NSW GOVERNMENT | Office of Environment & Heritage

Your reference: 12/07832-2
Our reference: DOC12/28255; FIL12/7164
Contact: Steve Lewer, 4908 6814

Ms Kylie Seretis
Manager, Ports and Rail
Infrastructure Projects
Department of Planning and Infrastructure
GPO Box 39
SYDNEY NSW 2001

Attention: Ingrid Ilias

Dear Ms Seretis

RE: NEWCASTLE COAL INFRASTRUCTURE GROUP COAL EXPORT TERMINAL (MP 06_0009) – PROPOSED RAIL FLYOVER: MODIFICATION REQUEST NO. 2

Reference is made to your letter dated 10 July 2012 requesting comments on the accompanying 'Newcastle Coal Infrastructure Group (NCIG) Coal Export Terminal Rail Flyover Modification Environmental Assessment Report (including its appendices)' dated June 2012 (the EA). The Office of Environment and Heritage (OEH) has reviewed the document and provides the following comments.

OEH understands that the modification involves the construction and operation of a rail flyover which includes: (i) a grade separation of the inbound track for NCIG's northern spur line, (ii) a minor realignment of the inbound track to the Kooragang Island main line (KIML), (iii) a minor realignment and lowering of the outbound line track to the KIML, and (iv) other ancillary structures associated with the proposal.

OEH is of the opinion this proposal will further reduce an area of internationally recognised wetlands that are considered important habitat to the Green and Golden Bell Frog and a number of threatened migratory birds as listed under the *Threatened Species Conservation Act 1995* (TSC Act). OEH notes that the proposal will specifically impact on an area known as 'Swan Pond' (the eastern shoreline) and clear surrounding Saltmarsh and Freshwater Wetland vegetation that offer important habitat to a number of listed threatened birds, namely Curlew Sandpiper, Black-tailed Godwit and Broad-billed Sandpiper, and also potentially Black-necked Stork, Australasian Bittern and White-fronted Chat which have all been recorded from the local environs. Additionally the majority of the vegetation to be cleared represents 'endangered ecological communities' under the TSC Act.

OEH has not previously provided any comments on this modification or liaised with the proponent with respect to threatened species impacts and proposed compensatory measures.

OEH has completed its review of the EA and offers the following submission regarding the modification. OEH cannot at this stage support the proposal. The main reason for lack of support relates to threatened species issues, namely inadequate flora and fauna surveys or details thereof (including targeted searches) and the lack of appropriate offsets / compensatory habitat in accordance with current OEH policy. As such no recommended conditions of approval have been provided for threatened species / biodiversity matters. OEH would reconsider the modification

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proposal in the light of these concerns being addressed. In regard to Aboriginal cultural heritage, OEH advise:

- Proponent to provide copy of Preliminary Aboriginal Heritage Assessment to support the proposed modification.
- Construction Environmental Management Plan (CEMP) must be updated to address all previous Aboriginal cultural heritage commitments.
- CEMP to amend OEH's Archaeologists' responsibilities in determining appropriateness of Aboriginal heritage management decisions.
- Additional local Aboriginal community consultation must occur if CEMP is updated/amended and evidence of this consultation to be provided by proponent in support of any changes to the CEMP.

The main detailed comments regarding the EA are shown below in **Attachment A**.

If you require any further information regarding this matter please contact Steve Lewer, Regional Biodiversity Conservation Officer, on 4908 6814.

Yours sincerely

31 JUL 2012

RICHARD BATH
Head – Hunter Planning Unit
Conservation and Regulation, North East

Enclosure:
- Attachment A - Key Issues and Comments
- Attachment B - Checklist of information required when utilising the Biobanking Assessment Methodology and Submitting BioBanking assessment to Office of Environment and Heritage using the BioBanking Credit Calculator v2.0

ATTACHMENT A - KEY ISSUES AND COMMENTS

Threatened Species

OEH is unable support this modification proposal in its current form due to issues pertaining to inadequate flora and fauna surveys and the lack of appropriate offset / compensatory habitat. OEH would reconsider the development proposal in the light of these concerns being addressed and suitable offset measures or compensatory habitat packages being developed.

