Office of Environment & Heritage

Your reference:
Our reference: DOC13/8910
Contact: Peter Christie
(02) 68835317

Howard Reed
Manager, Mining and Industry Projects
Major Projects Assessment
Department of Planning and Infrastructure
GPO Box 39
Sydney NSW 2011

Attention: Matthew Riley

Dear Mr Riley

RE: Cobbora Coal Project Preferred Project Report and Response to Submissions for public exhibition

I refer to your request received on 13 February 2013, seeking comment from the Office of Environment and Heritage on the Preferred Project Report and Response to Submissions (PPR/RTS) for the Cobbora Coal Project.

Biodiversity

A number of matters previously raised by OEH (19 November 2012) have been addressed by the Proponent. Nevertheless, some outstanding matters remain to be addressed:

- Assessment and mitigation of potential indirect impacts on habitat;
- Calculations and justification of offset requirements;
- The adequacy of the proposed offset strategy; and
- The need to continue to consult with OEH on a range of biodiversity-related matters.

Details of the full range of outstanding matters identified during the OEH review of the biodiversity components of the PPR/RTS, including recommendations are included in Attachment 1.

The environmental assessment documents for this proposal indicate that the project will impact on over 3,000ha of native vegetation, including three Endangered Ecological Communities, three additional over-cleared vegetation communities and known habitat for 22 threatened species. This includes predicted significant impacts for three threatened flora species and 13 threatened fauna species.

If the proposal proceeds, adequate mitigation and offsetting measures will be of high importance and must be commensurate with the impacts. For the reasons set out in Attachment 1, and in accordance with OEH policy, OEH is not yet satisfied with these measures as proposed by the Proponent.

PO Box 2111 Dubbo NSW 2830
Level 1 48-52 Wingewarra Street Dubbo NSW
Tel: (02) 6883 5312 Fax: (02) 6884 8675
ABN 30 841 387 271
www.environment.nsw.gov.au

In particular, whilst there are aspects of the proposed mitigation measures and the offset strategy that are supported, the current limits set for these measures by the Proponent have not yet been adequately justified in light of the significance of the impacts predicted.

The required BioBanking credits should be provided, with any reductions related to offset availability and reasonableness of costs fully justified. Any credit reduction should be only to the minimum extent justifiable. This will not necessarily be as low as the impact to offset hectare ratios adopted by the proponent.

Aboriginal Cultural Heritage (ACH)

The bulk of the matters raised in OEH's previous submission on the EA are adequately addressed The Proponent has also agreed to expand on the research design in response to the loss of Aboriginal sites overall from the proposed mine. This will include increasing survey efforts for ACH values in select biodiversity offset areas, and specific question for interpreting the site contents within the Cobbora precinct.

The preferred option modifications have removed impacts to Aboriginal sites previously listed for harm but additional sites elsewhere will be affected as a result. The mitigation of harm to those added sites is consistent with the strategies developed with Aboriginal stakeholders and accepted by OEH. OEH is currently in contact with the Cobbora Holding Company (CHC) to progress discussions of research parameters which are linked to the actions of the Aboriginal Heritage Management Plan.

The Aboriginal Heritage Management Plan

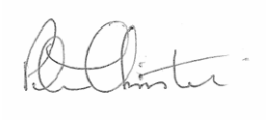
The Aboriginal Heritage Management Plan (the 'Plan') (provided separately by the Proponent) has also been reviewed by OEH and is considered adequate. Finer details of the Plan will be discussed with the Proponent during the consultation with OEH as required by the Department of Planning and Infrastructure.

The Plan's salvage methods seem sufficiently flexible to accommodate undiscovered sites or features that become known during the construction phases or from minor modification to the mine. The research design is built upon the data results from earlier surveys and research compiled within the Environmental Assessment, and is consistent with earlier discussions with OEH. The research design and proscribed methods adequately directs research towards an interpretation of Aboriginal land use for the region, notably for the Talbragar Subregion of the Brigalow Belt South Bioregion.

The Plan is clear and sufficient in detail for regulating the listed management and mitigation actions should an incident occur. The communication strategy, particularly the dispute resolution procedures, is adequately addressed in the Plan. Aboriginal involvement and communication protocols are adequate and have formed the main direction for mitigation to Aboriginal sites including temporary curation of salvaged objects.

