



# Department of Industry

OUT18/4554

Eleanor Parry  
Resource & Energy Assessments  
NSW Department of Planning and Environment

[Eleanor.Parry@planning.nsw.gov.au](mailto:Eleanor.Parry@planning.nsw.gov.au)

Dear Ms Parry

**Owendale Scandium Project (SSD 9200)  
Comment on the Secretary's Environmental Assessment Requirements (SEARs)**

I refer to your email of 15 March 2018 to the Department of Industry in respect to the above matter. Comment has been sought from relevant branches of Crown 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](mailto:landuse.enquiries@dpi.nsw.gov.au).

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

- Identification and assessment of potential impacts to aquatic ecosystems in accordance with the [Policy and Guidelines for Fish Habitat Conservation and Management \(2013\)](#);
- Assessment of whether there are likely to be any significant impacts on listed aquatic threatened species, populations or ecological communities scheduled under the *Fisheries Management Act 1994*. Please note that the current mapping for all threatened species is located on the website: <http://www.dpi.nsw.gov.au/fishing/species-protection/threatened-species-distributions-in-nsw/freshwater-threatened-species-distribution-maps>.
- The proponent should apply to close and purchase the Crown Public Road (within Lot14 DP816194) associated with the proposed processing facility, in order to avoid restrictions on access and development on this parcel. Further information is available on the website: <https://www.industry.nsw.gov.au/lands/access/roads>
- Preparation of an Agricultural Impact Statement (AIS). Specific guidance on satisfying the requirements for the AIS should be taken from the Department of Primary Industries [Agricultural Impact Statement Technical Notes \(2013\)](#);
- Measures for post mining rehabilitation to return the sites to safe, stable and non-polluting state;
- Assessment of impacts on surface and groundwater sources (both quality and quantity), related infrastructure, adjacent licensed water users, basic landholder rights, watercourses, riparian land, floodplains and groundwater dependent ecosystems, and measures proposed to reduce and mitigate these impacts in accordance with the [NSW Aquifer Interference Policy \(2012\)](#) and the [Guidelines for Controlled Activities on Waterfront Land \(2012\)](#); and

- 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), and
  - 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.

Yours sincerely



Alison Collaros  
**A/Manager, Assessment Advice**  
29 March 2018



Ms Eleanor Parry  
Resource and Energy Assessments  
Planning Services  
GPO Box 39  
SYDNEY NSW 2001

Notice Number 1563250  
File Number SF18/11456  
Date 29-Mar-2018

**REQUEST FOR SEARs - ENVIRONMENT PROTECTION AUTHORITY  
OWENDALE SCANDIUM PROJECT (SSD 9200)**

I refer to your email of 15 March 2018 requesting the Environment Protection Authority (EPA) provide Secretary's Environmental Assessment Requirements (SEARs) for the proposed "Owendale Scandium Project" (SSD 9200) (the Project).

The EPA understands that the application will be assessed by the Department of Planning and Environment (DPE) under Part 4 of the *Environmental Planning and Assessment Act 1979* as State Significant Development.

The EPA has considered the details provided regarding the Proposal, including the Preliminary Environmental Assessment (PEA) prepared by RW Corkery & Co, dated March 2018. The EPA considers the Project, if approved, would require licensing by the EPA.

The applicant should address the issues in **Attachment A** to this letter during the preparation of the Environmental Impact Statement (EIS) to adequately assess the environmental impacts of the Project. In carrying out the assessment, the proponent should refer to the relevant guidelines as listed in **Attachment B** and any relevant industry codes of practice and best practice management guidelines.

In summary the EPA's key information requirements for the Project are;

- A clear separation in the environmental assessment for Owendale Mine site on Fifield Road Fifield (Mine Site) and the Processing Plant on Kiacatoo Road Condobolin (Processing Site). These are two separate sites and need to be assessed separately.
- Noise and vibration.
- The management of waste and chemicals onsite. This includes the management of tailings material at the processing plant and its transport to the mine site.
- Water management including the potential impact of water pollution on local water courses (site water balance and management requirements);
- The impact on ground water, including impact on groundwater dependant ecosystems and other water users.

- The impact on air quality (including greenhouse gas emissions).

The EPA requests that the applicant is provided with the EPA's assessment requirements and guidelines as set out in **Attachments A and B**. The EPA also requests that one (1) hard copy and an electronic copy of the EIS are provided for assessment. These documents should be mailed to the EPA's Central West (Bathurst) office PO Box 1388 BATHURST NSW 2795.

Should you have any enquiries regarding this matter, please contact Joshua Loxley at the Dubbo office of the EPA on (02) 6883 5326.

Yours sincerely

A handwritten signature in black ink, appearing to read "SL", written over a horizontal dotted line.

**Sheridan Ledger**  
**Senior Regional Operations Officer**  
**Environment Protection Authority**

## ATTACHMENT A

### Owendale Scandium Project

#### EPA Secretary's Environmental Assessment Requirements

##### Licensing requirements

On the basis of the information submitted, the proposal will conduct scheduled activities, being "mining for minerals", "crushing, grinding or separating" and "mineral processing" under the *Protection of the Environment Operations Act 1997* (POEO Act). If approval is granted, the proponent will be required to submit a licence application to obtain separate environment protection licences (EPL) from the EPA for the mine site and the processing site.

As such, the EIS should also address the requirements of Section 45 of the POEO Act determining the extent of each impact and providing sufficient information to enable the EPA to determine appropriate conditions for the licence.

##### Environmental impacts of the project

The EIS must include a comprehensive description of the production processes, all discharges and emissions to the environment, an assessment of likely environmental impacts, particularly in relation to waste storages and include a detailed description of any proposed control measures.

The environmental sensitivity of the site and surrounds should be discussed. Details are required on the location of the proposed development, including the affected environment, to place the Project in its local and regional environmental context including surrounding landuses, land use zonings and most importantly potential sensitive receptors.

The EIS should describe mitigation and management options that will be used to prevent, control, abate or mitigate identified environmental impacts associated with the project 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.

The following environmental impacts of the project need to be assessed, quantified and reported on:

- Water
- Air
- Noise
- Waste, including waste storages and tailings management
- Construction
- Soils
- Contaminated Land

The 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 these guidelines is at **Attachment B**.

## Description of proposal and premises

### The Proposal

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

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

### The Premises

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

- the location of the proposed facility and details of the surrounding environment including the affected environment to place the Project in its local and regional environmental context. This should include surrounding land uses, planning zonings, potential sensitive receptors, catchments and adjoining sensitive areas, surface and sub-surface areas, features of conservation significance and environmental sensitivity (associated maps to be included);
- the proposed layout of the site (associated maps to be included);
- ownership details of any residence and/or land likely to be affected by the Project;
- 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 Project;
- all equipment proposed for use at the site;
- chemicals, including fuel, used on the site and proposed methods for their transportation, storage, use and emergency management;
- waste generation and disposal;
- methods to mitigate any expected environmental impacts of the development; and
- site rehabilitation following completion of the Project.

### Site Layout

The EIS should:

1. Provide maps, at an appropriate scale, which clearly identifies the proposed site layout relevant to environmental features such as drainage lines, terrain etc, over the life of the Project.
2. Provide maps which show land ownership information, the proposed site layout and impact assessment information at an appropriate scale.

## Assessment of the environmental impacts of the Project

The potential environmental impacts related to the following environmental issues need to be assessed, quantified and reported on. It should be noted that the following requirements apply to all aspects of the Project, which may include offsite works, including but not necessarily limited to, the relocation of infrastructure eg roads, railway crossings and lines, electricity transmission lines and services, and the establishment of access roads to the Project site.

### Air Quality

The goal should be to maintain existing rural air quality and protect sensitive receptors, both on and off site from adverse impacts of dust and odour and other relevant air pollutants. Background ambient air levels should be identified to inform the assessment.

Dust is of primary concern with potential emissions from general mining activities, onsite roads, conveyors, transfer points, loading facilities, ore stockpiles, overburden emplacements etc.

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

1. Assess the risk associated with potential discharges of fugitive and point source emissions for all stages of the Project. Assessment of risk relates to environmental harm, risk to human health and amenity.
2. Justify the level of assessment undertaken on the basis of risk factors, including but not limited to:
  - a. proposal location;
  - b. characteristics of the receiving environment; and
  - c. type and quantity of pollutants emitted.
3. Describe the receiving environment in detail. The Project must be contextualised within the receiving environment (local, regional and inter-regional as appropriate). The description must include but need not be limited to:
  - a. meteorology and climate – a minimum of 12 months data obtained from the meteorological station located at the Project site must be provided;
  - b. topography;
  - c. surrounding land-use;
  - d. receptors; and
  - e. ambient air quality.
4. Include a detailed description of the Project. All processes that could result in air emissions must be identified and described. Sufficient detail to accurately communicate the characteristics and quantity of all emissions must be provided. Include a detailed process diagram/flowchart of the Project specifying all air inputs, air outputs and air discharge points.
5. Identification and location of all fixed and mobile sources of dust/air emissions from the development, including rehabilitation, needs to be provided. The location of all emission sources should be clearly marked on a plan for key years of the mine development. The EIS needs to identify all pollutants of concern and estimate emissions by quantity (and size of particles), source(s) and discharge point(s).

Note: emissions can be classed as either:

- a. point (eg emissions from stack or vent), or
- b. fugitive (from wind erosion, leakages or spillages, associated with loading or unloading, crushing/screening, conveyors, storage facilities, plant and yard operation, vehicle movements [dust from road, exhausts, loss from load], land clearing and construction works).  
Fugitive emissions include coal dust emissions and leaks and spills of coal during rail transport to port facilities (as influenced by management methods and procedures employed by the proposal).

