

Appendix 2

Director-General's Requirements of Consulted Government Agencies

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Planning

Mining & Industry Projects

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Mr Peter van der Borgh
Managing Director
Cortona Resources Ltd
Ground Floor, 22 Oxford Close
WEST LEEDERVILLE WA 6007

Dear Mr van der Borgh

**Dargues Reef Gold Project (10_0054)
Director-General's Requirements**

I refer to your application for the above Project.

I have attached a copy of the Director-General's requirements for the project. These requirements have been prepared in consultation with the relevant agencies and are based on the information your company has provided to date. I have also attached a copy of the agencies' comments for your information.

Please note that the Director-General may alter these requirements at any time.

If your proposal is likely to have a significant impact on matters of National Environmental Significance, it will require an approval under the Commonwealth *Environment Protection Biodiversity Conservation Act 1999* (EPBC Act). This approval is in addition to any approvals required under NSW legislation. It is your responsibility to contact the Department of the Environment, Water, Heritage and the Arts in Canberra (6274 1111 or <http://www.environment.gov.au>) to determine if the project will require an approval under the EPBC Act. If it is subsequently determined that an approval is required under the EPBC Act, please contact the Department immediately as supplementary Director-General's requirements may need to be issued.

I would appreciate it if you would contact the Department at least two weeks before you propose to submit your Environmental Assessment. This would enable the Department to:

- confirm the applicable fee (see Division 1A, Part 15 of the *Environmental Planning and Assessment Regulation 2000*); and
- determine the number (hard-copy and CD-ROM) of copies of the Environmental Assessment that will be required for exhibition purposes.

Once it receives the Environmental Assessment, the Department will review in consultation with the relevant agencies to determine if it adequately addresses the Director-General's requirements, and may require you to revise it prior to public exhibition.

The Department is required to make all the relevant information associated with the project publicly available on its website. Consequently, I would appreciate it if you would ensure that all the documents you subsequently submit to the Department are in a suitable format for the web, and arrange for an electronic version of the Environmental Assessment to be hosted on a suitable website during the exhibition period.

NSW Department of Planning, 23-33 Bridge Street (GPO Box 39), SYDNEY NSW 2001
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If you have any enquiries about these requirements, please contact Haley Rich.

Yours sincerely

dkitto 23/4/10

David Kitto
Director
Mining & Industry Projects
as delegate of the Director-General



Director-General's Requirements

Section 75F of the *Environmental Planning and Assessment Act 1979*

Application Number	10_0054
Project	The Dargues Reef Gold Project, which includes: <ul style="list-style-type: none"> • constructing, operating and rehabilitating an underground gold mine and associated infrastructure; • extracting and processing up to 300,000 tonnes of gold ore per year for up to 5 years; and • transporting the processed ore from the site via road.
Location	Majors Creek, approximately 13 kilometres south of Braidwood
Proponent	Cortona Resources Limited
Date of Issue	23 April 2010
General Requirements	The Environmental Assessment must include <ul style="list-style-type: none"> • an executive summary; • a detailed description of the project including: <ul style="list-style-type: none"> - the need for the project; - a detailed resource and land use assessment; - alternatives considered, including a detailed justification for the proposed mine plan; - likely staging of the project; and - plans of any proposed building works; • a risk assessment of the potential environmental impacts of the project, identifying the key issues for further assessment; • a detailed assessment of the key issues specified below and any other significant issues identified in the risk assessment (see above), which includes: <ul style="list-style-type: none"> - a description of the existing environment and its values, using sufficient baseline data; - an assessment of the potential impacts of all stages of the project, including any cumulative impacts, taking into consideration any relevant guidelines, policies, plans and statutory provisions (see below); - a description of the measures that would be implemented to avoid, minimise and, if necessary, offset the potential impacts of the project, and ensure that the project is in the public interest and meets the net benefit test - detailed contingency plans for managing any potentially significant risks to the environment; • a statement of commitments; • a conclusion justifying the project on economic, social and environmental grounds, taking into consideration whether the project is consistent with the objects of the <i>Environmental Planning and Assessment Act 1979</i>, including the principles of ecological sustainable development; and • a signed statement from the author of the Environmental Assessment certifying that the information contained in the report is neither false nor misleading.
Key Issues	<ul style="list-style-type: none"> • Noise and Blasting – including construction, operational and road traffic noise; • Soil and Water – including: <ul style="list-style-type: none"> - a detailed site water balance; - a detailed groundwater model; - potential water quality impacts on the environment and other land users; and - a description of the final landform water management;