If you have any questions regarding this matter please contact me on 02 6883 5317.

Yours sincerely



PETER CHRISTIE
Coordinator, North West
Regional Operations Group

13 March 2013

Attachment 1. Biodiversity

ATTACHMENT 1 - Biodiversity

OEH has reviewed the Preferred Project Report and Response to Submissions (PPR/RTS) against 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 Offset Policy) and the Draft *'Threatened Species Survey and Assessment: Guidelines for developments and activities'* (2004).

PROJECT OVERVIEW

OEH understands that the impacts of the **revised** project include:

- Removal of 3,161 ha of native vegetation and habitat, including:
    - 1,960 ha native vegetation in 'moderate to good condition'.
    - 234ha of identified Endangered Ecological Communities (EEC) (including 153ha of derived native grassland)
    - 1,048ha 'native pasture in low condition' and
    - 16.7km of cliff-line habitat.
    - Approximately 1800ha of known and potential habitat for up to 43 threatened fauna species and eight threatened flora species. The proponent expects impacts to be significant for three threatened flora species and 13 threatened fauna species.
- Removal of approximately:
    - 0.4% of the known local population of *Acacia ausfeldii* (200 individuals);
    - 53% of the known local population of *Homoranthus darwinoides* (227 individuals);
    - 56% of the know local population of *Zieria ingramii* (706 individuals); and
    - 100% of the known local population of *Tylophora linearis* (9 individuals).
- Indirect impacts associated with noise, dust, light spill and fragmentation.
- Potential impacts to OEH Estate.

In comparison with the exhibited EA, we note that there is an increase in the overall extent of impact by 93 ha for native woodland (including 11ha for EEC), and 327 ha of native vegetation in total (partly due to reclassification of 153 ha of 'low condition' and 'non-native grassland' to native grassland and derived native grassland). OEH cannot comment on the adequacy of the re-assessment of grassland as the relevant data (plot location mapping, photos, plot species lists and abundance data for the project area) has not been provided.

ENVIRONMENTAL ASSESSMENT

1. INDIRECT IMPACTS

Questions remain regarding the assessment and mitigation of potential impacts on OEH Estate and other habitat adjacent to the project.

We note the following improvements to the project:

- A section of the rail spur has been moved further away from the Goodiman State Conservation Area (SCA).

- The water pipeline has been moved further away from the Yarrobil National Park (NP)
- Some additional information provided regarding the underpass associated with the rail spur north of Goodiman SCA, which is stated to be suitable for heavy plant access.
- Proposal to construct one dedicated fauna crossing (overpass) for the rail spur to the north of Goodiman SCA and three drains designed to incorporate 'dry fauna passages' connecting other offset areas separated by the rail spur.
- The location of a fauna crossing (tunnel) at the north west corner of Goodiman SCA.
- Some additional information relating to noise impacts
- Some additional commitments regarding fire management.

Nevertheless some clarification is sought regarding the following matters.

Access to Goodiman SCA

Section 3.9.5 (p. 37, volume 1) twice refers to an underpass on the **west** side of Goodiman SCA. When travelling *'east from Corishs Lane to Brooklyn Road'* a *'new section of road and a road over rail bridge will take Brooklyn Road over the rail spur and back onto its existing alignment'*. The text indicates that it is the underpass on the west side of the SCA that will maintain access to both the SCA and a residence (3044, not marked on this map) to the east of the SCA. Figure 3.15 is referred to.

There seems to be a mistake with either the text or the map in Figure 3.15. Contrary to the text the map indicates an underpass to the **east** of the SCA and a road over rail bridge to the west of the SCA. The text appears to reverse these. It is not clear which is correct.

Fauna movement structures

We support the construction of the proposed fauna movement structures as a measure to reduce the barrier effects of linear infrastructure. However we also note that there is no information provided as to why an overpass has only been considered for one location. It would be helpful to see a rationale based on the target species to support the selected structure design at each chosen location.

