Biodiversity Management Plan

Document control

Project number	Client	Project manager	LGA
8937	Evolution Mining	Corrine Edwards	Bland Shire LGA

Version	Author	Review	Status	Comments	Date
D1	Corrine Edwards	Radika Michniewicz	Draft		3 February 2025
Rev0	Corrine Edwards		Draft for client		14 February 2025
Rev1	Corrine Edwards		Updated following agency consultation		29 April 2025
Rev2	Mick Thomas		Updated following DPHI review		09 May 2025

Glossary and list of abbreviations

Term or abbreviation	Definition
AEMR	Annual Environmental Management Report
AMBS	Australian Museum Business Services
AOBV	Areas of Outstanding Biodiversity Value
As	Arsenic
AS	Australian Standard
AQMP	Air Quality Management Plan
BACI	Before and After Control and Impact approach
BC Act	NSW Biodiversity Conservation Act 2016
BDAR	Biodiversity Development Assessment Report
BLMP	Blast Management Plan
BOMP	Biodiversity Offset Management Plan
BOS	Biodiversity Offsets Scheme
BSA	Biodiversity Stewardship Agreement
BS Act	NSW Biosecurity Act 2015
BSC	Bland Shire Council
BMP	Biodiversity Management Plan
Ca	Calcium
Cd	Cadmium
CEMCC	Community Environmental Monitoring and Consultative Committee
CGO	Cowal Gold Operations
CNWAD/L	Weak acid dissociable cyanide per litre
cm	Centimetre
CPHR	Conservation, Programs, Heritage and Regulation within NSW DCCEEW

CSIRO	Commonwealth Scientific and Industrial Research Organisation
Cu	Copper
CWMP	Compensatory Wetland Management Plan
DA	Development Application
DCCEEW	NSW Department of Climate Change, Energy, the Environment and Water
DMP	Dewatering Management Plan
DoI L&W	Department of Industry – Lands & Water Division
DPE	NSW Department of Planning and Environment
DPE Fisheries	Department of Planning and Environment – Fisheries Division
DPI	NSW Department of Primary Industries (former)
EEC	Endangered Ecological Community
EES	NSW Environment Energy and Science Group (within DPIE)
EFA	Ecosystem Function Analysis
EIS	Environmental Impact Statement
EP&A Act	NSW Environmental Planning and Assessment Act 1979
EPA	Environment Protection Authority
EPBC Act	Commonwealth Environment Protection and Biodiversity Conservation Act 1999
EPL	Environment Protection Licence
Evolution	Evolution Mining (Cowal) Pty Ltd
Fe	Iron
FFMP	Flora and Fauna Management Plan
FM Act	Fisheries Management Act 1994
ha	Hectare
HBTs	Hollow Bearing Trees
IEA	Independent Environmental Audit

IMP	Independent Monitoring Panel
IWL	Integrated Waste Landform
K	Potassium
km	Kilometre
LCF	Lake Cowal Foundation
LFA	Landscape Function Analysis
LGA	Local Government Area
LLS	Riverina Local Land Services
LMP	Land Management Plan
LPB	Lake Protection Bund
LWMPLC	Land and Water Management Plan for Lake Cowal and Associated Wetlands
m	Metre
mg	Milligrams
Mg	Magnesium
MIC	Maximum Instantaneous Charge
ML	Mining Lease
MLRVMP	Mid Lachlan Regional Vegetation Management Plan and Strategy
MNES	Commonwealth Matters of National Environmental Significance
Mo	Molybdenum
Ni	Nickel
NONEL	Non-electric
NOW	NSW Office of Water
NPWS	National Parks and Wildlife Service
NSW	New South Wales
NSW DCCEEW	NSW Department of Climate Change, Energy, the Environment and Water

Pb	Lead
PCT	NSW Plant Community Type
Project	Cowal Gold Operations Open Pit Continuation Project
Project Area	Area contained within the Mining Lease, including RVEP and Compensatory Wetland management areas
RMP	Rehabilitation Management Plan
REF	Review of Environmental Factors
RR	Resources Regulator within the NSW Department of Planning and Environment
RVEP	Remnant Vegetation Enhancement Programme
Sb	Antimony
Se	Selenium
Secretary	Secretary of the NSW Department of Planning, Housing and Environment
SWGMBMP	Surface Water, Groundwater, Meteorological and Biological Monitoring Programme
TEC	Threatened Ecological Community
the Consent	Development Consent (SSD-42917792)
TSMP	Threatened Species Management Protocol
TSMS	Threatened Species Management Strategy
VCP	Vegetation Clearance Protocol
WIRES	NSW Wildlife Information, Rescue and Education Service Inc.
WMP	Water Management Plan
Zn	Zinc

Table of Contents

1 Document control

1.1 Background

The Cowal Gold Operations (CGO), owned and operated by Evolution, is an open-pit and underground gold mine located 38 km northeast of West Wyalong in New South Wales (NSW), and within the Lachlan Catchment.

CGO previously operated under two primary development consents:

- DA14/98 (1999): Covers open-pit mining, ore processing (9.8 annum (Mtpa), and waste/tailings management.
- SSD 10367 (2021): Allows underground stope mining, backfilling, and ore delivery to the processing plant.

A modification to SSD 10367 (Mod 16) was later approved to adjust underground mine access and increase production, with no changes to DA14/98 operations. Supporting infrastructure includes ore processing, waste management, workshops, and offices under DA14/98, as well as box-cut entry and pastefill plant under SSD 10367.

More recently, Evolution was granted State Significant Development Consent (SSD-42917792) on 10 December 2024, to which this BMP applies. The Consent authorises, among other activities:

- The continuation of open pit and underground mining operations until 2036
- Further development of the existing E42 Pit
- The development of open pit mining in three new adjacent orebodies, known as the 'E46', 'GR' and 'E41' pits.
- Construction and operation of ancillary mine infrastructure including an expanded Integrated Waste Landform (IWL) facility and Lake Protection Bund (LPB)

In addition to the Consent, Evolution holds DA 2011/64, issued by Bland Shire Council (BSC), which provides approval to develop and operate the Eastern Saline Borefield that supplies process water to the mine.

1.2 Summary of impacts

The project will clear 930.72 ha of native vegetation. Of this, the following listed threatened entities will be directly and indirectly impacted from the proposed development:

- 322.74 ha of Threatened Ecological Communities (TECs) listed under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) and/or NSW Biodiversity Conservation Act 2016 (BC Act) will be directly impacted.
- 1.11 ha of Austral Pillwort (*Pilularia novae-hollandiae*; BC Act: Endangered) habitat recorded over seven locations, containing an estimated 2,810 individuals.
- 375.22 ha of EPBC and/or BC Act listed migratory shorebird habitat will be directly impacted.
- The project is expected to result in likely significant impacts under the EPBC Act on the following Matters of Environmental Significance (MNES):
  - Grey Box (*Eucalyptus microcarpa*) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia EEC
  - Weeping Myall Woodlands EEC
  - Australasian Bittern (*Botaurus poiciloptilus*; BC Act: Endangered; EPBC Act: Endangered)
  - Australian Painted Snipe (*Rostratula australis*; BC Act: Endangered; EPBC Act: Endangered)
  - Painted Honeyeater (*Grantiella picta*; BC Act: Vulnerable; EPBC Act: Vulnerable)

- Superb Parrot (*Polytelis swainsoni*; BC Act: Vulnerable; EPBC Act: Vulnerable; foraging habitat only).
- Latham's Snipe (*Gallinago hardwicki*; BC Act: Vulnerable; EPBC Act: Migratory and Vulnerable)
- Sharp-tailed Sandpiper (*Calidris acuminata*; EPBC Act: Migratory and Vulnerable)
- Glossy Ibis (*Plegadis falcinellus*; EPBC Act: Migratory)

The prescribed impacts resulting from the project include:

- Non-native vegetation
- Waterbodies, water quality and hydrological processes
- Vehicle strike

The biodiversity credits specified in the Consent for the above impacts must be retired in accordance with the biodiversity offsets scheme of the BC Act before any impacts on the relevant biodiversity values for each project stage occur. Any biodiversity stewardship areas established to retire credits identified can be used to meet offset requirements for the EPBC Act listed Commonwealth migratory species offset area. Table 1 below details the credit obligations for the project staging as displayed in Figure 3.

Table 1: Biodiversity credit obligations under SSD 42917792.

Condition Number	Description	Status
B43	Nine (9) offsetting stages of the Project for various ecosystem and species credits (Figure 3). *PCT 17 Lignum shrubland wetland of the semi-arid (warm) plains (mainly Riverina Bioregion and Murray Darling Depression Bioregion. PCT 26 Weeping Myall open woodland of the Riverina Bioregion and NSW South Western Slopes Bioregion. PCT 53 Shallow freshwater wetland sedgeland in depressions on floodplains on inland alluvial plains and floodplains. PCT 55 Belah woodland on alluvial plains and low rises in the central NSW wheatbelt to Pilliga and Liverpool Plains regions. PCT 82 Western Grey Box – Poplar Box – White Cypress Pine tall woodland on red loams mainly of the eastern Cobar Peneplain Bioregion. PCT 185 Dwyer's Red Gum – White Cypress Pine – Currawang shrubby woodland mainly in the NSW South Western Slopes Bioregion. PCT 244 Poplar Box grassy woodland on alluvial clay-loam soils mainly in the temperate (hot summer) climate zone of central NSW (wheatbelt). PCT 249 River Red Gum swampy woodland wetland on cowals (lakes) and associated flood channels in central NSW. PCT 55 Belah woodland on alluvial plains and low rises in the central NSW wheatbelt to Pilliga and Liverpool Plains regions. Austral pillwort.*	Partially retired. Credits associated with Stage 1, 2a and 2b have been retired in accordance with the offsetting scheme under the BC Act.
B45	Additional offsetting requirements for the Compensatory wetland offset area, and the EPBC Act listed Commonwealth migratory species offset area. *PCT 17 - Lignum shrubland wetland of the semi-arid (warm) plains (mainly Riverina Bioregion and Murray Darling Depression Bioregion. PCT 53 - Shallow freshwater wetland sedgeland in depressions on floodplains on inland alluvial plains and floodplains. PCT 249 - River Red Gum swampy woodland wetland on cowals (lakes) and associated flood channels in central NSW.*	Fully retired. Credits for both the Compensatory Wetland offset area and EPBC migratory species offset area have been retired in accordance with the offsetting scheme under the BC Act.

B46	Transferred obligations from Development consent DA14/98 *PCT 26 Weeping Myall open woodland of the Riverina Bioregion and NSW South Western Slopes Bioregion. PCT 55 Belah woodland on alluvial plains and low rises in the central NSW wheatbelt to Pilliga and Liverpool Plains regions.*	Fully retired. Credits transferred from DA 14/98 have been retired in accordance with the offsetting scheme under the BC Act.
B47	Offset areas are to be secured under a biodiversity stewardship agreement or alternative mechanism. *Northern Offset Area (Enhancement Area). Southern Offset Area (Enhancement Area). Southern Offset Area (Revegetation Area)*	In progress.

The potential indirect Impacts outside of the Additional disturbance area include:

- increased noise, vibration and dust levels resulting in disturbance of fauna species, and potential for consequent abandonment of habitat and/ or changes in behaviour (including breeding behaviour)
- Increased disturbance to retained Austral Pillwort areas adjacent to the additional construction and operational footprints located within Crown Land
- lighting for night works, resulting in disturbance to fauna species and changes in occupancy or behaviour
- fire
- weed introduction and spread
- vertebrate pest invasion
- chemical and oil spills
- erosion and sedimentation
- potential inadvertent disturbance of retained habitats

Indirect and direct impacts are described in detail in Table 8.5 and Table 8.6, respectively, of Appendix F Revised BDAR (2024).

1.3 Purpose of the management plan

The purpose of this BMP is to provide a framework for Evolution personnel to ensure that compliance with the Consent Condition B48, Schedule 2, and relevant internal and external regulatory requirements related to biodiversity management at CGO is achieved. This BMP has been developed in accordance with the BDAR, to ensure that impacts on biodiversity are minimised, managed and rehabilitated.

This BMP includes specific management measures and monitoring requirements relating to biodiversity. Specifically, the area applicable to this BMP (project area) is shown in Figure 1 which includes activities relating to the following but not limited to:

- Habitat protection prior and during construction and during operation
- Pre-clearance surveys
- Clearing supervision and staged vegetation removal
- Weed control and feral pest control.
- Management and monitoring of threatened species and their habitat.
- Fauna injury and entrapment procedures, including daily monitoring of the IWL.

- Rehabilitation

This BMP is a standalone report that satisfies Consent Condition B48.It outlines the management of biodiversity values in relation to the direct and indirect above-ground impacts of the mine's construction and operation.

All areas within the Hillgrove Myalla Biodiversity Stewardship Agreement (BSA) variation, as well as the Northern and Southern offset areas, will be managed under the relevant biodiversity agreement actions. As such, the management of offset sites falls outside the scope of this plan.

This BMP has been prepared by a suitably qualified and experienced ecologist (Corrine Edwards, Niche Consulting), in accordance with condition B48(a) of the Consent.

Development under this consent will not commence until the Biodiversity Management Plan is approved by the Planning Secretary. Once approved, this BMP must be implemented for the development.

1.4 Structure of the BMP

The structure of this BMP is summarised in Table 2.

Table 2: Structure of the BMP

Section		Content
1	Introduction	Overview of BMP, purpose and scope.
2	Statutory requirements and legislation	Requirements for this BMP including State Consents and relevant EIS commitments.
3	Existing environment	Description of the existing environment relevant to this BMP, including recorded habitats, TEC's, threatened flora and fauna species, introduced weeds and feral pests, as well as both the direct and potential indirect impacts resulting from the approved proposal.
4	Environmental management	Details of the management measures and strategies to be implemented pre-construction; during construction; and post-construction and operation.
5	Monitoring	Monitoring and performance criteria related to each of the management actions to be implemented pre-construction; during construction; and post-construction (operation).
6	Implementation and reporting	Processes associated with the reporting of incidents, auditing and roles and responsibilities. This section also details incident reporting, complaints procedures and responses to non-compliance.
7	Review and improvement	This section details the process for the documentation and review of the BMP.
Appendix	Appendix	Supporting information relevant to the BMP

1.5 Consultation

Consultation was relevant government agencies was undertaken during the preparation of the EIS and drafting of Conditions of Consent. Feedback provided during this process is summarised in Table below. Management plan consultation feedback is detailed in Appendix 1.

Table 3: Consultation to date

Consulted Parties	Consultation date	Outcomes of Consultation
Conservation, Programs, Heritage and Regulation with NSW DCCEEW	During the preparation of the EIS	CPHR within NSW DCCEEW comments were received and addressed – refer to Appendix F of the EIS
Conservation, Programs, Heritage and Regulation with NSW DCCEEW	17/12/2024	Project initiation
Fisheries NSW	29/11/2024	– Volume and rate of water to be dewatered. – Lake water level continues to fluctuate, final volume to be determined. – Fish friendly pump screens to be used during dewatering – Fisheries NSW provided advice on guideline and specifications for river pump screens to reduce potential impacts. Larvae not a major concern for this project, but need to be considered. – BMP discussed high level detail of the dewatering activity and fauna management (29/11/2024)

1.6 Relationship with other plans

This BMP outlines broad-scale measures for managing both direct and indirect impacts on terrestrial and aquatic biodiversity values. It presents key management strategies and actions, which are discussed in detail throughout the document.

The BMP also consolidates relevant elements from previously approved management plans developed under other consents, in consultation with regulatory authorities and informed by existing biodiversity assessments. While earlier plans addressed specific requirements of Consent B48, this BMP includes updated strategies to meet the current obligations of the Consent and now supersedes the former plans. Specifically, superseded management plans include the former Flora and Fauna Management Plan (FFMP) and Land Management Plan (LMP).

Furthermore, the Commonwealth has agreed to adopt the NSW Hillgrove Myalla Biodiversity Stewardship Agreement (BSA) management plan to meet the management requirements for Commonwealth-listed migratory waterbirds, ensuring consistent alignment between state and federal obligations.

Evolution is also in discussions with the NSW Biodiversity Conservation Trust (BCT) to secure the Northern and Southern offset sites under a BSA. However, some portions of the compensatory wetland and Remnant Vegetation Enhancement (RVE) areas extend beyond the BSA and designated offset boundaries and encroach into the approved disturbance footprint. While these areas are not formally part of the BSA, they still require active management to maintain ecological function and comply with approval conditions which are addressed in this document.

As such, the CWMP (Compensatory Wetland Management Plan) is now superseded, and relevant strategies have been incorporated into this BMP.

This BMP is a part of a larger suite of operational environmental management documents for CGO developed as part of CGO's environmental management system. The overarching document in the environmental management system is CGO's Environmental Management Strategy (EMS). The EMS has been developed to provide a framework to ensure activities at CGO are undertaken in an environmentally responsible manner. The EMS forms part of the hierarchy of documents that enables CGO to establish and sustain a high level of environmental performance in all facets of its business.

Table 4 below provides a summary of existing management plans and strategies that have informed the development of this BMP. These include measures currently implemented on-site, relevant EIS commitments not addressed within this BMP, and the strategies adopted from superseded management plans.

Table 4: Relationship with other plans

Management Plans	Summary	Strategies used in BMP
Existing management plans relevant to this BMP		
Rehabilitation Management Plan (RMP) (Version 2, EMM, August 2023)	Focuses on rehabilitation of ML areas and associated infrastructure. Includes monitoring of rehabilitation performance, revegetation, and regeneration efforts within biodiversity offset areas and additional disturbance zones.	– Rehabilitation of disturbed areas. – Monitoring revegetation and regeneration performance.
Noise Management Plan (NMP) (NMP01-w, Evolution June 2023)	Describes the measures that would be implemented to comply with noise impact assessment criteria and operating conditions within the development consents: Details the noise monitoring programme that will be used to determine the effectiveness of management measures and compliance with the conditions of the development consent and the CGO's Environment Protection Licence (EPL) No. 11912. NMP01-W was prepared to address Mod 16 and SSD 10367 granted on 30 Sep 2021 however NMP01-W addresses EIS commitments N06-N10.	– Procedure for implementation of noise mitigation measures – Noise impact assessment criteria and other relevant noise emissions criteria

Management Plans	Summary	Strategies used in BMP
Hazardous Materials Management Plan (HMMP) (HMMP-01-A (965972-001) Evolution February 2022).	Provides monitoring methods, testing parameters, baseline data, control strategies and reporting for Cyanide management as well as the handling, storage and management of other hazardous material. HMMP-01-A (965972-001) was prepared to address (DA14/98) however HMMP-01-A (965972-001) addresses EIS commitments HM01, HM02, HM10, JM11, HM14 and HM15.	– Protocol for identifying and reporting cyanide related fauna deaths – Monitoring procedure and contingency measures for cyanide levels in tailings storages
Water Management Plan (WMP) (Version 3, EMM, 2025)	The WMP outlines water management, monitoring and reporting procedures to be implemented during construction and operations to mitigate impacts to water resources. Additionally, and Dewatering Plan (DMP) forms an appendix of the WMP which outlines water treatment requirements, monitoring and reporting procedures to be implemented during dewatering and water treatment works, management procedures to prevent environmental harm resulting from the discharge of extracted water from the site. The WMP was prepared to address Consent (SSD-42917792) and EIS commitments SW01-SW16 and HM08.	– Sediment and erosion controls for the management of potential indirect impacts to *Austral Pillwort*. – Dewatering methods – Expansion of the Lake Protection Bund (LPB)
Environmental Management Strategy Revised version 1.0, IEMA, 2025	Includes measures to prevent environmental harm, maintain and regenerate habitats, and ensure efficient resource use. Developed per Bland Shire Council Development Consent DA2022/0025 for the Inhabitat eco-tourist facility. The EMS was amended to address Consent (SSD-42917792) and EIS commitments SL01-SL04, SL05-SL07 and HM01.	– Habitat maintenance and regeneration. – Monitoring environmental impacts. – Sustainable energy and water use. – Strategies of soil resource management
Superseded management plans incorporated into this BMP		
Erosion and Sediment Control Management Plan (ESMP)	Discusses the relevant legislation and associated conditions of approval, Australian Standards and industry guidelines. Details the specific erosion and sediment control systems for the mine area, Saline Borefield, relocation of the Travelling Stock Reserve (TSR) and the realignment of Lake Cowal Road and the Bland Creek Palaeochannel borefield and pipeline.	– Sediment and erosion controls – Soil management including soil stripping, practice and soil stockpile management. – ESMP has been absorbed into the updated WMP

Management Plans	Summary	Strategies used in BMP
	Provides details for management of salinity issues. Details soil management measures including soil stripping scheduling, techniques and stockpile management.	
Biodiversity Offset Management Plan (BOMP)	Targets northern and southern biodiversity offset areas. Developed to reflect offset strategies, conserving regional biodiversity and enhancing habitats. Includes weed and feral animal control, seed propagation, fencing, signage, and revegetation. The BOMP was prepared to reflect the Development Consent as modified on 22 July 2014 and the approved CGM Extension Modification. The BOMP was approved on the 10 September 2015.	– Weed and feral animal control – Habitat enhancement and conservation – Implementation of offset strategies – Short, medium and long-term management measures for RVEP areas
Flora and Fauna Management Plan (FFMP)	Relevant management measures and mitigation techniques have been	– Preclearance and clearing requirements – Night lighting – Fauna management measures, including IWL/cyanide reporting

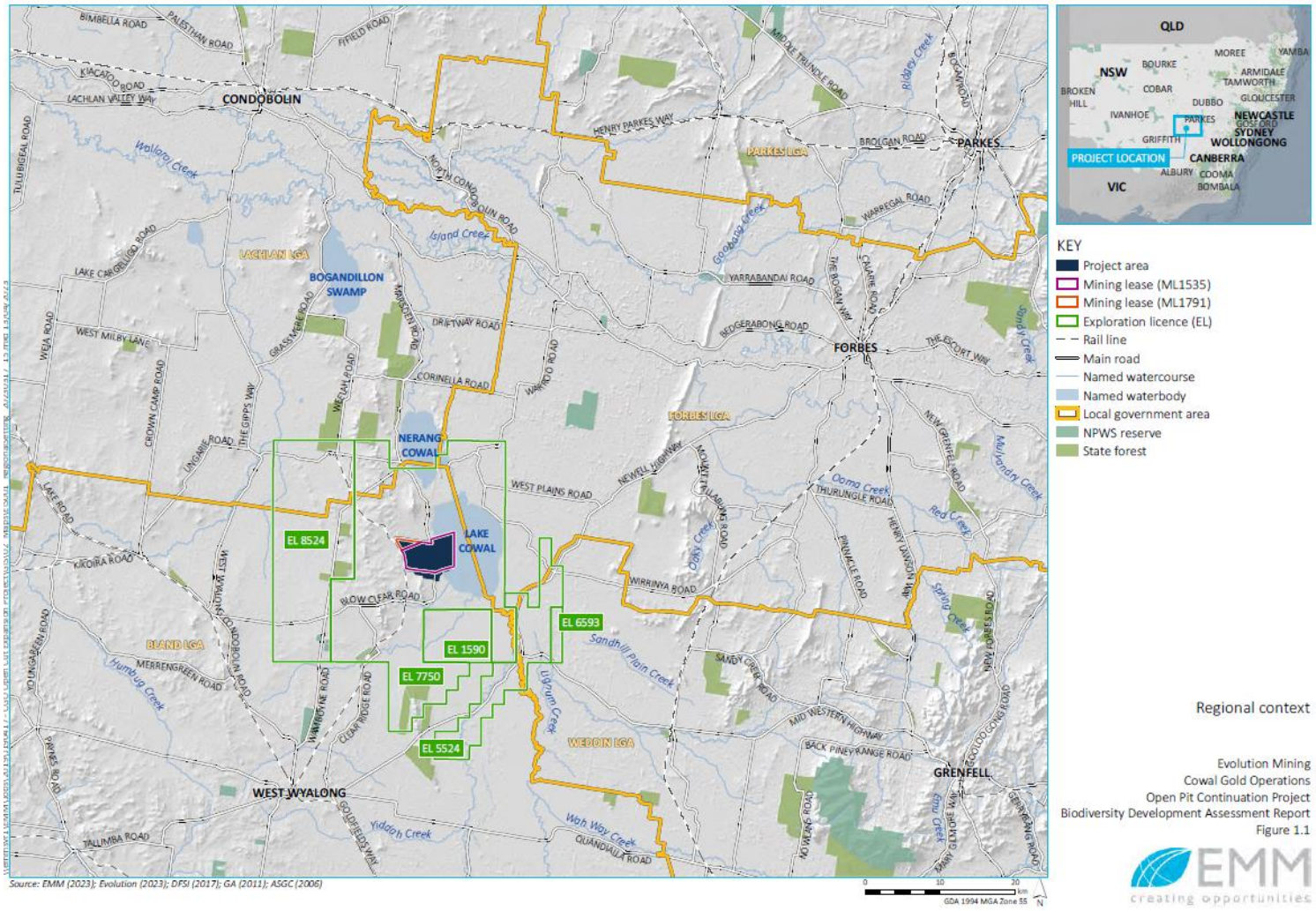

Figure 1: Site Location

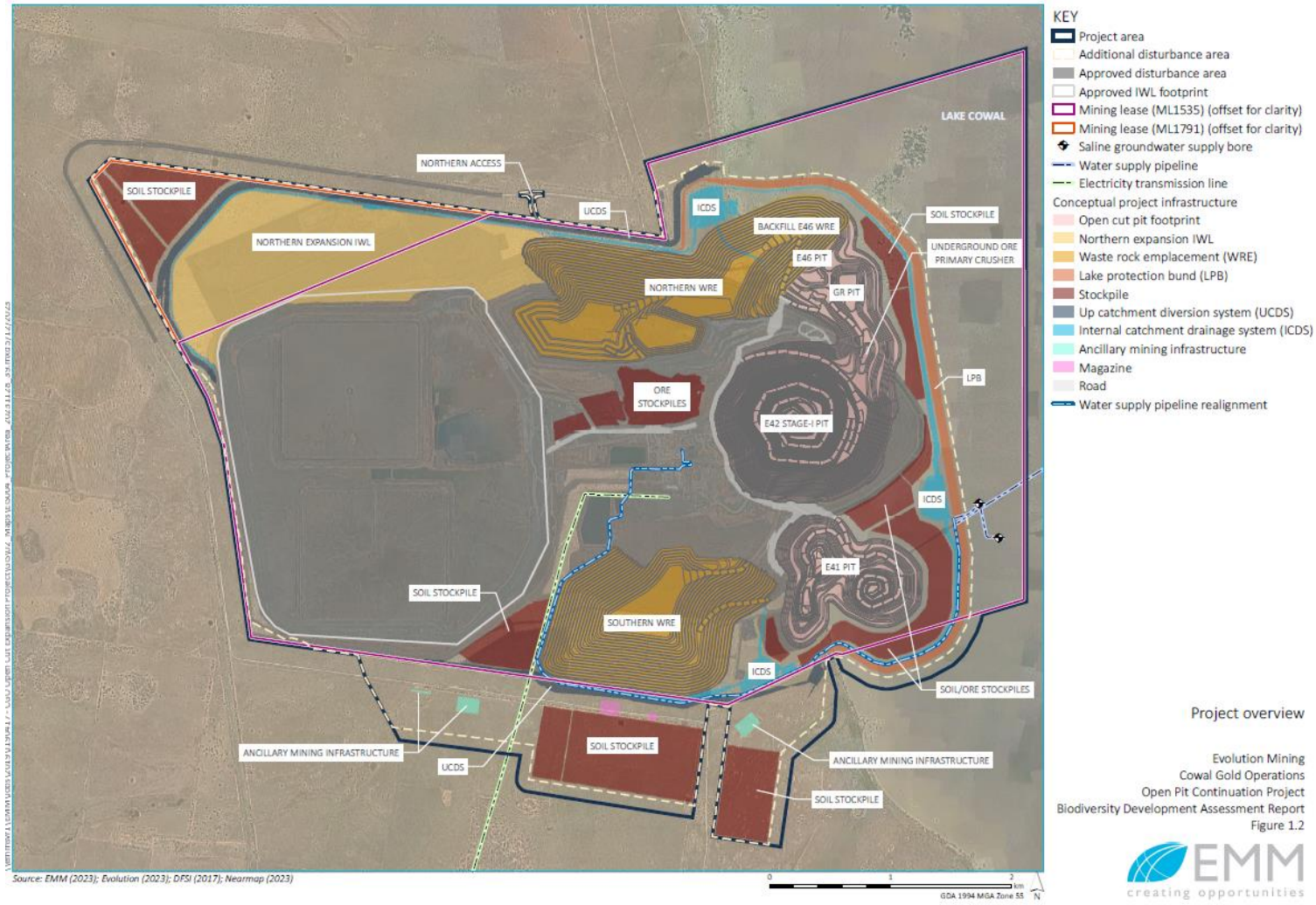

Figure 2: Project Overview

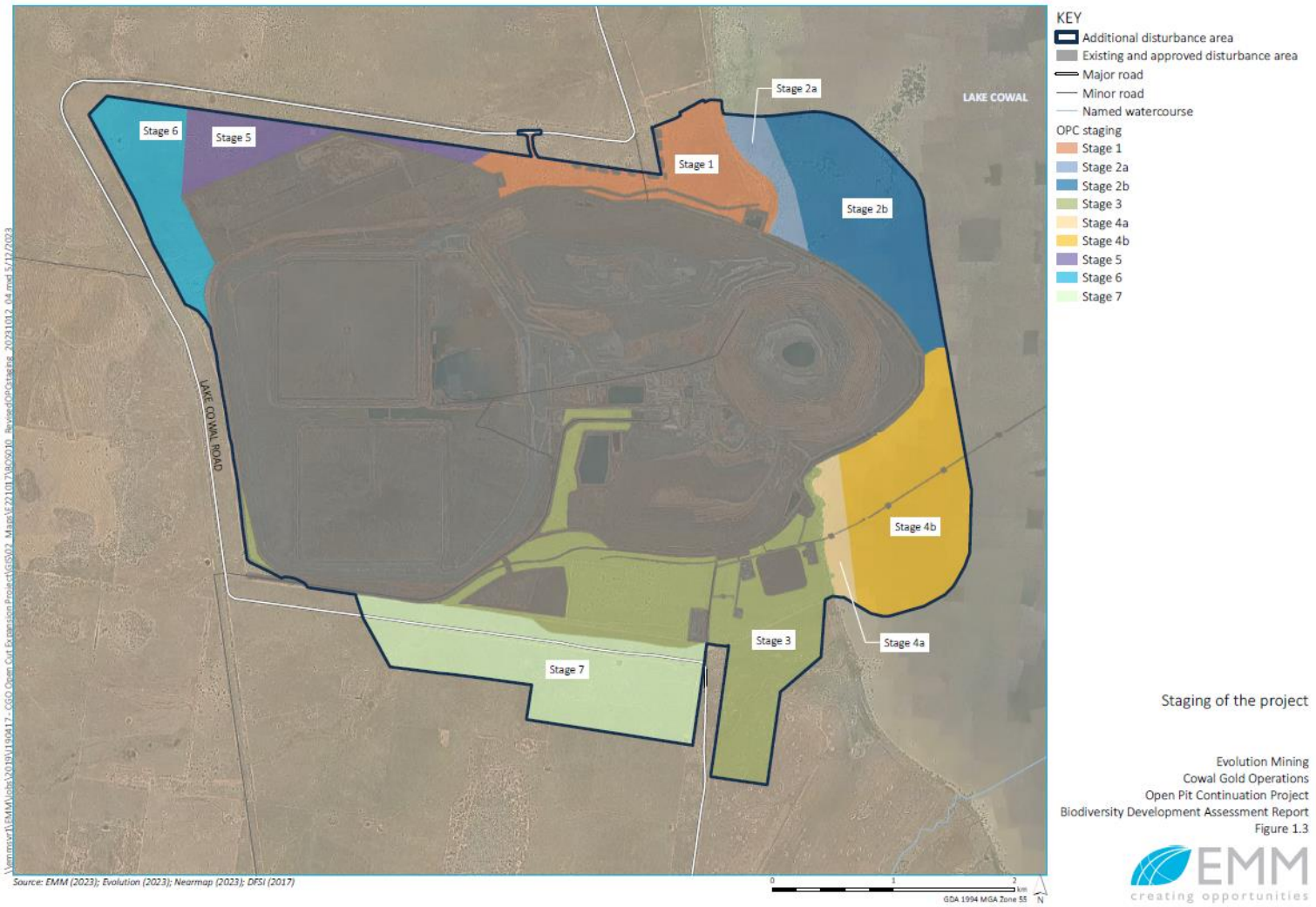

Figure 3: Project staging

2 Statutory requirements

2.1 Legislative context

2.1.1 Consent Conditions

The requirement for this BMP is established by Condition B under Schedule 2 of the Consent Table 5 outlines the requirements under this condition that are applicable to this BMP and identifies the sections in which these requirements have been addressed.

