NSW GOVERNMENT | Office of Environment & Heritage

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Your reference: SSD-5850
Our reference: DOC15/301439-1
Contact: Robert Gibson, 4927 3154

Mr Kane Winward
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GPO Box 39
SYDNEY NSW 2001

Department of Planning
Received
2 6 AUG 2015
Scanning Room

Dear Mr Winward

RE: MOUNT OWEN CONTINUED OPERATIONS PROJECT (SSD-5850) – RESPONSE TO SUBMISSIONS REPORT

I refer to your email dated 6 August 2015 requesting comment from the Office of Environment and Heritage (OEH) regarding the Mount Owen Continued Operations Project, Environmental Impact Statement, Response to Submissions (RTS) Report A: NSW Agency and Community Submissions (June 2015).

OEH has reviewed the RTS report in relation to Aboriginal cultural heritage, flooding and threatened biodiversity matters. OEH did not have further comments to add in relation to Aboriginal cultural heritage, but did identify some outstanding issues in relation to flood risk assessment and the assessment of the biodiversity offset package. Further details are provided in **Attachment 1**.

If you have any enquiries concerning this advice, please contact Robert Gibson, Regional Biodiversity Conservation Officer, on 4927 3154.

Yours sincerely

19 AUG 2015

RICHARD BATH
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Enclosure: Attachment 1

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ATTACHMENT 1: OEH COMMENTS ON THE RESPONSE TO SUBMISSIONS REPORT FOR THE MOUNT OWEN CONTINUED OPERATIONS PROJECT (SSD-5850)

On 11 March 2015, OEH provided comments on the exhibited Environmental Impact Statement (EIS) (Umwelt (Australia) Pty Limited, 2014) for the Mount Owen Continued operations Project. OEH was satisfied that proposed actions for Aboriginal cultural heritage matters were in accordance with legislative requirements and policy, but did identify some outstanding issues in relation to flooding and floodplain management and threatened biodiversity impacts. OEH acknowledges that the proponent has now provided further information in the Response to Submissions (RTS) report (Umwelt (Australia) Pty Limited, 2015). OEH's comments of the information provided in the RTS report are provided below.

ABORIGINAL CULTURAL HERITAGE ASSESSMENT

OEH notes the proponent's comments about Aboriginal Archaeology and Cultural Heritage in Section 4.8 of the RTS report. The proponent is in agreement with OEH's six recommended conditions of approval, as provided in the letter dated 11 March 2015. These recommended conditions still stand. OEH has no further comments to make on Aboriginal cultural heritage for this proposed project.

FLOODING AND FLOODPLAIN MANAGEMENT

OEH acknowledges the proponent's consideration of surface water matters for the project in Section 4.5 of the RTS report in which a number of matters raised by OEH were clarified. It is noted that impacts of the Probable Maximum Flood (PMF) were not required to be assessed in the original proposal and have not been considered for the continued operations. OEH agrees that the 500 mm freeboard applied to the PMF may be removed.

The EIS and additional response indicates that the continued operation of the Mount Owen Coal Mine will have incremental additional flooding impacts when compared with the existing approval. Impacts are generally limited to land owned by Glencore mines and it is stated in the response that the impacts do not extend to privately owned land. There are two areas of offsite impacts, however, which remain unacceptable:

Item 1

- Increase in peak flood depths upstream of proposed Bowmans Creek Bridge affects one parcel of land owned by a government authority.

The owner of this land has only been identified as 'government authority' and OEH is not aware of their identity. The government authority should be notified and consulted regarding the impacts of increased flood depths on their land. OEH is not the owner of the land and as such cannot support the development proposal if it has adverse flooding impacts on properties not owned by the proponent. It is up to the proponent and the affected land owner as to what impacts are acceptable and what mitigation measures will be required to a level that is considered satisfactory to both parties. Therefore this mitigation must ensure that the state government is indemnified against any claims for flooding that may be expected in the future as a result of this development; and

Item 2

- Increase in depth, hazard category and duration of inundation for the Hebden Road crossing of Yorks Creek.

Hebden Road is a public road. Any adverse change to existing depth or period of inundation of this roadway provides an increased risk to road users and the emergency services in flood events. The proponent is required to demonstrate no additional adverse effects on public infrastructure as a result of the development.

An on-site detention pond and additional culverts under Hebden Road were previously approved to mitigate the effect of increased flows in Yorks Creek and on Hebden Road for the existing approved development

footprint. The design of these items should be updated to ensure that there is no increase in depth or duration of inundation of Hebden Road for events up to and including the 1% Annual Exceedance Probability (AEP) event as a result of the proposed additional development. Review of the design could make it possible to ensure that a condition of no increased offsite impacts are met.

