

# APPENDIX C

## Updated mitigation measures



## C.1 Updated mitigation measures

**Table C.1** Summary of mitigation measures

ID	Mitigation measure
General	
GEN01	The IWL, including IWL northern expansion, will continue to be designed, constructed and operated in accordance with ANCOLD Guidelines and NSW Dam Safety Requirements
GEN02	The expanded LPB will continue to be designed, constructed and maintained in accordance with ANCOLD Guidelines including ongoing geotechnical monitoring using visual inspections and InSAR satellite movement.
GEN03	Procedures to record, handle and respond to complaints, non-compliances and incidents will be documented within the Project's EMS and implemented for the life of the Project.
GEN04	All staff and contractors will continue to receive General Environmental Awareness training.
Surface water	
SW01	A DPHI approved CEMP will be prepared prior to commencement of the LPB and UCDS construction. The CEMP will include design details for the expanded Lake Protection Bund (LPB), construction activities, environmental management, monitoring and an adaptive management framework. The CEMP will include a trigger action response plan (TARP) for assessing water quality, including contingency measures, such as changes to water treatment.
SW02	A revised Water Management Plan (WMP) will be prepared in consultation with NSW DCCEE and EPA and approved by DPHI prior to the commencement of Project operations. The revised WMP will include the outcomes of the surface water assessment (Appendix G of the EIS) and any additional related approval requirements.
SW03	Surface water monitoring will continue to be undertaken at specific areas within the Mining Lease area including the contained water storages (existing and proposed), UCDS, ICDS, open pit(s) and TSFs/IWL. The monitoring program will be revised to also include monitoring of total and dissolved chromium. It is also proposed that monitoring of metals includes contained water storages D1 and D4.
SW04	Surface water monitoring will continue to be undertaken in Lake Cowal (when lake water levels permit) to enable evaluation of water quality data against records of baseline monitoring.

**Table C.1**      **Summary of mitigation measures**

ID	Mitigation measure
SW05	During and for a period post construction of the expanded LPB, the intensity of Lake Cowal surface water monitoring would be increased. The frequency and monitoring locations would be discussed and agreed with DPHI / EPA and documented in the CEMP.
SW06	<p>If the LPB is constructed while Lake Cowal is fully or partially inundated, dewatering may be required. In this case, water will be pumped from the mine side of the LPB into Lake Cowal. A detailed de-watering plan (DWP) will be included in the CEMP. Before and during discharge of lake water captured behind the expanded LPB, the following monitoring of discharge water would occur and water treated as required:</p> <ul style="list-style-type: none"> <li>• Continuous monitoring of: pH, EC, turbidity, dissolved oxygen.</li> <li>• Monitoring of suspended solids, alkalinity, total iron, calcium, magnesium, potassium, sodium, chloride. sulphate, total phosphate, ortho phosphate, ammonium, nitrate and nitrite.</li> <li>• Monitoring of the total and dissolved metals: arsenic, cadmium, copper, chromium, molybdenum, mercury, nickel, lead, antimony, selenium, silver and zinc.</li> </ul> <p>Water will only be discharged if it meets the agreed site specific guideline values (SSGV) derived in accordance with ANZG (2018) established using baseline water quality data from Lake Cowal.</p> <p>The frequency and monitoring locations would be discussed and agreed with DPHI / EPA and documented in a dewatering management plan within the CEMP.</p>
SW07	The risk to lake water quality (from the placement of inert waste rock directly into Lake Cowal during initial construction of the lake isolation bund) will be mitigated by stockpiling the waste rock material to be used within the CGO existing disturbance area and undertaking a geochemical testing program to confirm that the material is inert (ie non-acid forming, not sodic/dispersive or saline and contains relatively low soluble environmentally significant constituents). The geochemical testing program will be detailed in the CEMP.
SW08	A continuous silt curtain will be established around the construction zone of the LPB, both inside and outside the LPB. The silt curtain is to be installed prior to construction to trap fine sediment and minimise / prevent suspended material migrating into the main body of the lake.
SW09	<p>Erosion and sediment controls will be documented in the DPHI approved CEMP, EMS and WMP and will be designed, installed, monitored and maintained in accordance with the best management practice guidance series Managing Urban Stormwater: Soils and Construction – Volume 1 (Landcom, 2004) and 2E Mines and Quarries (DECC, 2008). Controls will include:</p> <ul style="list-style-type: none"> <li>• limiting surface disturbance and restricting access to undisturbed areas</li> <li>• progressive rehabilitation/stabilisation of disturbance areas</li> <li>• separation of runoff from disturbed and undisturbed areas, where practicable</li> <li>• construction of surface drains to control and manage surface runoff</li> <li>• construction of sediment dams/basins to contain runoff up to a specified design criterion.</li> </ul> <p>Flocculants are to be used as required when the rate in which the suspended solids settle is slowed by the suspension of dispersive soils.</p> <p>Post construction, sediment basins will be either retained as permanent erosion and sediment control structures or backfilled, topsoiled and revegetated once no longer required for erosion and sediment control.</p>