Table 5: Consent Conditions

Condition Reference	Condition	Section of BMP
B48	A biodiversity management plan must be prepared for the development to the satisfaction of the Planning Secretary. This plan must:	N/A
B48(a)	be prepared by a suitably qualified and experienced person/s;	Section 1.3
B48(b)	be prepared in consultation with CPHR and Fisheries NSW.	Section 1.5
B48(c)	describe the short, medium, and long-term measures to be undertaken to manage the remnant vegetation and fauna habitat on the site, in the offset areas identified in table 9 (except if the offset areas are secured through a biodiversity stewardship agreement under the BC Act); and in the compensatory wetland areas and remnant vegetation enhancement program areas shown in Figure 3 of Appendix 4;	Section 4.5.5
B48(d)	include detailed performance and completion criteria for evaluating the performance of the measures undertaken under condition B48(c), including triggers for remedial action if these performance or completion criteria are not met;	Section 5 Tabel 26 and Table 27
B48(e)	describe measures implemented to:	N/A
B48(e)(i)	minimise impacts on fauna and associated habitat, including undertaking pre-clearance surveys;	Section 4.2.34.2.3.14.3.14.5.2
B48(e)(ii)	relocate threatened fauna species and/or its habitat away from disturbed areas;	Section4.5.2.44.5.2.7 4.5.2.7
B48(e)(iii)	keep fauna and avifauna away from tailings storages;	Section 4.5.2.34.5.2.3
B48(e)(iv)	rescue and rehabilitate wildlife that becomes bogged/sick/trapped;	Section 4.5.2.54.5.2.3
B48(e)(v)	maximise the salvage of resources, including tree hollows, vegetation and soil resources, for beneficial reuse, including fauna habitat enhancement;	Section 4.2.44.5.2.3

B48(e)(vi)	minimise impacts to threatened ecological communities listed under the BC Act and EPBC Act, and contribute to conservation strategies for these communities;	Section 4.2.3.24.3.24.2.4
B48(e)(vii)	manage any potential conflicts with Aboriginal heritage values;	Section 4.5.4 also see ACHMP (EMM 2025)
B48(e)(viii)	protect vegetation and fauna habitat outside of the mine disturbance area;	4.2Whole document
B48(e)(ix)	manage the collection and propagation of seed from the local area;	Sections 4.2.44.4
B48(e)(x)	control weeds, including measures to avoid and mitigate the spread of noxious weeds;	Section 4.3.3
B48(e)(xi)	control feral pests with consideration of actions identified in relevant threat abatement plans;	Section 4.4.2
B48(e)(xii)	Control erosion.	Section 4.5.1
B48(e)(xiii)	Control access to vegetated or revegetated areas, and	Section 4.2.1 & 4.2.2
B48(e)(xiv)	Manage bushfire hazards.	Section 4.5.3
B48(f)	include a seasonally based program to monitor and report on the effectiveness of the above measures, progress against the detailed performance indicators and completion criteria, and identify improvements that could be implemented to improve biodiversity outcomes;	Section 5
B48(g)	include a program to monitor and report on daily and seasonal fauna usage of tailings storages/IWL.	Section 5.2.
B48(h)	include a protocol for investigating and reporting cyanide-related native fauna deaths and identify contingency measures for reducing cyanide levels in the tailings storages/IWL in the event of fauna deaths caused by cyanide;	Section 4.5.2.3 & 4.5.2.8
B48(i)	include a program to monitor and report on impacts on birdlife in bird breeding areas, threatened fauna and flora, and fish and aquatic invertebrates in and around Lake Cowal, and outline contingency measures should impacts from the development be identified; and	Sections 5
B48(j)	include details of who would be responsible for monitoring, reviewing, and implementing the plan.	Section 6.1

2.2 Management Plan Requirements

Condition D5 of the Consent outlines the general requirements for all management plans. Table outlines the requirements under this condition that are relevant to this BMP and identifies the section in which these requirements have been addressed.

Table 6: Management Plan Requirements

Condition Reference	Condition	Section of BMP
D5	Management plans required under this consent must be prepared in accordance with relevant guidelines, and include:	NA
D5(a)	quality control information including document version control details and the management plan author(s);	Page 1
D5(b)	a summary of the environmental management context, including	NA
D5(b)(i)	a brief project description, including visual representation of any project staging;	Section 1.1
D5(b)(ii)	the purpose and scope of the management plan.	Section 1.3
D5(c)	the relationship of the management plan with other environmental management documents or systems;	Section 1.6
D5(d)	a site location plan identifying the project boundary, mine disturbance area and related environmental aspects;	Sections 1.1 & 3
D5(c)	a brief summary of background or baseline data, where relevant;	Section 5
D5(f)	a summary of consultation undertaken during the preparation of the management plan that includes when and how consultation was undertaken and the outcomes of the consultation;	Section 1.5
D5(g)	details of the statutory requirements, limits or performance measures and any specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the development or any management measures;	Section 2
D5(h)	an environmental risk assessment and a description of the measures that will be implemented to:	N/A
D5(h)(i)	comply with statutory requirements, limits, or performance measures and criteria;	Section 5
D5(h)(ii)	manage the predicted impacts identified in the documents listed in condition A2(c); and	Entire document
D5(h)(iii)	manage any other environmental risk or impact which has been subsequently identified after the documents in condition A2(c) were submitted;	Section 5

Condition Reference	Condition	Section of BMP
D5(i)	a monitoring and evaluation protocol for the measures identified in the environmental risk assessment that supports the analysis and evaluation of the implementation of the identified measures with results and records that are reliable, reproducible and traceable;	Section 5
D5(j)	process to review the environmental risk assessment to:	N/A
D5(j)(i)	analyse and evaluate the implementation of the identified measures and determine whether any changes to the environmental risk assessment or identified measures is required; and	Section 5
D5(j)(ii)	identify any additional unexpected environmental risks and the measures that will be implemented to manage them	Section 5
D5(k)	Protocol for periodic review of the plan.	Section 6.9

2.3 Relevant EIS commitments

Condition A2 (c) of the Consent states that the development may only be carried out generally in accordance with the EIS. The relevant EIS documents include:

- The Cowal Gold Operations Open Pit Continuation Project Environmental Impact Statement dated May 2023 and prepared by EMM Consulting Pty Limited.
- Appendix F Revised Biodiversity Assessment dated January 2024 prepared by EMM Consulting Pty Limited.
- Cowal Gold Operations Open Pit Continuation Project Submissions Report dated January 2024 prepared by EMM Consulting Pty Limited.
- and the additional information provided by the Applicant in support of the application.

The relevant EIS commitments relating to the management of biodiversity values, are in reference to mitigation measures proposed in Appendix F Revised Biodiversity Assessment dated January 2024, These specific measures and where the commitments have been addressed are outlined in Table 6.

It should be noted that as this is a standalone document incorporating construction and operational phases of the project, all reference to CEMP within the EIS commitments (Table 6.) is applicable to measures within this BMP where relevant EIS commitments have not been addressed within other management plans. Details of existing management plans and EIS commitments not addressed within this BMP are detailed in Table 4.

Mitigation measures with prefixes SW and HM that have not been included in this BMP have been addressed in the Water Management Plan (WMP) and Hazardous Material Management Plan (HMMP)

Table 7: Relevant EIS commitments

EIS Reference	Commitment	Section of BMP
TE01	Pre-clearance surveys (two stage) to remove roosting / breeding / nesting species will be undertaken:	Section 4.2.3

	Vegetation clearance will follow a Vegetation Clearance Protocol (VCP) which will be documented in the approved CEMP. The VCP will involve a two-stage assessment by a suitably qualified and experienced ecologist to determine their usage by birds, bats and/or arboreal mammals. This protocol will be extended to aquatic species, including frogs, depending on water levels at the time of construction.	Section 4.2.5
	Where the secondary habitat assessment determines that a habitat tree is being utilised as a roosting and/or nesting resource by non-threatened fauna, the fauna management strategies phase of the VCP will be initiated which may include observations of hollows, capture and release of fauna, timing vegetation clearance, alternative clearance methods.	Section 4.2.5
	Where the secondary habitat assessment determines that a habitat tree is being utilised as a roosting and/or nesting resource by threatened fauna, the threatened species management protocol of the VCP will be initiated.	Section 4.2.5
TE02	Logs of removed trees are to be retained for installation in BSA(s) to provide fauna habitat where practicable.	Section 4.2.4
TE03	The CEMP will include a Fauna management protocol detailing measures to rescue and rehabilitate wildlife during construction of the LPB and UCDS.	Section 4.3.1 & 4.5.2.4
TE04	Where feasible, noisy construction activities will be scheduled to occur away from the northern side of the LPB construction area (i.e., area closest to known waterbird breeding areas) during the October to March period, when waterbird breeding, and migratory shorebird visitation mostly occurs.	Section 5
TE05	The approved BMP and CEMP will detail CGO / construction staff training requirements to ensures personnel are aware of the sensitive environment they are working in and the measures to minimise impacts including as relevant:	Section 4.2.2
	Constructions crew are to undertake training prior to commencement of work to inform them of sensitive biological areas, including threatened and migratory species and ecological communities. They are to be informed of the areas approved to be disturbed, delineated no go areas and the protocol to follow in the case of an unexpected threatened species find.	
	Education of staff during induction about abiding by above driving and vehicle speed rules to reduce fauna strike risk, including periods when vehicle strikes are more likely based on fauna behaviour (e.g., sunrise and sunset).	
TE06	Depending on water levels within Lake Cowal, re-instatement of the Lake Cowal foreshore around the expanded LPB will occur either during construction (in dry conditions) or following construction (wet/semi-inundated conditions) when suitable conditions for rehabilitation occur. The foreshore reinstatement will extend approximately 30 m horizontally from the toe of the expanded LPB into the lake. Foreshore reinstatement activities will be carried out in generally in accordance and as relevant with A Rehabilitation Manual for Australian Streams (Rutherford, Jerie and Marsh 2000, the guidance series for Controlled Activities on Waterfront Land (DPI Water 2012) and best management practice guidance series Managing Urban Stormwater: Soils and Construction – Volume 1 (Landcom, 2004) and 2E Mines and Quarries (DECC, 2008). Methods to reinstate the Lake Cowal foreshore will be documented in the CEMP and will include microvariations in slope and elevation to provide complex habitats for terrestrial and aquatic species.	Section 4.5.6.1

TE07	Reduce risk of fauna strike by boats through speed limits and working within defined operating limits if the LPB is constructed when the lake is inundated.	Section 4.5.2.6
	Speed limits will be imposed on vessels used in constructing the LPB, if Lake Cowal is inundated at the time of construction. Vessels will operate within safe speed limits and adhere to designed operating limits, to reduce interactions with waterbirds in Lake Cowal. A maximum speed of 6-knots is to be applied when operating within 30 m of shore and areas of dense lignum (i.e., where waterbird breeding typically occurs) to minimise wash. If there is a risk of collision with wildlife, the boat's engine is to be put into idle until the animal moves away.	Section 4.5.2.6
	Vessel operating areas should be defined prior to construction to avoid waterbird breeding areas, as far as practicable. Extra mitigation measures, including further reduction of vessel speed, should be considered during October to January, when waterbirds are breeding, and migratory shorebirds are visiting Lake Cowal.	Section 4.5.2.6
TE08	Impacts where there is uncertainty over its likelihood of occurrence, and the level of impact that may occur, are best dealt using by adaptive management techniques. Table 8.4 of the BDAR details adaptive management measures that should be adopted in these situations. It should be noted that many of these adaptive management measures, set out in Table 8.4 of the BDAR, have been, or continue to be used already used at CGO to reduce, minimise or eliminate impacts. Measures include monitoring of:	N/A
	– noise impacts to threatened/ migratory waterbirds in Lake Cowal during construction and operation to see how the birds react	Section 4.5.2.6
	– potential impact of dust and particulate matter on threatened/ migratory waterbirds in Lake Cowal	Table 23
	– Impacts of construction/ operations on retained Austral Pillwort adjacent to additional disturbance area	Section 4.5
TE09	The boundary of the disturbance area will be clearly marked or fenced to prevent accidental damage to adjoining remnant native vegetation during vegetation clearance activities or construction works. The importance of respecting clearing, and operation boundaries is to be included in site inductions for all personnel. Areas of habitat containing retained Austral Pillwort (i.e., within the Project area but outside the additional disturbance footprint) are to be identified and marked out as a no-go zone.	Section 4.5
TE10	Weeds will continue to be managed in accordance with obligations under the Biosecurity Act 2015 (Biosecurity Act) and Local Land Services Act 2013 (LLS Act). Management measures will be included in the BMP and Environmental management strategy (EMS) and will include:	Section 4.3.3
	– annual inspections of weeds	Section 4.3.3
	– mechanical and/or application of approved herbicides	Section 4.3.3
	– follow-up inspections to assess effectiveness	Section 4.3.3
	– minimising seed transport by using vehicle wash bays	Section 4.3.3
	Use of herbicides in wetland areas (including Lake Cowal) will be strictly controlled. Within these areas, physical removal methods will be employed, where practicable. Where physical control methods are not suitable, an herbicide	Section 4.3.3

	registered for use in aquatic situations by the National Registration Authority may be used.	
TE16	Protective fencing (e.g., parawebbing) and sediment/erosion controls will be placed around retained Austral Pillwort areas / individuals for their protection during construction, where required. Specifically, sediment/erosion controls are to be established to prevent course debris from smothering Austral Pillwort habitat. The CEMP will detail specific construction sediment/erosion controls and other management measures to protect retained Austral Pillwort habitat during construction.	Section 4.5
	The condition of the Austral Pillwort fencing, and sediment/erosion controls will be monitored weekly during construction. More frequent checks are required during episodic events, including high intensity rainfall events.	Section 4.5
AE01	Turbidity as an indirect impact during construction of the LPB is to be managed by the installation of appropriately designed and installed tapered silt curtains (as set out in SW08).	Table 17
AE02	A Fauna Management Protocol (FMP) within the CEMP will be prepared detailing leading practices for capturing and releasing aquatic and terrestrial wetland fauna back into Lake Cowal from construction work areas or during LPB dewatering (if required). The FMP will include that fauna salvage during dewatering activities will be undertaken by a suitably qualified person and discuss capture and release methods (same as TE03).	Table 13
NV03	Construction noise monitoring requirements will be detailed in the CEMP and will include three noise monitoring events annually at representative bird breeding areas during the main breeding period (October to March).	Section 4.5.2.6, Table 20, 23 (1(a)(i), 1(a)(ii), 1(a)(b), 1(c),and Table 24 (AAM1 and AMM2, (also see Noise Management Plan)
NV04	The following measures will be included in the CEMP to manage construction noise:	N/A
	regular reinforcement (such as at toolbox talks) of the need to minimise noise	Section 4.2.2 (also see Noise Management Plan)
	review and implementation of feasible and reasonable mitigation measures to reduce noise	
	avoiding the use of portable radios, public address systems or other methods of site communication that may unnecessarily impact upon nearby residents	
	where possible, avoid the use of equipment that generates impulsive noise	
SL02	The existing general strategy of soil resource management at the CGO will be continued for the Project. This strategy involves stripping suitable soil resources from the proposed disturbance areas within the ML areas and directly replacing on rehabilitation areas or storing in dedicated stockpiles for re-use during progressive rehabilitation works. Management measures for soil stripping and stockpiling for the different soil units within the additional disturbance area will be documented in the Project's EMS as per the recommendations in the Project's Land and Soil Assessment (Appendix T of the EIS).	Section 4.2.4 and Table 12 (also see ESCMP, SSMP and EMS)
V02	All reasonable and feasible measures will be implemented to minimise the visual and off-site lighting impacts from the CGO.	Section 4.3.3

V03	Ensure no fixed outdoor lights shine directly above the horizontal or above the building line or any illuminated structure.	Section 4.3.3
V06	Taking all reasonable and feasible measures to shield views of mining operations and associated equipment from users of public roads and privately owned residences	Section 4.3.3
V07	Additional measures that will be implemented where feasible to mitigate impacts of night-lighting during construction and operation include:	Section 4.3.3
	direction of light downwards, not upwards	
	use of shielded fittings	
	avoiding 'over' lighting	
	switching lights off when not required	
	use of asymmetric beams, where floodlights are used	
	ensuring lights are not directed towards reflective surfaces	
	waste rock emplacement will be scheduled where feasible such that elevated bunds of waste rock are placed between primary work areas and sensitive receivers including waterbird nesting areas during the main breeding period, to mitigate potential impacts from night-lighting.	

3 Existing environment

3.1 Previous biodiversity assessments

The biodiversity values applicable to the BMP have been assessed in detail in the Revised Biodiversity Development Assessment Report dated January 2024 (EMM 2024b) prepared in support of the project.

The above report assessed the impact to both State and Commonwealth listed biodiversity as a result of the project in accordance with the Biodiversity Assessment Method (2020) and clause 6.15 of the Biodiversity Conservation Act and associated State and Commonwealth guidelines.

3.2 Threatened ecological communities

The following endangered ecological communities listed under the EPBC Act and the NSW BC Act have been recorded in the project area on as illustrated in Figure 4. Myall Woodland in the Darling Riverine Plains, Brigalow Belt South, Cobar Peneplain, Murray Darling Depression, Riverina and NSW Southwestern Slopes bioregions EEC (Weeping Myall Woodland EEC) listed under the BC Act;

- Weeping Myall Woodland EEC listed under the EPBC Act
- Grey Box (Eucalyptus microcarpa) Grassy Woodlands and Derived Native Grasslands of South-Eastern Australia (Grey Box Woodlands EEC) listed under the EPBC Act (120.17ha directly impacted);
- Inland Grey Box Woodland in the Riverina, NSW South Western Slopes, Cobar Peneplain, Nandewar and Brigalow Belt South Bioregions (Inland Grey Box Woodland EEC) listed under the BC Act; and
- Poplar Box Grassy Woodland on Alluvial Plains EEC listed under the EPBC Act.

3.3 Threatened flora

One threatened flora species was recorded in the project area. Pilularia novae-hollandiae (Austral Pillwort) has been recorded from gilgai areas within ML 1535, to the north and south of ML 1535 and in the region external of the ML (Bower, 2003; DnA Environmental,2022; EMM,2023). No threatened flora species were found during field surveys conducted by AMBS (AMBS, 2012).

The project will directly impact 1.11 ha of Austral Pillwort habitat recorded over seven locations, containing an estimated 2,810 individuals, which have been subsequently offset as part of the SSD-42917792 mitigation measures. Known and potential Austral Pillwort habitat also occurs within gilgai areas and along the lakeshore in CGO-owned land of surrounding properties, including areas within Crown Land. Table 8 provides the location and estimated individuals of Austral Pillwort within the study area. A range of mitigation measures and implementation of an ongoing monitoring programs have been proposed to protect the retained Austral Pillwort areas within the Project Area.

Measures to mitigate and manage impacts to retained Austral Pillwort outside of CGO owned land are detailed in Section 4.1.1 and 4.3.2.1.

Table 8: Austral Pillwort records

Area	Location recorded	Estimated individuals
Additional disturbance area	7	2,810

3.4 Fauna habitat

The project area consists of derived native grasslands with some remnant and regenerating woodlands, shrublands and wetlands associated with gilgais and Lake Cowal. Due to an extensive history of grazing and

cropping agricultural use throughout the project area, many habitat features for threatened species are degraded and thus provides suitable limited habitat for threatened species.

For many threatened and or migratory bird species, the ephemeral wetland within Lake Cowal provides suitable habitat. Historically, the condition of wetland habitat in Lake Cowal has declined due to extensive vegetation clearing by historic grazing and agriculture within Lake Cowal, as well as ongoing degradation by erosion, ploughing, herbicide spraying, weeds, feral predators and competitors, fishing, hunting, agricultural and mining activities within surrounding catchments.

During dry conditions, habitat available within Lake Cowal is typically grassland/sedgeland, with little to no free water, and hence Lake Cowal offers little habitat value for wetland bird species. Terrestrial fauna may occur during dry periods, with several species of amphibians, reptiles and mammals all having potential to occur. However, during wetting-drying cycles, the inundation and retreat of the shoreline presents suitable habitat for various freshwater wetland associated species, notably waterbirds.

3.5 Threatened woodland birds and microbats

The following threatened species have been recorded within or adjacent to the additional disturbance area by previous survey. These species are provided below in Table and locations shown in Figure 6. Water birds that are also listed as migratory and threatened species are detailed in Section 3.1.1 below.

Table 9: Recorded threatened fauna

Common Name	Scientific Name	BC Act Listing	EPBC Act Listing
Barking Owl	Ninox connivens	Vulnerable	Not Listed
Black Falcon	Falco subniger	Vulnerable	Not Listed
Black-chinned Honeyeater (eastern subspecies)	Melithreptus gularis gularis	Vulnerable	Not Listed
Corben's Long-eared Bat	Nyctophilus corbeni	Vulnerable	Not Listed
Dusky Woodswallow	Artamus cyanopterus cyanopterus	Vulnerable	Not Listed
Diamond Firetail	Stagonopleura guttata	Vulnerable	Vulnerable
South-eastern Glossy Black-Cockatoo	Calyptorhynchus lathami	Vulnerable	Vulnerable
Grey-crowned Babbler	Pomatostomus temporalis temporalis	Vulnerable	Not Listed
Grey-headed Flying Fox	Pteropus poliocephalus	Vulnerable	Vulnerable
Gilbert's Whistler	Pachycephalaincornata	Vulnerable	Not Listed
Inland Forest Bat	Vespadelus baverstocki	Vulnerable	Not Listed
Large Pied Bat	Chalinolobus p i c a t u s	Vulnerable	Not Listed
Little Eagle	Hieraaetus morphnoides	Vulnerable	Not Listed
Little Lorikeet	Parvipsitta pusilla	Vulnerable	Not Listed
Painted Honeyeater	Grantiella picta	Vulnerable	Vulnerable
Pink Cockatoo	Lophochroa leadbeater	Vulnerable	Endangered

Sloane's Froglet	Crinia sloanei	Vulnerable	Endangered
Spotted Harrier	Circus assimilis	Vulnerable	Not Listed
Superb Parrot	Polytelis swainsonii	Vulnerable	Vulnerable
Square-tailed Kite	Lophoictinia isura	Vulnerable	Not Listed
Varied Sitella	Daphoenositta chrysoptera	Vulnerable	Not Listed

3.5.1 Threatened/migratory species

In total, 21 species of BC Act and/or EPBC Act listed waterbirds have been recorded. These species are provided below in Table 10, and record locations shown in Figure 6.

Table 10: Recorded Threatened and/or Migratory Waterbirds

Common name	Scientific name	BC Act listing	EPBC Act listing	Migratory Status
Australasian Bittern	Botourus poiciloptilus	Endangered	Endangered	-
Blue-billed Duck	Oxyura australis	Vulnerable	Not Listed	-
Brolga	Grus rubicundus	Vulnerable	Not Listed	-
Curlew Sandpiper	Calidris ferruginea	Endangered	Critically Endangered	Yes
Freckled Duck	Stictonetta naevosa	Vulnerable	Not Listed	-
Magpie Goose	Anseranas semipalmata	Vulnerable	Not Listed	-
Caspian Tern	Hydroprogne caspia	Not Listed	Not Listed	Yes
Common Greenshank	Tringa nebularia	Not Listed	Endangered	Yes
Double-banded Plover	Charadrius bicinctus	Not Listed	Not Listed	Yes
Glossy Ibis	Plegadis falcinellus	Not Listed	Not Listed	Yes
Gull-billed Tern	Gelochelidon macrotarsa	Not Listed	Not Listed	Yes
Latham's Snipe	Gallinago hardwickii	Vulnerable	Vulnerable	Yes
Little Curlew	Numenius minutus	Not Listed	Not Listed	Yes
Marsh Sandpiper	Tringa stagnatilis	Not Listed	Not Listed	Yes

Pacific Golden Plover	Pluvialis fulva	Not Listed	Not Listed	Yes
Pectoral Sandpiper	Calidris melanotos	Not Listed	Not Listed	Yes
Red-necked Stint	Calidris ruficollis	Not Listed	Not Listed	Yes
Sharp-tailed Sandpiper	Calidris acuminata	Not Listed	Vulnerable	Yes
White-winged Black Tern	Chlidonias leucopterus	Not Listed	Not Listed	Yes

3.6 Introduced fauna species

Introduced fauna species that have been recorded on lands surrounding the offset areas (including within ML 1535) since 2005 include one bird species, seven mammal species and three plague locust species (Resource Strategies, 2013). These species include the Common Starling (*Sturnus vulgaris*), European Red Fox (*Vulpes vulpes*), European Rabbit (*Orytolagus cuniculus*), Feral Cat (*Felis catus*), Wild Dog (*Canis familiaris*), Feral Pig (*Sus scrofa* sp.) Brown Hare (*Lepus capensis*), House Mouse (*Mus musculus*) and plague locust species including the Australian Plague Locust (*Chortoicetes terminifera*), Migratory Locust (*Locusta migratoria*) and the Spur-throated Locust (*Austracris guttulosa*). Measures to control feral pests are detailed in Section on

4.4.2

3.7 Introduced Weeds

During the survey campaigns undertaken by EMM surveys to support Biodiversity Assessments for the project, weeds were recorded across all the PCTs within the disturbance area and immediately adjacent.

Weeds of National Significance are regarded as the worst weeds in Australia due to their invasiveness, potential to spread, and economic and environmental impacts, and are listed under the National Weeds Strategy. Of the weeds recorded, only one is regarded as a Weed of National Significance: Fireweed (Senecio madagascariensis). African boxthorn (*Lycium ferocissimum*) and Bathurst Burr (*Xanthium spinosum*) are species of concern within the Central West Local Land Services Region (LLS 2017). Other high threat weeds observed were Paspalum (*Paspalum dilatatum*) and Lippia (*Phyla canescens*).

These five weeds are regulated across all of NSW with a general biosecurity duty to prevent, eliminate or minimise any biosecurity risk they may pose. Other weed species that have been identified on CGO and Evolution landholdings and measures to control weeds are detailed in Section 4.3.3.