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	<ul style="list-style-type: none"> • Biodiversity – including: <ul style="list-style-type: none"> - accurate estimates of any vegetation disturbance associated with the project; - impacts on threatened species, populations or ecological communities; critical habitats; and native vegetation generally; - a detailed description of the measures that would be implemented to maintain or improve the regional biodiversity values in the medium to long term; • Visual – including landform and lighting impacts; • Heritage – both Aboriginal and non-Aboriginal; • Air Quality; • Traffic – including a detailed description of the measures that would be implemented during construction and operation to minimise impacts on Majors Creek Road and Araluen Road; • Waste – including: <ul style="list-style-type: none"> - accurate estimates of the quantity and nature of the potential waste streams of the project; - a detailed description of the measures that would be implemented to minimise, reuse, recycle and dispose of any waste produced on site, including tailings and waste rock; • Energy – calculate the scope 1, 2 and 3 emissions of the mining operations and describe what measures would be implemented to ensure these operations are energy efficient; • Rehabilitation– including a detailed strategy that describes: <ul style="list-style-type: none"> - how the site would be progressively rehabilitated and integrated into the landscape; and - what measures would be put in place for the long term protection and management of the site following cessation of mining, taking into consideration any relevant strategic land use planning or resource management plans or policies; and • Socio-economic.
References	<p>The environmental assessment of the project must take into account relevant State Government guidelines, policies and plans. While not exhaustive, the following attachment contains a list of some guidelines, policies and plans that may be relevant to the environmental assessment of this project on the existing and proposed development in the vicinity of the site.</p>
Consultation	<p>During the preparation of the Environmental Assessment, you should undertake an appropriate level of consultation with the relevant local, State or Commonwealth government authorities, service providers, community groups or affected landowners.</p> <p>In particular you must consult with the:</p> <ul style="list-style-type: none"> • Commonwealth Department of Environment, Water, Heritage and the Arts; • Department of Environment, Climate Change and Water; • NSW Office of Water; • Department of Industry & Investment; • Department of Transport and Infrastructure; • NSW Heritage Office; • Sydney Catchment Authority; and • Palerang Shire Council. <p>Both the consultation process, and the issues raised during this consultation process, must be described in the environmental assessment.</p>
Deemed Refusal Period	90 days



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Policies, Guidelines & Plans

Risk	<p>AS/NZS 4360:2004 Risk Management (Standards Australia)</p> <p>HB 203: 203:2006 Environmental Risk Management – Principles & Process (Standards Australia)</p> <p>Risk Management Handbook for the Mining Industry (DPI)</p> <p>Risk Management Policy Framework for Dam Safety (Dam Safety Committee)</p>
Noise & Blasting	<p>NSW Industrial Noise Policy (DECC)</p> <p>Environmental Criteria for Road Traffic Noise (NSW EPA) May 1999</p> <p>Environmental Noise Management Manual (RTA) Dec 2001</p> <p>Interim Construction Noise Guideline (DECC)</p> <p>Technical Basis for Guidelines to Minimise Annoyance due to Blasting Overpressure and Ground Vibration (ANZECC) Sep 1990</p> <p>Assessing Vibration: a technical guideline (DEC) Feb 2006</p>
Soil and Water	
Soil	<p>Rural Land Capability Mapping (DLWC)</p> <p>Agricultural Land Classification (DPI)</p> <p>Draft Guidelines for the Assessment & Management of Groundwater Contamination (DECC)</p>
Surface Water	<p>National Water Quality Management Strategy: Water quality management - an outline of the policies (ANZECC/ARMCANZ)</p> <p>National Water Quality Management Strategy: Policies and principles - a reference document (ANZECC/ARMCANZ)</p> <p>National Water Quality Management Strategy: Implementation guidelines (ANZECC/ARMCANZ)</p> <p>National Water Quality Management Strategy: Australian Guidelines for Fresh and Marine Water Quality (ANZECC/ARMCANZ)</p> <p>National Water Quality Management Strategy: Australian Guidelines for Water Quality Monitoring and Reporting (ANZECC/ARMCANZ)</p> <p>Using the ANZECC Guideline and Water Quality Objectives in NSW (DEC)</p> <p>State Water Management Outcomes Plan</p> <p>NSW Government Water Quality and River Flow Environmental Objectives (DECC)</p> <p>Managing Urban Stormwater: Soils & Construction (Landcom)</p> <p>Managing Urban Stormwater: Treatment Techniques (DECC)</p> <p>Managing Urban Stormwater: Source Control (DECC)</p>
Groundwater	<p>National Water Quality Management Strategy Guidelines for Groundwater Protection in Australia (ARMCANZ/ANZECC)</p> <p>NSW State Groundwater Policy Framework Document (DLWC)</p> <p>NSW State Groundwater Quality Protection Policy (DLWC)</p> <p>NSW State Groundwater Quantity Management Policy (DLWC) Draft</p>
Hazards	<p>State Environmental Planning Policy No. 33 – Hazardous and Offensive Development</p> <p>Applying SEPP 33 – Hazardous and Offensive Development Application Guidelines (DUAP)</p> <p>Multi-Level Risk Assessment</p> <p>Hazardous Industry Planning Advisory Paper No. 6 – Guidelines for Hazard Analysis</p>



