

Our ref: DOC19/672812-9

Your ref: SSE-9526

Ms Lauren Evans

20 September 2019

Team Leader

Energy and Resource Assessments, Planning and Assessment

Energy and Resources Division

lauren.evans@planning.nsw.gov.au

Dear Ms Evans

Maxwell Underground Coal Mine Project (SSD-9526)

I refer to your e-mail dated 7 August 2019 in which the Energy and Resources Division (ERD) of the Department of Planning, Industry and Environment (the Department) invited Biodiversity and Conservation Division (BCD) of the Department to provide advice in relation to the Maxwell Underground Coal Mine Project. We have reviewed the Environmental Impact Statement for this project in relation to impacts to Aboriginal cultural heritage, biodiversity and flood risk.

We are satisfied with the Aboriginal cultural heritage assessment undertaken and no further Aboriginal cultural heritage assessment is required.

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 Steven Cox, Senior Team Leader Planning, on 4927 3140 or via email at rog.hcc@environment.nsw.gov.au

Yours sincerely



SONYA ERRINGTON

Director Hunter Central Coast Branch

Biodiversity and Conservation Division

Enclosure: Attachments A and B

BCD's recommendations

Maxwell Underground Coal Mine Project (SSD-9526)

Flooding and flood risk

The Biodiversity and Conservation Division recommends:

1. The proponent should demonstrate that Edderton Road's level of flood immunity will not be reduced by the proposal. If impacts to Edderton Road are predicted, the proponent should identify suitable mitigation measures.

Biodiversity

The Biodiversity and Conservation Division recommends:

2. That any impacts to biodiversity caused by the proposed centralised gas management infrastructure are assessed in accordance with the Biodiversity Assessment Method, and any credits generated are appropriately offset.
3. That the impacts to threatened biodiversity due to remediation of mine subsidence cracks should be assessed in accordance with the Biodiversity Assessment Method, prior to the works being undertaken and any credits generated should be appropriately offset.
4. That a condition is included in any consent issued that the Subsidence Monitoring Program and Biodiversity Management Plan requires the impacts of any unexpected mine subsidence to be assessed in accordance with the BAM and any credits generated should be appropriately offset.
5. Active management of plants that may out-complete pine donkey orchid is applied to pine donkey orchid enclosed area and detailed in the Biodiversity Management Plan for the project.
6. That impacts to vegetation growing in Saddlers Creek and Saltwater Creek streambeds is assessed in accordance with the BAM and any credits generated should be appropriately offset.

BCD's detailed comments

Maxwell Underground Coal Mine Project (SSD-9526)

Flooding and flood risk

1. Flooding risks to Edderton Road require clarification.

The proponent has not demonstrated that Edderton Road will not be adversely affected by flooding. As the road crosses several ephemeral creeks within the subsidence area, there is potential for localised flooding impacts, such as the road being cut more often or exposed to higher levels of flood hazard. To mitigate subsidence impacts, a potential realignment of the road around the Maxwell Underground area has been proposed. The Biodiversity and Conservation Division (BCD) is unable to assess flooding impacts on either the current road or its alternate alignment as insufficient information has been provided.

Recommendation 1

The proponent should demonstrate that Edderton Road's level of flood immunity will not be reduced by the proposal. If impacts to Edderton Road are predicted, the proponent should identify suitable mitigation measures.

Biodiversity

2. The impact of gas management infrastructure on threatened species should be assessed

Section 3.5.6 of the Main Report of the Environmental Impact Statement (EIS) describes the proposed gas drainage system for the project. It includes a '...centralised gas management infrastructure at the surface'. The location of the centralised gas management system is not shown in any maps in the EIS, and it is not indicated if vegetation clearing will be required. BCD recommends that, if this surface infrastructure requires vegetation clearing that the impacts of the clearing are assessed in accordance with the Biodiversity Assessment Method (BAM), and any ecosystem or species credits generated are appropriately offset.

Recommendation 2

Any impacts to biodiversity caused by the proposed centralised gas management infrastructure should be assessed in accordance with the Biodiversity Assessment Method, and any credits generated are appropriately offset.

3. Impacts to threatened species by remediation works for subsidence cracks should be assessed

Table 29 of the BDAR summarises the proposed measures to mitigate and manage impacts from the project and includes a row on the remediation of surface cracks (likely to be between 25 and 50 millimetres wide on flatter areas, with some cracks more than 150 millimetres wide in other areas). However, this table does not include any requirement to review the environmental impacts caused by remediation of surface cracks on biodiversity; such as on the pine donkey orchid (*Diuris tricolor*), pink-tailed legless lizard (*Aprasia parapulchella*) or the striped legless lizard (*Delma impar*). BCD recommends that the proposed Biodiversity Management Plan should include a requirement for the impacts of proposed remediation works to be assessed in accordance with the BAM and that any ecosystem credits or species credits generated are offset.

Recommendation 3

Impacts to threatened biodiversity due to remediation of mine subsidence cracks should be assessed in accordance with the Biodiversity Assessment Method, prior to the works being undertaken and any credits generated should be appropriately offset.

4. Unexpected mine subsidence impacts should be assessed using BAM

Section 5.3.1 of the BDAR discusses potential subsidence impacts for the project. Subsidence modelling has identified ponding of about 2 hectares of native vegetation - which will be offset. However, if greater than expected mine subsidence occurs, the impacts should be assessed using BAM and any credits generated should be offset. BCD recommends that this requirement is included in the Subsidence Monitoring Program and Biodiversity Management Plan.

Recommendation 4

A condition should be included in any consent issued that the Subsidence Monitoring Program and Biodiversity Management Plan requires the impacts of any unexpected mine subsidence to be assessed in accordance with the BAM and any credits generated should be appropriately offset.

5. The pine donkey orchid plants will require active management

Section 5.6 of the BDAR describes the proposal to erect a fence around the perimeter of a 20 metre buffer of pine donkey orchid (*Diuris tricolor*) records to exclude grazing by livestock to enhance their growth. Active management of exotic tussock grasses (such as Rhodes grass (*Chloris gayana*), African lovegrass (*Eragrostis curvula*) or coolatai grass (*Hyparrhenia hirta*)), or other plants that may shade-out or otherwise out-compete the orchids will need to be considered to ensure that the plants survive. This will require consideration of slashing or crash grazing when the orchids are dormant in summer. Management of the orchid enclosed area should be detailed in the Biodiversity Management Plan for the project.

Recommendation 5

Active management of plants that may out-complete pine donkey orchid is applied to pine donkey orchid enclosed area and detailed in the Biodiversity Management Plan for the project.

6. Impacts from the drawdown of alluvial aquifers on creek line vegetation should be assessed

The proposed reduction in groundwater tables along Saddlers Creek and Saltwater Creek represent an uncertain impact on creek line vegetation. BCD recommends that adaptive management is applied to the health of vegetation along those creeks, so that they are monitored, and where changes to the health of such vegetation is detected, any harm is assessed by the BAM and any credits generated are appropriately offset.

Recommendation 6

Impacts to vegetation growing in Saddlers Creek and Saltwater Creek streambeds should be assessed in accordance with the BAM and any credits generated should be appropriately offset.