Port Stephens
C·O·U·N·C·I·L

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PCU043586

Telephone Inquiries: Mr Carlos Ferguson
(02) 4980 0213
File No: 25-2013-1-1
Parcel No: 9678

15 April, 2013

Attention: Howard Reed
Manager Mining Projects
NSW Planning & Infrastructure
GPO Box 39
Sydney NSW 2001

Dear Sir,

Re: **Proposed:** **Brandy Hill Quarry Expansion Project**
Property: **LOT: 3 DP: 1006516**
979 Clarence Town Road SEAHAM

I refer to your letter dated 27 March 2013 inviting Council to comment on the above mentioned development proposal.

Following review of the Preliminary Environmental Assessment prepared by Hanson Construction Materials Pty Ltd, Council would like to provide the following comments for your consideration.

Traffic

Council is unable to provide full comments based on the information provided. However, potential traffic impacts appear to be a critical issue and a detailed Traffic Impact Statement should be required as part of the DGRs for the proposed development.

Environment

Information available to Council indicates that the site contains the EEC 'Lower Hunter Valley Dry Rainforest in the Sydney Basin and NSW North Coast Bioregions'.

The proposal will need to address the presence and impacts of the proposal on this EEC, and consider any impacts on wildlife corridors and fauna movement, in addition to regular flora and fauna investigations and review against the Threatened Species Conservation Act. As a further note, the proposal should address the Port Stephens Comprehensive Koala Plan of Management, rather than SEPP 44.

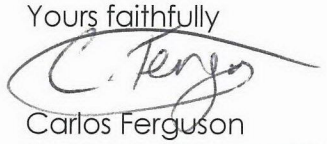
Planning

Council strongly recommends that any approval for the proposed development include requirements for Section 94 Contributions based on haulage. For further details regarding the requirements of Council's current Section Contribution Plan, please contact Leanne Peterson on (02) 4980 0141.

Council would like to note that its records indicate that a number of complaints have been received from nearby residents regarding traffic impacts during operation of the existing quarry, although none appear to be recent. It is strongly recommended that the DGRs require consideration of the potential impacts on nearby residences, particularly with regard to noise and vibration impacts from traffic and the quarry operation.

Council will be willing to provide further comment upon receipt of additional information or the DGRs, but if you have any questions please don't hesitate to contact me on (02) 4980 0213.

Yours faithfully



Carlos Ferguson
Senior Development Planner
Development Services

Trade & Investment
Resources & Energy

File: OUT13/7716

8 April 2013

Mr Howard Reed
Manager, Mining Projects
NSW Department of Planning & Infrastructure
GPO Box 39
Sydney NSW 2001

Dear Mr Reed,

RE: Brandy Hill Quarry Extension Project (SSD 5899) – Quarry DGRs request

Thank you for the opportunity to provide advice on the subject proposal.

This is a response from NSW Trade & Investment, incorporating advice from its Agriculture, Fisheries, and Mineral Resources Branches. Specific Fisheries or Forests issues arising may be provided in separate correspondence.

MRB notes that the Preliminary Environmental Assessment contains no mention of a resource assessment in the key issues to be included in the final Environmental Assessment. MRB would like to draw the proponent's attention to the mineral resource issues outlined below and in Attachment 'A' regarding the inclusion of a resource assessment for the proposed quarry expansion area.

Mineral Resources Issues
Rhyodacite is not a prescribed mineral under the Mining Act, 1992. Therefore, DTIRIS – Mineral Resources Branch has no statutory role in authorising or regulating the extraction of this commodity, apart from its role under the *Work Health & Safety Act 2011* and associated regulations and the Mine Health and Safety Act 2004 and associated regulations, for ensuring the safe operations of mines and quarries.

All environmental reports (EISs or similar) accompanying Development Applications for extractive industry lodged under the Environmental Planning & Assessment Act 1979 should include a resource assessment (as detailed in Attachment A) which:

- Documents the size and quality of the resource and demonstrates that both have been adequately assessed; and
- Documents the methods used to assess the resource and its suitability for the intended applications.

Applications to modify, expand, extend or intensify an existing consent that has already been adequately reported using the above protocol in publicly available documents, may restrict detailed documentation to the additional resources to be used, if accompanied by a summary of past resource assessments and of past production.

NSW Department of Trade and Investment, Regional Infrastructure and Services
RESOURCES & ENERGY DIVISION
PO Box 344 Hunter Region Mail Centre NSW 2310
Tel: 02 4931 6666 Fax: 02 4931 6726
ABN 51 734 124 190
www.dtiris.nsw.gov.au

DTIRIS - Mineral Resources Branch collects data on the quantity and value of construction materials produced annually throughout the State. Forms are sent to all operating quarries at the end of each financial year for this purpose. The statistical data thus collected is of great value to Government and industry in planning and resource management, particularly as a basis for analysing trends in production and for estimating future demand for particular commodities or in particular regions. In order to assist in the collection of construction material production data, the proponent should be required to provide annual production data for the subject site to DTIRIS - Mineral Resources Branch as a condition of any new or amended development consent.

For further information regarding mineral issues please contact Malcolm Drummond in the Department's Maitland Office (Tel 4931 6704 or email malcolm.drummond@industry.nsw.gov.au).

Agricultural Issues for Extractive Industries (Quarries)

The relevant agricultural issues to consider when preparing and also when assessing extractive industry proposals are set out in the Departments' Guideline: *Agricultural issues for Extractive Industries* available on our website; http://www.dpi.nsw.gov.au/environment/landuse-planning/agriculture/extractive-industries. The guideline also documents recommended project design and mitigatory responses.

The guideline is part of a series designed to help consent authorities identify potential agricultural impacts, and assess whether such proposals can avoid conflict with existing agricultural developments; and protect valuable food and fibre production resources. The guidelines can similarly help consultants and proponents and are available from the Department of Primary Industries land use planning web portal: http://www.dpi.nsw.gov.au/environment/landuse-planning/agriculture .

Fisheries Issues
General issues are summarised in Attachment B.

Yours sincerely

Simon Francis
A/Team Leader Land Use

Encl. Attachments "A to B"

NSW GOVERNMENT | Resources & Energy

ATTACHMENT A

TRADE & INVESTMENT NSW
RESOURCES & ENERGY DIVISION (Mineral Resources Branch)

ENVIRONMENTAL and WORK HEALTH & SAFETY ASSESSMENT REQUIREMENTS FOR CONSTRUCTION MATERIAL QUARRY PROPOSALS

It is in the best interests of both the proponent and the community to fully assess the resources which are to be extracted. This means that a thorough geological assessment should be undertaken to determine the nature, quality and extent of the resource. Failure to undertake such an assessment could lead to operational problems and possibly even failure of the proposal.

The following issues need to be addressed when preparing an environmental assessment (EA) or environmental impact statement (EIS) for a proposed construction materials (extractive materials) quarry:

Resource Assessment

1. A summary of the regional and local geology including information on the stratigraphic unit or units within which the resource is located.

2. The amount of material to be extracted and the method or methods used to determine the size of the resource (e.g. drilling, trenching, geophysical methods). Plans and cross-sections summarising this data, at a standard scale, showing location of drillholes and/or trenches, and the area proposed for extraction, should be included in the EA or EIS. Relevant supporting documentation such as drill logs should be included or appended. Major resource proposals should be subject to extensive drilling programs to identify the nature and extent of the resource.

3. Characteristics of the material or materials to be produced:
   a) For structural clay/shale extraction proposals, ceramic properties such as plasticity, drying characteristics (e.g. dry green strength, linear drying shrinkage), and firing characteristics (e.g. shrinkage, water absorption, fired colour) should be described.
   b) For sand extraction proposals, properties such as composition, grainsize, grading, clay content and contaminants should be indicated. The inclusion of indicative grading curves for all anticipated products as well as the overall deposit is recommended.
   c) For hard rock aggregate proposals, information should be provided on properties such as grainsize and mineralogy, nature and extent of weathering or alteration, and amount and type of deleterious minerals, if any.

d) For other proposals, properties relevant to the range of intended uses for the particular material should be indicated.

Details of tests carried out to determine the characteristics of the material should be included or appended. Such tests should be undertaken by NATA registered testing laboratories.

4. An assessment of the quality of the material and its suitability for the anticipated range of applications should be given.

5. The amount of material anticipated to be produced annually should be indicated. If the proposal includes a staged extraction sequence, details of the staging sequence needs to be provided. The intended life of the operation should be indicated.

6. If the proposal is an extension to an existing operation, details of history and past production should be provided.

7. An assessment of alternative sources to the proposal and the availability of these sources. The impact of not proceeding with the proposal should be addressed.

8. Justification for the proposal in terms of the local and, if appropriate, the regional context.

9. Information on the location and size of markets to be supplied from the site.

10. Route(s) used to transport quarry products to market.

11. Disposal of waste products and the location and size of stockpiles.

12. Assessment of noise, vibration, dust and visual impacts, and proposed measures to minimise these impacts.

13. Proposed rehabilitation procedures during, and after completion of, extraction operations, and proposed final use of site.

14. Assessment of the ecological sustainability of the proposal.

Health and Safety Issues

In relation to the health & safety of mining and quarrying operations, the following issues should be addressed:

1. All operations are to comply with the following Acts & Regulations
    a. *Work Health & Safety Act 2011*
    b. Work *Health & Safety Regulations 2011*
    c. *Mine Health & Safety Act 2004*
    d. *Mine Health & Safety Regulations 2007*

2. The mine holder must nominate the mine operator in writing on the prescribed form to the Chief Inspector as required by the *Mine Health & Safety Act 2004* Section 22 prior to the commencement of extraction.