Indirect Impacts

Section 9.1.4 (p. 109, volume 1) states that updated noise assessments were made near Goodiman SCA. It is reported that the maximum noise levels as a result of the operation of the rail spur are predicted at 48dB(A) at residences about 200-400m from the line. The updated noise assessments referred to in the text are not provided within the PPR/RTS so OEH is unable to see the predicted noise levels for the Goodiman SCA specifically.

The proponent quotes Barber *et al.* (2010)[i] who state that *'deleterious physiological responses to noise exposure in humans and other animals include hearing loss, elevated stress hormone levels and hypertension, and that these responses begin to appear at exposure levels of 55-60dB(A), levels that are restricted to relatively small areas close to noise sources'.* It appears that the original paper on which these observations were largely based (Dooling and Popper 2007[ii]) related specifically to birds and road traffic noise. Dooling and Popper (2007) also noted that the upper value of 60dB(A) is entirely dependent on existing natural ambient noise levels and that a lower guideline would be adopted for a quiet rural area and a higher noise guideline for a noisy urban area.

The proponent states that the proposal *'will not exceed the criteria above [55-60dB(A)] to cause physiological responses or harm to fauna nearby. Such noise may cause a flight response for some species; however, as with traffic noise, fauna will most likely become habituated to this noise'.* The proponent does not supply the references or data used to arrive at these conclusions beyond Barber *et al.* (2010). The proponent does not discuss the likelihood of expected noise levels impacting on other fauna (beyond birds), including bats. Other potential impacts beyond physiological responses or 'harm' are not discussed, such as behaviour, habitat usage, and breeding success.

In contrast, the proponent previously concluded (within the exhibited EA) that *'Some fauna species may habituate to periodic noise disturbances in surrounding habitat. However, threatened and locally rare fauna species are likely to be particularly susceptible to changes in behaviour and breeding success that may result from noise'* (p.117, Section 6.3.2).

Similarly, the proponent has not identified the level of noise impact on the proposed offsets adjacent to the project footprint.

The PPR/RTS does not contain any further information regarding other indirect effects of the project, such as light spill and dust (including coal dust during transport), specifically on the adjacent offsets or OEH estate. Further consideration of these matters is deferred to the construction and operational stages via monitoring and adaptive management under management plans. OEH will be interested in the monitoring procedures and mitigation measures developed. As previously highlighted, there has been no discussion to date on the degree to which the proponent expects that any adverse indirect impacts on adjacent habitat could actually be mitigated in practice.

We note that the PPR/RTS presents, for example, a noise assessment for a specific residence which includes the modelled noise levels associated with three different mitigation options in order to bring noise impacts within acceptable levels. It is assumed that similar assessments could be undertaken for biodiversity assets such as OEH Estate and offset sites.

The BioBanking Assessment Methodology (BBAM) also allows for identification and assessment of indirect impacts on biodiversity values. This includes identification of the on-site measures which can be employed to minimise any adverse impacts such as noise, light, dust, roads or other linear infrastructure which could restrict species movement, and determine the biodiversity credits required to offset any residual indirect impacts.

Fire management

Some additional information has been provided within the PPR/RTS and the commitment made by the proponent regarding development of a Bushfire Management Plan for the site, in consultation with OEH and the Rural Fire Service (RFS) is noted. However OEH has some outstanding questions regarding the information supplied, particularly regarding hazard reduction activities on Cobbora Holding Company (CHC) land, the form of 'community education' that is envisaged, and the form that the proposed assistance to land management agencies will take. Further consultation would be beneficial to address this.

Recommendation

That the Proponent be required to:

- Clarify the location of the road over rail bridge and rail underpass in the vicinity of Goodiman SCA.
- Provide the additional noise assessments undertaken for the Goodiman SCA.
- Provide information on the likely indirect impacts of the proposal on OEH Estate and proposed offsets, including noise, light spill and dust; in particular the likely level of mitigation expected to be achieved and the types of measures that could be employed.
- Employ the methodology set out in the BioBanking Operation Manual to take into account any residual indirect impacts on biodiversity values after considering the likely efficacy of available mitigation measures.
- Consult directly with OEH (National Parks and Wildlife Service) to refine the CHC commitments with regard to fire management.

