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09 April 2014

Ms Elle Donnelley
Planner - Mining Projects
Department of Planning and Infrastructure
GPO Box 39
SYDNEY NSW 2001

Your Ref: SSD 6437

Dear Ms Donnelly

**Request for Input for Director General Requirements - Proposed Extractive Industry
Lot 1 DP 204159, No. 4579 Old Northern Road (corner of Old Telegraph Road)
Maroota**

I refer to your email dated 3 April 2014 in which you request comments regarding the preparation of Director General Requirements for a proposed extractive industry at the above site. The following comments are provided for your incorporation into the Requirements.

1. The submission of full details describing the proposal.
2. The submission of full details confirming the proposal's relationship with the existing extractive industry operations undertaken by Dixon Sand.
3. The submission of plans and supporting written evidence showing the proposed final landform configuration and end use of land having regard to the existing use of the site and surrounding land uses. Specific details are to be provided regarding rehabilitation and landscape works upon cessation of extractive operations on the site.
4. The submission of a comprehensive staging plan and an associated rehabilitation staging program for the site.
5. The submission of full details regarding the proposal's compliance with the requirements of SEPP Mining and Extractive Industries (2007), Council's Development Control Plan Part B Section 1 – Rural, Sydney Regional Environmental Plan No. 9 – Extractive Industry, Sydney Regional Environmental Plan No. 20 – Hawkesbury – Nepean River and Baulkham Hills Local Environmental Plan 2012, and other relevant legislation, including the Section 91 'Integrated Development' provisions of the NSW EP & A Act, 1979 if relevant.
6. The EIS is required to identify the maximum yearly extraction rate and the life of the extraction (based on resource within the quarry) and also the subsequent timeframe for the completion of rehabilitation works upon the site.

7. The submission of a detailed traffic impact assessment report addressing the maximum number of truck movements associated with the operation. The preliminary information refers to access to the site from Old Telegraph Road. A review of the existing road form in this location is required, and including addressing the access driveway location given that part of Old Telegraph Road is unsealed.
8. The submission of an assessment of dust emissions from the site, addressing existing and anticipated dust impacts.
9. The submission of a comprehensive noise impact assessment report addressing the existing noise level and the likely noise levels associated with the extraction operations within the site, and including truck movements to / from the central processing plant.
10. The submission of an archaeological survey / assessment report, which addresses the local, regional and national archaeological significance of the site, in terms of both European and aboriginal heritage.
11. The assessment / analysis of the proposed extractive operation with respect to its visual impact upon surrounding properties and the scenic quality of the locality, in general. This visual assessment / analysis should be supported by appropriate photomontages and visual analysis diagrams / plans.
12. The preparation of a comprehensive 7 Part test / Species Impact Statement for all threatened flora and fauna species, endangered ecological communities and their habitats recorded within a 10 kilometre radius of the subject site.
13. The submission of a bushfire impact report addressing the proposed use of the site.
14. All works are to be clear of the SP2 Infrastructure zoned land along the Old northern Road frontage of the site.

It is noted that the proposal is referred to as an 'expansion' of the existing extractive industry operations. The proposal, whilst having a relationship to the existing Dixon Sand operations, is considered to be a new application and should not be considered as a modification to previous approvals.

Please note that all reports and information are to be prepared by suitably qualified persons.

Should you have any questions please contact me on 9843 0319.

Yours faithfully



Kristine McKenzie
PRINCIPAL EXECUTIVE PLANNER



Department of Primary Industries

OUT13/12997

Ms Elle Donnelley
Mining Projects
NSW Department of Planning and Infrastructure
GPO Box 39
SYDNEY NSW 2001

8 MAY 2014

Elle.Donnelley@planning.nsw.gov.au

Dear Ms Donnelley,

**Old Northern Road Quarry Expansion Project [SSD_6437]
Request for input into Director General Requirements (DGR's)**

I refer to your email dated 3 April 2014 to the Department of Primary Industries in respect to the above matter.

Comment by Agriculture NSW

Agriculture NSW advise that the proposed lots contain agricultural land class 3 suitable for cropping in rotation with pasture (Attachment 1). The site is within an agricultural production area. Recommended inclusions in the DGR's are in Attachment A.

For further information please contact Andrew Docking, Resource Management Officer (Richmond office) on 4588 2128, or: andrew.docking@industry.nsw.gov.au.

Comment by NSW Office of Water

The NSW Office of Water (Office of Water) provides the following comments below, and further detail in Attachment B.

It is recommended that the EIS be required to include:

- A detailed assessment against the NSW Aquifer Interference Policy (2012);
- Assessment of impacts on surface and ground water sources (both quality and quantity), related infrastructure, adjacent licensed water users, basic landholder rights, watercourses, riparian land, and groundwater dependent ecosystems, and measures proposed to reduce and mitigate these impacts;
- Proposed surface and groundwater monitoring;
- Details of water proposed to be taken (including through inflow and seepage) from each water source as defined by the relevant water sharing plan;

- An assessment of any water licensing requirements (including those for ongoing water take post-closure);
- A detailed and consolidated site water balance;
- The identification of an adequate and secure water supply for the life of the mine. Confirmation that water 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;
- Consideration of relevant policies and guidelines; and
- A statement of where each element of the DGRs is addressed in the EIS (i.e. in the form of a table).

Should you require further information please contact Janne Grose, Water Regulation Officer, on (02) 4729 8262. It is requested that one (1) **hard copy** and one (1) **CD** of the EIS report and any accompanying documentation is forwarded to Janne Grose at PO Box 323, Penrith NSW 2750.

Fisheries NSW advise no issues.

Yours sincerely



Richard Hunt
A/Director Policy, Legislation and Innovation

Attachment A

Old Northern Road Quarry Expansion Project [SSD_6437] Request for Input into Director General Requirements Comment by Agriculture NSW

The DGR's should require the following detailed information on the agricultural land and water resources in the project area, including soils, slopes, land and water characteristics;

- Location, production levels and relevant details of agricultural businesses within the surrounding locality of the project area;
- Risk-based assessment of any potential impacts of the project on agricultural resources and water, as well as impacts on weed management, biosecurity, dust, noise and traffic;
- Potential impacts on agricultural businesses including farm productivity, land values and flow-on impacts to regional communities and the environment;
- Any water licences which may be transferred or no longer available for agricultural use;
- Potential impacts on agricultural support services, processing and value-adding industries and regional employment;
- Measures to minimise any negative impacts on agricultural land, water, businesses and infrastructure at the local and regional level; and
- Rehabilitation plans; to return to existing agricultural level suitable for cropping in rotation with pasture.
- Evidence of consultation with landholders, community groups and government agencies.

From a regional perspective the success and amount of land rehabilitated to agricultural use would provide some evidence that rehabilitation for agriculture is possible.

