



Office of Environment & Heritage

DOC16/549616-1
SSD 6300

Mr Thomas Watt
Senior Planning Officer, Resource Assessments
Department of Planning and Environment
thomas.watt@environment.nsw.gov.au

Dear Mr Watt

Rixs Creek Coal Mine Extension Project - Response to Submissions Report

I refer to your e-mail dated 31 October 2016 inviting the Office of Environment and Heritage (OEH) to review the Response to Submissions Report for the Rixs Creek Coal Mine Extension Project. OEH provided a review of the Environmental Impact Statement for this project in a letter dated 4 December 2015. It was identified that insufficient information was provided in relation to threatened biodiversity and flooding aspects of this project. Therefore, OEH did not complete the review or provide any recommended conditions of consent.

OEH has reviewed the Response to Submissions Report, particularly in relation to threatened biodiversity and flooding. The review has determined that the proposed development does not impact flooding outside of the mine site. However, mine assets appear likely to be affected from flooding by Station Creek. Therefore, OEH recommends that some details of the flood-risk assessment are checked. In relation to threatened biodiversity the project is being assessed under the Upper Hunter Strategic Assessment and this requires a specific set of information to be provided. Most of this information has been provided, however, since the Response to Submissions Report was prepared an additional 40.98 hectares of the development footprint has been identified. More details are provided in **Attachment 1**. A copy of OEH's advice to the proponent in relation to the assessment requirements of the new area are provided in **Attachment 2**.

If you require any further information regarding this matter please contact Robert Gibson, Regional Biodiversity Conservation Officer, on 4927 3154.

Yours sincerely



1 DEC 2016

RICHARD BATH
Senior Team Leader Planning, Hunter Central Coast Region
Regional Operations

Enclosure: Attachments 1 & 2

ATTACHMENT 1: OEH REVIEW OF THE RIXS CREEK RESPONSE TO SUBMISSIONS REPORT

OEH has reviewed the report '*Rixs Creek Mine – Continuation of Mining Project: Environmental Impact Statement: Response to Submissions*' dated 20 October 2016, that was prepared by The Bloomfield Group. OEH's review focused on the three components raised in the review of the Environmental Impact Statement (EIS) and are presented below.

ABORIGINAL CULTURAL HERITAGE ASSESSMENT

OEH reviewed the EIS and agreed with its assessment of scientific significance on the 21 new Aboriginal sites that are likely to be affected by the proposed development. Consequently, OEH recommended that an Aboriginal Cultural Heritage Management Plan (ACHMP) was prepared for the project, for which OEH suggested it contain 12 key components. OEH acknowledges that the proponent has agreed to prepare an ACHMP for the project in consultation with OEH. Thus, OEH has no outstanding Aboriginal cultural heritage issues and recommends that any consent issued for this project includes the following standard recommended conditions:

Recommended Conditions of Consent for Aboriginal Cultural Heritage:

1. The proponent must consult with and involve all the registered local Aboriginal parties for the project, in the ongoing management of the Aboriginal cultural heritage values. Evidence of this consultation must be collated and provided to the consent authority upon request.
2. The proponent must update the existing Aboriginal Cultural Heritage Management Plan for the project area in consultation with the registered Aboriginal parties to detail procedures for managing all Aboriginal cultural heritage values associated with the project area. This process must be undertaken prior to commencing any ground disturbance or development works subject to the development.
3. In the event that ground disturbance locates previously unidentified Aboriginal object/s within the project area, all works must halt in the immediate area to prevent any further impacts to the object(s). A suitably qualified archaeologist and representatives of the local Aboriginal community must be contacted to determine the nature, extent and significance of the finds. The site is to be registered in the Aboriginal Heritage Information Management System (AHIMS) and the management outcome for the site included in the information provided to AHIMS. The proponent must consult with representatives of the local Aboriginal community, and the archaeologist to develop an appropriate management strategy for all objects/sites which complies with the requirements of the *National Parks and Wildlife Act 1974*.
4. If any human remains are located, all works must halt in the immediate area to prevent any further impacts to the remains. The NSW Police are to be contacted immediately. No action is to be undertaken until the NSW Police provide written notification to the proponent. If the skeletal remains are identified as Aboriginal, the proponent must contact Environment Line on 131 555 and representatives of the local Aboriginal community. No works are to continue until OEH provides written notification to the proponent.
5. All Aboriginal sites impacted by the project must have an Aboriginal Site Impact Recording form completed and be submitted to OEH's AHIMS Register within three months of being impacted.
6. An Aboriginal Cultural Education Induction Program must be developed for the induction of all personnel and contractors involved in the construction activities on site. Records are to be kept of which staff/contractors were inducted and when for the duration of the project. The program should be developed and implemented in collaboration with the registered Aboriginal parties.