**Table C.1**      **Summary of mitigation measures**

ID	Mitigation measure
SW10	<p>Erosion and sediment controls and construction areas will be inspected regularly or after rain events of 20 mm or more in a 24-hour period, to ensure erosion and sediment controls have been installed and performing effectively. Ameliorative responses and maintenance activities will be carried out in accordance with Landcom (2004) and DECC (2008) and may include:</p> <ul style="list-style-type: none"> <li>• cleaning out of containment structures, diversion drains, etc. where sediment/sand/soil/vegetation builds up</li> <li>• repairing areas of erosion (eg lining with a suitable material which may include use of grasses, plastic, geotextile, rock, concrete)</li> <li>• further application of seed/fertiliser in areas of minor soil erosion and/or inadequate vegetative establishment</li> <li>• installation of additional erosion and sediment control structures.</li> </ul>
SW11	<p>Construction of the realigned UCDS sections will be staged so that the proposed UCDS silting basins were constructed (excavated) ahead of upslope reaches of the UCDS so that the basins could act as sediment basins. A soil testwork program would be undertaken as part of detailed design to map and identify the presence of dispersive soils within the proposed footprint of the expanded UCDS and measures to control erosion of and sediment migration from these areas included in the design. Such measures may involve treatment of exposed surfaces or stockpiled fill materials with gypsum.</p>
SW12	<p>The site water balance model will be updated on a regular basis to maintain the model as a reliable tool for assessing the effectiveness of the site water management system. At a minimum this should occur every three years. Annual forecast water balance modelling will inform near term water supply reliability for the Project as it progresses.</p>
SW13	<p>The results from the monitoring programs will continue to be maintained in a database for review and assessment and used to assist in the management of the quality and quantity of surface and groundwater within and around CGO. The monitoring report results and any specialist interpretations of trends observed in the monitoring data will be reported as part of the annual review process.</p>
SW14	<p>Drainage from ore stockpiles will be designed to report to the ICDS and will not be permitted to come into contact with stockpiled soil resources.</p>
SW15	<p>Post-mining surface water monitoring and management – water quality monitoring will continue for a minimum of two years following cessation of mining and processing operations with monitoring data reviewed at annual intervals (as part of the annual review process) over this period in accordance with the Rehabilitation Management Plan. Reviews should involve assessment against long term performance objectives that are derived from baseline conditions or a justifiable departure from these, with due allowance for climatic variations. If objectives are not substantially met within the two-year period, management measures should be revised and the monitoring period extended.</p>
SW16	<p>Potential contingency measures in the event of unforeseen impacts or impacts in excess of those predicted may include:</p> <ul style="list-style-type: none"> <li>• scheduling the bund in sections</li> <li>• revising the construction methodology or schedule where feasible</li> <li>• cessation of activities that have led to the impacts</li> <li>• conducting additional monitoring (eg increase in monitoring frequency or additional sampling locations) to confirm impacts and inform the proposed contingency measures</li> <li>• refinements to the water management system design such as additional water treatment, modification of construction activities, additional containment dams, increases to storage or pumping capacity installation of new structures as required to address the identified issues</li> </ul>

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ID	Mitigation measure
	<ul style="list-style-type: none"> <li>• construction of additional temporary erosion and sediment control measures such as silt fences, hay bales, cut-off drains and dams, coir rope logs, additional planting of vegetation or inflatable weirs</li> <li>• remedial revegetation, rock armouring, revegetation or earthworks as necessary (eg to address sodic soils with gypsum or lime).</li> </ul>
Groundwater	
GW01	A revised Water Management Plan (WMP) will be prepared in consultation with NSW DCCEEW and EPA and approved by DPHI prior to the commencement of Project operations. The revised WMP will include the outcomes of the revised Groundwater impact assessment (Appendix G of this Submissions Report) and any additional related approval requirements.
GW02	Evolution will implement make good provisions if water supply is significantly affected at private bores and an investigation confirms the Project is the cause of the impact
GW03	Groundwater level and quality monitoring at Project monitoring bores will be undertaken through the Project life to monitor and confirm model predictions and assess groundwater quality trends. The monitoring network is established and relates to groundwater monitoring in aquifers beneath the ML area and regionally within the Bland Creek Palaeochannel aquifer.
GW04	Groundwater extraction from the Bland Creek Paleochannel borefield will continue to be managed via groundwater trigger levels developed in consultation with NSW DCCEEW and other water users within the BCP, including stock and domestic users and irrigators. The revised WMP will include procedures to manage extraction from the Bland Creek Paleochannel Borefield, including reducing / ceasing of pumping if required to meet the trigger levels. Should the groundwater levels look to be approaching the trigger levels, alternate water supplies would be considered in accordance with CGO's water supply hierarchy.
GW05	The need for groundwater model updates will be assessed every three years based on evaluation of groundwater monitoring data and findings of impact verification.
Biodiversity (terrestrial)	
TE01	<p>Pre-clearance surveys (two stage) to remove roosting / breeding / nesting species will be undertaken:</p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> <li>• 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.</li> </ul>
TE02	Logs of removed trees are to be retained for installation in BSA(s) to provide fauna habitat where practicable.

**Table C.1**      **Summary of mitigation measures**

ID	Mitigation measure
TE03	<p>The approved Biodiversity Management Plan (BMP) will outline measures to rescue and rehabilitate wildlife that may become bogged/sick/trapped in the IWL or elsewhere within the Project area.</p> <p>The CEMP will include a Fauna management protocol detailing measures to rescue and rehabilitate wildlife during construction of the LPB and UCDS.</p>
TE04	<p>Where feasible, noisy construction activities will be scheduled to occur away from the northern side of the LPB construction area (ie area closest to known waterbird breeding areas) during the October to March period, when waterbird breeding and migratory shorebird visitation mostly occurs.</p>
TE05	<p>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:</p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• 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 (eg sunrise and sunset).</li> <li>• Staff working in the IWL are to undertake a wildlife observation training course, including bird identification.</li> </ul>
TE06	<p>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.</p>
TE07	<p>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.</p> <p>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 (ie 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.</p> <p>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.</p>
TE08	<p>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 :</p> <ul style="list-style-type: none"> <li>• noise impacts to threatened/ migratory waterbirds in Lake Cowal during construction and operation to see how the birds react</li> </ul>

**Table C.1**      **Summary of mitigation measures**

ID	Mitigation measure
	<ul style="list-style-type: none"> <li>• noise impacts to threatened/ migratory waterbirds in Lake Cowal during blasting to see how the birds react</li> <li>• potential impacts on fauna associated with IWL during operation, including cyanide casualties</li> <li>• cyanide concentrations within the IWL and other relevant monitoring points to ensure levels stay within guidance levels</li> <li>• potential impact of dust and particulate matter on threatened/ migratory waterbirds in Lake Cowal</li> <li>• impacts of construction/ operations on retained Austral Pillwort adjacent to additional disturbance area</li> <li>• potential impacts on fauna associated with IWL during operation, including cyanide.</li> </ul>
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 (ie within the Project area but outside the additional disturbance footprint) are to be identified and marked out as a no go zone.
TE10	<p>Weeds will continue to be managed in accordance with obligations under the <i>Biosecurity Act 2015</i> (Biosecurity Act) and <i>Local Land Services Act 2013</i> (LLS Act). Management measures will be included in the BMP and Environmental management strategy (EMS) and will include:</p> <ul style="list-style-type: none"> <li>• annual inspections of weeds</li> <li>• mechanical and/or application of approved herbicides</li> <li>• follow-up inspections to assess effectiveness</li> <li>• minimising seed transport by using vehicle wash bays</li> </ul> <p>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, a herbicide registered for use in aquatic situations by the National Registration Authority may be used.</p> <p>Good hygiene practices are to be used to reduce the risk of spreading weeds and pathogens, including ensuring that all machinery, materials and personnel are clean of any weed seed prior to entering the site. Priority Weeds listed under <i>Biosecurity Act 2015</i> to be actively managed on site to limit the spread of weeds into the adjacent areas. Weeds removed from the Project area are to be disposed of appropriately at an approved waste facility.</p>
TE11	<p>Feral animals will be continued to be managed in accordance with Evolution 's obligations and Biosecurity Act and LLS Act. Management measures will be included in the BMP and Environmental management strategy (EMS) and will include:</p> <ul style="list-style-type: none"> <li>• Regular inspections to assess pest populations on Evolution land</li> <li>• Pest control for declared pests (including rabbits, pigs, wild dogs, foxes and wild cats)</li> <li>• Follow-up inspections to assess effectiveness</li> </ul> <p>Pest control measures to be employed include (but not limited to): poisoning (eg 1080 and curiosity baiting), trapping, shooting, destruction of warrens (rabbits).</p>



