NSW GOVERNMENT | Office of Environment & Heritage

Your reference: MP 11-0062
Our reference: DOC14-45623-01; EF14/1130
Contact: Robert Gibson, 4908 6851

Mr Matthew Sprott
Planning Officer – Mining Projects
Planning and Infrastructure
GPO Box 39
SYDNEY NSW 2001

Dear Mr Sprott

RE: ADEQUACY OF THE REVISED BIODIVERSITY OFFSET PACKAGE FOR THE DRAYTON SOUTH COAL PROJECT (MP 11-0062)

I refer to your email dated 3 April 2014 seeking comments on the adequacy of the offset package for the revised footprint of the Drayton South Coal Project.

The Office of Environment and Heritage (OEH) has reviewed the report titled 'Revised Drayton South Biodiversity Offset Package', prepared by Cumberland Ecology and dated April 2014. OEH understand that the revised mine footprint of about 1,618 hectares (ha), the offset package amounts to 2,432 ha of land, which includes a large component of post-mine site rehabilitation (1,212 ha). By reducing the size of the development proposal by about 300 ha the proponent has also reduced the size of the offsite offset from 2,422 to 1,049 ha.

OEH has reviewed the revised project in accordance with the *Draft NSW Offset Principles for Major Projects* and *NSW OEH Interim policy of assessing and offsetting biodiversity impacts of Part 3A, State significant developments (SSD) and State significant infrastructure (SSI)* (OEH, 2011) and has found that the offset package appears to meet the offsetting requirements of a Tier 3 outcome under the Interim Offset Policy and is thus an acceptable offset package. However, aspects of how the offset package will be secured, the large area of revegetation in the offset package, and omissions of some site data remain problematic. These are discussed in more detail in **Attachment 1**.

If you require any further information regarding this matter please contact Robert Gibson, Regional Biodiversity Conservation Officer, on 4908 6851.

Yours sincerely

15 APR 2014

RICHARD BATH
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Enclosure: Attachment 1

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ATTACHMENT 1: OEH's ASSESSMENT OF THE ADEQUACY OF THE OFFSET PACKAGE FOR THE REVISED DRAYTON SOUTH COAL PROJECT (MP 11-0062)

INTRODUCTION

The Office of Environment and Heritage (OEH) has been invited by Planning and Infrastructure (P&I) to review the offset package for the revised Drayton South Coal Project. OEH has conducted its review in light of the *NSW offset principles for major projects (state significant development and state significant infrastructure* (OEH, 2014a) and the *NSW OEH Interim policy of assessing and offsetting biodiversity impacts of Part 3A, State significant developments (SSD) and State significant infrastructure (SSI)* (OEH, 2011).

This review is based on information found in the following sources:

- Cumberland Ecology (2014) *Revised Drayton South Biodiversity Offset Package*. April 2014. Cumberland Ecology, Carlingford Court.
- Cumberland Ecology (2012) *Appendix J: Ecology Impact Assessment for Hansen Bailey*. October 2012. Cumberland Ecology, Carlingford Court.
- https://majorprojects.affinitylive.com/public/4c42b82dc23c01ef6c53d048776a4342/50.%20Drayton%20South%20-%20EA%20Appendix%20J%20-%20Ecology%20Impact%20Assessment.pdf
- Hansen Bailey (2013) *Drayton South Coal Project Response to Submissions*. May 2013. Hansen Bailey, Singleton. https://majorprojects.affinitylive.com/public/b90841571819c0c83db805cc085c2360/03.%20Drayton%20South%20-%20Response%20to%20Submissions%20Main%20Report%20-%20Part%203.pdf

According to the Revised Offset package for proposed Drayton South Coal Mine, and associated infrastructure would clear a total of about 1,618 ha over a period of about 27 years that includes:

- about 295 ha of EEC and Vulnerable Ecological Community (VEC) vegetation - including about 20 ha of WBYBBRG Woodland and derived grassland
- a number of threatened plants (1 clump of Weeping Myall (*Acacia pendula*) and 30 plants of Pine Donkey orchid (*Diuris tricolor*))
- one plant of Tiger Orchid (*Cymbidium canaliculatum*) which is part of the Endangered Population of *Cymbidium canaliculatum* in the Hunter catchment
- known suitable habitat for a range of threatened flora and fauna species.

