



Our ref: DOC19/967607-9

Your ref: SSD 8642

Mr. Stephen Shoemith
Team Leader - Energy and Resource Assessments
Planning and Assessment Division
Department of Planning, Industry and Environment
Stephen.Shoemith@planning.nsw.gov.au

Dear Stephen

Mangoola Coal Continued Operations Project (SSD 8642)

As you are aware the Biodiversity and Conservation Division (BCD), of the Department of Planning, Industry and Environment (the Department), has reviewed the biodiversity component of the Environmental Impact Statement (EIS) for the Mangoola Coal Continued Operations Project (SSD 8642). BCD has previously provided advice on the EIS in a letter dated 5 September 2019 (DOC19/608527-1) and held a meeting with Umwelt (Australia) Pty Limited and the Planning and Assessment Division of the Department on 1 November 2019).

At that meeting discussion was held regarding the Orchid Expert Report and in particular BCD's recommendation for future survey of offsets areas. Following that meeting, and the supply of additional information by the applicant's consultant, additional assessment has been undertaken. This has identified alternative approaches to resolving BCD's concerns and highlighted an additional issue with the assessment that has been undertaken.

The matters are described below and recommendations to resolve them are included in **Attachment A** and **Attachment B**.

If you require any further information regarding this matter, please contact Nicole Davis, A/Senior Team Leader Planning, on 4927 3156 or via email at rog.hcc@environment.nsw.gov.au

Yours sincerely

A handwritten signature in black ink, appearing to read 'K. O'Flaherty', written over a light grey rectangular background.

KATRINE O'FLAHERTY
A/Director Hunter Central Coast Branch
Biodiversity and Conservation Division

4 December 2019

Enclosure: Attachments A and B

1. Orchid Expert Report

The Mangoola Coal Continued Operations Project EIS uses counts of plants of *Diuris tricolor* and *Prasophyllum petilum* as the currency for assessing impacts and offsets for these threatened orchids. Counts for the proposed impact area are based on targeted surveys. Counts for the proposed offset are based on extrapolation of orchid densities, based on localised surveys, applied to areas identified in the expert report as being suitable habitat, as presented in the expert report. Section 2.4.1 of the expert report discusses the various limitations of undertaking one-off targeted surveys to accurately understand population sizes of these orchid species. Notably, the expert report (in paragraph 26) suggests that a 'one-off survey, even if conducted on the day of peak flowering, would likely overlook more than 80% of individuals in that population'. The expert report therefore highlights the relative uncertainty involved with targeted surveys undertaken within the proposed impact area, compared to the population estimates of the offset site.

BCD did not require additional targeted orchid surveys for this project as the survey effort for the work already undertaken for the Upper Hunter Strategic Assessment had already been approved. However, the findings of the expert report highlight how the EIS does not meet Principle 2 of the *NSW Biodiversity Offsets Policy for Major Projects* (the Offsets Policy). Principle 2 requires a reliable and transparent assessment, with clear and repeatable methods to assess impacts on biodiversity on a development site and likely gains in biodiversity on an offset site. In assessing work done under the Framework for Biodiversity Assessment (FBA), the Department has a responsibility to ensure that the Principles of the Offsets Policy are met.

BCD assessed the proposed impact and offset areas, with consideration of the known and likely habitats for these threatened orchids, based on the findings of the expert report and by reviewing the records made during targeted surveys. BCD regards vegetation zones 1 to 9 as known or potential habitat within the proposed impact area, totalling 567.81 hectares. The offset area for threatened orchids is taken to be the 1,109 hectares calculated by the expert report. This assessment has found that the area of orchid habitat within the offset sites is sufficient in size to meet the offsetting requirements of the FBA for this project. Therefore, in the event of approval for the Mangoola Coal Continued Operations Project, BCD will recommend a consent condition that ensures no additional species credits for the threatened orchids can be generated from any of the 1,290 hectares of proposed offset lands for any future purpose. This condition would ensure that Principle 2 the Offsets Policy is satisfied and formalises the advice that surplus threatened orchid credits from the offset land would not be used for any other project.

Alternatively, if the accredited assessor chooses to calculate species credits using the area method, there would no longer be a need to further justify the population estimates as counts would no longer be a factor. The area assessment method is considered best practice for these species and BCD would support the use of this method to calculate all species credits for *Diuris tricolor* and *Prasophyllum petilum*.

2. Vegetation Zone 6

Under the Upper Hunter Strategic Assessment, BCD (formally the Office of Environment and Heritage) approved a vegetation map for the Mangoola assessment area that regarded all areas of *PCT1603 Narrow-leaved Ironbark - Bull Oak - Grey Box Shrub - Grass Open Forest of the Central and Lower Hunter – Derived Native Grassland* as one vegetation zone. This area has been separated into two vegetation zones (5 and 6) for the Mangoola Coal Continued Operations Project.

Vegetation zone 6 covers 160.04 hectares and has been mapped as 'low condition'. The Site Value Score for vegetation zone 6 is 16.7. As the score is under 17, this 160.04 hectare area does not generate any offset credit requirement under the FBA rules. BCD analysed the vegetation quadrats that were surveyed and found that four of the six data plots for vegetation zone 6 were done in July 2017.

Section 3.2.1.1 of the Biodiversity Assessment Report (BAR) states that, due to land management practices, vegetation zone 6 is in lower condition than vegetation zone 5, having a reduced diversity and cover of native ground cover species. Section 4.3 of the Orchid Expert Report notes that floristic diversity is not expected to be high for plots sampled in winter 2017 as sampling occurred following prolonged drought conditions. Therefore, an alternative explanation for the difference between vegetation zones 5 and 6 may be the collection of the additional plot data in winter. Splitting the vegetation zones and the timing of additional surveys within the new vegetation zone 6 may have had a significant impact on the potential offset liability for Glencore and raises the question of potential bias in the assessment method.

The splitting of the vegetation zones may also have been inappropriate because:

- the FBA states that a vegetation zone must not contain a mix of vegetation in low condition and vegetation in moderate to good condition;
- three of the six plots of zone 6 meet the FBA's definition of moderate to good condition and the other three meet the definition of 'low condition'; and
- all plots in low condition were surveyed in July 2017 and had they been surveyed at a more suitable time, they are likely to have also been in moderate to good condition.

BCD recommends that Glencore are made aware of our concerns so the accredited assessor can review their assessment of Vegetation Zone 6 and make any changes, if considered necessary.