3. The operator of the mine must appoint a production manager as required by the *Mine Health & Safety Regulation 2007* Clause 16 and the operator must notify the Chief Inspector of the appointment in writing as required by the *Mine Health & Safety Regulation 2007* Clause 18 prior to the commencement of extraction.

4. Any blasting operations carried out by the mine operator must comply with the *Explosives Act 2003* and the *Explosives Regulations 2005*.

Mineral Ownership

The *Mining Act 1992* applies to those commodities prescribed by the regulations of the Act (Schedule 2, Mining Regulation 2003). Most construction materials are not prescribed minerals under the *Mining Act 1992*. In general terms, this means these materials are owned by the Crown where they occur on Crown land and by the landowner in the case of freehold land. A Mining Title is not required for their extraction although a Crown Lands licence is required where they occur on Crown land.

Construction materials such as s*and (other than marine aggregate), loam, river gravel, and coarse aggregate materials such as basalt, sandstone, and granite* are not prescribed minerals under the *Mining Act 1992*. Therefore, Trade & Investment NSW has no statutory responsibility for authorising or regulating the extraction of these commodities, apart from its role under the *Mine Health and Safety Act 2004* with respect to the safe operation of mines and quarries. However, the Department is the principal government authority responsible for assessing the State's resources of construction materials and for advising State and local government on their planning and management.

Some commodities, notably *structural clay (ie clay for brick, tile and pipe manufacture), dimension stone (except for sandstone), quartzite, kaolin, limestone and marine aggregate* are prescribed minerals under the *Mining Act 1992*. Minerals which are prescribed as minerals under the terms of the Mining Act may, in some cases belong either to the Crown or to the landowner, depending on a number of factors including the date on which the mineral was proclaimed and the date of alienation of the land. The proponent needs to determine whether the material is privately owned or Crown mineral (publicly owned). If it is privately owned, then either a notification under Section 8 of the Mining Act 1992 or, alternatively, a mining lease or mineral claim would be required. If it is a Crown mineral, an application for a mining lease or mineral claim will have to be lodged.

If you are unsure whether a mining title is required for your proposal you should contact NSW Trade & Investment, Resources & Energy Division.

NSW GOVERNMENT | Trade & Investment

ATTACHMENT B

Primary Industries Division - Aquatic Habitat Protection Requirements

Matters to be Addressed

Definitions

The definitions given below are relevant to these requirements:

Fish means any part of marine, estuarine or freshwater fish or other aquatic animal life at any stage of their life history (whether alive or dead). This includes aquatic molluscs, crustaceans, echinoderms, worms, aquatic insect larvae and other macroinvertebrates .

Marine vegetation means any species of plant that at any time in its life must inhabit water (other than fresh water).

Waters refers to all waters including tidal waters as well as flowing streams, irregularly flowing streams, gullies, rivers, lakes, coastal lagoons, wetlands and other forms of natural or man made water bodies on both private and public land.

1. General Requirements

- Area which may be affected either directly or indirectly by the development or activity should be identified and shown on an appropriately scaled map (1:25000) and aerial photographs.
- All waterbodies and waterways within the proposed area of development are to be identified.
- Description and maps of aquatic vegetation, snags, gravel beds and any other protected, threatened or dominant habitats should be presented. Description should include area, density and species composition.
- A survey of fish species should be carried out and results included. Existing data should be used only if collected less than 5 years previously.
- Identification of recognised recreational and commercial fishing grounds, aquaculture farms and/or other waterways users.
- Details of the location of all component parts of the proposal, including any auxiliary infrastructure, timetable for construction of the proposal with details of various phases of construction
- Aspects of the management of the proposal, both during construction and after completion, which relate to impact minimisation and site rehabilitation eg Environment Management Plans, Rehabilitation Plans, Compensatory offsets
- For each freshwater body identified on the plan, the plan should include, either by annotation or by an accompanying table, hydrological and stream morphology information such as: flow characteristics, including any seasonal variations, bed substrate, and bed width
- For each marine or estuarine area identified on the plan, the plan should include, either by annotation or by an accompanying table, hydrological and stream morphology information such as: tidal characteristics, bed substrate, and depth contours

DREDGING AND RECLAMATION ACTIVITIES

- Purpose of works
- Type(s) and distribution of marine vegetation in the vicinity of the proposed works
- Method of dredging to be used

- Timing and Duration of works
- Dimension of area of works including levels and volume of material to be extracted or placed as fill
- Nature of sediment to be dredged, including Acid Sulphate Soil, contaminated soils etc
- Method of marking area subject to works
- Environmental safeguards to be used during and after works
- Measures for minimising harm to fish habitat under the proposal
- Spoil type and source location for reclamation activities
- Method of disposal of dredge material
- Location and duration of spoil stockpiling, if planned

ACTIVITIES THAT DAMAGE MARINE VEGETATION

- Type of marine vegetation to be harmed
- Map and density distribution of marine vegetation
- Reasons for harming marine vegetation
- Methods of harming marine vegetation
- Construction details
- Duration of works/activities
- Measures for minimising harm to marine vegetation under the proposal and details of compensatory habitat development to replace lost vegetation.
- Method and location of transplanting activities or disposal of marine vegetation

ACTIVITIES THAT BLOCK FISH PASSAGE

- Type of activity eg works in a stream that change flow or morphological characteristics of the stream, including culvert and causeway construction, sediment and erosion control measures, stormwater diversion structures.
- Length of time fish passage is to be restricted, whether permanent or temporary
- Timing of proposed restriction. Should be timed to avoid interfering with migratory movements of fish.
- Remediation or compensatory works to offset any impacts

THREATENED SPECIES

- Threatened aquatic species assessment (Section 5c, EP&A Act 1979). This must be addressed even if there are no Threatened Species present on the site.
- Seven Part Test

FISHING AND AQUACULTURE

- Outline and document commercial, recreational and indigenous fishing activities that may be affected by the activity, including regular commercial fishing grounds, popular recreational fishing sites, recognised indigenous harvesting sites.
- Will the activity interfere with or cause an impact on the continuing operation and viability of nearby aquaculture or mariculture ventures.

2. Initial Assessment

A list of threatened species, endangered populations and endangered ecological communities must be provided. In determining these species, consideration must be given to the habitat types present within the study area, recent records of threatened species in the locality and the known distributions of these species.

In describing the locality in the vicinity of the proposal, discussion must be provided in regard to the previous land and water uses and the effect of these on the proposed site. Relevant historical events may include land clearing, agricultural activities, water

abstraction/diversion, dredging, de-snagging, reclamation, siltation, commercial and recreational activities.

A description of habitat including such components as stream morphology, in-stream and riparian vegetation, water quality and flow characteristics, bed morphology, vegetation (both aquatic and adjacent terrestrial), water quality and tide/flow characteristics must be given. The condition of the habitat within the area must be described and discussed, including the presence and prevalence of introduced species. A description of the habitat requirements of threatened species likely to occur in the study area must be provided.

In defining the proposal area, discussion must be provided in regard to possible indirect effects of the proposal on species/habitats in the area surrounding the subject site: for example, through altered hydrological regimes, soil erosion or pollution. The study area must extend downstream and/or upstream as far as is necessary to take all potential impacts into account.

Please Note: Persons undertaking aquatic surveys may be required to hold or obtain appropriate permits or licences under relevant legislation. For example:

Fisheries Management Act 1994
- Permit to take fish or marine vegetation for research or other authorised purposes (Section 37)
- Licence to harm threatened (aquatic) species, and/or damage the habitat of a threatened species (Section 220ZW).

Animal Research Act 1985:
- Animal Research Authority to undertake fauna surveys.

It is recommend that, prior to any field survey activities taking place, those persons proposing to undertake those activities give consideration to their obligation to obtain appropriate permits or licences which may be required in the specific context of the proposed survey activities.

3. Assessment of Likely Impacts

The EIS must:
- describe and discuss significant habitat areas within the study area;
- outline the habitat requirements of threatened species likely to occur in the study area;
- indicate the location, nature and extent of habitat removal or modification which may result from the proposed action;
- discuss the potential impact of the modification or removal of habitat;
- identify and discuss any potential for the proposal to introduce barriers to the movement of fish species; and
- describe and discuss any other potential impacts of the proposal on fish species or their habitat.

For all species likely to have their lifecycle patterns disrupted by the proposal to the extent that individuals will cease to occupy any location within the subject site, the EIS must describe and discuss other locally occurring populations of such species. The relative significance of this location for these species in the general locality must be discussed in terms of the extent, security and viability of remaining habitat in the locality.

4. Ameliorative Measures

The EIS must consider how the proposal has been or may be modified and managed to conserve fisheries habitat on the subject site and in the study area.

In discussing alternatives to the proposal, and the measures proposed to mitigate any effects of the proposal, consideration must be given to developing long term management strategies to protect areas within the study area which are of particular importance for fish species. This may include proposals to restore or improve habitat.

Any proposed pre-construction monitoring plans or on-going monitoring of the effectiveness of the mitigation measures must be outlined in detail, including the objectives of the monitoring program, method of monitoring, reporting framework, duration and frequency.

In the event of a request for concurrence or consultation of the Director of Industry & Investment NSW, one (1) copy of the EIS should be provided to Industry & Investment NSW in order for the request to be processed.

It should be noted that Industry & Investment NSW has no regulatory or statutory role to review draft EISs unless they are accompanied by or are requested as part of a licence application under Part 7A of the FM Act. However, Industry & Investment NSW is available to provide advice to consent and determining authorities regarding Fisheries' opinion as to whether the requirements have been met if requested, pending the availability of resources and other statutory priorities.

Useful Information

To help you in the preparation of an EIS, the publication "*Guidelines for the Assessment of Aquatic Ecology in EIA*" (Draft 1998) produced by the Department for Urban Affairs and Planning may prove useful in outlining appropriate procedures and methodologies for conducting aquatic surveys.