2. DOWNSTREAM ENVIRONMENTAL IMPACTS

OEH previously raised issues regarding reduction in 'operational surplus' in the downstream reaches of the Cudgegong and protection of in-stream habitat quality.

Operational surpluses provide an ecological service in regulated rivers and contribute to the long term average volume of water that is available to the environment under water sharing plan arrangements. OEH requested the opportunity to discuss these issues with the Proponent and State Water to ensure environmental values of the lower Cudgegong River are not compromised.

It is understood that the Proponent is finalising an extraction strategy agreement with State Water and proposes to consult with OEH regarding the implementation of that strategy to minimise any impacts on the lower Cudgegong River. However OEH's preference is to be part of the discussion with the proponent and State Water during the development of the extraction strategy agreement.

Secondly, the EA indicated that impacts may be expected to a number of groundwater dependent pools. OEH previously recommended that mitigation strategies be investigated along with effort to ensure adequate buffer areas between creeks and areas of disturbance are established to protect these areas and sought further detail on the proposed level of treatment of waters that will be discharged to the creeks.

We note that hydrological and ecological monitoring of persistent pools will be undertaken with proposed mitigation should adverse impacts occur, including compensation measures for the loss of habitat. While the intent to mitigate impacts and compensate for the loss of habitat should adverse impacts be detected is sound, OEH recommends the proponent develops a mitigation and compensation strategy which outlines the process that will be followed if adverse impacts are detected or anticipated. As impacts will most likely effect catfish the proponent should consult with DPI (Fisheries) to determine the range of appropriate mitigation and compensation measures and appropriate implementation procedures.

Recommendation

That the Proponent:

- provides OEH with the opportunity to be part of the consultation with State Water, prior to finalisation of the extraction strategy.
- develops a mitigation and compensation strategy which outlines the process that will be followed if adverse impacts on the in-stream habitat quality are detected or anticipated.

BIODIVERSITY OFFSET STRATEGY (BOS)

3. CALCULATION AND JUSTIFICATION OF OFFSET REQUIREMENTS

Additional consideration of species credits species and resultant offset requirements is required.

OEH previously noted several additional species credit species which were not considered in calculations of offset requirements. In the exhibited EA the following species were noted as having either a moderate or high likelihood of occurrence or were recorded in the Project area: *Philotheca ericifolia*, *Diuris tricolor*, *Rulingia procumbens*, *P. queenslandica*, *Crinia sloanei*, *Hoplocephalus bitorquatus*, *Hamirostra melanosternon*, *Phascolarctos cinereus*, *Dasyurus maculatus*, *Petaurus norfolkensis*, *Miniopterus schreibersii oceanensis* and *Vespadelus troughtoni* (note, the latter two bat species are both ecosystem and species credit species for which habitat constraints would not preclude their consideration as species credit species within the Project area).

OEH recommended that the proponent be required to provide adequate justification for not considering targeted offsets for these species credit species assessed as having a moderate to high likelihood of occurrence in the project area.

In response, the PPR/RTS states (Section 9.2.29 p.131 or the PPR/RTS) that *'The updated offset strategy provides an assessment of the suitability of offsets for all threatened species recorded* ***or considered to have a moderate or high likelihood*** *of occurring in the Project area. While this has been based on habitat values in consideration of recent similar project approvals, it is considered this assessment provides the necessary justification for the suitability of the proposed offsets.*

The updated offset strategy does not consider species that were not recorded at the site (including any of the above species) even though the consultant states in the PPR/RTS that it does. The proponent should provide either appropriate offsets, or justification for each of the above **fauna** species as to why offsets have not been provided (revision of assessment of potential habitat or expert report) or undertake an assessment of suitable offsets.

Given that survey effort for targeted threatened flora surveys is considered to have exceeded the DEC (2004) guidelines, the justification of why offsets have not been provided for the above threatened flora is not required.

OEH also notes that the PPR/RTS underestimates the credits secured by the Proponent to date for *Ziera ingramii.* The proponent stated (Appendix H, p. 42, Table 5.6) that they had achieved 876 credits for this species. OEH calculations indicate that this should be 2916 credits.

Recommendation

OEH recommends the proponent be requested to provide adequate offset, or justification for not considering targeted offsets for the above **fauna** species credit species with a moderate or high likelihood of occurrence in the Project Area.