Fauna and Flora Surveys

In general, the EA utilises a combination of desktop analyses of relevant databases (e.g. OEH 'Atlas of NSW Wildlife' database) and previous flora and fauna surveys not commissioned for the proposal to inform the likely or potential threatened species that will be impacted by the proposal. Although this approach has merit, the surveys used must have been conducted in accordance with the OEH's 'survey and assessment guidelines' (DEC 2004) and must not be greater than five years old. OEH notes that surveys undertaken for the original NCIG Coal Export Terminal (CET) in 2006 are no longer current and are would have to be either supplemented with newer surveys or redone. In particular, OEH must be satisfied that the following issues have been adequately addressed:

- a suitable survey design was adopted
- appropriate survey methodologies were utilised (as specified in the guidelines) and applied at a scale commensurate to detect the target species or guild
- targeted surveys were adequate and the subject species chosen were appropriate
- all surveys were conducted at the appropriate time with respect to seasonality and weather conditions (e.g. flower phenology)
- all surveys / methodologies adequately cover the study area, including all vegetation / habitat types and indirect impact areas.

In order for OEH to assess whether or not previous ecological studies/surveys are adequate with respect to guidelines, OEH will require copies of all the ecological reports used / cited in the EA. Without such documents OEH is unable to determine whether or not the level of surveying is appropriate and that all likely / potential species and habitats / vegetation types have been adequately surveyed and/or considered. To help speed up the assessment OEH suggest that the proponent summarise specific details of the relevant surveys to the NCIG site in tabular format, detailing the sampling methods and survey effort per stratification unit, including size of each unit, timing of surveys (not just the survey, but each specific component), prevailing climatic conditions at time of survey, and how they meet the minimum requirements in OEH survey guidelines (DEC 2004). This should be done for both the flora and fauna surveys component, including the threatened species-specific targeted searches. OEH does not consider the brief reference of such surveys in the EA as an adequate indication that appropriate baseline surveying and targeted surveys have been adequately undertaken on the subject site. Further more clarification of how the stratification units were determined and how survey design was applied to these would help OEH determine the adequacy of these surveys. A map overlaying the survey details over the stratification units / vegetation types would also be helpful.

Flora Surveys and Targeted Searches

The EA indicates that flora surveys that were undertaken for the recent Port Waratah Coal T4 (as under taken by Umwelt (Australia) Pty Limited in 2010-12) proposal were used to inform the EA of the vegetation types present on site, and the likely or potential threatened flora species present (based on their targeted searches). OEH assessed this surveying as generally being in accordance with the 'Threatened Biodiversity Survey and Assessment: Guidelines for Developments and Activities – Working Draft' (DEC 2004), and determined that the survey effort and methodologies utilised for this baseline flora survey appeared to be adequate and conducted in accordance with these guidelines. However, OEH in their correspondence on the T4 EA requested further information regarding the flora survey details as outlined above. As such OEH recommends the proponent

provide the above details to clarify their adequacy and indicate which surveys and sites were utilised in the EA.

With respect to targeted flora searches, OEH was of the opinion that the majority of such surveys undertaken by Umwelt for the predicted threatened flora were adequate for the much larger and conspicuous taxa. However, some of the more cryptic potential threatened flora species that have broad habitat matches to the freshwater / estuarine wetland habitat were considered inadequate or some likely taxa not surveyed. As such, OEH is of the opinion the following taxa have potential to occur on the NCIG and the proponent should demonstrate that these species are not present on site by appropriate means, including if necessary, appropriately timed targeted surveys in accordance with OEH guidelines (DEC 2004):