Should you require any further information on these requirements please contact the Aquatic Habitat Protection Office at Port Stephens on 4916 3931.

Office of Environment & Heritage

Your reference: SSD_5899
Our reference: DOC13/12728 ; FIL13/3481
Contact: David Paull, 4908 6837

Mr Howard Reed
Manager, Mining Projects
Department of Planning and Infrastructure
GPO Box 39
SYDNEY NSW 2001

Attention: Ruth Murphy

Dear Mr Reed

RE: REQUEST FOR INPUT TO DIRECTOR GENERAL'S REQUIREMENTS FOR BRANDY HILL QUARRY EXTENSION PROJECT (SSD 5899)

I refer to your letter dated 27 April 2013 seeking input into the Director General's Requirements (DGRs) for the Brandy's Hill Quarry Extension Project, a proposed State Significant Development. It is noted that the proposal would involve the removal of approximately 20 hectares of native vegetation to facilitate the extension of the quarry pit and the relocation of existing infrastructure.

The Office of Environment and Heritage (OEH) has reviewed the proposal based on the information provided in the report titled the 'Preliminary Environmental Assessment: (Brandy Hill) Quarry Expansion Project' as prepared by Hanson Construction Materials Pty Ltd, March 2013. OEH has considered the details of the proposal and has identified the information it requires to assess the proposal (**Attachment 1**). The proponent should ensure that the Environmental Impact Statement is sufficiently comprehensive to enable OEH to determine the extent of the impact(s) of the proposal. In carrying out the assessment, the proponent should refer to the relevant guidelines as listed in **Attachments 2 and 3** and relevant best practice management guidelines.

OEH requests one (1) hard and two (2) electronic (CD) copies of the EIS for assessment. These documents should be sent to:

Manager, Planning and Aboriginal Heritage
Office of Environment and Heritage
PO Box 488G
NEWCASTLE NSW 2300.

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

Yours sincerely

12 APR 2013

RICHARD BATH
Head - Hunter Planning Unit
Regional Operations

PO Box 488G Newcastle NSW 2300
117 Bull Street, Newcastle West NSW 2302
Tel: (02) 4908 6800 Fax: (02) 4908 6810
ABN 30 841 387 271
www.environment.nsw.gov.au

ATTACHMENT 1: OEH'S RECOMMENDED DIRECTOR GENERAL'S REQUIREMENT'S FOR BRANDY'S HILL QUARRY EXTENSION PROJECT

TABLE OF CONTENTS

1 Environmental impacts of the project

Impacts related to the following environmental issues need to be assessed, quantified and reported on:

- Aboriginal cultural heritage
- Biodiversity

Environmental impact statements (EISs) should address the specific requirements outlined below and assess impacts in accordance with the relevant guidelines mentioned. A full list of guidelines is at **Attachment 2**.

2 The Proposal

The objectives of the proposal should be clearly stated and refer to:

- the size, scale and type of the activity / development;
- all anticipated environment impacts, both direct and indirect, including level of vegetation / habitat clearing;
- threatened species, populations, ecological communities and / or habitats impacted upon;
- the staging and timing of the proposal; and
- the proposal's relationship to any other proposal and/or developments.

SPECIFIC ISSUES

3 Aboriginal Cultural Heritage

OEH recommends that the following Aboriginal cultural heritage issues be addressed by the proponent in preparing the EIS.

Existing Aboriginal cultural heritage values

OEH acknowledges the existence of numerous registered Aboriginal sites in the regional locality. These include culturally modified trees, isolated finds, camp sites, artefact scatters and potential artefact scatters (PADS). It is also acknowledged that the project area contains landforms which have yielded a significant volume of evidence of Aboriginal occupation It is therefore recommended that the proponent consider any potential impacts of the proposal on these known Aboriginal sites/objects, the sensitivity and significance of these sites to the traditional Aboriginal knowledge holders and any relationship that may exist between these sites and any Aboriginal cultural heritage values of the project area.

Potential impacts of the project on Aboriginal cultural heritage values

Standard requirements:

1. The EIS must address and document the information requirements set out in the draft '*Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation'* (Department of Environment and Conservation 2005). This document is available from Department of Planning and Infrastructure upon request.

2. The EIS must include surveys by suitably qualified archaeological consultants in consultation with all of the local Aboriginal knowledge holders.

3. The EIS should identify the nature and extent of impacts on Aboriginal cultural heritage values across the project area and clearly articulate strategies proposed to avoid/minimise these impacts.

If impacts are proposed as part of the final development, clear justification for such impacts should be provided.

4. The EIS must assess and document the archaeological and Aboriginal significance of the project area's Aboriginal cultural heritage values.

5. Describe the actions that will be taken to avoid or mitigate impacts of the project on Aboriginal cultural heritage values. This must include an assessment of the effectiveness and reliability of the measures and any residual impacts after these measures are implemented. Any proposed methodology for Aboriginal cultural heritage investigation should reflect best practice standards recommended by OEH in the '*Code of Practice for Archaeological Investigations of Objects in New South Wales (2010)*'.

6. The EIS must provide documentary evidence to demonstrate that effective community consultation with Aboriginal communities has been undertaken in assessing impacts, developing protection and mitigation options and making final recommendations. OEH supports broad-based Aboriginal community consultation and as a guide OEH's '*Aboriginal cultural heritage consultation requirements for proponents 2010*' provides a useful model to follow. This requirement is available on OEH's website at:
www.environment.nsw.gov.au/licences/consultation.htm.

7. If impacts on Aboriginal cultural heritage values are proposed as part of the final development, an assessment of the proposed impacts in the context of '*inter generational equity*' and cumulative impact must be undertaken. This assessment must examine both cultural and archaeological perspectives equally at both the local and regional levels, with consideration given to the site level and broader landscape level.

Note: If the EIS is relying on past surveys it is critical to confirm that the surveys are consistent with the requirements of the above State Significant Development project application guidelines. Further, whilst there may be no requirement for obtaining an Aboriginal Heritage Impact Permit (AHIP) under Part 6 of the *National Parks and Wildlife Act 1974* (NPW Act) for projects approved under the provisions of Part 4 of the *Environmental Planning and Assessment Act 1979,* there are other sections of the NPW Act which remain valid. This includes the requirement to obtain a Care Agreement for salvaged objects (Section 85) and reporting to OEH on the status of new or impacted Aboriginal sites (Section 89A).

4 Biodiversity

OEH acknowledges that the proposal will involve an increased extraction of additional resources up to 1.5 Million tonnes per annum (as stated in the Preliminary Environmental Assessment [PEA]), and the relocation of infrastructure. The area of the intended development footprint is not specified in the PEA though will require the removal of approximately 20 ha of native vegetation. This may provide habitat to threatened species, populations and/or ecological communities, and as such, where applicable, an appropriate assessment (including relevant surveys) must be conducted in accordance with the following recommendations.

Biodiversity impacts can be assessed using the BioBanking Assessment Methodology (scenario 1) or a detailed biodiversity assessment (scenario 2). The requirements for each of these approaches are detailed below.

Please Note: The BioBanking Assessment Methodology can be used **either** to obtain a BioBanking statement, or to assess impacts of a proposal and to determine required offsets without obtaining a statement. In the latter instances, if the required credits are not available for offsetting, appropriate alternative options may be developed in consultation with the OEH and in accordance with OEH policy.

Scenario 1 - Where a proposal is assessed using the BioBanking Assessment Methodology (BBAM DECC 2008):

1. Where a BioBanking Statement is being sought under Part 7A of the TSC Act, the assessment must be undertaken by an accredited BioBanking assessor (as specified under Section 142B (1)(c) of the TSC Act) and done in accordance with the *BioBanking Assessment Methodology and Credit Calculator Operational Manual* (OEH 2011a). To qualify for a BioBanking Statement a proposal must meet the improve or maintain standard.

2. The EIS should include a specific Statement of Commitments that reflects all requirements of the BioBanking Statement including the number of credits required and any DG approved variations to impact on Red Flags.

3. The EIS 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;
   - submission of credit calculator files for both the development and biobank sites as outlined in **Attachment 3**,
   - 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). **Attachment 3** is a checklist of information required when utilising the BioBanking Assessment Methodology and can be used as a guide to the relevant information required,
   - all appropriate GIS shape files (e.g. maps, plots and transects, assessment circles, species polygons, vegetation communities),
   - geo-referenced map(s) showing the locality of the offset lands, relevant vegetation zones and management areas (if applicable),
   - 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, and
   - with 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.

4. Where the '*NSW OEH interim policy on assessing and offsetting biodiversity impacts, State significant development (SSD) and State significant infrastructure (SSI) projects*' (OEH 2011b) 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.

5. Where appropriate, likely impacts (both direct and indirect) on any adjoining and/or nearby OEH estate reserved under the NPW Act or any marine and estuarine protected areas under the *Fisheries Management Act 1994* or the *Marine Parks Act 1997* should be considered. Please refer to the *Guidelines for developments adjoining land and water managed by the Department of Environment, Climate Change and Water* (DECCW 2010).

6. With regard to the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*, the assessment should identify and assess any relevant Matters of National Environmental Significance and whether the proposal has been referred to the Commonwealth or already determined to be a controlled action.

Scenario 2 - Where a proposal is assessed outside the BioBanking Assessment Methodology:

1. The EIS should include a detailed biodiversity assessment, including assessment of impacts on threatened biodiversity, native vegetation and habitat. This assessment should address the matters included in the following sections.

