



Mr Paul Freeman
Associate Director
EMM Consulting
PO Box 21
St Leonards NSW 1590
By email: pfreeman@emmconsulting.com.au

Dear Paul

**Cowal Gold Operations Underground Development (SSD 10367)
BDAR Waiver Request**

I refer to your correspondence dated 5 August 2020, requesting to waive the requirement for a Biodiversity Development Assessment Report (BDAR) to be lodged with the development application for the Cowal Gold Operations Underground Development (SSD 10367).

The Department has consulted with the Biodiversity Conservation Division (BCD) and reviewed the information provided in the BDAR waiver application and has determined that it cannot be concluded that the proposed development as described in the application is not likely to have any significant impact on biodiversity values. BCD's advice is attached.

Accordingly, as delegate for the Secretary Planning, Industry and Environment, I have determined that a waiver under section 7.9 of the *Biodiversity Conservation Act 2016* is **not granted** for the proposed development.

The impacts of the proposed development will require assessment using the biodiversity assessment method and the development application must be accompanied by a BDAR.

Should you have any enquiries regarding the above matter, please contact Philip Nevill on 8275 1036 or via email to philip.nevill@planning.nsw.gov.au

Yours sincerely,

23/09/20

Stephen O'Donoghue
Director, Resource Assessments
As delegate of the Secretary

Encl:
EES determination
EES decision report

Determination under clause 7.9(2) of the Biodiversity Conservation Act 2016

I, Graeme Enders, Director Biodiversity and Conservation Division, of the Department of Planning, Industry and Environment, under clause 7.9(2) of the *Biodiversity Conservation Act 2016*, determine that based on the information provided in the BDAR waiver application for the Cowal Gold Operations underground development (SSD 10367) dated 5 August 2020 it cannot be concluded that the proposed development is not likely to have any significant impact on biodiversity values and therefore a Biodiversity Development Assessment Report **is required**.

Proposed development means the development as described in Schedule 1.



22nd September 2020

Graeme Enders
Director
South West Branch
Biodiversity and Conservation Division
Department of Planning, Industry and Environment

Date

SCHEDULE 1 – Description of the proposed development

Cowal Gold Operations underground development

Evolution Mining seeks to extend Cowal Gold Operations (CGO) to include an underground stope mining domain. The proposed underground mine would include:

- development of an underground haulage decline from a new box-cut at the existing mine site, for personnel and materials access, and to transport ore from the underground mine to the surface;
- development of several other access points from the existing open-cut pit to the underground mine;
- a network of underground tunnels, to access the ore, transport ore to the surface and to ventilate the mine;
- use of stope mining methods to extract ore;
- production of up to 27 Mt of ore at a rate of 1.8 Mtpa;
- production of approximately 5.74 Mt of waste rock;
- delivery of extracted ore to the surface by truck;
- delivery of paste fill via a borehole and the backfilling underground stopes with the paste; and
- development of ancillary underground infrastructure to support the underground operation, including dewatering infrastructure, air ventilation system and electrical reticulation.

The underground mine will result in an additional 1.8 million ounces of gold being produced by CGO.

The proposed underground development project would be located partially within the existing CGO site and partially beneath Lake Cowal. The development will result in no surface disturbance outside of the previously approved disturbance footprint.

