



Our ref: DOC21/912839-2

Your ref: SSD-5144 MOD 10

Mr Jarrod Blane

Senior Planning Officer
Energy Resource Assessment
Minerals & Quarry Assessments
Department of Planning, Industry and Environment
jarrod.blane@dpie.nsw.gov.au

Dear Mr Jarrod Blane

Mandalong Southern Extension Project (SSD-5144 MOD 10) – Review of Modification Report

I refer to your e-mail dated 18 October 2021 in which the Planning and Assessment Division (P&A) of the Department of Planning, Industry and Environment (the Department) invited Biodiversity and Conservation Division (BCD) to provide advice in relation to the Mandalong Coal Mine Southern Extension Project (SSD-5144 MOD 10). RPS provided background information on the Biodiversity assessment in an e-mail dated 8 November 2021.

BCD have reviewed the modification report for modification to development consent SSD-5144, including relevant appendices, in relation to impacts on biodiversity and flood risk assessment. BCD has no comment on the flood risk assessment.

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 huntercentralcoast@environment.nsw.gov.au

Yours sincerely

STEVEN CRICK
Senior Team Leader Planning
Hunter Central Coast Branch
Biodiversity and Conservation Division

Date: 15 November 2021

Enclosure: Attachments A and B

BCD's recommendations

Mandalong Southern Extension Project (SSD-5144 MOD 10) – Review of Modification Report

Biodiversity

1. BCD recommends that nominal area of native vegetation likely to be affected by ponding following longwall mining is considered to be fully cleared and treated as such in the Biodiversity Assessment Method Calculator.
2. BCD recommends that further information is provided to show how targeted flora surveys met 'Surveying threatened plants and their habitats: NSW survey guide for the Biodiversity Assessment Method' (DPIE, 2020).
3. BCD recommends that further information is provided to show how targeted fauna surveys met BCD's survey guidelines.
4. BCD recommends that further information is provided to show how on-ground vegetation was matched to a Plant Community Type, and the degree of confidence in the match.

BCD's detailed comments

Mandalong Southern Extension Project (SSD-5144 MOD 10) – Review of Modification Report

Biodiversity

1. Consider ponding of native vegetation will result in total clearing and reassess in the BAM calculator

Section 6.1.1. 'Future vegetation integrity scores' in the Biodiversity Development Assessment Report (BDAR) allocates a partial loss, rather than a full loss, of the vegetation integrity score for native vegetation likely to be impacted by ponding from this project. BCD notes that the approach undertaken is based on the results of annual monitoring of vegetation above longwall panels elsewhere on the Mandalong South Coal Mine site. Section 8.1.1.2 of the Biodiversity Assessment Method (BAM) 2020 allows the future value of each component of the vegetation integrity score to be amended to reflect partial clearing. However, if such vegetation is likely to continue to degrade then the full loss of the vegetation should be assumed. It has yet to be demonstrated that full loss of vegetation will not occur over the 20 year timeframe that a BAM assessment considers, therefore BCD recommends that the precautionary principle is applied and that the nominal 0.01 hectares of vegetation considered to be directly impacted (Table 6-1 'Impacts to native vegetation') in the BDAR is considered to be fully cleared, and that the BAM Calculator (BAM-C) is rerun with the future vegetation integrity scores set to zero. This will require the BAM-C to be edited and the calculation re-run.

Recommendation 1

BCD recommends that nominal area of native vegetation likely to be affected by ponding following longwall mining is considered to be fully cleared and treated as such in the Biodiversity Assessment Method Calculator.