The proposed biodiversity offset strategy comprises 2,432 ha and is described as having the following elements:

- an on-site offset of 85 ha of remnant woody vegetation that includes Central Hunter Box – Ironbark Woodland EEC
- rehabilitation of 614 ha of Central Hunter Box Woodland EEC and 598 ha of Narrabeen Footslopes Slaty Box Woodland VEC on the Drayton South disturbance footprint;
- restoration of 62 ha of riparian vegetation along Saddler Creek; and
- an offsite offset of 1,049 ha that is about 28 km north-north-west of Murrurundi, and is in the Namoi River catchment. This offsite offset contains about 834 ha of reported White Box – Yellow Box – Blakely's Red Gum woodland EEC, including 478 ha in its derived grassland form. Six threatened fauna species have been detected so far on or adjacent to this property.

OEH notes that about half (1,212 ha out of 2,432 ha) of the on-site component of the Biodiversity Offset package comprises restoration and rehabilitation, and a further 20% (478 ha out of 2,432 ha) is composed of derived native grasslands. That is 742 of the offset package comprises remnant native woody vegetation (30.5%). **Table 1** (below) presents a summary of the current and previously proposed development and offset packages. The new proposal has a development footprint that is 309 ha smaller than the previous proposal, and an offset package that is 1,221 ha smaller, and has a larger component of post-mined rehabilitation.

Table 1. Summary of vegetation (by ha) in the development and offset areas for the current and *previous* proposals of the Drayton South Mine. Remnant woody areas (and % of total) of threatened vegetation listed are shown between square brackets [ ].

	Remnant woody vegetation	Derived Native Grassland	Rehabilitation	TOTAL	WBYBBRGW EEC*	TEC Vegetation
Current Development	324 (20%)	1295 (80%)	0	**1619**	5 (0.3%) [2] [0.1%]	291 (18%) [288] [17.8%]
Current Offset	680 (28%)	478 (20%)	1276 (52%)	**2432**	834 (34%) [356] [14.6%]	916 (38%) [430] [17.7%]
Offset Ratio	2:1	0.4:1			167:1 [178:1]	3.1:1 [1.5:1]
Previous Development Proposal	*389 (20%)*	*1539 (80%)*	*0*	***1928***	*166 (9%) [63] [3.3%]*	*456 (24%) [445] [23.1%]*
Previous Offset Proposal	*1290 (35%)*	*898 (25%)*	*1465 (40%)*	***3653***	*1672 (46%) [794] [21.7%]*	*1692 (46%) [848] [23.2%]*
Offset Ratio	*3.3:1*	*0.6:1*			*10:1 [4.7:1]*	*3.7:1 [1.9:1]*

*'WBYBBRGW EEC' means 'White Box – Yellow Box – Blakely's Red Gum Woodland EEC' as listed under Schedule 1 of the *Threatened Species Conservation Act 1995.*

When the Drayton South Coal Project was first proposed, its offset package was assessed under the 'OEH principles for the use of biodiversity offsets in NSW'. However, since then the 'Draft NSW Offsetting Principles for Major Projects' (OEH, 2014a) have been released and are to be used for assessing the adequacy of biodiversity offset packages for Major Projects. The new offset policy does allow for mine site rehabilitation that leads to a self-sustaining and recognisable (within the state-wide Plant Community Types database) and targeted vegetation community. However, full details have not yet been worked out at this stage. The proponent has not clearly stated how the proposed revegetation will be additional to other legal requirements, particularly those required under any consent issued under the *Mining Act 1992*. The 50% discount of any credit per hectare for mine site rehabilitation as an offset is not formalised as part of the current offset policy (OEH, 2014b). Fifty per cent (50%) discounting of ecosystem credits from rehabilitation is being considered under the Upper Hunter Strategic Assessment, however, this project is not yet completed and at any rate the Drayton South Coal Project is not being considered under this assessment pathway (see below).

