NSW GOVERNMENT | Office of Environment & Heritage

PCU043446

Your reference: MP 09_0175
Our reference: DOC13/9599; FIL13/3359
Contact: David Paull; 4908 6837

Ms Sophie Butcher
Planner, Mining Projects
Department of Planning and Infrastructure
GPO Box 39
SYDNEY NSW 2001

Dear Ms Butcher

RE: REVIEW OF EXHIBITED ENVIRONMENTAL ASSESSMENT FOR THE KARUAH EAST HARD ROCK QUARRY (MP 09_0175)

I refer to your email dated 11 March 2013, requesting comments from the Office of Environment and Heritage (OEH) on the exhibited Environmental Assessment (EA) for the Karuah East Hard Rock Quarry submitted by ADW Johnson Pty Ltd.

OEH notes that the Director General's Requirements (dated 22 October 2010) include the following matters:

- accurate predictions of any vegetation clearing on the site
- a detailed assessment of the potential impacts of the project on threatened species, populations, ecological communities, habitats, or on groundwater dependent ecosystems
- a detailed description of the measures to maintain or improve the biodiversity values within the project area to the medium to long term
- heritage, including Aboriginal and non-Aboriginal heritage.

The Office of Environment and Heritage (OEH) has undertaken a review of the EIS (including appendices) and has provided detailed comments in **Attachment A**. In summary, OEH has provided comments on the following biodiversity and Aboriginal cultural heritage issues:

- adequacy of survey effort and desktop assessment
- likely significance of impact upon *Tetratheca juncea* and *Grevillea parviflora* ssp *parviflora* and unresolved questions relating to the adequacy of offset areas
- the need for an Aboriginal Cultural Heritage Education Induction Program to be developed and implemented by the proponent for the induction of all personnel and contractors involved in the construction activities on site.

It is anticipated that a more detailed assessment of the adequacy of the proposed offset areas will be undertaken by the proponent by the end of April 2013 using the Biobanking Assessment Methodology. Until this occurs, OEH cannot support the proposal given the likely significance of impact on two threatened species, the uncertainly of impact upon a number of threatened fauna and flora species and the uncertainty connected with the adequacy of the offsets to constitute an appropriate offset outcome.

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If you require any further information regarding this matter please contact David Paull, Regional Biodiversity Conservation Officer, on 4908 6837.

Yours sincerely

11 APR 2013

RICHARD BATH
Head – Hunter Planning Unit
Regional Operations

ATTACHMENT A

OEH REVIEW OF EXHIBITED ENVIRONMENTAL ASSESSMENT FOR THE KARUAH EAST HARD ROCK QUARRY (MP 09_0175)

The Conservation and Regulation Division of the Office of Environment and Heritage (OEH) has reviewed the Environmental Assessment Report prepared for the proposed Karuah East Hard Rock Quarry Project (dated 31 January 2013) ('the EA') located at Lots 12 and 13 DP 1024564, Pacific Highway, Karuah, NSW. It is noted that this project is being assessed by the Department of Planning and Infrastructure (DP&I) as a Major Project application in accordance with the transitional provisions of Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

BIODIVERSITY

A review of the EA, including Appendix I entitled: 'Ecological Assessment – RPS and Biodiversity Offset Strategy – Ecological Australia' (dated March 2013), was undertaken in accordance with the:

- Threatened Species Assessment Guidelines: The Assessment of Significance (DECC – August 2007)
- Threatened Biodiversity Survey and Assessment: Guidelines for Developments and Activities - Working Draft (DEC, 2004)
- Threatened Species Survey and Assessment Guidelines: Field Survey Methods for Fauna -Amphibians (DECCW, 2009a)
- Biobanking Assessment Methodology and Credit Calculator Operation Manual (BBAM) (DECC 2009b).