2. A field survey of the site should be conducted and documented in accordance with relevant guidelines, including:
   - the *Threatened Species Survey and Assessment Guidelines: Field Survey Methods for Fauna - Amphibians* (DECCW, 2009a)
   - *Threatened Biodiversity Survey and Assessment: Guidelines for Developments and Activities - Working Draft* (DEC, 2004), and
   - Threatened species survey and assessment guideline information on www.environment.nsw.gov.au/threatenedspecies/surveyassessmentgdlns.htm.

   If a proposed survey methodology is likely to vary significantly from the above methods, the proponent should discuss the proposed methodology with OEH prior to undertaking the EIS, to determine whether OEH considers that it is appropriate.

   Recent (less than five years old) surveys and assessments may be used. However, previous surveys should not be used if they have:

   - been undertaken in seasons, weather conditions or following extensive disturbance events when the subject species are unlikely to be detected or present, or
   - utilised methodologies, survey sampling intensities, timeframes or baits that are not the most appropriate for detecting the target subject species,

   unless these differences can be clearly demonstrated to have had an insignificant impact upon the outcomes of the surveys. If a previous survey is used, any additional species listed under the TSC Act since the previous survey took place, must be surveyed for.

   Determining the list of potential threatened species for the site must be done in accordance with the *Threatened Biodiversity Survey and Assessment: Guidelines for Developments and Activities - Working Draft* (DEC, 2004) and the *Guidelines for Threatened Species Assessment* (Department of Planning, July 2005). The OEH Threatened Species website www.environment.nsw.gov.au/threatenedspecies/ and the *Atlas of NSW Wildlife* database must be the primary information sources for the list of threatened species present. The BioBanking Threatened Species Database, the Vegetation Types databases (available on DECCW website at www.environment.nsw.gov.au/biobanking/biobankingtspd.htm and www.environment.nsw.gov.au/biobanking/vegtypedatabase.htm, respectively) and other data sources (e.g. PlantNET, Online Zoological Collections of Australian Museums (www.ozcam.org/), previous or nearby surveys etc.) may also be used to compile the list.

3. OEH notes the following known and/or predicted threatened species, populations and ecological communities (based on OEH *Atlas of NSW Wildlife* database, vegetation mapping and potential habitat) which have broad habitat matches to that of the site occur on or areas nearby (approx. 10km radius) to the proposal. These should be targeted during surveying (but not be limited to just these):

(a) Potentially occurring Threatened Fauna and populations

Class	Family	Scientific Name	Common Name	NSW status	Comm. status
Amphibia	Hylidae	*Litoria brevipalmata*	Green-thighed Frog	V	
Reptilia	Elapidae	*Hoplocephalus bitorquatus*	Pale-headed Snake	V	
Reptilia	Elapidae	*Hoplocephalus stephensii*	Stephens' Banded Snake	V	
Aves	Casuariidae	*Dromaius novaehollandiae*	Emu population in the New South Wales North Coast Bioregion and Port Stephens local government area	E2	
Aves	Anseranatidae	*Anseranas semipalmata*	Magpie Goose	V	
Aves	Columbidae	*Ptilinopus magnificus*	Wompoo Fruit-Dove	V	
Aves	Columbidae	*Ptilinopus regina*	Rose-crowned Fruit-Dove	V	
Aves	Columbidae	*Ptilinopus superbus*	Superb Fruit-Dove	V	
Aves	Ciconiidae	*Ephippiorhynchus asiaticus*	Black-necked Stork	E1	
Aves	Ardeidae	*Botaurus poiciloptilus*	Australasian Bittern	E1	E
Aves	Ardeidae	*Ixobrychus flavicollis*	Black Bittern	V	
Aves	Accipitridae	*Circus assimilis*	Spotted Harrier	V	
Aves	Accipitridae	*Hieraaetus morphnoides*	Little Eagle	V	
Aves	Accipitridae	*Lophoictinia isura*	Square-tailed Kite	V	
Aves	Burhinidae	*Burhinus grallarius*	Bush Stone-curlew	E1	
Aves	Rostratulidae	*Rostratula australis*	Australian Painted Snipe	E1	V
Aves	Cacatuidae	*Callocephalon fimbriatum*	Gang-gang Cockatoo	V	
Aves	Cacatuidae	*Calyptorhynchus lathami*	Glossy Black-Cockatoo	V	
Aves	Psittacidae	*Glossopsitta pusilla*	Little Lorikeet	V	
Aves	Psittacidae	*Lathamus discolor*	Swift Parrot	E1	E
Aves	Psittacidae	*Neophema pulchella*	Turquoise Parrot	V	
Aves	Strigidae	*Ninox connivens*	Barking Owl	V	
Aves	Strigidae	*Ninox strenua*	Powerful Owl	V	
Aves	Tytonidae	*Tyto longimembris*	Eastern Grass Owl	V	
Aves	Tytonidae	*Tyto novaehollandiae*	Masked Owl	V	
Aves	Tytonidae	*Tyto tenebricosa*	Sooty Owl	V	
Aves	Climacteridae	*Climacteris picumnus victoriae*	Brown Treecreeper (eastern subspecies)	V	
Aves	Acanthizidae	*Chthonicola sagittata*	Speckled Warbler	V	
Aves	Meliphagidae	*Anthochaera phrygia*	Regent Honeyeater	CE	E
Aves	Meliphagidae	*Epthianura albifrons*	White-fronted Chat	V	
Aves	Meliphagidae	*Grantiella picta*	Painted Honeyeater	V	
Aves	Meliphagidae	*Melithreptus gularis gularis*	Black-chinned Honeyeater (eastern subspecies)	V	
Aves	Pomatostomidae	*Pomatostomus temporalis temporalis*	Grey-crowned Babbler (eastern subspecies)	V	
Aves	Neosittidae	*Daphoenositta chrysoptera*	Varied Sittella	V	
Aves	Pachycephalidae	*Pachycephala olivacea*	Olive Whistler	V	
Aves	Petroicidae	*Melanodryas cucullata cucullata*	Hooded Robin (south-eastern form)	V	
Aves	Petroicidae	*Petroica boodang*	Scarlet Robin	V	
Aves	Petroicidae	*Petroica phoenicea*	Flame Robin	V	
Aves	Estrildidae	*Stagonopleura guttata*	Diamond Firetail	V	
Mammalia	Dasyuridae	*Dasyurus maculatus*	Spotted-tailed Quoll	V	E
Mammalia	Dasyuridae	*Phascogale tapoatafa*	Brush-tailed Phascogale	V	
Mammalia	Dasyuridae	*Planigale maculata*	Common Planigale	V	
Mammalia	Phascolarctidae	*Phascolarctos cinereus*	Koala	V	V
Mammalia	Burramyidae	*Cercartetus nanus*	Eastern Pygmy-possum	V	
Mammalia	Petauridae	*Petaurus australis*	Yellow-bellied Glider	V	
Mammalia	Petauridae	*Petaurus norfolcensis*	Squirrel Glider	V	
Mammalia	Macropodidae	*Macropus parma*	Parma Wallaby	V	
Mammalia	Macropodidae	*Petrogale penicillata*	Brush-tailed Rock-wallaby	E1	V
Mammalia	Pteropodidae	*Pteropus poliocephalus*	Grey-headed Flying-fox	V	V

Mammalia	Emballonuridae	*Saccolaimus flaviventris*	Yellow-bellied Sheathtail-bat	V	
Mammalia	Molossidae	*Mormopterus norfolkensis*	Eastern Freetail-bat	V	
Mammalia	Vespertilionidae	*Chalinolobus dwyeri*	Large-eared Pied Bat	V	V
Mammalia	Vespertilionidae	*Falsistrellus tasmaniensis*	Eastern False Pipistrelle	V	
Mammalia	Vespertilionidae	*Miniopterus australis*	Little Bentwing-bat	V	
Mammalia	Vespertilionidae	*Miniopterus schreibersii oceanensis*	Eastern Bentwing-bat	V	
Mammalia	Vespertilionidae	*Myotis macropus*	Southern Myotis	V	
Mammalia	Vespertilionidae	*Nyctophilus corbeni*	Corben's Long-eared Bat	V	V
Mammalia	Vespertilionidae	*Scoteanax rueppellii*	Greater Broad-nosed Bat	V	
Mammalia	Vespertilionidae	*Vespadelus troughtoni*	Eastern Cave Bat	V	
Flora	Apocynaceae	*Cynanchum elegans*	White-flowered Wax Plant	E1	E
Flora	Asteraceae	*Ozothamnus tesselatus*		V	V
Flora	Asteraceae	*Rutidosis heterogama*	Heath Wrinklewort	V	V
Flora	Euphorbiaceae	*Monotaxis macrophylla*	Large-leafed Monotaxis	E1	
Flora	Fabaceae (Caesalpinioideae)	*Senna acclinis*	Rainforest Cassia	E1	
Flora	Fabaceae (Mimosoideae)	*Acacia bynoeana*	Bynoe's Wattle	E1	V
Flora	Juncaginaceae	*Maundia triglochinoides*		V	
Flora	Myrtaceae	*Callistemon linearifolius*	Netted Bottle Brush	V	
Flora	Myrtaceae	*Eucalyptus glaucina*	Slaty Red Gum	V	V
Flora	Myrtaceae	*Eucalyptus parramattensis subsp. decadens*		V	V
Flora	Myrtaceae	*Eucalyptus pumila*	Pokolbin Mallee	V	V
Flora	Orchidaceae	*Corybas dowlingii*	Red Helmet Orchid	E1	
Flora	Orchidaceae	*Cryptostylis hunteriana*	Leafless Tongue Orchid	V	V
Flora	Orchidaceae	*Cymbidium canaliculatum*	*Cymbidium canaliculatum* population in the Hunter Catchment	E2	
Flora	Orchidaceae	*Pterostylis gibbosa*	Illawarra Greenhood	E1	E
Flora	Polygonaceae	*Persicaria elatior*	Tall Knotweed	V	V
Flora	Proteaceae	*Grevillea parviflora subsp. parviflora*	Small-flower Grevillea	V	V
Flora	Rhamnaceae	*Pomaderris bodalla*	Bodalla Pomaderris	V	
Flora	Rhamnaceae	*Pomaderris queenslandica*	Scant Pomaderris	E1	
Flora	Rhamnaceae	*Pomaderris reperta*	Denman Pomaderris	CE	CE
Flora	Rubiaceae	*Asperula asthenes*	Trailing Woodruff	V	V
Flora	Rutaceae	*Leionema lamprophyllum subsp. obovatum*	*Leionema lamprophyllum* subsp. *obovatum* population in the Hunter Catchment	E2	