ADEQUACY OF THE CURRENT OFFSET PROPOSAL

OEH has conducted an assessment of the proposed biodiversity offset for the impact of the current proposed development (Table 1) and has found that the offset appears to be of an appropriate size for both the woody remnant vegetation being cleared and the amount of endangered ecological community vegetation being cleared, however, the make-up of the offsite offset vegetation in the offset mix, the high reliance of the offset of post-mine rehabilitation, and the means by which the offsets will be secured are is problematic; these are discussed in more detail below:

Offset package in light of current offset policy

The revised development and offset package was reviewed under the current offset policy framework; that is the 'NSW offset principles for major projects (state significant development and infrastructure) (OEH, 2014a) and the 'NSW OEH interim policy on assessing and offsetting biodiversity impacts of Part 3A, State significant development (SSD) and State significant infrastructure (SSI) projects' (OEH 2011). *Principle 2: Offset requirements should be based on a reliable and transparent assessment of losses and gains* for which analysis using 'established assessment tools, such as BioBanking Assessment Methodology, re considered best practice'. The Forecasting Tool for Biodiversity Assessment (FBA) is being developed to

be the main assessment tool for this policy; however, it is currently not available. Therefore, OEH used another currently established assessment tool. BioBanking to review the current package, and used the Interim Offset Policy as part of the decision making process (see below).

Principle 3: offsets must be targeted to the biodiversity values being lost or to higher conservation priorities provides some flexibility in the provision of offset packages that have similar or higher biodiversity values to those proposed to be lost. The on-site offset package with its remnant vegetation and planned revegetation along Saddlers Creek meet those requirements. There is still uncertainty that the proposed rehabilitation of a post-mined landscape will meet this requirement. The offsite offset includes vegetation that definitely and likely meets the NSW Scientific Committee determination for WBYBBGRW EEC, but is in an area of less clearing pressure than vegetation in the Central Hunter Valley.

Principle 6: Supplementary measures can be used in lieu of offsets has been considered by the proponent by way of the proposed post-mine site rehabilitation. However, this makes a large part of the offset package which, as discussed by OEH's comments on the previous version of this project comes with a high risk that the promised outcomes and their biodiversity values will not eventuate (see below).

BioBanking assessment of the proposed revised Development and Offsets

OEH conducted an assessment of the revised Drayton South Coal Project using the BioBanking Credit Calculator (version 2.1) and provides a summary of the results in **Table 2** (below). According to the BioBanking assessment the offset package falls about 10,000 credits short of generating the required number of ecosystem credits generated by the proposed development.

Table 2. Summary of results of a BioBanking assessment of the proposed development and offsets

	Development Site	Onsite Offset	Offsite Offset	Total Offset
Ecosystem Credits	18,133	910	6535	7,538
Species Credits	6,347	11	0*	11*

*The BioBanking Credit calculator did not generate any threatened species credits for species credit threatened species in the offsite offset. This is anomalous, however, it is unlikely to have generated sufficient credits to counter those produced by the development site, and also are for a different range of species.

The 'Response to Submissions Report' included a BioBanking assessment of the previous proposal in which all of the vegetation in the Offsite Offset area was calculated as a BioMetric Vegetation Types (BVTs) from the Hunter-Central Rivers Catchment Management Area (CMA); that is despite recognising that the offset land crossed a CMA boundary as shown in Figure A.8 of that report. About 46 ha (4%) of the offsite offset land occurs in the Hunter-Central Rivers CMA. The remainder occurs in the Namoi CMA and thus requires different BVTs to be applied to the vegetation. According to tradability rules for offsets in BioBanking none of the vegetation communities in the offsite offset are able to be used to offset vegetation to be lost in the development footprint.