OEH has considered the details of the proposal and while acknowledged that the assessment has largely been undertaken using the above guidelines, OEH and is not satisfied that the survey methodologies undertaken were adequate and consistent with the guidelines listed above, particularly with respect to:

- targeting of the Dry Rainforest area for threatened flora surveys. The mesic micro-climate in this area may be suitable for *Asperula asthenes.*

- targeting of Dry Rainforest areas for fauna surveys, particularly nocturnal frog surveys (this is a mesic habitat type with a higher likelihood of detecting Green-thighed Frog *Litoria breviplamata* than other vegetation zones. Even though the area of this stratification unit is small (0.4 ha) it still warrants targeting for fauna surveys due to its restricted nature. Other amphibian species which should have been targeted in this vegetation type is the Stuttering Frog *Mixophyes balbus* and the Booroolong Frog *Litoria booroolongensis* which were identified as having suitable habitat in the subject site under the in Protected Matters Search Tool. Frog surveys in general do not appear to be consistent with the Amphibian survey guidelines published by OEH (DECCW 2009a).

- for both arboreal and terrestrial hair tubes, only half the required effort was undertaken, with 80 trap-nights undertaken instead of 160 trap nights required over the two stratification units surveyed (this does not take into account Stratification Unit 3: Dry Rainforest). This methodology is important for some cryptic mammal species, such as the Long-nosed Potoroo *Potorus longipes.*

- anabat surveys were only undertaken for two hours per stratification unit (not taking into account the Stratification Unit 3: Dry Rainforest) which is half of the required survey effort.

- the ecological assessment also needs to consider any NSW listed species identified using the *Environment Protection and Biodiversity Conservation Act 1999* Protected Matters Search Tool.

- one major oversight during the desktop review was that one of the records of the Long-nosed Potoroo which is recorded in the NSW Wildlife Atlas as occurring at a location on the boundary of the current subject site was not identified. The occurrence of this species in such close proximity and in an area of

habitat identical to that proposed for removal is not consistent with the characterisation of the habitat in the subject site as "*marginal foraging habitat*" in Appendix 6 (no page numbers provided). This is particularly true when the survey effort undertaken was not adequate to reasonably detect this species. Any pre-clearing surveys should also target this species.

- in terms of the assessments of impact undertaken in Appendix I, the isolation of large area of bushland (indirect landscape impact) is not taken into account in the 'seven part tests'. The isolation of such a large area is likely to have a significant affect upon the viability of a number of threatened fauna species. The fragmentation of the regional corridor (Karuah Mountain 1) should also be accounted for in the assessments of significance as well as other cumulative impacts such as the extension to the Pacific Highway Corridor

- the impact on *Tetratheca juncea* (42 per cent removal of the population – 2,742 clumps with a further 839 clumps subject to edge effects) is considered to be a significant impact as indicated in the Assessment of significance (Appendix I) placing the population at a high risk of local extinction. This is a red flag under the BBAM

- the impact on *Grevillea parviflora* ssp *parviflora* (32 per cent removal of the local population) is likely to have a significant impact as indicated in the Assessment of significance (Appendix I) placing the population at a high risk of local extinction. This is a red flag under the BBAM.

Offset Requirement

OEH notes the Offset Strategy (ELA, 4 March 2013) as outlined with Appendix I of the assessment. The proposal will entail the removal of approximately 30 hectares of native vegetation identified as "Spotted Gum-Grey Gum-Ironbark-White Mahogany Moist Sclerophyll Forest"; "Smooth-barked Apple-Red Bloodwood-Stringybark Cry Sclerophyll Forest"; and "Grey Myrtle Dry Rainforest" and have significant impacts on two threatened flora populations, plus an undetermined possible impact on a number of other threatened species. The removal of this vegetation therefore, will require to be offset in order to compensate for this loss.

Any offset proposal needs to be consistent with one of two approaches; (a) the Biobanking Assessment Methodology (BBAM), taking into account the NSW OEH interim policy on assessing and offsetting biodiversity impacts, State significant development (SSD) and State significant infrastructure (SSI) projects' and (b) OEH 'offsetting principles', as outlined on the website: 'Principles for the use of biodiversity offsets in NSW' can be used as general guide for offsetting and compensatory habitat requirements (www.environment.nsw.gov.au/biocertification/offsets.htm).