4. ADEQUACY OF THE PROPOSED OFFSET STRATEGY

The proposed offset strategy has not met the requirements of the OEH Interim Offset Policy. or the Principles for Offsets in NSW.

The proposed CHC offset strategy will consist of:

- 3,460 ha of secured offsets, stated to be an overall 2:1 outcome to date (although it is actually 1.6:1 considering the data presented by the Proponent).
- An additional 126ha of Fuzzy Box Woodland EEC and 320ha of Inland Grey Box Woodland EEC (to achieve a ratio of 6:1), if these can be secured.
- An additional 2,865ha of non-EEC native vegetation (to achieve a ratio of 3:1).
- Potentially some additional offsets for specific threatened flora species should these be located (to achieve a ratio of up to 3:1 or the equivalent in management funding).
- Additional indirect offsetting measures.

In terms of the credit requirements as calculated by the proponent using BBAM, the proposal is reported to have (based on the <u>secured</u> offsets to date):

- Met (and exceeded) the full credit requirement for Box Gum Woodland EEC (although Table 5.4, p.36, indicates a 109 credit shortfall) , Large-eared Pied Bat breeding and foraging habitat, *Acacia ausfeldii* and two out of three other red-flagged vegetation communities to be impacted.

- A credit shortfall of 1,638 credits for Inland Grey Box Woodland EEC and 3,832 credits for Fuzzy Box Woodland EEC.
- A credit shortfall for 10 individual vegetation communities, and total credit shortfall 88,690 credits when all vegetation communities are combined (including EECs and threatened species habitat).
- A shortfall in credits for *Zieria ingramii* (by 7,946 credits), *Tylophora linearis* (by 702 credits ie total credit requirement)*, Homoranthus darwinoides* (by 2,001 credits)*.*
- A shortfall in credits for Australasian Bittern (by 90 credits) and Large-eared Pied Bat foraging habitat (by 2,400 credits) based on secured offsets.

As we do not have the credit reports for the revised project, the credit results quoted by the proponent in the PPR /RTS have been taken at face value at this stage.

OEH supports aspects of the offset strategy including:

- The low proportion of restoration of grasslands within the offsets in comparison with remnant woodland;
- Pursuit of lands which may be suitable for addition to the reserve system; and
- Recognition of indirect offsets being a secondary measure only where land-based options are not available.

However the following matters should be addressed.

The proponent has not yet justified the use of Tier 3 'mitigated net loss' under the OEH Offset Policy for the outstanding ecosystem and species credits.

Regarding the availability of the required ecosystem credits, the proponent reports:

- Credits for EECs and other vegetation types required have been advertised on the BioBanking list of wanted credits for over a year. Some areas are potentially available but these are considered by the Proponent to not meet like for like requirements or other aspects of the credit calculations as they are generally over 50km from the site.

- No credits are available for Fuzzy Box Woodland or Inland Grey Box woodland on the BioBanking public credit register.

- One site on the BioBanking Expression of Interest (EOI) register was identified as potentially containing an area of Fuzzy Box Woodland, however this has not been investigated further. Other sites listed for 'grassy woodland' were investigated and found to contain little potential for Grey Box Woodland or Fuzzy Box Woodland.

No documented evidence of these investigations is provided. Little specific information is provided regarding the availability of the required credits for other red-flagged and non-red flagged vegetation communities. The proponent does not indicate whether real estate searches have been undertaken, nor the extent to which local landholders have been approached.

With regard to the outstanding species credits, the proponent states that no threatened species credits are available for the outstanding credit requirements and land-based offsets are unlikely to be found with suitable population numbers. Again, little information has been presented to support this.

OEH's view is that satisfactory justification for proceeding to Tier 3 on credit availability grounds would at a minimum include the following in the first instance, for the subject IBRA sub-region and then broader bioregion:

- Documented evidence of a search of the relevant BioBanking registers and searches of real estate,
- Evidence local landholders with suitable land with credit matches, or other potential native vegetation, have been approached and the outcome of on-site investigations.