Project Name: Cowal Gold Operations underground development

SSD Application Number: 10367

Proponent: Evolution Mining

Date request received: 5 August 2020

Biodiversity value	Meaning	Relevant (✓ or NA)	Potential impacts	
			Applicant comment/ justification	BCD comment
Vegetation abundance - 1.4(b) BC Regulation	Occurrence and abundance of vegetation at a particular site	✓	<p>Where vegetation is present on the development site, provide a map on digital aerial photography or the best available imagery of the development site showing:</p> <ul style="list-style-type: none"> native vegetation (including grasslands and other non-woody vegetation types) and non-native vegetation, and the area of land that is directly impacted by the proposed development, including related infrastructure such as roads, pipelines, access tracks, temporary material stockpiles, asset protection zones and powerlines, if applicable. <p>Describe how the proposed development avoids impacts on native vegetation and identify the likelihood and extent of any remaining impacts including removal of isolated or cultivated native plants.</p>	<p>The proposed development will have no direct impact on native vegetation as the surface construction will occur within the previously approved disturbance footprint. However, the BDAR waiver has not presented sufficient information about the hydrogeology of the area and potential indirect impacts of the development. The proposed BDAR waiver (BDARW) was referred to DPIE Water Assessments for technical advice on hydrogeology. DPIE Water Assessments (WAMS 8792) consider that “it cannot be concluded with a high degree of confidence that that the proposed development is unlikely to have any significant impact on biodiversity values.”</p> <p>The following concerns with proposed BDAR waiver (BDARW) are noted:</p> <ul style="list-style-type: none"> In order for the numerical model presented in Appendix G of the BDARW application to be considered fit for purpose it must satisfy requirements of the Australian Groundwater Modelling Guidelines for a ‘Class 2/3’ model at

Biodiversity value	Meaning	Relevant (✓ or NA)	Potential impacts	
			Applicant comment/ justification	BCD comment
				<p>a minimum. It must also meet the requirements of the Aquifer Interference Policy, for example the requirement to be reviewed independently and deemed fit for purpose.</p> <ul style="list-style-type: none"> The basis for the conclusion drawn that lake bed sediments act as an impeding layer to vertical leakage from the lake is based primarily on limited modelling and leakage observations in the existing open pit. In order to demonstrate that there is negligible connection between Lake Cowal and underlying groundwater table the proponent would need to present contemporaneous baseline water table and water level monitoring from Lake Cowal. This information is not included in the BDARW. BDARW Appendix C Table 2.1 indicates that ‘chimneying’ is a risk as with all underground mines. Due to the “low” resolution of the structural model used and the limited quantitative data available for model calibration there is considerable uncertainty associated with the current modelling.
Vegetation integrity 1.5(2)(a) BC Act	Degree to which the composition, structure and function of vegetation at a particular site and the surrounding	✓	Describe the vegetation integrity and any impacts on vegetation integrity of identified plant communities.	The proposed development will have no direct impact on native vegetation as the surface construction will occur within the previously approved disturbance footprint. However, the BDAR waiver has not adequately addressed potential indirect impacts on the vegetation of Lake Cowal adjacent to the mine.

Biodiversity value	Meaning	Relevant (✓ or NA)	Potential impacts	
			Applicant comment/ justification	BCD comment
	landscape has been altered from a near natural state			
Habitat suitability 1.5(2)(b) BC Act	Degree to which the habitat needs of threatened species are present at a particular site	✓	<p>Identify any threatened species or ecological communities or their habitat on the development site.</p> <p>Describe how the proposed development avoids impacts on habitat suitability and identify the likelihood and extent of any remaining impacts including the impacts of development on the following habitat of threatened species or ecological communities:</p> <ul style="list-style-type: none"> (i) karst, caves, crevices, cliffs and other geological features of significance, (ii) rocks, (iii) human made structures, (iv) non-native vegetation, <p>(prescribed under clause 6.1(1)(a) of the BC Regulation)</p> <p>Impacts may include the removal or modification (eg. noise, light etc) of the habitat of threatened species or ecological communities.</p>	There will be no further impact on threatened species habitat within in the already approved disturbance footprint. However, further evidence is required to address potential indirect impacts (groundwater and surface water) on the waterbird habitat in Lake Cowal.
Threatened species abundance 1.4(a) BC Regulation	Occurrence and abundance of threatened species or threatened ecological communities, or their habitat, at a particular site	✓	Describe how the proposed development avoids impacts on threatened species abundance and identify the likelihood and extent of any remaining impacts including impacts of vehicle strikes on threatened species of animals or on animals that are part of a threatened ecological community (prescribed under clause 6.1(1)(f) of the BC Regulation).	There will be no further impact on threatened species habitat in the already approved disturbance footprint. However, further evidence is required to address potential indirect impacts (groundwater and surface water) on the waterbird habitat in Lake Cowal.
Habitat connectivity	Degree to which a particular site connects different areas of habitat of	✓	<p>Identify whether the development site contributes to habitat connectivity.</p> <p>Describe how the proposed development avoids impacts on habitat connectivity and identify the likelihood and extent</p>	There will be no direct impact on vegetation as a result of the development and the surface construction is within the already approved development footprint. However, further evidence is required to address

