DOC18/69245-01, EF13/4310

Department of Planning and Environment
GPO Box 39
SYDNEY NSW 2001

Attention: Philip Nevill
By email: Philip.nevill@planning.nsw.gov.au

15 February 2018

Dear Mr Nevill

**DALSWINTON SAND AND GRAVEL QUARRY (SSD 18_0994)**
**SECRETARY'S ENVIRONMENTAL ASSESSMENT REQUIREMENTS (SEARS)**

I refer to your email to the Environment Protection Authority (EPA), dated 7 February 2018, seeking the EPA's recommended Secretary Environmental Assessment Requirements (SEARS) for the Dalswinton Sand and Quarry.

The EPA has considered the proposal and has identified in **Attachment A** the information it requires to assess the project. In carrying out the assessment, the proponent should refer to the relevant guidelines listed in **Attachment B** and any relevant industry codes of practice and best practice management guidelines.

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

If you require any further information regarding this matter, please contact me on 4908 6821 or by email to hunter.region@epa.nsw.gov.au.

Yours sincerely

15.2.18

**BILL GEORGE**
**Senior Regional Operations Officer - Hunter**
**Environment Protection Authority**

Encl: **Attachment A** – EPA's Recommended Secretary's Environmental Assessment Requirements – Dalswinton Sand and Gravel Quarry (SSD 18_0994)

**Attachment B** – Guidance Materia

**Phone** 131 555
**Phone** 02 4908 6800
**Fax** 02 4908 6810
**TTY** 133 677
**ABN** 43 692 285 758
PO Box 488G
Newcastle
NSW 2300 Australia
117 Bull Street
Newcastle West
NSW 2302 Australia
**info@epa.nsw.gov.au**
**www.epa.nsw.gov.au**

**ATTACHMENT A**

## EPA's Recommended Secretary's Environmental Assessment Requirements – Dalswinton Sand and Gravel Quarry (SSD 18_0994)

### 1 Environmental impacts of the project

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

- Air Quality
- Noise and Vibration
- Water and Soil Quality and Management
- Waste Management
- Dangerous Goods, Chemical Storage and Bunding

The Environmental Impact Statement (EIS) should address the specific requirements outlined under each heading below and assess impacts in accordance with the relevant guidelines mentioned. A full list of guidelines is at Attachment B.

### 2 Licensing requirements

Should project approval be granted, the proponent will need to make a separate application to EPA for a variation to the existing Environment Protection Licence No.12709 for the Dalswinton Quarry. Additional information is available through EPA's *Guide to Licensing* document.

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

### 3 The Proposal and Premises

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

- The size and type of the operation;
- The nature of the processes and the products, by-products and wastes produced;
- The types and quantities of any chemicals to be used and stored onsite;
- Proposed operational hours, including any heavy vehicle movements;
- Proposed maximum and average annual production rates that will occur at the premises; and
- Proposed staging and timing of the proposal.

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

- The location of the proposed facility and details of the surrounding environment;
- The proposed layout of the site;
- Appropriate land use zoning;
- Ownership details of any residence and/or land likely to be affected by the proposed operations;
- Maps/diagrams showing the location of residences and properties likely to be affected and other industrial developments, conservation areas, wetlands, etc. in the locality that may be affected by the facility;
- A site diagram showing the site layout and location of environmental controls;
- All equipment proposed for use at the site;
- All chemicals, including fuel, used on the site and proposed methods for their transportation, storage, use and emergency management;
- Clearly detail the boundary of the premises; and
- Methods to mitigate any expected environmental impacts of the development.

# 4 Air Issues

## 4.1 Air quality

The EIS should include an air quality impact assessment (AQIA) in accordance with the Approved Methods for the Modelling and Assessment of Air Pollutants in NSW, including, as a minimum the following components:

Assessment Objective

1. Demonstrate the proposed project will incorporate and apply best management practice emission controls; and
2. Demonstrate that the project will not cause violation of the project adopted air quality impact assessment criteria at any residential dwelling or other sensitive receptor.

Assessment Criteria

- Define applicable assessment criteria for the proposed development referencing the Approved Methods for the Modelling and Assessment of Air Pollutants in NSW, including appendices and updates
- Demonstrate the proposal's ability to comply with the relevant regulatory framework, specifically the *Protection of the Environment Operations* (POEO) *Act* (1997) and the POEO (Clean Air) Regulation (2010).

Existing Environment

- Provide a detailed description of the existing environment within the assessment domain, including:
    - geophysical form and land-uses;
    - location of all sensitive receptors;
    - existing air quality; and
    - local and regional prevailing meteorology.
- Justify all data used in the assessment, specifically including analysis of inter-annual trends (preferably five consecutive years of data), availability of monitoring data, and local topographical features.
- Meteorological modelling must be verified against monitored data. Verification should involve comparative analysis of wind speed, wind direction and temperature, at a minimum.
- A review of all existing, recently approved and planned developments likely to contribute to cumulative air quality impacts must be completed.

Emissions Inventory

- Provide a detailed description of the project and identify the key stages with regards to the potential for air emissions and impacts on the surrounding environment.
- Identify all sources of air emissions, including mechanically generated, combustion and transport related emissions likely to be associated with the proposed development.
- Estimate emissions of TSP, PM10, PM2.5, NOx, (tonnes per year), at a minimum, for all identified sources during each key development stage. The emissions inventory should:
    - utilise USEPA (1995) (and updates) emission estimation techniques, direct measurement or other method approved in writing by EPA;
    - calculate uncontrolled emissions (with no particulate matter controls in place); and
    - calculate controlled emissions (with proposed particulate matter controls in place).

- The emissions inventory must be explicitly coupled with the project description.
- Provide a detailed summary and justification of all parameters adopted within all emission estimation calculations, including site specific measurements, proponent recommended values or published literature.
- Document, including quantification and justification, all air quality emission control techniques/practices proposed for implementation during the project. As a minimum, consideration must be given to source control techniques, emission control through mine planning and reactive/predictive management techniques.
- Blasting emission estimation should provide specific details on likely activities, including the frequency of blasts, area per blast, amount and type of explosives used and blasting hours.
- Demonstrate that the proposed control techniques/practices are consistent with best management practice.

Dispersion Modelling and Interpretation of Results

- Atmospheric dispersion modelling should be undertaken in accordance with the Approved Methods for the Modelling and Assessment of Air Pollutants in NSW, including appendices and updates.
- Modelling must implement fit for purpose modelling techniques that:
    - have regard for the most up to date and scientifically accepted dispersion modelling techniques;
    - contextualise all assumptions based on current scientific understanding and available data; and
    - include a thorough validation of adopted methods and model performance.
- Use an appropriate atmospheric dispersion model to predict, at a minimum, incremental ground level concentrations/levels of the following:
    - 24-hour and annual average PM10 concentrations;
    - 24-hour and annual average PM2.5 concentrations; and
    - 1-hour and annual average NO2 concentrations. NO2 concentrations should be assessed using a well justified approach for the transformation of NOx to NO2.
- Ground level concentrations of pollutants should be presented for surrounding privately-owned properties, site-owned properties and other sensitive receptors (as applicable).
- Undertake a cumulative assessment of predicted impacts. The contribution of all identified existing and recently approved developments should be accounted for in the cumulative assessment.
- Results of dispersion modelling should be presented as follows:
    - isopleth plots showing the geographic extent of maximum pollutant concentrations (incremental and cumulative);
    - tables presenting the maximum predicted pollutant concentrations (increment and cumulative) and the frequency of any predicted exceedances at each surrounding privately-owned properties, mine-owned properties and other sensitive receptors (as applicable); and
    - time series and frequency distribution plots of pollutant concentrations at each private receptor location at which an exceedance is predicted to occur. Where no exceedances are predicted, the analysis must be performed for the most impacted off site sensitive receptor.

Air Quality Emission Control Measures

- Provide a detailed discussion of all proposed air quality emission control measures, including details of a reactive/predictive management system. The information provided must include:
    - explicit linkage of proposed emission controls to the site specific best practice determination assessment
    - timeframe for implementation of all identified emission controls;
    - key performance indicators for emission controls;
    - monitoring methods (location, frequency, duration);
    - response mechanisms;
    - responsibilities for demonstrating and reporting achievement of KPIs;
    - record keeping and complaints response register; and
    - compliance reporting.