Therefore, OEH recommends that the previously proposed recommended conditions of approval for this project, with the exception of the reference to the need for 500 mm of freeboard in relation to the PMF, are applied if this project is approved.

THREATENED BIODIVERSITY ASSESSMENT

Sections 4.7 and 4.15 of the RTS report discusses ecological aspects of the project raised in the EIS. Most of the comments raised about the ecology assessment for this project, including its offset package relate to the assessment tool used. There were also issues raised about aspects of the offset package and threatened flora survey. These are discussed further below.

Offsets Policy and Assessment Framework

Many of the comments raised in OEH's letter dated 11 March 2015 in relation to the EIS for this project relate to offset policy in which the proposed development's impacts and values of it offset package and the way in which biodiversity values are able to be measured. The Director General's Requirements (DGRs) for this project were issued by the Department of Planning and Environment on 13 March 2013. OEH provided input to the DGRs in a letter dated 4 March 2013. The EIS for this project was on public exhibition between 20 January and 6 March 2015. On 25 June 2011, the 'NSW OEH interim policy on assessing and offsetting biodiversity impacts on Part 3A, State significant development (SSD) and State significance infrastructure (SSI) projects' policy (OEH, 2011) came into effect. This policy was replaced on 1 October 2014 by the 'NSW Biodiversity Offsets Policy for Major Projects' (OEH, 2014a) which includes the Framework for Biodiversity Assessment (FBA) (OEH, 2014b) as its tool for measuring biodiversity values. The ecological assessment presented in the EIS for this project was finalised in October 2014 and was prepared under the interim biodiversity offset policy.

Based on the timing of public exhibition of the EIS the project falls under the 'NSW Biodiversity Offsets Policy for Major Projects' (OEH, 2014a). As discussed in OEH's letter dated 11 March 2015 this policy has a transitional implementation period, however, that letter incorrectly stated that OEH had discretion as to how strictly the new policy could be applied to projects with a lead-in time that preceded the start of the policy, such as the Mount Owen Continued Operations Policy, where strict application of the FBA results in perverse outcomes. Instead it is the Department of Planning and Environment that holds this discretion. OEH instead is bound to apply the FBA and current offset policy as they are written.

In applying the FBA to this project OEH made several assumptions (provided in OEH's letter dated 11 March 2015) in order to run the BioBanking Credit Calculator – this data was not provided in the EIS nor in the RTS report (see Table 20 in the FBA for a list of required data). OEH's assessment found that the offset package generated fewer ecosystem credits and species credits than the development site. That is despite the offset package being more than twice the size of the development site (see **Table 1**, below).

Table 1. Ecosystem and species credits generated by the FBA for the Mount Owen Continuation Project (and areas, in hectares, including revegetation and rehabilitation that generated credits).

	Development Site (455.5 ha)	**Offset Sites (1,284.4 ha)**
Ecosystem Credits	28,008	11,106*
Species Credits	115,770	14,495

*Includes 2,731 ecosystem credits generated by 518 ha of post-mine rehabilitation

A breakdown of the estimated ecosystem credit yield for the development site and offset package is presented in **Table 2** (below).

Table 2. Comparison of vegetation communities in the development and offset sites, by Plant Community Type (PCT).

Development Site				**Combined Offsets**			
Vegetation Community: PCT Code, General name, (Vegetation Formation*)	Area (ha)	% cleared	Ecosystem Credits	Vegetation Community: PCT Code, General name, (Vegetation Formation*)	Area (ha)	Percent cleared (%)	Ecosystem Credits
HU712 River Oak (FW)	0.2	50	9	HU678 Black Cypress Pine (DSFs)	91.4	10	686
HU815 Spotted Gum-Ironbark (DSFs/g)	279.55	76	17,680	HU692 Grey Gum – Rough-barked Apple (DSFs)	1	50	11
HU817 Ironbark-Grey Box (GW)	115.95	74	5,602	HU702 Ironbark - Black Cypress Pine (DSFs)	59.3	40	445
HU906 Bull Oak (GW)	54	53	4,259	HU730 White Box – Gum – Apple (GW)	131.1	75	939
HU945 Swamp Oak (FW)	5.8	62	457	HU815 Spotted Gum-Ironbark (DSFs/g)	960.9	76	8,633
				HU818 Ironbark – Box – Spotted Gum (GW)	3.2	71	24
				HU820 White Box – Ironbark – Gum (DSFs)	9.2	29	69
				HU821 Gum – Ironbark – Apple (DSFs)	8.6	51	75
				HU822 Grey Box – Grey Gum – Apple (DSFs/g)	14.5	50	165
				HU828 Grey Gum – Grey Myrtle (DSFs)	4.7	27	53
				HU945 Swamp Oak (FW)	0.5	62	6
TOTAL	**455.5**		**28,008**		**1284.4**		**11,106**

*Vegetation Formation Codes: FW = Forested Wetland, DSFs/g = Dry Sclerophyll Forest (shrub/grass sub-formation), DSFs = Dry Sclerophyll Forest (shrubby sub-formation), GW = Grassy Woodlands.

