



Our ref: DOC19/1023388-5

Your ref: SSD-9526

Ms Lauren Evans

Team Leader

Energy and Resource Assessments, Planning and Assessment Division

Department of Planning, Industry and Environment

lauren.evans@planning.nsw.gov.au

Dear Ms Evans

Maxwell Underground Coal Mine Project (SSD-9526) - Response to Submissions Report

I refer to your e-mail dated 22 November 2019 in which the Planning and Assessment Division (PAD) of the Department of Planning, Industry and Environment (The Department), invited Biodiversity and Conservation Division (BCD) of The Department to review the *Response to Submissions Report* (RTS Report) for the Maxwell Underground Coal Mine Project (SSD-9526). BCD reviewed the project's likely impacts on flood risk, biodiversity and Aboriginal cultural heritage as described in the Environmental Impact Statement and provided advice in a letter dated 20 September 2019. BCD's advice was considered in the RTS Report.

BCD's recommendations are provided in **Attachment A** and detailed comments are provided in **Attachment B**. If you require any further information regarding this matter, please contact Robert Gibson, Regional Biodiversity Conservation Officer, on 4927 3154 or via email at rog.hcc@environment.nsw.gov.au

Yours sincerely

A handwritten signature in black ink that reads 'N91 Davis'.

NICOLE DAVIS

A/Senior Team Leader Planning

Hunter Central Coast Branch

Biodiversity and Conservation Division

4 December 2019

Enclosure: Attachments A and B

BCD's recommendations

Maxwell Underground Coal Mine Project (SSD-9526) – Review of Response to Submissions Report

Biodiversity

The Biodiversity and Conservation Division recommends:

1. The proponent must develop an adaptive management plan in accordance with the *Biodiversity Assessment Operational Manual: Stage 2* (BCD, 2019c). Any impacts that cannot be adaptively managed must be offset.
2. A condition should be included in any consent issued that states that mine subsidence above a certain threshold must be offset, using the BAM, and that details of thresholds are included in the Extraction Plan.
3. Adaptive management must be applied to the monitoring results of the health of riparian vegetation growing along Saddlers Creek and Saltwater Creek. Impacts to the health of riparian vegetation beyond agreed thresholds must be offset.

Aboriginal cultural heritage

The Biodiversity and Conservation Division recommends:

4. BCD recommends that an Aboriginal cultural heritage management plan be developed in consultation with the registered Aboriginal parties and to the satisfaction of BCD, prior to any ground disturbance works being undertaken.

BCD's detailed comments

Maxwell Underground Coal Mine Project (SSD-9526) – review of Response to Submissions Report

Biodiversity

1. An adaptive management plan is required for assessing impacts to threatened species by remediation works for subsidence cracks

BCD acknowledges the proponent's commitment to reviewing the impacts of the remediation of mine subsidence cracks to reduce their impacts on threatened species, rather than using the Biodiversity Assessment Method (BAM) to assess impacts to biodiversity. However, ploughing is a threat to both the pink-tailed legless lizard (*Aparasia parapulchella*) and the striped legless lizard (*Delma impar*), as both species rely on soil cracks and partially buried rocks as habitat (OEH, 2017; BCD, 2019a). Habitat modification is a threat to the pine donkey orchid (*Diuris tricolor*) (BCD, 2019b). Impacts of mine subsidence using Biodiversity Assessment Method (BAM) have been done over two area of likely ponding rather than over the wider undermined area. No details have been provided on how mine subsidence cracks are will be remediated. However, if they include techniques known to harm habitat for the legless lizards or the pine donkey orchid or occur during the growing season of the pine donkey orchid in the area where it occurs, then BCD recommends that the proponent develops an adaptive management plan to prevent harm to threatened biodiversity. This is described in Section 2.7 of the *Biodiversity Assessment Operational Manual: Stage 2* (BCD, 2019c), and can include the requirement to offset impacts that cannot be adaptively managed.

Recommendation 1

The proponent must develop an adaptive management plan in accordance with the *Biodiversity Assessment Operational Manual: Stage 2* (BCD, 2019c). Any impacts that cannot be adaptively managed must be offset.