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

This assessment should include the following parameters:

- a. dust deposition;
  - b. total suspended particles;
  - c. PM<sub>10</sub> and PM<sub>2.5</sub> particulate matter.
7. Demonstrate the Project's ability to comply with the relevant regulatory framework, specifically the *Protection of the Environment Operations Act 1997* and the *Protection of the Environment Operations (Clean Air) Regulation 2002*.
  8. Provide an assessment of the project in terms of the priorities and targets adopted under the NSW State Plan 2010 and its implementation plan Action for Air.
  9. Detail air emission control techniques/practices that will be employed by the Project.
    - a. All emission control techniques/practices must be benchmarked against best practice process design and emission control. The Project must be assessed by applying the procedure outlined in *Coal Mine Particulate Matter Control Best Practice - Site-specific determination guideline* (November 2011).  
<http://www.environment.nsw.gov.au/resources/air/20110813coalmineparticulate.pdf>
    - b. Nominated controls must be explicitly linked to calculated emission reductions adopted in the air quality impact assessment emissions inventory, with all assumptions documented and justified.
  10. Detail emission control techniques/practices that will be employed by the proposal, including the development of real-time monitoring/management procedures, response (adverse weather) trigger levels and predictive meteorological monitoring/modelling for dust management.
  11. Include a consideration of 'worst case' emission scenarios and impacts at proposed emission limits.
  12. Account for cumulative impacts associated with existing emission sources as well as any currently approved developments linked to the receiving environment.

### Noise and Vibration

Potential impacts on the noise amenity of the surrounding area should be assessed in accordance with the NSW Industrial Noise Policy (INP) and other relevant guidelines mentioned below, accounting for all noise sources associated with the Project. In particular, seasonality assessments are to be undertaken to assess the impact of temperature inversions and wind conditions.

A noise and vibration impact assessment for both construction and operational scenarios should be undertaken as part of the EIS. The assessment should consider the issues outlined below, and identify noise mitigation measures to be implemented to meet project specific noise levels developed for the Project. The EIS will need to assess all feasible and reasonable mitigation measures including an assessment of any residual impacts in accordance with section 3.4 of the Noise Policy for Industry 2017.

The noise assessment must include (but not be limited to) an assessment of the C-weighted noise (low frequency) as well as A-weighted noise.

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

#### General

1. Construction noise associated with the proposed development should be assessed using the *Interim Construction Noise Guideline* (DECC, 2009).  
<http://www.environment.nsw.gov.au/noise/constructnoise.htm>
2. Operational noise from all industrial activities (including private haul roads and private railway lines) to be undertaken on the premises must be assessed in accordance with the guidelines contained in the Noise Policy for Industry 2017, *NSW Industrial Noise Policy* (EPA, 2000) and *Industrial Noise Policy Application Notes*.  
[http://www.epa.nsw.gov.au/your-environment/noise/industrial-noise/noise-policy-for-industry-\(2017\)](http://www.epa.nsw.gov.au/your-environment/noise/industrial-noise/noise-policy-for-industry-(2017)) and <http://www.environment.nsw.gov.au/noise/industrial.htm>
3. Vibration from all activities (including construction and operation) to be undertaken on the premises should be assessed using the guidelines contained in the *Assessing Vibration: a technical guideline* (DEC, 2006). <http://www.environment.nsw.gov.au/noise/vibrationguide.htm>
4. If blasting is required for any reasons during the construction or operational stage of the proposed development, blast impacts should be demonstrated to be capable of complying with the guidelines contained in *Australian and New Zealand Environment Council – Technical basis for guidelines to minimise annoyance due to blasting overpressure and ground vibration* (ANZEC, 1990).  
<http://www.environment.nsw.gov.au/noise/blasting.htm>

#### Road

2. Noise on public roads from increased road traffic generated by land use developments should be assessed using the *NSW Road Noise Policy* (DECCW, 2011).  
<http://www.environment.nsw.gov.au/noise/traffic.htm>
3. Noise from new or upgraded public roads should be assessed using the *NSW Road Noise Policy* (DECCW, 2011). <http://www.environment.nsw.gov.au/noise/traffic.htm>

### *Noise Monitoring*

Describe the noise monitoring system in detail, including the development and implementation of a monitoring program that:

- uses a combination of predictive meteorological forecasting and real-time noise monitoring, supplemented with attended monitoring measures to evaluate the performance of the mine complex;
- adequately supports the proactive and reactive noise management system on site;
- includes a protocol for determining exceedances of the conditions imposed on the project;
- evaluates and reports on the effectiveness of the noise management system on site;
- provides for the annual validation of the noise model for the mine complex.

The EIS must describe the system that will be implemented to enable the community to access up-to-date information regarding any proposed blasting schedule.

### Waste

The EIS should identify all wastes to be generated by all aspects of the Project and identify procedures for the handling and management of all wastes produced. The handling of rejects, tailings and overburden material are important aspects which must be assessed in detail.

The EIS should:

1. Identify, characterise and classify all waste that will be generated onsite through excavation, demolition or construction activities, including proposed quantities of the waste.
2. Demonstrate how waste will be managed in accordance with the waste hierarchy, established under the [Waste Avoidance and Resource Recovery Act 2001](#), which aims to that ensures that resource management options are considered against the following priorities:
  - *Avoidance* including action to reduce the amount of waste generated by households, industry and all levels of government
  - *Resource* recovery including reuse, recycling, reprocessing and energy recovery, consistent with the most efficient use of the recovered resources
  - *Disposal* including management of all disposal options in the most environmentally responsible manner.
3. 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 in accordance with the EPA's *Waste Classification Guidelines*.
4. Provide details of the quantity and type of both liquid and non-liquid waste generated, handled, processed or disposed of at the premises. Wastes must be classified according to the Waste Classification Guidelines (DECC 2008).

5. Details of procedures for the assessment, handling, storage, transport and disposal of all hazardous and non hazardous waste used, stored, processed or disposed of at the site, in addition to the requirements for liquid and non-liquid wastes.
6. 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. All waste must be classified in accordance with EPA's *Waste Classification Guidelines*.
7. Provide, where relevant, the methods which will be utilised to ensure compliance with any approved Resource Recovery General Exemption for the offsite disposal of waste either generated onsite and disposed of offsite, or received from offsite and disposed of onsite. Resource Recovery General Exemptions may only be utilised where the waste is land applied for use as fuel of a waste material is a genuine, fit for purpose, reuse of the waste rather than another path to waste disposal.
8. Identify the management, disposal and transport of tailings including actions to prevent potential impacts to groundwater, surface water or any other environmental aspect which may occur as a result of the management technique utilised. The EIS must assess and commit to the implementation of all feasible and reasonable measures to minimise seeps, leaching, and/or leaks from the tailings storage facilities into the surrounding environment. The EIS must also include details of a monitoring program which will be established to assess leaks and/or seepages from any tailings storage facility, including a leak detection system.
9. Assess the potential for acid mine drainage from acid forming materials and identify the management /mitigation measures which will be utilised for any PAF material identified.
10. 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 spontaneous combustion.
    - Procedures for minimising the movement of waste around the site and double handling.
  - b) Provide details of waste rock emplacement areas with particular attention to:
    - The quantity of waste rock likely to be generated;
    - Proposed strategies for the handling, reuse/recycling and disposal of waste rock; and
    - Designation of transport routes for the transport of waste rock.

#### Chemicals and Hazardous Materials

The EIS should:

1. Provide details of the types and quantity of any chemical substances, including but not necessarily limited to, hydrocarbons (oils and fuels), hazardous or dangerous materials (eg explosives etc) to be used or stored onsite.

2. Provide details of procedures for the assessment, handling, storage, transport and disposal of all chemical substances, hazardous or dangerous materials used, stored, processed or disposed of at the site, in addition to the requirements for liquid and non-liquid wastes.
3. Outline pollution control measures relating to storage of wastes, materials, possibility of accidental spills (eg. Preparation of contingency plans), appropriate disposal methods and management of contaminated stormwater.

### Soils

The EIS should include:

1. An assessment of potential impacts on soil and land resources should be undertaken, being guided by *Soil and Landscape Issues in Environmental Impact Assessment* (DLWC 2000). The nature and extent of any significant impacts should be identified. Particular attention should be given to:
  - 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).
  - Urban and regional salinity – guidance given in the Local Government Salinity Initiative booklets which includes *Site Investigations for Urban Salinity* (DLWC, 2002).
2. A description of the mitigation and management options that will be used to prevent, control, abate or minimise identified soil and land resource impacts associated with the project. This should include an assessment of the effectiveness and reliability of the measures and any residual impacts after these measures are implemented.
3. Where required, add any specific assessment requirements relevant to the Project.

### Water

The environmental outcomes of the Project in relation to water should be:

- There is no pollution of waters (including surface and groundwater); and
- Polluted water (including process/tailings waters, wash down waters, polluted stormwater or sewerage) is captured onsite and collected, treated and beneficially reused, where safe and practical to do so.

The EIS should document the measures that will achieve the above outcomes in the construction, operation and post operations phases of the project. Construction activities will need to demonstrate best practice sediment and erosion control and management in accordance with the reference document *Managing Urban Stormwater: Soils and Construction* (NSW Landcom).

The EIS should:

1. Describe existing surface and groundwater quality. An assessment needs to be undertaken for any water resource likely to be affected by the Project.
2. Describe any drainage lines, creeks lines etc that will be impacted by the Project.