Stabilisation and rehabilitation of disturbed areas

Provide a detailed discussion on how stabilisation and rehabilitation of disturbed areas will be undertaken to assist in minimising wind generated dust within the premises.

## 5 Noise and Vibration

The following matters should be addressed in relation to noise and vibration impacts associated with the proposal. This includes identification of the hours of operations, assessment of all activities where proposed, and impacts on sensitive receivers associated with the proposed hours of operation. The following matters should be addressed as part of the EIS.

General

- Construction noise associated with the proposed development should be assessed using the Interim Construction Noise Guideline (DECC, 2009).

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

- Blast impacts should be demonstrated to be capable of complying with the guidelines contained in Australian and New Zealand Environment Council – Technical basis for guidelines to minimise annoyance due to blasting overpressure and ground vibration (ANZEC, 1990).

Industry

- Operational noise from all industrial activities (including private haul roads) to be undertaken on the premises should be assessed using the guidelines contained in the NSW Industrial Noise Policy (EPA, 2000) and the Noise Policy for Industry 2017.

Road

- Noise on public roads from increased road traffic generated by land use developments should be assessed using the guidelines contained in the NSW Road Noise Policy (DECCW, 2011).

- Noise from new or upgraded public roads should be assessed using the NSW Road Noise Policy (DECCW, 2011).

Monitoring

- Detail all monitoring that will be conducted to assess the impacts of the proposal.

# 6 Water and Soils

## 6.1 Water Quality

Describe Proposal

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

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

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

- Assess whether the proposal will regulation under the Hunter River Salinity Trading Scheme (HRSTS) Regulation 2002 in regard to potential saline water discharges.

Background Conditions

- Describe existing surface and groundwater quality. An assessment needs to be undertaken for any water resource likely to be affected by the proposal. Issues to be discussed should include but are not limited to:
  - a description of any impacts from existing industry or activities on water quality
  - a description of the condition of the local catchment e.g. erosion, soils, vegetation cover, etc.
  - an outline of baseline groundwater information, including, for example, depth to water table, flow direction and gradient, groundwater quality, reliance on groundwater by surrounding users and by the environment
  - historic river flow data

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

- State the indicators and associated trigger values or criteria for the identified environmental values. This information should be based on the ANZECC (2000) Guidelines for Fresh and Marine Water Quality as a minimum but should also be based on advice from Hunter Water Corporation given the sensitive receiving environment of Grahamstown Dam water supply.

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

Impact Assessment

- Describe the nature and degree of impact that any proposed discharges will have on the receiving environment, both surface water and groundwater.

- Detail contractual and other arrangements that will be put in place to prevent pollution from haul roads and unsealed roads per se, particularly rights of carriageways not owned by the proponent.
- Assess impacts against the relevant ambient water quality outcomes. Demonstrate how the proposal will be designed and operated to:
  - protect the Water Quality Objectives for receiving waters where they are currently being achieved; and
  - contribute towards achievement of the Water Quality Objectives over time where they are not currently being achieved.
- Where a discharge is proposed that includes a mixing zone, the proposal should demonstrate how wastewater discharged to waterways will ensure the ANZECC (2000) water quality criteria for relevant chemical and non-chemical parameters are met at the edge of the initial mixing zone of the discharge, and that any impacts in the initial mixing zone are demonstrated to be reversible.
- Propose water quality limits for any discharge(s) that adequately protects the receiving environment.
- Assess impacts on groundwater and groundwater dependent ecosystems.
- Describe how stormwater will be managed both during and after construction.

Monitoring

- Describe how predicted impacts will be monitored and assessed over time.
- Describe water quality monitoring to be undertaken. This should include monitoring of all potential pollutants, the proposed sampling frequency and sampling methodologies.

## 6.2 Soil

The EIS should include:

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

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

# 7 Waste

The EIS should:

- Include a detailed plan for in-situ classification of waste material, including the sampling locations and sampling regime that will be employed to classify the waste, particularly with regards to the identification of contamination hotspots.

- Identify, quantify, characterise and classify all waste that currently exists at the site. Identify the intended end use, for example reuse or disposal, and the end use location(s) for the waste. Also, specify the mechanism under which waste will be reused or disposed, such as a Resource Recovery Exemption. Note: All waste must be classified in accordance with EPA's Classification Guidelines.

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

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

- Include a commitment to retaining all sampling and classification results for the life of the project to demonstrate compliance with EPA's Waste Classification Guidelines.

- Provide details of how waste will be handled and managed onsite to minimise pollution, including:

  a) Stockpile location and management
     - Labelling of stockpiles for identification, ensuring that all waste is clearly identified and stockpiled separately from other types of material (especially the separation of any contaminated and non-contaminated waste).
     - Proposed height limits for all waste to reduce the potential for dust and odour.
     - Procedures for minimising the movement of waste around the site and double handling.
     - Measures to minimise leaching from stockpiles into the surrounding environment, such as sediment fencing, geofabric liners etc.

  b) Erosion, sediment and leachate control including measures to be implemented to minimise erosion, leachate and sediment mobilisation at the site during works. The EIS should show the location of each measure to be implemented. The Proponent should consider measures such as:
     - Sediment traps
     - Diversion banks
     - Sediment fences
     - Bunds (earth, hay, mulch)
     - Geofabric liners
     - Other control measures as appropriate

     The Proponent should also provide details of:
     - how leachate from stockpiled waste material will be kept separate from stormwater runoff;
     - treatment of leachate through a wastewater treatment plant (if applicable); and
     - any proposed transport and disposal of leachate off-site.

- Provide details of how the waste will be handled and managed during transport to a lawful facility. If the waste possesses hazardous characteristics, the Proponent must provide details of how the waste will be treated or immobilised to render it suitable for transport and disposal.

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

- Include a statement demonstrating that the Proponent is aware of EPA's requirements with respect to notification and tracking of waste.

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

- Outline contingency plans for any event that affects operations at the site that may result in environmental harm, including: excessive stockpiling of waste, volume of leachate generated exceeds the storage capacity available on-site etc.

## 8 Dangerous Goods, Chemical storage and Bunding

- The EIS must outline all details regarding the transport, handling, storage and use of dangerous goods, chemicals and products, including fuel, both on site and with ancillary activities and describe the measures proposed to minimise the potential for leakage or the migration of pollutants into the soil/waters or from the site.

- The EIS should identify any fuel or chemical storage areas proposed for the site.

- The EIS should consider compliance with the following legislation, standards and guidelines where relevant:
  - Australian Standard AS1692:1989 Tanks for Flammable and combustible liquids;
  - Bunding and Spill Management Guideline (Office of Environment & Heritage);
  - Australian Standard AS 1940:2004 The Storage and Handling of Flammable and Combustible Liquids;
  - Australia Standard AS 4452-1997: The Storage and Handling of Toxic Substances;
  - Australian/New Zealand Standard AS/NZS 4452:1997: The Storage and Handling of Mixed Classes of Dangerous Goods in Packages and Intermediate Bulk Containers; and
  - Road and Rail Transport (Dangerous Goods) Act 1997