Key: V=Vulnerable; E(1)=Endangered; E2=Endangered Population; CE= Critically Endangered

(c) Potentially occurring Threatened Ecological Communities

- *Central Hunter Grey Box-Ironbark Woodland in the New South Wales North Coast and Sydney Basin Bioregions*
- *Central Hunter Ironbark-Spotted Gum-Grey Box Forest in the New South Wales North Coast and Sydney Basin Bioregions*
- *Freshwater Wetlands on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions*
- *Hunter Floodplain Red Gum Woodland in the NSW North Coast and Sydney Basin Bioregions*
- *Hunter Lowland Redgum Forest in the Sydney Basin and New South Wales North Coast Bioregions*
- *Hunter Valley Vine Thicket in the NSW North Coast and Sydney Basin Bioregions*
- *Lower Hunter Valley Dry Rainforest in the Sydney Basin and NSW North Coast Bioregions*
- *River-Flat Eucalypt Forest on Coastal Floodplains of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions*

4. The EIS should contain the following information as a minimum:

    a. The requirements set out in the *Guidelines for Threatened Species Assessment* (Department of Planning, July 2005).
    b. Description and geo-referenced mapping of study area (and spatial data files), e.g. overlays on topographic maps, satellite images and /or aerial photos, including details of map datum, projection and zone, all survey locations, all vegetation communities, key habitat features and reported locations of threatened species, populations and ecological communities present in the subject site and study area.
    c. Description of survey methodologies used, including timing, location and weather conditions.
    d. Details, including qualifications and experience of all staff undertaking the surveys, mapping and assessment of impacts as part of the EIS.
    e. Detailed description of all vegetation communities (both forested and non-woody [e.g. derived grasslands], including classification and methodology used to classify) and including all plot data. Plot data should be supplied to the OEH in electronic format (e.g. MS-Excel) and organised by vegetation community.
    f. Identification of national and state listed threatened biota known or likely to occur in the study area and their conservation status.
    g. Description of the likely impacts of the proposal on biodiversity and wildlife corridors, including direct and indirect and construction and operation impacts. Wherever possible, quantify these impacts such as the amount of each vegetation community or species habitat to be cleared or impacted, or any fragmentation of a wildlife corridor. The proposal should provide an assessment of the cumulative impacts of the proposal in relation to other nearby developments.
    h. Identification of the avoidance, mitigation and management measures that will be put in place as part of the proposal to avoid or minimise impacts, including details about alternative options considered and how long term management arrangements will be guaranteed.
    i. Description of the residual impacts of the proposal. If the proposal cannot adequately avoid or mitigate impacts on biodiversity, then a biodiversity offset package is expected (see the requirements for this at point 6 below).
    j. Provision of specific Statement of Commitments relating to biodiversity.

5. An assessment of the significance of direct and indirect impacts of the proposal must be undertaken for threatened biodiversity known or considered likely to occur in the study area based on the presence of suitable habitat. This assessment must take into account:

    a. the factors identified in s.5A of the EP&A Act, and
    b. the guidance provided by *The Threatened Species Assessment Guideline – The Assessment of Significance* (DECC 2007) which is available at: www.environment.nsw.gov.au/resources/threatenedspecies/tsaguide07393.pdf

6. Where an offsets package is proposed by a proponent for impacts to biodiversity (and a BioBanking Statement has not been sought) this package should:
    a. Meet OEH's *Principles for the use of biodiversity offsets in NSW*, which are available at: www.environment.nsw.gov.au/biocertification/offsets.htm.
    b. Identify the conservation mechanisms to be used to ensure the long term protection and management of the offset sites.
    c. Include an appropriate Management Plan (such as vegetation or habitat) that has been developed as a key amelioration measure to ensure any proposed compensatory offsets, retained habitat enhancement features within the development footprint and/or impact mitigation measures (including proposed rehabilitation and/or monitoring programs) are appropriately managed and funded.

With respect to managing and conserving a proposed offset in perpetuity, OEH considers and supports the following as appropriate conservation mechanisms:

- The establishment of biobanking sites with biobanking agreements under the *Threatened Species Conservation Act 1995*;
- 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*; or
- A Planning Agreement under s 93F of the *Environmental Planning and Assessment Act 1979.*

Note: OEH no longer supports public positive covenant under s88E of the *Conveyancing Act 1919* as an appropriate conservation mechanism to secure and/or manage biodiversity offsets.

7. Where appropriate, likely impacts (both direct and indirect) on any adjoining and/or nearby National Parks and Wildlife Service estate reserved under the *National Parks and Wildlife Act 1974* or any marine and estuarine protected areas under the *Fisheries Management Act 1994* or the *Marine Parks Act 1997* should be considered. Refer to the *Guidelines for developments adjoining land and water managed by the Department of Environment, Climate Change and Water* (DECCW 2010). The OEH notes Rawdon Creek Nature Reserve is in the vicinity of the proposal, and as such any direct or indirect impacts to this reserve need to be documented and assessed.

8. With regard to the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*, the assessment should identify any relevant Matters of National Environmental Significance and whether the proposal has been referred to the Commonwealth or already determined to be a controlled action.

References

DEC (2004) Threatened Biodiversity Survey and Assessment: Guidelines for Developments and Activities. Draft, Department of Environment and Conservation, Hurstville; available at: www3.environment.nsw.gov.au/pdfs/tbsa_guidelines_draft.pdf.

DECC (2007) Threatened Species Assessment Guidelines: The Assessment of Significance. August 2007. Department of Environment and Climate Change (NSW).

DECC (2009) *Threatened Species Survey and Assessment Guidelines: Field Survey Methods for Fauna – Amphibians.* April 2009. Department of Environment and Climate Change (NSW), Goulburn Street, Sydney.

DECCW (2010) *Guidelines for developments adjoining land and water managed by the Department of Environment, Climate Change and Water.* DECCW, Sydney.

DoP (2005) *Guidelines for Threatened Species Assessment.* Department of Planning, Sydney, July 2005.

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.

RBG&DT (2013) *PlantNET website.* http://plantnet.rbgsyd.nsw.gov.au/floraonline.htm Royal Botanic Gardens and Domain Trust, Sydney.

ATTACHMENT 2: GUIDANCE MATERIAL

Title	Web address
Relevant Legislation	
Commonwealth Environment Protection and Biodiversity Conservation Act 1999	www.austlii.edu.au/au/legis/cth/consol_act/epabca1999588/
Environmental Planning and Assessment Act 1979	www.legislation.nsw.gov.au/maintop/view/inforce/act+203+1979+cd+0+N
National Parks and Wildlife Act 1974	www.legislation.nsw.gov.au/maintop/view/inforce/act+80+1974+cd+0+N
Threatened Species Conservation Act 1995	www.legislation.nsw.gov.au/maintop/view/inforce/act+101+1995+cd+0+N
Aboriginal Cultural Heritage	
Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation (2005)	Available from DoP.
Aboriginal Cultural Heritage Consultation Requirements for Proponents (EPA, 2010)	www.environment.nsw.gov.au/licences/consultation.htm
Code of Practice for the Archaeological Investigation of Aboriginal Objects in New South Wales (EPA, 2010)	www.environment.nsw.gov.au/licences/archinvestigations.htm
Aboriginal Site Impact Recording Form	www.environment.nsw.gov.au/licences/DECCAHIMSSiteRecordingForm.htm
Aboriginal Heritage Information Management System (AHIMS) Registrar	www.environment.nsw.gov.au/contact/AHIMSRegistrar.htm
Biodiversity	
BioBanking Assessment Methodology (DECC, 2008)	www.environment.nsw.gov.au/resources/biobanking/08385bbassessmethod.pdf
BioBanking Assessment Methodology and Credit Calculator Operational Manual (EPA, 2008)	www.environment.nsw.gov.au/biobanking/operationalmanual.htm
Threatened Species Survey and Assessment Guidelines: Field Survey Methods for Fauna -Amphibians (EPA, 2009)	www.environment.nsw.gov.au/resources/Threatenedspecies/09213amphibians.pdf
Threatened Biodiversity Survey and Assessment: Guidelines for Developments and Activities - Working Draft (DEC, 2004)	www.environment.nsw.gov.au/resources/nature/TBSAGuidelinesDraft.pdf
Guidelines for Threatened Species Assessment (Department of Planning, July 2005)	Draft available from DoP
EPA Threatened Species website	www.environment.nsw.gov.au/Threatenedspecies/
Atlas of NSW Wildlife	http://wildlifEIStlas.nationalparks.nsw.gov.au/wildlifEIStlas/watlas.jsp

Title	Web address
BioBanking Threatened Species Database	www.environment.nsw.gov.au/biobanking/biobankingtspd.htm
Vegetation Types databases	www.environment.nsw.gov.au/biobanking/vegtypedatabase.htm
PlantNET	http://plantnet.rbgsyd.nsw.gov.au/
Online Zoological Collections of Australian Museums	www.ozcam.org/
Threatened Species Assessment Guideline - The Assessment of Significance (EPA, 2007)	www.environment.nsw.gov.au/resources/Threatenedspecies/tsaguide07393.pdf
Principles for the use of biodiversity offsets in NSW	www.environment.nsw.gov.au/biocertification/offsets.htm
OEH managed land	
Land reserved or acquired under the NPW Act	
List of national parks	www.environment.nsw.gov.au/NationalParks/parksEISchatoz.aspx
Guidelines for developments adjoining land and water managed by OEH	www.environment.nsw.gov.au/protectedareas/developmntadjoiningdecc.htm

ATTACHMENT 3:

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).