3. Provide a water balance for the 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.
4. Describe the Project including position of any intakes and discharges, volumes, water quality and frequency of all water discharges (e.g. surface water discharge to a river/creek, groundwater, irrigation of waste water etc).
5. Assess the nature and degree of impact that any proposed discharges may have on the receiving environment. Assessment for discharge to surface waters should be guided by *Using the ANZECC Guidelines and Water Quality Objectives in NSW* (DEC, 2006) using local Water Quality Objectives determined from the *NSW Water Quality and River Flow Objectives* (DEC, 2006). Demonstrate how the Project 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.
6. Where the proponent intends to undertake the assessment using site-specific water quality trigger values, detail the water quality of a reference site that has been selected based on the site-specific considerations outlined in ANZECC (2000).
7. Identify potential impacts on watercourses and the management/mitigation measures that will be implemented where mining activities occur in proximity to or within a watercourse.
8. Identify whether any discharge, or the location of the Project, will cause erosion, siltation, destruction of riparian vegetation or a reduction in the stability of river banks or watercourses.
9. If the discharge requires treatment prior to disposal, any treatment measures should be described and the predicted water quality outcomes documented. Include a detailed process diagram/flowchart of the proposal specifying all water inputs, outputs and discharge points
10. Demonstrate that all practical options to avoid discharge have been investigated and implemented and outline measures that have been taken to reduce the pollutant load of the discharge so that the environmental impact is minimised where a discharge is necessary.
11. Describe how stormwater will be managed both during and after construction including a layout of the proposed stormwater system in accordance with *Managing Urban Stormwater, Soils and Construction – Volume 1* (Landcom, 2004) and *Volumes 2A to 2E* (DECC, 2008), The EIS should:
  - Provide the proposed general location of all water management structures. These should be clearly indicated on appropriately scaled maps.
  - Demonstrate how clean, dirty and contaminated water will be managed (separated) on site throughout the life of the Project.
  - Provide detailed water management strategies for all disturbance areas including the management of channel and overland flows into and within the disturbance area.
  - Provide the proposed sizing of all water storage dams, sediment dams and other dams as required and justification for the sizing utilised.
  - Identify contingency measure which may be implemented during extreme rainfall events.

12. Where the management of sediment basins requires the use of flocculants, the EIS should include information about the type, toxicity and management of flocculants proposed to treat captured water before discharge.
13. Provide detailed water management strategies for all disturbance areas, paying particular attention to the waste rock emplacement areas and potential impacts on groundwater and offsite surface water resources including particular reference to the management of channel and overland flows into and within the disturbance area.
14. Determine and detail the tailings management and monitoring strategy and dam design to be implemented, including an assessment of the potential impacts of tailings storage on surface and groundwater resources, contingency plans in the event of a leak or seep, rehabilitation and the long term management and feasibility.
15. Provide plans for the proposed relocation/realignment of all creeks and/or drainage lines including design, timelines and completion criteria and sufficient evidence to demonstrate that the proposed plans are achievable, reasonable and feasible in the short and the long term.
16. 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.
17. State the indicators and associated trigger values or criteria for the identified environmental values. This information should be sourced from the ANZECC (2000) Guidelines for Fresh and Marine Water Quality ([http://www.mincos.gov.au/publications/australian\\_and\\_new\\_zealand\\_guidelines\\_for\\_fresh\\_and\\_marine\\_water\\_quality](http://www.mincos.gov.au/publications/australian_and_new_zealand_guidelines_for_fresh_and_marine_water_quality)).
18. State any locally specific objectives, criteria or targets which have been endorsed by the NSW Government.
19. Assess impacts on groundwater and groundwater dependent ecosystems. The assessment should be guided by the principles in *The NSW State Groundwater Policy Framework Document* (DLWC, 1997). *Assessment and Management of Groundwater Contamination* (DEC, 2007) provides guidance on assessing and managing groundwater contamination. Assess impacts against relevant water quality guidelines for:
  - potentially impacted environmental values and beneficial uses using local Water Quality Objectives;
  - contamination, such as investigation levels specified in *National Environment Protection Measure Guideline on the Investigation Levels for Soil and Groundwater* (EPHC, 1999).
20. Provide plans for any proposed relocation/realignment of all creeks and/or drainage lines including design, timelines and completion criteria and sufficient evidence to demonstrate that the proposed plans are achievable/sustainable, reasonable and feasible in the short and the long term.
21. Assess any irrigation areas proposed for wastewaters produced in accordance with the EPA Guideline "The Use of Effluent by Irrigation".
22. Describe how predicted impacts on surface water, groundwater and aquatic ecosystems will be monitored and assessed over time, including monitoring locations, relevant parameters, and sampling frequency. The EIS should:

- Include a Trigger Action Response Plan, or similar response management plan, to identify appropriate trigger values and criteria and provide appropriate response actions if impacts are identified through the monitoring program.
- Identify the process for identifying any trends in the monitoring data obtained.

Note: Water quality monitoring should be undertaken in accordance with the *Approved Methods for the Sampling and Analysis of Water Pollutant in NSW* (DEC, 2004). *Groundwater Sampling and Analysis: Field Guide* (Geosciences Australia, 2009) provides guidance on the design of a groundwater sampling program.

#### Monitoring, Assurance and Reporting Programs

1. The EIS should include a detailed assessment of any noise, air quality, water quality or waste monitoring required during the construction phase and on-going operation of the facility to prevent or minimise any adverse environmental impacts from the development.
2. Appropriate baseline data requirements are to be identified as part of the EIS, to form the basis for baseline and ongoing monitoring of environmental parameters.
3. It must be demonstrated that the proposed methods for baseline and subsequent monitoring are scientifically robust and statistically sound.
4. The EIS must also identify and describe monitoring programs, compliance assurance programs and reporting requirements and arrangements that will demonstrate the effectiveness of proposed management measures in meeting applicable requirements.
5. The EIS must, in addition to outlining proposed programs, clearly identify what is to be monitored and audited and why. This should include identification of monitoring locations, parameters to be monitored, sample analysis methods, the level of reporting proposed. The EIS should also include information on frequency and type of audits proposed to assure compliance with applicable requirements,
6. The EIS should demonstrate monitoring and audit programs must be designed appropriately, according to best practice, to provide objective evidence regarding activities associated with the development and have regard to whether these activities are adversely impacting on the environment in the short, medium and/or long term.

#### Cumulative impacts

The EIS should provide an assessment of the cumulative impacts of the project during construction and operation of the proposal with regard to noise, air quality, water quality or waste. Assessment of cumulative impacts must consider past, current and future activities in the area surrounding the project, impacts associated with internal components of this project (where relevant – e.g. a project involving construction throughout a precinct or similar), as well as the construction impacts of any projects recently completed.

## Attachment B

### Guidance Material

Title	Web address
<b>Relevant Legislation</b>	
<i>Contaminated Land Management Act 1997</i>	<a href="http://www.legislation.nsw.gov.au/maintop/view/inforce/act+140+1997+cd+0+N">http://www.legislation.nsw.gov.au/maintop/view/inforce/act+140+1997+cd+0+N</a>
<i>Environmental Planning and Assessment Act 1979</i>	<a href="http://www.legislation.nsw.gov.au/maintop/view/inforce/act+203+1979+cd+0+N">http://www.legislation.nsw.gov.au/maintop/view/inforce/act+203+1979+cd+0+N</a>
<i>Protection of the Environment Operations Act 1997</i>	<a href="http://www.legislation.nsw.gov.au/maintop/view/inforce/act+156+1997+cd+0+N">http://www.legislation.nsw.gov.au/maintop/view/inforce/act+156+1997+cd+0+N</a>
<i>Water Management Act 2000</i>	<a href="http://www.legislation.nsw.gov.au/maintop/view/inforce/act+92+2000+cd+0+N">http://www.legislation.nsw.gov.au/maintop/view/inforce/act+92+2000+cd+0+N</a>
<b>Licensing</b>	
Guide to Licensing	<a href="http://www.epa.nsw.gov.au/licensing/licenceguide.htm">http://www.epa.nsw.gov.au/licensing/licenceguide.htm</a>
<b>Air Issues</b>	
<b>Air Quality</b>	
Approved methods for modelling and assessment of air pollutants in NSW (2005)	<a href="http://www.epa.nsw.gov.au/resources/air/ammodelling05361.pdf">http://www.epa.nsw.gov.au/resources/air/ammodelling05361.pdf</a>
POEO (Clean Air) Regulation 2010	<a href="http://www.legislation.nsw.gov.au/#/view/regulation/2010/428">http://www.legislation.nsw.gov.au/#/view/regulation/2010/428</a>
Dust	No EPA specific guidance material exists for the control of dust from construction sites. Consideration should be given to the POEO Act and the Local Government Air Quality Toolkit (DECC, 2007), accessed via: <a href="http://www.epa.nsw.gov.au/air/lqaqt.htm">http://www.epa.nsw.gov.au/air/lqaqt.htm</a>
Odour - Technical Framework - Assessment and Management of Odour from Stationary Sources in NSW (DEC, 2006)	<a href="http://www.epa.nsw.gov.au/air/odour.htm">http://www.epa.nsw.gov.au/air/odour.htm</a>
<b>Noise and Vibration</b>	
Interim Construction Noise Guideline (DECC, 2009)	<a href="http://www.epa.nsw.gov.au/resources/noise/09265cng.pdf">http://www.epa.nsw.gov.au/resources/noise/09265cng.pdf</a>
Noise Policy for Industry	<a href="http://www.epa.nsw.gov.au/your-environment/noise/industrial-noise/noise-policy-for-industry-(2017)">http://www.epa.nsw.gov.au/your-environment/noise/industrial-noise/noise-policy-for-industry-(2017)</a>
Industrial Noise Policy and Application Notes	<a href="http://www.epa.nsw.gov.au/noise/industrial.htm">http://www.epa.nsw.gov.au/noise/industrial.htm</a>
Assessing Vibration: A technical Guideline (DECC, 2006)	<a href="http://www.epa.nsw.gov.au/resources/noise/vibrationguide0643.pdf">http://www.epa.nsw.gov.au/resources/noise/vibrationguide0643.pdf</a>