Some additional properties have been included in the offset strategy since the EA exhibition. However it also seems that there are some properties which formed part of the original offset strategy as described in the EA, which no longer appear in the PPR. The reasons for this are unclear, particularly where these have been identified as CHC owned lands which lie outside of the mapped coal resource and on which a number of suitable vegetation types have been mapped, including areas of Inland Grey Box EEC (properties adjoining the western boundary of the northern portion of Tuckland State Forest for example). The proponent does state (p 31. Appendix F) that an additional 2,500 ha is already being negotiated for addition to the offset strategy however this appears to be a reference to the 'unsecured' properties hatched on Figure 3.1.

In the draft EA the proponent stated that over 13,000 ha of potential offsets had been identified (6,500 ha within the Project Application Area (PAA), and a further 6,500 ha outside the PAA). The proponent has not provided evidence that subsequent investigation revealed these lands to be unsuitable or unavailable.

The proponent also estimates that the cost of providing the full quantum of credits required *'is considered unreasonable as the proposed mine has already made considerable financial contributions to offsets, and these large costs would affect the viability of the Project in the long-term'*. The proponent has not provided sufficient justification for this conclusion.

The proponent has not properly used the Tier 3 variation criteria under the OEH Offset Policy.

The proponent states that their final offset strategy will only aim to provide impact to offset ratios (in hectares) of 6:1 for woodland EECs (ie excluding derived native grassland) and 3:1 for EEC (derived native grassland) and other woodland vegetation. These decisions have been made without demonstrating a systematic application of the Tier 3 variation criteria. For example to address issues of credit availability, the variation criteria will allow (in certain circumstances) the following in the first instance:

- conversion of ecosystem credits for one vegetation type to another of the same formation and bioregion, or if this is not possible, conversion to an identified regional conservation priority.

- conversion of species credits for one species to another with the same or more endangered conservation status (although this may be inconsistent with the Commonwealth requirements).

Considering the variation criteria the proponent has not exhausted all options available for adequately offsetting the biodiversity losses associated with the proposal. It has not been demonstrated that after applying the variation criteria, the proposed level of offsetting is all that can be achieved.

The proposed offset strategy has not met the NSW Offset Principles

Under the offset principles, enhancement of biodiversity in offset areas should be equal to or greater than the loss in biodiversity from the impact site, aiming to result in a net improvement in biodiversity over time. Offsets should also be based on a quantitative assessment of the loss in biodiversity from the development and the gain in biodiversity from the offset. The methodology must be based on the best available science, be reliable and used for calculating both the loss from the development and the gain from the offset. The use of arbitrary impact to hectare ratios is not supported by OEH.

OEH considers the proposed offset strategy likely to provide a 'no net loss' outcome for Box Gum Woodland EEC, two other red-flagged vegetation communities and certain threatened species for which species credits have been generated; and a 'mitigated net loss' outcome only for the remaining red-flagged and non-red flagged vegetation communities and threatened species. The degree to which this net loss is mitigated is dependent on the quantum of the credit shortfall. It is important that this shortfall is as minimal as possible.

As previously highlighted, of the 17 threatened species for which the proponent has predicted significant impacts as a result of the project, only 4 have generated specific threatened species credits in the BioBanking assessment. This means that habitat for the remaining 13 species is only represented in the ecosystem credits generated.

A shortfall in ecosystem credits means a likely shortfall in the offset as it relates to habitat for these threatened species. The proponent has not adequately justified why it is considered appropriate to only offset the loss of threatened species habitat at a ratio of 3:1, particularly in light of the significant impacts predicted for these species. For example, little specific information has been presented regarding the quality of the habitat attributes present within the proposed offsets for the subject threatened species compared to the impact site, such as caves, rock overhangs, water bodies, habitat trees, density of different hollow size categories and species specific foraging or nesting resources etc.