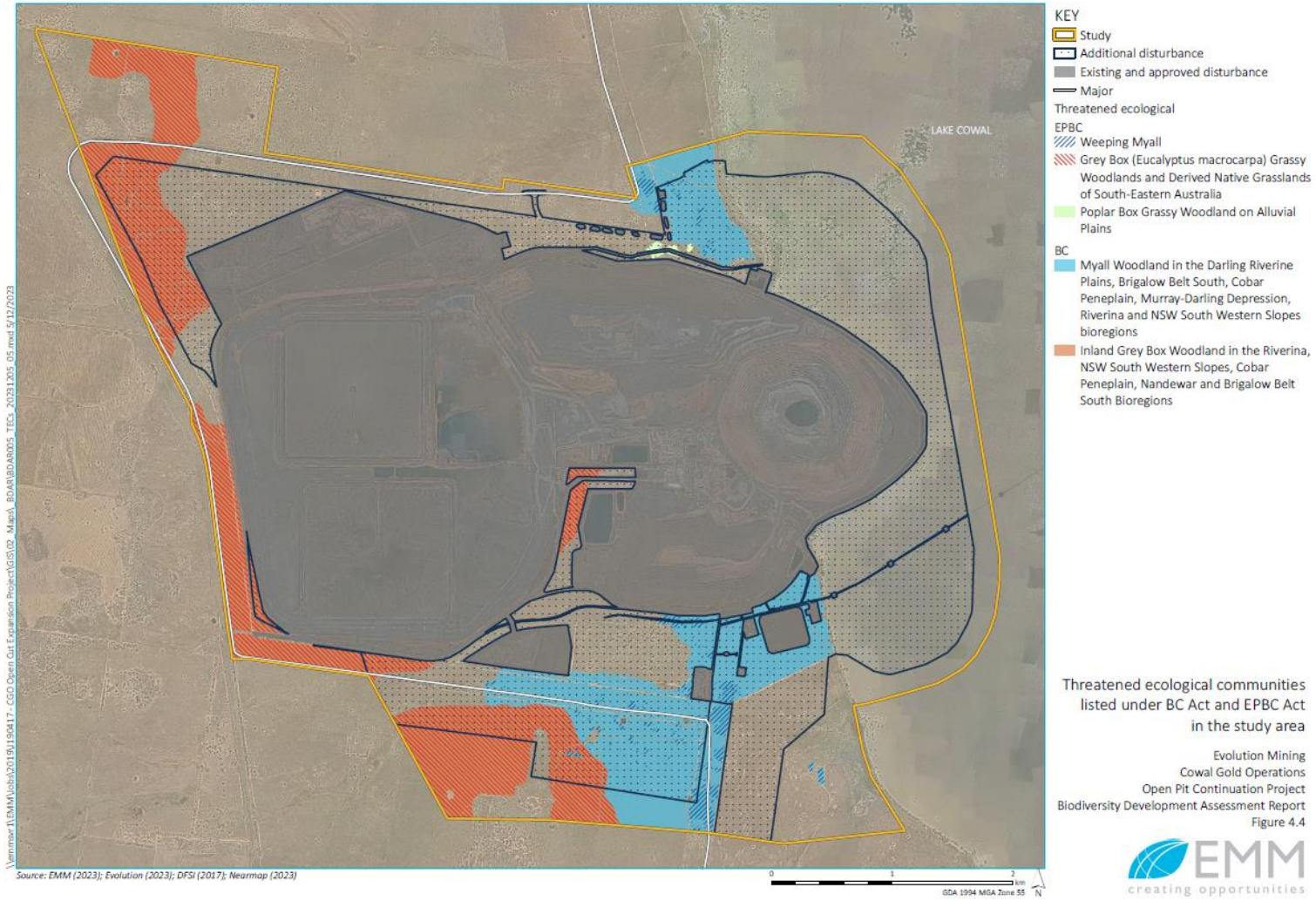

Figure 4: Threatened Ecological Communities

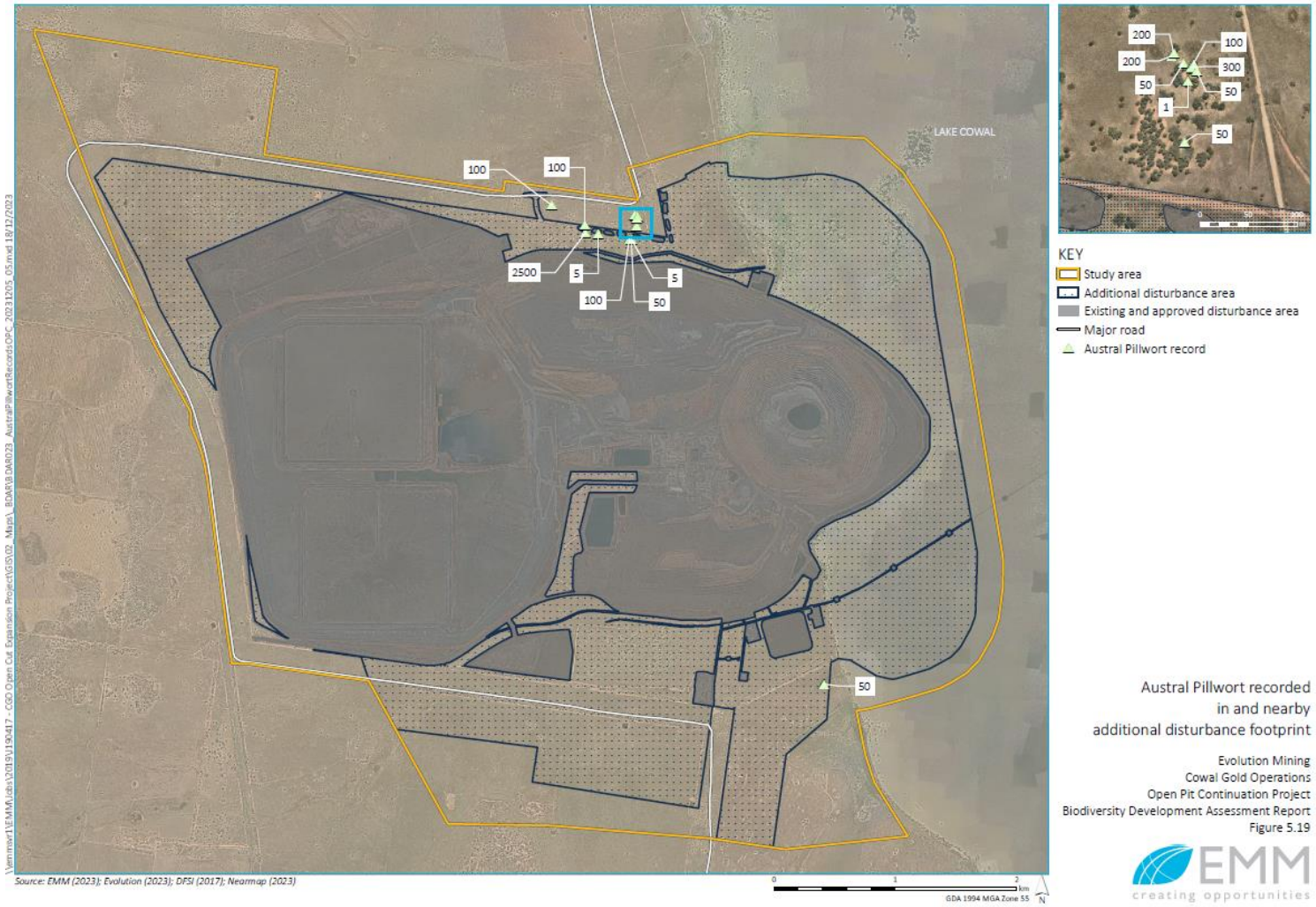

Figure 5: Threatened flora recorded

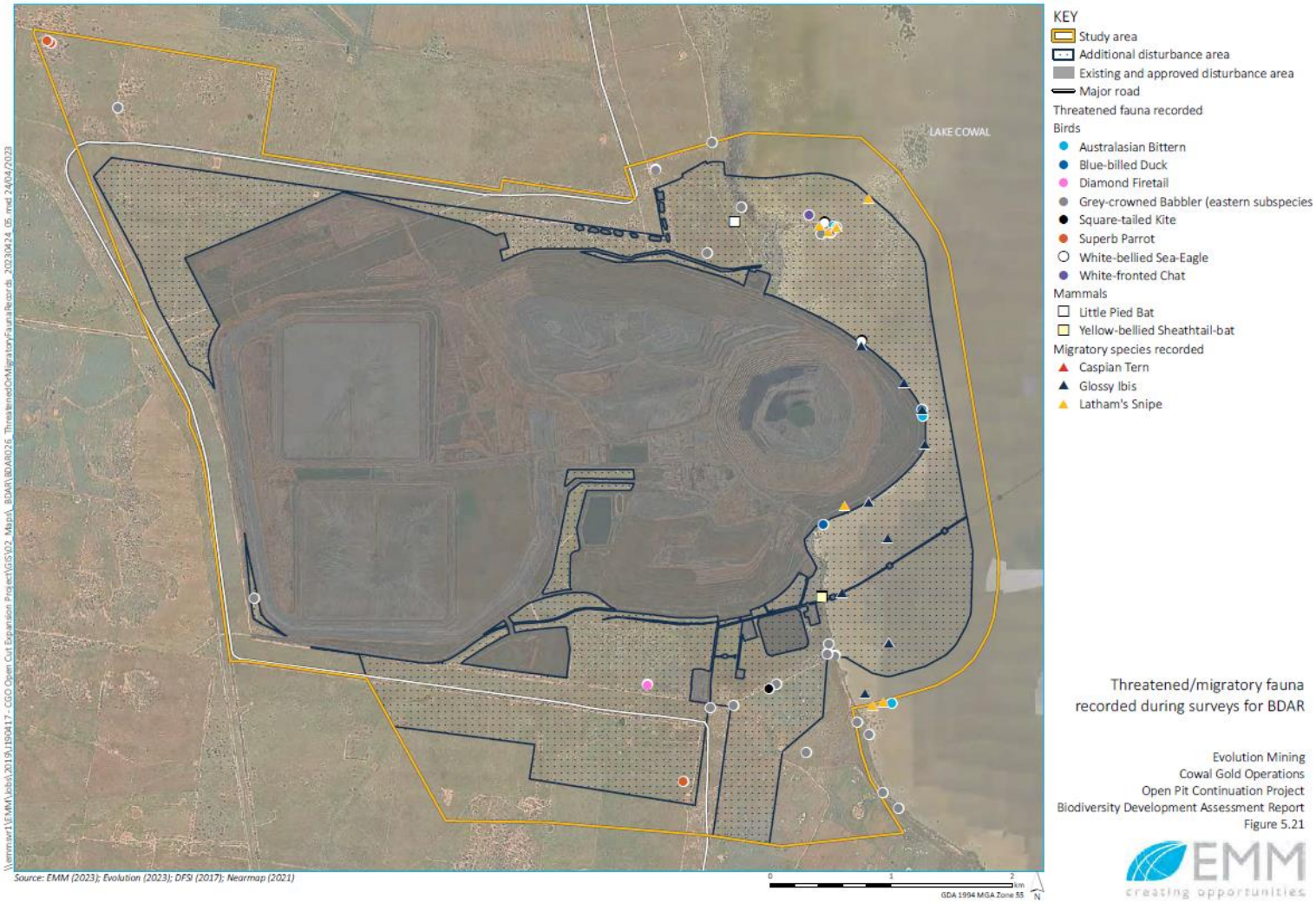

Figure 6: Threatened/migratory fauna recorded

4 Environmental management

4.1 Approach to management

The management actions have been addressed for pre-construction, construction, post-construction/operation of the project in accordance with various Development Application Consent Conditions listed with B48 and relevant EIS and BDAR commitments.

The management actions proposed in this section aim to avoid and minimise direct and indirect impacts on biodiversity as far as practical. A summary of the management actions, including responsibility, performance criteria, monitoring adaptive management is provided in Table 26 and Table 27 respectively, with additional detail relating to each management measure provided in this section.

The roles and responsibilities of all project personnel of relevance to this BMP are listed in Table 28. Evolution would be primarily responsible for the implementation of this BMP unless specified otherwise.

4.2 Pre-construction management measure

4.2.1 Demarcation of the clearing, construction and biodiversity sensitive areas

In accordance with consent B48(e)(viii) and EIS commitment TE09, prior to any vegetation clearing works commencing, vegetation clearing limits will be clearly demarcated using bunting to prevent unauthorised clearing and impacts to retained native vegetation and associated fauna habitat. Specific measures relating to demarcation limits are provided below in Table.

Table 11: Methodology for demarcation of clearing, construction and biodiversity sensitive areas

Measure	Procedure
Construction Area	– Demarcation of the construction area (flagging tape/boundary signage) to be undertaken along the boundaries of direct impact area. – Additional vegetation clearing limits will be clearly demarcated using bunting to prevent unauthorised clearing. – The installation of bunting will facilitate the ease of movement of fauna present within the construction footprint. – Prior to construction works commencing, the construction area will be bounded by temporary fencing along the lake foreshore where a vegetation corridor remains to prevent encroachment of heavy plant, vehicles, and personnel into the native vegetation. – All existing and installed temporary fencing will display signs stating that access is not permitted to native vegetation. – A tree assessment report will be undertaken to determine the location of fencing in relation to the Tree Protection Zone's (TPZ) of retained trees
Austral Pillwort	– Areas of habitat containing retained Austral Pillwort within the project area are to be identified and marked out as a no-go zone using flagging tape and signage – Sediment and erosion controls including protective fencing (e.g., parawebbing) and sediment/erosion controls including silt screens will also be established around retained Austral Pillwort areas to prevent course coarse debris and sediment-laden water from smothering Austral Pillwort habitat

Tree Protection	– Tree protection fencing will be installed around TPZ of trees that are not required to be removed to facilitate the project, particularly in the approved additional disturbance area. – Compliance with Australian Standard AS 4970-2009 'Protection of trees on development sites' will be adhered to, ensuring no stockpiling or heavy plant activity occurs within tree root protection zones.
Fauna Consideration	– Temporary fencing as described above will minimise impacts on fauna habitat resources particularly, woody vegetation corridor along the foreshore outside the disturbance footprint. – Gate modifications will be made to fencing to allow trapped fauna to escape. – No construction activities will occur while fauna is trapped within the construction area.

4.2.2 Contractor education

In line with EIS commitment TE05, information regarding the management of biodiversity-sensitive areas, including the significance of native threatened flora, fauna, migratory species and threatened ecological communities, will be incorporated into employee and contractor inductions. The content of contractor education is provided in Table.

Table 12: Content to be incorporated into employee and contractor inductions

Biodiversity Value	Communication
Sensitive Environmental Features	– Communicate to all contractors about sensitive biological areas, including threatened migratory species, threatened flora, fauna habitats, and ecological communities. – Emphasise that access to demarcated native vegetation is strictly prohibited.
Fauna Encounter During Clearing	– Communicate the procedures to follow if fauna is found during vegetation clearing, as per Section 5.
Arrive Clean, Leave Clean	– Educate contractors to ensure personal protective equipment (PPE), such as boots and clothing, is free from mud and weed propagules to avoid contamination if entry into native vegetation is unavoidable. – Truck drivers to remain on signposted tracks and adhere to vehicle hygiene protocols to prevent environmental contamination.
Reducing Fauna Strike Risk	– All contractors and Evolution personnel are to be educated during inductions about adhering to driving and vehicle speed limits, particularly during high-risk times for fauna activity, such as sunrise and sunset.
Reporting Biodiversity Risks	– All contractors and Evolution personnel are aware of their responsibility to report faults in sediment fencing, tree protection, construction perimeter fencing, or any other issues that may present a real or perceived risk to biodiversity.
Maintaining a Clean Environment	– All contractors and Evolution personnel are to be educated on how to achieve rubbish-free conditions within mining lease (ML) areas, particularly around administration and contractor facilities, to discourage scavenging by non-native species and to reduce the risk of colonisation by invasive fauna.

Biodiversity Value	Communication
Prohibition of Animals	– All contractors and Evolution personnel are educated about the prohibition of domestic pets from entering ML areas. - Contractors and employees are not allowed to keep or feed native fauna.
Vehicle Movement and Speed Limits	– Strict speed limits on vehicles using ML area roads and tracks will be determined by CGO to minimise potential interactions with fauna.
Minimising Fauna Trapping	– All contractors and Evolution personnel are to be educated on how all open boreholes and excavations are to be either capped or temporarily covered to prevent fauna from becoming trapped.
Austral Pillwort Protection	– All contractors and Evolution personnel are to be educated about marked no-go zones for Austral Pillwort within the project area and outside the disturbance footprint. – Educate contractors on the importance of protective measures, including the installation of fencing (e.g., parawebbing) and sediment/erosion controls to prevent damage or smothering of retained Austral Pillwort habitat. – Reinforce the importance of these no-go zones during site inductions for all personnel.
Reducing Impacts of Noise on Fauna	– Reinforcement (such as at toolbox talks) the need to minimise noise during construction. – Educate staff on the effects of noise and the use of quiet work practices when operating equipment (e.g. positioning idle trucks in appropriate areas).
Induction Information	– Provide comprehensive training during inductions on the management of native flora and fauna, biodiversity risks, and biodiversity sensitive features. – Include education on respecting vegetation clearing limits and appropriate vehicle hygiene practices.

4.2.3 Pre-clearance management measure and survey

In accordance with consent B48(e)(i) and EIS commitment TE01, pre-clearance surveys are required to minimise impacts on flora and fauna during vegetation clearing. Pre-clearance surveys for threatened fauna, and the salvage, transplanting and/or propagation of any threatened flora species present within the disturbance area will be undertaken at least one week prior to planned vegetation clearing activities.

4.2.3.1 Pre-clearance management measures for flora

- the disturbance areas to be clearly marked or fenced to prevent accidental damage to adjoining remnant native vegetation during vegetation clearance activities or construction works
- areas of habitat containing retained Austral Pillwort within the project area are to be identified and marked out as a no-go zone
- protective fencing (e.g. parawebbing) and sediment/erosion controls will be placed around retained Austral Pillwort populations and known habitat for their protection prior to construction

4.2.3.2 Pre-clearance management measures for fauna

- Conduct pre-clearance surveys to minimise impacts on flora and fauna. Surveys for threatened fauna and the salvage, and/or propagation of threatened EEC propagules will be undertaken at least two weeks prior to planned vegetation clearing activities.

- Mark and observe all hollow-bearing trees, stags, and any trees containing nests or dreys within the clearing footprint. Salvageable standing and fallen timber will also be identified. The parameters of habitat features to be identified include the following:
  - habitat features (e.g. hollow, opening, crack, loose bark, bird nest).
  - the position of the habitat feature (e.g. located on a branch or trunk).
  - the size of the feature (e.g. small, medium or large).
  - living status of the tree (e.g. alive or stag).

The potential for the habitat features to be salvaged and used in the rehabilitation, habitat enhancement programmes and or BSA areas included but is not limited to:

- hollow-bearing trees showing sign of activity, particularly high bird activity at hollows and nests; and.
- fallen logs and showing evidence of fauna activity (e.g. scats, tracks and scratches).

4.2.4 Maximise the salvage of resources

In accordance with consent B48 (e) and EIS commitment TE02 salvageable habitat features (including hollows in living and dead wood, standing, and fallen dead wood, and rocks) identified during the pre-clearance survey will be retained for placement in the RVEP and BSA Areas and/or distributed into adjacent habitat.

- Salvaged habitat features marked for use including logs of removed trees are to be retained for installation in BSA areas to provide fauna habitat
- All retained salvaged habitat features will be flagged, then relocated and stored at a designated area, until they are placed in their nominated areas.

Table 13 below outlines additional measures that are required to be incorporated into the Rehabilitation Management Plan for positive outcomes for biodiversity.

Table 13: Biodiversity management measures for rehabilitation

Measure	Description
Maximise the use of salvaged resources, including tree hollows, vegetation, and soil resources, for beneficial reuse, including fauna habitat enhancement B48(e)(v)	- Salvaged habitat features that have been stockpiled since clearing was undertaken may be evenly placed on the ground throughout the rehabilitation area under the supervision of a qualified ecologist. - Placement of coarse woody debris in the BSA areas will not exceed benchmark values as specified in BioNet Vegetation Classification (or equivalent) at the time of commencement of the relevant stage of rehabilitation. - Salvage topsoil suitable for reuse in rehabilitation of the BSA and RVEP areas. Store in piles for reuse in rehabilitating. Where practicable, soil will be stripped from one area and immediately transferred to an active rehabilitation area for direct placement. This will reduce the size of soil stockpiles and optimise soil fertility for rehabilitation. Soil unable to be immediately used for rehabilitation will be stockpiled as per the sites soil Stripping Management Plan (SSMP)If feasible, source fresh donor topsoil from newly cleared areas supporting any of the PCTs that occur within and adjacent to the disturbance area. The use of fresh donor soil would promote establishment of native species from the soil seedbank. Case studies found the use of fresh donor topsoil resulted in the establishment of at least 33% more species than the use of stockpiled topsoil (Commonwealth of Australia 2016).

Measure	Description
Manage the collection and propagation of seed from the local area B48(e)(ix)	– During the preliminary habitat assessment phase, trees may also be examined for their provision of seed to be utilised in the rehabilitation programme. Where available, seed will be collected at the time of vegetation clearance activities. – Consistent with commitments in the Cowal Gold Operations Processing Rate Modification Environmental Assessment (Evolution, 2018), seed stock from species characteristic of the Grey Box EEC and Weeping Myall Woodlands EEC listed under the EPBC Act would be collected from areas to be cleared (where available), for use in the CGO's rehabilitation programme. – An appropriately qualified bush regenerator must prepare and implement a Native Seed Collection Strategy, which adheres to the Australian benchmark guidelines developed by Florabank for native seed collection. – Appropriately qualified, experienced, and licenced contractors must be used for native seed collection and must adopt the Model Code of Practice. – Appropriately qualified bush regenerator must undertake the salvage, transplanting and propagation of any flora species, and collection and propagation of seed from the local area. – Use locally sourced seed wherever possible to propagate tube stock to be used for revegetation
Minimise impacts to threatened ecological communities listed under the BC Act and EPBC Act, and contribute to conservation strategies for these communities B48(e)(vi)	– The planting palette will be comprised of diagnostic species of the PCTs recorded in adjacent habitat. – Revegetation will aim to reflect adjacent vegetation by restoring relevant PCTs. Conceptual rehabilitation domains, aligned with these PCTs, have been developed in accordance with best practice and will guide rehabilitation as outlined in Section 2.4.1 of the RMP.
Control weeds, including measures to avoid and mitigate the spread of weeds B48(e)(ix)	In addition to the weed control measures detailed in Section 5.3.3, the following weed control measures apply to the enhancement areas. – Appropriately qualified person must undertake the revegetation maintenance including weed control. – Undertake maintenance weeding in the disturbance footprint and adjacent natural bushland where weed incursion has been identified. Dependent on the weed density and the age of the revegetated area will dictate the frequency of weed maintenance after completion of the domain. – Spot spraying is recommended to control weeds on steep slopes at risk of erosion. – Jute matting may be used to secure steep slopes of the stockpiles and supress weed growth.

4.2.5 Pre-clearance surveys

In accordance with Consent B48(e)(i) and EIS commitment TE01, the preclearance surveys will involve the following stages:

Stage 1: Preliminary habitat assessment

The preliminary habitat assessment phase of the pre-clearance surveys involves the inspection of all trees by a suitably qualified person(s) located within proposed disturbance areas for features with the potential to provide roosting and/or nesting resources for birds, bats and arboreal mammals (e.g. hollows, openings, cracks and/or loose bark). Trees containing such features are referred to in this BMP as potential 'habitat trees'. The purpose of the preliminary habitat assessment is to identify roosting/nesting habitat resources that may be impacted by the vegetation clearance activities.

Parameters recorded by the preliminary habitat assessment may include:

- habitat features (e.g. hollow, opening, crack, loose bark, bird nest).
- the position of the habitat feature (e.g. located on a branch or trunk).
- the size of the feature (e.g. small, medium or large).
- living status of the tree (e.g. alive or stag).
- the potential for the habitat features to be salvaged and used in the rehabilitation or habitat enhancement programmes.
- fauna observed in the area and surrounds, particularly bird activity at hollows and nests; and
- evidence of fauna in the area and surrounds (e.g. scats, tracks and scratches).

The results of the preliminary habitat assessment will be utilised to determine appropriate secondary habitat assessment activities (described below).

During the preliminary habitat assessment phase, trees may also be examined for their provision of seed to be utilised in the rehabilitation programme. Where available, seed will be collected at the time of vegetation clearance activities.

Consistent with commitments in the Cowal Gold Operations Processing Rate Modification Environmental Assessment (Evolution, 2018), seed stock from species characteristic of the Grey Box EEC and Weeping Myall Woodlands EEC would be collected from areas to be cleared (where available), for use in the CGO's rehabilitation programme.

In the event that any threatened species are observed during the preliminary habitat assessment, the Threatened Species Management Protocol (TSMP) will be initiated.

All non-habitat vegetation may be removed (i.e., under-scrubbing leaving hollow-bearing/habitat trees in place). Habitat trees are to remain in place untouched for a minimum of 48 hours after all non-habitat trees have been removed, to allow unassisted departure of native fauna from remaining habitat.

Stage 2: Secondary Habitat Assessment

The secondary habitat assessment involves further surveys of habitat trees by a suitably qualified person(s) to determine their usage by birds, bats and/or arboreal mammals. This may include:

- observations of hollows and nests for nesting birds.
- spotlighting and stag-watching for arboreal mammals and roosting bats; and
- bat surveys using Anabat electronic detectors is advised to be undertaken at least two weeks prior to clearing to ensure data analysis can be undertaken.

The secondary habitat assessment phase will be conducted with consideration of seasonal and temporal factors. For example, where practicable, bat fauna surveys will be conducted to avoid the hibernation period (May to August). The secondary habitat assessment will be undertaken within two weeks prior to vegetation clearance. If the secondary assessment and vegetation clearance cannot occur within this timeframe, the areas proposed for clearing will be reassessed, and the clearing process will be staged accordingly to ensure compliance with this BMP and EIS commitment TE01.

Where the secondary habitat assessment determines that a habitat tree is being used as a roosting and/or nesting resource by non-threatened fauna, the fauna management strategies phase of the BMP will be initiated (Section 4.12.3.1). Where the secondary habitat assessment determines that a habitat tree is being used as a roosting and/or nesting resource by threatened fauna, the Threatened Species Management Strategy stage of the BMP (TSMP) will be initiated (4.5.2.7).

4.2.6 Vegetation clearance procedure

Where the secondary habitat assessment determines that a habitat tree is not being utilised by fauna as a roosting and/or nesting resource, vegetation clearance can proceed using the vegetation clearance procedure.

- Removal of habitat trees under the supervision of an ecologist. Trees will be gently tapped with machinery several times (with several minutes wait in between) to encourage any resident fauna to leave.
- Habitat trees with hollows will be dismantled in pieces so that hollows are retained and lowered gently. Hollows will be inspected, and any wildlife relocated or the hollow to be retained in situ until wildlife can be relocated effectively.
- Where fauna has not fled or does not seem likely to flee from a hollow the ecologist will advise on the potential to block hollow exits and move the section of the hollow-bearing tree with the fauna to the conservation area where the exits can be unblocked at an appropriate time of day and the animal left to exit and move on its own.
- Where this method of relocation is not considered acceptable by the ecologist, the ecologist will attempt to capture or encourage any un-injured fauna that is capable to move or relocate from the project site.
- If it proves difficult to remove an animal from a hollow, these trees/logs will be left on the ground overnight to give these animals a chance to relocate before the tree is mulched or moved.
- Typically, most fauna in this situation will have multiple roosts throughout the region and will vacate the hollow and move away from the impact footprint.
- Any small and nocturnal fauna that are unable to relocate themselves, such as micro-bats, lactating females, will be captured, placed into individual calico bags, and then stored in a cool location for release after dusk. Any captured fauna will be released into suitable habitat off-site.
- If an animal is injured during these works, the ecologist will ensure that they receive the appropriate level of care. Depending on the level of injury, WIRES and/or the nearest veterinary clinic will be contacted to take the animal into care upon delivery by the ecologist.

4.2.7 Clearing of vegetation

Key points for vegetation clearing are:

- The removal of native vegetation identified as containing potential roosting/nesting resources for birds, bats and/or arboreal mammals to be conducted outside of peak breeding/hibernating periods (e.g. for a large number of species known or considered highly or moderately likely to occur in the disturbance area, late Summer/early Autumn, is the most appropriate).
- Where possible, schedule clearing to occur in mid-Autumn, which is outside of breeding and nesting periods and outside hibernation (torpor) periods of threatened fauna species that are known or considered highly or moderately likely to occur in the disturbance area.
- Comply with measures and procedures in Sections 4.2.3, 4.2.5 and 4.2.6.

4.3 During construction management measures

4.3.1 Management of aquatic fauna and invertebrates during dewatering

In accordance with EIS commitment AE02 the following procedure will guide actions for capturing and releasing aquatic and terrestrial wetland fauna back into Lake Cowal from construction work areas or during LPB dewatering. To facilitate rapid fauna rescue, the pump inlet will be large enough to allow sediment passage but will include a fish-friendly mesh cover to prevent macroinvertebrates, fish, larvae, tadpoles, and frogs from being pumped out.

In addition to the discharge requirements outlined in the WMP for water discharge, the dewatering of waters from Lake Cowal will require the following measures provided below in Table 14. As far as reasonably practical, CGO will avoid dewatering and fauna translocation activities during the peak of Summer to avoid stress of fish.