SA EPA Environmental Noise Guidelines (SA EPA, 2009)	<a href="http://www.epa.sa.gov.au/environmental_info/noise/wind_farms">http://www.epa.sa.gov.au/environmental_info/noise/wind_farms</a>
Technical Basis for Guidelines to Minimise Annoyance due to Blasting Overpressure and Ground Vibration	<a href="http://www.epa.nsw.gov.au/resources/noise/ANZECBlasting.pdf">http://www.epa.nsw.gov.au/resources/noise/ANZECBlasting.pdf</a>
NSW Road Noise Policy	<a href="http://www.epa.nsw.gov.au/noise/traffic.htm">http://www.epa.nsw.gov.au/noise/traffic.htm</a>
<b>Waste, Chemicals and Hazardous Materials and Radiation</b>	
<b>Chemical and Fuel Storage</b>	
Bunding and Spill Management	<a href="http://www.epa.nsw.gov.au/mao/bundingspill.htm">http://www.epa.nsw.gov.au/mao/bundingspill.htm</a>
Storage and Handling of Dangerous Goods – Code of Practice (WorkCover, 2005)	<a href="http://www.workcover.nsw.gov.au/formspublications/publications/Documents/storage-handling-dangerous-goods-1354.pdf">http://www.workcover.nsw.gov.au/formspublications/publications/Documents/storage-handling-dangerous-goods-1354.pdf</a>
<b>Waste</b>	
Environmental Guidelines: Solid Waste Landfills (EPA 2016)	<a href="http://www.epa.nsw.gov.au/resources/waste/solid-waste-landfill-guidelines-160259.pdf">http://www.epa.nsw.gov.au/resources/waste/solid-waste-landfill-guidelines-160259.pdf</a>
Waste Classification Guidelines	<a href="http://www.epa.nsw.gov.au/wasteregulation/classify-guidelines.htm">http://www.epa.nsw.gov.au/wasteregulation/classify-guidelines.htm</a>
Resource Recovery Orders and Exemptions	<a href="http://www.epa.nsw.gov.au/wasteregulation/orders-exemptions.htm">http://www.epa.nsw.gov.au/wasteregulation/orders-exemptions.htm</a>
<b>Soils</b>	
<b>Contaminated Sites Assessment and Remediation</b>	
Managing land contamination: Planning Guidelines – SEPP 55 Remediation of Land	<a href="http://www.legislation.nsw.gov.au/#/view/EPI/1998/520">http://www.legislation.nsw.gov.au/#/view/EPI/1998/520</a>
Contaminated Sites Guidelines	<a href="http://www.epa.nsw.gov.au/clm/guidelines.htm">http://www.epa.nsw.gov.au/clm/guidelines.htm</a>
<b>Soils – general</b>	
Soil Publications	<a href="http://www.environment.nsw.gov.au/soils/publications.htm">http://www.environment.nsw.gov.au/soils/publications.htm</a>
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 - <a href="http://www.environment.nsw.gov.au/resources/water/BlueBookVol1.pdf">http://www.environment.nsw.gov.au/resources/water/BlueBookVol1.pdf</a> Vol 2 - <a href="http://www.environment.nsw.gov.au/stormwater/publications.htm">http://www.environment.nsw.gov.au/stormwater/publications.htm</a>
<b>Water</b>	
Water Quality Objectives	<a href="http://www.environment.nsw.gov.au/ieo/index.htm">http://www.environment.nsw.gov.au/ieo/index.htm</a> <a href="http://www.environment.gov.au/water/publications/quality/pubs/nwqms-guidelines-4-vol1.pdf">http://www.environment.gov.au/water/publications/quality/pubs/nwqms-guidelines-4-vol1.pdf</a>
ANZECC (2000) Guidelines for Fresh and Marine Water Quality	<a href="http://www.mincos.gov.au/publications/australian_and_new_zealand_guidelines_for_fresh_and_marine_water_quality">http://www.mincos.gov.au/publications/australian_and_new_zealand_guidelines_for_fresh_and_marine_water_quality</a>

	<a href="http://www.environment.gov.au/water/publications/quality/nwqms-guidelines-4-vol1.html">http://www.environment.gov.au/water/publications/quality/nwqms-guidelines-4-vol1.html</a>
	<a href="http://www.environment.gov.au/water/publications/quality/pubs/nwqms-guidelines-4-vol1.pdf">http://www.environment.gov.au/water/publications/quality/pubs/nwqms-guidelines-4-vol1.pdf</a>
Approved Methods for the Sampling and Analysis of Water Pollutant in NSW (2004)	<a href="http://www.environment.nsw.gov.au/resources/legislation/approved-methods-water.pdf">http://www.environment.nsw.gov.au/resources/legislation/approved-methods-water.pdf</a>



19 March 2018

Environmental Assessment Officer  
Resource and Energy Assessments | Planning Services  
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ABN 82 815 250 829

Dear Sir/ Madam

**RE Sears Request - Proposed Mine and Processing Site Owendale Scadium Project**

Thank you for the opportunity to provide input into the SEARs.

Council wishes to raise the following.

**1. Cumulative Impact.**

As you are aware a number of proposals and consents exist for mining in the Lachlan Shire and adjoin Local Government Areas. It is imperative that the cumulative impact of mining be assessed in detail and addressed.

The EIS should include an assessment of the likely impacts of the development on the environment, focusing on the specific issues identified below, including;

- a description of the existing environment likely to be affected by the development, using sufficient baseline data;
- an assessment of the potential impacts of all stages of the development, including any cumulative impacts.
- a description of the measures that would be implemented to avoid, mitigate and/or offset the impacts of the development, and an assessment of:
  - whether these measures are consistent with industry best practice, and represent the full range of reasonable and feasible mitigation measures that could be implemented;
  - the likely effectiveness of these measures; and
  - whether contingency plans would be necessary to manage any residual risks; and
- a description of the measures that would be implemented to monitor and report on the environmental performance of the development.

Lachlan Shire is supportive of mining and the mining complex is very much in the early development stage with the potential for significant community impact in a traditional agricultural area.

Therefore the EIS should include an assessment of the compatibility of the development with other land uses in the vicinity of the development.

**2. Water**

- An assessment of the likely impacts of the development on the quantity and quality of the region's surface and groundwater resources

- an assessment of the likely impacts of the development on aquifers, watercourses, riparian land, water-related infrastructure, and other water users;
- a detailed site water balance, including a description of site water demands, water disposal methods (inclusive of volume and frequency of any water discharges), water supply infrastructure and water storage structures; and
- a detailed description of the proposed water management system (including sewage), water monitoring program and other measures to mitigate surface and groundwater impacts.

### **3. Noise**

- an assessment of the likely operational noise impacts of the development (including construction noise), and cumulative noise impacts (considering other mining developments in the locality).
- If a claim is made for specific construction noise criteria for certain activities, then this claim must be justified and accompanied by an assessment of the likely construction noise impacts of these activities; and
- An assessment of the likely road noise impacts of the development in accordance with the NSW Road Noise Policy.

### **4. Air Quality**

- an assessment of the likely air quality impacts of the development, and cumulative impacts (considering other mining developments in the locality), in accordance with the Approved Methods and Guidance for the Modelling and Assessment of Air Pollutants in NSW, and having regard to the NSW Government's Voluntary Land Acquisition and Mitigation Policy; and
- an assessment of the likely greenhouse gas impacts of the development

### **5. Hazards**

- an assessment of the likely risks to public safety, paying particular attention to potential bushfire/ fire risks, and the handling, transport and use of any dangerous goods, and in accordance with *State Environmental Planning Policy No. 33 – Hazardous and Offensive Development*;
- Council is also interested in understanding the impacts that the processing plant operations would have on the ability and capacity of the local emergency services to respond to the range of possible incidents.

### **6. Visual**

- an assessment of the likely visual impacts of the development on private landowners in the vicinity of the development and key vantage points in the public domain, paying particular attention to any temporary and permanent modification of the landscape (overburden dumps, bunds, etc.), cumulative impacts (considering other mining developments in the locality), and to minimising the lighting impacts of the development.

### **7. Socio-Economic**

- an assessment of the likely impacts of the development on the local community, including cumulative impacts (considering other mining developments in the locality), and consideration of workforce accommodation; and

- an assessment of the likely economic impacts of the development, paying particular attention to:
  - the significance of the resource;
  - the economic benefits of the project for the State and region; and
  - the demand for the provision and maintenance of local infrastructure and services as a result of undertaking the development.

#### **8. Transport**

- an assessment of the likely transport impacts of the development on the capacity, condition, safety and efficiency of the road network (including Fifield Road, Kiacatoo Road, Denison Street, Molong Street, and Melrose Street), and cumulative impacts (considering other mining developments in the locality); and
- a description of the measures that would be implemented to mitigate any impacts, including any proposed upgrades developed in consultation with the relevant road authorities (if required) and ongoing maintenance during the operations of the development.

#### **9. Heritage**

- including an assessment of the likely Aboriginal and historic heritage (cultural and archaeological) impacts of the development
- Details of consultation with the local Aboriginal Community

#### **10. Biodiversity**

- an assessment of the biodiversity values and the likely biodiversity impacts of the development and cumulative biodiversity impacts (considering other mining developments in the locality);
- a description of the proposed actions for minimising, managing and reporting on the biodiversity impacts of the development over time.

Council welcomes the opportunity to work with the proponent and the Government to ensure an environmentally sustainable project that will benefit all.

If you have any further queries regarding the above, please do not hesitate to contact me on 02 6895 1951.

Yours sincerely



Greg Tory  
**Director Environment & Projects**

File Ref. No: BFS18/723(8000003021)  
TRIM Doc. No: D18/18791  
Contact: Senior Firefighter Arthur Brown

28 March 2018

Ms Eleanor Parry  
The Department of Planning & Environment  
Resource and Energy Assessments  
Planning Services  
GPO Box 39  
SYDNEY NSW 2001

[eleanor.parry@planning.nsw.gov.au](mailto:eleanor.parry@planning.nsw.gov.au)

Dear Ms Parry

**Critical State Infrastructure Secretary's Environmental Assessment  
Requirements (SEAR)  
SSD9200-Owendale Scandium Project-Platina Resources Limited-Open Cut  
Mine Site  
Lot 19 Lot 21 DP 753987 Lot 16 DP 661660 Lot 1 DP 372852  
Fifield Road Tullamore  
&  
Processing Site  
Lots 11-14 DP 816194 Lot 3 DP 583430  
Kiacatoo Road Condobolin**

Reference is made to correspondence received from the Department of Planning & Environment seeking comment from Fire & Rescue NSW (FRNSW) in relation to the preparation of Secretary's Environmental Assessment Requirements (SEARs) regarding the above development proposal.