## 9 Monitoring Programs

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

**ATTACHMENT B**

**Guidance Material**

| Title | Web address |
|---|---|
| **Relevant Legislation** | |
| *Environmentally Hazardous Chemicals Act 1985* | http://www.legislation.nsw.gov.au/maintop/view/inforce/act+14+1985+cd+0+N |
| *Environmental Planning and Assessment Act 1979* | http://www.legislation.nsw.gov.au/maintop/view/inforce/act+203+1979+cd+0+N |
| *Protection of the Environment Operations Act 1997* | http://www.legislation.nsw.gov.au/maintop/view/inforce/act+156+1997+cd+0+N |
| *Water Management Act 2000* | http://www.legislation.nsw.gov.au/maintop/view/inforce/act+92+2000+cd+0+N |
| *Contaminated Land Management Act 2000* | http://www.legislation.nsw.gov.au/#/view/act/1997/140 |
| **Licensing** | |
| Guide to Licensing | www.environment.nsw.gov.au/licensing/licenceguide.htm |
| **Air Issues** | |
| **Air Quality** | |
| Approved methods for the Modelling and Assessment of Air Pollutants in NSW (2016) | http://www.epa.nsw.gov.au/resources/epa/approved-methods-for-modelling-and-assessment-of-air-pollutants-in-NSW-160666.pdf |
| Approved methods for the Sampling and Analysis of Air Pollutants in NSW (2016) | http://www.epa.nsw.gov.au/resources/air/07001amsaap.pdf |
| Coal Mine Particulate Matter Control Best Practice – Site specific determination guide | www.epa.nsw.gov.au/resources/air/20110813coalmineparticulate.pdf |
| POEO (Clean Air) Regulation 2010 | http://www.legislation.nsw.gov.au/maintop/view/inforce/subordleg+428+2010+cd+0+N |
| **Noise and Vibration** | |
| Interim Construction Noise Guideline (DECC, 2009) | http://www.environment.nsw.gov.au/noise/constructnoise.htm |
| Assessing Vibration: a technical guideline (DEC, 2006) | http://www.environment.nsw.gov.au/noise/vibrationguide.htm |
| Australian and New Zealand Environment Council – Technical basis for guidelines to minimise annoyance due to blasting overpressure and ground vibration (ANZEC, 1990) | http://www.environment.nsw.gov.au/noise/blasting.htm |
| NSW Industrial Noise Policy, Noise Policy for Industry (2017), Implementation and Transitional arrangements for the Noise Policy for Industry (2017). | http://www.epa.nsw.gov.au/resources/noise/ind_noise.pdf<br>https://www.epa.nsw.gov.au/publications/noise/17p0524-noise-policy-for-industry<br>https://www.epa.nsw.gov.au/publications/noise/17p0293-implement-transition-arrange-noise-pol-industry |
| NSW Road Noise Policy (DECCW, 2011) | http://www.epa.nsw.gov.au/resources/noise/2011236nswroadnoisepolicy.pdf |
| **Human Health Risk Assessment** | |

| Title | Web address |
|---|---|
| Environmental Health Risk Assessment: Guidelines for assessing human health risks from environmental hazards (enHealth, 2012) | http://www.eh.org.au/documents/item/916 |
| **Waste** | |
| Waste Classification Guidelines (EPA, 2014) | http://www.epa.nsw.gov.au/wasteregulation/classify-guidelines.htm |
| Resource recovery exemptions | http://www.epa.nsw.gov.au/wasteregulation/recovery-exemptions.htm |
| Resource recovery orders and exemptions | http://www.epa.nsw.gov.au/wasteregulation/orders-exemptions.htm |
| NSW Waste Avoidance and Resource Recovery Strategy 2014-2021 | http://www.epa.nsw.gov.au/wastestrategy/warr.htm |
| **Contaminated Sites Assessment and Remediation** | |
| Managing land contamination: Planning Guidelines – SEPP 55 Remediation of Land | http://www.epa.nsw.gov.au/clm/planning.htm |
| Guidelines for Consultants Reporting on Contaminated Sites (EPA, 2000) | http://www.epa.nsw.gov.au/resources/clm/20110650consultantsglines.pdf |
| Guidelines for the NSW Site Auditor Scheme - 2nd edition (DEC, 2006) | http://www.epa.nsw.gov.au/resources/clm/auditorglines06121.pdf |
| Sampling Design Guidelines (EPA, 1995) | http://www.epa.nsw.gov.au/resources/clm/95059sampgdlne.pdf |
| National Environment Protection (Assessment of Site Contamination) Measure 1999 (or update) | http://www.scew.gov.au/nepms/assessment-site-contamination |
| **Water and Soils** | |
| **Soils – general** | |
| Soil and Landscape Issues in Environmental Impact Assessment (DLWC 2000) | http://www.dnr.nsw.gov.au/care/soil/soil_pubs/pdfs/tech_rep_34_new.pdf |
| Managing urban stormwater: soils and construction, vol. 1 (Landcom 2004) and vol. 2 (A. Installation of services; B Waste landfills; C. Unsealed roads; D. Main Roads; E. Mines and quarries) (DECC 2008) | Vol 1 - Available for purchase at http://www.landcom.com.au/whats-new/publications-reports/the-blue-book.aspx<br>Vol 2 - http://www.environment.nsw.gov.au/stormwater/publications.htm |
| Landslide risk management guidelines | http://www.australiangeomechanics.org/resources/downloads/ |
| Site Investigations for Urban Salinity (DLWC, 2002) | http://www.environment.nsw.gov.au/resources/salinity/booklet3siteinvestigationsforurbansalinity.pdf |
| Local Government Salinity Initiative Booklets | http://www.environment.nsw.gov.au/salinity/solutions/urban.htm |
| **Water** | |
| Water Quality Objectives | http://www.environment.nsw.gov.au/ieo/index.htm |
| ANZECC (2000) Guidelines for Fresh and Marine Water Quality | http://www.mincos.gov.au/publications/australian_and_new_zealand_guidelines_for_fresh_and_marine_water_quality |
| Applying Goals for Ambient Water Quality Guidance for Operations Officers – Mixing Zones | http://deccnet/water/resources/AWQGuidance7.pdf |

| Title | Web address |
|---|---|
| Approved Methods for the Sampling and Analysis of Water Pollutant in NSW (2004) | http://www.environment.nsw.gov.au/resources/legislation/approvedmethods-water.pdf |
| Water Pollution and Treatment (EPA) | http://www.environment.nsw.gov.au/water/polltreatment.htm |

Planning & Environment
Resources & Geoscience

20 February 2018

Philip Nevill
Environmental Assessment Officer
Department of Planning & Environment
GPO Box 39
Sydney NSW 2001

Emailed: Philip.nevill@planning.nsw.gov.au

Your Reference: SSD 18_0994
Our Reference: OUT18/2159

Dear Mr Nevill,

**Re: Request for Secretary's Environmental Assessment Requirements**
**Proposed Expansion of Dalswinton Sand and Gravel Quarry – SSD18_0994**

Thank you for the opportunity to provide advice on the subject proposal. This is a response from NSW Department of Planning & Environment – Division of Resources & Geoscience, Geological Survey of New South Wales (GSNSW).

The building and construction industries in NSW require ongoing replacement of supplies as sources are exhausted. The expansion of existing quarries, subject to environmental assessment, helps to ensure a continued supply of material for a range of building and construction uses in NSW. The resource in the subject area represents a regionally important source of sand and aggregate for the Hunter and Sydney regions.

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.

Sand and aggregate are not a prescribed mineral under the *Mining Act 1992*. Therefore, the Department has no statutory role in authorising or regulating the extraction of this commodity, apart from its role under the *Work Health and Safety Act 2011* and associated regulations and the *Work Health and Safety (Mine and Petroleum Sites) Act 2013* and associated regulations, for ensuring 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.

All environmental reports (EIS 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.**

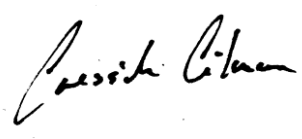
**The above information should be summarised in the EIS, with full documentation appended.** If deemed commercial-in-confidence, the resource assessment summary included in the EIS should commit to providing DRG with full resource assessment documentation separately. Applications to modify, expand, extend 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.

DRG collects data on the quantity of construction materials produced annually throughout the State. Forms are sent to all operating quarries at the end of each financial year for this purpose. The statistical data 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. Production data may be published in aggregated form, however production data for individual operations is kept strictly confidential.

**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 the NSW Division of Resources and Geoscience 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 Division of Resources & Geoscience - Land Use team at landuse.minerals@industry.nsw.gov.au.

Yours sincerely



Cressida Gilmore
Manager - Land Use

**Encl. Attachments "A"**

Planning & Environment
NSW GOVERNMENT | Resources & Geoscience

**ATTACHMENT A**

# NSW Department of Planning & Environment
# RESOURCES & GEOSCIENCE DIVISION

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

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

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

### Resource Assessment

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

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

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

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

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

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

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

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

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

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

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

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

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

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

14. Assessment of the ecological sustainability of the proposal.

**Health and Safety Issues**

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

1. All mining operations are to comply with the following legislation:
    a. *Work Health and Safety Act 2011*
    b. *Work Health and Safety Regulation 2017*
    c. *Work Health and Safety (Mine and Petroleum Sites) Act 2013*
    d. *Work Health and Safety (Mine and Petroleum Sites) Regulation 2014*
    e. *Explosives Act 2003*
    f. *Explosives Regulation 2013*.