Table 14 Management of aquatic fauna and invertebrates

Method	Procedure
Pre-dewatering measures	– Preparing the Lake Protection Bund (LPB) area for dewatering in accordance with the WMP.
	– As far as reasonably practical, CGO will avoid dewatering and fauna translocation activities during the peak of Summer to avoid stress of fish
	– Identification of suitable habitats within unimpacted areas of Lake Cowal for translocation of native fauna by the Project Ecologist.
	– Installation of measures to minimise injury to aquatic fauna, such as sediment controls to direct fauna towards suitable habitats during the dewatering process. – The volume or rate of water extraction is not to exceed dewatering limits approved by Fisheries NSW and EPA
	– Obtaining and setting up fish friendly pumping screens to ensure native aquatic fauna are not harmed during the pumping process or that pest species are not transferred. The fish friendly pump screen must be suitable for pump diversions. E.g. ISI/AWMA proprietary design as advised by NSW DPI Fisheries “The practical guide to modern fish-protection screening in Australia”. – Fish friendly pump screen is to have 2-3mm mesh.
Aquatic Fauna Capture	– Trained staff will traverse the waterbody during the dewatering and will collect native aquatic fauna including fish, eels, fish larvae and invertebrates using dip nets, or gloved hands if required and periodically check any static nets and remove captured fauna.
	– Manual searching of vegetation for cover such as hollows, fallen timber, burrows, discarded tins, etc.
	– Gradual dewatering over several days to allow fauna relocation, including measures to direct them away from dangerous areas (e.g., roads) towards suitable alternative locations.
	– Manually entering (where safe) the partially dewatered zone to search for remaining fauna.
	– Ensuring the dewatering schedule allows sufficient time for fauna rescue, particularly during the final bunded water depth of 1 meter. Fauna to be undertaken with pumps adequately sized and placed free from mud and debris (e.g., inside an excavator bucket or screened sump pit). – Larger fauna will be prioritised due to rapid decrease in dissolved oxygen concentration as the water volume decreases.
	– Transferring native fauna to aerated holding containers (fish) or directly to release areas (reptiles/amphibians/invertebrates/larvae). Frogs will be released into dense pool/pondside vegetation, preferably at night to avoid predators. Holding tanks will be shaded to prevent harmful temperature increases.
	– Installation of a fauna egress matting to allow any fauna in the bottom sediment to escape. This ramp will remain in place for a minimum of two nights.
	– Supervising project ecologist will nominate suitable release sites based on the species and quantity of captured aquatic fauna and invertebrate species.

Method	Procedure
Relocation of Captured Aquatic Fauna	– Native fish are to be transported in aerated containers of collected water and gradually acclimatised to new water quality. Process includes collecting water from the receiving waterbody and slowly mixing with tank water over 5–10 minutes.
	– Frogs will be released into dense aquatic vegetation after sunset if possible.
Methods to Prevent Injury to Fauna During Dewatering	– Using gloves to limit the spread of disease.
	– Working slowly and methodically through the waterway to avoid trampling aquatic fauna. – Limiting holding time in aerated containers. – Keeping one frog per bag to minimise disease spread and potential toxin impact between species. – Shading holding containers to prevent harmful temperature increases. – Having a nearby release point to minimise transportation time and stress.
Management of Pest Species and Pathogens	– Euthanising non-native aquatic species humanely in accordance with DFPI guidelines.
	– Following decontamination processes for in-water work, including cleaning equipment and vehicle tires.
Post-dewatering Report	– Recording details of fauna capture and release (species, date, time, location).

In accordance with the requirements of the Section 37 Permit under the FM Act, any exotic species considered 'pest fish' by NSW DPI (DPI 2014) must be humanely euthanised.

Any pest species will be humanely removed and euthanised in a manner consistent with the Prevention of *Cruelty to Animals Act* 1979. Pest fish will be euthanised as per the standards in Section 5 of the *Australian code of practice for the care and use of animals for scientific purpose* (NHMRC 2013) and ANZCART *guidelines for euthanasia of animals used for scientific purpose*s (2001). For example, the small-bodied pest fish Eastern Gambusia will be euthanised using an ice slurry. Large-bodied pest fish such as Carp (*Cyprinus carpio*) may be required to be euthanised by blunt force trauma. Euthanised fish will be disposed of, if required, at a landfill site.

If any individuals of the Red-eared Slider Turtle (*Trachemys scripta elegans*) are identified, they will be separately contained and reported to DPI Biosecurity via telephone (1800 680 244) or email (nia.management@dpi.nsw.gov.au).

If any pests or diseases that are identified as prohibited matter under Schedule 2, Part 1 of the NSW Biosecurity Act 2015, or notifiable species under Schedule 1, Part 2 of the Biosecurity Regulation 2017, the Emergency Animal Disease and Pests Hotline (1800 675 888) will be notified.

4.3.2 Management measures for Austral Pillwort

Areas within the project area containing retained Austral Pillwort are to be identified and marked out as a no-go zone using flagging tape and signage. To prevent sedimentation and protect sensitive Austral Pillwort habitat, CGO has implemented a multi-layered sediment control strategy that includes sediment fencing and a tiered drainage control system comprising the ICDS (Internal Catchment Drainage System) and UCDS (Up-catchment Diversion System).

Sediment fencing is installed along the perimeter of key retained Austral Pillwort habitat, particularly in areas adjacent to active construction or operational zones. These fences act as physical barriers to intercept and filter sediment-laden runoff, preventing coarse debris from entering and smothering sensitive habitat. The fencing inspections will ensure effectiveness during rainfall events and peak operational periods.

The UCDS functions as the primary catchment control, capturing and redirecting surface water runoff from upslope areas before it reaches mining operations and areas of ecological sensitivity. It is strategically located to intercept runoff at the highest feasible point in the landscape, minimising the volume and velocity of water that could potentially enter the Austral Pillwort habitat. This line will incorporate bunds, swales, and diversion drains to manage flow direction and reduce erosion risk.

The ICDS serves as a secondary containment measure within the disturbed footprint of the mine site. Positioned closer to the operational areas, the ICDS is designed to capture and direct runoff from mining activities to internal sediment basins and containment structures. This layered approach will ensure that no uncontrolled discharge enters adjacent Austral Pillwort habitat or the broader Lake Cowal catchment.

Additional sediment/erosion controls will be implemented to prevent coarse debris from smothering Austral Pillwort habitat. This will be implemented by the establishment protective fencing (e.g., parawebbing) and sediment/erosion controls along the boundary of retained Austral Pillwort areas during construction.

4.3.3 Weed management

In accordance with Consent B48(e)(x) the procedures detailed in Table will be implemented as necessary. These measures include weed prevention, physical removal, and chemical application control methodologies.

Where feasible, physical removal methods will be prioritised. If physical control methods are unsuitable, only herbicides registered for aquatic use by the Australian Pesticides and Veterinary Medicines Authority (APVMA) will be applied, following product label instructions (DLWC, 1998).

Table 16 provides details on the species observed during field surveys and the corresponding proposed weed control methods. For any additional weed species identified on-site, refer to the Weed Control Handbook (DPI, 2018) for appropriate control methods.

Table 15: Weed management measures

Method	Procedure
Weed prevention	
On-farm weed source reduction	Where practicable, Evolution will keep fence lines, livestock yards, laneways, and areas around sheds free of weeds to minimise the spread of weeds via physical removal or spraying in these heavily trafficked areas.
Material control	All materials brought into the construction site (e.g., soil, mulch, gravel) is to be certified free of weeds and pathogens. Responsible for approving all materials purchased or salvaged to be brought on site.
Machinery, vehicle & boot hygiene	Correct machinery, vehicle, and boot hygiene is to be undertaken to help prevent the spread of invasive plant diseases and weeds threatening native plants, animals, and ecosystems. This will reduce the risk of introducing and spreading soil pathogens such as *Phytophthora cinnamomi* or *Batrachochytrium dendrobatidis*, which causes amphibian chytrid fungus disease into the site, which may be inadvertently transferred into the adjacent environment. Contractor education is undertaken on induction and monthly. Methods of implementation to ensure all items are addressed is discussed in Section 4.2.2
Wash-down facilities	Use a wash-down facility for vehicles and machinery, or wash-down on a hard, well-drained surface, such as on a road.

PPE hygiene	Clean PPE (Personal Protective Equipment), especially boots, prior to unavoidable entry on foot into the native vegetation and rehabilitation area.
Weed control	
Weed identification	Conduct annual site inspections to identify weed species listed in Table 15.
Communication & coordination	– Engage with other landholders, leaseholders, and regulatory authorities to keep weed management practices in line with regional weed control activities. – If herbicides are used, permission will be sought from the occupiers of the land.
Weed removal	Use mechanical removal of identified priority weeds and/or the application of approved herbicides in authorised areas (herbicide use in wetland areas will be strictly controlled)
Prevention of new weeds	– Where practicable, prevent the establishment of new weeds on Evolution-owned land by minimising seed transport of weed species through the use of a vehicle wash bay. – Weed propagules will be disposed of appropriately at a green waste facility to minimise potential weed spread to the adjoining areas of bushland
Species identification	Any species of uncertain classification will be sampled and identified by Riverina LLS, BSC, or local DPI Agriculture officers. Advice will continue to be sought from Riverina LLS and BSC for the control of any newly identified weeds on Evolution-owned land.
Priority weed notification	Notify BSC, Riverina LLS, and DPI Agriculture if a priority weed is identified on Evolution-owned land.
Integrated weed management	Use an integrated weed management approach involving a combination of hand weeding and various chemical applications to avoid harm to non-target native species. If herbicides are used, permission will be sought from the occupiers of the land.

Hand weeding	– Hand weeding will be undertaken on annuals and perennials, or immature woody weeds and vines.
	– Hand weed removal measures are to take advantage of seasonal attributes is key. For example., moist soil conditions after rain are good for hand-weeding and knowing flowering times to specific target weeds to spray before seed-set or during active growing.
	  – hand weeding.
	  – mulching and smothering.
	  – slashing and mowing.
	  – burning.
	  – cultivation.
	  – weed seed collection.
	  – green manuring.
	  – hay or silage making.
	  – competitive crops and pastures; and
	  – crop and pasture rotation.

Herbicide use	– Herbicides will only be applied by suitably qualified persons. – Typical application techniques considered will include (DPI, 2018b): – Spraying (spot application or broad-area infestation treatment)

	– Cut and paint (applied to weed trees) – Stem injection (applied to weed trees) – Frilling (application to a series of notches around the trunk of a large weed plant) – Stem-painting (suitable for vines and smaller weed plants) – Chemical control methods will align with recommendations provided in the *New South Wales Weed Control Handbook*, accessible via the NSW Department of Primary Industries WeedWise website (DPI, 2018). – Herbicide application near waterways will comply with guidelines established by the Cooperative Research Centre for Australian Weed Management (2005). – The most effective herbicide will be selected based on its impact on target weed species and its persistence in soil and water. – Over-spraying will be avoided to prevent soil exposure and reduce erosion risks. – All herbicide use will follow the instructions specified on product labels or any relevant off-label permits issued by the APVMA. – Given the nature of the site and expected type of weed incursions, there are limitations associated with hand removal. Best applied to annuals/perennials (large infestation), grasses, woody weeds, and vines. A mix of spot-spraying, Cut & Paint, and Scrape & Paint techniques can be utilised to apply chemicals to target weed species.
Waste disposal	Weed propagules will be disposed of appropriately at a green waste facility to minimise potential weed spread to the adjoining areas of bushland.

Table 16: Proposed weed specific control methods

Common Name	Scientific Name	Weed Status and HTE/Priority Weeds/Listed	Physical Control Methods	Chemical Control Methods
African Boxthorn	*Lycium ferocissimum*	Biosecurity Act 2015, HTE, Priority Weed, Listed under National Weeds Strategy & Central West LLS	Manual removal (including excavation of roots)	Herbicide treatment with registered systemic herbicides (e.g., Triclopyr, Glyphosate). Apply Triclopyr directly to cut stems; Glyphosate as foliar spray, ensuring even coverage on leaves before flowering or during early growth stages.
Bathurst Burr	*Xanthium spinosum*	Biosecurity Act 2015, HTE, Priority Weed, Listed under National Weeds Strategy & Central West LLS	Hand weeding before seed set	Herbicide application (e.g. Glyphosate). Apply Glyphosate as a foliar spray early in the growing season before seed set to effectively manage this weed.
Paspalum	*Paspalum dilatatum*	Biosecurity Act 2015, HTE, Priority Weed, Listed under National	Hand weeding/manual removal	Non-selective herbicide

Common Name	Scientific Name	Weed Status and HTE/Priority Weeds/Listed	Physical Control Methods	Chemical Control Methods
		Weeds Strategy & Central West LLS		
Lippia	*Phyla canescens*	Biosecurity Act 2015, HTE, Priority Weed, Listed under National Weeds Strategy & Central West LLS	Manual removal where feasible	Herbicide treatment (e.g., Glyphosate). Apply Glyphosate as a foliar spray to ensure coverage, especially in actively growing plants.
Aaron's Rod	*Verbascum thapsus*	Not listed	Hand weeding/manual removal	Non-selective herbicide
Black Roly-poly	*Sclerolaena muricata*	General Biosecurity Duty (NSW Biosecurity Act 2015, Weed, Listed under National Weeds Strategy & Central West LLS	Hand removal before seed dispersal	Non-selective herbicide
Camel Melon	*Cucumis myriocarpus*	Not listed	Manual removal	Non-selective herbicide
Common Nightshade	*Solanum nigrum*	Not listed	Hand removal	Apply Glyphosate to actively growing plants as a foliar spray, ensuring full coverage of leaves.
Fleabane	*Conyza spp.*	Biosecurity Act 2015, HTE, Priority Weed, Listed under National Weeds Strategy & Central West LLS	Hand removal	Apply Glyphosate as a foliar spray ensuring uniform coverage and application before seed setting.
Galvanised Burr	*Sclerolaena birchii*	Biosecurity Act 2015, HTE, Priority Weed, Listed under National Weeds Strategy & Central West LLS	Hand removal	Non-selective herbicide
Horehound	*Marrubium vulgare*	Biosecurity Act 2015, HTE, Priority Weed, Listed under National Weeds Strategy & Central West LLS	Manual removal	Apply Glyphosate as a foliar spray during the growing season.
Malta Thistle	*Centaurea melitensis*	Not listed	Hand removal before flowering	Apply Glyphosate as a foliar spray before flowering.
Narrow-leaved Cotton Bush	*Gomphocarpus fruticosus*	Not listed	Hand removal before seed dispersal	Apply Glyphosate as a foliar spray, as a foliar spray, applying early in the growing season.

Common Name	Scientific Name	Weed Status and HTE/Priority Weeds/Listed	Physical Control Methods	Chemical Control Methods
Nerium	*Nerium oleander*	Biosecurity Act 2015	Hand removal	Apply Triclopyr directly to cut stems or foliage for effective control.
Paterson's Curse	*Echium plantagineum*	Biosecurity Act 2015, HTE, Priority Weed, Listed under National Weeds Strategy & Central West LLS	Manual removal before flowering	Apply Glyphosate as a foliar spray early in the growing season before flowering.
Saffron Thistle	*Carthamus lanatus*	Biosecurity Act 2015, HTE, Priority Weed, Listed under National Weeds Strategy & Central West LLS	Hand removal before flowering	Apply Glyphosate to actively growing plants as a foliar spray, ensuring good leaf coverage.
Scotch Thistle	*Onopordum acanthium*	Biosecurity Act 2015, HTE, Priority Weed, Listed under National Weeds Strategy & Central West LLS	Hand removal before flowering	Apply Glyphosate as a foliar spray, ensuring even coverage before flowering.
Spear Thistle	*Carthamus lanatus*	Biosecurity Act 2015, HTE, Priority Weed, Listed under National Weeds Strategy & Central West LLS	Hand removal before flowering	Apply Glyphosate as a foliar spray, ensuring full coverage during active growth stages.
St. John's Wort	*Hypericum perforatum*	Biosecurity Act 2015, HTE, Priority Weed, Listed under National Weeds Strategy & Central West LLS	Manual removal	Herbicide treatment (e.g., Apply Glyphosate as a foliar spray early in the growing season.
Treasure Flower	*Gazania linearis*	Not listed	Hand removal	Herbicide application. Apply Glyphosate as a foliar spray to ensure even distribution of herbicide on plant leaves.
White Torch Cactus	*Soehrensia spachiana*	Not listed	Manual removal (excavation required)	Herbicide application with registered systemic herbicides. Apply Glyphosate to the cut stem or as a foliar spray in active growth stages.

4.4 Post construction and during operation management measures

4.4.1 On-going weed control

On-going weed control measures will be to continue to implement weed prevention, control and management procedures described in Table 15 and Table 16 for 5 years after completion of construction. Weed maintenance

in all areas disturbed as a result of construction (i.e., not including BSA areas) will be undertaken twice yearly at the beginning of Spring and Autumn to target weeds during peak growing periods as is best practice.

The frequency of weed maintenance is to adhere to the frequencies below, however modifications may be necessary

For example, the frequency may vary due to the response of vegetation on the site (level of weed re-incursion); hence it is recommended that management be adaptive.

4.4.2 Feral pest animal control

Riverina Local Land Services (RLLS) are responsible for coordinating feral animal control programs with landholders and local Councils and implementing Regional Strategic Pest Animal Plans to achieve the goals of the State and National level pest management strategies and threat abatement plans.

Given there is currently no baseline data regarding the existing populations of pest species at the site (with the exception of presence/absence data recorded by EMM during field campaigns, the approach to feral animal control will be as follows:

- Consult with RLLS and/or Council to determine if there are any applicable feral pest control programs that can be considered in relation to the current Project.
- Continue monitoring the presence of pest species population for fluctuations.
- Undertake pest control actions once the presence of pests is understood.

Pest control activities implemented within the project area will be reported in the Annual Review. Where inspections identify damage or failure of revegetation due to pests, contingency measures would be implemented to remediate the area.

Feral pest control may be undertaken using one or a combination of the methods listed in Table 17 below. It is anticipated that the site will be treated once a year using the approved methods, in consultation with RLLS and/or Council. Control measures will be implemented during the pre-construction, construction, and operational phases. These activities will be undertaken by nominated CGO personnel.

Table 17: Pest control measures that may be considered

Control type	Target species	Details
Poison baiting	Wild dogs, rabbit, and foxes	Under Section 4.4.1 of the Pesticides Act 1999 Pesticide Control (1080 bait products) Order, a baiting control plan will be developed in consultation with the authorised control officer following an appropriate risk assessment. To acquire and use 1080, Pindone, RHDV, or PAPP baits in NSW, you must be accredited (or under the direct supervision of an accredited person) with an AQF3 Chemical Accreditation or Vertebrate Pesticide Induction Training (VPIT) course accreditation.
Trapping	Wild dogs, rabbit, cats, foxes, wild pigs	Live trapping may be a suitable method of pest control to be used within the site, however it still poses a risk to non-target domestic animals. Trapping may be undertaken to remove particularly problematic individual animals. However, as with the other methods of pest control, trapping at the site alone is unlikely to make any significant difference to pest populations unless it is undertaken as part of a larger regional group control program. Key points for consideration with regards animal welfare and trapping are: – Set traps at dusk and check traps just before dawn to ensure safe release of nocturnal native species.

Control type	Target species	Details
		– Check trapped non-target animals for injuries prior to release and take into care where necessary. – Arrange for ethical and humane euthanasia of introduced species prior to the trapping campaign. – If animals must be moved, cover them to minimise distress. – Trapping for effective animal control – Choose suitably sized traps. – Place traps along regular animal trails (e.g., along fence lines, creeks etc.) – Ensure traps are as natural as possible (e.g., create an illusion of a tunnel by covering the trap with natural materials, weather traps to remove unnatural scent, wear gloves to avoid imparting human scent).
Den fumigation and ripping	Fox, rabbits	Den fumigation is suitable to control rabbit populations in high conservation value areas and in areas. Den ripping destroys warrens using a tractor or bulldozer fitted with single or multiple-tined rippers. The technique used will vary depending on local conditions such as soil type, position of warrens and type of equipment available. Given that this destructive method of pest control is not consistent with the environment conservation aims of this BMP, it is not recommended.
Other options considered.		Other options of pest control include shooting and biological control. Shooting programs are to be undertaken by a licenced and experienced shooter and may be used to control populations or humanely euthanise injured, bogged, or sick animals. Recent biological control programs include the release of the Rabbit Haemorrhagic Disease Virus known as RHDV1-K5 (RHDV) throughout the region commencing 17 February 2021. This type of pest control is effective at large, regionwide scales and would not be appropriate to implement on site.

4.4.3 Night lightning

The following lighting strategies/control measures in accordance with visual amenity EIS commitments will be implemented to minimise the visual and off-site lighting impacts associated with the CGO:

- Ensure no fixed outdoor lights shine directly above the horizontal or above the building line or any illuminated structure (EIS commitment V03)
- Ensure no in-pit mobile lighting rigs shine directly above the pit wall and other mobile lighting rigs do not shine directly above the horizontal (except when required for emergency safety purpose) (EIS commitment V04)
- Ensure that all external lighting at the CGO complies with the relevant Australian Standards including Australian Standard AS4282 (INT) 1997 – Control of Obtrusive Effects of Outdoor Lighting (EIS commitment V05)
- Taking all reasonable and feasible measures to shield views of mining operations and associated equipment from users of public roads and privately owned residences (EIS commitment V06).

Additional measures in accordance with EIS commitment V07 that will be implemented where feasible to mitigate impacts of night-lighting during construction and operation include:

- direction of light downwards, not upwards
- use of shielded fittings
- avoiding 'over' lighting
- switching lights off when not required
- use of asymmetric beams, where floodlights are used
- ensuring lights are not directed towards reflective surfaces

4.5 Management measures, procedures and protocols applicable to all stages

4.5.1 Erosion and sediment controls

Erosion and sediment will be controlled in accordance with the Erosion and Sediment Control Management Plan (ESCMP) and the Soil Stripping Management Plan (SMP) which have been developed in accordance B48(a)(xii) of the Consent. The ESCMP details the erosion and sediment control systems in place at the CGO and the programme used to monitor and report on the effectiveness of these systems. The CGO's erosion and sediment control systems include:

- Lake Isolation System.
- UCDS.
- ICDS; and
- other structures including sediment control dams.

The objectives of the ESCMP are provided below in Table . Further details regarding the programme for reporting on the effectiveness and performance of the erosion and sediment control systems are provided in the ECSMP.

Table 18: Sediment and erosion controls

Measure	Procedure	Timing
Erosion and Sediment Control (ESCMP)	– Control erosion and sediment in accordance w in accordance with the SMP and the ESCMP. – Follow guidelines in Managing Urban Stormwater: Soils and Construction (Landcom 2004) ("The Blue Book") and 2E Mines and Quarries, (DECC, 2008).	Ongoing during construction activities.
Separation of Water Flows	– Separate flows into the Internal Catchment Drainage System and the Up-catchment Diversion System.	Throughout construction, starting at initial site preparation.
Standard Erosion and Sediment Controls	– Implement and maintain standard erosion and sediment controls during construction until excavated areas are stabilised (e.g., vegetated or sealed).	From initial site preparation until disturbed areas are stabilised.
Tapered silt Curtains Installation	– Install continuous tapered silt curtains around the construction zone of the LPB, both inside and outside the LPB. The silt curtain is to be installed prior to construction.	Before commencement of construction and maintained throughout

Measure	Procedure	Timing
	– Leave silt curtains in place for the duration of construction and operation, where required	the construction phase.
Monitoring and Maintenance	– Conduct monthly monitoring of sedimentation controls and after moderate-to-heavy rainfall. – Adjust sedimentation measures as required. – Require contractors to report any observed fault in sediment fencing to their supervisor.	Monthly, and as soon as possible after rainfall events.
Removal and Disposal of Controls	– Remove erosion and sedimentation measures, such as silt curtains, after construction activities are completed and the area is remediated and stabilised.	Upon completion of construction and site stabilisation.
Austral Pillwort Protection	– Establish protective fencing (e.g., parawebbing) and sediment/erosion controls around retained Austral Pillwort areas during construction. – The condition of the fencing and sediment/erosion controls will be monitored weekly during construction. More frequent checks may be required during episodic events, including high intensity rainfall events	Before construction begins and maintained throughout construction.
Soil stripping protocol	– Prior to soil stripping, testing of soil profiles will be undertaken to confirm the precise depths of suitable soil and any requirements for amelioration at the time of soil stockpiling. Stakes may be used to delineate soil boundaries and to identify suitable stripping depths for equipment operators – Disturbance areas will be stripped progressively, to reduce potential erosion and sediment generation, and to minimise the extent of topsoil stockpiles and the period of soil storage	Upon completion of vegetation clearing
Soil Stabilisation and Remediation	– Use soil stabilisation methods such as coir logs and jute matting. - Engage suitably qualified person/s to specify and implement regeneration measures as needed. – Complete stabilisation within 1 year of construction completion.	During post-construction remediation, completed within one year of project completion.
Sediment Barrier Timing	– Confirm timing of sediment barrier installations and removals to ensure they remain effective during construction and are removed when no longer needed.	Ongoing during construction and assessed as part of monitoring.
Containment of Erosion Control Measures	– Place all erosion control measures downslope of soil disturbance areas. - Implement additional sediment control measures for significant breaches that cannot be remediated within the site.	Throughout construction, with adjustments after inspections.
Post-Construction Stabilisation	– Permanently stabilise all sediment controls upon completion of construction. – Follow Section 5.4.2 for natural regeneration and planting and Section 5.4.3 of the ESMP for soil stabilisation guidelines.	After construction completion and during post-construction stabilisation period.

The construction contractor will monitor and maintain sedimentation measures monthly and as soon as possible after moderate – heavy rainfall and adjust sedimentation measures as required. All contractors have a responsibility to report to their supervisor any observed fault in sediment fencing.

4.5.1.1 Mitigating Breeches

All erosion control measures will be contained within the site, downslope of areas to undergo soil disturbance. However, if significant breaches are found on inspection that cannot be remediated within the site, additional sediment control may need to be implemented in impacted area. Breach mitigation measures are defined in the erosion and sediment control section of the water management plan.

Construction and operational areas that are no longer required for use are to be rehabilitated as soon as practical to minimise the potential extent of fugitive sediment.

Breaches ascertaining to the quality or condition of the retained Austral Pillwort populations will be managed in accordance with the below table.

Table 19: Mitigation measures for the Austral Pillwort

Impact type	Adaptive Management Measure
Access to retained population/s	– Reinstate fencing as required
Sediment laden water	– Reinstate protection measures. If sediment/erosion controls are ineffective in preventing course debris entering this area, additional and/or new approaches should be applied. – Any sediment that breaches the controls, the sediment should be detained and removed from within the protected Austral Pillwort habitat area. Options for the collection of sediment is to be considered in consultation with CPHR within NSW DCCEEW and the species Accountable Officer.
Mining operations impact on population size	– If monitoring identifies that mine construction and operation has resulted in the decline and/or absence of retained Austral Pillwort located outside of the approved disturbance footprint, or lead to more than negligible degradation of habitat, arrangements to offset this impact via the NSW BOS is to be considered in consultation with CPHR within NSW DCCEEW and the species Accountable Officer. The option of propagating and translocating into the adjoining known Austral pillwort habitat, using either the propagated plants or retained topsoil from the excavated Austral pillwort gilgai habitat, should also be considered, noting that approval for this translocation would be required.

4.5.2 Management measures for fauna

This section outlines the management measures to be implemented to minimise impacts on fauna within the disturbance area, as well as the surrounding area of Lake Cowal. Key mitigation strategies include restricting CGO disturbance areas, designing and implementing fencing and constructing mine water supply pipelines while considering fauna safety. Additional measures address night lighting impacts, bird deterrence, and the prevention of entrapment, as detailed below.

4.5.2.1 ML Fence Desing

A fence has been constructed around the boundary of ML 1535. The fence has been designed to minimise the impact on waterbirds and aquatic species. The fence comprises a standard four strand farm fence. However, to minimise the impact on waterbirds and aquatic species, the spacing between the top three wires has been increased by 75 millimetres (mm) in comparison to a standard farm fence and the fence contains no barb wire. A farm gate has been built on the fences northern and southern boundary and two have been built in the eastern boundary.

The fences will be inspected weekly to ensure effectiveness. If animals become trapped within the wetland area (ML 1535), the appropriate access gate(s) will be opened or maintained to facilitate their movement. If any damage to fencing is observed, rectification works are to be undertaken to restore exclusion as soon as possible.

4.5.2.2 Pipeline Construction

A borefield of four production bores has been developed within the Bland Creek Palaeochannel located approximately 20 km to the east-northeast of the CGO site (Figure 1). The borefield reticulation system includes a break pressure/balancing storage after the final bore, a buried 600 mm diameter pipeline to the CGO site and power supply along existing road reserves (North Limited, 1998a).

The existing pipeline was laid to ensure it does not impede the passage of fish or other animals, interfere with flood behaviour, or obstruct the movement of boats and vehicles.

An automatic shutdown device has been installed to immediately stop water pumping in the event of a pipe rupture. As part of the processing rate modification, the existing water supply pipeline from the Bland Creek Palaeochannel Borefield (up to Bore 4) was duplicated. The pipeline was constructed within the existing 40-metre corridor, with a trench excavated along its entire length to bury the new pipeline (nominal diameter of up to 600 mm) at a depth of approximately 1 metre. The surface disturbance associated with construction was approximately 6 metres wide along the pipeline, with additional disturbance in designated laydown areas as approved in MOD 14.