Due to the mismatch of vegetation communities between the development site and the offsite offset with regards to the BioBanking vegetation tradability rules OEH then applied the interim offsetting policy to the proposed development.

Interim Offsetting Policy Assessment of the proposed Development and Offsets

As discussed in OEH's review of the previous version of the proposed development the *NSW OEH Interim policy of assessing and offsetting biodiversity impacts of Part 3A, State significant developments (SSD) and State significant infrastructure (SSI)* (OEH, 2011) is also based on the BioBanking Assessment Methodology and has a three-tiered approach in which Tier 1 ('Improve or maintain') is the full application of BioBanking. As discussed above the remnant vegetation in the on-site offset does not generate as many credits as the same vegetation types in the development site, and that the vegetation communities in the offsite offset do not match the offset options by way of vegetation type and thus does not enable the offsetting requirements to be fully met in the context of the BioBanking assessment methodology; therefore the project as described does not meet 'Tier 2' (No net loss) of the Interim Policy.

The 'Tier 3' (mitigated net loss) outcome in the policy allows for clearing of 'Red Flag' vegetation, not necessarily retiring all credits generated from the development but providing at least twice the amount of remnant woody vegetation in the offset package than that which will be cleared. This project, as described in the 'Revised Drayton South Biodiversity Offset Package' is consistent with the first two criteria and by the inclusion of about 680 ha of woody remnant vegetation in the offset package, thereby providing the minimum 2:1 offset ration required by this policy. Therefore, based on a cursory assessment, it appears that this project could meet the 'Tier 3' outcome of the interim policy.

Securing Biodiversity Offsets

Section A.6 of the revised offset package (Cumberland Ecology, 2014) discusses how the offset lands will be permanently protected and lists five mechanisms that may be used to secure these offsets. OEH no longer supports rezoning of the land or the application of conservation covenants under Section 88 of the *Conveyancing Act 1919* as means of securing offsets. This is because both of these options can be readily removed, and therefore they do not provide permanent protection of such land for conservation. OEH recommends that the conservation measures listed in s. 126L of the *Threatened Species Conservation Act 1995* (TSC Act) are considered as ways as securing the offsets for this proposal; noting that not all of these options will be applicable for a Major Project. This matter has not been resolved since OEH reviewed the EA for the original proposal, and this will need to be resolved in a satisfactory way if OEH were to consider that the proponent has met its offsetting obligations.

Similarly, for the proposed conservation of existing vegetation along the primary ridgeline to be considered as an offset it would need to be secured for conservation in perpetuity by an appropriate mechanism. In addition, OEH notes that about 40 ha of the 85 ha or so of this identified vegetation occurs above areas of proposed high wall mining. Thus in additional requirement for managing this land as an offset would be to include management plans for how to protect the biodiversity values from impacts of high wall mining.

Please note that OEH cannot guarantee that any or all of the land of the offset package will be suitable for addition to National Park's estate or for the application of a Conservation Agreement.

Rehabilitation as part of the Offset Package

Planned rehabilitation/ revegetation of 1,276 ha forms just over half (52%) of the current offset package. OEH raised concerns about planned revegetation not resulting in promised outcomes for biodiversity to which the notes that the report on the Revised Drayton South Biodiversity Offset Package provided a case study of riparian vegetation rehabilitation on the Dart Brook Mining lease and the case for on-going monitoring of revegetation, with data analysis and provision for adaptive management. The current offset policy for Major Projects allows mine-site revegetation to be included as an offset under some circumstances. Full details of that part of the policy have yet to be developed, however, for such revegetation to be included as an offset it must be additional to other legal requirements, particularly those of any consent issued under the *Mining Act 1992* (OEH, 2014b). OEH supports the use of on-going monitoring to better enable revegetation and rehabilitation to result in a self-sustaining vegetation community that meets the targeted BVT (see below).