2. The mine holder must appoint a mine operator and notify the Department in writing as required by clause 7 of the *Work Health and Safety (Mines and Petroleum Sites) Regulation 2014* before commencing any mining operations.

3. Other duties and notification and reporting requirements exist under the WHS laws and duty holders must ensure they understand and comply with these requirements.

**Mineral Ownership**

The *Mining Act 1992* applies to those commodities prescribed by the regulations of the Act (Schedule 2, *Mining Regulation 2016*). Most construction materials are not prescribed minerals under the *Mining Act 1992*. In general terms, this means these materials are owned by the Crown where they occur on Crown land and by the landowner in the case of freehold land. A Mining Title is not required for their extraction although a Crown Lands licence is required where they occur on Crown land.

Construction materials such as s*and (other than marine aggregate), loam, river gravel, and coarse aggregate materials such as basalt, sandstone, and granite* are not prescribed minerals under the *Mining Act 1992*. Therefore, NSW Department of Planning & Environment has no statutory responsibility for authorising or regulating the extraction of these commodities, apart from its role under the WHS laws 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 an individual, 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 mining lease or mining (mineral owner) lease would be required. If it is a Crown mineral, an application for a mining lease will have to be lodged.

If you are unsure whether a mining title is required for your proposal you should contact NSW Department of Planning & Environment, Resources & Geoscience Division.

**Hunter New England Local Health District**
**Hunter New England Population Health**
**Direct Contact Details**
Phone: (02) 4924 6477 Fax: (02) 4924 6490
Email: cindy.gliddon@hnehealth.nsw.gov.au

NSW GOVERNMENT Health
Hunter New England
Local Health District

21 February 2018

Mr Philip Nevill
Environmental Assessment Officer
Planning Services
GPO Box 39
SYDNEY NSW 2001

Dear Mr Nevill

**DALSWINTON QUARRY, DALSWINTON (SSD 18_9094) - SECRETARY'S ENVIRONMENTAL ASSESSMENT REQUIREMENTS (SEARS)**

I refer to your email of 7 February 2018 requesting input into the SEARs for the continuation and expansion of sand and gravel extraction at Dalswinton Quarry (Lot 72 DP1199484) located in the Muswellbrook local government area.

The proposed development is expected to extract approximately 500,000 tonnes per annum over a twenty-five year period. This includes reworking previous stages to recover fine aggregates.

It is noted that the proponent intends to carry out stakeholder consultation and consider the environmental aspects that are most likely to impact on human health in the Environment Impact Statement (EIS). This will include air quality and odour, noise and vibration, stormwater, soil and water issues.

Hunter New England Population Health (HNEPH) has reviewed the SEARs Application and provides the following points to be further considered in the EIS.

**Stakeholder Consultation**
It is recommended that the proponent seeks additional specialist advice in relation to ensuring robust community engagement and stakeholder consultation processes.

**Environmental Health Risk Assessment**
It is recommended that the EIS include the requirement of a human health risk assessment that considers the potential adverse effects from human exposure to acute and cumulative project related environmental hazards. The assessment should be conducted in accordance with the enHealth document *Environmental Health Risk Assessment: Guidelines for assessing human health risk from environmental hazards (2012)* and be submitted as part of the EIS.

**Hunter New England Local Health District**
ABN 63 598 010 203

**Hunter New England Population Health**
Locked Bag 10
Wallsend NSW 2287
Phone (02) 4924 6477 Fax (02) 4924 6490
Email HNELHD-PHEnquiries@hnehealth.nsw.gov.au
www.hnehealth.nsw.gov.au/hneph

The assessment should include, but not be limited to:

- Assessment of the human exposure risks to acute and cumulative impact of noise,
- Air quality - particulates and cumulative impact of particulates, and;
- The risk of contamination of stormwater and drinking water including ground water, surface water and rain water tanks.

When assessing health risks, both incremental changes in exposure from existing background pollutant levels and the cumulative impacts of specific and existing pollutant levels should be addressed at the location of receptors. Exposure should be assessed at the location of the most affected receptors and also for the other sensitive receptors which may include childcare centres, hospitals and aged care facilities. Consideration should also be given to the size of the population exposed to environmental hazards.

**Potable Water Supply**
The email does not mention a potable water supply for the facilities and employees at Dalswinton Quarry. It is expected that there is no town water supply to the site and therefore the assessment should include comment on issues associated with drinking water quality and rainwater tanks. The peak reference document in Australia for information in relation to rainwater tanks is enHealth's *Guidance on use of rainwater tanks* (2010), which is accessible at:
http://www.health.gov.au/internet/main/publishing.nsf/Content/ohp-enhealth-raintank-cnt.htm

Businesses or facilities that supply drinking water from an independent water supply (i.e. not town water) need to follow the *NSW Health Private Water Supply Guidelines* (2014). The *Public Health Act 2010* and the *Public Health Regulation 2012* require drinking water suppliers, including private water suppliers, to develop and adhere to a 'quality assurance program' (or drinking water management system). Further information and templates can be found at:
http://www.health.nsw.gov.au/environment/water/Pages/private-supplies.aspx

NSW Health recommends regular testing of drinking water at facilities with a private supply. If a private water supply is contaminated, or is not monitored or not treated then consumers should be warned.

We look forward to reviewing the proponent's EIS when on exhibition.

Should you require any additional information in relation to the above, please contact Ms Cindy Gliddon, Environmental Health Officer on 4924 6477.

Yours sincerely

Dr David Durrheim
Service Director - Health Protection

Department of Industry

OUT18/2296

Mr Philip Nevill
Resource Assessments
NSW Department of Planning and Environment

Philip.nevill@planning.nsw.gov.au

Dear Mr Nevill

**Dalswinton Sand and Gravel Quarry (SSD 0994)**
**Comment on the Secretary's Environmental Assessment Requirements (SEARs)**

I refer to your email of 7 February 2018 to the Department of Industry in respect to the above matter. Comment has been sought from relevant branches of Lands & Water and Department of Primary Industries.

Any further referrals to Department of Industry can be sent by email to landuse.enquiries@dpi.nsw.gov.au.

The department has reviewed the Preliminary Environmental Assessment and advises that the EIS should be required to address the following:

**Land**

- An assessment of the impact of the development on agricultural land and enterprises, including an assessment of current and potential Important Agriculture Land on the development site and surrounding locality, and flood prone land, a soil survey to consider the potential for erosion to occur, and paying particular attention to the compatibility of the development with the existing land uses on the site and adjacent land (e.g. operating mines, extractive industries, mineral or petroleum resources, exploration activities, aerial spraying, dust generation, and biosecurity risk) during operation and after decommissioning.
- A Landuse Conflict Risk Assessment (LUCRA) to identify potential landuse conflict, in particular relating to separation distances and management practices to minimise odour, dust, and noise from sensitive receptors or sources that may affect the development.
- An assessment of rehabilitation and decommissioning/closure management that outlines rehabilitation objectives and strategies to guide the return of the land back to agricultural production.
- Details of proposed measures to adequately avoid or mitigate all significant impacts to current and potential agricultural developments.

**Water**

- A detailed and consolidated site water balance, including:
    - Annual volumes of surface water and groundwater proposed to be taken by the activity (including through inflow and seepage) from each surface and groundwater source as defined by the relevant water sharing plan.

    - Assessment of any volumetric water licensing requirements (including those for ongoing water take following completion of the project).
    - The identification of an adequate and secure water supply for the life of the project. 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.
- 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.
- Full technical details and data of all surface and groundwater modelling.
- Proposed surface and groundwater monitoring activities and methodologies.
- Assessment of any potential cumulative impacts on water resources, and any proposed options to manage the cumulative impacts.
- Consideration of relevant policies and guidelines.