The new pipeline has been:

- constructed in consultation with DPE Fisheries and in accordance with the requirements of DoI L&W,
- laid to avoid impeding the passage of fish or other animals, interfering with flood behaviour, or obstructing boats and vehicles, and
- equipped with an automatic shutdown device to immediately stop water pumping in the event of a rupture. Water supply will not resume until the rupture is located and repaired.

The shutdown system eliminates the risk of significant impact on lake surface water quality.

Further details can be found in the CGO Water Management Plan (WMP).

4.5.2.3 Measures to keep avifauna away from tailings and storages

In accordance with Development Consent Condition B48 (e)(iii) effective mechanisms have been developed to keep fauna and avifauna away from the tailings storages. DCCEEW recommends the monitoring of wildlife impacts and reducing the risks associated with the storage of water on tailings storage facilities, which could involve perimeter fencing, minimising the area of ponded water, netting or intermittent noise to distract birds (Commonwealth of Australia 2016). The mechanisms have been developed in consultation with former NPWS (NPWS, pers. comm., 21 May 2003) and are provided below in Table 20.

Table 20: Measures to keep avifauna away from tailings and storages

Measure	Procedure
Minimising the Area of Open Water	– Maximise dry density of tailings through subaerial deposition and air-drying. – Reuse water from tailings storages using under-drainage systems and decant ponds. – Maintain small supernatant pond areas by recycling water.
Maximising Dry Densities	– Use subaerial deposition to promote natural segregation of particles: coarse material settles at the perimeter, fine material toward the centre. – Segregation creates inward-sloping tailings beaches, directing water to central decant ponds.

	– This drainage pattern enhances surface exposure to air, promoting evaporation and increasing in-situ dry density of tailings. – Subaerial method allows for staged and controlled tailings build-up, improving storage stability and density over time.
Maximising the Re-use of Water	– Water re-use will be maximised through an under-drainage pipe network, central decant ponds, and a duplicated water return pipeline to the process water supply storage pond (D6). Supernatant pond areas will be kept as small as possible by continuously recycling water through the processing plant. – As part of the IWL construction, an underdrainage system was established along the eastern perimeter embankment to enhance water recovery and mitigate seepage. This system efficiently recovers water using slotted pipes surrounded by clean aggregate, wrapped in geotextile, and stabilised with select rock. Water flows under gravity to sumps, which pump it back to the central decant for reuse. decant for reuse (CMW Geosciences, 2018).
Fencing to Prevent Fauna Entry	– Maintain the existing 2m high chain mesh fence with 5cm maximum hole diameter. – Maintain vermin mesh with 2cm maximum hole diameter at the bottom meter of the fence. – Ensure that vermin mesh is buried 50 cm beneath soil or rock dependent on the ground condition – Maintain electrified wires as deterrents for feral pests. – As recommended by the Best Practise Guidelines for Reducing Impacts of Tailings Storage Facilities on Avian Wildlife in the Northern Territory of Australia (Northern Territory Department of Mines and Energy, 1998), the area immediately adjacent to the existing fence will be kept clear of tall vegetation so that fauna cannot use it to gain access to the IWL area. – Any fence breaches or areas needing repair must be reported to the site manager immediately. – Gates are to remain closed, as far as reasonably practical. – Conduct monthly patrols for inspection and maintenance.
Making the Area Non-Conducive to Wildlife	– Stabilise tailings storage batters with pasture cover to minimize habitat value. – Prevent establishment of trees and shrubs in the vicinity until decommissioning. – Regular maintenance to remove vegetation that could attract fauna.
Use of Netting	– Net small areas like the cyanide mixing facility to restrict avifauna access. – Avoid netting large tailings storage areas due to maintenance challenges and bird entanglement risks. – Implement alternative avifauna deterrents as best practice.
Monitoring and Maintenance	– Conduct monthly inspections of fences and tailings areas. – Record and monitor wildlife activity. o Twice daily surveys by CGO staff to inspect for visitation and identify and bogged / trapped fauna with procedures discussed in section 4.5.2.4. o Seasonal monitoring undertaken by avian ecologist. – Perform maintenance promptly to address identified issues.
Avifauna Deterrence	– Implement best-practice methods, such as intermittent noise or visual distractions. Best practice methods to deter birds from tailings storges are described below. – Monitor effectiveness and adapt techniques as needed.

Various mechanisms considered best practice have been employed globally at mining operations to deter birds from tailings storages (North Limited, 1998a). A review of relevant literature (e.g. Transport Canada, 2002; Baxter, 2000; Northern Territory Bird Usage of Tailings Storage Facilities Coordinating Group, 1999; Normandy

Mining Limited, 1999; Northern Territory Department of Mines and Energy, 1998; Donato, 1997; Hagelstein, 1997 in Donato, 1997; Dodds-Smith and Filas, 1996; Wildlife Control Technology Inc., 1996; Nevada Mining Association et al., 1990; Bomford and O'Brien, 1990; Donato et al., 2007) suggests that the use of physical deterrents alone as a control measure has limited long term value.

Suggested measures including broadcast of audio and visual stimuli to scare/repel birds are widely accepted as having limited success in the short term and minimal success in the longer term. The literature recommends hazing techniques be used in combination with other management mechanisms (such as minimising potential habitat opportunities for fauna, as discussed above in Table 20. Deterrence/hazing techniques employed at the CGO to deter different bird species may include:

- bird deterrent stations, activated remotely by either the radar or timer mode which broadcast bird distress calls, barking dogs, gun shots etc.
- gas cannons linked to the radar or timer-mode control station/s.
- car horns.
- radar lobe systems that detect avifauna presence at the tailings facilities.
- solar powered scattered laser light tripod station (held in safe storage to be used if required).
- bird scaring kite; and
- human presence.

Additional methods of avifauna deterrence will be considered as new technologies are developed.

4.5.2.4 Fauna injury and entrapment procedure

The following procedure will guide actions taken in the event that fauna is injured during any clearing activity or trapped and/or injured during construction or operation.

1. Should fauna be observed near the works area, and they are potentially at risk of being harmed, then the following procedure will be followed:
    a. Contact the site supervisor
    b. The site supervisor reviews if the animal is at risk of being harmed
    – If yes, all works in the vicinity of the animal (works in other areas may continue) will be halted. The animal, if highly mobile (such as Kangaroo) will be slowly and gently encouraged to leave the construction area (i.e., corralled toward).
    – If the animal is not at risk of being harmed, then works will be halted in the vicinity of the animal until it moves on (works may continue in other areas of the site).
    – If the animal is not capable of moving on of its own accord, then the following steps will ensue.

2. If an animal is found within the site that is injured the following procedure will be implemented:

    a. Contact the site supervisor
    b. The site supervisor determines the most appropriate person to engage:
    – Project ecologist, or
    – The Wildlife Information and Rescue Services (WIRES), who will respond to all sick, injured or orphaned native wildlife queries.
3. If the injuries are too great for the animal to be relocated, then the animal will be taken to a WIRES Wildlife Carer or Veterinary Clinic.

4.5.2.5 Measures to rescue wildlife that become bogged/sick/trapped

In accordance with Consent B48(e)(iv) the following measures have been developed for the rescue and rehabilitation of wildlife that may become bogged/sick/trapped in the tailing's storages or elsewhere within project area. The wildlife rescue and rehabilitation plans have been prepared in consultation with the NSW Wildlife Information, Rescue and Education Service Inc. (WIRES) and maintains alignment with guidance provided by NPWS (2023). It is noted that CGO Environmental Department staff may also be trained WIRES volunteers.

The following rescue procedures will be used in the event that any wildlife is found bogged, sick, and/or trapped in the tailing's storages or elsewhere in the ML areas:

1. Where possible, the animal will be moved away from danger. Table 19 presents potential rescue procedures which may be utilised for various fauna types (DPE, 2023). In the case of snakes, no attempt will be made to handle them, and due caution will be exercised.
2. Depending on complexity, WIRES Rescue and Immediate Care Course (RICC) qualified personnel may be contacted and arrangements made for the animal to be collected. Authorised Personnel (e.g., CGO Environmental Department staff) may also provide advice on the rescue and temporary care of the animal until a trained rescuer is available.
3. Authorised personnel will follow the relevant capture and handling technique outlined in Table 9 below. Additionally, the following measures will be taken where practicable:

   – stress to the rescued animal will be minimised by covering it with a towel or similar item.
   – the animal will be placed in a warm, dark and quiet place and only handled when necessary. While water may be offered, no attempt will be made to feed the sick or injured animal; and
   – advice provided by the WIRES rescue unit in relation to the temporary care of the animal will be implemented where relevant.

Should additional advice be required when carrying out wildlife rescues, wires will be contacted on 13000WIRES or 1300 094 737. In addition, the report a rescue form may be submitted online via the WIRES homepage.

Table 21: Relevant capture and handling technique

Type of Fauna	Capture	Handling	Transport
Birds			
Small Birds	Throw towel over bird or pick up with bare hands.	Hold gently in palm of hand with head and legs protruding. Hold close to chest and ensure wings are closed.	Cardboard box.
Medium Birds	Throw towel over bird and wrap up.	Hold with both hands, encompassing the bird's body. Hold close to chest and ensure wings are closed.	Cardboard box.
Large Birds	Best left to experts.	Best left to experts.	Best left to experts.
Waterbirds	Throw towel over bird and wrap up.	Hold head and body firmly. Large species may need beak secured, but do not cover nostrils.	Large cardboard box.

Mammals			
Possums and Gliders	Use pillowcase or similar as a glove and scoop inside.	Hold back of head and base of tail firmly.	Place pillowcase containing animal inside a box.
Kangaroos and Wallabies	Throw blanket over animal and wrap up.	Hold base of tail and support chest, lift and place headfirst inside bag.	Pillowcase for orphans, non-hessian sack for adults.
Small Marsupials and Rodents	Use pillowcase or similar as a glove and scoop inside.	Hold back of head and support body.	Place pillowcase containing animal inside a box.
Insectivorous Bats	Throw towel over bat or pick up with gloved hands. If not vaccinated for Australian Bat Lyssavirus, leave to experts.	If vaccinated, hold gently in palm of hand, head protruding.	Pillowcase or similar, tied securely.
Reptiles			
Snakes	If trained in snake handling, use snake handling kit to scoop inside. DO NOT attempt to capture snake using the tail method	DO NOT HANDLE snakes, leave tightly secured in the snake handling bag.	Best left to experts.
Lizards	Throw towel over lizard or coerce into box.	Hold back of head and support body. Large species need tail and legs secured.	Place pillowcase containing animal inside a box.
Freshwater Turtles	Throw towel over turtle or pick up with gloved hands.	Hold edge of shell with both gloved hands.	Cardboard box.
Amphibians			
Frogs	Throw net over frog or pick up with wet gloved hands.	Hold with wet gloved hands cupped around frog. Beware of toxic skin secretions.	Wet pillowcase.

4.5.2.6 Measures to minimise impacts on breeding birds

In accordance with Consent B48(e)(vi), EIS commitment TE04, TE07, NV03, the following measures will be implemented to minimise the direct and prescribed impacts on breeding birds from pre-construction, construction and operation activities occurring within CGO as detailed in Table 22. Bird breeding behaviour monitoring will continue to be conducted by a suitably qualified avian ecologist during the main bird breeding periods from October to March each year at the main bird breeding areas shown in Figure 9 of Lake Cowal.

Table 22: Measures to minimise impacts on breeding birds

Measure	Procedure

Minimising Impact on Breeding Birds	– To minimise impacts on waterbird breeding and migratory shorebird visitation, noisy construction activities will be scheduled, where feasible, away from the northern side of the LPB construction area (the area closest to known waterbird breeding habitats) during the October to March period, when these activities are most prevalent. – If abrupt negative changes in waterbird breeding and migratory shorebird behaviour caused by the commencement of construction and/or operations, being the significant reduction in the number and/or species richness of waterbirds, or movement of waterbirds foraging, roosting and/or nesting away from the additional disturbance areas, CGO will immediately augment operations away from the breeding areas. – Evolution will work with the construction team to implement appropriate and effective noise mitigation measures. – Additional efforts will focus on adjusting construction schedules to further distance activities from bird breeding habitats wherever possible. – Document changes in construction sequence and bird behaviour in monitoring reports. - Report negative mining induced changes in waterbird breeding and migratory shorebird behaviour to CPHR within NSW DCCEEW within seven days. – Records of discussions between Evolution and the contractor regarding proposed construction sequence changes are to be documented and included in bird monitoring reports. Furthermore, any negative changes in the behaviour as a result of mining activities of any listed breeding and migratory shorebird species observed during monitoring events must be reported to the CPHR within NSW DCCEEW within seven days.
	– Train CGO staff prior to work commencement to respect biological areas, understand no-go zones, and follow protocols for unexpected fauna finds
Reducing Fauna Strike Risk	– Impose a 6-knot speed limit for boats in Lake Cowal during inundation. – Define vessel operating areas to avoid waterbird breeding zones. – Reduce vessel speeds further to 4-knot speed when within 30m of waterbird breeding zones during October-January (waterbird breeding season). – Idle boat engines when wildlife is nearby to avoid collisions.
	– Educate staff about vehicle speed limits during induction to reduce fauna strike risks, especially at sunrise and sunset.

4.5.2.7 Threatened species relocation procedure

In accordance with Consent B48(e)(ii), the following procedure has been developed to relocate threatened species. In the event that a threatened species is identified within a CGO disturbance area, the Threatened Species Management Strategy phase of the TSMP will be initiated.

The Threatened Species Management Strategy phase of the TSMP involves the identification of mitigation measures to ameliorate any potentially significant impacts on the threatened species. Management measures and options for the species will be developed in consideration of a number of factors including the:

- threatened species identified and its ecological characteristics (such as home range and important lifecycle components such as breeding,
- roosting/nesting or foraging) likely usage of the disturbance area by the species (e.g. breeding, roosting/nesting or foraging).
- location in which the threatened species was recorded within the disturbance area (e.g. pipeline, access road or CGO disturbance areas).
- and potential to relocate the species and/or its habitat away from the disturbance area.

Species specific requirements exclude the possibility of developing a general management strategy to incorporate all threatened species that may potentially be identified within the CGO disturbance area. The potential management strategies that could be utilised to relocate a threatened species and/or its habitat away from CGO disturbance areas include:

- Capture and Release of Fauna into Surrounding Suitable Habitat – For example, in the event a Southern Bell Frog was identified in CGO disturbance areas it could be relocated to alternative suitable habitat. Any threatened species relocation programme would be undertaken in consultation with the CPHR of DCCEEW.
- Modification of Area to be Disturbed – Opportunities may be available to modify the area proposed to be disturbed by the CGO. For example, in the event a tree hollow is identified as a known nesting/breeding resource for a threatened bird species, the required disturbance schedule will be staged to avoid disturbance to the threatened species habitat.
- The Placement of Nesting Boxes in Suitable Habitat for Birds and Arboreal Mammals – As described in 5.2.4 nest boxes have been established in the RVEP areas to provide nesting habitat for threatened fauna (e.g. woodland birds and arboreal mammals).
- Inclusion of Hollow-Developing Tree Species in the Rehabilitation and/or Enhancement Programmes. Planting flora species that will, in the long-term, provide nesting/breeding resources for the threatened species identified. For example, the revegetation of River Red Gum and other eucalypt species will, in the long-term, provide hollows for threatened species such threatened hollow-dependent microbat species, Barking Owl, Glossy Black-Cockatoo, Superb Parrot and Major Mitchell's Cockatoo.
- Trialling of the Establishment of Threatened Flora Species in the Rehabilitation Programme – In the event threatened flora species including Austral pillwort are identified within CGO disturbance areas, consideration will be given to trialling the establishment of the species in the rehabilitation programme.
- Provision of Forage Resources in the Rehabilitation and Habitat Enhancement Programmes – Planting flora species that will provide potential foraging resources for the threatened species identified in the disturbance areas. For example, CGO will prioritise the planting of known foraging species for recorded species including but not limited to Glossy Black-Cockatoo, Superb Parrot and Pink Cockatoo derived from mapped Plant Community Types. Endemic foraging species that may be used include but is not limited to: Danthonia sp, Eucalyptus populnea ssp. Bimbil, Eucalyptus macrocarpa, Eucalyptus melliodora, Eucalyptus sideroxylon, Eucalyptus camaldulensis and Casuarina cristata

In accordance with the TSMP, the species-specific management strategies proposed would be subject to review and approval by the CPHR within NSW DCCEEW, prior to implementation.

4.5.2.8 Protocol for investigating and reporting cyanide

Table outlines the Protocol for identifying and responding to cyanide related native fauna deaths within the ML areas. It also describes the monitoring and reporting of cyanide related native fauna deaths and an overview of the fauna necropsy facilities in accordance with Consent B48(h). Any wildlife deaths caused by cyanide with be investigated and reported in accordance with Section 6.3 of the BMP.

Table 23: Protocol for investigating and reporting cyanide

Fauna Impact Type/requirement	Approach	Procedure	Timing

Native fauna incidents or deaths identified during IWL patrols.	Routine patrols by personnel.	Patrol the IWL area twice daily to identify fauna deaths or incidents. Record observer details (name, position), date, time, type of fauna, number, location, and other relevant details.	Twice daily.
Determination of cause of death for dead fauna.	Visual assessment or necropsy.	Collect dead fauna and assess the cause of death. If cause is not apparent (e.g., vehicle strike), transport to a veterinarian for necropsy and laboratory tests, including cyanide bioassays, pathology, and histopathology.	Immediate collection and transport.
Collection of samples for laboratory testing.	Tissue and blood sample collection.	Collect tissue and whole blood samples for cyanide bioassays, cytochrome oxidase activity, bacteriology, and histopathology where cyanide-related death is suspected.	As required during necropsy.
Storage and transportation of deceased fauna.	Dedicated storage and transport.	Store dead fauna in a dedicated fridge or freezer to preserve samples. Transport the dead fauna to a veterinarian laboratory as soon as practicable for necropsy and testing.	As soon as practicable.
Reporting of cyanide-related fauna deaths.	Notification to authorities.	Notify CPHR within NSW DCCEEW, RR, and CEMCC (and DPE Fisheries for fish deaths) within 24 hours or the next working day following confirmation of cyanide-related death from necropsy results.	Within 24 hours (or next working day).
Maintenance and reporting of necropsy records	Database and reporting system.	Record all necropsy results in CGO's database. Include findings in the biannual *Seasonal Wildlife Use Patterns of the Cowal Gold Operations Integrated Waste Landform report* and *Annual Review*.	Biannually and annually.
Handling of deceased fauna during collection.	Use of protective equipment and procedures.	Wear protective clothing, disposable gloves, and use sealed plastic bags to handle dead fauna to ensure safety and prevent contamination.	During collection.
Additional investigation through visual or photographic documentation.	Photographing/video recording scenes.	Capture images or video footage of the affected areas, fauna behaviour, place of death, and relevant site conditions to provide additional information for investigations.	At the time of incident detection.
Provision of necropsy facilities.	Fauna necropsy by qualified veterinarians.	Ensure access to qualified veterinarians to conduct gross necropsies. If necessary, tissue and blood samples are sent to specialized laboratories for further quantitative and qualitative analysis.	As required.
Reporting necropsy results for cyanide-related deaths.	Submission to regulatory bodies.	Provide necropsy results, including laboratory findings, to CPHR, RR, and CEMCC (and DPE Fisheries for fish deaths). Maintain a record of all cyanide-related deaths and publish them in the Annual Review.	On confirmation of results and annually.

4.5.3 Bushfire management

In accordance with Consent B48(e)(xiv), bushfire management at the CGO includes fuel management strategies, planning and implementation procedures for hazard reduction and strategies for reducing fire hazards and related risks on-site and on Evolution-owned land. These strategies and procedures include maintenance of firebreaks around the ML boundaries (including the Travelling Stock Reserve) and water supply borefields, offset areas and around RVEP areas on Evolution-owned land in consultation with the NSW Rural Fire Service, Riverina LLS and BSC.

Additionally, Asset Protection Zones (APZ) will be installed and managed as inner protection areas for the life of the Project including a minimum APZ of 10 m around infrastructure and an APZ of 50 m where practical. Native vegetation clearing within these APZ's will only be undertaken within the projects approved disturbance area. Fire water supplies at CGO will continue to be maintained and will be detailed in the Project's pending Bushfire Management Plan and Emergency response plan.

The main CGO access, alternate access and internal site roads will be maintained to provide for safe reliable, and unobstructed passage by a Cat 1 firefighting vehicle.

Bushfire prevention measures will include:

- fire awareness and fire safety training to be included in the induction of all CGO personnel and contractors required to access the site to reduce the risk of bushfire.
- fire track and fire break maintenance; annual inspections to identify areas requiring bushfire control measures including assessment of fuel loads; and
- fuel management (e.g., hazard reduction burns) in consultation with the NSW Rural Fire Service.
- Appropriate fuel management strategies that may be implemented include:
- fuel management by means other than burning, including methods such as slashing, pruning, mulching or other operations (i.e., ploughing, herbicide application and rolling).
- fuel management via burning where conventional fuel management strategies are inappropriate, impractical or not successful (undertaken in consultation with relevant authorities); and
- maintaining designated fire breaks.

Vegetation inspections are conducted weekly as part of boundary inspection monitoring, and as required following periods of rainfall stimulated growth. Fuel reduction activities are generally scheduled to be conducted prior to bushfire season, which runs from October to the end of March (Bland Temora Zone Bush Fire Management Committee, 2021). Within Asset Protection Zones, the NSW Rural Fire Service (2019) recommends grass height to be kept below 100mm and litter fuels below 1cm. Areas that exceed these parameters shall be noted as requiring fuel load reduction.

Any bushfire prevention or fuel management measures on Evolution-owned land will consider potential ecological impacts of the measures, including EEC areas, and will be implemented outside the boundary of the offset areas, where practicable.

Advice for achieving ecological bushfire hazard reduction would be required to be provided by a suitably qualified bushfire consultant. Evolution is to provide and updated Bushfire Management Plan and Bush Fire Emergency Management and Evacuation Plan

4.5.4 Managing impacts to Aboriginal cultural heritage values

To satisfy Consent B48(e)(vii), prior to construction ground disturbance, an Aboriginal Cultural Heritage Management Plan has been developed for the project. The management ad mitigation of impacts to Aboriginal heritage items are detailed in the ACHMP which has been developed in consultation with the Registered Aboriginal Parties (RAPs) and Heritage NSW.

4.5.5 Short, medium and long-term measures

In accordance with Consent B48(c), Evolution Mining are to: "

> *"describe the short, medium, and long-term measures to be undertaken to manage the remnant vegetation and fauna habitat on the site, in the offset areas identified in Table 10: Summary of the Biodiversity Offset Areas - Cowal Gold Mine (DA14/98) (except if the offset areas are secured through a biodiversity stewardship agreement under the BC Act); and in the compensatory wetland areas and remnant vegetation enhancement program areas shown in figure 3 of appendix 4;"*

As discussed in Section 1, Evolution are currently in discussions with the BCT to secure these areas under a BSA. This submission is currently in review and negotiations have begun to secure Northern and Southern offset sites under a BSA. As such, the Northern and Southern offset sites and are not required to be included in this BMP. However Certain portions of the compensatory wetland and RVEP areas extend beyond the BSA boundary. These RVEP and compensatory wetland management areas, located outside the BSA boundary and within the disturbance area, require management under this BMP and are provided in Figure 7. The following section outlines the short, medium, and long-term management measures for remnant vegetation enhancement and compensatory wetland protection at CGO. These measures reflect current commitments under the CGO BMP and draw from existing plans including the RMP, LMP, FFMP, and CWMP. The short, medium and long-term for these areas are provided below.

Furthermore, areas of lake foreshore situated within the additional disturbance area to the north and south of the New Lake Foreshore, will be enhanced during mine operation and post-closure (i.e. until lease relinquishment) to compensate for the loss of 120 ha of wetland as a result of the development (refer to Figure 7). These areas form the Compensatory Wetland. Enhancement measures during mine operation are detailed in the following sections. Enhancement measures post- closure will be developed as part of the long-term land use and lease relinquishment process, which is detailed below

.

Table 24. Measures for remnant vegetation enhancement program areas

Term	Objective	Action	Measurable Indicator	Approach	Outcome	Time-bound Milestone
Short term measures	Stabilise newly exposed foreshore areas	Recontour shoreline, apply erosion control matting and install toe drains	Erosion hotspots mapped and treated; surface stability achieved within 3 months	Reshape eroded banks to stable slopes; apply jute/coir matting; install drains to direct runoff	Stabilised foreshore limiting sedimentation into the lake	Initial works completed within 3 months post exposure
	Initiate foreshore revegetation	Apply topsoil and seed native grass, shrub and reed species	80% groundcover establishment within first growing season; survival of key species >70%	Use species specific seed mix suited to dry/wet transition zones; install markers for monitoring plots	Established native cover reducing erosion and supporting fauna recolonisation	Planting completed within 6 months and monitored quarterly
	Exclude access to sensitive revegetation zones	Install temporary fencing and signage to restrict pedestrian and stock access	No signs of disturbance within fenced areas; successful plant establishment	Install visual barriers and interpretive signage; regularly inspect and maintain fencing	Protected regeneration areas facilitating successful establishment	Fencing installed within 2 months of site exposure
	Create diverse microhabitats across foreshore zones	Design and construct micro-relief features including elevated mounds, shallow hollows, ephemeral pools, rock clusters, and shaded log piles across varied moisture gradients	Annual microhabitat audit records >6 unique habitat types per 500 m²; evidence of use by invertebrates, amphibians, reptiles or small mammals (via motion cameras or tracking)	Use earthworks to create terrain heterogeneity (e.g., depressions, ridges); embed coarse woody debris and rocks; retain leaf litter and plant shrubby clumps; locate features to intercept seasonal water flows	Fine-scale habitat diversity supports life cycle needs of multiple fauna groups (shelter, basking, breeding); encourages recolonisation from adjacent natural areas	Installation aligned with revegetation phase; faunal usage confirmed within 12 months post-establishment
Medium term measures	Enhance vegetation diversity and resilience	Supplement planting with woodland and riparian species	Species richness index improves over 2 years; canopy layer initiation observed	Identify underperforming zones; introduce tree/shrub species such as River Red Gum and native wattles	Diverse, multilayered vegetation providing long-term stability and habitat value	Planting in Years 2 and 3; monitored annually
	Stabilise and integrate drainage points	Vegetate swale and gully end to intercept runoff	Reduction in sedimentation at inlets; vegetation survival >75%	Establish native sedges and grasses in drainage paths; monitor sedimentation and plant cover	Functional sediment filters improving water quality entering lake	Vegetation established by end of Year 2
	Support natural colonisation of fauna	Install habitat structures and reduce disturbance	Fauna sightings increase across at least 3 target groups (e.g. birds, reptiles, frogs)	Place logs, rocks, and shelters; conduct visual and acoustic fauna surveys seasonally	Re-established habitat supporting local biodiversity	Monitoring results reviewed annually
	Enhance foreshore complexity for faunal refuge	Install timber piles, root balls, and dense vegetation thickets	Increased faunal observations (e.g. frogs, skinks, birds) using these elements during seasonal surveys	Embed timber structures partially in substrate near wet-dry interface; plant dense shrubs and sedges around these points	Availability of shaded, cool, and protected zones for breeding and shelter	Habitat complexity features installed by end of Year 2; monitored annually

	Enhance foreshore complexity for faunal refuge	Install timber and root ball refuges near water edge; create shaded understory thickets using dense sedges and shrubs	Faunal survey detects >20% increase in shelter-dependent species (frogs, skinks, wrens) in treatment vs control plots within 2 years	Strategically place partially buried logs and root structures near the wet/dry interface; interplant shrubs in tight clumps around these structures; monitor usage with baited motion cameras and acoustic sensors	Increased availability of cool, sheltered and protected micro-sites facilitates nesting and foraging in edge-dwelling fauna	Habitat structures installed by end of Year 2; surveys conducted in spring and autumn
Long term measures	Monitor vegetation and foreshore function over time	Implement 10-year monitoring of plant health, cover, and bank condition	Stability maintained; vegetation meets ≥80% cover target; erosion incidents minimal	Use fixed-point photography, NDVI, and soil stability checks during seasonal surveys	Self-sustaining vegetation community stabilising lake edge	Annual monitoring for 10 years post-rehabilitation
	Maintain public amenity with ecological integrity	Designate pathways, viewing points, and controlled access routes	No increase in unauthorised access; positive community feedback	Create low-impact trails and signs; maintain vegetative buffer along access zones	Balanced use of foreshore area preserving ecological values	Pathways installed by Year 3; use audited annually
	Integrate foreshore into broader landscape objectives	Ensure vegetation continuity with adjoining habitats	Foreshore corridor connects with native vegetation patches; mapped in GIS	Coordinate planting and fencing to align with nearby offsets and ecological zones	Lake edge contributes to wider landscape-scale connectivity	Connectivity confirmed via ecological mapping by Year 5
	Maintain structural diversity in foreshore habitats over time	Regularly assess integrity of microhabitats and replace or adapt features as needed	Annual audits of microhabitat structures; habitat quality index remains ≥80%	Use fixed-point surveys to assess wear, degradation or use; replace degraded logs or reshape topography if eroded	Sustained habitat function supporting long-term species persistence	Annual review of habitat zones for 10 years
	Maintain structural diversity in foreshore habitats over time	Monitor integrity of installed microhabitats and adaptively manage with repairs, replacements, or additions based on ecological use	≥80% of microhabitat structures remain functional 10 years post-installation; regular evidence of faunal occupancy	Annual habitat audit using scoring tool (cover, integrity, evidence of use); replace degraded logs, repair soil contours, plant into gaps where needed; document adaptations and trends	Long-term availability of critical shelter and breeding niches supporting a resilient foreshore fauna community	Monitoring maintained every 12 months post Year 2; adaptation actions implemented within 3 months of audit

Table 25: Compensatory Wetland Management Measures

Term	Objective	Action	Measurable Indicator	Approach	Outcome	Time-bound Milestone
Short term measures	Establish wetland hydrology	Construct inflow and outflow regulation infrastructure including bunds, adjustable culverts, and spillways	Regulated water levels maintained within ±10 cm of seasonal targets; flow direction and duration logs verified monthly	Shape wetland basin contours; install inflow bunds and level spreaders to slow and distribute water; add adjustable culverts for adaptive flow control	Stable wetland hydrology supports target vegetation zones and fauna use throughout seasonal cycles	Completed within 12 months of disturbance; water level monitoring initiated within first inflow season
	Initiate native wetland vegetation	Apply salvaged topsoil and plant species matched to elevation zones (deep, shallow, fringe, riparian)	≥70% survival rate in first year; zonal vegetation establishment observed across all hydrological zones	Spread seedbank-rich topsoil over wetland floor; plant Eleocharis, Schoenoplectus, Myriophyllum, and riparian shrubs in zone-appropriate locations	Functional vegetation structure by zone mimicking natural wetland ecotones	Completed within first growing season post-construction; initial assessment within 6 months
	Install protective infrastructure	Fence and sign wetland boundary to prevent vehicle and stock entry	Zero unauthorised access incidents logged in first 2 years	Install stock-proof fencing and access signage; establish exclusion zones in spatial management system	Minimised disturbance to regenerating habitat and infrastructure	Fencing completed within 3 months of earthworks; inspections quarterly
Medium term measures	Enhance vegetation structure and diversity	Supplement planting in underperforming areas with emergent, rush, and shrub species	Species diversity index (e.g. Shannon) increases over baseline; <20% bare ground in all vegetation zones	Assess zones annually; infill with local endemic species suited to recorded soil moisture and light availability	Resilient vegetation communities able to self-perpetuate and support habitat function	Gap planting executed in years 2–4 based on monitoring outcomes
	Improve wetland edge stability	Stabilise banks with dense rushes, coir logs, erosion mesh and buffer vegetation	Bank erosion rate <5 cm/year; >80% vegetative cover on buffer zone by year 3	Revegetate edges with Juncus and Carex spp.; install coir logs where water velocity or wind action threatens stability	Edge zones prevent sedimentation and provide gradual transition to surrounding habitat	Completed by year 2 and reassessed biannually
	Create habitat features for fauna	Install logs, woody debris, rock clusters, and floating islands in shallow and open zones	At least 3 functional habitat types installed per 100 m²; fauna activity recorded at 75% of features within 2 years	Use salvaged logs, rock piles and nesting platforms; ensure placement near inflow/outflow zones and open water edges	Diverse structural features support wetland birds, amphibians, macroinvertebrates and small fish	Installed between years 2–3, monitoring integrated with fauna surveys
Long term measures	Maintain ecosystem function and health	Implement long-term vegetation, fauna, hydrology and water quality monitoring	≥85% of ecological performance targets met; no decline in habitat	Use photopoints, water probes, vegetation plots and fauna traps to	Functional wetland ecosystem adapted to natural variation	Monitoring every 6–12 months for minimum 10 years

			condition indicators over time	assess wetland condition over time	and supporting conservation values	
	Secure long-term protection	Formalise stewardship agreement and register as offset site	Site listed under BSA or equivalent; condition obligations embedded in offset register	Submit vegetation condition benchmarks and spatial data to BCT or relevant authority for long-term security	Legal mechanism ensures the wetland's biodiversity values are protected beyond mine closure	Executed before mine relinquishment and reported annually
	Enhance regional connectivity	Link wetland with nearby habitat patches via riparian corridors and stepping stones	Mapped ecological linkage score improves post-rehabilitation; species movement verified between sites	Plant or preserve connecting vegetation; design water regime to support movement of frogs and birds across corridors	Wetland contributes to larger-scale biodiversity outcomes across the landscape	Corridor integrity verified by year 5 and maintained through monitoring

4.5.5.1 Rehabilitation Concepts for the New Lake Foreshore

The rehabilitation of the new lake foreshore at Cowal Gold Operations (CGO) is a critical component of the site's closure and post-mining land use strategy. The foreshore, forming part of the final landform adjacent to Lake Cowal, is designed to transition from an operational environment to a self-sustaining, ecologically functional landscape that contributes to regional biodiversity values and supports long-term water quality and erosion control.