FLOODING AND FLOODPLAIN MANAGEMENT

The EIS prepared for this project did not contain a flood assessment and thus when OEH provided comments on this project in December 2015 it was not possible for OEH to fully consider flood impacts for this project. OEH therefore recommended that a flood risk assessment was undertaken in accordance with AS/NZS ISO 31000 2009 Risk management – principles and Guidelines. Further clarification has now been provided in the Response to Submissions Report.

OEH notes that the size of the catchment areas in the Rixs Creek coal mine area have been decreased, apart from the catchment to Station Creek. However, the flood affected land along Station Creek is all mine-owned land. Flood modelling has shown that some mine assets are likely to be impacted by flooding and therefore that flood protection works will be required. Since the flood risk will not affect other privately owned land OEH has no further comment on this aspect of the project.

The flood analysis carried out by the proponent has used probable rational method for determination of flood flows. This method is not considered best practice and may under or overestimate flows. The consultant has used double design flows in recognition of this potential error and this is considered adequate for the purpose of setting consent conditions.

OEH therefore recommends that if this project is approved it includes the following conditions of consent in relation to flooding issues.

Recommended Conditions of Consent for Flooding:

That the proponent:

1. Carries out a risk assessment of flood risk in accordance with AS/NZS ISO 31000 2009 Risk management – principles and guidelines. The risk assessment must determine the appropriate level of flood protection and freeboard required to protect the mine and its employees. The risk assessment is to include floods up to the probable maximum flood event.
2. Ensures that a minimum 35 metre floodway width is maintained at the culvert crossing to Pit 2 tailings dam. That would ensure that mine operations are carried out in accordance with the recommendations made in JP Environmental flood report dated 15th June 2016 unless otherwise refined by further flood modelling.
3. Reviews flood flows used in the JP Environmental flood analysis to determine if hydrological models should be used for design purposes. Alternatively the conservative 1% upper limit, double rational flow, should be used.
4. Designs, installs and maintains flood mitigation works to ensure adequate protection to Pit 2 tailings dam, open cut and Pit 3 to levels informed by risk assessment and flood modelling.
5. Revises the hydraulic model to ensure that it reflects the designed flood protection works and any other changes to mine infrastructure in the flood affected area.
6. Develops an inspection and maintenance protocol for existing and proposed berms required for flood protection.
7. Develops an inspection and restoration protocol to protect Station Creek from erosion where it receives additional diversion flows.
8. Upgrades and maintains sediment management dams to the required capacity in accordance with Managing Urban Stormwater Soils and Construction Volume 2E Mines and Quarries 2006 based on a 90th percentile 5 day rainfall event for Type D soils.
9. Ensures that there are no adverse flooding impacts on property owned by entities other than the proponent as a result of the works.
10. The occupation and use of this site should place no extra requirements on the NSW State Emergency Service for assistance during flood times

THREATENED SPECIES ASSESSMENT

OEH's review of the EIS in December identified a number of incomplete aspects of its biodiversity assessment. These are summarised below in relation to the additional information provided in the Response to Submissions Report:

1. That for the proposal to be consistent with the Path 1 assessment pathway of the Upper Hunter Strategic Assessment (UHSA) Interim Policy that the proponent must identify native vegetation that meets the definition of the *Commonwealth Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) listed Central Hunter Valley eucalypt forest and woodland Critically Endangered Ecological Community (CHVEFW). This was not included in the EIS.

OEH has worked with the proponent to identify the areas of CHVEFW within the project area. The results are presented in Section 5.7 and Appendix E of the Response to Submissions Report.

OEH notes that an additional area of 40.98 hectares has been recently added to the project area, with an additional document being prepared for public exhibition to address these changes. The revised area of CHVEFW will need to be presented in the additional document. Thus this matter has yet to be fully resolved. OEH will be providing further instructions to the proponent on what they will need to provide OEH to ensure that the assessment of the total development footprint meets UHSA requirements.

2. Clarification was required on the requirements of planned mitigation and mine site rehabilitation for the mine project under the UHSA.

OEH acknowledges that Section 5.7.1 of the Response to Submissions Report proposes to undertake mitigation measures in accordance with the draft UHSA '*Draft Guidelines for the mitigation of coal mining impacts on biodiversity*'.