**Guidelines**

The section on policies and guidelines should also include the following:

- Aquifer Interference Policy (2012)
- Guidelines for Controlled Activities on Waterfront Land (2012)
- Land Use Conflict Risk Assessment Guide (2011)
- Agricultural Issues for Extractive industry Development (2012)

Yours sincerely

Alex King
**Director Cabinet and Legislation Services**
21 February 2018

muswellbrook shire council

**Enquiries**
**Please ask for** Scott Brooks
**Direct** 02 6549 3862
**Our reference**
**Your reference**

21 February 2018

**Philip Nevill**
**Environmental Assessment Officer**
**Dept of Planning & Environment**
**GPO Box 39**
**SYDNEY NSW 2001**

Dear Philip,

**Dalswinton Sand and Gravel Quarry Request for SEAR's**

I refer to an application from HDB Town Planning and Design on behalf of Rosebrook Sand and Gravel ("the Proponent") for SEAR's requirements for SSD 18_0994. We make the following submission on behalf of Muswellbrook Shire Council ("Council") with respect to the Proponents SEAR's application dated February 2018. Council appreciates the opportunity for comment.

The quarry development currently has a Muswellbrook Shire Council Consent DA 410/1995 that expires in November 2019. On the 22nd March 2017 an inspection was undertaken as a part of a Shire wide review of all quarries holding Council Consents. The Dalswinton quarry was found to be neat and tidy and operated in a professional manner. They were generally complaint with the Consent requirements with the significant exception of the quarry surface area and stockpile volumes exceeding limits identified in the Consent. The outcomes of these findings have triggered the need for this SSD application.

This proposal involves a continuation of the existing operations with the following exceptions:

- The area of land to be the subject of quarrying operations is to increase by 39Ha;
- The existing area where material has been previously extracted is to be re-worked to extract sand, that is known to have remained in the reject stream;
- The annual tonnage limit is to increase from 150,000TPA to 500,000TPA;
- The quarry life is to be extended 25 years.

Council's issues of concern are as follows:

**Flooding**
Section 5.4 incorrectly states that the site is not flood affected. The entire site is inundated in a 1% AEP flood event. Please find attached supporting map. Council ask that the impact of flood on the site be fully assessed and flood heights assessed against Councils latest flood studies to ensure consistency. The Flood study should include:

1. Predicted flood heights;
2. The effect of the quarry infrastructure and stockpiles on flood flow;

3. The risk of erosion in the quarry resulting from floods;
4. The risk of the river diverting from its current course should the quarry be flooded and erode;
5. The risk of quarry equipment being washed away and polluting the down steam environment during floods.

It is noted that Section 3.2 has the stockpiles running parallel with the River, and this is supported by Council. Any quarry infrastructure should provide only minimal effect on flood and modeling needs to be undertaken to ensure the development does not increase flood height either upstream or downstream of the development.

**Offset from the Hunter River**
It is noted that the quarry is planned to be a minimum of 100m from the Hunter River. This distance will need to be confirmed against Office of Water requirements to ensure it is compliant with current policy.

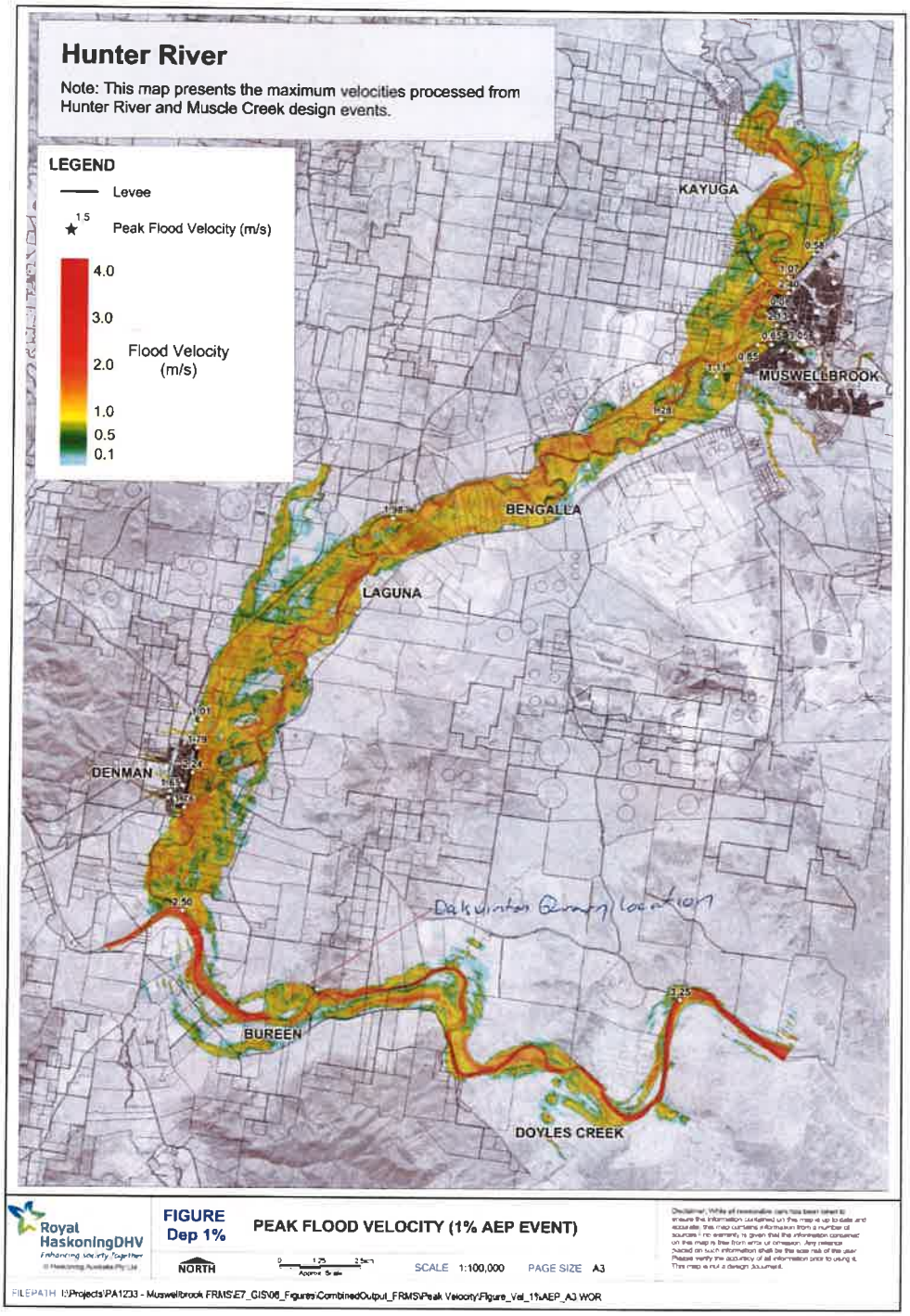
**Site Drainage**
It is known that there is a moderate sized catchment area to the north of the planned quarry extension. It will need to be confirmed that any stormwater runoff from this area can be diverted around the quarry and safely conveyed to the Hunter River.

**Additional Truck Movements**
The additional truck movements proposed may result in dust or mud being tracked onto the Golden Highway. It is requested that this is managed by the inclusion of a 50-60m bitumen sealed section on the highway end of the quarry haul road to reduce the risk of effect on the Highway.
It is noted that the planned product tonnage taken off site is to increase more than 3 fold per annum from 150,000tpa to 500,000tpa. Both the existing capacity of the Golden Highway and the intersection will need to be assessed against current RMS and Council requirements.
It is known that there are private residences that gain access of the Dalswinton haul road and so live near it. The effect of the additional traffic, mainly for noise and dust should be considered in the Application.

Council appreciates the opportunity to comment and would be pleased to provide additional information if requested.

Yours faithfully

Fiona Plesman
**ACTING GENERAL MANAGER**


Hunter River
Note: This map presents the maximum velocities processed from Hunter River and Muscle Creek design events.
LEGEND
Levee
Peak Flood Velocity (m/s)
4.0
3.0
2.0
1.0
0.5
0.1
Flood Velocity (m/s)
KAYUGA
MUSWELLBROOK
BENGALLA
LAGUNA
DENMAN
BUREEN
DOYLES CREEK
Dalswinton Granary location
FIGURE Dep 1%
PEAK FLOOD VELOCITY (1% AEP EVENT)
NORTH
SCALE 1:100,000
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DOC18/68940-1

SSD 18_0994

Philip Nevill
Environmental Assessment Officer, Resource Assessments
Department of Planning and Environment
philip.nevill@planning.nsw.gov.au

Dear Philip

**Input into Secretary's Environmental Assessment Requirements – Dalswinton Sand and Gravel Quarry - 511 Dalswinton Road, Dalswinton (SSD 18_0994)**

I refer to your email dated 7 February 2018 seeking input into the Secretary's Environmental Assessment Requirements (SEARs) for the extension of the Dalswinton Sand and Gravel Quarry, located at 511 Dalswinton Road, Dalswinton (Lot 72 in DP 1199484). The proposed development is within the Muswellbrook local government area.