Rehabilitation of the New Lake Foreshore will be an iterative process and revegetation species will continue to be selected in consideration of::

- Lake Cowal's hydrological regime (wetting and drying cycles).
- species occurring in relevant reference sites and mapped Plant Community Types (including lake and slope woodland communities).
- species performance during revegetation trials; and
- suitability to substrate conditions.

Revegetation concepts and methods for the New Lake Foreshore are described in detail below.

Landform Design and Stability

- The final landform for the lake foreshore has been developed to:
- Achieve long-term geotechnical and erosional stability by incorporating gentle, stable slope gradients (<10%) and stable transition zones between aquatic and terrestrial environments.
- Integrate engineered landforms with natural contours, ensuring surface drainage is directed away from the lake edge where feasible.
- Avoid steep embankments and unnatural depressions that may lead to localised erosion, ponding, or vegetation dieback.
- Drainage infrastructure will include strategically placed contour drains, rock-lined spillways, and energy dissipation structures to prevent scouring and ensure the controlled release of runoff to downstream receiving environments.

Soil Preparation and Substrate Management

Successful foreshore rehabilitation is dependent on the creation of a suitable growth medium. Soil management practices will include:

- Use of stockpiled topsoil from pre-disturbance areas, amended where necessary with organic matter to improve structure and microbial activity.
- Testing of growth media to ensure it meets required physical and chemical standards for native vegetation establishment (e.g. pH, salinity, nutrient status).
- Implementation of erosion control measures (e.g. jute matting, biodegradable mulch) during early establishment phases to promote soil retention.

Vegetation Strategy and Ecosystem Reconstruction

Vegetation rehabilitation will target the re-establishment of Foreshore Woodland and Fringing Wetland communities, consistent with pre-mining vegetation mapping and local ecological benchmarks. Key elements include:

- Species Selection:

- Prioritisation of local endemic species suited to seasonally inundated and moist soil conditions.
- Inclusion of native rushes (e.g. Juncus spp.), sedges (e.g. Carex spp.), and trees such as Eucalyptus camaldulensis and Casuarina cunninghamiana in appropriate zones.
- Use of understorey species to provide groundcover, prevent erosion, and support faunal diversity.

Planting Techniques:

- Combination of direct seeding, tube stock planting, and hydromulching to establish cover at various depths and across microtopography.
- Strategic planting of vegetation bands based on hydrological gradients, to simulate natural succession and improve resilience to fluctuating water levels.

Target Density and Coverage:

- Initial revegetation will aim for a minimum of 70% vegetative cover within 5 years, with ongoing monitoring to track progression towards ecological benchmarks.

Habitat Features and Faunal Support

- Rehabilitation of the foreshore will integrate natural habitat features to promote colonisation and support biodiversity:
- Placement of coarse woody debris, logs, and boulders to provide basking sites and shelter for reptiles, amphibians, and small mammals.
- Construction of ephemeral wetland zones and shallow scrapes to support amphibian breeding and aquatic invertebrate diversity.
- Installation of nesting boxes or perches, where appropriate, to support avian species that depend on mature trees or standing deadwood.
- This approach aligns with the Threatened Species Management Plan (TSMP) by enhancing habitat availability for known species of conservation concern, including the Australasian Bittern and Painted Snipe.

Weed, Pest, and Fire Management

- Weed and pest management will form a core part of the rehabilitation program.
- Initial weed suppression prior to planting via targeted herbicide application or mechanical control.
- Post-planting maintenance involving routine inspections, manual removal, and selective herbicide use to prevent re-establishment of invasive species (e.g. Phyla canescens, Salix spp., Lythrum salicaria).
- Integrated feral animal control (e.g. fox baiting, rabbit warren management) to protect regenerating vegetation and nesting fauna.
- Fire risk will be managed through firebreaks, fuel load monitoring, and consultation with local fire authorities.

Monitoring, Adaptive Management and Success Criteria:

- A monitoring framework will be implemented in accordance with this BMP and Closure Plan, to evaluate rehabilitation progress and trigger adaptive management where necessary. Key components include:

- Performance Indicators:
- Vegetation cover, floristic composition, native species richness, and absence/reduction of weed species.
- Soil stability, erosion rates, and hydrological function.
- Evidence of faunal use, such as sightings, tracks, nests, or calls of target species.

Timeframes and Reporting:

- Formal assessments will be conducted biannually during the initial three years, then annually, with results reported to the Department of Planning, Housing and Infrastructure (DPHI) and included in the Annual Review.

Completion Criteria:

- Rehabilitation will be considered successful when it meets agreed closure criteria, including the establishment of sustainable vegetation communities with functional ecological attributes and stable landforms

4.5.5.2 Rehabilitation Concepts for the Waste Rock Emplacements

The rehabilitation objectives for the waste rock emplacements are to:

- stabilise batter slopes with rock armour (primary waste rock mulch) to control surface water runoff downslope and reduce erosion potential in the long-term.
- provide a stable plant growth medium able to support long-term vegetation growth including native and/or endemic Eucalypt woodland, shrubland and grassland species suited to slope and elevated positions similar to those remnants in the surrounding landscape; and
- exclude grazing and agricultural production.

Figure 7: Existing Wetland Rehabilitation and Enhancement Areas

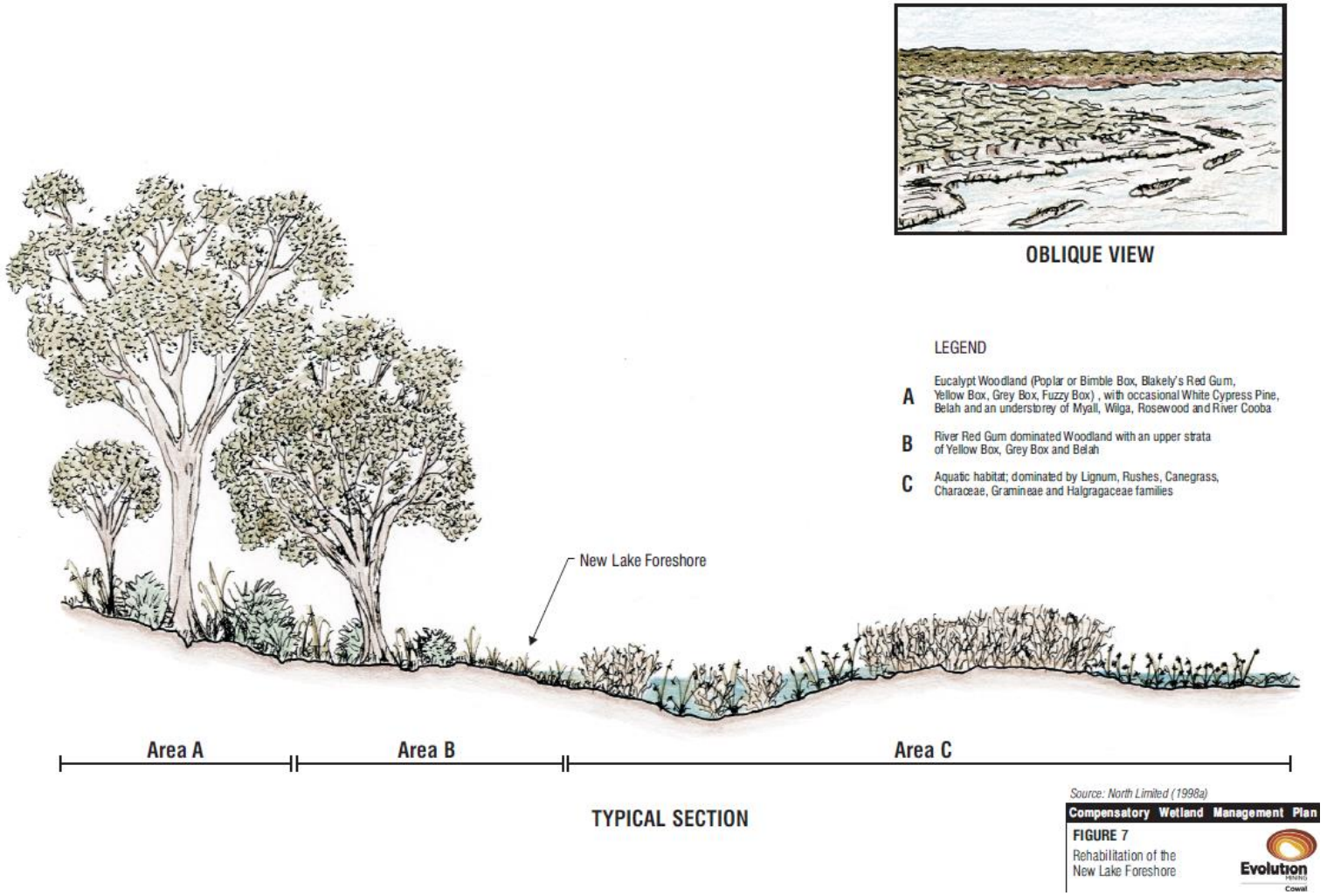

Figure 8: Lake Foreshore Rehabilitation Concept

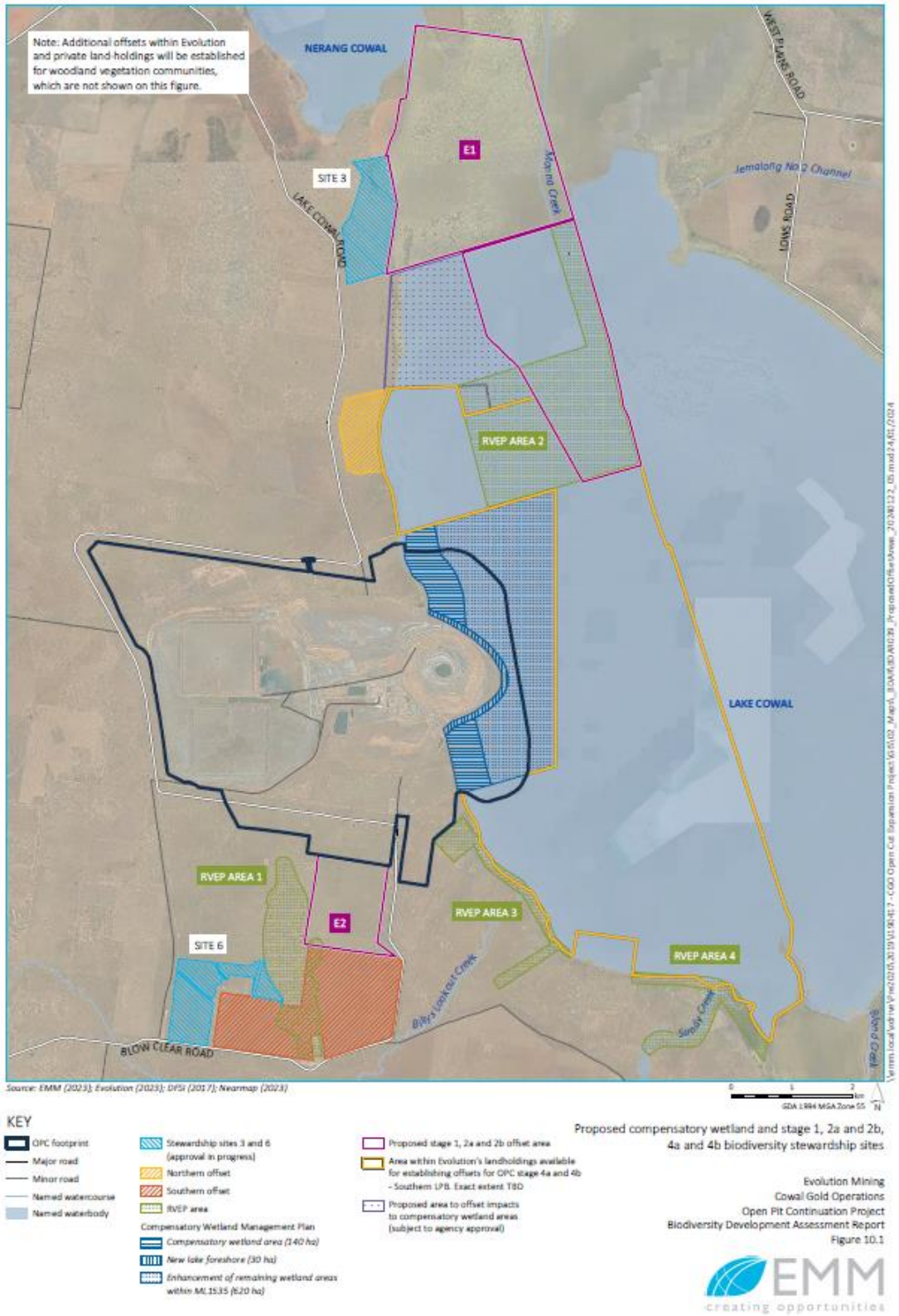

Figure 9: Offset areas and CGO footprint

5 Monitoring

Monitoring and inspections of both impacted and adjacent areas will be conducted to assess the effectiveness of control programs and to ascertain the requirement for further work. The effectiveness of biodiversity management controls will continue to be evaluated throughout the life of the mine and adaptive management and continuous improvement measures will be investigated and implemented where practicable as outlined in Section 4.

Adaptive management and continuous improvement measures in accordance with Consent B48 will be implemented accordingly. The relevant conditions are reproduced below:

a) include a seasonally based program to monitor and report on the effectiveness of the above measures, progress against the detailed performance indicators and completion criteria, and identify improvements that could be implemented to improve biodiversity outcomes.
b) include a program to monitor and report on daily and seasonal fauna usage of the tailing's storages/IWL.
c) include a protocol for investigating and reporting cyanide-related native fauna deaths and identify contingency measures for reducing cyanide levels in the tailing's storages/IWL in the event of fauna deaths caused by cyanide.
d) include a program to monitor and report on direct and indirect impacts on birdlife in bird breeding areas, threatened fauna and flora, and fish and aquatic invertebrates in and around Lake Cowal; and
e) include details of who would be responsible for monitoring, reviewing, and implementing the plan.

The monitoring programme will be coordinated by CGO personnel and conducted by suitably qualified person(s). The results of the monitoring programme will be reported in the Annual Review (Section 6.5).

5.1 Periodic auditing

Internal monthly audits will take place to assess the performance of the following measures against the performance indicators in Table .

- fauna injury and entrapment
- maintenance of Asset protection zones (covered in the bushfire management plan)
- disturbance area demarcation
- erosion and sediment control measures
- contractor education (undertaken through delivery of annual environmental awareness training), and
- weed prevention
- daily and seasonal fauna usage of the tailing's storages/IWL.

Annual audits will take place to assess the effectiveness of the following management actions:

- cyanide-related native fauna deaths
- ongoing weed control
- feral pest animal control, and
- fire-fighting equipment.

In accordance with Condition D5 (g) of the Consent, in the event that performance measures are considered to not been met, a contingency measure will be applied.

5.2 Contingency measures

In the event that performance measures are considered to not been met, a contingency measure will be applied.

The contingency measures associated with management actions are listed in Table which can be implemented where required to correct management actions if performance criteria are not met.

The success of remediation measures that have been implemented will be reviewed as part of any Corrective Action Management Plan and the Annual Review.

5.3 Risk assessment

CGO has developed a site wide environmental risk assessment that includes a description of the measures that would be implemented to:

- comply with statutory requirements, limits, or performance measures and criteria
- manage the predicted impacts identified in the Project's EIS
- manage any other environmental risk or impact that has been identified since the EIS documents were submitted.

The environmental risk assessment forms a key component of the sites EMS.

The site wide environmental risk assessment is reviewed annually as part of the site's annual review process or following any significant incident or non-compliance. The purpose of the risk assessment review process is to:

- analyse and evaluate the implementation of the identified measures and determine whether any changes to the environmental risk assessment or identified measures is required
- identify any additional unexpected environmental risks and the measures that will be implemented to manage them.

This BMP has been developed in consideration to the key risks to water resources identified through the site wide environmental risk assessment.

Table 26: Monitoring and performance indicators

ID	Management activity	Effectiveness (high-low)	Performance criteria	Monitoring proposed	Parameters to be collected and baseline data required	Responsibility	Contingency action
1. Pre-construction							
1 (a)	Demarcation of Clearing Area and Construction Area	High	– No vegetation clearing to occur beyond clearing limits. – Fence integrity, evidence of breaches, and presence of fauna attempting to cross barriers. – Assessment of wear and tear from environmental factors. – Monitoring of adjacent habitat to ensure fencing does not create unintended barriers to wildlife movement. – Analysis of fence effectiveness in maintaining protected zones	Routine inspections of exclusion fencing and buffer zones to ensure structural integrity and effectiveness in restricting access to sensitive areas. Detection of breaches and real-time monitoring where feasible. Assessment of effectiveness in preventing incursions of feral species and unauthorised human access. Monitoring of potential barriers to wildlife movement and impact on fauna migration.	– Fence integrity, evidence of breaches, and presence of fauna attempting to cross barriers. – Assessment of wear and tear from environmental factors. – Monitoring of adjacent habitat to ensure fencing does not create unintended barriers to wildlife movement. – Analysis of fence effectiveness in maintaining protected zones.	Nominated Evolution personnel	Fix the fence to comply with Sectioon 4.2.1
1 (b)	Contractor Education	High	– No evidence of encroachment by heavy plant, vehicles or	Monthly audit.	N/A	Environmental Manager	Re-educate contractors in accordance with Section 4.2.4

ID	Management activity	Effectiveness (high-low)	Performance criteria	Monitoring proposed	Parameters to be collected and baseline data required	Responsibility	Contingency action
			personnel in retained areas – Demarcated areas – Threatened Ecological Communities not impacted by the proposal and no-go zones including retained Austral Pillwort areas				
1 (c)	Pre-clearance Management Measures and Surveys - Fauna	High	Minimal impacts to fauna during vegetation clearing activities.	Monitoring not required. Supervision during clearing operation to be undertaken.	N/A	Project Ecologist	Implement fauna injury and entrapment procedure in Section 4.5.2.4
1 (d)	Pre-clearance Management Measures and Surveys - Flora	Effectiveness is variable depending on species, preparation and characteristics of recipient sites, skill of persons	All threatened flora species within the disturbance area salvaged for transplantation and/or propagation.	Monitoring the translocated plants will form a part of the translocation plan to be prepared by the suitably qualified and experienced ecologist engaged to undertake the works.		Project Ecologist	To be specified in the translocation plan.
1 (e)	Clearing of Vegetation - Maximise the salvage of resources	High	Salvage and subsequent relocation and/or storage for later reuse of habitat features Salvage of all suitable topsoil inhabited by native flora species.	Not required.		Environmental Manager	NA

ID	Management activity	Effectiveness (high-low)	Performance criteria	Monitoring proposed	Parameters to be collected and baseline data required	Responsibility	Contingency action
1 (f)	Clearing of Vegetation - Threatened Ecological Communities	High	Minimal impacts to Threatened Ecological Communities during vegetation clearing activities.	– Supervision during clearing operation to be undertaken. – Monitoring of the CGO vegetation clearing is to be undertaken using spatial datasets pre and post clearing activities	– Vegetation mapping must be conducted prior to any clearing activities, clearly identifying the approved development footprint. – Following clearing, additional vegetation mapping is to be undertaken in the cleared areas to confirm that no unauthorised vegetation removal has occurred.	Project Ecologist	If any unauthorised clearing is detected a stop work order will be put in place and all spatial data is to be provided and reported to CPHR within NSW DCCEEW within seven days.
1 (g)	Clearing of Vegetation - Vegetation Clearing Procedure	High	Minimal impacts to fauna during vegetation clearing activities.	Monitoring not required. Supervision during clearing operation to be undertaken. Reporting using spatial data will be provided in monitoring and compliance reporting.	N/A	Project Ecologist	Implement fauna injury and entrapment procedure in Sectio 4.2.6
2. During construction							
2 (a)	Weed Prevention	High	Relevant information included in site induction and Toolbox talk.	Monthly audit.	N/A	Environmental Manager	Re-educate contractors in accordance with Section 4.2.2
2 (b)	Weed Control	Medium	Minimal incursion of weeds into adjacent habitat Stay within a reasonable range of baseline	Weeds will be surveyed for annually. Follow up inspections will also continue to be made of specific areas following the implementation of weed control measures (to assess the	Weed monitoring will include identification of: – the extent of weed occurrence (priority or other).	Project Ecologist	Additional weeding event to control major incursions

ID	Management activity	Effectiveness (high-low)	Performance criteria	Monitoring proposed	Parameters to be collected and baseline data required	Responsibility	Contingency action
				success of the weed controls). Follow up inspections may be required after control implementation, depending on the weed species and nature of the problem. Weed monitoring will be conducted by suitably qualified personnel from a slow-moving vehicle. General weed management activities will be reported in the CGO's Annual Review. As a component of the Annual Review reporting, the weed control programme will be assessed for performance annually, and amended where necessary (e.g., to implement new control measures as advised by BSC, Riverina LLS or DPI Agriculture. Proposed significant amendments to weed monitoring and management will be discussed with the BSC and Riverina LLS. The weed survey will also include inspections of the CGO's soil stockpiles. Should any significant weed infestations of soil stockpiles be identified, appropriate maintenance/control measures	– the details of weed distribution (i.e., locations of infested areas and photographic evidence) and possible reasons for any infestations (e.g. a change in land use practices). – the optimum herbicide application or physical removal timing (for implementation of controls). – any resistance to an herbicide type or herbicide application technique (on the basis of success of previous controls); and – any new weed species that may be carried into the CGO area on vehicles accessing the site and become established near the vehicle wash-down area.		

ID	Management activity	Effectiveness (high-low)	Performance criteria	Monitoring proposed	Parameters to be collected and baseline data required	Responsibility	Contingency action
				will be undertaken (e.g., spraying or manual removal). Any maintenance measures conducted will be recorded in the CGO soil stockpile register.			
2 (c)	Demarcation of Clearing Area and Construction Area	High	No evidence of encroachment by heavy plant, vehicles or personnel	Monthly audit to determine if fencing is installed correctly / damage repaired	N/A	Environmental Manager	Fix the fence.
3. Post Construction and During Operation Management Measures							
3 (a)	On-going Weed Control	Medium	Minimal incursion of weeds into adjacent habitat Stay within a reasonable range of baseline	Annual walkover to assess the extent of weed coverage and direct the frequency/timing of the weed control going forward.		Suitably qualified person/s	Additional weeding event to control major incursions
3 (b)	Feral Pest Animal Control – Group programs	Medium	Participation in LLS managed Group feral animal control programs if available.	Not required	Not required	Environmental Manager	NA
3 (c)	Feral Pest Animal Control – Monitoring	Medium	Grounds monitored to determine whether pest activity warrants additional measures beyond Group feral animal control programs.	– Regular property inspections to assess the status of pest populations within Evolution-owned land, including wetland areas within ML 1535, and the need for the implementation of appropriate control strategies.	– Population density and activity of feral species (e.g., foxes, cats, rabbits, and pigs). – Data will be used to assess predation pressure on native wildlife particularly bird populations. Identification of seasonal variations in pest activity and impact on biodiversity.	Environmental Manager	If pest activity is excessive, approach LLS for guidance on additional measures that can be implemented.

ID	Management activity	Effectiveness (high-low)	Performance criteria	Monitoring proposed	Parameters to be collected and baseline data required	Responsibility	Contingency action
				– Camera trap monitoring placed across the area immediately adjacent to the project area. Two to four camera traps will be installed to detect the presence of rabbits, foxes, and feral cats. – Site walk over to determine the presence of dens, burrows and scats within the project area and immediate surrounds. – Inspections to assess the effectiveness of control measures implemented and review these if necessary; and Documenting pest sightings and control measures.			
3 (d)	Monitoring cyanide concentrations within the IWL and other relevant water bodies	Medium	Cyanide levels of the aqueous component of the tailing's slurry stream do not exceed: 20 mg CNWAD/L (90 percentile over six months), and a maximum permissible limit at any time of 30 mg CNWAD/L at the process plant.	Cyanide concentration is to be recorded twice daily from water at an active spigot in the TSF, IWL and any other relevant water body. Frequency of water monitoring is to be revised in correspondence with relevant regulators following approval and prior to commencement of operations.	Cyanide in the existing IWL is currently managed as part of the CMP. Within the new TSF and IWL, this established approach will be adopted. As such, acceptable limits of cyanide concentrations are to be assessed against relevant water quality criteria. Cyanide levels of the aqueous component of the tailing's slurry	Sustainability Manager and conducted by suitably qualified person(s).	Refer to Adaptive Management Measure AMM 3 and AMM 4 within Table 25

ID	Management activity	Effectiveness (high-low)	Performance criteria	Monitoring proposed	Parameters to be collected and baseline data required	Responsibility	Contingency action
				CNwAD monitoring results are continued to be reported monthly on the company website.	stream do not exceed: 20 mg CNWAD/L (90 percentile over six months), and a maximum permissible limit at any time of 30 mg CNWAD/L at the process plant.		
3 (e)	Monitoring contamination of surface water or sediments in including Lake Cowal during construction and operation.		Exceedance of contamination guidelines as described by Lake Cowal. Australian New Zealand Environmental Conservation Council (ANZECC 2000} water quality guidelines.	Water and sediment quality sampling is to continue to be undertaken within Lake Cowal as part of the existing Surface Water, Groundwater, Meteorological and Biological Monitoring Programme (SWGMBMP). Monitoring locations, frequency of monitoring and surface water parameters relevant to Lake Cowal that will be monitored in accordance with the surface water monitoring programme described in Section 4.3 of the SWGMBMP If construction is to be undertaken when Lake Cowal is full, additional water sampling should occur prior to and during the construction of the LPB, to inform the application of additional or change of mitigation/management measures.	Baseline water quality values for Lake Cowal are provided in the Water Management Plan, which are used to indicate any connections between the closed catchment of the Project and Lake Cowal. Australian New Zealand Environmental Conservation Council (ANZECC 2000} water quality guidelines will continue to be used to identify any pollution of Lake Cowal that may have arisen. Baseline values should be reviewed considering results from the ongoing monitoring by Evolution, which commenced in 2010. New monitoring locations should also be established where needed that are nearby and representative of areas that may be sensitive to construction and operation impacts on water quality, including water bird breeding areas.	Nominated Evolution personnel	Refer to Table 23 and WMP

ID	Management activity	Effectiveness (high-low)	Performance criteria	Monitoring proposed	Parameters to be collected and baseline data required	Responsibility	Contingency action
				Timing will be in accordance with the Surface Water, Groundwater, Meteorological and Biological Monitoring Programme (SWGMBMP). This BMP will be updated to include details of additional monitoring sites which will be defined within a revised SWGMBMP.	Parameters to be continued to be measured within water samples include (but not limited to): – pH and electrical conductivity – turbidity and suspended solids – dissolved oxygen – heavy metals – hydrocarbons. Parameters to be continued to be measured within sediment samples include (but not limited to): – Arsenic – Cadmium – Lead – Zinc – Antimony		
4. Management Measures and Procedures Applicable to All Stages							
4 (a)	Fauna Injury and Entrapment Procedure	Medium	Ideally no incidents, or all injured fauna to receive appropriate care.	Record encounters that result in injury or entrapment: – Species – Location – Outcome (i.e. fauna death, fauna received care from WIRES/Vet)		Environmental Manager	From records determine whether there is any particular location causing frequent incidences. Address any identifiable causes for fauna injury and entrapment.