The correspondence submitted to FRNSW included the following information and documentation:

1. Preliminary Environmental Assessment for the Owendale Scandium Project prepared by R.W. Corkery & Co. Pty Limited for Platina Resources Limited and dated March 2018.

FRNSW have reviewed the submitted documentation. The following comments and recommendations are provided for consideration for inclusion in the SEARs for the Environmental Impact Statement (EIS).



## Overview

FRNSW notes that the development proposal consists of two separate areas referred to as the 'mine site' located approximately 13km southwest of Tullamore; and the 'processing site' located approximately 5km west of Condobolin.

In relation to the mine site, FRNSW does not have any specific concerns providing that the buildings, plant and structures are constructed in accordance with the relevant National Construction Code (NCC) Series Building Code of Australia (BCA) Deemed-to-Satisfy (D-t-S) provisions.

In relation to the processing site, FRNSW have concerns in relation to the function and use of the site. The site presents a higher risk that has not been documented sufficiently to evaluate conclusively at this stage. It is the expectation of FRNSW that the buildings, plant and structures on the site will be constructed in accordance with the relevant D-t-S provisions of the BCA. In addition to this FRNSW believe that additional firefighting and smoke hazard management measures may be required to address special hazards relating to the nature or quantity of materials stored or used in buildings or on the allotment; the location of buildings in relation to a water supply for firefighting purposes and the special characteristics, function and use of the buildings on the allotment.

### Provision for special hazards

FRNSW assert that the above matters are not usually adequately addressed by the typical application of the BCA provisions by consent or certifying authorities. It is the expectation of FRNSW that due to the special problems of firefighting associated with such facilities that the provisions of Clauses E1.10 and E2.3 of the BCA should be applicable to the development and accordingly satisfied.

In this regard the D-t-S provisions do not specify what 'suitable additional provisions' can be applied to prescriptively satisfy the provisions outlined in Clauses E1.10 and E2.3. Consequently, it is the opinion of FRNSW that the lack of prescriptive guidance is intended to ensure that in each instance where Clauses E1.10 and E2.3 are deemed applicable, the development is assessed on its merits. The opinion of FRNSW in this regard is consistent with the guidance and clarification detailed in the NCC Series Guide to Volume One of the BCA.

Similarly, it is the opinion of FRNSW that in instances where the provisions of Clauses E1.10 and E2.3 of the BCA are applicable, the provisions for special hazards are developed in consultation with the relevant fire agency having statutory responsibility for extinguishing fires which, in this instance, is FRNSW (i.e. pursuant to Section 6 of the Fire Brigades Act 1989). This is because the effectiveness of any suitable additional provisions must be adequate to mitigate any special problems relating to firefighting that are identified.

Special problems of firefighting should, due to their specific nature, be identified by the relevant fire service. The relevant fire service will be familiar with their agencies operational capabilities and limitations and have substantial experience in relation to problems that are unique to and associated with this type of development.

Furthermore, it is FRNSW experience that the application of the provisions of Clauses E1.10 and E2.3 of the BCA upon developments by consent and certifying authorities is infrequent, due in large part to the lack of familiarity or expertise in this specialist area of firefighting and hazard mitigation.

### **Recommendations**

Due to documented higher risk of environmental harm during the processing operations and the negligible amount of information currently available, FRNSW recommend that the following conditions are imposed upon the development:

- a) Clauses E1.10 and E2.3 of the BCA shall be complied with to the satisfaction of FRNSW. The following aspects of the development shall be assessed and appropriately addressed:
  - i) The site shall be served by a fire hydrant system capable of providing water for firefighting at sufficient flow and pressure of an adequate duration appropriate to the site's largest fire load.
  - ii) Buildings, plant or structures used to process and store any hazardous materials shall be provided with suitable smoke hazard management provisions that facilitate fire brigade intervention.
  - iii) Buildings, plant or structures used to process and store any hazardous materials shall be provided with suitable automatic fire suppression systems that facilitate fire brigade intervention.
  - iv) The site shall be provided with an effective means to contain an appropriate volume of contaminated firefighting water. The capacity of containment is to be commensurate with the concurrent discharge rate of the hydraulic fire systems installed on the site.
  - v) Sufficient vehicular access shall be provided for firefighting vehicles to the buildings, plant or structures.

FRNSW will engage constructively with the proponent (and their respective consultants) to expeditiously address the matters raised above should the above conditions be imposed upon the development.

Should you have any further enquiries please contact the Fire Safety Branch.

Yours sincerely



A/Superintendent Michael Gibson  
A/Manager  
Fire Safety Assessment Unit



DOC18/162178  
SSD 9200

Ms Eleanor Parry  
Environmental Assessment Officer  
Resource & Energy Assessments  
Department of Planning and Environment  
GPO Box 39  
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[Eleanor.Parry@planning.nsw.gov.au](mailto:Eleanor.Parry@planning.nsw.gov.au)

Dear Ms Parry,

**Owendale Scandium Project – SSD 9200**

I refer to your email dated 15 March 2018 seeking input into the Department of Planning and Environment Secretary's Environmental Assessment Requirements (SEARs) for the preparation of an Environmental Impact Assessment (EIS) for the Owendale Scandium Project (SSD 9200).

OEH has considered your request and provides SEARs for the proposed development in **Attachments A and B**.

OEH recommends the EIS needs to appropriately address the following:

1. Biodiversity and offsetting
2. Aboriginal cultural heritage
3. Historic heritage
4. Water and soils
5. Flooding

Please note that for projects **not** defined as pending or interim planning applications under Part 7 or the *Biodiversity Conservation (Savings and Transitional) Regulation 2017* the Biodiversity Assessment Methodology (BAM) **must** be used to assess impacts to biodiversity in accordance with the *Biodiversity Conservation Act 2016* (BC Act). For this project the BAM must be used.

If you have any questions regarding this matter further please contact Michelle Howarth, Senior Conservation Planning Officer on 02 6883 5339 or email [michelle.howarth@environment.nsw.gov.au](mailto:michelle.howarth@environment.nsw.gov.au) .

Yours sincerely,

**PETER CHRISTIE**  
Director Regional Operations  
**North West**

20 March 2018

Contact officer: MICHELLE HOWARTH  
6883 5339

Attachment A - Environmental Assessment Requirements

Attachment B - Guidance Material

## ATTACHMENT A

## Standard Environmental Assessment Requirements

### Biodiversity

1. Biodiversity impacts related to the proposed Owendale Scandium Project are to be assessed in accordance with [Section 7.9 of the Biodiversity Conservation Act 2017](#) 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](#), unless OEH and DPE determine that the proposed development is not likely to have any significant impacts on biodiversity values.
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 submitted with all spatial data associated with the survey and assessment as per Appendix 11 of the BAM.
5. 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

6. The EIS must identify and describe the Aboriginal cultural heritage values that exist across the whole area that will be affected by the Owendale Scandium Project and document these in an Aboriginal Cultural Heritage Assessment Report (ACHAR). This may include the need for surface survey and test excavation. The identification of cultural heritage values must be conducted in accordance with the [Code of Practice for Archaeological Investigations of Aboriginal Objects in NSW](#) (OEH 2010), and guided by the [Guide to investigating, assessing and reporting on Aboriginal Cultural Heritage in NSW \(DECCW, 2011\)](#) and consultation with OEH regional branch officers.
7. Consultation with Aboriginal people must be undertaken and documented in accordance with the [Aboriginal cultural heritage consultation requirements for proponents 2010 \(DECCW\)](#). The

<p>significance of cultural heritage values for Aboriginal people who have a cultural association with the land must be documented in the ACHAR.</p>
<p>8. 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.</p>
<p><b>Historic heritage</b></p>
<p>9. The EIS must provide a heritage assessment including but not limited to an assessment of impacts to <i>State and local heritage</i> 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:</p> <ol style="list-style-type: none"> <li>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),</li> <li>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),</li> <li>c. include a statement of heritage impact for all heritage items (including significance assessment),</li> <li>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</li> <li>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.</li> </ol>
<p><b>Water and soils</b></p>
<p>10. The EIS must map the following features relevant to water and soils including:</p> <ol style="list-style-type: none"> <li>a. Acid sulfate soils (Class 1, 2, 3 or 4 on the Acid Sulfate Soil Planning Map).</li> <li>b. Rivers, streams, wetlands, estuaries (as described in s4.2 of the Biodiversity Assessment Method).</li> <li>c. Wetlands as described in s4.2 of the Biodiversity Assessment Method.</li> <li>d. Groundwater.</li> <li>e. Groundwater dependent ecosystems.</li> <li>f. Proposed intake and discharge locations.</li> </ol>
<p>11. The EIS must describe background conditions for any water resource likely to be affected by the Owendale Scandium Project, including:</p> <ol style="list-style-type: none"> <li>a. Existing surface and groundwater.</li> <li>b. Hydrology, including volume, frequency and quality of discharges at proposed intake and discharge locations.</li> </ol>

- 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.
- e. Risk-based Framework for Considering Waterway Health Outcomes in Strategic Land-use Planning Decisions <http://www.environment.nsw.gov.au/research-and-publications/publications-search/risk-based-framework-for-considering-waterway-health-outcomes-in-strategic-land-use-planning>

12. The EIS must assess the impacts of the Owendale Scandium Project on water quality, including:
- a. The nature and degree of impact on receiving waters for both surface and groundwater, demonstrating how the Owendale Scandium Project 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.
  - c. Consistency with any relevant certified Coastal Management Program (or Coastal Zone Management Plan)

13. The EIS must assess the impact of the Owendale Scandium Project 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 hazards**