- **Trailing Woodruff (*Asperula asthenes*)** – flowers and fruits in spring (Thompson 2009); fruits are required to separate genera *Asperula* and *Galium* (Harden 1992). This species is grows in moist sites such as river banks, intermittently flooded low-lying sites, in rainforest and *Melaleuca quinquenervia* forest, typically near the coast (Thompson 2009). Potential habitat on site would include damp areas, freshwater wetlands and any intermittently flooded low-lying / swampy areas. The species has been recorded to the north of the proposal in Port Stephens LGA growing in riparian habitat.
- **Small Water-ribbons (*Maundia triglochinoides*)** – flowers November to January, in the warmer months (Harden 1993, Benson & McDougall 2002); without flowering material may be confused with the more common genus *Triglochin* (i.e. 'individual fruit dehiscing but carpels remaining fused along their central axis for most of their length, ovule pendulous, attached at the apex of ovary in *Maundia*' cf. 'individual fruit separating into carpels, ovule erect, attached at the base of the ovary in *Triglochin*' [Aston 1971, Harden 1993), though *Maundia* tends to have spongy inflated leaves compared to linear, flattened or terete and strap-like in *Triglochin* (Aston 1971 Harden 1993). Potential habitat on site would include freshwater wetlands. This species preferred habitat is present on the subject site. *Maundia triglochinoides* grows in swamps, creeks, drains or shallow freshwater (30-60 cm deep) on heavy clay, typically on heavy clay (Harden 1992, Aston 1971). It is known from the local area from Pambalong Nature Reserve, Williamtown and Medowie, and more recently from Tomago area (Old Punt Road) approximately 4-5 km from the NCIG site.

Fauna Surveys and Targeted Searches

With respect to fauna baseline surveys and targeted searches, the EA implies (as per Section 3.3 of Appendix D) that the it has utilised surveys undertaken by Umwelt (Australia) Pty Limited on lands adjacent to the NCIG CET (including the proposed rail flyover area). As such it appears that no recent fauna surveys or targeted species-specific searches were undertaken on the development footprint for this EA. OEH considers this a major failing of the EA and strongly recommends to Department of Planning and Infrastructure (DP&I) that the proponent conduct appropriate fauna surveys and targeted searches in accordance with OEH guidelines (DEC 2004). The lack of such surveys brings into question the validity and adequacy of the 'threatened species assessment' section, given that it is not based on any specific *in situ* data that would normally be utilised to inform and assess the proposal's impacts. OEH considers this approach unsuitable and inconsistent with other recent development requirements in this locality, and is therefore not in a position to adequately assess the EA with respect to impacts on fauna until appropriate surveying is undertaken or adequate justification as to why this approach is acceptable and in accordance with OEH assessment procedures. If actual fauna surveys have been undertaken on the proposed development footprint, including previous studies, they need to be provided to OEH and summarised as outlined above. Details of any targeted threatened fauna surveys / searches also need to be provided, including specific particulars of survey methodology, areas / habitats / vegetation types searched and timing.

Similarly, the above approach has been applied to the Green and Golden Bell Frog, a species potentially impacted by the development and predicted to occur on the subject site and known from the surrounds. Again, OEH would expect the EA to be informed by specific on-site targeted searches, with details of baseline population data provided (if applicable). Such details have not been provided in the results or threatened species section of the EA, and hence OEH recommends to DP&I that the proponent rectify this. OEH expects that such data exists, given the level of surveying / monitoring referenced in Table1 of Appendix D.