ID	Management activity	Effectiveness (high-low)	Performance criteria	Monitoring proposed	Parameters to be collected and baseline data required	Responsibility	Contingency action
4 (b)	Bushfire Hazard Management	High	Vegetation in asset protection zones is maintained at a suitable height.	Monthly audit.	N/A	Safety Manager	Have APZ maintenance undertaken if APZ is deemed unsafe.
4 (c)	Bushfire Hazard Management	High	All fire safety equipment is tagged and tested as required.	Yearly audit	N/A	Safety Manager	Have equipment tagged and tested if due.
4 (d)	Erosion and Sediment Management	High	No breaches of sediment fencing. No major erosion left unmitigated.	In accordance with the Soil Stripping Management Plan (SMP) and the Erosion and Sediment section of the WMP, which include: – Conducting monthly monitoring of sedimentation controls or after rain event of 30mm or more in a 24 hour period to ensure erosion and sediment controls have been installed and performing effectively. – Adjust sedimentation measures as required. Require contractors to report any observed fault in sediment fencing to their supervisor.	All works must comply with testing required by the various Acts (Appendix K of the ESCMP), including Water Act, 1912 Soil Conservation Act, 1938 Rivers and Foreshores Improvement Act (1948) (note Part 3A) Dam Safety Act, 1978 Fisheries Management Act, 1994 Protection of the Environment Operations Act, 1997 Water Management Act, 2000. Baseline data will be derived from existing CGO's Environmental monitoring data.	Nominated Evolution personnel	Repair sediment fencing, mitigate erosion and sedimentation in accordance with Section 4.5.1
4 (e)	Aquatic fauna	Low	No exceedance in water quality parameters from baseline data collected	Monitoring the CGO's potential impacts on fish and aquatic invertebrates, will be undertaken utilising a biological monitoring programme that will	The biological monitoring programme includes monitoring of:	Sustainability Manager and conducted by suitably qualified ecologist	Refer to Section 7 of DMP

ID	Management activity	Effectiveness (high-low)	Performance criteria	Monitoring proposed	Parameters to be collected and baseline data required	Responsibility	Contingency action
			prior to construction and dewatering.	be implemented during the operations phase of the mine.	– changes in lake water quality. – removal/modification of habitat. – movement of dust away from active areas to lake environs; and – lake sediment quality. Baseline data is to be collected prior to construction and dewatering.		
5. Monitoring of avifauna							
5 (a)(i)	Bird Numbers and Species Diversity at Bird Breeding Sites	Medium	Outcomes of the assessment will be the identification of a trigger for management and informing the need of an appropriate response	New transects are to be established adjacent to the proposed LPB, including waterbird breeding areas near the disturbance footprint and comparable reference sites in Lake Cowal. Suitably qualified ornithologists should determine transect locations to ensure ecologically significant areas are studied, enabling accurate monitoring of potential impacts and informing effective mitigation strategies. A statistical assessment of the change in waterbird communities will be undertaken annually across the first three years of construction; and the first three years of operations.	The following parameters should be recorded during baseline, as well as replicate monitoring efforts: – meteorological conditions present at the time of monitoring. – lake characteristics (e.g., lake depth, percent water coverage of lake and filling phase status). – vegetation survey data of the transects. – Bird species richness and diversity – Number of fledglings	Sustainability Manager and conducted by suitably qualified ornithologists	– Noisy construction will be scheduled away from key breeding habitats during the October–March period. – Noise mitigation measures will be implemented if migratory bird behaviour changes during monitoring. – Efforts will be made to further distance

ID	Management activity	Effectiveness (high-low)	Performance criteria	Monitoring proposed	Parameters to be collected and baseline data required	Responsibility	Contingency action
				The analysis should consider a BACI approach. Statistical analysis to examine variation in the abundance of breeding birds, and the number and survival of fledglings and the mean number of breeding bird species between years, seasons, lake water cycle and climatic conditions. In addition to bird breeding/behaviour monitoring, and visual opportunistic monitoring will be conducted within the CGO including the New Lake Foreshore, Compensatory Wetland and remaining wetland areas within ML 1535 as described in Section 11.1.5 and the CWMP.			activities from breeding areas. Changes in construction sequencing and bird behaviour will be documented, with significant behaviour changes reported to CPHR within NSW DCCEEW within seven days.
5 (a) (ii)	Waterbird Breeding surveys	Medium	Waterbird behaviour will not have observed marked changes during monitoring, resulting from mining operations	Waterbird breeding surveys will be carried out in 2 stages: 1. Foot transects will be carried out along terrestrial locations with the addition of binoculars to assist in bird identification. 2. Colonial breeding areas within the lake will be surveyed via boat.	The following parameters should be recorded during baseline, as well as replicate monitoring efforts: – meteorological conditions present at the time of monitoring. – lake characteristics (e.g., lake depth, percent water coverage of lake and filling phase status). – vegetation survey data of the transects.	Sustainability Manager and conducted by suitably qualified ornithologists	– Noisy construction will be scheduled away from key breeding habitats during the October–March period. – Noise mitigation measures will be implemented if migratory bird behaviour

ID	Management activity	Effectiveness (high-low)	Performance criteria	Monitoring proposed	Parameters to be collected and baseline data required	Responsibility	Contingency action
				Previous surveys indicate that the main bird breeding areas occur in wooded and vegetated parts in northern sections of the lake. All historic data collected the locations of these breeding locations are provided in Figure 7. Monitoring during each survey effort is to occur adjacent to LPB and established monitoring locations across Lake Cowal. Monitoring locations are provided in Figure 7.	– abrupt changes of bird behaviour as a result of noise (e.g., bird taking flight as a result of a noise stimulus). – differences in behaviour between different species of birds. – the number and proportion of birds that take flight if considered to be in response to noise (relative to the total resident population at the time of monitoring). – the proportion of birds that return if they take flight in response to noise. – the length of time birds is away if they take flight and the likely impact this would have to hatching and fledging of offspring. – the degree to which birds develop tolerance to noise levels over time; and – changes in foraging and breeding patterns in terms of the extent and/or location of foraging and breeding areas.		changes during monitoring as described in Table 27 (AMM 1). – Efforts will be made to further distance activities from breeding areas. Changes in construction sequencing and bird behaviour will be documented, with significant behaviour changes reported to CPHR within NSW DCCEEW within seven days.

ID	Management activity	Effectiveness (high-low)	Performance criteria	Monitoring proposed	Parameters to be collected and baseline data required	Responsibility	Contingency action
5 (b)	Monitoring effect of noise impacts to threatened/ migratory waterbirds in Lake Cowal during construction and operation (excluding blasting)	Medium	An adverse reaction observed to noise and/or light associated with construction and/or operations includes (but not limited to): – abrupt negative changes in bird behaviour corresponding with commencement of construction and operations. – significant reductions in the number and/or species richness of waterbirds, or – movement of waterbirds foraging, roosting and/or nesting away from the Additional disturbance areas	Three monitoring events to be undertaken annually by a suitably qualified ornithologist, including main bird breeding/migratory shorebird visitation period (September to January). Monitoring during each survey effort is to occur adjacent to LPB and established monitoring locations across Lake Cowal. A statistical assessment of the change in waterbird communities should be undertaken annually across the first three years of construction; and the first three years of operations. The analysis should consider a BACI approach.	Baseline data is to comprise of all documented surveys including noise levels from registered from noise monitoring locations provided in Figure 7. Baseline data is to include datasets collected breeding periods, including those collected within La Nina cycles as well as from the 2024-2025 breeding period when no noise was being generated. The following parameters should be recorded during baseline, as well as replicate monitoring efforts:	Sustainability Manager and conducted by suitably qualified ornithologists	Refer to Adaptive Management Measure AMM 1 within Table 27
5 (c)	Monitoring of noise impacts to threatened/ migratory waterbirds in Lake Cowal during blasting	Medium	An adverse reaction observed to blasting emission, including (but not limited to):	Attended monitoring is to occur immediately before, during and after the first ten blasts. Observations during the initial blast are to be overseen by four suitably qualified	Baseline data is to comprise of all documented surveys including noise levels from registered from noise	Sustainability Manager and conducted by suitably qualified ornithologists	Refer to Adaptive Management Measure AMM 2 within Table 27

ID	Management activity	Effectiveness (high-low)	Performance criteria	Monitoring proposed	Parameters to be collected and baseline data required	Responsibility	Contingency action
			– abrupt negative changes in bird behaviour corresponding with the noise. – significant number and/or proportion of birds take flight compared to total resident population corresponding with the noise stimulus. – a significantly less proportion of birds return if they take flight in response to noise; and/or – length of time birds that away if they take flight and that likely to have a more than negligible impact. Outcomes of the assessment will be the identification of a trigger for management and informing the need of an appropriate response	ornithologists. Construction: Three monitoring events annually by a suitably qualified ornithologist, including main bird breeding/migratory shorebird visitation period (September to January). Operations: Three monitoring events annually by a suitably qualified ornithologist, including main bird breeding/migratory shorebird visitation period (September to January).	monitoring locations provided in Figure 7. Baseline data is to include datasets collected breeding periods, including those collected within La Nina cycles as well as from the 2024-2025 breeding period when no noise was being generated. The following parameters should be recorded during baseline, as well as replicate monitoring efforts: Monitoring results from the CGO's noise and blasting monitoring programmes (as detailed in the Noise Management Plan and Blast Management Plan [BLMP] respectively) will also be used to monitor noise and blasting impacts. Parameters to be collected include: – meteorological conditions present at the time of monitoring. – lake characteristics (e.g., lake depth, percent water coverage of lake and filling phase status)		

ID	Management activity	Effectiveness (high-low)	Performance criteria	Monitoring proposed	Parameters to be collected and baseline data required	Responsibility	Contingency action
					– vegetation survey data of the transects. – abrupt changes of bird behaviour as a result of noise (e.g., bird taking flight as a result of a noise stimulus) – differences in behaviour between different species of birds – the number and proportion of birds that take flight if considered to be in response to noise (relative to the total resident population at the time of monitoring) – the proportion of birds that return if they take flight in response to noise. – the length of time birds is away if they take flight and the likely impact this would have to hatching and fledging of offspring – the degree to which birds develop tolerance to noise levels over time. changes in foraging and breeding patterns in terms of the extent and/or location of		

ID	Management activity	Effectiveness (high-low)	Performance criteria	Monitoring proposed	Parameters to be collected and baseline data required	Responsibility	Contingency action
					foraging any changes in breeding areas.		
6. Monitoring of flora							
6 (a)	Monitoring of retained Austral Pillwort within Project Area	Medium	Given the cryptic nature of the species, it is difficult to determine the success of mitigation measure to protect and minimise impacts on Austral pillwort. The main objective of the management measures is to minimise all impacts on Austral Pillwort.	Monitoring of Austral Pillwort protective and sediment and erosion controls including the monitoring of sediment-laden water are to be monitored weekly during construction and during/after episodic events. Where required additional surveys monitoring Austral Pillwort populations and condition of their habitat will be timed during October to December after rainfalls, in drying mud after inundation. Monitoring of Austral Pillwort persistence and habitat condition adjacent to construction areas will be built into the existing Austral Pillwort monitoring program by Evolution. Austral Pillwort and condition of their habitat will be assessed during and following construction to determine if an indirect impact has occurred. Where possible, concurrent monitoring of reference populations using a Before-After-Control-Impact (BACI)	Records of Austral Pillwort gathered for surveys in the current BDAR will be used as a baseline dataset. Areas where Austral Pillwort was recorded in the Broader Austral Pillwort survey area (i.e., away from the Additional disturbance area) will be used as a control.	A suitably qualified ecologist	Refer to Adaptive Management Measure AMM 8 within Table 27

ID	Management activity	Effectiveness (high-low)	Performance criteria	Monitoring proposed	Parameters to be collected and baseline data required	Responsibility	Contingency action
				design (using survey results from this study for both the impact and control before data) will inform if decline is due to natural or construction / operation related impacts. Survey is to occur as soon as possible after construction when suitable conditions occur. It is noted that as this species is highly dependent on climatic conditions to express vegetatively, it may take some time for suitable conditions to occur.			

Table 27: Adaptive management measures

ID	Uncertain Biodiversity Impact	Trigger for Management	Risk of Failure	Contingency measure
AMM 1	Potential noise impacts to threatened/ migratory waterbirds in Lake Cowal during construction and operation (excluding blasting)	An adverse reaction observed to noise and/or light associated with construction and/or operations includes (but not limited to): – abrupt negative changes in bird behaviour corresponding with commencement of construction and operations. – significant reductions in the number and/or species richness of waterbirds, or – movement of waterbirds foraging, roosting and/or nesting away from the Additional disturbance areas For impacts to be attributed to construction and/or operations, it would be expected to see these negative responses of waterbirds to be greatest closest to mine compared to baseline levels and reference areas away from my activities.	Medium: Waterbird usage of Lake Cowal naturally is highly variable in space and time. This includes periods when there is little/no water in Lake Cowal, so waterbird communities are typically reduced or absent. Hence, the ability to detect responses of waterbirds to indirect impacts of the Project may be masked by this variance in the composition waterbird communities and locations of habitat usage in Lake Cowal.	Contingency measures to minimise noise may include the following: – Restricting movement of trucks on ridgelines and exposed haul routes where their noise can propagate over a wide area, especially at night. – Scheduling the use of noisy equipment during the daytime. Siting noisy equipment behind structures that act as barriers, or at the greatest distance from the noise sensitive area. – Orienting equipment so that noise emissions are directed away from any sensitive areas, to achieve maximum attenuation of noise. – Scheduling operations so that noisy equipment items are used separately rather than concurrently. – Keeping equipment well maintained. – Employing 'quiet' practices when operating equipment (e.g., positioning idling trucks in appropriate areas). – Adjusting reversing alarms on heavy equipment to make them 'smarter', limiting acoustic range to the immediate danger area. – Using equipment with efficient mufflers and using quieter engines (such as electric instead of internal combustion). – Using high-pressure hydraulic systems to split rock instead of hydraulic or pneumatic hammers. – Damping or lining metal trays. – An evaluation of the design and mitigation of night lighting (see Section 8.2.1) should also be reviewed since the

ID	Uncertain Biodiversity Impact	Trigger for Management	Risk of Failure	Contingency measure
				effects of noise and light are difficult to differentiate if waterbird communities change following commencement of construction or operation. – If negative changes in waterbird behaviour and/or distribution occur following commencement of operations, contingencies to minimise blasting emissions should be explored since construction and operation have similar noise generating activities. Monitoring results from the CGM's noise and blasting monitoring programmes (as detailed in the NMP and BMP will also be used to monitor and respond to noise and blasting impacts.
AMM 2	Potential noise impacts to threatened/ migratory waterbirds in Lake Cowal during blasting	An adverse reaction observed to blasting emission, including (but not limited to): – abrupt negative changes in bird behaviour corresponding with the noise. – significant number and/or proportion of birds take flight compared to total resident population corresponding with the noise stimulus. – a significantly less proportion of birds return if they take flight in response to noise; and/or – length of time birds that away if they take flight and that likely to have a more than negligible impact.	Medium: Changes in blast output and location, as well as spatiotemporal variance in waterbird occupancy/nesting may change response of waterbirds to blasting over time (i.e., subsequent to initially observed blasts). However, initial blasts are likely to be the most acute and inform of any changes required to appropriately manage blasting emissions.	Contingency measures that can be employed if response is triggered: – reduce the MIC or charge mass per delay, to the lowest possible level. – keep face heights to a practical minimum. – ensure stemming type and length is adequate. – eliminate exposed detonating cord. Investigate alternative initiation methods. – eliminate secondary blasting (instead of popping, use rock breaker or drop hammer) – reduce the need for toe shots (e.g., better control of drill patterns) – orientate faces where possible so that they do not face directly towards waterbird breeding colonies. – ensure that all delays are designed to eliminate wave front reinforcement. – vary the direction of initiation. – exercise strict control over the burden, spacing and orientation of all blast drill holes.

ID	Uncertain Biodiversity Impact	Trigger for Management	Risk of Failure	Contingency measure
				– take particular care where the face is already broken or where it is strongly jointed, sheared, or faulted. – consider deck loading where appropriate to avoid broken ground or cavities in the face (e.g., from back break). – Monitoring results from the CG0's noise and blasting monitoring programmes (as detailed in the NMP and BMP will also be used to monitor and respond to noise and blasting impacts.
AMM 3	Potential impacts on fauna associated with IWL during operation, including cyanide	– Biannually an assessment of impacts to fauna is to be undertaken, with findings included as part of a submission to CGO regulators. This report is to compile and assess the following data: – IWL quarterly site visits to conduct intensive wildlife observations, IWL perimeter fence inspections, provide on-site training to wildlife observers. – desktop review of existing electronic data collected by Anabat™ devices. – desktop review of existing wildlife visitation data recorded at the IWL and control site. Results to be compiled and performance to be assessed:	Moderate: CGO has designed and improved its control strategies for Cyanide management through its established CMP, which was approved by Department of Planning in 2006. Since commencement, an independent audit of the environmental performance of CGO, including performance on the CMP, has occurred in annually since 2004 (except 2:020 and 2021). Management of cyanide at CGO has been certified by the International Cyanide Management institute's (ICMI) Code for Cyanide Management. This code is a voluntary, performance driven, certification program of best practices for gold and silver mining companies and the companies producing and transporting cyanide used in gold and silver mining. The Cyanide Code provides a management system for the safe management of cyanide throughout its use cycle.	Reducing cyanide levels in the tailings dams in the event it is established that fauna deaths are occurring from cyanide in tailings dam water. Contingency measures for reducing cyanide levels in the tailings dams in the event it is established that fauna deaths are occurring from cyanide in tailings dam water are presented in Section 8 of the former FFMP. Measures include: – adding cyanide destruction chemical(s) to tailings dam waters to reduce existing cyanide levels, or – increasing the dosage rate of cyanide destruction chemical(s) in the cyanide destruction circuit to achieve new cyanide level in tailings discharge to the dam. In the event of wildlife deaths occurring due to cyanide, Evolution will consult with the relevant government agencies to agree on an appropriate course of action. Other measures to supplement wildlife management beyond minimising use of cyanide and cyanide destruction beyond be considered to scare away birds and animals include: – floating balls – remote-control airborne devices – use of netting.

ID	Uncertain Biodiversity Impact	Trigger for Management	Risk of Failure	Contingency measure
		– an evaluation of the accuracy of wildlife and chemistry monitoring data – an assessment of seasonal patterns in wildlife visitations – a review of monitoring protocols and identification of any deficiencies – the provision of appropriate remedial management options.	Environmental performance indicators demonstrate the effectiveness of the CM P. Key results of annual reports from 2010 to 2021 period are: – no cyanide-related wildlife mortality or effect were recorded. – CNwAo concentrations have remained low and within licence conditions for the TSF. That is, the maximum CNwAD of water sampled twice daily from the tailing's slurry has never exceeded the SO mg/L limit.	

ID	Uncertain Biodiversity Impact	Trigger for Management	Risk of Failure	Contingency measure
AMM 4	Potential impact of cyanide concentrations within the IWL and other relevant water bodies	Cyanide levels of the aqueous component of the tailing's slurry stream do not exceed: 20 mg CNWAD/L (90 percentile over six months), and a maximum permissible limit at any time of 30 mg CNWAD/L at the process plant.	Moderate: CGO has designed and improved its control strategies for Cyanide management through its established CMP, which was approved by Department of Planning in 2006. Since commencement, an independent audit of the environmental performance of CGO, including performance on the CMP, has occurred in annually since 2004 (except 2:020 and 2021}. Management of cyanide at CGO has been certified by the International Cyanide Management institute's (ICMI} Code for Cyanide Management. This code is a voluntary, performance driven, certification program of best practices for gold and silver mining companies and the companies producing and transporting cyanide used in gold and silver mining. – The Cyanide Code provides a management system for the safe management of cyanide throughout its use cycle. Environmental performance indicators demonstrate the effectiveness of the CM P. Key results of annual reports from 2010 to 2021 period are: – there have been no cyanide-related wildlife mortality or effect recorded during Evolution's management of the CGO CNwAo concentrations have remained low and within licence	Contingency measures for reducing cyanide levels in the tailings dams in the event it is established that fauna deaths are occurring from cyanide in tailings dam water are presented in Section 8 of the FFMP. These measures include: – adding cyanide destruction chemical(s) to tailings dam waters to reduce existing cyanide levels, or – increasing the dosage rate of cyanide destruction chemical(s) in the cyanide destruction circuit to achieve new cyanide level in tailings discharge to the dam. In the event of cyanide concentrations exceeding the trigger, Evolution will consult with the relevant government agencies to agree on an appropriate course of action.

ID	Uncertain Biodiversity Impact	Trigger for Management	Risk of Failure	Contingency measure
			conditions for the TSF. That is, the maximum CNwAo of water sampled twice daily from the tailing's slurry has never exceeded the SO mg/L limit.	
AMM 5	Potential contamination of groundwater	Measured concentrations of analyte in groundwater exceeds ANZECC (2000} guidelines and elevated beyond baseline concentrations.	Low. There is a low chance of connection between Lake Cowal and groundwater within the underlying aquifers due to the depth of the relatively impermeable clay that separates the Lake Cowal bed from the underlying aquifer system. Environmental performance indicators that demonstrate the effectiveness of the groundwater within annual reports from 2010 to 2021 are: – Cyanide within groundwater has been below the laboratory detection limit from 2014 to	In the event of serious impacts to groundwater by way of recharge or contamination, Evolution will consult with the relevant government agencies to agree on an appropriate course of action.

ID	Uncertain Biodiversity Impact	Trigger for Management	Risk of Failure	Contingency measure
			2021. There have been readings above the laboratory detection limit in 2010, 2011, 2012 and 2013. However, subsequent retesting showed reductions in concentrations. – There has been no observed die-off of vegetation in areas adjacent to CGO that has been attributed to drawdown of groundwater, including in Lake Cowal.	
AMM 6	Potential contamination of surface water or sediments in including Lake Cowal during construction and operation.	Where monitoring results indicate values in excess of the ANZECC and ARMCANZ (2000} default 99% protection level triggers.	Low. Risk of failure is likely to be greatest during construction, especially if Lake Cowal is inundated at the time. However, monitoring of sediment across the 2010 to 2021 period have identified no connections between the closed catchment of CGO operations and Lake Cowal. Although surface water monitoring during some years when Lake Cowal was full found some elevated metal concentrations, this was within the expected variance of this waterbody and not attributed to activities at CGO. Hence, risk of water contamination should notably reduce once the LPB is constructed, providing a hydrological separation between construction and operation activities and Lake Cowal. After this, any potential contaminants within surface	A review and investigation procedure will be conducted to validate the data and to assess the need to implement additional management measures to those already in place. The review procedure will involve validation of data, management of data, analysis and investigation, and where necessary development of ameliorative measures. Ameliorative measures will be developed in consultation with the relevant authorities based on the results of the review and investigative process.

ID	Uncertain Biodiversity Impact	Trigger for Management	Risk of Failure	Contingency measure
			waters can be internally captured and treated within the ICDS.	
AMM 7	Potential impact of dust and particulate matter on threatened/migratory waterbirds in Lake Cowal	Assessment of the dust deposition monitoring programme results against EPA criteria.	Medium. Despite all management efforts, transport of dust and particulate matter is difficult to control offsite. Nevertheless, based on the development of effective responses to feedback from regulators and an independent monitoring panel, Evolution has an effective and adaptable approach to dust management that is applicable to the Project, which can be tailored to the meteorological conditions and potential sources of dust/particulate matter.	In the event the EPA amenity criteria for dust deposition is exceeded within bird breeding areas, an assessment will be conducted to determine: the timing of elevated dust levels the general location of the elevated dust levels the climatic conditions at the time of the elevated dust levels potential contributing factors to the elevated dust levels whether the elevated dust levels are attributable to Project activities. Additional dust control, management and modification measures to be adopted will be selected with consideration of: – mine activities scheduled for the next phase of construction/operation possible reasons for previous elevated dust level. – additional modifications in the form of control methods or operational changes which could be adopted control equipment that will be utilised the location of current and future dust generating activities.

ID	Uncertain Biodiversity Impact	Trigger for Management	Risk of Failure	Contingency measure
				Potential measures include: – increased watering of exposed surfaces via water trucks or other methods as required. – activating or increasing rates of water application at fixed water sprays on stockpiles and/or transfer points. – the temporary cessation of ancillary or non-essential on-site dust generating activities (e.g., soil stripping).
AMM 8	Impacts of construction/ operations on retained Austral Pillwort adjacent to Additional disturbance area	Protective fencing is breached (where installed). Sediment/erosion controls are not effective in preventing course debris from entering habitat of retained Austral Pillwort. Absence of Austral Pillwort from areas adjacent to Additional disturbance area and/or decline in habitat condition, but not control locations. Note that factors other than mining construction and operations including rainfall (i.e., species only expresses following significant winter/spring rainfall) and incursion by grasses and weeds and agricultural activities (including stock grazing) may also explain changes in Austral Pillwort populations, so such factors should also be recorded. Mining related	Medium. If BMP controls are monitored weekly, the installation of fencing to prevent person/equipment access should be effective to prevent disturbance of retained Austral Pillwort habitat. If BMP controls are monitored weekly, and during/after episodic events, the installation of sediment/erosion controls should be effective to prevent smothering of retained Austral Pillwort habitat by course debris and sediment. The ephemeral nature of Austral Pillwort makes it hard to survey for. Suitable rainfall is required prior to summer for this species to express. If absent in monitoring, control locations should be inspected closely to ensure the low count/absence is due to climatic factors other than mining.	If fencing is breached, reinstall fencing to protect retained Austral Pillwort. If sediment/erosion controls are breached, reinstall sediment/erosion controls to protect retained Austral Pillwort. Any sediment that breaches the controls should be detained and removed from within the protected Austral Pillwort habitat area. If sediment/erosion controls are ineffective in preventing coarse debris entering this area, additional and/or new approaches should be applied. If monitoring identifies that mine construction and operation has resulted in the decline and/or absence of Austral Pillwort, or lead to more than negligible degradation of habitat, arrangements to offset this impact via the NSW BOS is to be considered in consultation with NSW Planning. The option for propagation and translocation into the adjoining habitat utilising the propagated plants or retained topsoil for excavated Austral Pillwort gilgai habitat (approval for this translocation would be required) should also be considered.

ID	Uncertain Biodiversity Impact	Trigger for Management	Risk of Failure	Contingency measure
		impacts can be distinguished from these external factors by adopting a BACI survey design.		