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ID	Mitigation measure
TE12	<p>The existing fully enclosed fencing around the IWL will be extended around the northern IWL expansion and will be maintained to the following standards until the IWL has been decommissioned and capped:</p> <ul style="list-style-type: none"> <li>• A two metre high fence built around the perimeter of the IWL with a mesh gauge no greater than 50 mm diameter in the top metre and no greater than 20 mm diameter in the bottom metre. Fence mesh buried 500 mm below ground level to deny access to burrowing animals. The fence contains a half hat design which curves away from the tailings storage area.</li> </ul>
TE13	<p>Rehabilitation of the IWL area during operations will be such that the IWL batters are stabilised whilst providing minimal habitat value for bird life (ie revegetated with pasture cover only). The batters will be maintained so that other vegetation (such as trees and shrubs) does not become established in the vicinity of the IWL until the facility has been de commissioned and capped.</p>
TE14	<p>Broadcast of audio and visual stimuli will be used as required to scare/repel birds within IWL.</p> <p>Hazing may be used deter birds from landing or utilising an area. Depending on the species, techniques that may be employed include:</p> <ul style="list-style-type: none"> <li>• radar systems that detect avifauna presence at the tailings facilities</li> <li>• bird deterrent stations, activated remotely by either the radar or timer mode which broadcast bird distress calls, barking dogs, gun shots etc</li> <li>• gas cannons linked to the radar or timer-mode control station/s</li> <li>• car horns</li> <li>• solar powered scattered laser light tripod station (held in safe storage to be used if required)</li> <li>• bird scaring kite</li> <li>• human presence</li> </ul>
TE15	<p>Reduce risk of fauna strike by vehicles/equipment through notification and speed limits.</p> <p>Speed limits will be imposed on vehicles. The upper maximum speed to be applied for the Project is 60km/hr, which is for haul roads only, noting that many areas of the Project will have lesser speed limits applied depending on operational requirements. Signposting will be installed to remind personnel of the danger of vehicles to wildlife.</p>
TE16	<p>Protective fencing (eg 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.</p> <p>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.</p>
Aquatic ecology	
AE01	<p>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).</p>



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ID	Mitigation measure
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).
AE03	Ongoing testing of primary waste rock to be used in construction of the LPB is required (same as SW05).
Aboriginal heritage	
AH01	Prior to construction ground disturbance, an Aboriginal Cultural Heritage Management Plan will be developed by a heritage specialist in consultation with the Registered Aboriginal Parties (RAPs) to provide the post-approval framework for managing archaeological mitigation and Aboriginal heritage within the Project area. The Aboriginal Cultural Heritage Management Plan will, where relevant, include existing requirements and obligations developed under established agreement between Evolution and the Wiradjuri Condobolin Corporation (WCC).
AH02	A heritage interpretation strategy will be prepared to identify the interpretive values of the Project area, and specifically Aboriginal heritage values across the additional disturbance area.
AH03	Consultation will be maintained with the RAPs throughout the Project.
Social	
SCL01	Continuation of regular contact with the community through the existing Communication and Engagement Plan (CEP), providing consistency in CGO points of community contact.
SCL02	Preparation of a social closure and legacy program and strategy involving collaboration with key stakeholders and the community. Integrated planning for transition and rehabilitation would serve to build a shared understanding of, and responsibility for, optimal post mining outcomes. This is not a process for CGO to lead, however CGO will actively participate.
SCL03	<p>Mitigations likely to be effective in reducing short term accommodation demand from the mine and the Project include:</p> <ul style="list-style-type: none"> <li>• planning of shutdown periods to avoid peak construction workforce requirements and community events, where possible, and</li> <li>• if a shutdown period occurs at the same time as a relatively high Project construction workforce requirement and there is a shortage of accommodation in West Wyalong; members of the shutdown workforce may be accommodated in Forbes and Condobolin. In this scenario it is expected that constrained availability of short term accommodation should only occur for a relatively short duration.</li> </ul>
Economic	
EC01	To maximise local benefits derived from the Project, and consistent with existing CGO policy, CGO and contractors will be encouraged to source labour locally where possible and practical and provide training opportunities.

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ID	Mitigation measure
EC02	To maximise local benefits derived from the Project, CGO will continue to support local business by utilising their established supply networks and providing sufficient opportunities and information for local business to secure new supply contracts.
Noise and vibration	
NV01	A validation noise monitoring program will be implemented once Project operations commence to verify noise levels predicted in the Project's Noise and Vibration Assessment (NVIA) (refer Appendix O of the EIS).
NV02	Noise monitoring will continue for the Project with an updated noise monitoring program prepared and implemented prior to the commencement of Project operations. The noise monitoring program will require quarterly attended noise monitoring which will be conducted at locations representative of residences with the greatest risk of experiencing impacts to noise amenity. The noise monitoring program will also include three noise monitoring events annually at representative bird breeding areas during the main breeding period (October to March).
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).
NV04	<p>The following measures will be included in the CEMP to manage construction noise:</p> <ul style="list-style-type: none"> <li>• regular reinforcement (such as at toolbox talks) of the need to minimise noise</li> <li>• review and implementation of feasible and reasonable mitigation measures to reduce noise</li> <li>• avoiding the use of portable radios, public address systems or other methods of site communication that may unnecessarily impact upon nearby residents</li> <li>• where possible, avoid the use of equipment that generates impulsive noise</li> <li>• notify potentially affected residents prior to the commencement of construction works.</li> </ul>
NV05	Where feasible, the movement of trucks on ridgelines and exposed haul routes where their noise can propagate over a wide area, will be avoided or minimised especially at night. This means restricting evening and night period movement of material to areas shielded by barriers or mounds and reserving large-scale material movement for the day period. The expanded LPB will provide some shielding, thereby reducing the potential for noise to propagate from the open-cut pits across Lake Cowal.
NV06	Noisier equipment will be sited where possible, behind structures that act as barriers, or at the greatest distance from the noise-sensitive receptor / area, or orienting the equipment so that emissions are directed away from any sensitive areas, to achieve maximum attenuation.
NV07	Where there are several noisy pieces of equipment, operations and construction will be scheduled where feasible, so they are used separately rather than concurrently.
NV08	Operate plant and equipment in the quietest and most efficient manner
NV09	Educating staff on the effects of noise and the use of quiet work practices when operating equipment (eg positioning idling trucks in appropriate areas).