References:

http://www.dpi.nsw.gov.au/data/assets/pdf_file/0005/367763/Agriculture-issues-for-extractive-industry-development.pdf

http://www.nsw.gov.au/sites/default/files/agricultural-impact-statement-factsheet_sd_v01.pdf

The proposal will need to address the potential risk of creating land use conflict within the locality – DPI recommends that a land use conflict risk analysis is undertaken such as noted in the following guideline:

http://www.dpi.nsw.gov.au/data/assets/pdf_file/0018/412551/Land-use-conflict-risk-assessment-LUCRA-guide.pdf

Attachment 1: The lots contain agricultural land class



End Attachment A

Attachment B

Old Northern Road Sand Quarry Expansion Project (SSD 6347) Request for Input into Director General Requirements Additional Comment by NSW Office of Water

Relevant Legislation

The Environmental Assessment (EA) should take into account the objects and regulatory requirements of the *Water Act 1912* and *Water Management Act 2000* (WMA 2000), as applicable. Proposals and management plans should be consistent with the Objects (s.3) and Water Management Principles (s.5) of the WMA 2000.

Water Sharing Plans

The proposal is located within the area covered by the *Water Sharing Plan for the Greater Metropolitan Region Unregulated River Water Sources* and the *Water Sharing Plan for the Greater Metropolitan Region Groundwater Sources*. The EIS is required to:

- Demonstrate how the proposal is consistent with the relevant rules of the WSP including rules for access licences, distance restrictions for water supply works and rules for the management of local impacts in respect of surface water and groundwater sources, ecosystem protection, water quality and surface-groundwater connectivity.
- Provide a description of any site water use (amount of water from each water source) and management including all sediment dams, clear water diversion structures with detail on the location, design specifications and storage capacities for all the existing and proposed water management structures.
- Provide an analysis of the proposed water supply arrangements against the rules for access licences and other applicable requirements of any relevant WSP.
i.e. Can the proponent buy in sufficient water and use it in accordance with the WSP? Are there rules that might prevent the trade? Extraction at that location?
- Provide a consolidated site water balance.

Relevant Policies and Guidelines

The EIS should take into account the following policies (as applicable):

- Guidelines for controlled activities on waterfront land (2012);
- NSW Aquifer Interference Policy (2012);
- NSW State Rivers and Estuary Policy (1993);
- NSW State Groundwater Policy Framework Document (1997);
- NSW State Groundwater Quality Protection Policy (1998);
- NSW State Groundwater Dependent Ecosystems Policy (2002);
- Department of Primary Industries Risk Assessment Guidelines for Groundwater Dependent Ecosystems (2012);
- NSW Water Extraction Monitoring Policy (2007);
- Australian Groundwater Monitoring Guidelines (2012).

These policies can be accessed online at the following links:

<http://www.water.nsw.gov.au/Water-management/Law-and-policy/Key-policies/default.aspx>
<http://www.water.nsw.gov.au/Water-licensing/Approvals/Controlled-activities/default.aspx>

An assessment framework developed by the Office of Water sets out the recommended methodology for undertaking the assessment against the Aquifer Interference Policy, and is found on the Office of Water's website at <http://www.water.nsw.gov.au/Water-management/Law-and-policy/Keypolicies/Aquifer-interference>.

The EIS needs to demonstrate the proposal is consistent with the spirit and principles of these policy documents.

Licensing Considerations

The EIS is required to provide:

- Identification of water requirements for the life of the proposed project in terms of both volume and timing (including predictions of potential ongoing groundwater take following the cessation of operations at the site - i.e. evaporative loss from open voids).
- Details of the water supply source(s) for the proposal including any proposed surface water and groundwater extraction from each water source as defined in the relevant Water Sharing Plan/s and all water supply works to take water.
- Explanation of how the required water entitlements will be obtained (i.e. through a new or existing licence/s, trading on the water market, controlled allocations etc.).
- Information on the purpose, location, construction and expected annual extraction volumes including details on all existing and proposed water supply works which take surface water, (pumps, dams, diversions, etc).
- Details on all bores and excavations for the purpose of investigation, extraction, dewatering, testing and monitoring. All predicted groundwater take must be accounted for through adequate licensing.
- Details on existing dams/storages (including the date of construction, location, purpose, size and capacity) and any proposal to change the purpose of existing dams/storages.
- Details on the location, purpose, size and capacity of any new proposed dams/storages.

Water allocation account management rules, total daily extraction limits and rules governing environmental protection and access licence dealings also need to be considered.

The Harvestable Right gives landholders the right to capture and use for any purpose 10 % of the average annual runoff from their property. The Harvestable Right has been defined in terms of an equivalent dam capacity called the Maximum Harvestable Right Dam Capacity (MHRDC). The MHRDC is determined by the area of the property (in hectares) and a site-specific run-off factor. The MHRDC includes the capacity of all existing dams on the property that do not have a current water licence. Storages capturing up to the harvestable right capacity are not required to be licensed but any capacity of the total of all storages/dams on the property greater than the MHRDC may require a licence.

For more information on Harvestable Right dams visit:

<http://www.water.nsw.gov.au/Water-licensing/Basic-water-rights/Harvesting-runoff/Harvesting-runoff>.

Groundwater Assessment

Section 3 of the PEA notes a comprehensive groundwater impact assessment would be undertaken as part of the EA of the proposed additional extraction and this assessment will assist in the determination of the maximum depth of extraction so the regional groundwater table is not impacted (page 5). *NOW is aware that there are two poorly inter-connected aquifers mapped beneath much of the project area, and it should be recognised that potential impacts on both aquifers will need to be considered in the assessment.*

To ensure the sustainable and integrated management of groundwater sources, the EIS needs to include adequate details to assess the impact of the project on all groundwater sources including:

- The predicted highest seasonal groundwater levels for the two aquifers at the site, and the level of interconnection between them.
- Works likely to intercept, connect with or infiltrate the groundwater sources.

- Any proposed groundwater extraction (including incidental), including the purpose, location and construction details of all proposed bores and works and expected annual extraction volumes.
- A description of the flow directions and rates and physical and chemical characteristics of the groundwater source (including connectivity with other groundwater and surface water sources).
- Sufficient baseline monitoring for groundwater quantity and quality for all aquifers and GDEs to establish a baseline incorporating typical temporal and spatial variations.
- The predicted impacts of any final landform on the groundwater regime.
- The existing groundwater users within the area (including the environment), any potential impacts on these users and safeguard measures to mitigate impacts.
- An assessment of the quality of the groundwater for the local groundwater catchment.
- An assessment of the potential for groundwater contamination (considering both the impacts of the proposal on groundwater contamination and the impacts of contamination on the proposal).
- Measures proposed to protect groundwater quality, both in the short and long term.
- Measures for preventing groundwater pollution so that remediation is not required.
- Protective measures for any groundwater dependent ecosystems (GDEs).
- Proposed methods of the disposal of waste water and approval from the relevant authority.
- The results of any models or predictive tools used.
- Licence, approval or registration numbers for all groundwater works.
- Identification of any nominal thresholds as to the level of impact beyond which remedial measures or contingency plans would be initiated (this may entail water level triggers or a beneficial use category).

Where potential impact/s are identified, the assessment will need to identify limits to the level of impact and contingency measures that would remediate, reduce or manage potential impacts to the existing groundwater resource and any dependent groundwater environment or water users, including information on:

- Any proposed monitoring programs, including water levels and quality data.
- Reporting procedures for any monitoring program including mechanism for transfer of information.
- An assessment of any groundwater source/aquifer that may be sterilised from future use as a water supply as a consequence of the proposal.
- Description of the remedial measures or contingency plans proposed.
- Any funding assurances covering the anticipated post development maintenance cost, for example on-going groundwater monitoring for the nominated period.