14. 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).
  - d. Flood hazard

- |  |
|--|
| <p>15. The EIS must describe flood assessment and modelling undertaken in determining the design flood levels for events, including a minimum of the 5% Annual Exceedance Probability (AEP), 1% AEP, flood levels and the probable maximum flood, or an equivalent extreme event.</p>  |
| <p>16. The EIS must model the effect of the proposed Owendale Scandium Project (including fill) on the flood behaviour under the following scenarios:</p> <ul style="list-style-type: none"> <li>a. Current flood behaviour for a range of design events as identified in 14 above. This includes the 0.5% and 0.2% AEP year flood events as proxies for assessing sensitivity to an increase in rainfall intensity of flood producing rainfall events due to climate change.</li> </ul>   |
| <p>17. Modelling in the EIS must consider and document:</p> <p>18. Existing council flood studies in the area and examine consistency to the flood behaviour documented in these studies.</p> <p>19. The impact on existing flood behaviour for a full range of flood events including up to the probable maximum flood, or an equivalent extreme flood.</p> <p>20. 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, hazard categories and hydraulic categories.</p> <p>21. Relevant provisions of the NSW Floodplain Development Manual 2005.</p>  |
| <p>22. The EIS must assess the impacts on the proposed Owendale Scandium Project on flood behaviour, including:</p> <ul style="list-style-type: none"> <li>a. Whether there will be detrimental increases in the potential flood affectation of other properties, assets and infrastructure.</li> <li>b. Consistency with Council floodplain risk management plans.</li> <li>c. Consistency with any Rural Floodplain Management Plans.</li> <li>d. Compatibility with the flood hazard of the land.</li> <li>e. Compatibility with the hydraulic functions of flow conveyance in floodways and storage in flood storage areas of the land.</li> <li>f. Whether there will be adverse effect to beneficial inundation of the floodplain environment, on, adjacent to or downstream of the site.</li> <li>g. 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.</li> <li>h. Any impacts the development may have upon existing community emergency management arrangements for flooding. These matters are to be discussed with the NSW SES and Council.</li> <li>i. Whether the proposal incorporates specific measures to manage risk to life from flood. These matters are to be discussed with the NSW SES and Council.</li> <li>j. Emergency management, evacuation and access, and contingency measures for the development considering the full range of 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 NSW SES.</li> <li>k. Any impacts the development may have on the social and economic costs to the community as consequence of flooding.</li> </ul> |

## ATTACHMENT B

## Guidance Material

Title	Web address
<b>Relevant Legislation</b>	
<i>Biodiversity Conservation Act 2016</i>	<a href="https://www.legislation.nsw.gov.au/#/view/act/2016/63/full">https://www.legislation.nsw.gov.au/#/view/act/2016/63/full</a>
<i>Coastal Management Act 2016</i>	<a href="https://www.legislation.nsw.gov.au/#/view/act/2016/20/full">https://www.legislation.nsw.gov.au/#/view/act/2016/20/full</a>
<i>Commonwealth Environment Protection and Biodiversity Conservation Act 1999</i>	<a href="http://www.austlii.edu.au/au/legis/cth/consol_act/epabca1999588/">http://www.austlii.edu.au/au/legis/cth/consol_act/epabca1999588/</a>
<i>Environmental Planning and Assessment Act 1979</i>	<a href="http://www.legislation.nsw.gov.au/maintop/view/inforce/act+203+1979+cd+0+N">http://www.legislation.nsw.gov.au/maintop/view/inforce/act+203+1979+cd+0+N</a>
<i>Fisheries Management Act 1994</i>	<a href="http://www.legislation.nsw.gov.au/maintop/view/inforce/act+38+1994+cd+0+N">http://www.legislation.nsw.gov.au/maintop/view/inforce/act+38+1994+cd+0+N</a>
<i>Marine Parks Act 1997</i>	<a href="http://www.legislation.nsw.gov.au/maintop/view/inforce/act+64+1997+cd+0+N">http://www.legislation.nsw.gov.au/maintop/view/inforce/act+64+1997+cd+0+N</a>
<i>National Parks and Wildlife Act 1974</i>	<a href="http://www.legislation.nsw.gov.au/maintop/view/inforce/act+80+1974+cd+0+N">http://www.legislation.nsw.gov.au/maintop/view/inforce/act+80+1974+cd+0+N</a>
<i>Protection of the Environment Operations Act 1997</i>	<a href="http://www.legislation.nsw.gov.au/maintop/view/inforce/act+156+1997+cd+0+N">http://www.legislation.nsw.gov.au/maintop/view/inforce/act+156+1997+cd+0+N</a>
<i>Water Management Act 2000</i>	<a href="http://www.legislation.nsw.gov.au/maintop/view/inforce/act+92+2000+cd+0+N">http://www.legislation.nsw.gov.au/maintop/view/inforce/act+92+2000+cd+0+N</a>
<i>Wilderness Act 1987</i>	<a href="http://www.legislation.nsw.gov.au/viewtop/inforce/act+196+1987+FIRST+0+N">http://www.legislation.nsw.gov.au/viewtop/inforce/act+196+1987+FIRST+0+N</a>
<b>Biodiversity</b>	
Biodiversity Assessment Method (OEH, 2017)	<a href="https://biodiversity-ss.s3.amazonaws.com/Uploads/1494298079/Biodiversity-Assessment-Method-May-2017.pdf">https://biodiversity-ss.s3.amazonaws.com/Uploads/1494298079/Biodiversity-Assessment-Method-May-2017.pdf</a>
Biodiversity Development Assessment Report	<a href="https://www.legislation.nsw.gov.au/#/view/act/2016/63/part6/div3/sec6.12">https://www.legislation.nsw.gov.au/#/view/act/2016/63/part6/div3/sec6.12</a>
Guidance and Criteria to assist a decision maker to determine a serious and irreversible impact (OEH, 2017)	<a href="https://biodiversity-ss.s3.amazonaws.com/Uploads/1494298198/Serious-and-Irreversible-Impact-Guidance.PDF">https://biodiversity-ss.s3.amazonaws.com/Uploads/1494298198/Serious-and-Irreversible-Impact-Guidance.PDF</a>
Accreditation Scheme for Application of the Biodiversity Assessment Method Order 2017	<a href="https://www.legislation.nsw.gov.au/regulations/2017-471.pdf">https://www.legislation.nsw.gov.au/regulations/2017-471.pdf</a>
Biodiversity conservation actions	<a href="http://www.environment.nsw.gov.au/resources/bcact/ancillary-rules-biodiversity-actions-170496.pdf">www.environment.nsw.gov.au/resources/bcact/ancillary-rules-biodiversity-actions-170496.pdf</a>
Reasonable steps to seek like-for-like biodiversity credits for the purpose of applying the variation rules	<a href="http://www.environment.nsw.gov.au/resources/bcact/ancillary-rules-reasonable-steps-170498.pdf">www.environment.nsw.gov.au/resources/bcact/ancillary-rules-reasonable-steps-170498.pdf</a>
OEH Threatened Species Website	<a href="http://www.environment.nsw.gov.au/threatenedspecies/">www.environment.nsw.gov.au/threatenedspecies/</a>
NSW BioNet (Atlas of NSW Wildlife)	<a href="http://www.bionet.nsw.gov.au/">www.bionet.nsw.gov.au/</a>
NSW guide to surveying threatened plants (OEH 2016)	<a href="http://www.environment.nsw.gov.au/resources/threatenedspecies/160129-threatened-plants-survey-guide.pdf">www.environment.nsw.gov.au/resources/threatenedspecies/160129-threatened-plants-survey-guide.pdf</a>
OEH threatened species survey and assessment guideline information	<a href="http://www.environment.nsw.gov.au/threatenedspecies/surveyassessmentguidelines.htm">www.environment.nsw.gov.au/threatenedspecies/surveyassessmentguidelines.htm</a>