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ID	Mitigation measure
NV10	Regularly inspect and maintain plant and equipment to minimise noise level increases, to ensure that all noise attenuation devices are operating effectively.
NV11	Maximum sound power levels will be considered when purchasing equipment or will be specified in tender documents and contracts.
NV12	Evolution will continue to carry out a maximum of one single blast event a day (ie either a single detonation or a number of individual blasts fired in quick succession in a discrete area of the mine) for the open pit operations between 9am and 5pm (excluding blasts required to ensure the safety of the mine or its workers).
NV13	General operating practices for blasting will conform with Australian Standard 2187.2:2006. This includes measures to implemented to reduce air blast and overpressure.
NV14	Blast monitoring will continue for the Project with an updated blast monitoring program prepared and implemented prior to the commencement of Project operations. The blast monitoring program will monitor blast emissions from each blast at locations representative of residences with the greatest risk of experiencing blast impacts.
NV15	<p>The on-site meteorological station will be used to:</p> <ul style="list-style-type: none"> <li>• determine whether conditions are suitable for scheduled blasts.</li> <li>• assist in the prediction of noise, dust and blasting impacts.</li> <li>• provide data at the time of each blast as part of the iterative blast design process.</li> </ul>
Air quality	
AQ01	An air quality management system will be implemented over the life of the Project and will use a combination of predictive/real time meteorological data and air quality data to guide planning of mining operations. The air quality management system will be outlined in the Project's EMS.
AQ02	<p>The following air quality management measures will continue to be implemented as required and documented in the Project's EMS:</p> <ul style="list-style-type: none"> <li>• all roads and trafficked areas are watered and/or treated with an alternative dust suppressant and regularly maintained</li> <li>• obsolete roads will be ripped and re-vegetated</li> <li>• prevention of truck overloading to reduce spillage during ore loading/unloading and hauling</li> <li>• a water spray dust suppression system is used at the primary and secondary crusher bins during truck dumping of raw ore</li> <li>• dust aprons are lowered during drilling for collection of fine dust</li> <li>• water injection or dust suppression sprays are used when high levels of dust are being generated</li> <li>• blasting will only occur following an assessment of weather conditions</li> <li>• exposed areas are reshaped, topsoiled and revegetated as soon as practicable</li> <li>• long-term soil stockpiles will be revegetated with a cover crop to minimise wind erosion dust</li> <li>• visual assessments of dust generating activities will be conducted daily by the Sustainability Manager or delegate to identify the major dust generating activities on-site</li> </ul>

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ID	Mitigation measure
AQ03	Air quality monitoring will continue for the Project with an updated air quality monitoring program prepared by an air quality specialist in accordance with the <i>Approved Methods for the Sampling and Analysis of Air Pollutants in NSW</i> (EPA, 2022) and <i>Ambient Air Monitoring Guidance Note</i> (EPA, 2022). The air quality monitoring program will use air quality monitoring equipment to collect data that will be used to evaluate the CGO's performance against air quality criteria and to guide day to day operations.
AQ04	The siting of air quality monitoring sites will continue to be undertaken in accordance with relevant Australian Standards, in particular AS /NZS 3580.1.1 Methods for sampling and analysis of ambient air Part 1.1: Guide to siting air monitoring equipment.
AQ05	Chemical dust suppression, or other suitable long-term solutions, will be used proactively on the IWL as required.
AQ06	The potential for dust generation from waste paste will be minimised by ensuring the waste paste is kept damp, prior to encapsulation within the waste rock emplacements and is not exposed for extended periods of time.
Greenhouse gas	
GHG01	Operating GHG measures that will be implemented over the life of the Project include: <ul style="list-style-type: none"> <li>• regular maintenance of plant and equipment to minimise fuel consumption</li> <li>• efficient mine planning (eg minimising rehandling and haulage of materials) to minimise fuel consumption</li> <li>• consideration of energy efficiency in the plant equipment selection phase.</li> </ul>
GHG02	GHG monitoring that will be implemented over the life of the Project include: <ul style="list-style-type: none"> <li>• review progress against the emissions reduction roadmap every three years</li> <li>• monitor external factors such as the NSW Government Net Zero Plan and its influence on site emissions</li> <li>• review and update the technology roadmap to identify current or future technologies that may be mature enough to implement</li> <li>• include feasible actions identified in the emissions reduction roadmap and technology in the Project's EMS.</li> </ul>
Visual amenity	
V01	Tree planting to screen views of the Project will be installed at P5 if requested by the landowner.
V02	All reasonable and feasible measures will be implemented to minimise the visual and off-site lighting impacts from the CGO.
V03	Ensure no fixed outdoor lights shine directly above the horizontal or above the building line or any illuminated structure.
V04	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).