Biodiversity value	Meaning	Relevant (✓ or NA)	Potential impacts	
			Applicant comment/ justification	BCD comment
1.4(c) BC Regulation	threatened species to facilitate the movement of those species across their range		of any remaining impacts of development on the connectivity of different areas of habitat of threatened species that facilitates the movement of those species across their range (prescribed under clause 6.1(1)(b) of the BC Regulation).	potential indirect impacts (groundwater and surface water) on the waterbird habitat in Lake Cowal.
Threatened species movement 1.4(d) BC Regulation	Degree to which a particular site contributes to the movement of threatened species to maintain their lifecycle	✓	Describe how the proposed development avoids impacts on threatened species movement and identify the likelihood and extent of any remaining impacts of development on movement of threatened species that maintains their lifecycle (prescribed under clause 6.1(1)(c) BC Regulation).	There will be no direct impact on vegetation as a result of the development and the surface construction is within the already approved development footprint. However, further evidence is required to address potential indirect impacts (groundwater and surface water) on the waterbird habitat in Lake Cowal.
Flight path integrity 1.4(e) BC Regulation	Degree to which the flight paths of protected animals over a particular site are free from interference	NA	Identify whether flight paths of protected animals occur over the development site. Protected animals are animals of a species listed or referred to in Schedule 5 of the BC Act. They include any species of birds, mammals, amphibians or reptiles that are native to Australia or that periodically or occasionally migrate to Australia. Describe how the proposed development avoids impacts on flight path integrity and identify the likelihood and extent of any remaining impacts. Note: The impacts of wind turbine strikes on protected animals are prescribed under clause 6.1(1)(e) of the BC Regulation. It is, therefore, unlikely that a BDAR waiver would be issued for a proposed wind farm.	The proposed development is within the already approved development area. The major development is underground so this criterion is not applicable.
Water sustainability 1.4(f) BC Regulation	Degree to which water quality, water bodies and hydrological processes sustain threatened species	✓	Describe how the proposed development avoids impacts on water sustainability and identify the likelihood and extent of any remaining impacts of development on water quality, water bodies and hydrological processes that sustain threatened species and threatened ecological communities (including from subsidence or upsidence resulting from	DPIE Water Assessments assessed the BDAR waiver application and considers that “it cannot be concluded with a high degree of confidence that that the proposed development is unlikely to have any significant impact on biodiversity values.” (see BCD comment under ‘Vegetation abundance’ above).

Biodiversity value	Meaning	Relevant (✓ or NA)	Potential impacts	
			Applicant comment/ justification	BCD comment
	and threatened ecological communities at a particular site.		underground mining or other development) (prescribed under clause 6.1(1)(d) of the BC Regulation).	Lake Cowal is potential threatened species habitat. The proponent will need to provide further information addressing potential indirect impacts of the project on prescribed biodiversity values (Section 6.7.1.4 of the Biodiversity Assessment Method), specifically the hydrological and hydrogeological processes that sustain Lake Cowal habitats.

Recommendation

It is recommended that the delegated officer:

- Considers the matters set out in this report; and
 - Determines that, based on the information provided, it cannot be concluded that the proposed development is not likely to have any significant impact on biodiversity values and therefore a BDAR is required.



Andrew Fisher
Senior Team Leader
South West Branch
Biodiversity and Conservation Division
Department of Planning, Industry and Environment

Date 21/09/20