PCU043484

NSW GOVERNMENT

Heritage Council of New South Wales

3 Marist Place
Parramatta NSW 2150

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Parramatta NSW 2124
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Telephone: 61 2 9873 8500
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Contact: Katrina Stankowski
Telephone: (02) 9873 8569
Katrina.Stankowski@heritage.nsw.gov.au
File: 13/06560
Job ID No: A1402610 & A1404305
Your Ref: SSD5899

Howard Reed
Manager, Mining Projects
Department of Planning & Infrastructure
GPO Box 39
SYDNEY NSW 2001

Attention: Ruth Murphy

Dear Mr Reed

RE: Request for Director General's Requirements for the preparation of an Environmental Impact Statement – Brandy Hill Quarry Extension Project (SSD 5899).

I refer to your letter dated the 27th March, 2013 (received by this Branch on 4th of April), requesting information regarding the NSW Heritage Council's requirements for the preparation of the above mentioned Environmental Impact Statement (EIS).

It is advised that the EIS should address the following issues:

- The heritage significance of the site and any impacts this major project may have upon this significance should be assessed. This assessment should include natural areas and places of Aboriginal, historic or archaeological significance. It should also include a consideration of wider heritage impacts in the area surrounding the site.

- The Heritage Council maintains the State Heritage Inventory which lists some items protected under the Heritage Act, 1977 and other statutory instruments. This register can be accessed through the Heritage Branch home page on the internet (www.heritage.nsw.gov.au). It should be noted that the legal standing of items listed on the State Heritage Register can also be provided by applying for a section 167 Certificate through the Heritage Branch home page.

- In addition, you should consult lists maintained by the National Trust, any heritage listed under the Australian Government's Environment Protection and Biodiversity Conservation Act 1999 and the local council in order to identify any identified items of heritage significance in the area affected by the proposal. Please be aware, however, that these lists are constantly evolving and that items with potential heritage significance may not yet be listed.

- Non-Aboriginal heritage items within the area affected by the proposal should be identified by field survey. This should include any buildings, works, relics (including relics underwater), gardens, landscapes, views, trees or places of non-Aboriginal heritage significance. A statement of significance and an assessment of the impact of the proposal on the heritage significance of these items should be undertaken. Any policies/measures to conserve their heritage significance should be identified. This assessment should be undertaken in accordance with the guidelines in the NSW Heritage Manual. The field survey and assessment should be undertaken by a qualified practitioner/consultant with historic sites experience.

- The proposal should have regard to any impacts on places, items or relics of significance to Aboriginal people. Where it is likely that the project will impact on Aboriginal heritage, adequate community consultation should take place regarding the assessment of significance, likely impacts and management/mitigation measures.

- The relics provisions in the Heritage Act require an excavation permit to be obtained from the Heritage Council, or an exception to be endorsed by the Heritage Council, prior to commencement of works if disturbance to a site with known or potential archaeological relics is proposed. Where possible refer to archaeological zoning plans or archaeological management plans held by Local Councils. If any unexpected archaeological relics are uncovered during the course of work excavation should cease and an excavation permit, or an exception notification endorsement, obtained.

The Heritage Branch would be happy to review any further documentation that may address any likely heritage impacts. If you have any further enquiries regarding this matter, please contact Katrina Stankowski on (02) 9873 8569.

Yours sincerely

15/04/2013

Vincent Sicari
Manager
Conservation Team
Heritage Branch
Regional Operations
Office of Environment & Heritage

As Delegate of the NSW Heritage Council

NSW GOVERNMENT | Department of Primary Industries

OUT13/9429

26 APR 2013

Ms Ruth Murphy
Mining and Industry Projects
NSW Department of Planning and Infrastructure
GPO Box 39
SYDNEY NSW 2001

Ruth.Murphy@planning.nsw.gov.au

Dear Ms Murphy,

Brandy Hill Quarry Expansion Project (SSD-5899)
Request for input into Director General Requirements

I refer to your letter dated 27 March 2013 to the Department of Primary Industries in respect to the above matter.

Comment by NSW Office of Water
The NSW Office of Water has requested that the environmental assessment address the items listed in Attachment A.

For further information, please contact Rohan McDonald, Planning and Assessment Coordinator (Newcastle office), on 4904 2642 or rohan.mcdonald@water.nsw.gov.au.

Yours sincerely

Phil Anquetil
Executive Director Business Services

Attachment A

Brandy Hill Quarry Expansion Project (SSD-5899)
Request for Input into Director General Requirements
Comment by NSW Office of Water

NSW Office of Water requires the environmental assessment demonstrate:

1. An adequate and secure water supply for the proposal. Confirmation that water supplies for the project can be sourced from an appropriately authorised and reliable supply. This is to include an assessment of the current market depth where water entitlement is required to be purchased.

2. Identification of site water demands, water sources (surface and groundwater), water disposal methods and water storage structures in the form of a water balance. The water balance is to outline the proposed water management on the site and to also include details of any water reticulation infrastructure that supplies water to and within the site.

3. An impact assessment on adjacent licensed water users (surface and groundwater), riparian ecosystems and groundwater-dependent ecosystems. This is to meet the requirements of relevant state policy in addition to the objects and principles of the *Water Management Act 2000* which can be accessed at:

   http://www.water.nsw.gov.au/Water-management/Law-and-Policy/default.aspx

4. An assessment of the potential to intercept and/or impact groundwater and predicted dewatering volumes, water quality and disposal/retention methods. This will need to address the requirements of relevant policy including the Aquifer Interference Policy. It is recommended final landforms of open voids containing groundwater are minimised. Where there is ongoing groundwater take induced by evaporative loss this must be identified and addressed by retaining the appropriate water licence entitlement at the site.

5. An impact assessment of any proposed works within or adjacent to watercourses and adequate provision of buffer requirements. Ability to achieve the principles of the *Water Management Act 2000* and the requirements of the Guidelines for Controlled Activity Approvals. The relevant guidelines can be accessed at:

   http://www.water.nsw.gov.au/Water-Licensing/Approvals/Controlled-activities/default.aspx

6. Preparation of a surface water management plan and groundwater management plan to integrate the proposed water balance and management for the site and to identify adequate mitigating and monitoring requirements for both water quality and water volume.

7. Existing and proposed water licensing requirements in accordance with the *Water Act 1912* and *Water Management Act 2000* (whichever is relevant). This is to demonstrate that existing licences (include licence numbers) and licensed uses are appropriate, and to identify where additional licences are proposed. The proponent will be required to ensure they hold adequate licensed entitlement commensurate with the anticipated volume of groundwater take and surface water take prior to this take occurring. Groundwater take includes the volume of water intercepted by the proposed activities both via the quarry pit and any extraction bores, in addition to any ongoing take induced by evaporative loss within the pit. The annual requirements need to be regularly reviewed through updates of modelling and reviews of metering data.

8. Adequate mitigating and monitoring requirements to address surface water and groundwater impacts.

End Attachment A

Your reference:
Our reference: DOC13/12723; LIC10/854-02
Contact Michael Howat; (02) 4908 6819

Department of Planning and Infrastructure
GPO Box 39
SYDNEY NSW 2001

Attn: Ms Ruth Murphy

Dear Ms Murphy

BRANDY HILL QUARRY EXTENSION PROJECT (SSD 5899)
Recommended Director Generals Requirements
Issued in relation to Part 4 Division 4.1 of the *Environmental Planning and Assessment Act 1979*

I refer to your request for the Environment Protection Authority's (EPA's) requirements for the Environmental Impact Statement (EIS) for the above proposal received by the EPA on 3 April 2013. The EPA notes the proposal is for an extension to Hanson Construction Material Pty Ltd's existing Brandy Hill Quarry, Environment Protection Licence (EPL)1879.

The EPA understands that the proposal includes the following:

- Extend the life of the quarry;
- Extend the approved extraction boundary for the quarry;
- Increase the annual extraction limit to 1.5 million tonnes per annum; and
- Relocate the quarry infrastructure within the premises.

The EPA has considered the project as detailed in the report titled "Brandy Hill Quarry - Quarry Expansion Project: Preliminary Environmental Assessment", dated March 2013, and has identified the information it requires to assess the project. This information is provided in **Attachment 1**. The proponent should ensure that the EIS is sufficiently comprehensive to enable the EPA to determine the extent of the impacts of the proposal. In this regard EPA notes this is a major expansion of existing operations (doubling of production and introduction of night-time operations) and key areas that will need specific attention include: noise/blasting impacts; traffic noise impacts; and potential increased air impacts. These issues are expanded upon in Attachment 1.

In carrying out the assessment, the proponent should refer to the relevant guidelines as listed in **Attachment 2** and any relevant industry codes of practice and best practice management guidelines.

The proponent should be aware that any commitments made in the EIS may be formalised as approval and subsequently environment protection licence conditions. Pollution control measures should not be proposed if they are impractical, unrealistic or beyond the financial viability of the development. It is important that all conclusions are supported by adequate data.