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Biodiversity	
	Draft Guidelines for Threatened Species Assessment under Part 3A of the <i>Environmental Planning and Assessment Act 1979</i> (DEC)
	NSW Groundwater Dependent Ecosystem Policy (DLWC)
	Policy & Guidelines - Aquatic Habitat Management and Fish Conservation (NSW Fisheries)
	Policy & Guidelines - Fish Friendly Waterway Crossings (NSW Fisheries)
Heritage	
<i>Aboriginal</i>	Ask First; A Guide to Respecting Indigenous Heritage Places and Values (AHC) 2002
	Draft Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation (DEC)
<i>Non- Aboriginal</i>	The Australia ICOMOS Burra Charter for Places of Cultural Significance 1999
	The Australian Natural Heritage Charter (For the Conservation of Places of Natural Heritage Significance) 2 nd ed. 2002
	Statements of Heritage Impact (NSW Heritage Office)
	NSW Heritage Manual: Assessing Heritage Significance (NSW Heritage Office) 2001
	NSW Heritage Manual: Conservation Management Documents 1996
	NSW Heritage Manual: Heritage Terms and Abbreviations 1996
	Historical Archaeology Code of Practice (NSW Heritage Council DoP) 2006
Air Quality	
	Protection of the Environment Operations (Clean Air) Regulation 2002
	Approved Methods for the Modelling and Assessment of Air Pollutants in NSW (DEC)
	Approved Methods for the Sampling and Analysis of Air Pollutants in NSW (DEC)
Traffic & Transport	
	Guide to Traffic Generating Development (RTA)
	Road Design Guide (RTA)
Waste	
	NSW Waste Avoidance and Resource Recovery Strategy 2007 (DECC)
	NSW Waste Avoidance and Resource Recovery Strategy Performance Report 2006 (DECC)
	Waste Classification Guidelines: Part 1 Classification of Waste (DECC) 2008
Greenhouse Gas	
	AGO Factors and Methods Workbook (AGO)
	Guidelines for Energy Savings Action Plans (DEUS, 2005)
Rehabilitation	
	Strategic Framework for Mine Closure (ANZMEC & Minerals Council of Australia)
	Mine Rehabilitation – Leading Practice Sustainable Development Program for the Mining Industry (Commonwealth of Australia)
	Mine Closure and Completion – Leading Practice Sustainable Development Program for the Mining Industry (Commonwealth of Australia)