The Offset Strategy Report identifies the use of BBAM in order to assess the impacts of a proposal and to determine required offsets without obtaining a statement or an agreement. If the required credits are not available for offsetting, appropriate alternative options may be developed in consultation with the OEH and in accordance with the Interim OEH offsets policy (OEH 2011). OEH supports the voluntary use of BBAM as defined under Section 127B of the *Threatened Species Conservation Act 1995* (TSC Act) and the 'BioBanking Assessment Methodology and Credit Calculator Operational Manual' (DECCW 2009b). OEH considers this approach consistent with how threatened species impacts can be formally assessed under other parts of the *Environmental Planning and Assessment Act 1979*.

The Offset Strategy Report identifies two potential offset areas 'Karuah Offset' and the 'Tahlee Offset'. These lands cover some 112 hectares though detailed assessments using BBAM have not been undertaken. Instead a timeline for the provision of this assessment is given indicating a delivery time sometime in April 2013. However, this has not been received by OEH before the end of the exhibition period.

Given that no BioBanking Statement or Agreement is proposed, the OEH has concerns about the adequacy of the offsets proposed to achieve an 'improve or maintain' or a Tier 2 or 3 outcome and without the provision of the assessment is not able to make an evaluation as to the adequacy of the offset strategy.

Using previous assessments within the ecosystems impacted in this case as an indication, the 110 hectares proposed for offset is unlikely to be adequate to meet the ecosystem credits required.

Where BBAM is being used to assess impacts of a proposal and to determine required offsets, and a BioBanking Statement is not being obtained, the EA should contain a detailed biodiversity assessment and all components of the assessment must be undertaken in accordance with the BioBanking Assessment Methodology and Credit Calculator Operational Manual.

The EA should include a specific Statement of Commitments which:

- is informed by the outcomes of the proposed BioBanking assessment offset package
- sets out the ecosystem and species credits required by the BioBanking Assessment Methodology and how these ecosystem and/or species credits will be secured and obtained
- if the ecosystem or species credits cannot be obtained, provides appropriate alternative options to offset expected impacts, noting that an appropriate alternative option may be developed in consultation with OEH officers and in accordance with OEH policy
- demonstrates how all options have been explored to avoid red flag areas
- includes the submission of credit calculator files for both the development and biobank sites as outlined in Appendix 1
- includes all appropriate BioBanking assessment files (including all reports, underlying assumptions [particularly in the selection of vegetation types from the vegetation types database, placement of assessment circles, connectivity assessment etc], associated maps, field sheets etc), and any relevant expert reports (if applicable).
- includes all appropriate GIS shape files (e.g. maps, plots and transects, assessment circles, species polygons, vegetation communities)
- is geo-referenced map(s) showing the locality of the offset lands, relevant vegetation zones and management areas (if applicable)
- includes legible copies of all field plot / transect data sheets for all plots entered into the credit calculator. This is the primary source of information OEH utilises to assess biometric vegetation types chosen, habitat preferences and site condition
- in respect to the use of the offset policy, the level or tier of offset achieved must be clearly stated and explained, and any credit variation rules which have been applied must be justified.

Note: On 1 April 2012, the BioBanking Credit Calculator Version 2 has become the compulsory version of the tool to use for BioBanking assessments (see www.environment.nsw.gov.au/biobanking/calculator.htm for more details). The credit calculator is now web-based and no longer produces 'xml' files. Instead a copy of the assessment can be sent electronically to OEH. The requirement of submitting background files for OEH to use in checking the BioBanking assessment still stands and is also explained in Appendix 1.