Correspondence provided to OEH from the Hunter Birds Observers Club (HBOC) indicates that the subject development footprint, in particular the eastern shorelines of the wetland known as 'Swan

Pond' represents significant roosting, breeding and foraging habitat to a number of migratory waterbirds / shorebirds, including Curlew Sandpiper, Black-tailed Godwit and Broad-billed Sandpiper, which are listed under the NSW TSC Act. Additionally, the threatened Black-necked Stork, Australasian Bittern and White-fronted Chat which have all been recorded from the local surrounding environs, with the latter being represented by numerous records in the adjoining Saltmarsh habitat, its preferred habitat type. Although OEH acknowledges that the area to be impacted upon only represents a small area (2.6 ha) the EA fails to make reference to its specific importance to migratory and threatened waterbirds / shorebirds, in particular:

(i) Swan Pond represents significant roosting / foraging habitat to thousands of waterbirds, that are regularly seen on this water body,
(ii) the surrounding Coastal Saltmarsh represents roosting habitat to a number of shorebird species and important foraging habitat to the White-fronted Chat (as stated above), and
(iii) exposed mudflats are important feeding habitat to a variety of migratory shorebirds and wetland birds. HBOC data indicates that 22 international migratory shorebirds have been recorded from Swan Pond and surrounds, three of those specifically listed under TSC Act.

Given the importance of the overall site and surrounds to migratory shorebirds OEH would expect the proposal would be deemed a 'controlled action' under the Australian Government *Environment Protection and Biodiversity Conservation Act 1999* and referred to Department of Sustainability, Environment, Water, Population and Communities.

The EA refers to various shorebird monitoring by HBOC and provides a list of bird species recorded and monitored at Deep Pond (an area not directly impacted by the modification), however, it fails to indicate that HBOC have carried out detailed monthly monitoring of Swan Pond, which is directly impacted upon, since 1999. OEH considers this a major omission given this is the main avian habitat that will be impacted by the proposal. As such OEH recommends to DP&I that the proponent provide details of this monitoring and assess impacts of the proposal on the basis of this data, specifically acknowledging the impacts on known threatened species, which to date have been poorly addressed.

Threatened Species Assessment

OEH has not completed a detailed review of the threatened species assessment section of the EA, as some of the surveys may not have been undertaken, namely the fauna baseline and targeted searches. Furthermore, OEH believes that the proposal has underestimated the impact on the wetland habitat of the site, given that OEH are of the opinion it represents important roosting, breeding and foraging habitat to a number of migratory waterbirds / shorebirds, including known listed threatened species under the TSC Act. OEH does not concur with the EA evaluation of potential impacts on waterbirds (as outlined in Table 7 of the Appendix D), given the lack of on-site surveys to support these conclusions and absence of HBOC data which clearly indicates the importance of the affected Swan Pond and surrounds to locally occurring threatened and migratory shorebirds / waterbirds. Similarly, OEH believes the assessment on EEC communities (Tables 3 and 4 of Appendix D) fails to recognise their local value and importance to migratory and threatened species (as outlined above).

The EA's assessment of threatened species fails to specifically assess impacts on the following avian species, that are known to occur on or within the general local of the proposed modification (Note: OEH does not consider the grouping and assessing of species under the loose heading of 'waterbirds' is adequate):

- Australasian Bittern,
- Black-necked Stork,
- Black-tailed Godwit
- Broad-billed Sandpiper,
- Curlew Sandpiper, and
- White-fronted Chat.

The above species need to be addressed singularly and adequately assessed before OEH can further review the EA.

Provision of Offsets / Compensatory Habitat

OEH acknowledges that offsets / compensatory habitat for the previous consent for the NCIG CET was addressed under the 'Compensatory Habitat Ecological Monitoring Program (CHEMP)', which only addresses impacts on the Green and Golden Bell Frog (GGBF). Under the CHEMP GGBF habitat is offset at a minimum ratio of 2:1, unless NCIG can provide pre-impact population data that suggests the area of land occupied by this population is less than the set ratio. To date, NCIG has not been able to determine the pre-impact population size and associated area occupied by the population at the existing CET. Accordingly, OEH has advised DP&I in recent correspondence (dated 30 July 2012) that a minimum 2:1 should be provided. However, this should be viewed in light of other projects on Kooragang Island that will have a greater offset requirement for similar impacts, due to them being assessed under OEH current offset policy for State Significant Developments (SSD; as outlined below).