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ID	Mitigation measure
V05	Ensure that all external lighting at the CGO complies with the relevant Australian Standards including <i>Australian Standard AS4282 (INT) 1997 – Control of Obtrusive Effects of Outdoor Lighting</i>
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
V07	Additional measures that will be implemented where feasible to mitigate impacts of night-lighting during construction and operation include: <ul style="list-style-type: none"> <li>• direction of light downwards, not upwards</li> <li>• use of shielded fittings</li> <li>• avoiding ‘over’ lighting</li> <li>• switching lights off when not required</li> <li>• use of asymmetric beams, where floodlights are used</li> <li>• ensuring lights are not directed towards reflective surfaces</li> <li>• 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.</li> </ul>
V08	Ensuring that the visual appearance of all new buildings, structures, facilities or works which are visible from the outside the site (including paint colours and specifications) is aimed at blending as far as possible with the surrounding landscape.
V09	Progressive rehabilitation and the ongoing revegetation of mined and/or disturbed areas and will be designed cognisant of visual amenity and to mitigate visual impacts experienced by sensitive receptors
V10	Construction laydown areas will be located in areas with limited visibility from residences and public roads.
Traffic and transport	
TT01	A transport management plan will be prepared for the Project in consultation with TfNSW and Bland, Forbes and Lachlan Shire Councils. The transport management plan will include a Driver’s Code of Conduct.
TT02	Existing designated mine access routes as detailed in the Project’s Transport impact assessment (Appendix R of the EIS) will be used by CGO employees and contractors travelling to and from the CGO during construction and operation of the Project.

**Table C.1**      **Summary of mitigation measures**

ID	Mitigation measure
TT03	Private vehicle travel to and from the CGO will be in accordance with Evolution's Private Vehicle Travel to and from Site Policy and related policies. Company-provided transport to and from the CGO is to be used where possible, and private vehicles are not permitted to travel to and from the CGO unless an Essential Driver Authority or temporary exemption is provided by Evolution. Contractors are expected to provide transport for their employees.
TT04	Operational shift hours will continue to be scheduled to minimise exposure of school buses and other motorists operating on mine access routes during peak period traffic. Any change to shift times will consider potential for interaction between school buses and CGO-generated traffic.
TT05	To the extent possible, heavy vehicle deliveries will be scheduled to occur outside peak periods associated with the general movement of vehicles to and from the CGO (ie CGO shift change periods).
TT06	All oversize loads will be transported with the relevant permits and load declarations obtained in accordance with <i>Additional Access Conditions: Oversize and overmass heavy vehicles and loads</i> (TfNSW2020) (or its current equivalent at the time of the event) and any other licences and escorts as required by regulatory authorities.
TT07	All drivers must follow the Driver's Code of Conduct to minimise the potential for disruption to other motorists by CGO generated traffic. The Code of Conduct will apply to all company-supplied and contractor transport vehicles including employee transport vehicles, shuttle buses, gravel transport trucks and other heavy vehicles.
TT08	Evolution will monitor the road surface conditions for the Bonehams Lane and Lake Cowal Road routes (directly south and north of the mine). Any hazard identified which requires emergency repair or maintenance on public roads will be raised to the relevant Council to be rectified.
TT09	Access for emergency vehicles will be maintained at all times over the life of the Project.
Hazardous materials (including cyanide)	
HM01	<p>Evolution will continue to maintain a Hazardous Chemicals and Dangerous Goods Register and Chemaalert 3 System detailing all hazardous materials used, stored and produced in-site. In accordance with the <i>NSW Work Health and Safety Regulation 2017</i> (WHS Regulation), the register will be maintained to include the following information (where applicable):</p> <ul style="list-style-type: none"> <li>• the SDS provided by the supplier of the chemical</li> <li>• the common name or trade name of the chemical</li> <li>• the formal chemical names of the components of the chemical</li> <li>• copies of the risk assessments carried out for the chemical</li> <li>• toxicological information</li> <li>• safe storage and handling information</li> <li>• information concerning the health effects</li> <li>• first aid treatment information</li> <li>• a response plan, indicating an appropriate means for dealing with a dangerous incident such as spillage or poisoning in relation to the chemical.</li> </ul>

**Table C.1**      **Summary of mitigation measures**

ID	Mitigation measure
HM02	<p>The Hazardous Chemicals and Dangerous Goods Register and Chemaalert 3 System will continue to be updated in the following circumstances:</p> <ul style="list-style-type: none"> <li>• when a new chemical/consumable is to be used at site</li> <li>• change of supplier</li> <li>• change of consumption rate</li> <li>• change of storage facility/location</li> <li>• change of relevant staff</li> <li>• change of material use.</li> </ul>
HM03	<p>Sodium cyanide will continue to be managed in accordance with the International Cyanide Management Code for the Manufacture, Transport and Use of Cyanide in the Production of Gold (2021) and the AS/NZS 4452:1997 The Storage and Handling of Toxic Substances. The latter sets out the requirements for storage and handling of toxic substances in bulk. This includes:</p> <ul style="list-style-type: none"> <li>• design and construction requirements for containers</li> <li>• requirements for portable and fixed tanks</li> <li>• bunds and compounds</li> <li>• locations of bulk containers</li> <li>• filling of bulk containers</li> <li>• storage areas, tanks, pipelines, pumps and valves have high visibility labelling and are inspected regularly for signs of leakage, presence of solution outside of the tanks in the bunded areas and integrity of the containment. Any aspects requiring maintenance or repair are recorded along with corrective measures.</li> </ul>
HM04	<p>Cyanide monitoring will continue and include:</p> <ul style="list-style-type: none"> <li>• monitoring of CNWAD levels of the aqueous component of the tailings slurry stream at the process plant</li> <li>• monitoring CNWAD levels in the decant water of the tailings storages/IWL an on-site laboratory for quickly establishing CNWAD levels in the liquid at the process plant and in the decant ponds for monitoring purposes</li> <li>• a monitoring regime for the detection of cyanide movement beneath and adjacent to the IWL</li> </ul> <p>The ICM Code for Cyanide Management requires signatories (which includes CGO) to ensure that any spillage outside a bunded area above 0.5 mg/L Weak Acid Dissociable (WAD) cyanide is recorded as an incident and treated as an emergency requiring immediate surface clean up.</p>
HM05	<p>The design and construction of the relocated explosive compound and magazine will comply with AS 2187.1:1998 Explosives – Storage, Transport and Use. Storage will be in accordance with Clause 84(2)(c) of the Explosives Regulation, 2013.</p>
HM06	<p>All storage facilities have been designed in accordance with relevant Australian Standards and with the protection of the environment as well as health and safety in mind. Safety features that have been incorporated into the design of reagent storage areas include:</p>