Where the 'NSW OEH interim policy on assessing and offsetting biodiversity impacts, State significant development (SSD) and State significant infrastructure (SSI) projects' (OEH 2011) is being used then the proponent must stipulate which level(s) of offset is being offered. In accordance with the interim policy, justification must be provided as to why it is appropriate to apply the Tier 2 ('no net loss') or Tier 3 ('mitigated net loss') outcomes. In considering whether the mitigated net loss standard is appropriate, justification must be provided on: (i) whether the credits required by the calculator are available on the market; (ii) whether alternative offset sites (other than credits) are available on the market; and (iii) the overall cost of the offsets and whether these costs are reasonable given the circumstances. This must be to satisfaction of and in consultation with OEH. Tier 2 and Tier 3 offset proposals will likely require a larger area of remnant vegetation to be offered in the offset package than if Tier 1 ('improve or maintain') had been met.

RECOMMENDED CONDITIONS OF APPROVAL FOR THREATENED BIODIVERSITY

1. It is recommended that further targeted surveys be undertaken during the appropriate times of year and using the appropriate methodologies that assess/the presence/absence of *Asperula asthenes* Microchiropteran Bats, threatened frogs and *Potorus longipes* in the subject site.

2. In the offset report, OEH acknowledges that an assessment using the BioBanking Assessment Methodology is scheduled to be submitted to the Department of Planning and Infrastructure. Until this occurs, the adequacy of the offset to improve or maintain outcomes - within the framework of the NSW OEH interim policy (OEH 2011) cannot be resolved particularly in relation to the likely significance of impact upon *Tetratheca juncea* and *Grevillea parviflora* ssp *parviflora* and the area of offset lands required.

References

DEC (2004) 'Threatened Biodiversity Survey and Assessment: Guidelines for Developments and Activities - Working Draft'. NSW Department of Environment and Conservation, Sydney www.environment.nsw.gov.au/resources/nature/TBSAGuidelinesDraft.pdf

DECC (2007) 'Threatened Species Assessment Guidelines: The Assessment of Significance'. August 2007. NSW Department of Environment and Climate Change, Sydney. www.environment.nsw.gov.au/resources/threatenedspecies/tsaguide07393.pdf

DECCW (2009a) 'Threatened Species Survey and Assessment Guidelines: Field Survey Methods for Fauna – Amphibians' April 2009. NSW Department of Environment, Climate Change and Water, Sydney

www.environment.nsw.gov.au/resources/threatenedspecies/09213amphibians.pdf

DECCW (2009b) 'BioBanking Assessment Methodology and Credit Calculator Operational Manual'. March 2009 NSW Department of Environment, Climate Change and Water, Sydney. www.environment.nsw.gov.au/resources/biobanking/09181bioopsman.pdf

RPS (2010) Ecological Assessment. Report to Hansen Construction Materials, December 2010.

OEH (2011) 'NSW OEH interim policy on assessing and offsetting biodiversity impacts, State significant development (SSD) and State significant infrastructure (SSI) projects' NSW Office of Environment and Heritage, Sydney.

OEH (2012) 'Assessors' guide to using the BioBanking Credit Calculator v.2' April 2012. NSW Office of Environment and Heritage, Sydney. www.environment.nsw.gov.au/resources/biobanking/120182AssessGdeBBCC.pdf

ABORIGINAL CULTURAL HERITAGE

A review of the EA, including Sections 6.7.1, 7.8 and Appendix J entitled: 'Cultural Heritage Assessment – Karuah East Hard Rock Quarry – Pacific Highway, Karuah' (dated June 2012), was undertaken to assess the potential impacts of the project on Aboriginal cultural heritage, in accordance with OEH's Aboriginal cultural heritage assessment guidelines and the requirements of Part 6 of the *National Parks and Wildlife Act 1974*, (NPW Act).

OEH acknowledges that the Aboriginal cultural heritage assessment has been undertaken in accordance with the OEH's assessment guidelines. The results of the Aboriginal cultural heritage assessment undertaken for the project area are also acknowledged.