Title	Web address
BioNet Vegetation Classification - NSW Plant Community Type (PCT) database	<a href="http://www.environment.nsw.gov.au/research/Vegetationinformationsystem.htm">www.environment.nsw.gov.au/research/Vegetationinformationsystem.htm</a>
OEH Data Portal (access to online spatial data)	<a href="http://data.environment.nsw.gov.au/">http://data.environment.nsw.gov.au/</a>
Fisheries NSW policies and guidelines	<a href="http://www.dpi.nsw.gov.au/fisheries/habitat/publications/policies,-guidelines-and-manuals/fish-habitat-conservation">http://www.dpi.nsw.gov.au/fisheries/habitat/publications/policies,-guidelines-and-manuals/fish-habitat-conservation</a>
List of national parks	<a href="http://www.environment.nsw.gov.au/NationalParks/parksearchtoz.aspx">http://www.environment.nsw.gov.au/NationalParks/parksearchtoz.aspx</a>
Revocation, recategorisation and road adjustment policy (OEH, 2012)	<a href="http://www.environment.nsw.gov.au/policies/RevocationOfLandPolicy.htm">http://www.environment.nsw.gov.au/policies/RevocationOfLandPolicy.htm</a>
Guidelines for developments adjoining land and water managed by the Department of Environment, Climate Change and Water (DECCW, 2010)	<a href="http://www.environment.nsw.gov.au/protectedareas/developmntadjoiningdecc.htm">http://www.environment.nsw.gov.au/protectedareas/developmntadjoiningdecc.htm</a>
<b><u>Heritage</u></b>	
The Burra Charter (The Australia ICOMOS charter for places of cultural significance)	<a href="http://australia.icomos.org/wp-content/uploads/The-Burra-Charter-2013-Adopted-31.10.2013.pdf">http://australia.icomos.org/wp-content/uploads/The-Burra-Charter-2013-Adopted-31.10.2013.pdf</a>
Statements of Heritage Impact 2002 (HO & DUAP)	<a href="http://www.environment.nsw.gov.au/resources/heritagebranch/heritage/hmstatementsofhi.pdf">http://www.environment.nsw.gov.au/resources/heritagebranch/heritage/hmstatementsofhi.pdf</a>
NSW Heritage Manual (DUAP) (scroll through alphabetical list to 'N')	<a href="http://www.environment.nsw.gov.au/Heritage/publications/">http://www.environment.nsw.gov.au/Heritage/publications/</a>
<b><u>Aboriginal Cultural Heritage</u></b>	
Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW, 2010)	<a href="http://www.environment.nsw.gov.au/resources/cultureheritage/comconsultation/09781ACHconsultreq.pdf">http://www.environment.nsw.gov.au/resources/cultureheritage/comconsultation/09781ACHconsultreq.pdf</a>
Code of Practice for the Archaeological Investigation of Aboriginal Objects in New South Wales (DECCW, 2010)	<a href="http://www.environment.nsw.gov.au/resources/cultureheritage/10783FinalArchCoP.pdf">http://www.environment.nsw.gov.au/resources/cultureheritage/10783FinalArchCoP.pdf</a>
Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW (OEH 2011)	<a href="http://www.environment.nsw.gov.au/resources/cultureheritage/20110263ACHguide.pdf">http://www.environment.nsw.gov.au/resources/cultureheritage/20110263ACHguide.pdf</a>
Aboriginal Site Recording Form	<a href="http://www.environment.nsw.gov.au/resources/parks/SiteCardMainV1_1.pdf">http://www.environment.nsw.gov.au/resources/parks/SiteCardMainV1_1.pdf</a>
Aboriginal Site Impact Recording Form	<a href="http://www.environment.nsw.gov.au/resources/cultureheritage/120558asirf.pdf">http://www.environment.nsw.gov.au/resources/cultureheritage/120558asirf.pdf</a>
Aboriginal Heritage Information Management System (AHIMS) Registrar	<a href="http://www.environment.nsw.gov.au/contact/AHIMSRegistrar.htm">http://www.environment.nsw.gov.au/contact/AHIMSRegistrar.htm</a>
Care Agreement Application form	<a href="http://www.environment.nsw.gov.au/resources/cultureheritage/20110914TransferObject.pdf">http://www.environment.nsw.gov.au/resources/cultureheritage/20110914TransferObject.pdf</a>
<b><u>Water and Soils</u></b>	
<b>Acid sulphate soils</b>	
Acid Sulfate Soils Planning Maps via Data.NSW	<a href="http://data.nsw.gov.au/data/">http://data.nsw.gov.au/data/</a>
Acid Sulfate Soils Manual (Stone et al. 1998)	<a href="http://www.environment.nsw.gov.au/resources/epa/Acid-Sulfate-Manual-1998.pdf">http://www.environment.nsw.gov.au/resources/epa/Acid-Sulfate-Manual-1998.pdf</a>

Title	Web address
Acid Sulfate Soils Laboratory Methods Guidelines (Ahern et al. 2004)	<a href="http://www.environment.nsw.gov.au/resources/soils/acid-sulfate-soils-laboratory-methods-guidelines.pdf">http://www.environment.nsw.gov.au/resources/soils/acid-sulfate-soils-laboratory-methods-guidelines.pdf</a> This replaces Chapter 4 of the Acid Sulfate Soils Manual above.
<b>Flooding and Coastal Erosion</b>	
Reforms to coastal erosion management	<a href="http://www.environment.nsw.gov.au/coasts/coastalerosionmgmt.htm">http://www.environment.nsw.gov.au/coasts/coastalerosionmgmt.htm</a>
Floodplain development manual	<a href="http://www.environment.nsw.gov.au/floodplains/manual.htm">http://www.environment.nsw.gov.au/floodplains/manual.htm</a>
Guidelines for Preparing Coastal Zone Management Plans	<a href="http://www.environment.nsw.gov.au/resources/coasts/130224CZMPGuide.pdf">Guidelines for Preparing Coastal Zone Management Plans</a> <a href="http://www.environment.nsw.gov.au/resources/coasts/130224CZMPGuide.pdf">http://www.environment.nsw.gov.au/resources/coasts/130224CZMPGuide.pdf</a>
NSW Climate Impact Profile	<a href="http://climatechange.environment.nsw.gov.au/">http://climatechange.environment.nsw.gov.au/</a>
Climate Change Impacts and Risk Management	<a href="#">Climate Change Impacts and Risk Management: A Guide for Business and Government, AGIC Guidelines for Climate Change Adaptation</a>
<b>Water</b>	
Water Quality Objectives	<a href="http://www.environment.nsw.gov.au/ieo/index.htm">http://www.environment.nsw.gov.au/ieo/index.htm</a>
ANZECC (2000) Guidelines for Fresh and Marine Water Quality	<a href="http://www.environment.gov.au/water/publications/quality/australian-and-new-zealand-guidelines-fresh-marine-water-quality-volume-1">www.environment.gov.au/water/publications/quality/australian-and-new-zealand-guidelines-fresh-marine-water-quality-volume-1</a>
Applying Goals for Ambient Water Quality Guidance for Operations Officers – Mixing Zones	<a href="http://deccnet/water/resources/AWQGuidance7.pdf">http://deccnet/water/resources/AWQGuidance7.pdf</a>
Approved Methods for the Sampling and Analysis of Water Pollutant in NSW (2004)	<a href="http://www.environment.nsw.gov.au/resources/legislation/approvedmethods-water.pdf">http://www.environment.nsw.gov.au/resources/legislation/approvedmethods-water.pdf</a>



# NSW RURAL FIRE SERVICE



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

Your reference: SSD 9200  
Our reference: D18/4904

3 April 2018

**Attention:** Eleanor Parry

Dear Sir/Madam,

## Request for input into SEARs – Owendale Scandium Project

Reference is made to correspondence dated 15 March 2018 seeking input to the request for Secretary's Environmental Assessment Requirements for the above State Significant Development in accordance with the *Environmental Planning and Assessment Act 1979*.

The New South Wales Rural Fire Service advises that the preparation of an Environment Impact Statement should incorporate a bush fire assessment report prepared by a suitably qualified person that addresses *Planning for Bush Fire Protection 2006* and which recommends measures to prevent a fire occurring within the site from developing into a bush/grass fire risk to the surrounding area.

If you have any queries regarding this advice, please contact Development Assessment and Planning on 1300 NSW RFS.

Yours sincerely,

Kalpana Varghese  
A/Team Leader, Development Assessment and Planning

**Postal address**

NSW Rural Fire Service  
Records Management  
Locked Bag 17  
GRANVILLE NSW 2141

**Street address**

NSW Rural Fire Service  
Planning and Environment Services (East)  
42 Lamb Street  
GLENDENNING NSW 2761

T 1300 NSW RFS  
F (02) 8741 5433  
E [pes@rfs.nsw.gov.au](mailto:pes@rfs.nsw.gov.au)  
[www.rfs.nsw.gov.au](http://www.rfs.nsw.gov.au)





26 March 2018

SF2018/099532; WST18/00038

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

**Attention: Ms Eleanor Parry**

Dear Ms Parry

**SSD9200: Part Lots 19, 21 & 22 DP 753987, Lot 16 DP 661660, Lot 1 DP 372852; Fifield Road (MR57), Tullamore and Lot 14 DP 816194; Kiacatoo Road (MR7521), Condobolin; Owendale Scandium Project Request for input into Secretary's Environmental Assessment Requirements (SEARs)**

Thank you for your email on 15 March 2018 requesting input into SEARs from Roads and Maritime Services for the proposed Owendale Scandium Project.

Roads and Maritime notes the proposal involves the construction and operation of a scandium mine 13 kilometres south west of Tullamore. The proposed mine would extract up to 90,000 tonnes per annum for transportation to Condobolin for processing.

Roads and Maritime has reviewed the submitted documentation and identified the following key issues to be addressed in the Environmental Impact Statement being prepared in support of the project:

- A traffic impact study prepared in accordance with the methodology set out in Section 2 of the *RTA's Guide to Traffic Generating Developments 2002* and including:
  - For the construction and operation of the quarry, road transport volumes and vehicle types broken down into:
    - origin and destination.
    - travel routes.
    - peak hours.
  - The study is to provide details of projected transport operations including:
    - traffic volumes, both proposed and cumulative, and, both input and output traffic.

**Roads and Maritime Services**

- materials to be transported and vehicle types used for transport.
  - physical constraints, risks and hazards on the haulage route. In particular, narrowness of haulage route through Fifield and potential for wildlife strikes.
  - measures to be employed to ensure a high level of safety for all road users interacting with construction and operational traffic.
- Any over size and over mass vehicles and loads expected for the construction and operation of the project.
  - Temporary and permanent staff numbers (including employees and contractors) and staff parking arrangements during construction and operation of the project.
  - Measures to be employed to ensure traffic efficiency and safety on the public road network during construction and operation of the project.
  - Local climate conditions that may affect road safety during construction and operation of the project (e.g. dust, fog, wet weather, etc.) and appropriate measures to mitigate the impacts of such conditions.
- Access locations and treatments need to be identified and in accordance with *Austroads Guide to Road Design* and relevant Roads and Maritime supplements, including safe intersection sight distance. In particular, the proposed site access with Fifield Road, intersection of Fifield Road and Henry Parkes Way (MR61) and the processing site access with Kiacatoo Road. Safe intersection sight distance for a 100km/h speed environment is 262 metres in each direction.
  - Measures to be employed to manage daily staff commutes between the mine site and accommodation facilities and the mine and processing sites to address the impacts of unsafe driver behaviour and driver fatigue.

Roads and Maritime appreciates the opportunity to contribute to the SEARs and requests that a copy of the SEARs be forwarded to Roads and Maritime at the same time they are sent to the applicant. If you require further information please contact the undersigned on 02 6861 1453.