White Box – Yellow Box – Blakeley's Red Gum Woodland (WBYBBRG Woodland) EEC assessment

The revised development footprint reduces the impact on this state-listed EEC from 166 ha to 5 ha. The revised biodiversity offset is said to include 356 ha of WBYBBRGW woodland and 478 ha of the woodland in its derived native grassland form (834 ha in total). The ecological reports for this project, in both its original and revised forms considered these vegetation communities under the broader terms of 'Box – Gum Woodland' EEC under the Federal *Environment Protection and Biodiversity Conservation Act 1999* Act in this assessment. However, OEH is only applying the TSC Act definition in this assessment which therefore excludes about 11 ha of Forest Red Gum (*Eucalyptus tereticornis*)-dominated woodland and 3 ha of its derived grassland form in this assessment.

OEH's review of the original proposal identified limitations in the details provided of vegetation considered to be WBYBBRGW EEC particularly in the offsite offset. This was partially addressed in Section 4.8 (notably pages 138 to 141 inclusive) of the 'Response to Submissions Report' in which 31 additional vegetation quadrats were conducted on the offsite offset to record floristic. On page 140 the text includes the following: 'most of the grassland on the offsite biodiversity offset property was allocated to woodland or open forest communities, most of which conform to Box Gum woodland (EEC)'. Thus on the one hand the all DNG on the offsite property for the previous and current offset packages are counted in summary tables as WBYBBRGW EEC, and yet this is contradicted in the related text in those reports and the 'Response to Submissions Report'. The latter report does not include copies of the field sheets for the 31 new quadrats or even a list of plant species found in all new sites, or provide a map to show where the new 31 quadrats were located, thus the claim that all DNG on the offsite offset is EEC cannot be verified.

River Oak Riparian Woodland

After reviewing the EA for the original project OEH requested further information on why the proponent had considered all 7 ha of River Oak Riparian Woodland in the Offsite Offset to match WBYBBRGW EEC. The proponent provided additional information in the 'Response to Submissions Report' (pp. 136-137). OEH notes that River Oak (*Casuarina cunninghamiana*) is not listed as a characteristic species in the WBYBBRGW EEC final determination. While the omission of River Oak in the Final Determination is not critical in whether or not this riparian woodland is or is not the EEC OEH the way the community is described in the EA is that it is primarily dominated by River Oak and Rough-barked Apple (*Angophora floribunda*) (Such as Figure 10.9 in the original EA) and locally co-dominated by Yellow Box and Blakely's Red Gum – Forest Red Gum intergrades. The 'Response to Submissions Report' states that this riparian woodland also contains many of the characteristic species of WBYBBRGW EEC, however, as described above the proponent has not provided copies of field sheets, or a table with all species found in quadrats in this vegetation community in order to support the claims made for this project. OEH acknowledges that based on the landscape context along 3rd order streams that some of the River Oak Riparian Woodland would likely meet the definition of WBYBBRGW EEC, but at this stage it appears that not all of it would.

Threatened Plant Species

The proposed development site contains about 30 plants of *Diuris tricolor* and one clump of Weeping Myall (*Acacia pendula*); both of which are threatened species. It also contains one plant of Tiger Orchid (*Cymbidium canaliculatum*) which is part of the threatened population in the Hunter catchment.

The revised offset package includes one clump of Weeping Myall. Given that the offset now includes increasing the level of security of the Drayton Wildlife, by either a Conservation Agreement under Part 4, Division 12 of the NPW Act or a BioBanking Agreement under Part 7A, Division 2 of the TSC Act on that land, it now includes extant plants of *Diuris tricolor*.