Groundwater Dependent Ecosystems

It is suggested the EIS considers the potential impacts on any Groundwater Dependent Ecosystems (GDEs) at the site and in the vicinity of the site and:

- Identify any potential impacts on GDEs as a result of the proposal including:
 - the effect of the proposal on the recharge to groundwater systems;
 - the potential to adversely affect the water quality of the underlying groundwater system and adjoining groundwater systems in hydraulic connections; and
 - the effect on the function of GDEs (habitat, groundwater levels, connectivity).

- Provide safeguard measures for any GDEs.

Watercourses and Riparian Land

The EIS should consider the Guidelines for Controlled Activities on Waterfront Land (2012).

The EIS should address the potential impacts of the project on all watercourses likely to be affected by the project, existing riparian vegetation and the rehabilitation of riparian land. It is recommended the EIS provides details on all watercourses potentially affected by the proposal, including:

- Scaled plans showing the location of:
 - watercourses and top of bank;
 - riparian corridor widths to be established along the creeks;
 - existing riparian vegetation surrounding the watercourses (identify any areas to be protected and any riparian vegetation proposed to be removed);
 - the site boundary, the footprint of the proposal in relation to the watercourses and riparian areas; and
 - proposed location of any asset protection zones.
- Photographs of the watercourses.
- A detailed description of all potential impacts on the watercourses/riparian land.
- A description of the design features and measures to be incorporated to mitigate potential impacts.
- Geomorphic and hydrological assessment of water courses including details of stream order (Strahler System), river style and energy regimes both in channel and on adjacent floodplains.

End Attachment B



Mr Mike Young
GPO Box 39
SYDNEY NSW 2001

Attention: Ms Elle Donnelley



Notice Number 1521373
File Number DOC14/44398
Date 11-Apr-2014

RE: Old Northern Road Quarry Expansion Project (SSD 6437)

I refer to your request for the Environment Protection Authority's (EPA) requirements for the environmental impact statement (EIS) in regard to the above proposal received by EPA on 3 April 2014.

EPA has considered the details of the proposal as provided by the Department of Planning and Infrastructure (DoPI) and has identified the information it requires to issue its general terms of approval in Attachment A. In summary, EPA's key information requirements for an EIS for the proposed development include an adequate assessment of:

1. Potential air pollution, including potential dust emissions from the site;
2. Potential surface and ground water pollution of the site and the surrounding areas;
3. Potential offensive noise and vibration impacts from the site;
4. Management of chemicals, fuels and wastes stored and /or generated at the site;
5. Rehabilitation of the site to its required usage after extraction ceases.

Yours sincerely

David Gathercole

Acting Head

Metropolitan - Sydney Industry

(by Delegation)

ATTACHMENT A: EIS REQUIREMENTS FOR

Old Northern Road Quarry Expansion Project (SSD 6437)

How to use these requirements

The EPA requirements have been structured in accordance with the DoPI EIS Guidelines, as follows. It is suggested that the EIS follow the same structure:

- A. Executive summary
- B. The proposal
- C. The location
- D. Identification and prioritisation of issues
- E. The environmental issues
- F. List of approvals and licences
- G. Compilation of mitigation measures
- H. Justification for the proposal

A Executive summary

The executive summary should include a brief discussion of the extent to which the proposal achieves identified environmental outcomes.

B The proposal

1. Objectives of the proposal

- The objectives of the proposal should be clearly stated and refer to:
 - a) the size and type of the operation, the nature of the processes and the products, by-products and wastes produced
 - b) a life cycle approach to the production, use or disposal of products
 - c) the anticipated level of performance in meeting required environmental standards and cleaner production principles
 - d) the staging and timing of the proposal and any plans for future expansion
 - e) the proposal's relationship to any other industry or facility.

2. Description of the proposal

General

- Outline the production process including:
 - a) the environmental "mass balance" for the process – quantify in-flow and out-flow of materials, any points of discharge to the environment and their respective destinations (sewer, stormwater, atmosphere, recycling, landfill etc)
 - b) any life-cycle strategies for the products.
- Outline cleaner production actions, including:
 - a) measures to minimise waste (typically through addressing source reduction)
 - b) proposals for use or recycling of by-products
 - c) proposed disposal methods for solid and liquid waste
 - d) air management systems including all potential sources of air emissions, proposals to re-use or treat emissions, emission levels relative to relevant standards in regulations, discharge points
 - e) water management system including all potential sources of water pollution, proposals for re-use, treatment etc, emission levels of any wastewater discharged, discharge points, summary of options explored to avoid a discharge, reduce its frequency or reduce its impacts, and rationale for selection of option to discharge.
 - f) soil contamination treatment and prevention systems.
- Outline construction works including:
 - a) actions to address any existing soil contamination

- b) any earthworks or site clearing; re-use and disposal of cleared material (including use of spoil on-site)
- c) construction timetable and staging; hours of construction; proposed construction methods
- d) environment protection measures, including noise mitigation measures, dust control measures and erosion and sediment control measures.

Air

- Identify all sources of air emissions from the development.
Note: emissions can be classed as either:
 - *point (eg emissions from stack or vent) or*
 - *fugitive (from wind erosion, leakages or spillages, associated with loading or unloading, conveyors, storage facilities, plant and yard operation, vehicle movements (dust from road, exhausts, loss from load), land clearing and construction works).*
- Provide details of the project that are essential for predicting and assessing air impacts including:
 - a) the quantities and physio-chemical parameters (eg concentration, moisture content, bulk density, particle sizes etc) of materials to be used, transported, produced or stored
 - b) an outline of procedures for handling, transport, production and storage
 - c) the management of solid, liquid and gaseous waste streams with potential for significant air impacts.

Noise and vibration

- Identify all noise sources from the development (including both construction and operation phases). Detail all potentially noisy activities including ancillary activities such as transport of goods and raw materials.
- Specify the times of operation for all phases of the development and for all noise producing activities.
- For projects with a significant potential traffic noise impact provide details of road alignment (include gradients, road surface, topography, bridges, culverts etc), and land use along the proposed road and measurement locations – diagrams should be to a scale sufficient to delineate individual residential blocks.

Water

- Provide details of the project that are essential for predicting and assessing impacts to waters:
 - a) including the quantity and physio-chemical properties of all potential water pollutants and the risks they pose to the environment and human health, including the risks they pose to Water Quality Objectives in the ambient waters (as defined on www.environment.nsw.gov.au/ieo, using technical criteria derived from the Australian and New Zealand Guidelines for Fresh and Marine Water Quality, ANZECC 2000)
 - b) the management of discharges with potential for water impacts
 - c) drainage works and associated infrastructure; land-forming and excavations; working capacity of structures; and water resource requirements of the proposal.

- Outline site layout, demonstrating efforts to avoid proximity to water resources (especially for activities with significant potential impacts eg effluent ponds) and showing potential areas of modification of contours, drainage etc.
- Outline how total water cycle considerations are to be addressed showing total water balances for the development (with the objective of minimising demands and impacts on water resources). Include 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.