2. Unexpected mine subsidence impacts may need to be offset

BCD acknowledges that mine subsidence modelling for this project has been peer-reviewed and considers the 'worst case' scenarios, and how the proponent is considering managing subsidence impacts in Extraction Plans. Unexpected mine subsidence events, however, are still possible. As described in Recommendation 2 (above), the BAM has provision for managing uncertain impacts by applying adaptive management, with triggers for remedial action, and requiring offsets where thresholds have been exceeded. To do this first requires the collection of baseline data in BAM format.

The proponent's suggested approach is very similar to that in Section 2.7 of the *Biodiversity Assessment Operational Manual: Stage 2* (BCD, 2019c). BCD recommends that the requirement to offset unexpected mine subsidence is included as a consent condition, and that details of monitoring, management and thresholds are included in the Extraction Plan.

Recommendation 2

A condition should be included in any consent issued that states that mine subsidence above a certain threshold must be offset, using the BAM, and that details of thresholds are included in the Extraction Plan.

3. Adaptive management must be applied to monitoring results of the health of riparian vegetation along Saddlers Creek and Saltwater Creek

BCD notes that the proponent intends to monitor shallow, alluvial bores in the Saddlers Creek alluvium, and also vegetation health of Swamp Oak along Saddlers Creek and Saltwater Creek. BCD still considers the proposed reduction in groundwater tables along Saddlers Creek and Saltwater Creek to be an uncertain impact on creek line vegetation, and so recommends that adaptive management is applied if monitoring detects changes to the health of riparian vegetation. Any change beyond a certain threshold may have to be offset, as per Section 2.7 of the *Biodiversity Assessment Operational Manual: Stage 2* (BCD, 2019c).

Recommendation 3

Adaptive management must be applied to the monitoring results of the health of riparian vegetation growing along Saddlers Creek and Saltwater Creek. Impacts to the health of riparian vegetation beyond agreed thresholds must be offset.

Aboriginal cultural heritage

4. An Aboriginal cultural heritage management plan must be prepared and implemented for the project

As recommended in Section 8 and Appendix G of the Environmental Impact Statement, an Aboriginal cultural heritage management plan (ACHMP) must be developed for the project in consultation with the registered Aboriginal parties (RAPs) and to the satisfaction of BCD, to manage and mitigate extant Aboriginal sites and objects.

BCD recommends that a consent condition is created that requires an ACHMP be prepared in consultation with the RAPs and BCD prior to ground disturbing works being undertaken for the project.

Recommendation 4

BCD recommends that an Aboriginal cultural heritage management plan be developed in consultation with the registered Aboriginal parties and to the satisfaction of BCD, prior to any ground disturbance works being undertaken.

Resolved matters

5. The following matters have been resolved since BCD's review of the EIS:
 - The proponent has demonstrated that the proposal is unlikely to reduce the flood immunity of Edderton Road through conventional subsidence
 - The proponent has identified that the proposed gas drainage system occurs in the Mine Entry Area of the Project and thus has been assessed using the BAM
 - The land with the population of pine donkey orchid (*Diuris tricolor*) will be actively managed, and this will be detailed in the *Biodiversity Management Plan*

References:

OEH (2017) Pink-tailed Legless Lizard – profile. 07 September 2017. NSW Office of Environment and Heritage, Sydney.

<https://www.environment.nsw.gov.au/threatenedSpeciesApp/profile.aspx?id=10061>

BCD (2019a) Striped Legless Lizard – profile. 19 March 2019. NSW Biodiversity and Conservation Division, Sydney.

<https://www.environment.nsw.gov.au/threatenedSpeciesApp/profile.aspx?id=10211>

BCD (2019b) Pine Donkey Orchid – profile. 03 January 2019. NSW Biodiversity and Conservation Division, Sydney.

<https://www.environment.nsw.gov.au/threatenedSpeciesApp/profile.aspx?id=10243>

BCD (2019c) *Biodiversity Assessment Operational Manual: Stage 2. September 2019*. NSW Biodiversity and Assessment Division, Department of Planning, Industry and Environment, Sydney.

<https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Animals-and-plants/Biodiversity/biodiversity-assessment-method-operational-manual-stage-2-190512.pdf>