OEH acknowledges that the proponent has developed management strategies to address the possibility that any Aboriginal objects located within the project area may be impacted by the development proposal. OEH accordingly supports the management recommendations for Aboriginal cultural heritage provided in Sections 6.7.1, 6.9 and 7.8 of the EA.

There is also a possibility that currently undetected cultural material may be present within the project area in those areas where Aboriginal objects have not been previously identified. It is therefore recommended that an Aboriginal Cultural Heritage Education Induction Program is development and implemented by the proponent for the induction of all personnel and contractors involved in the construction activities on site. Records should be kept of which staff/contractors were inducted and when for the duration of the project. It

is also recommended that this program be developed and implemented in collaboration with the registered Aboriginal parties.

OEH has accordingly included recommended conditions of approval below to target the above matters.

OEH refers to Section 6.9 of the EA. It is noted that the proponent is committed to developing a Heritage Management Environmental Procedure for the project following a determination of the development application. It is recommended that this procedure is developed in consultation with a suitably qualified cultural heritage specialist and the registered Aboriginal parties. The procedure should also clearly articulate each of the Aboriginal cultural heritage management recommendations for the project area and should include contact details and responsibilities of all associated stakeholders.

OEH also encourages the proponent to continue to engage with the registered Aboriginal parties in developing and maintaining appropriate cultural heritage outcomes for the life of the proposed development.

Conclusion

OEH has no additional concerns with the Aboriginal cultural heritage assessment for the project application and recommends that the following conditions of approval for Aboriginal cultural heritage are reflected in any approval conditions for the project.

RECOMMENDED CONDITIONS OF APPROVAL FOR ABORIGINAL CULTURAL HERITAGE

1. The proponent must continue to consult with and involve all the registered local Aboriginal representatives 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. In the event that ground disturbance identifies a new Aboriginal object/s within the project area, all works must halt in the in the immediate area to prevent any further impacts to the object(s). A suitably qualified cultural heritage specialist 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) (managed by OEH) and the management outcome for the site included in the information provided to the AHIMS. The proponent will consult with representatives of the local Aboriginal community, and the cultural specialist to develop and implement and appropriate management strategies for all objects/sites. Any management strategy development must also comply with the appropriate legislative provisions.

3. If human remains are located in the event that surface disturbance occurs, 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 OEH's 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.

4. An Aboriginal Cultural Heritage 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.

APPENDIX 1

CHECKLIST OF INFORMATION REQUIRED WHEN UTILISING THE BIOBANKING ASSESSMENT METHODOLOGY & SUBMITTING THE BIOBANKING ASSESSMENT TO OFFICE OF ENVIRONMENT AND HERITAGE (OEH) USING THE BIOBANKING CREDIT CALCULATOR VERSION 2.0

The *Assessors' Guide to Using the BioBanking Credit Calculator v.2* has been finalised and it is now available for download from the Office of Environment and Heritage website. The guide provides information on the operation and use of the web-based BioBanking Credit Calculator v2.0.

To summit your assessment to OEH open your assessment in *Edit* mode. Navigate to the *Assessment details* page and select the *Submit* button in the top right hand corner. A *Submit the assessment for approval* box will appear (Figure 1), where you can confirm submission (*OK* button) or cancel submission (*Cancel* button). Once a case has been submitted to OEH, the status of the case will change in your *My work* tab from *Work in progress (WIP)* to *submitted*. Please note that you cannot make any edits to an assessment that has been submitted, although you will be able to view the assessment.

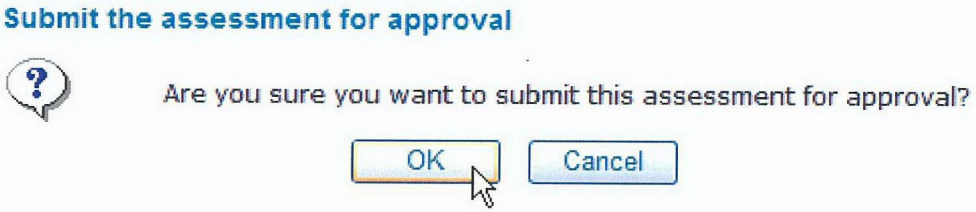

Figure 1: Menu box in the BioBanking Credit calculator v. 2 that enables an assessment to be submitted to OEH.