**Table A2-1
Director-General's Requirements
(Department of Planning – 23 April 2010)**

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Paraphrased Requirement	Relevant EA Section(s)
GENERAL	
The Environmental Assessment must include	Executive summary
<ul style="list-style-type: none"> • an executive summary; 	
<ul style="list-style-type: none"> • a detailed description of the project including: <ul style="list-style-type: none"> - the need for the project; 	6.2
<ul style="list-style-type: none"> - a detailed resource and land use assessment; 	1.4, 4.1
<ul style="list-style-type: none"> - alternatives considered, including a detailed justification for the proposed mine plan; 	2.16
<ul style="list-style-type: none"> - likely staging of the project; and 	Not applicable
<ul style="list-style-type: none"> - plans of any proposed building works; 	2.2
<ul style="list-style-type: none"> • a risk assessment of the potential environmental impacts of the project, identifying the key issues for further assessment; 	3.3
<ul style="list-style-type: none"> • a detailed assessment of the key issues specified below and any other significant issues identified in the risk assessment (see above), which includes: <ul style="list-style-type: none"> - a description of the existing environment and its values, using sufficient baseline data; 	4.1, 4.2.2, 4.3.2, 4.3.4, 4.4.2, 4.5.2, 4.6.3, 4.6.5, 4.7.3, 4.7.5, 4.8.2, 4.9.2, 4.10.2, 4.11.2, 4.12.2 & 4.12.3
<ul style="list-style-type: none"> - an assessment of the potential impacts of all stages of the project, including any cumulative impacts, taking into consideration any relevant guidelines, policies, plans and statutory provisions (see below); 	4.2.6, 4.3.6, 4.4.5, 4.5.6, 4.6.7, 4.7.7, 4.8.4, 4.9.5, 4.10.7, 4.11.4 & 4.12.6
<ul style="list-style-type: none"> - a description of the measures that would be implemented to avoid, minimise and, if necessary, offset the potential impacts of the project, and ensure that the project is in the public interest and meets the net benefit test 	4.2.5, 4.3.5, 4.4.3, 4.5.4, 4.6.6, 4.7.6,
<ul style="list-style-type: none"> - detailed contingency plans for managing any potentially significant risks to the environment; 	4.8.3, 4.9.4, 4.10.6, 4.11.3 & 4.12.4
<ul style="list-style-type: none"> • a statement of commitments; 	5
<ul style="list-style-type: none"> • a conclusion justifying the project on economic, social and environmental grounds, taking into consideration whether the project is consistent with the objects of the Environmental Planning and Assessment Act 1979, including the principles of ecological sustainable development; and 	6
<ul style="list-style-type: none"> • a signed statement from the author of the Environmental Assessment certifying that the information contained in the report is neither false nor misleading. 	page iii
NOISE AND BLASTING	
Including construction, operational and road traffic noise.	4.2
SOIL AND WATER	
Including:	
<ul style="list-style-type: none"> • a detailed site water balance: 	4.5.5
<ul style="list-style-type: none"> • a detailed groundwater model; 	4.4.4.3
<ul style="list-style-type: none"> • potential water quality impacts on the environment and other land users; and 	4.4.5 & 4.5.6
<ul style="list-style-type: none"> • a description of the final landform water management; 	2.14.3



Table A2-1
Director-General's Requirements
(Department of Planning – 23 April 2010) (cont'd)

Paraphrased Requirement	Relevant EA Section(s)
BIODIVERSITY	
Including:	4.3.4 and Figure 4.15
<ul style="list-style-type: none"> accurate estimates of any vegetation disturbance associated with the project; 	4.3.6
<ul style="list-style-type: none"> impacts on threatened species, populations or ecological communities; critical habitats; and native vegetation generally; 	4.3.5
<ul style="list-style-type: none"> a detailed description of the measures that would be implemented to maintain or improve the regional biodiversity values in the medium to long term; 	
VISUAL	
Including landform and lighting impacts;	4.11
HERITAGE	
Both Aboriginal and non-Aboriginal;	4.6 & 4.7
AIR QUALITY	
	4.10
TRAFFIC	
Including a detailed description of the measures that would be implemented during construction and operation to minimise impacts on Majors Creek Road and Araluen Road;	4.9
WASTE	
Including:	Table 2.3
<ul style="list-style-type: none"> accurate estimates of the quantity and nature of the potential waste streams of the project; 	2.5, 2.7 & 2.8
<ul style="list-style-type: none"> a detailed description of the measures that would be implemented to minimise, reuse, recycle and dispose of any waste produced on site, including tailings and waste rock; 	
ENERGY	
Calculate the scope 1, 2 and 3 emissions of the mining operations and describe what measures would be implemented to ensure these operations are energy efficient;	4.10.7.2
REHABILITATION	
Including a detailed strategy that describes:	2.14
<ul style="list-style-type: none"> how the site would be progressively rehabilitated and integrated into the landscape; and 	2.14.11 and 2.15
<ul style="list-style-type: none"> what measures would be put in place for the long term protection and management of the site following cessation of mining, taking into consideration any relevant strategic land use planning or resource management plans or policies. 	
SOCIO-ECONOMIC	
	4.1.6, 2.12, 4.13 & 6.2.3