Under the FBA, ecosystem credits from the development site can be retired by credits from vegetation communities in the offset site provided they are in the same vegetation formation and at the same or greater extent cleared. That is also dependent on the offset sites being in the same or adjacent IBRA subregion as the development (OEH, 2014b: Table 5 and Section 10.5). Species credits for threatened fauna can be traded for other fauna species in the same Order, in a similar ecological niche, and for threatened plants with other taxa in the same plant family and life form as the taxon affected; and in all cases for taxa at the same or greater level of threat as the species being affected. In all cases there is a geographical constraint applied to ensure options are only available close to the impact site (OEH, 2014a: Appendix A).

By applying the FBA trading rules for ecosystem credits within the same vegetation formation, and allowing for the use of credits generated from Plant Community Types (PCTs) less cleared than the vegetation in the development site, there is a credit shortfall of about 18,241 credits (see **Table 3** below).

Table 3. Ecosystem Credits of the development site and the offset package according the FBA offset rules. This results in a shortfall of about 18,241 ecosystem credits.

Development Site	Credits to be retired	Matching PCTs in the Offset Package	Matching Credits from Offset	Credit difference
HU712 – River Oak (FW)	9	HU945	6	-3
HU815 – Spotted Gum – Ironbark Forest (DSFs/g)	17,680	HU815 (rehabilitation) + HU822	8,633 + 165= 8,798	-8,882
HU817 Ironbark-Grey Box (GW)	5,602	HU730 + HU818	939 + 24 = 963	-4,639
HU906 Bull Oak (GW)	4,259	0	0	-4,259
HU945 Swamp Oak (FW)	457	0	0	-457
TOTAL	**28,008**		**9,767**	**-18,241**

The assessment period of the Mount Owen Continued Operations Project falls within the 18 month transitional period of the *NSW Biodiversity Offsets Policy for Major Proj*ects (OEH, 2014a). During this period all new Major Projects must be assessed using the FBA. However, some flexibility by the consent authority is allowed if this results in perverse outcomes that do not reflect the intentions of the policy. The Department of Planning and Environment for example, may consider including the Dry Sclerophyll Forest (shrubby sub-formation) vegetation communities of the offset lands in the offset package (HU678, HU692, HU702, HU820, HU821 and HU828) and the 1,339 ecosystem credits that they generate to help offset HU815, for example. Factors for consideration in the flexible application of the FBA in this instance include the size of the offset package being more than twice the size of the proposed development and the location of the offsets the offset package is more than twice the size of the development footprint, and includes land adjacent to existing offsets and the Manobalai Nature Reserve, and thus are considered to augment current conservation lands. The proponent may consider supplementary measures to make up the short-fall in their offset package under the current policy.

Possible Use of Supplementary Measures in the Offset Package

OEH notes that the proponent does not own land along the central reach of Stringybark Creek that is within the assessment area for this project and thus they are unable to implement rehabilitation along additional parts of this creek for use by the Spotted-tailed Quoll. Therefore, OEH recommends that additional effort is required to put back a larger assemblage of indigenous species in the revegetation and rehabilitation components of the offset package, as was touched on in our letter dated 11 March 2015.

Securing Biodiversity Offset Land

OEH notes the proponent's agreement to secure the offset land for this project in an appropriate way. Given that this detail will be resolved during future discussions OEH wishes to advise that the range of suitable options has changed and will likely to continue to change since our letter dated 11 March 2015.

Inclusion of a greater mix of species in post-mine rehabilitation and revegetation

OEH acknowledges that the Mount Owen mine in particular, and Glencore in general, have been actively developing rehabilitation and revegetation and rehabilitation techniques for mines in the Hunter Valley and that great results have been achieved. However, as discussed in our previous letter, one area that is requiring attention is that of increasing the diversity of plant species that are put back into degraded and recreated landscapes. OEH feels that this is in part being addressed through such things as the 'Hunter Ironbark

Research Program' that was required under the project approval for the Ravensworth Operations Project (MP09-0176).