Yours faithfully



Andrew McIntyre  
Manager Land Use Assessment  
Western Region

Eleanor Parry  
Environmental Assessment Officer  
Resource & Energy Assessments - Planning Services Division  
Department of Planning & Environment  
GPO Box 39  
SYDNEY NSW 2001

[Eleanor.Parry@planning.nsw.gov.au](mailto:Eleanor.Parry@planning.nsw.gov.au)

Dear Eleanor

**Owendale Scandium Project (SSD 9200)  
Secretary's Environmental Assessment Requirements (SEARs)**

I refer to your email dated 15 March 2018 inviting the Division of Resources & Geoscience (the Division) to provide comments on the Owendale Scandium Project (the Project) request for SEARs submitted by Platina Resources Limited (the Proponent).

The Division requires that the Proponent apply the environmental assessment requirements as stated in the document 'Indicative Secretary's Environmental Assessment Requirements (SEARs) - for state significant mining developments', dated October 2015 (Indicative SEARs).

The Division has reviewed the information supplied in relation to the abovementioned Project and recommends that the following targeted SEARs be applied to the Project, in addition to those detailed in the Indicative SEARs document:

Project Description

To ensure the project and its environmental interactions can be understood and assessed by the Division of Resources & Geoscience (DRG), the Environmental Impact Statement (EIS) should provide a comprehensive description of all aspects (including the mineral extraction and mining purposes) of the project. Text, plans or charts must clearly show the proposed extent and sequence of the development.

Geology

The EIS is to include a brief description of the geological setting of the deposit. Of importance is a description of the geology and mineralisation of the deposit itself. This should include specific details about the shape, physical dimensions, mineralogy and ore mineral distribution for individual ore bodies/lenses.

Supporting information including plans and cross-sections need to show the extent of the mineralised zones to be mined and those located adjacent/beneath planned mining voids which may be sterilised by planned activities. Where this may impact on resource utilisation and planned final voids, information such as grade and width/tonnes needs to be included. The EIS is to include whole rock, minor and trace element geochemistry of the ore, tailings and waste rock. This information is often a key component in understanding the environmental effects of the proposal.

### Biodiversity Offsets

Biodiversity offsets have the potential to preclude access for future resource discovery and extraction and could also potentially permanently sterilise access to mineral resources. The EIS must therefore clearly illustrate the location (including offsite locations) of any biodiversity offsets being considered for the project and their spatial relationship to known and potential mineral and construction material resources and existing mining and/or exploration titles or applications.

### Other Approval Requirements

The EIS for the project should clearly identify existing mining and/or exploration titles or applications and the proposed mining lease area(s) for the project site(s) including any authorisations required for ancillary mining activities.

The Division also recommends that the following targeted requirements (amendments) be applied to the *Target Resource* section of the SEARs for the Project:

### Target Resource

- (1) The EIS must fully describe the resource targeted by the development, including:
  - (a) A resource/reserve statement that has been prepared in accordance with the most recent Joint Ore Reserves Committee Code, including resource and reserve estimates for each ore body proposed to be mined. The statement must include the ore grades for each ore body;
  - (b) Details of run-of-mine ore, low grade ore-mineralised waste and waste rock tonnage projected to be extracted for each year of the life of the project;
  - (c) Details of low grade stockpiles including grades of Sc, Co and Ni to avoid resource sterilisation;
  - (d) Details of the processing methods, ore grade product and Sc recoveries and of Co and Ni tonnages/grades to tailings;
  - (e) Details of any resource sterilisation from proposed mine infrastructure;
  - (f) A projection of the saleable product planned to be produced for each year of the life of the project;
  - (g) Identification and details of the market for the product to be sold into;
  - (h) Assessment of product market if other mines begin in the local area and its impacts on the project;
  - (i) Quantities and source(s) of sulfuric acid required for the extraction process, and
  - (j) Quantities and source(s) of lime and/or limestone required for acid neutralisation.
  
- (2) The EIS must detail the significance of the resource targeted, comprising:
  - (a) The size, quality and availability of the resource;
  - (b) The proximity and access to existing or proposed infrastructure;
  - (c) Any relationship of the resource to other existing mines;
  - (d) Whether other industries or projects are dependent on the development of the resource; and
  - (e) Estimates of employment generation, expenditure (including capital investment) and the payment of royalties to the State.

The standard mining development rehabilitation SEARs to be applied to this Project, as described in the Indicative SEARs document, are included as Annexure 1 for reference.

Further enquiries regarding this matter please contact:

Adam Banister  
Senior Advisor (Resources Development & Operations), Royalties & Advisory Services  
(02) 4931 6439 or [advisory.services@planning.nsw.gov.au](mailto:advisory.services@planning.nsw.gov.au)

Yours sincerely

A handwritten signature in blue ink, appearing to read 'Matt Gagan', with a long, sweeping flourish extending upwards and to the right.

Matt Gagan  
**Manager Royalties & Advisory Services**  
3 April 2018

## Annexure 1

### Mining Development Rehabilitation Standard SEARs

(1) The EIS must include a detailed description of progressive rehabilitation timeframes and commitments for each rehabilitation domain, having regard to the following:

#### **Post-mining land use**

- (a) Identification and assessment of post-mining land use options;
- (b) Identification and justification of the preferred post-mining land use outcome(s), including a discussion of how the final land use(s) are aligned with relevant local and regional strategic land use objectives;
- (c) Identification of how the rehabilitation of the project will relate to the rehabilitation strategies of neighbouring mines within the region, with a particular emphasis on the coordination of rehabilitation activities along common boundary areas;

#### **Rehabilitation objectives and domains**

(d) Inclusion of a set of project rehabilitation objectives and completion criteria that clearly define the outcomes required to achieve the post-mining land use for each domain. Completion criteria should be specific, measurable, achievable, realistic and time-bound. If necessary, objective criteria may be presented as ranges;

#### **Rehabilitation Methodology**

- (e) Details regarding the rehabilitation methods for disturbed areas and expected time frames for each stage of the rehabilitation process;
- (f) Mine layout and scheduling, including maximising opportunities for progressive final rehabilitation. The final rehabilitation schedule should be mapped against key production milestones (i.e. ROM tonnes) of the mine layout sequence before being translated to indicative timeframes throughout the mine life. The mine plan should maximise opportunities for progressive rehabilitation;

#### **Conceptual Final Landform Design**

(g) Inclusion of a drawing at an appropriate scale identifying key attributes of the final landform, including final landform contours and the location of the proposed final land use(s);

#### **Monitoring and Research**

- (h) Outlining the monitoring programs that will be implemented to assess how rehabilitation is trending towards the nominated land use objectives and completion criteria;
- (i) Details of the process for triggering intervention and adaptive management measures to address potential adverse results as well as continuously improve rehabilitation practices;
- (j) Outlining any proposed rehabilitation research programs and trials, including their objectives. This should include details of how the outcomes of research are considered as part of the ongoing review and improvement of rehabilitation practices;

#### **Post-closure maintenance**

(k) Description of how post-rehabilitation areas will be actively managed and maintained in accordance with the intended land use(s) in order to demonstrate progress towards meeting the rehabilitation objectives and completion criteria in a timely manner;

#### **Barriers or limitations to effective rehabilitation**

- (l) Identification and description of those aspects of the site or operations that may present barriers or limitations to effective rehabilitation, including:
  - (i) evaluation of the likely effectiveness of the proposed rehabilitation techniques against the rehabilitation objectives and completion criteria;

- (ii) an assessment and life of mine management strategy of the potential for geochemical constraints to rehabilitation (e.g. acid rock drainage, spontaneous combustion etc.), particularly associated with the management of overburden/interburden and reject material;
  - (iii) the processes that will be implemented throughout the mine life to identify and appropriately manage geochemical risks that may affect the ability to achieve sustainable rehabilitation outcomes;
  - (iv) a life of mine tailings management strategy, which details measures to be implemented to avoid the exposure of tailings material that may cause environmental risk, as well as promote geotechnical stability of the rehabilitated landform; and
  - (v) existing and surrounding landforms (showing contours and slopes) and how similar characteristics can be incorporated into the post-mining final landform design. This should include an evaluation of how key geomorphological characteristics evident in stable landforms within the natural landscape can be adapted to the materials and other constraints associated with the site.
- (m) Where a void is proposed to remain as part of the final landform, include:
- (i) a constraints and opportunities analysis of final void options, including backfilling, to justify that the proposed design is the most feasible and environmentally sustainable option to minimise the sterilisation of land post-mining;
  - (ii) a preliminary geotechnical assessment to identify the likely long term stability risks associated with the proposed remaining high wall(s) and low wall(s) along with associated measures that will be required to minimise potential risks to public safety; and
  - (iii) outcomes of the surface and groundwater assessments in relation to the likely final water level in the void. This should include an assessment of the potential for fill and spill along with measures required be implemented to minimise associated impacts to the environment and downstream water users.
- (n) Where the mine includes underground workings:
- (i) determine (with reference to the groundwater assessment) the likelihood and associated impacts of groundwater accumulating and subsequently discharging (e.g. acid or neutral mine drainage) from the underground workings post cessation of mining; and
  - (ii) consideration of the likely controls required to either prevent or mitigate against these risks as part of the closure plan for the site.
- (o) Consideration of the controls likely to be required to either prevent or mitigate against rehabilitation risks as part of the closure plan for the site;
- (p) Where an ecological land use is proposed, demonstrate how the revegetation strategy (e.g. seed mix, habitat features, corridor width etc.) has been developed in consideration of the target vegetation community(s);
- (q) Where the intended land use is agriculture, demonstrate that the landscape, vegetation and soil will be returned to a condition capable of supporting this; and
- (r) Consider any relevant government policies<sup>1</sup>.

<sup>1</sup> The following government policies should be considered when addressing rehabilitation issues:

- Mine Rehabilitation (Leading Practice Sustainable Development Program for the Mining Industry, 2006)
- Mine Closure and Completion (Leading Practice Sustainable Development Program for the Mining Industry, 2006)
- Strategic Framework for Mine Closure (ANZMEC-MCA, 2000)