Waste and chemicals

- Provide details of the quantity and type of both liquid waste and non-liquid waste generated, handled, processed or disposed of at the premises. Waste must be classified according to the EPA's *Waste Classification Guidelines, December 2009*.
- Provide details of liquid waste and non-liquid waste management at the facility, including:
 - a) the transportation, assessment and handling of waste arriving at or generated at the site
 - b) any stockpiling of wastes or recovered materials at the site
 - c) any waste processing related to the facility, including reuse, recycling, reprocessing (including composting) or treatment both on- and off-site
 - d) the method for disposing of all wastes or recovered materials at the facility
 - e) the emissions arising from the handling, storage, processing and reprocessing of waste at the facility
 - f) the proposed controls for managing the environmental impacts of these activities.
- Provide details of spoil disposal with particular attention to:
 - a) the quantity of spoil material likely to be generated
 - b) proposed strategies for the handling, stockpiling, reuse/recycling and disposal of spoil
 - c) the need to maximise reuse of spoil material in the construction industry
 - d) identification of the history of spoil material and whether there is any likelihood of contaminated material, and if so, measures for the management of any contaminated material
 - e) designation of transportation routes for transport of spoil.
- Provide details of procedures for the assessment, handling, storage, transport and disposal of all hazardous and dangerous materials used, stored, processed or disposed of at the site, in addition to the requirements for liquid and non-liquid wastes.
- Provide details of the type and quantity of any chemical substances to be used or stored and describe arrangements for their safe use and storage.
- Reference should be made to the guidelines: *EPA's Waste Classification Guidelines, December 2009*.

ESD

- Demonstrate that the planning process and any subsequent development incorporates objectives and mechanisms for achieving ESD, including:

- a) an assessment of a range of options available for use of the resource, including the benefits of each option to future generations
- b) proper valuation and pricing of environmental resources
- c) identification of who will bear the environmental costs of the proposal.

3. Rehabilitation

- Outline considerations of site maintenance, and proposed plans for the final condition of the site (ensuring its suitability for future uses).

4. Consideration of alternatives and justification for the proposal

- Consider the environmental consequences of adopting alternatives, including alternative:
 - a) sites and site layouts
 - b) access modes and routes
 - c) materials handling and production processes
 - d) waste and water management
 - e) impact mitigation measures
 - f) energy sources
- Selection of the preferred option should be justified in terms of:
 - a) ability to satisfy the objectives of the proposal
 - b) relative environmental and other costs of each alternative
 - c) acceptability of environmental impacts and contribution to identified environmental objectives
 - d) acceptability of any environmental risks or uncertainties
 - e) reliability of proposed environmental impact mitigation measures
 - f) efficient use (including maximising re-use) of land, raw materials, energy and other resources.

C The location

1. General

- Provide an overview of the affected environment to place the proposal in its local and regional environmental context including:
 - a) meteorological data (eg rainfall, temperature and evaporation, wind speed and direction)
 - b) topography (landform element, slope type, gradient and length)
 - c) surrounding land uses (potential synergies and conflicts)
 - d) geomorphology (rates of landform change and current erosion and deposition processes)
 - e) soil types and properties (including erodibility; engineering and structural properties; dispersibility; permeability; presence of acid sulfate soils and potential acid sulfate soils)

- f) ecological information (water system habitat, vegetation, fauna)
- g) availability of services and the accessibility of the site for passenger and freight transport.

2. Air

- Describe the topography and surrounding land uses. Provide details of the exact locations of dwellings, schools and hospitals. Where appropriate provide a perspective view of the study area such as the terrain file used in dispersion models.
- Describe surrounding buildings that may effect plume dispersion.
 - a) Provide and analyse site representative data on following meteorological parameters: temperature and humidity
 - b) rainfall, evaporation and cloud cover
 - c) wind speed and direction
 - d) atmospheric stability class
 - e) mixing height (the height that emissions will be ultimately mixed in the atmosphere)
 - f) katabatic air drainage
 - g) air re-circulation.
- For deposited dust, the data file should include hourly average values for the following additional parameters:
 - a) Monin-Obukhob length (m)
 - b) surface friction velocity (m/s)
 - c) surface roughness height (m).

3. Noise and vibration

- Identify any noise sensitive locations likely to be affected by activities at the site, such as residential properties, schools, churches, and hospitals. Typically the location of any noise sensitive locations in relation to the site should be included on a map of the locality.
- Identify the land use zoning of the site and the immediate vicinity and the potentially affected areas.

4. Water

- Describe the catchment including proximity of the development to any waterways and provide an assessment of their sensitivity/significance from a public health, ecological and/or economic perspective. The Water Quality and River Flow Objectives on the website: www.environment.nsw.gov.au/ieo should be used to identify the agreed environmental values and human uses for any affected waterways. This will help with the description of the local and regional area.

5. Soil Contamination Issues

- Provide details of site history – if earthworks are proposed, this needs to be considered with regard to possible soil contamination, for example if the site was previously a landfill site or if irrigation of effluent has occurred.

D Identification and prioritisation of issues / scoping of impact assessment

- Provide an overview of the methodology used to identify and prioritise issues. The methodology should take into account:
 - a) relevant NSW government guidelines
 - b) industry guidelines
 - c) EISs for similar projects
 - d) relevant research and reference material
 - e) relevant preliminary studies or reports for the proposal
 - f) consultation with stakeholders.
- Provide a summary of the outcomes of the process including:
 - a) all issues identified including local, regional and global impacts (eg increased/ decreased greenhouse emissions)
 - b) key issues which will require a full analysis (including comprehensive baseline assessment)
 - c) issues not needing full analysis though they may be addressed in the mitigation strategy
 - d) justification for the level of analysis proposed (the capacity of the proposal to give rise to high concentrations of pollution compared with the ambient environment or environmental outcomes is an important factor in setting the level of assessment).

E The environmental issues

1. General

- The potential impacts identified in the scoping study need to be assessed to determine their significance, particularly in terms of achieving environmental outcomes, and minimising environmental pollution.
- Identify gaps in information and data relevant to significant impacts of the proposal and any actions proposed to fill those information gaps so as to enable development of appropriate management and mitigation measures. This is in accordance with ESD requirements.

Note: The level of detail should match the level of importance of the issue in decision making which is dependent on the environmental risk.

Describe baseline conditions

- Provide a description of existing environmental conditions for any potential impacts.

Assess impacts

- For any potential impacts relevant for the assessment of the proposal provide a detailed analysis of the impacts of the proposal on the environment including the cumulative impact of the proposal on the receiving environment especially where there are sensitive receivers.
- Describe the methodology used and assumptions made in undertaking this analysis (including any modelling or monitoring undertaken) and indicate the level of confidence in the predicted outcomes and the resilience of the environment to cope with the predicted impacts.
- The analysis should also make linkages between different areas of assessment where necessary to enable a full assessment of environmental impacts eg assessment of impacts on air quality will often need to draw on the analysis of traffic, health, social, soil and/or ecological systems impacts; etc.
- The assessment needs to consider impacts at all phases of the project cycle including: exploration (if relevant or significant), construction, routine operation, start-up operations, upset operations and decommissioning if relevant.
- The level of assessment should be commensurate with the risk to the environment.