Ecological monitoring, analysis and reporting

OEH acknowledges that the proponent will be considering its approach to these matters in the development of the revised Rehabilitation and Offset Management Plan developed for this project if approved.

Consideration of the threatened orchid, *Pterostylis chaetophora*, for this Project

OEH notes that the proponent did not consider potential impacts on this species due to the near coastal location of most records for this species – most are records within 33 kilometres (km) of the coast between about Cessnock and Taree. However, there are two records in the Upper Hunter Valley in the Wildlife Atlas: one from 1999 from Wingen Maid Nature Reserve (about 62 km NNW of the project area), and the other from 2005 from just North West of Denman (about 40 km due West of the project area). Both records were identified by David Jones from the Centre for Plant Biodiversity Research, Canberra. Therefore, the project area is considered to be within the range of this species.

The description of the greenhood orchid found for surveys for this species from the Kunzea Shrubland do not match the vegetative features for *Pterostylis chaetophora*. Thus it appears that this species is not present in the development footprint. However, this species will require targeted survey and due consideration for other projects in the upper Hunter Valley.

Summary and Conclusion

Following the review of the RTS report for the Mount Owen Continued Operations Project, OEH recommends the following modified conditions in relation to threatened biodiversity are included with any consent issued.

MODIFIED RECOMMENDED CONDITIONS OF APPROVAL FOR THREATENED BIODIVERSITY

1. That all of the biodiversity offset land as described in the Environmental Impact Statement for the Mount Owen Continuation Project must be secured within 12 months of any consent being granted by an appropriate conservation mechanism that is applicable under current biodiversity offsetting policy.

2. That the Proponent shall ensure that the offset strategy is focused on the re-establishment of :

    a. Significant and/or threatened plant communities including:
        i. Central Hunter Grey Box – Ironbark Woodland in the NSW North Coast and Sydney Basins Bioregions endangered ecological community (EEC);
        ii. Central Hunter Ironbark – Spotted Gum – Grey Box Forest in the NSW North Coast and Sydney Basins Bioregions EEC;
    b. Significant and/or threatened plant species including:
        i. *Ozothamnus tesselatus*; and
    c. Habitat for significant and/or threatened animal species including
        i. Spotted-tailed Quoll (*Dasyurus maculatus* subsp. *maculatus*)
        ii. Brush-tailed Phascogale (*Phascogale tapoatafa*)
        iii. Koala (*Phascolarctos cinereus*)
        iv. Squirrel Glider (*Petaurus norfolcensis*)
        v. Eastern Bentwing-bat (*Miniopterus schreibersii oceanensis*)
        vi. East-coast Freetail Bat (*Mormopterus norfolkensis*)
        vii. Southern Myotis (*Myotis macropus*)
        viii. Speckled Warbler (*Chthonicola saggitata*)
        ix. Little Lorikeet (*Glossopsitta pusilla*)
        x. Grey-crowned Babbler (*Pomatostomus temporalis temporalis*)
        xi. Diamond Firetail (*Stagonopleura guttata*)

xii. Masked Owl (*Tyto novaehollandiae*)

3. That vegetation monitoring for this project includes appropriate statistical analysis to guide revegetation and management to help ensure that rehabilitation objectives are met.

References:

OEH (2014a) *NSW Biodiversity Offsets Policy for Major Projects*. September 2014. NSW Office of Environment and Heritage, Sydney. www.environment.nsw.gov.au/biodivoffsets/bioffsetspol.htm

OEH (2014b) *Framework for Biodiversity Assessment: NSW Biodiversity Offsets Policy for Major Projects.* September 2014. NSW Office of Environment and Heritage, Sydney www.environment.nsw.gov.au/resources/biodiversity/140675fba.pdf

OEH (2011) *NSW OEH interim policy on assessing and offsetting biodiversity impacts of Part 3A, State significant development (SSD) and State significant infrastructure (SSI) projects.* 25 June 2011. Office of Environment and Heritage, Sydney.

Umwelt (Australia) Pty Limited (2014) *Glencore: Environmental Assessment, Mount Owen Continued Operations Project. October 2014*. Umwelt (Australia) Pty Limited, Teralba. http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=5850

Umwelt (Australia) Pty Limited (2015) *Glencore: Mount Owen Continued Operations Project, Environmental Impact Statement: Response to Submissions – Report A: NSW Agency and Community Submissions. June 2015*. Umwelt (Australia) Pty Limited, Teralba. http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=5850

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