OEH does not concur with the EA that migratory and threatened shorebird and waterbird habitat is not being impacted upon and would expect suitable offsets to be provided as compensatory measure. Such habitat was not subject to the original offset provisions of the CHEMP for the CET and hence the recommended fixed ratio for GGBF habitat does not apply. To determine the adequate biodiversity offset required to compensate the loss of threatened migratory shorebird / waterbird habitat (e.g. Freshwater Wetlands, Coastal Saltmarsh and tidal mudflats) either one of the following methodologies are to be used:

- OEH 'offsetting principles', as outlined on the website: 'Principles for the use of biodiversity offsets in NSW' (OEH website 2011 –: Appendix 1) can be used as general guide for offsetting and compensatory habitat requirements (www.environment.nsw.gov.au/biocertification/offsets.htm)
- a biodiversity assessment using BioBanking Assessment Methodology (BBAM) under Biodiversity Banking and Offsets Scheme, as outlined in the 'BioBanking Assessment Methodology and Credit Calculator Operational Manual' (OEH 2011a). This would provide details of the required ecosystem and species (threatened) credits that need to be retired to offset the impacts of the development.

OEH acknowledges that BioBanking is a voluntary process and not a requirement under residual Part 3A and new SSD proposals, but believes it provides a valuable insight and quantitative appraisal into what would be an acceptable offset package to compensate the likely impacts of the modification. Similarly, OEH's 2011 'NSW OEH Interim policy on assessing and offsetting biodiversity impacts of Part 3A , State Significant Development (SSD) and State Significant Infrastructure (SSI) projects' (OEH 2011b; the 'policy') can apply. The policy allows for modification to the BBAM under limited circumstances.

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 by following the steps outlined in **Attachment B**. The requirement of submitting background files for OEH to use in checking the BioBanking assessment still stands and is also explained in Attachment B, including details of what accompanying documentation, maps and files is required.

Conservation in Perpetuity of Offset Lands

Any offset proposed will need to be managed in perpetuity under an appropriate conservation mechanism, such as:

- the establishment of biobanking sites with biobanking agreements under the *Threatened Species Conservation Act 1995* (TSC Act)
- the dedication of land under the *National Parks and Wildlife Act 1974* (NPW Act)
- a Conservation Agreement under the NPW Act
- a Trust Agreement under the Nature Conservation Trust Act 2001
- a Planning Agreement under s 93F of the *Environmental Planning and Assessment Act 1979*.

The EA currently fails to indicate how offset / compensatory land will be managed and conserved in perpetuity.

Management Plan

Typically, OEH requires that an appropriate Management Plan (such as vegetation or habitat) be developed and implemented as a key amelioration measure, prior to any approvals. This will facilitate the assessment of the EA and whether or not it adequately addresses impacts on threatened species, their habitat and EEC. The EA does not indicate whether such a plan will be developed for the offsets, though OEH acknowledges that this may have been included under the original CET, and would except issues arising from this modification could be incorporated under appropriate plans from the original consent (if applicable).

Nevertheless, OEH would expect the management plan / document would clearly outline how the offset / compensatory area, any retained vegetated areas or habitat features and proposed habitat management within the development footprint (e.g. buffer zones, habitat trees and nest boxes) will be managed and implemented with respect to long-term conservation and viability, including clear details on how they will be funded. The plan / document should cover, but not be limited to, the following issues (where applicable):