Describe management and mitigation measures

- Describe any mitigation measures and management options proposed to prevent, control, abate or mitigate identified environmental impacts associated with the proposal and to reduce risks to human health and prevent the degradation of the environment. This should include an assessment of the effectiveness and reliability of the measures and any residual impacts after these measures are implemented.
- Proponents are expected to implement a 'reasonable level of performance' to minimise environmental impacts. The proponent must indicate how the proposal meets reasonable levels of performance. For example, reference technology based criteria if available, or identify good practice for this type of activity or development. A 'reasonable level of performance' involves adopting and implementing technology and management practices to achieve certain pollutant emissions levels in economically viable operations. Technology-based criteria evolve gradually over time as technologies and practices change.
- Use environmental impacts as key criteria in selecting between alternative sites, designs and technologies, and to avoid options having the highest environmental impacts.
- Outline any proposed approach (such as an Environmental Management Plan) that will demonstrate how commitments made in the EIS will be implemented. Areas that should be described include:
 - a) operational procedures to manage environmental impacts
 - b) monitoring procedures
 - c) training programs
 - d) community consultation
 - e) complaint mechanisms including site contacts
 - f) strategies to use monitoring information to improve performance
 - g) strategies to achieve acceptable environmental impacts and to respond in event of exceedences.

2. Air

Describe baseline conditions

- Provide a description of existing air quality and meteorology, using existing information and site representative ambient monitoring data. This description should include the following parameters *such as*, dust deposition rates, total suspended particles, PM10 and PM2.5 concentrations and crystalline silica impacts. These should be determined according to the EPA's *Approved Methods and Guidance for the Modelling and Assessment of Air Pollutants in NSW, 2005*.

Assess impacts

- Identify all pollutants of concern and estimate emissions by quantity (and size for particles), source and discharge point.
- Estimate the resulting ground level concentrations of all pollutants. Where necessary (eg potentially significant impacts and complex terrain effects), use an appropriate dispersion model to estimate ambient pollutant concentrations. Discuss choice of model and parameters with the EPA.
- Describe the effects and significance of pollutant concentration on the environment, human health, amenity and regional ambient air quality standards or goals.
- Describe the contribution that the development will make to regional and global pollution, particularly in sensitive locations.
- For potentially odorous emissions provide the emission rates in terms of odour units (determined by techniques compatible with EPA procedures). Use sampling and analysis techniques for individual or complex odours and for point or diffuse sources, as appropriate.

Note: With dust and odour, it may be possible to use data from existing similar activities to generate emission rates.

- Reference should be made to EPA's *Approved Methods and Guidance for the Modelling and Assessment of Air Pollutants in NSW, 2005*; *Approved Methods for the Sampling and Analysis of Air Pollutants in NSW, 2007*; *Assessment and Management of Odour from Stationary Sources in NSW, 2006*; *Technical Notes: Draft Policy: Assessment and Management of Odour from Stationary Sources in NSW, 2006*; *Load Calculation Protocol for use by holders of NSW Environment Protection Licences when calculating Assessable Pollutant Loads, 2009*.

Describe management and mitigation measures

- Outline specifications of pollution control equipment (including manufacturer's performance guarantees where available) and management protocols for both point and fugitive emissions. Where possible, this should include cleaner production processes.

3. Noise and vibration

Describe baseline conditions

- Determine the existing background (L_{A90}) and ambient (L_{Aeq}) noise levels in accordance with the EPA's *NSW Industrial Noise Policy*.
- Determine the existing road traffic noise levels in accordance with the EPA's *NSW Environmental Criteria for Road Traffic Noise*, where road traffic noise impacts may occur.
- The noise impact assessment report should provide details of all monitoring of existing ambient noise levels including:
 - a) details of equipment used for the measurements
 - b) a brief description of where the equipment was positioned
 - c) a statement justifying the choice of monitoring site, including the procedure used to choose the site, having regards to the definition of 'noise sensitive locations(s)' and 'most affected locations(s)' described in Section 3.1.2 of the EPA's *NSW Industrial Noise Policy*
 - d) details of the exact location of the monitoring site and a description of land uses in surrounding areas
 - e) a description of the dominant and background noise sources at the site
 - f) day, evening and night assessment background levels for each day of the monitoring period
 - g) the final Rating Background Level (RBL) value
 - h) graphs of the measured noise levels for each day should be provided
 - i) a record of periods of affected data (due to adverse weather and extraneous noise), methods used to exclude invalid data and a statement indicating the need for any re-monitoring under Step 1 in Section B1.3 of the EPA's *NSW Industrial Noise Policy*
 - j) determination of L_{Aeq} noise levels from existing industry.

Assess impacts

- Determine the project specific noise levels for the site. For each identified potentially affected receiver, this should include:
 - a) determination of the intrusive criterion for each identified potentially affected receiver
 - b) selection and justification of the appropriate amenity category for each identified potentially affected receiver
 - c) determination of the amenity criterion for each receiver
 - d) determination of the appropriate sleep disturbance limit.
- Maximum noise levels during night-time period (10pm-7am) should be assessed to analyse possible affects on sleep. Where $L_{A1(1min)}$ noise levels from the site are less than 15 dB above the background L_{A90} noise level, sleep disturbance impacts are unlikely. Where this is not the case, further analysis is

required. Additional guidance is provided in Appendix B of the EPA's *NSW Environmental Criteria for Road Traffic Noise*.

- Determine expected noise level and noise character (eg tonality, impulsiveness, vibration, etc) likely to be generated from noise sources during:
 - a) site establishment
 - b) construction
 - c) operational phases
 - d) transport including traffic noise generated by the proposal
 - e) other services.

Note: The noise impact assessment report should include noise source data for each source in 1/1 or 1/3 octave band frequencies including methods for references used to determine noise source levels. Noise source levels and characteristics can be sourced from direct measurement of similar activities or from literature (if full references are provided).

- Determine the noise levels likely to be received at the most sensitive locations (these may vary for different activities at each phase of the development). Potential impacts should be determined for any identified significant adverse meteorological conditions. Predicted noise levels under calm conditions may also aid in quantifying the extent of impact where this is not the most adverse condition.
- The noise impact assessment report should include:
 - a) a plan showing the assumed location of each noise source for each prediction scenario
 - b) a list of the number and type of noise sources used in each prediction scenario to simulate all potential significant operating conditions on the site
 - c) any assumptions made in the predictions in terms of source heights, directivity effects, shielding from topography, buildings or barriers, etc
 - d) methods used to predict noise impacts including identification of any noise models used. Where modelling approaches other than the use of the ENM or SoundPlan computer models are adopted, the approach should be appropriately justified and validated
 - e) an assessment of appropriate weather conditions for the noise predictions including reference to any weather data used to justify the assumed conditions
 - f) the predicted noise impacts from each noise source as well as the combined noise level for each prediction scenario under any identified significant adverse weather conditions as well as calm conditions where appropriate
 - g) for developments where a significant level of noise impact is likely to occur, noise contours for the key prediction scenarios should be derived
 - h) an assessment of the need to include modification factors as detailed in Section 4 of the EPA's *NSW Industrial Noise Policy*.
- Discuss the findings from the predictive modelling and, where relevant noise criteria have not been met, recommend additional mitigation measures.
- The noise impact assessment report should include details of any mitigation proposed including the attenuation that will be achieved and the revised noise impact predictions following mitigation.
- Where relevant noise/vibration criteria cannot be met after application of all feasible and cost effective mitigation measures the residual level of noise impact needs to be quantified by identifying:

- a) locations where the noise level exceeds the criteria and extent of exceedence
 - b) numbers of people (or areas) affected
 - c) times when criteria will be exceeded
 - d) likely impact on activities (speech, sleep, relaxation, listening, etc)
 - e) change on ambient conditions
 - f) the result of any community consultation or negotiated agreement.
- For the assessment of existing and future traffic noise, details of data for the road should be included such as assumed traffic volume; percentage heavy vehicles by time of day; and details of the calculation process. These details should be consistent with any traffic study carried out in the EIS.
 - Where blasting is intended an assessment in accordance with the *Technical Basis for Guidelines to Minimise Annoyance due to Blasting Overpressure and Ground Vibration* (ANZECC, 1990) should be undertaken. The following details of the blast design should be included in the noise assessment:
 - a) bench height, burden spacing, spacing burden ratio
 - b) blast hole diameter, inclination and spacing
 - c) type of explosive, maximum instantaneous charge, initiation, blast block size, blast frequency.

Describe management and mitigation measures

- Determine the most appropriate noise mitigation measures and expected noise reduction including both noise controls and management of impacts for both construction and operational noise. This will include selecting quiet equipment and construction methods, noise barriers or acoustic screens, location of stockpiles, temporary offices, compounds and vehicle routes, scheduling of activities, etc.
- For traffic noise impacts, provide a description of the ameliorative measures considered (if required), reasons for inclusion or exclusion, and procedures for calculation of noise levels including ameliorative measures. Also include, where necessary, a discussion of any potential problems associated with the proposed ameliorative measures, such as overshadowing effects from barriers. Appropriate ameliorative measures may include:
 - a) use of alternative transportation modes, alternative routes, or other methods of avoiding the new road usage
 - b) control of traffic (eg: limiting times of access or speed limitations)
 - c) resurfacing of the road using a quiet surface
 - d) use of (additional) noise barriers or bunds
 - e) treatment of the façade to reduce internal noise levels buildings where the night-time criteria is a major concern
 - f) more stringent limits for noise emission from vehicles (i.e. using specially designed 'quite' trucks and/or trucks to use air bag suspension
 - g) driver education
 - h) appropriate truck routes
 - i) limit usage of exhaust breaks
 - j) use of premium muffles on trucks

- k) reducing speed limits for trucks
- l) ongoing community liaison and monitoring of complaints
- m) phasing in the increased road use.

4. Water

Describe baseline conditions

- Describe existing surface and groundwater quality – an assessment needs to be undertaken for any water resource likely to be affected by the proposal and for all conditions (e.g. a wet weather sampling program is needed if runoff events may cause impacts).

Note: Methods of sampling and analysis need to conform with an accepted standard (e.g. EPA's Approved Methods for the Sampling and Analysis of Water Pollutants in NSW, 2004 or be approved and analyses undertaken by accredited laboratories).

- Provide site drainage details and surface runoff yield.
- State the ambient Water Quality and River Flow Objectives for the receiving waters. These refer to the community's agreed environmental values and human uses endorsed by the Government as goals for the ambient waters. These environmental values are published on the website: www.environment.nsw.gov.au/ieo. The EIS should state the environmental values listed for the catchment and waterway type relevant to your proposal.

NB: A consolidated and approved list of environmental values are not available for groundwater resources. Where groundwater may be affected the EIS should identify appropriate groundwater environmental values and justify the choice.

- 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.deh.gov.au/water/quality/nwqms/volume1.html>) (Note that, as at 2004, the NSW Water Quality Objectives booklets and website contain technical criteria derived from the 1992 version of the ANZECC Guidelines. The Water Quality Objectives remain as Government Policy, reflecting the community's environmental values and long-term goals, but the technical criteria are replaced by the more recent ANZECC 2000 Guidelines).

NB: While specific guidelines for groundwater are not available, the ANZECC 2000 Guidelines endorse the application of the trigger values and decision trees as a tool to assess risk to environmental values in groundwater.

- State any locally specific objectives, criteria or targets, which have been endorsed by the government e.g. the Healthy Rivers Commission Inquiries (www.hrc.nsw.gov.au) or the NSW Salinity Strategy (DLWC, 2000) (www.dlwc.nsw.gov.au/care/salinity/#Strategy).
- Where site specific studies are proposed to revise the trigger values supporting the ambient Water Quality and River Flow Objectives, and the results are to be used for regulatory purposes (e.g. to assess whether a licensed discharge impacts on water quality objectives), then prior agreement from the EPA on the approach and study design must be obtained.
- Describe the state of the receiving waters and relate this to the relevant Water Quality and River Flow Objectives (i.e. are Water Quality and River Flow Objectives being achieved?). Proponents are generally only expected to source available data and information. However, proponents of large or high risk developments may be required to collect some ambient water quality / river flow / groundwater data

to enable a suitable level of impact assessment. Issues to include in the description of the receiving waters could include:

- a) lake or estuary flushing characteristics
- b) specific human uses (e.g. exact location of drinking water offtake)
- c) sensitive ecosystems or species conservation values
- d) a description of the condition of the local catchment e.g. erosion levels, soils, vegetation cover, etc
- e) an outline of baseline groundwater information, including, but not restricted to, depth to water table, flow direction and gradient, groundwater quality, reliance on groundwater by surrounding users and by the environment
- f) historic river flow data where available for the catchment.

Assess impacts

- No proposal should breach clause 120 of the *Protection of the Environment Operations Act 1997* (i.e. pollution of waters is prohibited unless undertaken in accordance with relevant regulations).
- Identify and estimate the quantity of all pollutants that may be introduced into the water cycle by source and discharge point including residual discharges after mitigation measures are implemented.
- Include a rationale, along with relevant calculations, supporting the prediction of the discharges.
- Describe the effects and significance of any pollutant loads on the receiving environment. This should include impacts of residual discharges through modelling, monitoring or both, depending on the scale of the proposal. Determine changes to hydrology (including drainage patterns, surface runoff yield, flow regimes, wetland hydrologic regimes and groundwater).
- Describe water quality impacts resulting from changes to hydrologic flow regimes (such as nutrient enrichment or turbidity resulting from changes in frequency and magnitude of stream flow).
- Identify any potential impacts on quality or quantity of groundwater describing their source.
- Identify potential impacts associated with geomorphological activities with potential to increase surface water and sediment runoff or to reduce surface runoff and sediment transport. Also consider possible impacts such as bed lowering, bank lowering, instream siltation, floodplain erosion and floodplain siltation.
- Identify impacts associated with the disturbance of acid sulfate soils and potential acid sulfate soils.
- Containment of spills and leaks shall be in accordance with the technical guidelines section 'Bunding and Spill Management' of the *Authorised Officers Manual* (EPA, 1995) (<http://www.environment.nsw.gov.au/mao/bundingspill.htm>) and the most recent versions of the Australian Standards referred to in the Guidelines. Containment should be designed for no-discharge.
- The significance of the impacts listed above should be predicted. When doing this it is important to predict the ambient water quality and river flow outcomes associated with the proposal and to demonstrate whether these are acceptable in terms of achieving protection of the Water Quality and River Flow Objectives. In particular the following questions should be answered:
 - a) will the proposal protect Water Quality and River Flow Objectives where they are currently achieved in the ambient waters; and
 - b) will the proposal contribute towards the achievement of Water Quality and River Flow Objectives over time, where they are not currently achieved in the ambient waters.