Table A2-1
Director-General's Requirements
(Department of Planning – 23 April 2010) (cont'd)

Page 3 of 3

Paraphrased Requirement	Relevant EA Section(s)
CONSULTATION	
<p>During the preparation of the Environmental Assessment, you should undertake an appropriate level of consultation with the relevant local, State or Commonwealth government authorities, service providers, community groups or affected landowners. In particular you must consult with the:</p> <ul style="list-style-type: none"> • Commonwealth Department of Environment, Water, Heritage and the Arts; • Department of Environment, Climate Change and Water; • NSW Office of Water; • Department of Industry & Investment; • Department of Transport and Infrastructure; • NSW Heritage Office; • Sydney Catchment Authority; and • Palerang Shire Council. <p>Both the consultation process, and the issues raised during this consultation process, must be described in the environmental assessment.</p>	3.2.2.2

Table A2-2
Coverage of Environmental Issues

Page 1 of 20

Government Agency	Paraphrased Requirement	Relevant EA Section(s)
GENERAL		
Department of Environment, Climate Change & Water (01/04/10)	DECCW requests some further details about, or justification for development or site management issues which were raised at the planning focus meeting held 18 March 2010. These are:	
	<ul style="list-style-type: none"> • the location of operational facilities for the project, such as the tailings dam, water storage dams and ROM pad/crushing site; 	2.7 & 2.16.8, 2.2.4, 2.6.3 & 2.16.5 and Figure 2.1
	<ul style="list-style-type: none"> • any proposed rehabilitation for environmentally degraded areas of the site, such as the southern parts of Majors Creek; and 	2.15
	<ul style="list-style-type: none"> • detailed surveys for the critically endangered Majors Creek Leek Orchid. 	4.3.3.2 and 4.3.4
	The EA must include a comprehensive description of the production processes, all discharges and emissions to the environment, an assessment of likely environmental impacts,	2.6 & Section 4
	and a comprehensive description of any proposed control measures.	4.2.6, 4.3.6, 4.4.5, 4.5.6, 4.6.7, 4.7.7, 4.8.4, 4.9.5, 4.10.7, 4.11.4 & 4.12.6 4.2.5, 4.3.5, 4.4.4, 4.5.5, 4.6.6, 4.7.6, 4.8.3, 4.9.4, 4.10.6, 4.11.3 & 4.12.4



Table A2-2
Coverage of Environmental Issues (cont'd)

Government Agency	Paraphrased Requirement	Relevant EA Section(s)
GENERAL (Cont)		
	Details are required on the location of the proposed development, including the affected environment, to place the proposal in its local and regional environmental context including surrounding land uses, planning zonings and potential sensitive receptors.	4.1, 4.2.2, 4.3.2, 4.3.4, 4.4.2, 4.5.2, 4.6.3, 4.6.5, 4.7.3, 4.7.5, 4.8.2, 4.9.2, 4.10.2, 4.11.2, 4.12.2 & 4.12.3
	The EA 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. There should also be a justification in the EA for the location of a range of project specific works, such as the ROM pad and tailings dam.	4.2.5, 4.3.5, 4.4.4, 4.5.5, 4.6.6, 4.7.6, 4.8.3, 4.9.4, 4.10.6, 4.11.3 & 4.12.4
	A detailed plan of the study area shall be provided at a preferred scale of 1:4,000 or finer.	Figure 2.1
	Colour aerial photography of the locality (or a reproduction of such a photograph) shall be provided.	Figure 1.2
	A topographic map of the general locality at a scale of 1:25,000 is to be provided.	Figure 4.3
	The land tenure across the <i>study area</i> is to be described.	4.1.5
WATER		
Department of Environment, Climate Change & Water (01/04/10)	The EA must outline site layout, demonstrating efforts to avoid pollution to water resources (especially for activities with significant potential impacts eg tailings dam) and show potential areas of modification of contours, drainage etc.	Figure 2.1
	The EA must provide details of the project that are essential for predicting and assessing impacts to waters: <ul style="list-style-type: none"> • including the quantity and physio-chemical properties of all potential water pollutants and the risks they pose to the environment and human health, including the risks they pose to Water Quality Objectives in the ambient waters (as defined on www.environment.nsw.gov.au/ieo, using technical criteria derived from the Australian and New Zealand Guidelines for Fresh and Marine Water Quality, ANZECC 2000); • the management of discharges with potential for water impacts; and • drainage works and associated infrastructure; land-forming and excavations; working capacity of structures; and water resource requirements of the proposal. 	4.4.5.7 and 4.5.6 4.5.6 2.2.4, 4.5.4 and Figure 2.7