- weed management (both control and suppression) and monitoring
- management of retained native vegetation and habitat (including buffer zones)
- feral animal control
- fire management (including asset protection zones (APZs)
- public access (including restriction of increased traffic and associated impacts, such as increased refuse and pets)
- size and management of buffer zones
- minimisation of edge effects and fragmentation
- stormwater control and changes to hydrology (including stormwater / runoff control and sediment / erosion control measures)
- management of specific habitat enhancement measures (e.g. hollow / habitat trees, animal fencing to facilitate movement, artificial hollows and nest boxes etc.)
- fauna displacement and if appropriate translocation (including any licence requirements)
- proposed surveys, such as pre-extraction baseline, pre-clearance and rehabilitation surveys
- details of long-term monitoring (including proposed timing)
- details of any rehabilitation program, including details of timing (including proposed staging details), rehabilitation measures (including details of proposed revegetation and species mix), and post-rehabilitation monitoring
- measures to ensure conservation in perpetuity (e.g. transfer to National Parks reserves, conservation agreements or covenants)
- funding details of long-term financial commitment to any proposed conservation measures, including any mechanisms to be implemented to achieve this.

References

Aston, H.I. (1971) *Aquatic Plants of Australia*. Melbourne University Press.

Benson, D. and McDougall, L. (2002) Ecology of Sydney plant species - Part 9: Monocotyledon families Agavaceae to Juncaginaceae. *Cunninghamia*, 7(4): 695-930.

DEC (2004) *Threatened Biodiversity Survey and Assessment: Guidelines for Developments and Activities*. Working Draft. November 2004. Department of Environment and Conservation (NSW). This document is available at: www.environment.nsw.gov.au/resources/nature/TBSAGuidelinesDraft.pdf.

Harden, G.W. (ed.) (1990-2002) *Flora of New South Wales: Volumes 1-4*. New South Wales University Press, Kensington.

OEH (2011a) BioBanking Assessment Methodology and Credit Calculator Operational Manual. Office of Environment and Heritage (NSW), Goulburn Street, Sydney. www.environment.nsw.gov.au/biobanking/calculator.htm

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

Thompson, I.R. (2009) A revision of *Asperula* and *Galium* (Rubieae: Rubiaceae) in Australia. *Muelleria*, 27(1): 36-112.

Aboriginal Cultural Heritage Assessment

A review of the EA was undertaken by OEH 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).

Aboriginal Cultural Heritage Values

OEH acknowledges the significance of the local environment to the local Aboriginal community. OEH notes the existence of numerous registered Aboriginal sites in the immediate locality and acknowledges that the project area contains landforms which have yielded a significant volume of evidence of Aboriginal occupation. OEH acknowledges the results of previous preliminary Aboriginal cultural heritage assessment undertaken for the project undertaken in preparation of the exhibited EA (August – September 2006). It is noted that there is a possibility that currently undetected cultural material may be present within the project area in undisturbed contexts in those areas where Aboriginal objects have not been previously identified. It is expected that the proponent has developed appropriate management strategies to address this matter.

OEH also notes that that proponent has undertaken a Preliminary Aboriginal Heritage Assessment (PAHA) for the proposed modification and local Aboriginal community consultation has contributed to this process. However, the proponent has not provided a copy of any final report containing the results of this assessment and evidence of the consultation undertaken. In order to address this matter, OEH strongly recommends that the proponent provide a copy of the PAHA Report and evidence of the consultation process in support of the proposed modification.

Management of Aboriginal Cultural Heritage

OEH notes that the proponent has committed to managing the potential impact from the project on Aboriginal cultural heritage values and OEH supports this commitment. It is noted that Section 4.10.3 of the EA (2006) identified a range of culturally appropriate management strategies developed in consultation with representatives of the local Aboriginal community in an effort to manage the potential threat on Aboriginal objects as a result of the major project application.

A range of management measures were proposed to deal with any Aboriginal objects which may be uncovered during the construction activities associated with the project. These included strategies if the natural previously undisturbed soils located beneath the project area are likely to be disturbed during construction.