**Table C.1**      **Summary of mitigation measures**

ID	Mitigation measure
	<ul style="list-style-type: none"> <li>• installation of ventilation systems in areas where dispensing and mixing of chemicals occurs</li> <li>• installation of drain valves and pipework to facilitate the removal of rainwater from bunded areas</li> <li>• provision of portable pumps within the processing area for use in pumping any chemical spills within bunded areas back to the storage tanks or emergency holding tanks</li> <li>• provision of appropriate fire protection facilities compatible with the volatility and flammable properties of the stored reagents/chemicals</li> <li>• provision of eyewash and emergency showers for process plant workers to be used for immediate wash down should an accident occur.</li> </ul>
HM07	All chemical storage areas, including those for dangerous goods have appropriate signage in accordance with AS 1319:1994 Safety Signs for the Occupational Environment and the Workplace Health and Safety Regulations 2017 Schedule 13. General signage requirements for restricted areas (where flammable and combustible liquids are stored and handled) have been installed as required by AS 1940:2017 The Storage and Handling of Flammable and Combustible Liquids.
HM08	The Project's ICDS will continue to be designed, constructed and maintained to capture potentially contaminated surface water generated on-site and no disposal of water from the ICDS is permitted to drain into Lake Cowal under any circumstances.
HM09	A runoff collection drain (secondary collection) will continue to be maintained around the perimeter of the process plant and will drain to the process plant contained water storage.
HM10	Any other consumable storage areas (e.g. explosive storages) outside the process plant area will be internally bunded which may also consist of secondary collection drains as required by relevant Australian Standards.
HM11	Evolution will continue to store hazardous materials in such a manner as to minimise the possibility of fire, including the provision of efficient fire alarm and suppression systems.
HM12	Transport of hazardous materials including Cyanide will continue to be in accordance with Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG Code) (National Transport Commission, 2018) and International Cyanide Management Code for the Manufacture, Transport, and Use of Cyanide in the Production of Gold.
HM13	<p>Transport of hazardous goods to and from the CGO will be via designated transport routes outlined in the Transport Management Plan prepared in Consultation with TfNSW, Bland Shire Council, Forbes Shire Council and Lachlan Shire Councils. The only transport routes relevant to the local road network for the delivery of the hazardous materials to the CGO will continue to be (unless otherwise agreed with DPHI):</p> <ul style="list-style-type: none"> <li>• the Newell Highway (from Dubbo) into West Wyalong and then the approved Mine Access Route from West Wyalong to the CGO.</li> <li>• the Newell Highway (from Narrandera/Mirrool) into West Wyalong and then the approved Mine Access Route from West Wyalong to the CGO.</li> <li>• Goldfields Way (from Temora) into West Wyalong, and then the approved Mine Access Route from West Wyalong to the CGO.</li> <li>• Burley Griffin Way (from Temora) to Mirrool, the Newell Highway (from Mirrool) to West Wyalong, and then the approved Mine Access Route from West Wyalong to the CGO.</li> </ul>
HM14	<p>All Evolution employees and contractors will continue to be trained in the appropriate use of chemicals relevant to their tasks and duties, including:</p> <ul style="list-style-type: none"> <li>• hazardous chemical/dangerous good awareness</li> <li>• job hazard analysis preparation and use</li> </ul>

**Table C.1**      **Summary of mitigation measures**

ID	Mitigation measure
	<ul style="list-style-type: none"> <li>• use of SDS information</li> <li>• measures to prevent accidental release</li> <li>• potential environmental impacts</li> <li>• use and maintenance of PPE</li> <li>• emergency spill response and containment</li> <li>• clean-up techniques.</li> </ul>
HM15	<p>Suitable absorbent materials, spill clean-up materials and equipment will continue to be maintained in chemical and waste storage, handling and use areas for containing, neutralising or decontaminating spills. In accordance with <i>AS/NZS 3833:2007 The Storage and Handling of Mixed Classes of Dangerous Goods in Packages and Intermediate Bulk Containers</i>, the following items will be maintained in chemical and waste storage, handling and use areas as necessary according to the materials stored in the relevant area:</p> <ul style="list-style-type: none"> <li>• adequate quantities of absorbent material (e.g. sand, fullers earth or suitable proprietary substances)</li> <li>• chemical wheelie bin spill response kits for use on chemical spills</li> <li>• hydrocarbon wheelie bin spill response kits for use on fuel/oil spills</li> <li>• sodium carbonate for use on acidic spills</li> <li>• a sufficient number of resealable waste-recovery containers (e.g. drums made of materials compatible with the substances being kept and appropriately marked as being for emergency use only)</li> <li>• portable pumps and decanting equipment</li> <li>• shovels, bags, PPE.</li> </ul>
Historic heritage	
HH01	A protocol for the unexpected discovery of potential historic heritage will be documented in the Project's EMS.
HH02	As identified in the Project's Historic heritage assessment (Appendix S of the EIS), a storage shed located between the southern waste rock emplacement and the D9 water storage contains the remaining structure materials of the former Lake Cowal Homestead Complex which was approved to be removed in its entirety under DA14/98 (as modified). Should these materials require relocating during the Project, consultation with Bland Shire Council and the Bland District Historical Society will be carried out as to their ongoing management and/or disposal.
Soils and land	
SL01	Erosion and sediment controls will be designed, installed and maintained in accordance with the best management practice guidance series <i>Managing Urban Stormwater: Soils and Construction – Volume 1</i> (Landcom, 2004) and <i>2E Mines and Quarries</i> (DECC, 2008).