The Office of Environment and Heritage (OEH) understands that Rosebrook Sand and Gravel Pty Ltd (the applicant) are seeking to extend the existing Dalswinton sand and gravel quarry for post 2019-operations for approximately a further 25 years. OEH understands that the proposal is a State Significant Infrastructure (SSD 8937) project under the *Environmental Planning and Assessment Act 1979*.

OEH has reviewed the Preliminary Environmental Assessment as prepared by Hunter Development Brokerage (dated February 2018) and has prepared Standard SEARs which are presented in **Attachment A**. There are no project-specific SEARs provided for this project (**Attachment B**).

For biodiversity and threatened species matters, this project is to be assessed in accordance with the Biodiversity Assessment Method (BAM, dated 25 August 2017) and documented in a Biodiversity Development Assessment Report (BDAR). The BDAR must include information in the form detailed in the *Biodiversity Conservation Act 2016* (s6.12) (BC Act), *Biodiversity Conservation Regulation 2017* (s6.8) and BAM. Under this process, the BDAR must be prepared by a person accredited in accordance with the Accreditation Scheme for the Application of the Biodiversity Assessment Method Order 2017 under s6.10 of the BC Act.

The proponent will need to ensure that the BDAR is fully consistent with requirements of the BAM. Details of guidance documents to assist with this process are provided in **Attachment C**.

With respect to Aboriginal cultural heritage, OEH notes that any Aboriginal cultural heritage assessment undertaken prior to 2010 is unlikely to meet current OEH Aboriginal cultural heritage guidelines for the assessment of Aboriginal cultural heritage in NSW. The OEH 2011 *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW* should be referenced in this instance.

If you have any further questions in relation to this matter, please contact Steve Lewer, Regional Biodiversity Conservation Officer, on 02 4927 3158.

Yours sincerely

**STEVEN COX**

**Senior Team Leader - Planning**
**Hunter Central Coast Branch**
**Regional Operations Division**

21 February 2018

Contact officer: STEVE LEWER
02 4927 3158

Enclosure: Attachments A, B and C

# Attachment A – Standard Environmental Assessment Requirements

**Biodiversity**

1. Biodiversity impacts related to the proposed development (SSD 17_8795) are to be assessed in accordance with the Biodiversity Assessment Method and documented in a Biodiversity Development Assessment Report (BDAR). The BDAR must include information in the form detailed in the *Biodiversity Conservation Act 2016* (s6.12), *Biodiversity Conservation Regulation 2017* (s6.8) and Biodiversity Assessment Method.
2. The BDAR must document the application of the avoid, minimise and offset framework including assessing all direct, indirect and prescribed impacts in accordance with the Biodiversity Assessment Method.
3. The BDAR must include details of the measures proposed to address the offset obligation as follows;
   - The total number and classes of biodiversity credits required to be retired for the development/project;
   - The number and classes of like-for-like biodiversity credits proposed to be retired;
   - The number and classes of biodiversity credits proposed to be retired in accordance with the variation rules;
   - Any proposal to fund a biodiversity conservation action;
   - Any proposal to conduct ecological rehabilitation (if a mining project);
   - Any proposal to make a payment to the Biodiversity Conservation Fund.

If seeking approval to use the variation rules, the BDAR must contain details of the reasonable steps that have been taken to obtain requisite like-for-like biodiversity credits.

4. The BDAR must be prepared by a person accredited in accordance with the Accreditation Scheme for the Application of the Biodiversity Assessment Method Order 2017 under s6.10 of the *Biodiversity Conservation Act 2016*.

**Aboriginal cultural heritage**

5. The Environmental Impact Assessment (EIS) must identify and describe the Aboriginal cultural heritage values that exist across the whole area that will be affected by the development and document these in the Aboriginal Cultural Heritage Assessment Report (ACHAR). This may include the need for surface survey and test excavation. The identification of cultural heritage values should be guided by the Guide to investigating, assessing and reporting on Aboriginal Cultural Heritage in NSW (DECCW, 2011) and consultation with OEH regional branch officers.

6. Consultation with Aboriginal people must be undertaken and documented in accordance with the Aboriginal cultural heritage consultation requirements for proponents 2010 (DECCW). The significance of cultural heritage values for Aboriginal people who have a cultural association with the land must be documented in the ACHAR.

7. Impacts on Aboriginal cultural heritage values are to be assessed and documented in the ACHAR. The ACHAR must demonstrate attempts to avoid impact upon cultural heritage values and identify any conservation outcomes. Where impacts are unavoidable, the ACHAR must outline measures proposed to mitigate impacts. Any objects recorded as part of the assessment must be documented and notified to OEH.

**Historic heritage**

8. The EIS must provide a heritage assessment including but not limited to an assessment of impacts to State and local heritage including conservation areas, natural heritage areas, places of Aboriginal heritage value, buildings, works, relics, gardens, landscapes, views, trees should be assessed. Where impacts to State or locally significant heritage items are identified, the assessment shall:

   a. outline the proposed mitigation and management measures (including measures to avoid significant impacts and an evaluation of the effectiveness of the mitigation measures) generally consistent with the NSW Heritage Manual (1996),

   b. be undertaken by a suitably qualified heritage consultant(s) (note: where archaeological excavations are proposed the relevant consultant must meet the NSW Heritage Council's Excavation Director criteria),

   c. include a statement of heritage impact for all heritage items (including significance assessment),

   d. consider impacts including, but not limited to, vibration, demolition, archaeological disturbance, altered historical arrangements and access, landscape and vistas, and architectural noise treatment (as relevant), and

   e. where potential archaeological impacts have been identified develop an appropriate archaeological assessment methodology, including research design, to guide physical archaeological test excavations (terrestrial and maritime as relevant) and include the results of these test excavations.

**Water and soils**

9. The EIS must map the following features relevant to water and soils including:
   a. Acid sulfate soils (Class 1, 2, 3 or 4 on the Acid Sulfate Soil Planning Map).
   b. Rivers, streams, wetlands, estuaries (as described in s4.2 of the Biodiversity Assessment Method).
   c. Wetlands as described in s4.2 of the Biodiversity Assessment Method.
   d. Groundwater.
   e. Groundwater dependent ecosystems.
   f. Proposed intake and discharge locations.

10. The EIS must describe background conditions for any water resource likely to be affected by the development, including:
   a. Existing surface and groundwater.
   b. Hydrology, including volume, frequency and quality of discharges at proposed intake and discharge locations.
   c. Water Quality Objectives (as endorsed by the NSW Government http://www.environment.nsw.gov.au/ieo/index.htm) including groundwater as appropriate that represent the community's uses and values for the receiving waters.
   d. Indicators and trigger values/criteria for the environmental values identified at (c) in accordance with the ANZECC (2000) Guidelines for Fresh and Marine Water Quality and/or local objectives, criteria or targets endorsed by the NSW Government.

11. The EIS must assess the impacts of the development on water quality, including:
    a. The nature and degree of impact on receiving waters for both surface and groundwater, demonstrating how the development protects the Water Quality Objectives where they are currently being achieved, and contributes towards achievement of the Water Quality Objectives over time where they are currently not being achieved. This should include an assessment of the mitigating effects of proposed stormwater and wastewater management during and after construction.
    b. Identification of proposed monitoring of water quality.

12. The EIS must assess the impact of the development on hydrology, including:
    a. Water balance including quantity, quality and source.
    b. Effects to downstream rivers, wetlands, estuaries, marine waters and floodplain areas.
    c. Effects to downstream water-dependent fauna and flora including groundwater dependent ecosystems.
    d. Impacts to natural processes and functions within rivers, wetlands, estuaries and floodplains that affect river system and landscape health such as nutrient flow, aquatic connectivity and access to habitat for spawning and refuge (e.g. river benches).
    e. Changes to environmental water availability, both regulated/licensed and unregulated/rules-based sources of such water.
    f. Mitigating effects of proposed stormwater and wastewater management during and after construction on hydrological attributes such as volumes, flow rates, management methods and re-use options.
    g. Identification of proposed monitoring of hydrological attributes.