OEH notes however, that a number of the previous management measures have not been developed and implemented by the proponent as a component of Construction Environmental Management Plan (dated 21 September 2010). In particular, it is noted that the development and implementation of a community monitoring program for those works that were expected to extend into the natural ground surface to assess whether any objects are present and to recover any objects present prior to

impact occurring has not occurred. Further, a commitment to undertake a significance assessment by consulting archaeologist/community if Aboriginal objects are identified in the project area and details regarding the salvage of a selection of any objects identified has also not occurred. These matters concern OEH and it is strongly recommended that the CEMP is updated promptly as a component of this modification application to address these previous commitments and any potential local Aboriginal community concerns.

OEH also notes that the current CEMP describes a process whereby OEH's Archaeologist is called upon to determine appropriate management requirements for any potential archaeological material identified within the project area. This approach/strategy is certainly not supported by OEH.

OEH acknowledges that effective heritage management requires knowledge of values or cultural significance. An understanding of what makes a place culturally significant and why, enables appropriate decisions to be made about the management of that place. OEH recognises and acknowledges that Aboriginal people are the primary source of information about the value of their heritage and how this is best protected, managed and conserved. Local Aboriginal people must have an active role in any Aboriginal cultural heritage planning process. Effective consultation requires a commitment by all parties to work in the spirit of co-operation, mutual understanding and respect. Consultation with local Aboriginal people is important and needs to be sustained throughout the heritage assessment/planning process to ensure cultural perspectives, views and concerns are taken into account.

The responsibility therefore of developing a culturally appropriate management strategy in these circumstances lies with the proponent in consultation with a suitably qualified cultural heritage specialist and representatives of the local Aboriginal community. OEH would welcome an advisory role only during any subsequent process developed. Further, any strategy developed should also ensure compliance with the major project approval.

Accordingly, it is recommended that the CEMP is updated promptly following consultation with the local Aboriginal community to address these matters.

Construction Environmental Management Plan

OEH acknowledges and supports the proponent's commitment to update the Construction Environmental Management Plan (CEMP) for the project area, to clearly articulate environmental management strategies for the project. OEH recognises that a component of the CEMP aims to detail culturally appropriate management strategies in the event that Aboriginal objects are encountered and likely impacted by the proposed modified development. OEH also acknowledges the commitment by the proponent to implement management measures for Aboriginal cultural heritage matters in accordance with the CEMP. However, a review of Section 4.2.9 of the CEMP (dated 21 September 2010) identifies a number of inconsistencies with the Aboriginal heritage management commitments provided by the proponent in Section 4.10.3 of the original EA prepared for the project (exhibited during August and September 2006).

In particular, it is noted that the development and implementation of a community monitoring program for those works that were expected to extend into the natural ground surface to assess whether any objects present has not occurred. Further, a commitment to undertake a significance assessment by consulting archaeologist/community if Aboriginal objects are identified in the project area and details regarding the salvage a selection of any objects identified has also not occurred. This concerns OEH.

In order to address these matters accordingly, it is recommended that the CEMP is updated prior to any proposed works associated with the proposed modified project application.

Further, the CEMP must clearly demonstrate that effective community consultation with local Aboriginal communities has been undertaken in the development and implementation of any updated plan. This includes the development of procedures for ongoing local Aboriginal community consultation and involvement. OEH also encourages the proponent to maintain continuous

consultation processes with the community for the entire project. Evidence of consultation with the local Aboriginal community should be submitted with any updated plan.

OEH has included below recommended amended conditions of approval to target these matters.

Conclusion

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

RECOMMENDED AMENDED CONDITIONS OF APPROVAL FOR ABORIGINAL CULTURAL HERITAGE

1. The applicant must update the Aboriginal Cultural Heritage component of the Construction Environmental Management Plan, prior to commencing any ground disturbance or development works which are the subject of the modified development.

2. 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.