Recommendation

OEH recommends that:

1. The proponent be required to present detailed information to support any claims that the required credits are not able to be secured to meet Tier 2 of the OEH offset policy. Satisfactory justification for proceeding to Tier 3 on credit availability grounds would at a minimum include the following information for in the first instance, the subject IBRA sub-region and then broader bioregion:

    a) Documented evidence of a search of the credit register including the date on which the search occurred: http://www.environment.nsw.gov.au/bimsprapp/SearchBiodiversityCredit.aspx

    b) Documented evidence of listing on the public list of wanted credits: http://www.environment.nsw.gov.au/biobanking/listwantedcredits.htm

    c) Documented evidence of expressions of interest made to the market and/or a search of the BioBanking site Expression of Interest (EOI Register): http://www.environment.nsw.gov.au/bimsprapp/AgreementEOISummary.aspx

    d) Documented evidence of searches of real estate, including the date(s) of the search(es);

    e) Documented evidence that a proponent has approached local landholders that have suitable land with credit matches, or other potential native vegetation, and the outcome of subsequent on-site investigations.

2. The proponent be required to present a strong case for any requested reduction in the required credits on economic grounds. At a minimum, this should include:
    a) Review of costings for offset purchase and management by a suitably qualified and experienced person.
    b) Documentation of current land valuation in offsetting area from the Department of Finance and Services, Land and Property Information.
    c) A cost benefit analysis for the project which includes the estimated offsetting costs associated with the provision of the full quantum of required credits and taking into account any offset lands which were not purchases exclusively for the purpose of providing an offset (ie land which required acquisition for other reasons, such as noise etc, regardless of the offset requirements).
    d) Consideration of the predicted level of impact on high conservation value vegetation communities threatened species and their habitats.

3. For any vegetation communities and/or threatened species for which proceeding to Tier 3 is justified (based on a) and b) above), development of the final offset strategy should include systematic application of the Tier 3 criteria in consultation with OEH.

5. INDIRECT IMPACTS

Indirect offsets are proposed by CHC for outstanding ecosystem or species credits.

Section 4.1 of the Updated Biodiversity Offset Strategy (p. 27) provides a list of potential management and research projects that may be used if outstanding offset requirements are not able to be found in unsecured or potential offset sites.

OEH considers that indirect offsets should be used only when all avenues for meeting the outstanding credit requirements have been exhausted including variation criteria provided by Attachment B of 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 Offset Policy). OEH would also request that if indirect offsets are required that OEH be consulted by CHC in regard to appropriate projects for investment in management and research

Recommendation

OEH be consulted by CHC in regard to potential projects for investment in management and research if outstanding credit requirements cannot be acquired.

6. FUTURE OFFSET TENURE AND SECURITY

The following points relate to the future tenure of some of the proposed offset sites:

- The Proponent has been in discussion with the National Parks and Wildlife Service (NPWS) regarding potential additions to OEH estate. However whilst there is interest in some of the proposed lands, at this point NPWS has not confirmed that these lands will be recommended as estate additions, subject to acceptance by the Minister for the Environment.

- The Proponent has not discussed the proposed Dapper Nature Reserve addition with NPWS and initial interest in this land as an OEH Estate addition is low, primarily due to the extent of clearing on that site as well as the additional boundary length.

- The PPR/RTS maps incorrectly identify the 'Sherrin' crown lease as being part of the Cobbora SCA. This land is not part of the SCA, it is land vested in the Minister for the Environment under Part 11 of the *National Parks and Wildlife Act 1974*.

- OEH can also confirm that no discount for 'additionality' would need to be applied to the inclusion of the 'Sherrin' crown lease within the offset strategy.

- Proposed OEH Estate additions which lie above identified coal resources can not be confirmed until they have been through the NPWS referencing process. OEH remains concerned about the future security of any offsets with mining potential, whether they are estate additions or otherwise.

Recommendation

OEH recommends that:

- The proponent is encouraged to continue consultation with OEH regarding potential additions to OEH Estate in the region.

- DoPI apply strict penalties to any approval granted which strongly discourages future open cut or underground mining of secured offset lands.

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[i] Barber, J.R., Crooks, K.R. and Fristrup, K.M. (2010) The costs of chronic noise exposure for terrestrial organisms. *Trends in Ecology and Evolution* 25 (3) 180-189.

[ii] Dooling, R.J. and Popper, A.N. (2007) *The effects of highway noise on birds*. Report 43A0139 to California Department of Transportation, Division of Environmental Analysis. Center for Comparative and Evolutionary Biology of Hearing, University of Maryland, College Park MD 20742,