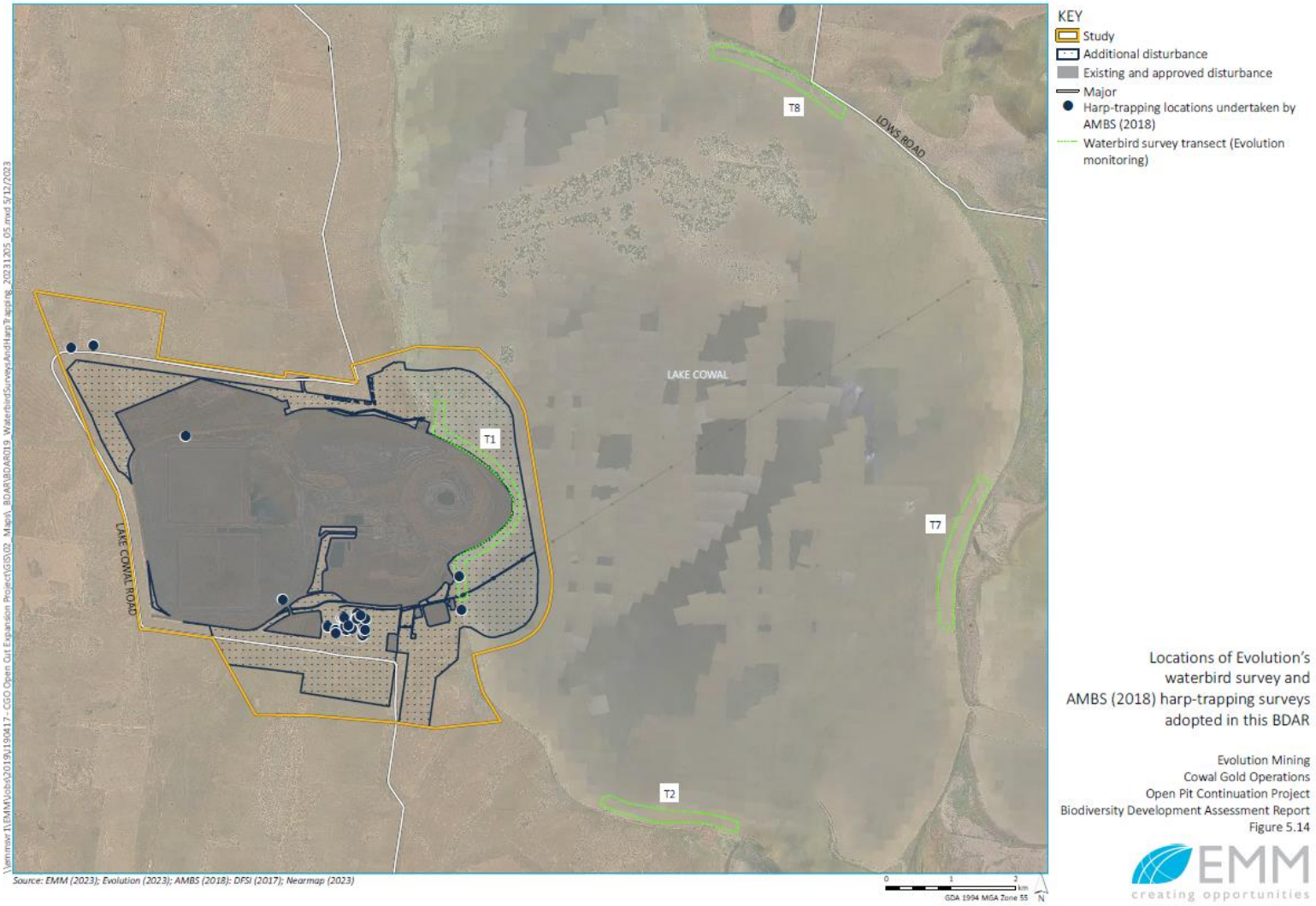

Figure 10: Waterbird survey transects

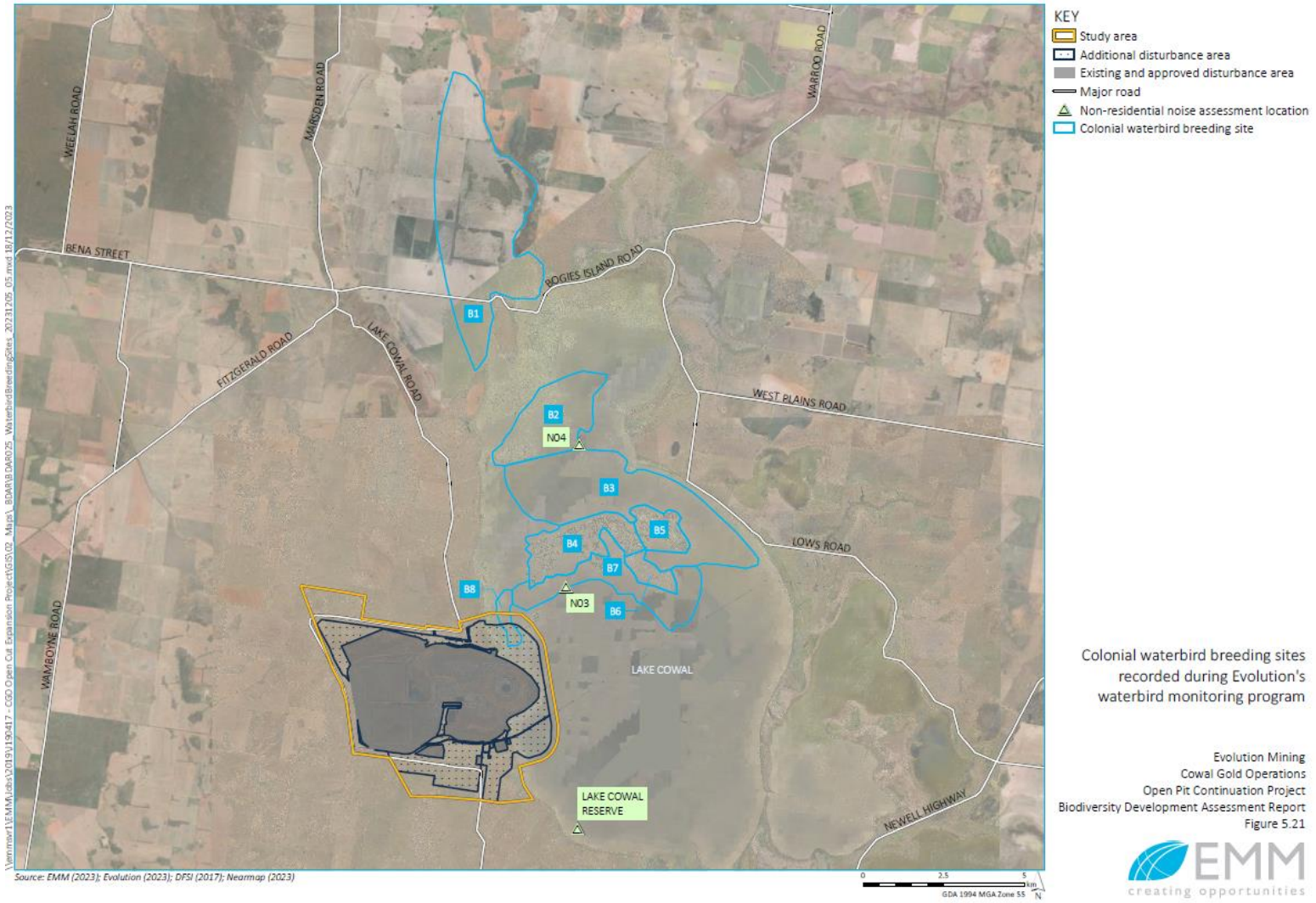

Figure 11: Waterbird breeding sites and noise monitoring locations

6 Implementation and reporting

6.1 Roles and responsibilities

The roles and responsibilities of all project personnel of relevance to this BMP are listed in Table below.

Table 28: Roles and responsibilities

Environmental management role	Responsibility
Sustainability Manager	Act as the appointed “Environmental Officer” on behalf of the operation.
	Oversees the development and implementation of BMP systems and governance programs to ensure the operation maintains compliance with applicable environmental obligations.
	Oversees the BMP monitoring program to meet the environmental obligations.
	Oversees the development and management of Sustainability risks.
	Coordinates cultural heritage matters ensuring compliance with relevant NSW legislation and the Indigenous Archaeology and Cultural Heritage Management Plan.
	Leads, coaches and mentors a dynamic team to provide high quality Sustainability service and support to the CGO.
	Establishes training and awareness programs for employees, contractors and visitors to site in relation to the Sustainability management plans developed to comply with Sustainability obligations and Evolution’s policies in relation to Sustainability management and performance.
	Oversees the governance programme to monitor compliance and performance of department managers, supervisors, employees, and contractors against the BMP programmes.
	Oversees the preparation and delivery of internal and external reports as per Sustainability obligations.
	Promotes Evolution’s Sustainability strategy by educating staff and contractors.
	Oversees the development and implementation of cultural heritage and European heritage awareness program for all employees, contractors and visitors to the operation.
	Responsible for the development of the rehabilitation, biodiversity offsets, mine closure and land strategies, and oversees the implementation of associated programs and activities.
Sustainability Superintendent	Maintains project approvals, ensuring approval obligations are suitable for the continued operation of the CGO.
	Ensures all CGO approval documents are submitted as required by licences, development consent and mining lease conditions and other permits.
	Manages consultants involved in CGO approvals processes.
	Works with relevant government agencies and consultants to ensure necessary project approvals are achieved.
	Promotes and enhances Evolution’s reputation and relationship with the Government regulators, local landholders and other stakeholders.
	Maintains the implementation of the environment management system and maintains compliance with applicable environmental obligations are met and minimises environmental harm and risk.
	Oversees the environmental monitoring and reporting program.
	Coordinates external environmental audits and site visits, acting as primary contact on environmental matters.
	Supports Sustainability Manager’s responsibilities.
	Responsible for site environmental monitoring, including external consultant monitoring and reporting.

	Implementation and compliance with EMPs, environmental approvals, licensing and permits.
	Responsible for annual internal auditing and reporting (e.g. CGO Annual Review).
	Public monthly reporting of environmental monitoring data.
	Closure rehabilitation.
	ChemAlert updating and chemical approvals.
	Pest and weed control work coordination.
	Equipment management.
	Environmental Management System implementation and optimisation.
	Scheduling of corrective and preventative actions.
	Significant environmental aspects, formal risk assessments and Management of Change program supervision.
	Objectives, targets and action tracking.
General manager	Provides adequate resourcing to support site environmental management and implementation of the Forward Program and approved management plans.
	Provide strategic direction.
	Responsible for management of Evolution staff and all contractors.
All personnel	All general staff members trained in environmental procedures and protocols as part of the induction process and regular site meetings.
	All general staff members responsible for immediately reporting environmental incidents.
	All general staff members responsible for undertaking works in an environmentally sound manner and in accordance with BMPs and site commitments.

6.2 Non-compliance notification and reporting

A non-compliance is defined within the Consent as:

> *"An occurrence, set of circumstances, or development, which is a breach of the Development Consent but is not an incident."*

In accordance with Consent D10, Evolution will notify the Department within seven days after becoming aware of any non-compliance with the Consent Conditions. Evolution will provide in writing to the NSW planning portal (Major Projects). a detailed report of the non-compliance which identifies the development application number for the CGO, the Consent Condition of which the CGO is non-compliant, the way in which the CGO does not comply and the reasons for the non-compliance (if known). The CGO will also provide details around any actions which have been, or will be, undertaken to address the non-compliance.

Note: A non-compliance which has been notified as an incident does not need to also be notified as a noncompliance.

6.3 Incident notification and repo

Incidents are defined in the Consent as:

> *"A set of circumstances that causes or threatens to cause material harm to the environment, and/or breaches or exceeds the limits or performance measures/criteria in this consent."*

Evolution will notify the department in writing via the Major Projects Poral, and any other relevant agencies, immediately after becoming aware of the incident. In accordance with Appendix 8 of the Consent, Evolution will provide the relevant agencies with a detailed report on the incident, and any further reports that may be requested. These reports will outline as a minimum, the development (including the development application number), the location and the nature of the incident which has occurred.

6.4 Complaints register

A complaints register will be maintained by the People, Culture & Community Manager (or delegate) in accordance with Environment Protection Licence Condition M5.1.

Information recorded in the complaints register with respect to each complaint will include:

- date of complaint.
- the method by which the complaint was made.
- any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that fact.
- nature of complaint.
- the action(s) taken by Evolution in relation to the complaint, including any follow-up contact with the complainant; and
- if no action was taken by Evolution, the reasons why no action was taken.

An initial response will be provided to the complainant within 24 hours. Preliminary investigations into the complaint will commence within 48 hours of complaint receipt.

A summary of the complaints register will be displayed on the Evolution website and will be updated on a monthly basis.

6.5 Dispute Resolution

In the event that dispute resolution is necessary, the resolution process will be one of informed discussion involving the complainant and Evolution. Evolution may also refer the dispute (with the complainant's agreement) to the CGO's CEMCC for mediation. In the event that the complainant is still dissatisfied, the matter may be referred to the DPE for consideration of further measures. Every effort will be made to ensure that concerns are addressed in a manner that results in a mutually acceptable outcome.

6.6 Community Consultation

Community Environmental Monitoring and Consultative Committee (CEMCC)

The Applicant shall establish and operate a Community Environmental Monitoring and Consultative Committee (CEMCC) for the development to the satisfaction of the Secretary. This CEMCC must:

be comprised of an independent chair and at least 2 representatives of the Applicant, 1 representative of BSC, 1 representative of the Lake Cowal Environmental Trust (but not a Trust representative of the Applicant), 4 community representatives (including one member of the Lake Cowal Landholders Association).

- be operated in general accordance with the Guidelines for Establishing and Operating Community Consultative Committees for Mining Projects (Department of Planning, 2007, or its latest version).
- monitor compliance with
- conditions of this consent and other matters relevant to the operation of the mine during the term of the consent.

Note: The CEMCC is an advisory committee. The Department and other relevant agencies are responsible for ensuring that the Applicant complies with this consent.

The Applicant shall establish a trust fund to be managed by the Chair of the CEMCC to facilitate the functioning of the CEMCC and pay an annual fee to the fund for the duration of gold processing operations. The annual payment shall be indexed according to the Consumer Price Index (CPI) at the time of payment. The first payment shall be made by the date of the first Committee meeting. The Applicant shall also contribute to the Trust Fund reasonable funds for payment of the independent Chairperson, to the satisfaction of the Secretary.

As required, the CEMCC is comprised of:

- four community representatives (including one member of the Lake Cowal Landholders Association).
- one representative of the Lake Cowal Foundation.

- one representative of the Wiradjuri Condobolin Corporation.
- one representative of each of the BSC, Forbes Shire Council and Lachlan Shire Council.
- an independent chairperson; and
- two representatives of Evolution.

The CEMCC will continue to provide opportunities for members of the community to attend CEMCC meetings to discuss specific issues relevant to them, including flora and fauna related issues. This will be achieved by landholders making a request to the CEMCC regarding a particular issue, or by the landowner registering a complaint in the complaints register. Landowners who register complaints may be invited to join in discussion of the issue at the next CEMCC meeting.

The CEMCC meets quarterly, and meeting minutes are provided on Evolution's website (www.evolutionmining.com.au).

6.7 Independent environmental audit

In accordance with Consent D12 an Independent Environmental Audit (IEA) will be conducted. This audit must be conducted by 31 December 2025 and is to occur when the 3 years thereafter.

6.8 Annual review

An Annual Review will be prepared in accordance with the requirements of Consent D11 and is reproduced below:

D11 An annual report reviewing the environmental performance of the development must:

f) be submitted:

   i. to the Department by the end of March each year after the commencement of development under this consent, or other timeframe agreed by the Planning Secretary;
   ii. to BSC and made available to the CCC.

g) describe the development (including any rehabilitation) that was carried out in the previous calendar year, and the development that is proposed to be carried out over the current calendar year;
h) include a comprehensive review of the monitoring results and complaints records of the development over the previous calendar year, including a comparison of these results against the:

   i. relevant statutory requirements, limits or performance measures/criteria;
   ii. requirements of any plan or program required under this consent;
   iii. monitoring results of previous years; and
   iv. relevant predictions in the EIS;

i) identify any non-compliance or incident which occurred in the previous calendar year, and describe what actions were (or are being) taken to rectify the non-compliance and avoid reoccurrence;
j) evaluate and report on:

   i. the effectiveness of the noise and air quality management systems; and
   ii. compliance with the performance measures, limits and operating conditions of this consent;

k) identify any trends in the monitoring data over the life of the development;
l) identify any discrepancies between the predicted and actual impacts of the development, and analyse the potential cause of any significant discrepancies; and
m) describe what measures will be implemented over the next calendar year to improve the environmental performance of the development.

6.9 Review of the BMP

This BMP will be reviewed, within three months of the submission of:

- an Annual Review
- an incident report
- an audit
- the approval of any modification to the conditions of the Development Consent; or
- any direction of the Department

Where this review leads to revisions of this BMP, then within four weeks of the review, the revised BMP will be submitted for the approval of the Department (unless otherwise agreed with the Department). The revision status of this BMP is indicated on the title page of each copy.

This BMP will be made publicly available on Evolution's website.

7 Bibliography

ACO Technologies (1995) ACO Wildlife Road Tunnels and Fencing Systems to Protect Wildlife.

Australian Museum Business Services (2018) Cowal Gold Operations Processing Rate Modification – Flora and Fauna Survey Report.

Anne Clements and Associates (1995) Terrestrial Flora Report: Lake Cowal District in NSR Environmental Consultants Pty Ltd (1995) Lake Cowal Gold Project Environmental Impact Statement. Appendix F.

Australian and New Zealand Environment and Conservation Council and Agriculture and Resource Management Council of Australia and New Zealand (2000) National Water Quality Management Strategy No. 4: Australian Guidelines for Water Fresh and Marine Water Quality Monitoring and Reporting Vol1 & 2.

Australian Museum Business Services (2012) Cowal Gold Mine and Surrounds Flora Survey.

Australian Museum Business Services (2013) Lake Cowal Waterbird Monitoring Programme.

Australian Water Technologies Pty Ltd (1999) Land and Water Management Plan for Lake Cowal and Associated Wetlands. Prepared for the Jemalong Land and Water Management Plan Steering Committee.

Baxter, A. (2000) Use of Distress Calls to Deter Birds from Landfill Sites Near Airports. Central Science Laboratory. Sand Hutton, York.

Barrick Australia Limited (2006) Cowal Gold Project 2005 Annual Environmental Management Report.

Bomford, M. and O'Brien, P. H. (1990) Sonic deterrents in animal damage control: a review of device tests and effectiveness. Wildl. Soc. Bull. 18:411-422.

Bower, C. (1997) Cowal Gold Project: Flora – Threatened Species Assessment. Report Prepared for North Limited.

Bower, C. (1998) Survey of the Cowal Gold Project Area and Surrounds for the Austral Pillwort (Pilularia novae-hollandiae). Orchid Research.

Bower, C. (2003) Vegetation Community Mapping on Barrick-owned Land. Unpublished Report.

Charles Sturt University (1997) Cowal Gold Project Area Botanical Survey. Report prepared for North Limited.

CMW Geosciences (2018) Integrated Waste Landform, Tailings Storage Facility, Cowal Gold Operation, NSW, DSC Detailed Design Report. Ref. PER2016-08AK, 24 January, 2018.

Crome, F. (1995) Waterbird Monitoring on Lake Cowal in NSR Environmental Consultants Pty Ltd (1995) Lake Cowal Gold Environmental Impact Statement. Appendix C.

Department of Environment, Climate Change and Water (2010) New South Wales Wetlands Policy.

Department of Environment, Climate Change and Water, Department of Industry and Investment (2010) Draft New South Wales Biodiversity Strategy 2010–2015.

Department of the Environment, Water, Heritage and the Arts (2008a) Threat Abatement Plan for Predation by Feral Cats.

Department of the Environment, Water, Heritage and the Arts (2008b) Threat Abatement Plan for Predation by the European Red Fox. Commonwealth of Australia, Canberra.

Department of Land and Water Conservation (DLWC) (2001) Mid Lachlan Regional Vegetation Management Plan and Strategy. NSW Government.

Department of Primary Industries (2013) Policy and Guidelines for Fish Habitat Conservation Management.

Department of Primary Industries (2018a) Ecology and Management of Vertebrate Pests in NSW.

Department of Primary Industries (2018b) Vertebrate Pesticide Manual.

Department of Urban Affairs and Planning (1998) Primary Submission to the Commission of Inquiry into the Cowal Gold Project.

DnA Environmental (2013) Northern Waste Emplacement Trials: Experimental Design.

Dodds-Smith, M. and Filas, B. (1996) Preventing Bird Deaths. Mining Environmental Management December 1996. pp 10-11.

Donato, D. (1997) Bird Usage Patterns on Northern Territory Mining Tailings and Their Management to Reduce Mortalities Interim report September 1997. Report to Bird Usage of Tailings Storage Facilities Co-ordinating group.

Environment Australia (1997) The Wetlands Policy of the Commonwealth Government of Australia. Environment Australia, Canberra.

Environmental & Educational Services (EES) (1992-2000) Lake Cowal Waterbird Monitoring Survey Progress Report. Unpublished Data.

Environmental & Educational Services (EES) (1999) Lake Cowal Waterbird Monitoring Survey Progress Report. Unpublished Data.

EES (1999a) Waterbirds at Lake Cowal, New South Wales, Australia: Assemblage Shifts Over a Completes Filling and Drying Cycle. Unpublished Report.

EES (1999b) Waterbirds at Lake Cowal, New South Wales, Australia II: Breeding Activity Over a Complete Filling and Drying Cycle. Unpublished Report.

EMM (2023) Cowal Gold Operations Open Pit Continuation Project Environmental Impact Statement, prepared for Evolution Mining (Cowal) Pty Ltd, by EMM Consulting Pty Ltd, Report No. J190417 RP1, 29 May 2023.

EMM (2023a) CGO Open Pit Continuation Project: Aquatic Ecology Assessment, Appendix K of the EIS report, prepared for Evolution Mining (Cowal) Pty Limited, by EMM Consulting Pty Ltd, 26 May 2023.

EMM (2023) CGO Open Pit Continuation Project: Biodiversity Development Assessment Report, Appendix J of the EIS report, prepared for Evolution Mining (Cowal) Pty Limited, by EMM Consulting Pty Ltd, version 4, 29 May 2023.

EMM (2024) Biodiversity Development Assessment Report (RtS version) for Cowal Gold Operations Open Pit Continuation Project. Unpublished Report. CGO Open Pit Continuation Project: Biodiversity Development Assessment Report, Appendix F of the response to submissions, prepared for Evolution Mining (Cowal) Pty Limited, by EMM Consulting Pty Ltd, RtS version 6, 27 January 2024

Evolution Mining (Cowal) Pty Limited (2018) Cowal Gold Operations Processing Rate Modification Environmental Assessment.

Gell, P.A. (2002-2003). Lake Cowal Waterbird Monitoring Survey Progress Reports January 2002, August 2002, October 2002, January 2003, August 2003, October 2003, Unpublished Data.

Gell, P.A. and Peake, P. (2001). Lake Cowal Waterbird Monitoring Survey Progress Report. Unpublished Data.

Gell, P.A. (2004-2010) Lake Cowal Waterbird Monitoring Survey: Progress Reports from 2004 to 2010.

Gell, P.A. (2005) Lake Cowal Waterbird Monitoring Survey: Progress Report – October 2005.

Gell, P.A. and Peake, P. (2011) Lake Cowal Waterbird Monitoring Survey: Progress Report January 2011.

Glasson, A. and Duff, S. (2001) The Jemalong Land and Water Management Plan, Project Overview and Negotiated Outcomes, Final Report.

Gould League of Victoria Inc. (1997) The Nestbox Book. Gould League of Victoria, Victoria.

Gursansky, W. (2023) Seasonal wildlife use patterns of the Cowal Gold Operations integrated waste

landform: 1 July to 31 December 2022. Donato Environmental Services, Darwin.

Hagelstein, K. (1997) Strategies and Standards for Control of Bird Mortality at Mining Operations in Short Course Notes on Management of Cyanide Mining, 14-16 April 1997 Perth, ACMRR, Kenmore, Qld. in Donato, D. (1997) Bird Usage Patterns on Northern Territory Mining Water Tailings and Their Management to Reduce Mortalities. Interim Report September 1997. Report to Bird Usage of Tailings Storage Facilities Co-ordinating Group.

Harden, G.J. (Ed) (1990) Flora of New South Wales, Volume 1. University of New South Wales Press, Sydney.

Hydro Engineering & Consulting Pty Ltd (2018) Cowal Gold Operations Processing Rate Modification Hydrological Assessment.

Karori Wildlife Sanctuary (2003) http://www.sanctuary.org.nz/story/fence.

Lachlan Catchment Management Authority (2013) Lachlan Catchment Action Plan.

Lane, B.A. (1989) West Wyalong Prospect Waterbird Investigation: Breeding Survey Report, October 1989. Report prepared for North Limited.

Lane, B.A. (1990) West Wyalong Prospect: Waterbird Investigation Data Report. Report prepared for North Limited.

Lane, B.A. (1991a) Report on Lake Cowal Waterbird Breeding Activity, January 1991. Report prepared for North Limited.

Lane, B.A. (1991b) Lake Cowal Waterbird Monitoring Survey: Progress Report, August 1991. Report prepared for North Limited.

Lane, B.A. (1991c) Lake Cowal Waterbird Monitoring Survey: Progress Report, October 1991. Report prepared for North Limited.

Natural Resource Management Ministerial Council (2010) Australia's Biodiversity Conservation Strategy 2010–2030.

Nevada Mining Association, Nevada Department of Minerals, Nevada Department of Wildlife (1990) Proceedings of the Nevada Wildlife/Mining Workshop 27-29 March 1990, Nevada.

Normandy Mining Limited (1999) Normandy Mining Limited 1999 Environmental Report.

North Limited (1998a) Cowal Gold Project – Environmental Impact Statement. Report prepared by Resource Strategies Pty Ltd.

North Limited (1998b) Cowal Gold Project – Commission of Inquiry Primary Submission. Prepared by North Limited.

Northern Territory Bird Usage of Tailings Storage Facilities Coordinating Group (1999) Bird Usage Patterns on Northern Territory Mining Water Tailings and their Management to Reduce Mortalities. Prepared by David Donato

Northern Territory Department of Mines and Energy (1998) Best Practise Guidelines – Reducing Impacts of Tailings Storage Facilities on Avian Wildlife in the Northern Territory of Australia.

Resource Strategies, CSIRO Wildlife and Ecology, Goldney. D. and Greg Richards and Associates (1997) Cowal Gold Project Species Impact Statement. Report prepared for North Limited.

Resource Strategies (2013) Cowal Gold Mine Extension Modification Threatened Species Assessment.

Resource Strategies Pty Ltd (2018) Cowal Gold Operations Processing Rate Modification Biodiversity Assessment Report and Biodiversity Offset Strategy.

Riverina Local Land Services (2018) Riverina Regional Strategic Pest Animal Management Plan 2018 – 2023.

Sharp, T. and Saunders, G. (2004) Model Code of Practice for the Humane Control of Feral Cats. NSW Department of Primary Industries.

Tongway, D and Hindley, N. (1995) Manual for Soil Condition Assessment of Tropical Grasslands. CSIRO Australia Division of Wildlife and Ecology. Canberra.

Transport Canada (2002) Wildlife Control Procedures Manual. Transport Canada. Canada.

White, S., (1998) Caring for Australian Wildlife. Australian Geographic Pty Ltd. Terry Hills.

Wildlife Control Technology Inc. (1996) Bird Balls. Mining Environmental Management June 1996, p 23.

Williams, K.I., Parer, I.B., Coman, B.J., Burley, J. and Brayster, M. (1995) Managing Vertebrate Pests: Rabbits. Australian Government Publishing Service, Canberra.

8 List of illustrations and tables

List of Figures

List of Tables

Appendix 1: Consultation responses

Other Agency Comments	Company Response
NSW Fisheries - *Table 13. Management of aquatic fauna and invertebrates refers to the dewatering procedures as the volume or rate of water extraction will be set up to 300l/sec per pumping location as advised by Fisheries.* Fisheries have not advised a volume or rate of water extraction, rather have advised that the rate of extraction should meet the Design Specifications for Fish Protection Screens in Australia such that the approach velocity, minimum effective screen surface area and aperture size of screens are met.	Management Plan has been updated to remove pumping rate.
Another consideration surrounds the timing of the dewatering works and translocation of fish. Dewatering and translocation during hot periods such as the peak of Summer should be avoided due to the stress that it can place on fish and potentially result in fish kills.	As far as reasonably practical, CGO will avoid dewatering and fauna translocation activities during the peak of Summer to avoid stress of fish.
The development of the Erosion and Sediment Control Management Plan (ESCMP) should make reference to the publication "Managing Urban Stormwater: Soils and Construction" (4th Edition Landcom, 2004), commonly referred to as "The Blue Book" for guidance.	The Section of the WMP detailing sediment and erosion controls refers to the practices used and implemented by the "Blue Book". These controls will be implemented to minimise potential impacts to biodiversity values.
CPHR – 1. Consolidation of previous commitments and the OPC project should be clearly captured in the new BMP. Recommendations: 1.1. Revise the BMP to include mitigation actions and commitments from previous management plans to cover all of the development site. 1.2. The revised BMP should include a clear line of sight from the commitments and mitigation measures listed in the EIS and BDAR to the BMP.	1.1 These management actions are throughout the whole document. This BMP has been developed by collating management plans under DA 14/98 and SSD 10367 into a consolidated document. 1.2 Table 7 shows the commitments from the EIS, including BDAR, and details the relevant section in the management plan which it is addressed.
2. Ensure previous feedback from RD review of other management plans and reporting is incorporated into the revised BMP. Recommendations: 2.1. Include all previous review recommendations from RD advice on management plans.	2.1 Previous feedback is not relevant to this management plan. Where agency advice has been previously incorporated into the previous plans, management commitments have been incorporated into the updated BMP.

3. All mitigation measures from the BDAR and EIS should be included in the draft BMP and be further detailed based on SMART principles. Recommendations: 3.1. Ensure all mitigation measures are developed based on SMART principles and provide sufficient detail to meet compliance and reporting standards.	3.1 Table 26 detailing monitoring and performance indicators has been updated to include more specific and measurable reporting standards.
4. References to BCS throughout the draft BMP should be updated. Recommendations: 4.1. Update all BCS references to CPHR.	4.1 Reference to BCS has been updated to CPHR throughout the plan