PO Box 488G Newcastle NSW 2300
117 Bull Street, Newcastle West NSW 2302
Tel: (02) 4908 6800 Fax: (02) 4908 6810
ABN 43 692 285 758
www.epa.nsw.gov.au

The EPA requests **two hard copies of the EIS** for assessment. These documents should be provided to Regional Manager (Hunter), Environment Protection Authority, PO Box 488G NEWCASTLE NSW 2300. Please also send an electronic copy to our referral mailbox – planning.matters@environment.nsw.gov.au.

If project approval is granted, the proponent will need to make a separate application to the EPA for an amendment to the existing EPL 1879, or a new EPL if desired, prior to undertaking any on site works.

If you have any queries regarding this matter please contact Michael Howat on phone 4908 6819.

Yours sincerely

PETER JAMIESON
Head Regional Operations Unit – Hunter
Environment Protection Authority

Encl: **Attachment 1:** EPA's Recommended Director Generals Requirements – Brandy Hill Quarry Extension

Attachment 2: Guidance Material

ATTACHMENT 1

EPA's Recommended Director Generals Requirements (DGRs)
Brandy Hill Quarry Extension Project – SSD 5899

TABLE OF CONTENTS

1 Environmental impacts of the project

1. Impacts related to the following environmental issues need to be assessed, quantified and reported on:
   - Air Issues
   - Noise and vibration
   - Waste and chemicals
   - Water and Soils
     - Soil
     - Water quality

   Environmental Impact Statements (EISs) should address the specific requirements outlined under each heading below and assess impacts in accordance with the relevant guidelines mentioned. A full list of guidelines is provided at **Attachment 2**.

2 General

1. The Proposal

The objectives of the proposal should be clearly stated and refer to:

- the size and type of the operation;
- the nature of the processes and the products, by-products and wastes produced;
- the use or disposal of products;
- the anticipated level of performance in meeting required environmental standards and cleaner production principles;
- the staging and timing of the proposal; and
- the proposal's relationship to any other industry or facility.

2. The Premises

The EIS will need to fully identify all of the processes and activities intended for the site over the life of the development. This will include details of:

- The location of the proposed facility and details of the surrounding environment;
- The proposed layout of the site;
- Appropriate landuse zoning;
- Ownership details of any residence and/or land likely to be affected by the proposed facility;
- Maps/diagrams showing the location of residences and properties likely to be affected and other industrial developments, conservation areas, wetlands, etc in the locality that may be affected by the facility;
- All equipment proposed for use at the site;
- Chemicals, including fuel, used on the site and proposed methods for their transportation, storage, use and emergency management;
- Waste generation and disposal;

- Methods to mitigate any expected environmental impacts of the development;
- Site rehabilitation following termination of the development

3 Licensing requirements

1. Should project approval be granted, the proponent will need to make a separate application to the EPA for an amendment to the existing Brandy Hill Quarry Environment Protection Licence 1879 prior to undertaking any on site works. Additional information is available through EPA's *Guide to Licensing* document: www.environment.nsw.gov.au/licensing/licenceguide.htm

   General information on licence requirements can also be obtained from EPA's Environment Line on 131 555 during office hours, or can be found at the EPA web site at:
   http://www.environment.nsw.gov.au/licensing/

SPECIFIC ISSUES

4 Air issues

The EIS should include a detailed air quality impact assessment (AQIA). The AQIA should:

1. Assess the risk associated with potential discharges of fugitive and point source emissions for all stages of the proposal. Assessment of risk relates to environmental harm, risk to human heath and amenity.

2. Justify the level of assessment undertaken on the basis of risk factors, including but not limited to:
   a. proposal location;
   b. characteristics of the receiving environment; and
   c. type and quantity of pollutants emitted.

3. Describe the receiving environment in detail. The proposal must be contextualised within the receiving environment (local, regional and inter-regional as appropriate). The description must include but need not be limited to:
   a. meteorology and climate;
   b. topography;
   c. surrounding land-use; receptors; and
   d. ambient air quality.

4. Include a detailed description of the proposal. All processes that could result in air emissions must be identified and described. Sufficient detail to accurately communicate the characteristics and quantity of all emissions must be provided. Identification and location of all fixed and mobile sources of dust/air emissions from the development, including rehabilitation, needs to be provided. The location of all emission sources should be clearly marked on a plan for key years of the quarry development. The EIS needs to identify all pollutants of concern and estimate emissions by quantity (and size for particles), source(s) and discharge point(s).

Note: emissions can be classed as either: be limited to:

a. point (eg emissions from stack or vent), or
b. fugitive (from wind erosion, leakages or spillages associated with loading or unloading, crushing/screening, plant and yard operation, vehicle movements [dust from road, exhausts, loss from load], land clearing and construction works).

5. Include a consideration of 'worst case' emission scenarios and impacts at proposed emission limits.

6. Account for cumulative impacts associated with existing emission sources as well as any currently approved developments linked to the receiving environment.

7. Include air dispersion modelling where there is a risk of adverse air quality impacts, or where there is sufficient uncertainty to warrant a rigorous numerical impact assessment. Air dispersion modelling must be conducted in accordance with the *Approved Methods for the Modelling and Assessment of Air Pollutants in NSW* (2005) http://www.environment.nsw.gov.au/resources/air/ammodelling05361.pdf.

   This assessment should include the following parameters:

   a. dust deposition;
   b. total suspended particles;
   c. PM_{10} particulate matter;
   d. Respirable crystalline silica (EPA understands the rhyodacite quarried on-site has a high silica content and hence levels at sensitive receptors should be estimated and assessed using relevant guidance such as that produced by the USEPA, the California EPA Office of Environmental Health and EPA Victoria).

8. Demonstrate the proposal's ability to comply with the relevant regulatory framework, specifically the *Protection of the Environment Operations (POEO) Act (1997)* and the *POEO (Clean Air) Regulation (2010)*.

9. Provide an assessment of the project in terms of the priorities and targets adopted under the NSW State Plan 2010 and its implementation plan Action for Air.

10. Detail emission control techniques/practices that will be employed by the proposal.

11. The EIS will need to examine if the current air monitoring network is sufficient for the upgraded quarry. In this regard EPA notes the current Environment Protection Licence stipulates three dust deposition monitoring locations. EPA is moving away from dust deposition monitoring due to issues with this monitoring method and the fact that results are only produced monthly, well after the actual time of monitoring. EPA is moving towards PM_{10} monitoring for quarries and the EIS should therefore explore a monitoring network based on PM_{10}. The EIS should also examine the most appropriate method of monitoring PM_{10} and in particular compare the costs / benefits of using high volume sampler technology (which will produce a result every six days and has a delay for sample analysis) verses using technology such as a Tapered Element Oscillating Microbalance (TEOM) (which will give daily instantaneous results).

5 Noise and vibration

In relation to noise, the following matters should be addressed (where relevant) as part of the Environmental Assessment.

General

1. As this is an active quarry construction noise associated with the proposed development should be assessed using the guidelines contained in the *NSW Industrial Noise Policy* (EPA, 2000) and *Industrial Noise Policy Application Notes.*

   http://www.environment.nsw.gov.au/noise/industrial.htm

2. Vibration from all activities (including construction and operation) to be undertaken on the premises should be assessed using the guidelines contained in the *Assessing Vibration: a technical guideline* (DEC, 2006).

   http://www.environment.nsw.gov.au/noise/vibrationguide.htm

3. Blast impacts should be demonstrated to be capable of complying with the guidelines contained in *Australian and New Zealand Environment Council – Technical basis for guidelines to minimise annoyance due to blasting overpressure and ground vibration* (ANZEC, 1990). http://www.environment.nsw.gov.au/noise/blasting.htm

   A detailed assessment of blast impacts will be necessary as it is noted that blasting activities will be occurring significantly closer (and less well shielded) to sensitive receptors than occurs at present.

4. Operational noise from all industrial activities (including private haul roads and private railway lines) to be undertaken on the premises should be assessed using the guidelines contained in the *NSW Industrial Noise Policy* (EPA, 2000) and *Industrial Noise Policy Application Notes*

   http://www.environment.nsw.gov.au/noise/industrial.htm .

   Particular attention should be given to determining noise impacts of the proposal as much of the processing and handling of material at present occurs in a reasonably well shielded location, however moving the processing operations approximately 500 metres south will not only bring noisy activities closer to sensitive receptors, but this area is likely to be significantly less well acoustically shielded. EPA also notes that processing and heavy vehicle movements are proposed to occur 24 hours a day 7 days per week, whereas currently these activities generally only occur 6 am to 6 pm Monday to Saturday.

Road

5. Noise on public roads from increased road traffic generated by the quarry should be assessed using the guidelines contained in the *Environmental Criteria for Road Traffic Noise* (EPA, 1999).

   http://www.environment.nsw.gov.au/noise/traffic.htm

A detailed assessment of traffic impacts will be necessary as EPA is aware of current community concern about heavy vehicles travelling through residential areas along Brandy Hill Drive.

The EIS will need to be very clear on increases in traffic movements. EPA notes from the Preliminary Environmental Assessment (PEA) that currently about 150 truck "movements" occur per day, of which 80 % occur in the hours 6 am to 12 pm. The PEA details about 144 "loads" per day being generated by the proposal. The EIS needs to be very clear with terminology and should discuss truck "movements" as it would appear the current proposal will generate 288 movements per day, which is a substantial increase from present.

Given the increase in traffic generated by the proposal (extending well into the night-time), the EIS will need to examine and detail if alternative routes to Brandy Hill Drive are possible / desirable / needed to reduce road noise (or safety) impacts on residents within Brandy Hill Village.

6. Noise from new or upgraded public roads should be assessed using the *Environmental Criteria for Road Traffic Noise* (EPA, 1999). http://www.environment.nsw.gov.au/noise/traffic.htm

6 Waste and chemicals

The EIS should:

1. Identify, characterise and classify all waste that will be generated onsite through excavation, demolition or construction activities, including proposed quantities of the waste.
   Note: All waste must be classified in accordance with *EPA's Waste Classification Guidelines*.