**Table A2-2
Coverage of Environmental Issues (cont'd)**

Government Agency	Paraphrased Requirement	Relevant EA Section(s)
WATER (Cont)		
Department of Environment, Climate Change & Water (01/04/10)	The EA must outline how total water cycle considerations are to be addressed showing total water balances for the development (with the objective of minimising demands and impacts on water resources). Include water requirements (quantity, quality and source(s)) and proposed storm and wastewater disposal, including type, volumes, proposed treatment and management methods and re-use options.	2.10.2.6 and 4.5.5
	The EA should fully assess impacts including but not limited to the following:	
	<ul style="list-style-type: none"> • Groundwater quality issues including the alteration of the groundwater recharge rates and possible contamination of groundwater from the recycled water scheme; 	4.4.5.7
	<ul style="list-style-type: none"> • Altered flow and drainage regimes and subsequent effects on the dynamics and recharge ability of groundwater aquifers; and long-term effects on stability and integrity of aquifers; 	4.4.5
	<ul style="list-style-type: none"> • Impacts of altered flow and drainage regimes impacting on receiving waters including impact on creek morphology and ecosystem implications including aquatic ecology, riparian vegetation and weed distribution; 	4.4.5 and 4.5.6.3
	<ul style="list-style-type: none"> • Cumulative impacts of proposed recycled water discharges on the receiving waters – downstream impact of altered flows; effects to river health, ecology and biodiversity; and 	4.4.5 and 4.5.6
	<ul style="list-style-type: none"> • Construction impacts on waterways due to runoff and increased sediment and nutrient movement. 	4.5.6
	The EA should provide details of the project that are essential for predicting and assessing impacts to waters including the quantity and physio-chemical properties of all potential water pollutants and the risks posed to the environment and human health, including the risks they pose to Water Quality Objectives in the ambient waters using technical criteria derived from the ANZECC Guidelines.	2
Council (06/04/10)	Council is concerned about use of surface water and ground water that may potentially affect water resources in the area for the local community and environmental flows. It is Council's opinion that NOW approvals are required for use of dam and ground water associated with any use that is not for stock and domestic. The impact of water harvesting needs to be addressed in the EIS.	2.2.4 and 4.5.2.2
	'Adequate details with regard to monitoring of water quality and water quantity upstream and downstream of the proposed development need to be addressed in the EIS. Council is particularly concerned about the location of the tailings.	4.5.7

Table A2-2
Coverage of Environmental Issues (cont'd)