**Flooding and coastal erosion**

13. The EIS must map the following features relevant to flooding as described in the Floodplain Development Manual 2005 (NSW Government 2005) including:
    a. Flood prone land.
    b. Flood planning area, the area below the flood planning level.
    c. Hydraulic categorisation (floodways and flood storage areas).

14. The EIS must describe flood assessment and modelling undertaken in determining the design flood levels for events, including a minimum of the 1 in 10 year, 1 in 100 year flood levels and the probable maximum flood, or an equivalent extreme event.

15. The EIS must model the effect of the proposed development (including fill) on the flood behaviour under the following scenarios:
    a. Current flood behaviour for a range of design events as identified in 11 above. This includes the 1 in 200 and 1 in 500 year flood events as proxies for assessing sensitivity to an increase in rainfall intensity of flood producing rainfall events due to climate change.

16. Modelling in the EIS must consider and document:

    a. The impact on existing flood behaviour for a full range of flood events including up to the probable maximum flood.
    b. Impacts of the development on flood behaviour resulting in detrimental changes in potential flood affection of other developments or land. This may include redirection of flow, flow velocities, flood levels, hazards and hydraulic categories.
    c. Relevant provisions of the NSW Floodplain Development Manual 2005.

17. The EIS must assess the impacts on the proposed development on flood behaviour, including:

    a. Whether there will be detrimental increases in the potential flood affectation of other properties, assets and infrastructure.
    b. Consistency with Council floodplain risk management plans.
    c. Compatibility with the flood hazard of the land.
    d. Compatibility with the hydraulic functions of flow conveyance in floodways and storage in flood storage areas of the land.
    e. Whether there will be adverse effect to beneficial inundation of the floodplain environment, on, adjacent to or downstream of the site.
    f. Whether there will be direct or indirect increase in erosion, siltation, destruction of riparian vegetation or a reduction in the stability of river banks or watercourses.
    g. Any impacts the development may have upon existing community emergency management arrangements for flooding. These matters are to be discussed with the SES and Council.
    h. Whether the proposal incorporates specific measures to manage risk to life from flood. These matters are to be discussed with the SES and Council.
    i. Emergency management, evacuation and access, and contingency measures for the development considering the full range or flood risk (based upon the probable maximum flood or an equivalent extreme flood event). These matters are to be discussed with and have the support of Council and the SES.
    j. Any impacts the development may have on the social and economic costs to the community as consequence of flooding.

# Attachment B – Project Specific Environmental Assessment Requirements

| |
|---|
| **Biodiversity** - nil |
| **Aboriginal cultural heritage** - nil |
| **Historic heritage** - nil |
| **Water and soils** - nil |
| **Flooding and coastal erosion** - nil |

# Attachment C – Guidance material

| Title | Web address |
|---|---|
| **Relevant Legislation** | |
| *Biodiversity Conservation Act 2016* | https://www.legislation.nsw.gov.au/#/view/act/2016/63/full |
| *Coastal Management Act 2016* | https://www.legislation.nsw.gov.au/#/view/act/2016/20/full |
| *Commonwealth Environment Protection and Biodiversity Conservation Act 1999* | http://www.austlii.edu.au/au/legis/cth/consol_act/epabca1999588/ |
| *Environmental Planning and Assessment Act 1979* | http://www.legislation.nsw.gov.au/maintop/view/inforce/act+203+1979+cd+0+N |
| *Fisheries Management Act 1994* | http://www.legislation.nsw.gov.au/maintop/view/inforce/act+38+1994+cd+0+N |
| *Marine Parks Act 1997* | http://www.legislation.nsw.gov.au/maintop/view/inforce/act+64+1997+cd+0+N |
| *National Parks and Wildlife Act 1974* | http://www.legislation.nsw.gov.au/maintop/view/inforce/act+80+1974+cd+0+N |
| *Protection of the Environment Operations Act 1997* | http://www.legislation.nsw.gov.au/maintop/view/inforce/act+156+1997+cd+0+N |
| *Water Management Act 2000* | http://www.legislation.nsw.gov.au/maintop/view/inforce/act+92+2000+cd+0+N |
| *Wilderness Act 1987* | http://www.legislation.nsw.gov.au/viewtop/inforce/act+196+1987+FIRST+0+N |
| **Biodiversity** | |
| Biodiversity Assessment Method (OEH, 2017) | http://www.environment.nsw.gov.au/resources/bcact/biodiversity-assessment-method-170206.pdf |
| Guidance and Criteria to assist a decision maker to determine a serious and irreversible impact (OEH, 2017) | http://www.environment.nsw.gov.au/resources/bcact/guidance-decision-makers-determine-serious-irreversible-impact-170204.pdf |
| NSW Guide to Surveying Threatened Plant | http://www.environment.nsw.gov.au/resources/threatenedspecies/160129-threatened-plants-survey-guide.pdf |
| Fisheries NSW policies and guidelines | http://www.dpi.nsw.gov.au/fisheries/habitat/publications/policies,-guidelines-and-manuals/fish-habitat-conservation |
| List of national parks | http://www.environment.nsw.gov.au/NationalParks/parksearchatoz.aspx |
| Revocation, recategorisation and road adjustment policy (OEH, 2012) | http://www.environment.nsw.gov.au/policies/RevocationOfLandPolicy.htm |
| Guidelines for developments adjoining land and water managed by the Department of Environment, Climate Change and Water (DECCW, 2010) | http://www.environment.nsw.gov.au/protectedareas/developmntadjoiningdecc.htm |
| **Heritage** | |
| The Burra Charter (The Australia ICOMOS charter for places of cultural significance) | http://australia.icomos.org/wp-content/uploads/The-Burra-Charter-2013-Adopted-31.10.2013.pdf |
| Statements of Heritage Impact 2002 (HO & DUAP) | http://www.environment.nsw.gov.au/resources/heritagebranch/heritage/hmstatementsofhi.pdf |
| NSW Heritage Manual (DUAP) (scroll through alphabetical list to 'N') | http://www.environment.nsw.gov.au/Heritage/publications/ |

| Title | Web address |
|---|---|
| **Aboriginal Cultural Heritage** | |
| Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW, 2010) | http://www.environment.nsw.gov.au/resources/cultureheritage/commconsultation/09781ACHconsultreq.pdf |
| Code of Practice for the Archaeological Investigation of Aboriginal Objects in New South Wales (DECCW, 2010) | http://www.environment.nsw.gov.au/resources/cultureheritage/10783FinalArchCoP.pdf |
| Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW (OEH 2011) | http://www.environment.nsw.gov.au/resources/cultureheritage/20110263ACHguide.pdf |
| Aboriginal Site Recording Form | http://www.environment.nsw.gov.au/resources/parks/SiteCardMainV1_1.pdf |
| Aboriginal Site Impact Recording Form | http://www.environment.nsw.gov.au/resources/cultureheritage/120558asirf.pdf |
| Aboriginal Heritage Information Management System (AHIMS) Registrar | http://www.environment.nsw.gov.au/contact/AHIMSRegistrar.htm |
| Care Agreement Application form | http://www.environment.nsw.gov.au/resources/cultureheritage/20110914TransferObject.pdf |
| **Acid sulphate soils** | |
| Acid Sulfate Soils Planning Maps via Data.NSW | http://data.nsw.gov.au/data/ |
| Acid Sulfate Soils Manual (Stone et al. 1998) | http://www.environment.nsw.gov.au/resources/epa/Acid-Sulfate-Manual-1998.pdf |
| Acid Sulfate Soils Laboratory Methods Guidelines (Ahern et al. 2004) | http://www.environment.nsw.gov.au/resources/soils/acid-sulfate-soils-laboratory-methods-guidelines.pdf<br>This replaces Chapter 4 of the Acid Sulfate Soils Manual above. |
| **Flooding and Coastal Erosion** | |
| Reforms to coastal erosion management | http://www.environment.nsw.gov.au/coasts/coastalerosionmgmt.htm |
| Floodplain development manual | http://www.environment.nsw.gov.au/floodplains/manual.htm |
| Guidelines for Preparing Coastal Zone Management Plans | Guidelines for Preparing Coastal Zone Management Plans<br>http://www.environment.nsw.gov.au/resources/coasts/130224CZMPGuide.pdf |
| NSW Climate Impact Profile | http://climatechange.environment.nsw.gov.au/ |
| Climate Change Impacts and Risk Management | Climate Change Impacts and Risk Management: A Guide for Business and Government, AGIC Guidelines for Climate Change Adaptation |
| **Water** | |
| Water Quality Objectives | http://www.environment.nsw.gov.au/ieo/index.htm |
| ANZECC (2000) Guidelines for Fresh and Marine Water Quality | www.environment.gov.au/water/publications/quality/australian-and-new-zealand-guidelines-fresh-marine-water-quality-volume-1 |
| Applying Goals for Ambient Water Quality Guidance for Operations Officers – Mixing Zones | http://deccnet/water/resources/AWQGuidance7.pdf |