3. The proponent is to provide fair and reasonable opportunities for the representatives of the local Aboriginal community to monitor any initial ground disturbance activities associated with previously undisturbed environments within the project area. In the event that additional Aboriginal objects are uncovered during the monitoring program, the objects are to be recorded and managed in accordance with the requirements of sections 85A and 89A of the *National Parks and Wildlife Act 1974.*

4. In the event that surface disturbance identifies a new Aboriginal object, all works must halt in the in the immediate area to prevent any further impacts to the object(s). A suitably qualified archaeological specialist and representatives of the local Aboriginal community must be contacted to determine the significance of the object(s). The site is to be registered in the Aboriginal Heritage Information Management System (AHIMS) (managed by the 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 archaeological specialist to develop and implement management strategies for all objects/sites. If impacts are unavoidable, mitigation measures are to be undertaken in accordance with the updated Construction Environmental Management Plan. All sites impacted must have an Aboriginal Site Impact Recording (ASIR) form completed and be submitted to the AHIMS Registrar within three (3) months of completion of these works.

5. 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 contacted immediately. No action is to be undertaken until police provide written notification to the proponent. If the skeletal remains are identified as Aboriginal, the proponent must contact the OEH's Environment Line on 131 555 and representatives of the local Aboriginal community. No works are to continue until the OEH provides written notification to the proponent.

6. An Aboriginal Cultural Education 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 local Aboriginal community.

National Park Estate

OEH (Parks and Wildlife Group) has reviewed the EA with respect to the impacts and interactions of the proposed rail flyover modification on the Hunter Wetlands National Park which adjoins the proposed project site to the west. The assessment has included consideration of the affect of the project on the ecological function of the adjoining reserve.

Existing Infrastructure and Services

The land identified within the area of the State Environmental Planning Policy (Major Projects) 2005 (SEPP), adjacent to the existing rail corridor, contains a range of existing utilities such as water, oil and gas pipelines.

While it is permissible in certain circumstances for this type of infrastructure to be located within reserved land, it is generally only where there are no other feasible or reasonable options available.

OEH strongly recommends infrastructure, utilities and associated services remain within the SEPP land to ensure there are no additional impacts on reserved land. Any realignment works need to be restricted to the SEPP areas and no works are to be conducted within the National Parks and Wildlife Services Reserve system.

Loss of Migratory Shorebird Habitat in Swan Pond

Swan Pond is considered one of the most important wetlands for shorebirds within the Hunter Wetlands National Park and the loss of salt marsh and freshwater wetland habitat from this wetland will substantially contribute to the incremental loss of migratory shorebird habitat in the estuary. This area has been actively managed, by both the Hunter-Central Rivers Catchment Management Authority and the HBOC, to improve and maintain shorebird habitat over many years and the mudflats associated with Swan Pond are important feeding habitat. The proponent needs to review the proposal to ensure impacts on the Swan Pond are eliminated or at least are minimised.

ATTACHMENT B: Checklist of information required when utilising the Biobanking Assessment Methodology and Submitting BioBanking assessment to Office of Environment and Heritage using the BioBanking Credit Calculator v2.0

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 (OEH) website www.environment.nsw.gov.au/resources/biobanking/120182AssessGdeBBCC.pdf. 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.

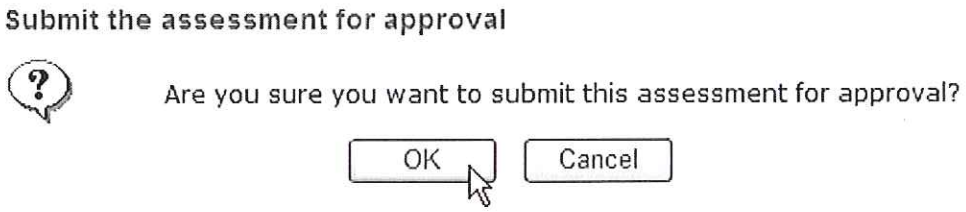

Figure 1: Submitting an assessment

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 onsite 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,
  - 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
  - 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
    - 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
  - 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/DP numbers
- the scale
- the date it was prepared
- 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).