- Consult with the EPA as soon as possible if a mixing zone is proposed (a mixing zone could exist where effluent is discharged into a receiving water body, where the quality of the water being discharged does not immediately meet water quality objectives. The mixing zone could result in dilution, assimilation and decay of the effluent to allow water quality objectives to be met further downstream, at the edge of the mixing zone). The EPA will advise the proponent under what conditions a mixing zone will and will not be acceptable, as well as the information and modelling requirements for assessment.

Note: The assessment of water quality impacts needs to be undertaken in a total catchment management context to provide a wide perspective on development impacts, in particular cumulative impacts.

- Where a licensed discharge is proposed, provide the rationale as to why it cannot be avoided through application of a reasonable level of performance, using available technology, management practice and industry guidelines.
- Where a licensed discharge is proposed, provide the rationale as to why it represents the best environmental outcome and what measures can be taken to reduce its environmental impact.
- Reference should be made to *Managing Urban Stormwater: Soils and Construction* (Landcom, 2004), *Guidelines for Fresh and Marine Water Quality* ANZECC 2000), EPA's *Environmental Guidelines: Use of effluent by Irrigation*, 2004.

Describe management and mitigation measures

- Outline stormwater management to control pollutants at the source and contain them within the site. Also describe measures for maintaining and monitoring any stormwater controls.
- Outline erosion and sediment control measures directed at minimising disturbance of land, minimising water flow through the site and filtering, trapping or detaining sediment. Also include measures to maintain and monitor controls as well as rehabilitation strategies.
- Describe waste water treatment measures that are appropriate to the type and volume of waste water and are based on a hierarchy of avoiding generation of waste water; capturing all contaminated water (including stormwater) on the site; reusing/recycling waste water; and treating any unavoidable discharge from the site to meet specified water quality requirements.
- Outline pollution control measures relating to storage of materials, possibility of accidental spills (eg preparation of contingency plans), appropriate disposal methods, and generation of leachate.
- Describe hydrological impact mitigation measures including:
 - a) site selection (avoiding sites prone to flooding and water logging, actively eroding or affected by deposition)
 - b) minimising runoff
 - c) minimising reductions or modifications to flow regimes
 - d) avoiding modifications to groundwater.
- Describe groundwater impact mitigation measures including:
 - a) site selection
 - b) retention of native vegetation and revegetation
 - c) artificial recharge

- d) providing surface storages with impervious linings
- e) monitoring program.
- Describe geomorphological impact mitigation measures including:
 - a) site selection
 - b) erosion and sediment controls
 - c) minimising instream works
 - d) treating existing accelerated erosion and deposition
 - e) monitoring program.
- Any proposed monitoring should be undertaken in accordance with the EPA's *Approved Methods for the Sampling and Analysis of Water Pollutants in NSW*, 2004.

5. Soils and contamination

Describe baseline conditions

- Provide any details (in addition to those provided in the location description - Section C) that are needed to describe the existing situation in terms of soil types and properties and soil contamination.

Assess impacts

- Identify any likely impacts resulting from the construction or operation of the proposal, including the likelihood of:
 - a) disturbing any existing contaminated soil
 - b) contamination of soil by operation of the activity
 - c) subsidence or instability
 - d) soil erosion
 - e) disturbing acid sulfate or potential acid sulfate soils.
- Reference should be made to EPA's *Contaminated Sites – Guidelines for Consultants Reporting on Contaminated Sites*, 2011; *Contaminated Sites – Guidelines on Significant Risk of Harm and Duty to Report Contamination under the Contaminated Land Management Act*, 2009.

Describe management and mitigation measures

- Describe and assess the effectiveness or adequacy of any soil management and mitigation measures during construction and operation of the proposal including:
 - a) erosion and sediment control measures
 - b) proposals for site remediation – see *Managing Land Contamination, Planning Guidelines SEPP 55 – Remediation of Land* (Department of Urban Affairs and Planning and Environment Protection Authority, 1998)

- c) proposals for the management of these soils – see *Assessing and Managing Acid Sulfate Soils*, Environment Protection Authority, 1995 (note that this is the only methodology accepted by the EPA).

6. Waste and chemicals

Describe baseline conditions

- Describe any existing waste or chemicals operations related to the proposal.

Assess impacts

- Assess the adequacy of proposed measures to minimise natural resource consumption and minimise impacts from the handling, transporting, storage, processing and reprocessing of waste and/or chemicals.
- Reference should be made to EPA's Waste Classification Guidelines, 2009.

Describe management and mitigation measures

- Outline measures to minimise the consumption of natural resources.
- Outline measures to avoid the generation of waste and promote the re-use and recycling and reprocessing of any waste.
- Outline measures to support any approved regional or industry waste plans.

7. Cumulative impacts

- Identify the extent that the receiving environment is already stressed by existing development and background levels of emissions to which this proposal will contribute.
- Assess the impact of the proposal against the long term air, noise and water quality objectives for the area or region.
- Identify infrastructure requirements flowing from the proposal (eg water and sewerage services, transport infrastructure upgrades).
- Assess likely impacts from such additional infrastructure and measures reasonably available to the proponent to contain such requirements or mitigate their impacts (eg travel demand management strategies).

F. List of approvals and licences

- Identify all approvals and licences required under environment protection legislation including details of all scheduled activities, types of ancillary activities and types of discharges (to air, land, water).

G. Compilation of mitigation measures

- Outline how the proposal and its environmental protection measures would be implemented and managed in an integrated manner so as to demonstrate that the proposal is capable of complying with statutory obligations under EPA licences or approvals (eg outline of an environmental management plan).
- The mitigation strategy should include the environmental management and cleaner production principles which would be followed when planning, designing, establishing and operating the proposal. It should include two sections, one setting out the program for managing the proposal and the other outlining the monitoring program with a feedback loop to the management program.

H. Justification for the Proposal

- Reasons should be included which justify undertaking the proposal in the manner proposed, having regard to the potential environmental impacts.

8 April 2014

Elle Donnelley
Planner
NSW Planning & Infrastructure
GPO Box 39
SYDNEY NSW 2001

Emailed: Elle.Donnelley@planning.nsw.gov.au

Your Reference: SSD 6437
Our Reference: OUT14/11021

Dear Ms Donnelley,

**Re: Request for Director General Requirements
Proposal – Old Northern Road Quarry Expansion**

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.

Mineral Resources Issues

Sand (friable sandstone) 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 operation 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.

DTIRIS - Mineral Resources Branch collects data on the quantity and value of construction materials produced annually throughout the State. Forms are sent to all

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

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.