The following documentation must be submitted with your Environmental Impact Statement or Environmental Assessment report (in hard copy and soft copy):

- BioBanking Assessment Report including a list of dominant indigenous species for overstorey, mid-storey and ground cover for each vegetation type and, where required:
  - local benchmark data;
  - request for increase in gain of site value;
  - a description of the proposed development;
  - measures to avoid and mitigate the impacts of development;
  - an assessment of indirect impacts;
  - a statement of on-site measures;
  - a description of the application of the BioBanking Assessment Methodology, including details of and assumptions made in utilising the methodology, such as (but not limited to) placement of assessment circles, remnant value, connectivity and reasoning behind selection of vegetation types in the Biometric Vegetation Type database;
  - plot and transect values including a list of the indigenous plant species identified in each of the plots; and
  - a description of targeted threatened flora and fauna surveys, and any general baseline surveys (incl. vegetation specific surveys). These should be also be provided schematically.

  and

  Where required, the BioBanking Assessment Report should also include:
  - expert reports;
  - an application for a determination on red flag areas;
  - more appropriate use of local data for vegetation types, benchmarks or threatened species;
  - environmental contributions accompanied by a BioBanking Agreement Credit Report (if applicable); and
  - an application for deferred retirement arrangements (if applicable).

- Copies of completed field data sheets, and updated with correct plant taxonomy in instances where field names have been used.

- Maps (soft copy as A4 jpgs) of:
  - offset site / BioBanking Agreement boundary or development footprint;
  - vegetation zones;
  - management zones;
  - and where required:
    - existing waste;
    - existing erosion; and
    - existing structures (in waterways)

- Separate shape files should be supplied for all the maps mentioned above plus:
  - plots and transects;
  - assessment circles;
  - species polygons;
  - polygons for adjacent remnant area; and
  - the location or habitat area of sensitive species, and the management area related to that sensitive species (as this information cannot be displayed publicly).

All maps must include:

- a title (as per the names above);
- the site's name, location and lot/Deposited Plan (DP) numbers;
- the scale;
- the date it was prepared; and
- a legend.

Boundaries and zones must be confirmed on the site using a GPS. This information should be digitised onto an ortho-rectified aerial photo or SPOT-5 image. Maps must be easily readable and submitted to OEH as a Geographic Information System (GIS) file that is ESRI compatible. Shape files must use GDA94 datum. Name each shape file as: 'biobank site name_descriptor'. For example, 'Hill Farm_photo points' or 'Hill Farm_management zones'.

Photo points should be named A, B, C, D, E, F, G, etc. Photo points should be located in areas where change is expected, i.e. where replanting, natural regeneration, intensive weeding or other active management actions are to be carried out. As a rough guide, include at least one photo point in each management zone where active management actions will be undertaken. Boundaries and zones must be confirmed on the site using a GPS. This information should be digitised onto an ortho-rectified aerial photo or SPOT-5 image. Maps must be easily readable and submitted to OEH as a Geographic Information System (GIS) file that is ESRI compatible.

Shape files must use GDA94 datum. Name each shape file as: 'biobank/development site name_descriptor'. For example, 'Hill Farm_photo points' or 'Hill Farm_management zones'.

Additional requirements for offset sites that may be required (based on liaison with OEH):

- completed biobanking agreement management action template (provided in Word format), and
- Biodiversity Credits Pricing Spreadsheet.

Once the case has been received OEH will review the data entered, and any supporting documentation. For State Significant Development (SSD), State Significant Infrastructure and residual Part 3A (under the *Environmental Planning and Assessment Act 1979*) this review will take place during the assessment of the Environmental Impact Statement or Environmental Assessment report (for Part 3A matters).