The Response to Submissions Report also proposes that ecological rehabilitation will be undertaken in accordance with the draft UHSA '*Guidelines for the ecological rehabilitation of recognisable and self-sustaining plant community types*' where possible. These guidelines define the standard that proponents must commit to in order to use rehabilitation to contribute to meeting an offset requirement under the UHSA. Whilst Rixs Creek have not proposed to meeting an offset requirement using mine rehabilitation, OEH encourages Rixs Creek to implement these guidelines for any areas being rehabilitated to native vegetation.

3. Demonstration of 'reasonable steps' undertaken to seek land-based offsets before they may consider paying in the Offsets Fund.

The EIS did not demonstrate that 'reasonable steps' had been undertaken to investigate the provision of land-based offsets before offering alternative offsetting options may be pursued. OEH acknowledges that Section 5.7.1 of the Response to Submissions Report demonstrates that 'reasonable steps' are being undertaken to seek land-based offsets.

4. The review of the EIS, and subsequently provided files identified apparent errors in the calculation of ecosystem credits under the Biodiversity certification assessment. OEH therefore recommended that they were reviewed and the calculation re-run.

OEH has worked with the proponent to ensure that all biodiversity credits are correctly calculated, and this was presented in Section 5.7 of the Response to Submissions Report. However, since that work was undertaken an additional area of 40.98 hectares has been recently added to the project area. This required the calculation of ecosystem credits for the project footprint to be recalculated and a biodiversity assessment to be done of that additional area that was consistent with the requirements of the current draft Biodiversity Management Plan under the UHSA.

The updated BCAM assessment for the total project area was found to be 4,059 ecosystem credits. OEH has prepared a letter for the proponent that details the information requirements for the new area. A copy of this letter is provided in **Attachment 2**.

Recommended Conditions of Consent for Threatened Biodiversity:

Section 6.4 of the Ecology Assessment provided in Appendix I of the EIS stated the intent of the proponent to meet its offsetting obligations "... in accordance with the Upper Hunter Biodiversity Plan, including contributing money to the Upper Hunter Offset Fund using appropriate OEH calculators". The proponent has provided the required information for the original development footprint, however, the recently identified additional 40.98 hectares requires full assessment in accordance with the UHSA, using the Biodiversity Certification Assessment Methodology (BCAM). In this context it is still possible to provide the following recommended condition of consent for threatened biodiversity. That is:

1. That within three years of the date of commencement of development under this consent, the Applicant shall retire biodiversity credits specified in **Table 1** to the satisfaction of OEH.

The retirement of these credits must be carried out in accordance with the Upper Hunter Strategic Assessment and can be achieved by:

- a) Acquiring or retiring credits under the Biobanking Scheme in the *Threatened Species Conservation Act 1995*;
- b) Making payments into an offset fund that has been developed by the NSW Government;
- c) Making a commitment to retire a specific type and number of credits through post-mine rehabilitation within 10 years of the completion of mining under this consent; or
- d) Providing supplementary measures.

Table 1. Ecosystem credit requirements.

Vegetation Community	Code (BVT)	Plant Community Type	Area (ha)	TSC Act Endangered Ecological Community (EEC)	EPBC Act CEEC	Credits required
Forest Red Gum grassy open forest	HU812	Forest Red Gum grassy open forest on floodplains of the lower Hunter	0.81	Hunter Lowlands Redgum Forest EEC	n/a	29
Bull Oak grassy woodland	HU906	Bull Oak grassy woodland of the central Hunter Valley	0.10	n/a	Central Hunter Valley Eucalypt Forest and Woodland CEEC	2
Swamp Oak – Weeping Grass grassy riparian forest	HU945	Swamp Oak – Weeping Grass grassy riparian forest of the Hunter Valley	0.36	n/a	n/a	11
Narrow-leaved Ironbark – Native Olive shrubby open forest	HU819	Narrow-leaved Ironbark - Native Olive shrubby open forest of the central and upper Hunter	21.23	n/a	Central Hunter Valley Eucalypt Forest and Woodland CEEC	606
Grey Box grassy open forest	HU962	Grey Box grassy open forest of the Central and Lower Hunter Valley	1.01	Central Hunter Grey Box – Ironbark Woodland EEC	Central Hunter Valley Eucalypt Forest and	25

					Woodland CEEC	
Narrow-leaved Ironbark – Native Olive shrubby open forest (DNG)	HU819	Narrow-leaved Ironbark - Native Olive shrubby open forest of the central and upper Hunter	195.49	n/a	n/a	3,385
TOTAL			219.00		4,058	