Tiger Orchid plants on the offsite offset are in the Namoi River catchment, and therefore are not part of the endangered population in the Hunter catchment. OEH acknowledges the proponents intent to translocate the Tiger Orchid currently in the development footprint to suitable habitat that will be appropriately managed for conservation in perpetuity. Whilst this is not ideal, OEH acknowledges that based on the ecology of this species translocation of Tiger Orchid is often successful, as has been reported from the Mangoola Mine Site (SLR Consulting Australia Pty Ltd, 2014), and particularly where the translocation guidelines by Vallee *et al.* (2004) are followed. OEH does not support translocation of this Tiger Orchid plant outside of the Hunter catchment (see below).

Monitoring of mine site rehabilitation and other vegetation

OEH notes that the proponent is planning on monitoring mine site rehabilitation and revegetation, and comparing results against local reference sites (EA, Appendix J, section 8.3). OEH supports this approach, especially as it includes data analysis in which the results may be used to trigger adaptive management. OEH recommends that the data analysis includes appropriate statistical analysis, perhaps 'Analysis of similarity (ANOSIM)', that would enable trends to be detected before they become obvious, and thus will

enable adaptive management to be implemented thereby enabling the best use of resources and providing a better chance of rehabilitations outcomes for the project being achieved.

Natural regeneration of native vegetation following removal of livestock has been raised in different parts of the EA (e.g. Appendix J, section 5.1) as a way of improving the biodiversity values of offset land. Whilst native vegetation does indeed respond favourably when grazing pressure is removed not all species may return to a vegetation community. This may be due to local extinction of grazing-sensitive species or that established plants, including perennial exotic tussock grasses, may now prevent certain species from becoming re-established. Statistical analysis of quadrats in regenerating native vegetation would enable the rate of vegetation recovery, based on species diversity to be measured and thus test the hypothesis that stock exclusion alone can lead to full recovery of at least some native vegetation communities. It would also enable adaptive management to be implemented where this was proving not to be the case, which, for example, may then require the local reintroduction of some grazing-sensitive species.

Relocation of threatened plants

OEH notes that revised biodiversity offset includes a commitment to translocate the one Tiger Orchid from the development footprint to a suitable host tree in a nominated Biodiversity Offset Area (Cumberland Ecology 2014; s. A.8.2). As identified in the revised offset plan several Tiger Orchids have been translocated at other mine sites in the Hunter Valley, which have so far had a high rate of survival (e.g. SLR Consulting Australia Pty Ltd, 2014). As mentioned above, OEH usually does not support translocation, but would do so in this case provided that the plant remains in the Hunter catchment, so that it remains within the bounds of the endangered population and thus may be considered as part of the offset package.

OEH understands that research on in-vitro propagation of threatened ground orchids has been conducted at the Mount Annan Botanic Gardens, and so recommends that the proponent discuss their proposed research into *Diuris tricolor* with them. In additional successful translocation of *D. tricolor* has been reported so far from the Mangoola Mine (e.g. SLR Consulting Australia Pty Ltd, 2014), and this OEH recommends that Anglo American consider translocation of at least some of the 30+ plants from the development footprint to a suitable part of the Drayton Wildlife Reserve to give plants of this this species a better chance of long-term survival in the local area. Any such translocation would need to be done in accordance with Vallee *et al.* (2004).

The NSW Scientific Committee final determination for Weeping Myall endangered population in the Hunter Valley is silent on plants of the indigenous suckering, non-pendulous form and imported plants of the typical weeping, seed-producing form from the western slopes. It is not clear in the documentation for this project if both subpopulations in the Study Area are of Weeping Myall are of the indigenous form or not; and this needs to be clarified to ensure that this Endangered Subpopulation is appropriately offset.