2. Identify, characterise and classify all waste that is proposed to be disposed of to an offsite location, including proposed quantities of the waste and the disposal locations for the waste. This includes waste that is intended for re-use or recycling.
   Note: All waste must be classified in accordance with *EPA's Classification Guidelines*.

3. Include details of all procedures and protocols to be implemented to ensure that any waste leaving the site is transported and disposed of lawfully and does not pose a risk to human health or the environment.

4. Include a statement demonstrating that the Proponent is aware of the relevant legislative requirements for disposal of the waste, including any relevant Resource Recovery Exemptions, as gazetted by EPA from time to time.

7 Water and soils

7.1 Soil

The EA should include:

1. An assessment of potential impacts on soil and land resources should be undertaken, being guided by *Soil and Landscape Issues in Environmental Impact Assessment* (DLWC 2000). The nature and extent of any significant impacts should be identified. Particular attention should be given to:
   a. Soil erosion and sediment transport - in accordance with *Managing urban stormwater: soils and construction,* vol. 1 (Landcom 2004) and vol. 2 E. Mines and quarries (DECC 2008).
   b. Mass movement (landslides) – in accordance with *Landslide risk management* guidelines presented in Australian Geomechanics Society (2007).
   c. Urban and regional salinity – guidance given in the Local Government Salinity Initiative booklets which includes *Site Investigations for Urban Salinity* (DLWC, 2002).

2. A description of the mitigation and management options that will be used to prevent, control, abate or minimise identified soil and land resource impacts associated with the project. This should include an assessment of the effectiveness and reliability of the measures and any residual impacts after these measures are implemented.

3. Where required, add any specific assessment requirements relevant to the project.

7.2 Water

Describe Proposal

1. Describe the proposal including position of any intakes and discharges, volumes, water quality and frequency of all water discharges.

2. Demonstrate that all practical options to avoid discharge have been implemented and environmental impact minimised where discharge is necessary.

3. Where relevant include a water balance for the development including water requirements (quantity, quality and source(s)) and proposed storm and wastewater disposal, including type, volumes, proposed treatment and management methods and re-use options.

Background Conditions

4. Describe existing surface and groundwater quality. An assessment needs to be undertaken for any water resource likely to be affected by the proposal.

5. State the Water Quality Objectives for the receiving waters relevant to the proposal. These refer to the community's agreed environmental values and human uses endorsed by the NSW Government as goals for ambient waters (http://www.environment.nsw.gov.au/ieo/index.htm). Where groundwater may be impacted the assessment should identify appropriate groundwater environmental values.

6. State the indicators and associated trigger values or criteria for the identified environmental values. This information should be sourced from the ANZECC

(2000) Guidelines for Fresh and Marine Water Quality (http://www.mincos.gov.au/publications/australian_and_new_zealand_guidelines_for_fresh_and_marine_water_quality).

7. State any locally specific objectives, criteria or targets which have been endorsed by the NSW Government.

Impact Assessment

8. Describe the nature and degree of impact that any proposed discharges will have on the receiving environment.

9. Assess impacts against the relevant ambient water quality outcomes. Demonstrate how the proposal will be designed and operated to:
    - protect the Water Quality Objectives for receiving waters where they are currently being achieved; and
    - contribute towards achievement of the Water Quality Objectives over time where they are not currently being achieved.

10. Where a discharge is proposed that includes a mixing zone, the proposal should demonstrate how wastewater discharged to waterways will ensure the ANZECC (2000) water quality criteria for relevant chemical and non-chemical parameters are met at the edge of the initial mixing zone of the discharge, and that any impacts in the initial mixing zone are demonstrated to be reversible.

11. Assess impacts on groundwater and groundwater dependent ecosystems.

12. Describe how stormwater will be managed.

14. Describe in detail any water storage ponds, or basins, proposed to be constructed during the whole quarry operational life. Provide location of the proposed storage(s), estimated volume capacities and expected water quality. In this regard the EIS needs to be clear as it would appear from the PEA that the existing southern stormwater ponds may be impinged upon by the moving of processing activities to the south.

Monitoring

13. Describe how predicted impacts will be monitored and assessed over time. Including a Trigger Action Response Plan, or similar response management plan, that will be implemented in response to any adverse impacts identified from the activity. This plan is to identify appropriate trigger values for the site and provide appropriate response actions to be implemented if adverse impacts are identified through the monitoring program.

8. Monitoring Programs

The EIS should include a detailed assessment of any noise, air quality, water quality or waste monitoring required during the construction phase and on-going operation of the site to ensure that the development achieves a satisfactory level of environmental performance. The evaluation should include a detailed description of the monitoring locations, sample analysis methods and the level of reporting proposed.

ATTACHMENT 2

Guidance Material

Title	Web address
Relevant Legislation	
Protection of the Environment Operations Act 1997	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+156+1997+cd+0+N
Environmental Planning and Assessment Act 1979	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+203+1979+cd+0+N
Water Management Act 2000	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+92+2000+cd+0+N
Licensing	
Guide to Licensing	www.environment.nsw.gov.au/licensing/licenceguide.htm
Air Issues	
Air Quality	
Approved methods for modelling and assessment of air pollutants in NSW (2005)	http://www.environment.nsw.gov.au/resources/air/ammodelling05361.pdf
POEO (Clean Air) Regulation 2010	http://www.legislation.nsw.gov.au/maintop/view/inforce/subordleg+428+2010+cd+0+N
Noise and Vibration	
Interim Construction Noise Guideline (DECC, 2009)	http://www.environment.nsw.gov.au/noise/constructnoise.htm
Assessing Vibration: a technical guideline (DEC, 2006)	http://www.environment.nsw.gov.au/noise/vibrationguide.htm
Australian and New Zealand Environment Council – Technical basis for guidelines to minimise annoyance due to blasting overpressure and ground vibration (ANZEC, 1990)	http://www.environment.nsw.gov.au/noise/blasting.htm
Industrial Noise Policy Application Notes	http://www.environment.nsw.gov.au/noise/traffic.htm
Environmental Criteria for Road Traffic Noise (EPA, 1999)	http://www.environment.nsw.gov.au/noise/traffic.htm
Interim Guideline for the Assessment of Noise from Rail Infrastructure Projects (DECC, 2007)	http://www.environment.nsw.gov.au/noise/railinfranoise.htm
Waste and Chemicals	
Waste	
Waste Classification Guidelines (DECC, 2008)	http://www.environment.nsw.gov.au/waste/envguidlns/index.htm
Resource recovery exemption	http://www.environment.nsw.gov.au/waste/RRecoveryExemptions.htm
Water and Soils	
Soils – general	

Title	Web address
Soil and Landscape Issues in Environmental Impact Assessment (DLWC 2000)	http://www.dnr.nsw.gov.au/care/soil/soil_pubs/pdfs/tech_rep_34_new.pdf
Managing urban stormwater: soils and construction, vol. 1 (Landcom 2004) and vol. 2 (A. Installation of services; B Waste landfills; C. Unsealed roads; D. Main Roads; E. Mines and quarries) (DECC 2008)	Vol 1 - Available for purchase at http://www.landcom.com.au/whats-new/publications-reports/the-blue-book.aspx Vol 2 - http://www.environment.nsw.gov.au/stormwater/publications.htm
Landslide risk management guidelines	http://www.australiangeomechanics.org/resources/downloads/
Site Investigations for Urban Salinity (DLWC, 2002)	http://www.environment.nsw.gov.au/resources/salinity/booklet3siteinvestigationsforurbansalinity.pdf
Water	
Water Quality Objectives	http://www.environment.nsw.gov.au/ieo/index.htm
ANZECC (2000) Guidelines for Fresh and Marine Water Quality	http://www.mincos.gov.au/publications/australian_and_new_zealand_guidelines_for_fresh_and_marine_water_quality
Applying Goals for Ambient Water Quality Guidance for Operations Officers – Mixing Zones	http://deccnet/water/resources/AWQGuidance7.pdf
Approved Methods for the Sampling and Analysis of Water Pollutant in NSW (2004)	http://www.environment.nsw.gov.au/resources/legislation/approvedmethods-water.pdf

PCU044583

Transport Roads & Maritime Services

16 May 2013

SF2013/034249
CR2013/002435
MJ

Manager, Mining & Industry Projects
Department of Planning & Infrastructure
GPO Box 39
SYDNEY NSW 2001

Attention: Mr Howard Reed

CLARENCETOWN ROAD: BRANDY HILL QUARRY EXTENSION PROJECT – REQUEST FOR DIRECTOR GENERAL'S REQUIREMENTS FOR ENVIRONMENTAL ASSESSMENT (SSD 5899)

Dear Mr Reed,

I refer to the letter dated 27 March 2013 requesting the provision of key issues which Roads and Maritime Services (RMS) believes should form part of the Director-General's Environmental Assessment Requirements (DGR's) for the subject proposal. Please accept my apologises for the delay in responding.

RMS understands that the Director General's Requirements (DGR's) for the subject project were issued on 26 April 2013. RMS advices that the requirements included in the DGR's relating to Traffic and Transport are considered generally satisfactory to allow an appropriate assessment of the Environmental Assessment to be undertaken.

RMS will provide further comment on the subject project on receipt of the Environmental Assessment, referred as part of the project application process.

Port Stephens Council should also be consulted regarding their requirements for assessment of traffic / transport conditions.

Please contact me on (02) 4924 0688 should you require any further advice.

Yours sincerely,

Ash Tamhane
A/Manager Land Use
Hunter Region

Cc General Manager
Port Stephens Council

Roads & Maritime Services

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