**Table C.1**      **Summary of mitigation measures**

ID	Mitigation measure
SL02	<p>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).</p>
SL03	<p>Where stockpiling of soil resources are required the following mitigation measures will be adopted:</p> <ul style="list-style-type: none"> <li>• leave the surface of the completed soil stockpiles in a "rough" condition to help promote water infiltration and minimise erosion prior to vegetation establishment</li> <li>• deep-rip soil stockpiles and seed (if necessary) to maintain soil organic matter levels, soil structure and microbial activity</li> <li>• treat soil stockpiles with gypsum as required to reduce dispersiveness during stockpiling</li> <li>• install signposts for all soil stockpiles with the date of construction and type of soil</li> <li>• record details of all soil stockpiles on a site database which includes the location and volume of each stockpile and the stockpile maintenance records (eg ameliorative treatment, weed control, seeding)</li> <li>• soil stockpiles should be less than 3 m in height or ripped in order to promote infiltration and minimise erosion until vegetation is established, and to prevent anaerobic zones forming.</li> <li>• where necessary, a flow diversion bank or catch drain should be placed up-slope of a stockpile to direct surface water flows away. All stockpiles shall remain in a free-draining location to avoid long term soil saturation.</li> <li>• where necessary, silt fences or cleared vegetation should be installed around topsoil stockpiles or stripped areas as a form of erosion and sediment control.</li> <li>• seed stockpiles as soon as possible to minimise erosion. An annual cover crop species that produce sterile florets or seeds may be sown. A rapid growing and healthy annual pasture sward will provide sufficient competition to minimise the emergence of undesirable weed species. Final rehabilitation target pasture or native grass species should be established on stockpiles to build up a desirable species seed bank in the topsoil.</li> <li>• a general-purpose starter fertiliser may be applied to all soil stockpiles following construction. Fertiliser use and mix will depend on soil tests on stockpiled soil and proposed use of the soil.</li> <li>• inspections of stockpiled soils should be undertaken to inform ongoing management of the resource and to assist in limiting potential degradation of soil quality while held in storage.</li> <li>• prior to re-spreading stockpiled topsoil onto the disturbance area, an assessment of weed infestation on stockpiles should be undertaken to determine if individual stockpiles require herbicide application.</li> <li>• the soil stockpiles will be inspected by the Sustainability Manager or their delegate on an annual basis, with regard to vegetation cover, weed and erosion and sedimentation issues.</li> <li>• The following soil stockpile maintenance procedures will be conducted where on-going monitoring indicates the need: <ul style="list-style-type: none"> <li>– fertiliser application</li> <li>– deep ripping to improve aerobic conditions</li> <li>– additional erosion control and stabilisation</li> </ul> </li> </ul>

**Table C.1**      **Summary of mitigation measures**

ID	Mitigation measure
	<ul style="list-style-type: none"> <li>– supplementary seeding with a select cover species</li> <li>– weed control as necessary.</li> </ul>
SL04	Drainage from ore stockpiles will be designed to report to the ICDS and will not be permitted to come into contact with stockpiled soil resources
SL05	<p>The following mitigation measures will be followed for the re-spreading of soil during rehabilitation activities:</p> <ul style="list-style-type: none"> <li>• Following ground preparation and growth medium development works, progressive revegetation activities should commence as soon as possible.</li> <li>• Soils to be placed in a rehabilitation area are identified for use based on the soil quality and vegetation history, with consideration to the planned final land use of the rehabilitation area, and with consideration to the mine plan and operational factors.</li> <li>• Soils sourced from the respective mine pit areas should remain predominantly within these areas, either placed to rehabilitation or within stockpile. Therefore, soils consistent with the parent units from these areas are typically found within these areas.</li> <li>• Topsoil should be spread, treated with fertiliser (for pasture areas only) and seeded in one consecutive operation, to reduce the potential for topsoil loss to wind and water erosion. Thorough seedbed preparation should be undertaken to ensure optimum establishment and growth of vegetation.</li> <li>• All topsoiled areas should be lightly contour ripped (after topsoil spreading) to incorporate rock into the soil matrix and increase stability. Ripping should be undertaken on the contour. Best results will be obtained by ripping immediately prior to sowing.</li> <li>• Soil management documentation should be maintained that includes confirmation that topsoil stockpiles have been scalped, topsoil has been placed at the appropriate depth and ameliorants have been applied at the correct rate.</li> <li>• The need for maintenance fertilising will be assessed during regular rehabilitation monitoring programs, particularly in agricultural final land use areas where grazing is occurring or planned to occur. The application method (eg tractor spreader or aerial spreading) will be determined based on the existing vegetation, landform and timing of application.</li> </ul>
SL06	<p>To mitigate potential erosion impacts, the following mitigation measures should be adopted:</p> <ul style="list-style-type: none"> <li>• minimise the area disturbed and restrict access to non-disturbed areas</li> <li>• rehabilitate roads and hardstand areas no longer required for operations</li> <li>• avoid soil stripping operations during particularly wet or dry periods, to minimise compaction during soil excavation and use ameliorants where required (eg gypsum application to dispersive soils)</li> <li>• use of silt fences and temporary sediment traps to minimise sediment movement</li> <li>• use of diversion banks, channels and rip-rap structures to divert surface water around disturbed areas and control runoff velocity</li> <li>• use of spoon drains, table drains and concrete culverts to control surface runoff from access roads</li> <li>• leave more saline and dispersive soil horizons in-situ beneath mine landforms, where possible.</li> </ul>
SL07	<p>To manage salinity, the following mitigation measures should be adopted:</p> <ul style="list-style-type: none"> <li>• minimise the areas disturbed and restrict access to non-disturbed areas</li> </ul>

**Table C.1**      **Summary of mitigation measures**

ID	Mitigation measure
	<ul style="list-style-type: none"> <li>• identify saline soils (infill testing) and implement selective soil resource management</li> <li>• identify low salinity construction material (construction fill testing) and selective resource management</li> <li>• fence ML 1535 and ML 1791 boundaries to restrict livestock and prevent overgrazing and erosion</li> <li>• implement appropriate erosion and sediment control systems and ongoing monitoring and maintenance</li> <li>• containment and management of saline surface water runoff.</li> </ul>
Subsidence	
SUB01	A subsidence monitoring program will be implemented for the life of the Project inclusive of detailed measures and controls that will be implemented to avoid and/or minimise subsidence, through management of risk associated with stope overbreak and/or stope failure, a risk assessment and trigger action response plan (TARP) to identify and manage stope instability and an adaptive management process.
SUB02	A qualified structural or civil engineer will be engaged to review the following detailed subsidence forecasts for all pieces of major mining-related infrastructure, including but not limited to the final LPB, major plant in the processing precinct and tailings storage facilities etc, in order to confirm that the forecast strains, displacements and angular distortions do not exceed the service limits of any asset.
SUB03	The underground mine design will be reviewed and where necessary updated to ensure that no stopes are excavated beneath the open pit with a fresh rock crown pillar height of less than 20-30 m (i.e. maintain a minimum stope width to fresh rock crown pillar ratio of 1:2). Where any non-compliant stopes do exist in the mine plan it is suggested that they should be removed. The recommendations made in Beck Engineering 2022 (Appendix E of the Modification Report for SSD 10367 Mod 1) and Beck Engineering 2020 (Appendix E of the EIS for SSD 10367) will be generally followed as relevant to the current mine design.
SUB04	When backfilling the E46 open pit, the fill material types used and the sequence of the deposition will be considered in order to avoid creation of voids within the fill, which might lead to subsidence over time. Ideally, fill material(s) with minimal porosity should be used to backfill the E46 pit.
SUB05	In order to mitigate and contain any potential slumping of the E46 final backfill slope, it is recommended to construct fresh rock bunds at the toe of the slope.
SUB06	Rock mass characterisation data will continue to be collected and interpreted from the open pit and underground mining domains, especially regarding the strength properties of the various lithologies as well as the location, orientation and characteristics of the geological structures.
Bushfire	
BF01	A Bushfire Management Plan will be prepared for the Project. The Plan will be developed in consultation with the RFS and Bland Temora Bushfire Management Committee.
BF02	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 new Project infrastructure and an APZ of 50 m where practical.