| Title | Web address |
| --- | --- |
| Approved Methods for the Sampling and Analysis of Water Pollutant in NSW (2004) | http://www.environment.nsw.gov.au/resources/legislation/approvedmethods-water.pdf |

# NSW RURAL FIRE SERVICE

The Secretary
NSW Planning & Environment
GPO Box 39
Sydney NSW 2001

Your Ref: SSD 18_0994
Our Ref: D18/549
DA18020911728 AB

**ATTENTION:** Philip Nevill

26 February 2018

**Request for Secretary's Environmental Assessment Requirements - State Significant Development SD 18_0994 - Dalswinton Sand and Gravel Quarry; Lot 72 DP1199484, 511 Dalswinton Road, Dalswinton**

Dear Mr Nevill

I refer to NSW Planning and Environment correspondence dated 7 February 2018 seeking comment from the NSW Rural Fire Service on matters to be included in the Secretary's Environmental Assessment Requirements for the above proposal.

The subject land is mapped bush fire prone land by Muswellbrook Shire Council. The NSW Rural Fire Service considers that the environmental assessment for the development of a 'sand and gravel quarry' should address the following bush fire criteria:

- the aim and objectives of 'Planning for Bush Fire Protection 2006';
- identification of potential ignition sources during construction and operation of the development;
- storage of fuels and other hazardous materials (e.g., explosives for blasting);
- proposed bush fire protection measures for the development, including vegetation management and fire suppression capabilities;
- operational access for fire fighting appliances to the site; and
- emergency and evacuation planning.

**Postal address**
Records
NSW Rural Fire Service
Locked Bag 17
GRANVILLE NSW 2142

**Street address**
NSW Rural Fire Service
Planning and Environment Services (North)
Suite 1, 129 West High Street
COFFS HARBOUR NSW 2450

T (02) 6691 0400
F (02) 6691 0499
www.rfs.nsw.gov.au
**Email:** pes@rfs.nsw.gov.au

For any queries regarding this correspondence please contact Alan Bawden on 1300 NSW RFS.

Yours Sincerely

John Ball

**Manager – Planning and Environment Services North**

*The RFS has made getting information easier. For general information on 'Planning for Bush Fire Protection, 2006' , visit the RFS web page at www.rfs.nsw.gov.au and search under 'Planning for Bush Fire Protection, 2006'.*

Transport
Roads & Maritime
Services

CR2018/000491
SF2013/143351
KAP

12 February 2018

Department of Planning & Environment
Resource Assessments
GPO Box 39
SYDNEY NSW 2001

Attention: Philip Nevill, Environmental Assessment Officer

**PROPOSAL – SEARS REQUEST FOR DALSWINTON SAND AND GRAVEL QUARRY, 511 DALSWINTON ROAD, DALSWINTON (LOT: 72 DP: 1199484), SSD NO. 18_9094**

Reference is made to Department of Planning and Environment's email dated 7 February 2018, requesting Roads and Maritime Services' (Roads and Maritime) requirements under Schedule 2 of the *Environmental Planning and Assessment Regulation 2000* for the Environmental Impact Statement (EIS).

Transport for NSW and Roads and Maritime's primary interests are in the road network, traffic and broader transport issues. In particular, the efficiency and safety of the classified road network, the security of property assets and the integration of land use and transport.

Roads and Maritime have reviewed the preliminary environmental assessment titled *SEARs Application*, prepared by HDB Planning (Revision B), and dated February 2018. It is understood that the proposal seeks to extend the life of the existing sand and gravel quarry and extract approximately 15-20 million tonnes for a further 25 years (beyond the expiration date of 13 November 2019), with a maximum extraction rate of 500,000 tonnes per annum (the current maximum extraction rate is 150,000 p.a.). The quarry proposes to operate from 5:00am to 12:00 midnight Mondays to Fridays and 5:00am to 1:30pm Saturdays.

The existing access to the site via a haulage road to Golden Highway is proposed to be retained. The current operation generates an average of 20 truckloads (27-33 tonnes transported by 20 inbound and 20 outbound vehicles) per day. The statement by HDB advises that the proposed increase in extraction is anticipated to generate "additional truck movements" and larger trucks (up to 50 tonne) and hourly vehicle movements are proposed to be managed by an electronically controlled weighbridge. A traffic assessment is proposed to be undertaken to identify the impact of the additional traffic and the larger trucks on the traffic flows on the Golden Highway, as well as the level of service of the intersection.

<u>Roads and Maritime response & requirements</u>

The EIS should refer to the following guidelines with regard to the traffic and transport impacts of the proposed development:

- Road and Related Facilities within the Department of Planning EIS Guidelines, and,

- Section 2 Traffic Impact Studies of Roads and Maritime's *Guide to Traffic Generating Developments 2002*.

Furthermore, a traffic and transport study shall be prepared in accordance with the Roads and Maritime's *Guide to Traffic Generating Developments 2002* and is to include (but not be limited to) the following:

- Assessment of all relevant vehicular traffic routes and intersections for access to / from the subject properties. A location plan illustrating the private haulage route, location of weighbridge and parking storage for waiting trucks, and the intersection with the Golden Highway should be provided.

- Current traffic counts for all of the traffic routes and intersections.

- The anticipated additional vehicular traffic generated from both the construction and operational stages of the project (including maximum daily heavy vehicle volumes based on the maximum daily processing potential from on-site operations).

- The distribution on the road network of the trips generated by the proposed development. It is requested that the predicted traffic flows are shown diagrammatically to a level of detail sufficient for easy interpretation.

- Consideration of the traffic impacts on existing and proposed intersections, in particular, the intersection of the Golden Highway and the property access, and the capacity of the local and classified road network to safely and efficiently cater for the additional vehicular traffic generated by the proposed development during both the construction and operational stages. The traffic impact shall also include the cumulative traffic impact of other proposed developments in the area.

- Identify the necessary road network infrastructure upgrades that are required to maintain existing levels of service on both the local and classified road network for the development. In this regard, preliminary concept drawings shall be submitted with the EIS for any identified road infrastructure upgrades. However, it should be noted that any identified road infrastructure upgrades will need to be to the satisfaction of Roads and Maritime and Council.

  Note, should road upgrades be required, preliminary concept drawings should be submitted with the future application for consideration in the development assessment (consistent with *Part 4A – Unsignliased and Signalised Intersections* within *Austroads Guide to Road Design 2010* and relevant supplements).

- Traffic analysis of any major / relevant intersections impacted, using SIDRA or similar traffic model, including:

    - Current traffic counts and 10 year traffic growth projections
    - With and without development scenarios
    - 95$^{th}$ percentile back of queue lengths
    - Delays and level of service on all legs for the relevant intersections
    - Electronic data for Roads and Maritime review.

- Any other impacts on the regional and state road network including consideration of pedestrian, cyclist and public transport facilities and provision for service vehicles.

On determination of this matter, please forward a copy of the SEARs to Roads and Maritime for record and / or action purposes. Should you require further information please contact Hunter Land Use on 4924 0688 or by email at development.hunter@rms.nsw.gov.au.

Yours sincerely

Marc Desmond
A/ Manager Land Use Assessment
Hunter Region