2. Demonstrate how targeted surveys for threatened flora meet survey guidelines

Section 3.2.4 'Targeted Flora Surveys' in the Biodiversity Inventory Report (BIR), which is Appendix A to the BDAR, does not demonstrate how the targeted flora survey undertaken meets BCD's targeted flora survey guideline ('Surveying threatened plants and their habitats: NSW survey guide for the Biodiversity Assessment Method' (DPIE, 2020)). BCD therefore recommends that the proponent provide more information on survey effort undertaken for threatened plant species, including:

- a. A table in which each species surveyed is given a row, and with columns allocated for the following data:
 - i. The status of the plant taxon under the *Biodiversity Conservation Act 2016*
 - ii. The status of the plant taxon under the Commonwealth *Environmental Protection and Biodiversity Conservation Act 1999*
 - iii. the associated Plant Community Type (PCT) or Types,
 - iv. the total area of suitable habitat for each species,

- v. the months for which the species may be surveyed (Based on the Biodiversity Assessment Method Calculator (BAM-C), and the Threatened Biodiversity Data Collection (TBDC) (note if different),
 - vi. the dates of targeted survey(s),
 - vii. transect separation spacings (based on growth form and vegetation density) as per the guideline,
 - viii. transect spacing used,
 - ix. A copy of any additional survey requirements contained within the TBDC,
 - x. Notes about any factor of the survey, such as vegetation condition at the time of survey, and
 - xi. Whether the survey guidelines have been met for each species.
- b. A description of whether multi-species surveys were conducted. If so, how they complied with Section 5.1 of 'Surveying threatened plants and their habitats: NSW survey guide for the Biodiversity Assessment Method' (DPIE, 2020), which allows for up to five species in the same stratum to be searched for simultaneously.
 - c. A revised copy of Figure 3-1 'Targeted Flora Searches' that shows targeted survey effort in relation to each threatened plant species. Where more than one threatened species shares exactly the same area of suitable habitat then those species may be shown on the same map.

Recommendation 2

BCD recommends that further information is provided to show how targeted flora surveys met 'Surveying threatened plants and their habitats: NSW survey guide for the Biodiversity Assessment Method' (DPIE, 2020).

3. Demonstrate how targeted surveys for threatened fauna meet survey guidelines

Section 3.3 'Fauna Surveys' in the BIR does not demonstrate how the targeted fauna surveys undertaken meet BCD's targeted fauna survey guidelines, and where appropriate, relevant Commonwealth Government survey guidelines. BCD therefore recommend that the proponent provide more information on survey effort undertaken for threatened animal species, including:

- a. Tables of each species surveyed. One table per guild of species, that is frogs reptiles, day-flying birds large forest owls, microbats, macrobats, arboreal mammals etc. With one row per species and columns are allocated for the following data:
 - a. The status of the animal taxon under the *Biodiversity Conservation Act 2016*
 - b. The status of the animal taxon under the Commonwealth *Environmental Protection and Biodiversity Conservation Act 1999*
 - i. the associated Plant Community Type (PCT) or Types,
 - ii. habitat constraints or requirements
 - iii. the total area of suitable habitat for each species,

- iv. the months for which the species may be surveyed (Based on the Biodiversity Assessment Method Calculator (BAM-C), and the Threatened Biodiversity Data Collection (TBDC) (note if different),
 - v. the dates of targeted survey(s),
 - vi. the name of the survey guidelines or guidelines used
 - vii. a summary of the survey requirements, including the minimum survey effort (such as hours and days, numbers of traps etc),
 - viii. A copy of any additional survey requirements contained within the TBDC,
 - ix. Notes about any factor of the survey, such as vegetation condition at the time of survey, recent rainfall, phase of moon, and
 - x. Whether the survey guidelines have been met for each species.
- b. A revised copy of Figure 3-2 'Fauna Survey Effort' that shows targeted survey effort in relation to each threatened fauna species. Where more than one threatened species shares exactly the same area of suitable habitat then those species may be shown on the same map.

Recommendation 3

BCD recommends that further information is provided to show how targeted fauna surveys met BCD's survey guidelines.

4. Discuss how on-ground vegetation was matched to a Plant Community Type

Section 4.2.1 'Plant Community Types (PCTs)' in the BIR does not discuss how on-ground vegetation was matched to a PCT, nor the degree of confidence of the match. BCD recommends that a summary of process by which on-ground vegetation was matched to a PCT based on key species, geographic location, landscape position and other relevant physical attributes (such as substrate). Include the short-list of the top two to five options, the reason for the final match, and the degree of confidence in the final match.

Recommendation 4

BCD recommends that further information is provided to show how on-ground vegetation was matched to a Plant Community Type, and the degree of confidence in the match.