**Table C.1**      **Summary of mitigation measures**

ID	Mitigation measure
BF03	Management of APZ will manage fuel loads as required. The Bushfire Management Plan will guide landscape and APZ management, including monitoring and managing potential fuel loads surrounding the Project area.
BF04	Any new buildings associated with the Project will reduce the risk of ignition from a bushfire in accordance with AS3959-2018
BF05	Fire water supplies at CGO will continue to be maintained and will be detailed in the Project's Bushfire Management Plan and Emergency response plan.
BF06	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.
Contamination	
CON1	<p>An unexpected finds procedure will be included in the CEMP and Project's EMS. An unexpected find is potential contamination that was not previously identified during this contamination assessment or other investigations conducted for the Project. CGO employees and contractors will be trained in identifying the following:</p> <ul style="list-style-type: none"> <li>• soil that appears to be contaminated based on visual and olfactory (odour) assessment</li> <li>• Asbestos contaminated material (ACM) (ie either bonded or friable asbestos)</li> <li>• groundwater or surface water that appears to be contaminated based on visual and olfactory (odour) assessment (including sheens or abnormal discolouration on the water surface, free phase liquids such as petroleum fuel, etc)</li> <li>• potentially contaminating infrastructure (such as historical building structures potentially containing hazardous materials)</li> <li>• fill containing wastes (eg residual mine waste and tailings, NOA, refuse).</li> </ul>
CON2	<p>In the event of a suspected unexpected contamination discovery:</p> <ul style="list-style-type: none"> <li>• excavation works will temporarily be suspended at the location of the unexpected find, the CGO Sustainability Manager contacted, the area of concern appropriately isolated and inspected</li> <li>• if required, the area will be inspected by a contaminated land consultant, and appropriate sampling and analysis would be undertaken with the sampling activities documented in a report</li> <li>• workplace health and safety environmental protection requirements will be reviewed, depending on the type of unexpected finds encountered.</li> </ul>
CON3	Management of ACM using an experienced and licenced operator may be required prior establishing soil stockpiles in the north-western portion of the additional disturbance area.
Rehabilitation and closure	
RE01	The rehabilitation objectives and closure criteria will be refined over the life of the Project in response to advances in rehabilitation techniques, outcomes of rehabilitation trials or changes to the agreed final land uses.
RE02	Ongoing rehabilitation trials and research will be an extension of the trials undertaken to date and will include:

**Table C.1**      **Summary of mitigation measures**

ID	Mitigation measure
	<ul style="list-style-type: none"> <li>• Material Amelioration – Continued investigation into the chemical and physical properties of soil resources and the optimum rates of gypsum application to improve suitability for plant growth and use on rehabilitation areas</li> <li>• Rehabilitation Media – Continued monitoring of the effectiveness of various applications associated with the rock mulch, topsoil and hay cover materials stabilising landform slopes (ie controlling erosion) and providing a suitable medium for revegetation.</li> <li>• Revegetation – Ongoing trials and research to determine the most appropriate revegetation species suited to substrate materials of the CGO’s final landforms including: <ul style="list-style-type: none"> <li>– Implementation of new vegetation growth trials to investigate revegetation species suited to the top surface rehabilitation materials of CGO final landforms, including the IWL and WREs, open pit crests to refine revegetation objectives;</li> <li>– Investigations and implementation of a trial to determine the most effective methods for direct seeding rehabilitation areas following the establishment of the initial Wimmera Ryegrass cover crop; and</li> </ul> </li> <li>• Implementation of research and a revegetation trial to investigate revegetation methods and species suited to the final slopes and rehabilitation media of the IWL embankments.</li> <li>• Soil/rock matrix application and mixing – trialling the soil/rock matrix application and mixing techniques detailed in section 5.2.4ii to determine which methods provides the greatest level of erosion protection and vegetation establishment.</li> </ul>
RE03	A knowledge base for the Project’s open pit final landform designs will be developed to ensure that all relevant technical aspects are being utilised and evaluated for the final landform designs for the open pit walls. The knowledge base will provide the foundation for the final landform detailed design and may include tabulated data, detailed conceptual models and 3D CAD models that bring together the soil fertility, geological logs, geotechnical parameters, groundwater level and flow and vertical and horizontal dewatering data, surface water management, and the final landform design components including vegetation and other remediation measures.
RE04	A staged open pit closure strategy will be detailed in the DPHI approved Rehabilitation Strategy which outlines a staged work program that will ensure a viable, stable final landform is developed for the open pits prior to mine closure. The staged work program will be actively progressed over the mine life using data and knowledge gathered in RE02 and RE03.
RE05	<p>Identified erosion hazard areas will be reshaped where possible. In instances where reshaping is not possible, as well as addressing any related groundwater and additional land surface protection, beyond the CGO soil-rock matrix cover system will be implemented to include one or more of the following:</p> <ul style="list-style-type: none"> <li>• chemical treatment (eg using lime / gypsum)</li> <li>• revegetation using species such as vetiver grass <i>Chrysopogon zizanioides</i></li> <li>• use of geofabric coverings</li> <li>• rock armouring.</li> </ul>
RE06	Any legacy landform features such as berms and bullnoses, identified by erosion and landform evolution modelling to increase erosion beyond acceptable rates will be removed or modified where possible. If not, Evolution will consider increasing the proportion of rock to soil in the rock/soil matrix.
RE07	Waste paste will be placed on active waste emplacements away from the external batters to ensure no interaction with future rehabilitation activities and growth medium.
Waste (excluding tailings and waste rock)	



Table C.1      Summary of mitigation measures

ID	Mitigation measure
WA01	All waste will be classified in accordance with the Waste Classification Guidelines (EPA, 2014) (or latest version) and disposed of at appropriately licensed waste facilities