Queries regarding the above information, and future requests for advice in relation to this matter, should be directed to the MRB Land Use team at landuse.minerals@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

A handwritten signature in black ink, appearing to read 'S Francis', with a stylized flourish extending from the end.

Simon Francis
A/Team Leader - Land Use

Encl. Attachments "A to B"

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, grain size, 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 grain size 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 *sand (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.

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 recommended 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



You reference: SSD 6437
Our reference: DOC14/44241
Contact: Rachel Lonie, 9995 6837

Ms Elle Donnelley
Planner, Mining Projects
Mining and Industry Projects
Planning and Infrastructure
GPO Box 39
SYDNEY NSW 2001

Department of Planning
Received
16 APR 2014
Scanning Room

Dear Ms Donnelly

I refer to your email of 3 April 2014 seeking input from the Office of Environment and Heritage (OEH) to the Director-General's Requirements (DGRs) for the Old Northern Quarry Expansion Project (SSD 6437).

OEH has reviewed the information provided and provides the following requirements for the Environmental Impact Statement (EIS) to be prepared for the project in relation to biodiversity and Aboriginal cultural heritage.

1. Biodiversity

With regard to biodiversity, OEH notes that while much of the site appears to be largely cleared of native vegetation and is used predominantly for agricultural purposes some patches of native vegetation are present. These are mapped as being Shale Sandstone Transition Forest and Sydney Sandstone Gully Forest.

OEH recommends the following be included in the Director-General's Requirements for the preparation of an Environmental Impact Statement (EIS). Further details about the assessment required is provided in Attachment 1.

1. The EIS should address impacts on flora and fauna, including threatened species, populations and endangered ecological communities and their habitats, in accordance with OEH's Threatened Species Survey and Assessment Guidelines (available at <http://www.environment.nsw.gov.au/threatenedspecies/surveyassessmentgdlns.htm>) and any relevant draft or final recovery plans.

2. Any steps taken to mitigate or offset any identified impacts to the environment should also be detailed in the EIS. The NSW offset principles for major projects (state significant development and state significant infrastructure) are to be used in assessing and determining the adequacy of any offsets. <http://www.environment.nsw.gov.au/biocertification/offsets.htm>

Note: The guidelines for the Supplementary Measures (Principle 6) are currently being developed by OEH. Until the guidelines are finalised, OEH should be consulted in regards to the application of this principle if it is being considered in the preparation of the EIS.

2. Aboriginal Cultural Heritage

In relation to Aboriginal cultural heritage, OEH recommends the following be included in the Director-General's Requirements for the preparation of an EIS:

- The EIS should address Aboriginal Heritage in accordance with the Draft *Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation* (2005).
- Impacts on Aboriginal cultural heritage must be avoided where possible. Where it is not possible, mitigation strategies must be explored in consultation with Aboriginal stakeholders.

If you have any queries regarding this matter please contact Rachel Lonie, Senior Regional Operations Officer on 9995 6837.

Yours sincerely

S. Harrison 14/04/14

SUSAN HARRISON
Senior Team Leader Planning
Greater Sydney Region
Regional Operations

Attachment 1

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

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 OEH officers and in accordance with OEH policy.

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

1. Where a BioBanking Statement is being sought under Part 7A of the *Threatened Species Conservation Act 1995* (TSC Act), the assessment must be undertaken by an accredited BioBanking assessor (as specified under Section 142B (1)(c) of the TSC Act 1995) and done in accordance with the *BioBanking Assessment Methodology and Credit Calculator Operational Manual* (DECCW, 2008). To qualify for a BioBanking Statement a proposal must meet the improve or maintain standard.
 - 1a. 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.
 2. Where the BioBanking Assessment Methodology is being used to assess impacts of a proposal and to determine required offsets, and a BioBanking Statement is not being obtained, the EIS should contain a detailed biodiversity assessment and all components of the assessment must be undertaken in accordance with the *BioBanking Assessment Methodology and Credit Calculator Operational Manual* (DECCW, 2008).
 - 2a. 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;
 - includes all relevant 'BioBanking files (e.g. *.xml output files), data sheets and documentation (including maps, aerial photographs, GIS shape files, other remote sensing imagery etc.) to ensure OEH can conduct an appropriate review of the assessment.
3. 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.
4. Any steps taken to mitigate or offset any identified impacts to the environment should also be detailed in the EIS. The NSW offset principles for major projects (state

significant development and state significant infrastructure) are to be used in assessing and determining the adequacy of any offsets.
<http://www.environment.nsw.gov.au/biocertification/offsets.htm>

Note: The guidelines for the Supplementary Measures (Principle 6) are currently being developed by OEH. Until the guidelines are finalised, OEH should be consulted in regards to the application of this principle if it is being considered in the preparation of the EIS.

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, 2009)
 - *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 <http://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 OEH website at <http://www.environment.nsw.gov.au/biobanking/biobankingtspd.htm> and <http://www.environment.nsw.gov.au/biobanking/vegtypedatabase.htm>, respectively) and other data sources (e.g. PlantNET, Online Zoological Collections of Australian Museums (<http://www.ozcam.org/>), previous or nearby surveys etc.) may also be used to compile the list.

3. 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, vegetation communities (including classification and methodology used to classify), 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. Identification of national and state listed threatened biota known or likely to occur in the study area and their conservation status.
 - f. 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.
 - g. 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.
 - h. 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).
 - i. Provision of specific Statement of Commitments relating to biodiversity.
4. 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* (DECCW, 2007) which is available at: <http://www.environment.nsw.gov.au/resources/threatenedspecies/tsaguide07393.pdf>
5. 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.
6. Any steps taken to mitigate or offset any identified impacts to the environment should also be detailed in the EIS. The NSW offset principles for major projects (state significant development and state significant infrastructure) are to be used in assessing and determining the adequacy of any offsets. <http://www.environment.nsw.gov.au/biocertification/offsets.htm>

Note: The guidelines for the Supplementary Measures (Principle 6) are currently being developed by OEH. Until the guidelines are finalised, OEH should be consulted in regards to the application of this principle if it is being considered in the preparation of the EIS.

7 April 2014

Our Reference: SYD14/00341 (A6520018)
DP&I Ref: SSD 6437

Director
Mining Projects
Planning and Infrastructure
GPO Box 39
Sydney NSW 2001

Attention: Elle Donnelley

**REQUEST FOR DIRECTOR GENERAL'S REQUIREMENTS FOR OLD NORTHERN ROAD
QUARRY EXPANSION PROJECT SSD 6437**

Reference is made to your email dated 3 April 2014 requesting Roads and Maritime Services (Roads and Maritime) to provide details of key issues and assessment requirements regarding the abovementioned development for inclusion in the Director General's Environmental Assessment (EA) requirements.

Roads and Maritime require the following issue to be included in the transport and traffic impact assessment of the proposed development:

1. Daily and peak traffic movements likely to be generated by the proposed development including the impact on nearby intersections and the need/associated funding for upgrading or road improvement works (if required).

The key intersection to be examined and modelled is:

- Site Access/Old Northern Road

Any inquiries in relation to this matter can be directed to Angela Malloch on 8849 2041 or Angela.Malloch@rms.nsw.gov.au

Yours faithfully



Pahee Rathana
A/Senior Land Use Planner
Network and Safety Section