Saddlers Creek Rehabilitation and Conservation

OEH acknowledges that Anglo-American has made a commitment to protecting and restoring Saddlers Creek through the protection of 20 ha of remnant woody vegetation and the planned creation of a further 62 ha of Hunter Floodplain Red Gum Woodland or Central Hunter Box–Ironbark Woodland. OEH further acknowledges that Anglo-American has commenced discussions with the Mount Arthur Coal mine on how best to coordinate revegetation and rehabilitation of Saddlers Creek and adjacent parts of its floodplain, and that Hunter Local Land Services (that now includes what was until recently called the Hunter-Central Rivers CMA). These are all positive actions that OEH supports.

Revegetation proposal come with the risk that planned outcomes will not be met. OEH acknowledges that the revised offset package includes a case study of Anglo-American's successful rehabilitation of 6.5 km of creek and river bank along the Hunter River and Dart Brook on the Dartbook Mine lease, and the protection and enhancement of 12 ha of a large population of River Red Gums (*Eucalyptus camaldulensis*) that are part of the Endangered Population of River Red Gum in the Hunter Catchment (Cumberland Ecology, 2014: s. A.4.1). There appears to be very little information available on the riparian revegetation on the Dartbook Mine Lease. If the proponent ensured that the results of this rehabilitation project were written up

and made available in the peer-reviewed literature then this would provide greater support for the rehabilitation projects proposed as part of the offset package.

OEH notes that the proposed Saddler Creek Restoration Area (Cumberland Ecology 2014: Figure 1) is narrow and sinuous and will have large edge effects, and also includes two small .inholdings; and these will provide challenges for its management. OEH therefore recommends that edge effects are considered in the management plan developed for this restoration area.

Conclusions

The proposed offset appears to meet OEH's 'NSW offset principles for major projects (state significant development and infrastructure)' (OEH, 2014a) by achieving a Tier 3 outcome of the *NSW OEH Interim policy of assessing and offsetting biodiversity impacts of Part 3A, State significant developments (SSD) and State significant infrastructure (SSI)* (OEH, 2011). This is due to the remnant woody vegetation component of the offset meeting the minimum 2:1 offset ratio required.

The offset package must be appropriately secured for conservation in perpetuity. Of the five mechanisms listed OEH supports two: dedication to National Park estate or placement of a Conservation Agreement; both of which come with no guarantee such mechanisms will suit the particular parcels of the land in question. Another option for consideration is the placement of a BioBanking Agreement under Part 7A, Division 2 of the *Threatened Species Conservation Act 1995.*

The offset package relies heavily on a large area of post-mined land rehabilitation to two self-sustaining and recognisable targeted threatened ecological communities. The proponent has recognised risks and limitations to this exercise and has made a commitment for such works to include monitoring and analysis of monitoring results to feed into adaptive management to help guarantee that promised outcomes will be delivered. OEH recommends that monitoring results and their subsequent analysis are made available to the public shortly after they have been generated, at most within 6 months, to ensure that the monitoring process is open and transparent, and also that other people and mine sites can learn from the experiences of the Drayton South Coal Project to enable high quality rehabilitation to be developed in the Hunter Valley that has the trust of the regulator and the general community.

OEH can accept mine-site rehabilitation as part of an offset package, however, the details have not yet been finalised. Thus the proponent is taking on a large risk by including such a large amount of post-mined rehabilitation in their offset package.

Further details are required of the form of Acacia pendula in the onsite offset, as to whether it is the indigenous form of not. OEH also recommends consideration of translocating some or all of the *Diuris tricolor* plants from the development site, using work on the nearby Mangoola Mine as a guide.

The proponent still falls short on providing details of on-ground survey results in their environmental reports. This could be easily rectified by the provision of copies of field data sheets, and maps showing where all survey sites were located in their reports. The provision of more complete vegetation descriptions, in terms of structure and composition would provide more support to assertions made in the reports, and where any vegetation communities are considered to meet the NSW Scientific Committee Determination for an Endangered Ecological Community then this requires an assessment against each paragraph of the determination and the provision of site data to support this conclusion.

References

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