Government Agency	Paraphrased Requirement	Relevant EA Section(s)
WATER (Cont)		
NSW Office of Water (01/04/10)	<p>NOW requires the Environmental Assessment (EA) for the proposal to demonstrate that the proposed mining operation will achieve the following:</p> <ul style="list-style-type: none"> • no impact on adjacent licensed water users, basic landholder rights, minimum base flows, or groundwater-dependent ecosystems; • adequate water licensing under the Water Act 1912 for proposed groundwater extraction and/or groundwater interception and compliance with the S.1 113A Water Act 1912 embargo on groundwater licences in the Coastal Floodplain Alluvial Groundwater Sources and Highly Connected Alluvial Groundwater Sources of Coastal Catchments – Regional NSW, which is provided as a supplement to this letter. 	<p>4.4.5.5 and 4.5.6</p> <p>2.1.3</p>
	<p>NOW requires the Environmental Assessment (EA) for the proposal to demonstrate the following;</p> <ol style="list-style-type: none"> 1. Adequate and secure water supply. 2. Identification of site water demands, water sources (surface and groundwater), water disposal methods and water storage structures in the form of a water balance. This is to also include details of any water reticulation infrastructure that supplies water to and within the site. 3. Proposed water management on the site based on the site water balance. This is to also include an outline of a proposed surface water and groundwater management plan. 4. A groundwater and surface water impact assessment on adjacent licensed water users, basic landholder rights, groundwater-dependent ecosystems and the surface water environment. This will require a detailed understanding of the existing and predicted surface and groundwater system. 5. Requirement to intercept groundwater and predicted dewatering volumes, seepage volumes, water quality and disposal/retention methods. Intercepted and dewatered volumes need to be predicted throughout mine life and for any post mine life recovery period to reach equilibrium. 6. An impact assessment of the construction, operation and final landform of the proposed onsite waste rock emplacements, tailings storage facility and other potentially contaminating facilities to meet the requirements of the NSW State Groundwater Policy framework document. 7. Identification of works or activities requiring licensing under the Water Act 1912 or Water Management Act 2000, eg. Monitoring bores, aquifer interception, groundwater and/or surface water extraction. 	<p>4.5.5</p> <p>4.5.5</p> <p>2.10.2.6, 4.4.3 and 4.5.4</p> <p>4.4 and 4.5</p> <p>4.4.5</p> <p>4.5.6</p> <p>2.1.3</p>



Table A2-2
Coverage of Environmental Issues (cont'd)

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Government Agency	Paraphrased Requirement	Relevant EA Section(s)
WATER (Cont)		
	8. Proposal to construct watercourse crossings and carry out works within 40m of a watercourse in accordance with former DWE Controlled Activity Approval Guidelines.	2.2.3
	9. Adequate mitigating and monitoring requirements to address surface and groundwater impacts.	4.4.3 and 4.5.4
	<p>The Environmental Assessment report must include the following for all water-related aspects of the proposal:</p> <ul style="list-style-type: none"> • an environmental risk analysis to identify potential environmental impacts associated with the project (construction and operation); • proposed mitigation measures and potentially significant residual environmental impacts after the application of proposed mitigation measures; and • where additional key environmental impacts are identified through this environmental risk analysis, an appropriately detailed impact assessment of these additional key environmental impacts must be included in the Environmental Assessment report. 	<p>3.3</p> <p>4.4.3 and 4.5.4</p> <p>4.4.5 and 4.5.6</p>
	<p>The Environmental Assessment must include assessment of water supply and/or water interception and extraction against any Water Sharing Plan, or any embargo in force affecting the site or potential water supply to the proposal. A full description of water supply to all stages of the proposal must be included, which includes:</p> <ul style="list-style-type: none"> • water source(s) which may be used to supply water to the proposal, existing licences, additional water requirements, and a checklist against any regulatory water sharing or other ministerial plans or other instruments applying to that water source; • explanation of any embargoes or full commitment declarations for the proposal, and any identified means to source water supply for the proposal; • examination of reliability of water supply to the proposal, including alternatives to site rainfall runoff harvesting in the event of drought; • demonstration of prioritisation and effective reuse of saline or other contaminated water within the proposal; • explanation of water circuitry and means to segregate contaminated, sediment-laden and clean water volumes within the proposal and proposal site. 	<p>2.10.2.6</p> <p>Parts 3 and 4 of the SCSC</p> <p>4.5.5</p> <p>2.10.2.6</p> <p>2.10.2.6 and 4.5.4</p>



Table A2-2
Coverage of Environmental Issues (cont'd)

Government Agency	Paraphrased Requirement	Relevant EA Section(s)
WATER (Cont)		
NSW Office of Water (01/04/10)	<p>The Environmental Assessment report must include demonstration that the project is consistent with the spirit and principles of the NSW State Groundwater Policy Framework Document, the NSW State Groundwater Quality Protection Policy, the NSW State Groundwater Dependent Ecosystems Policy and the Draft NSW State Groundwater Quantity Management Policy, This must include, for the pre-, during, and post- development phases of the project the following:</p> <ul style="list-style-type: none"> • identification of surrounding water users and any groundwater dependent ecosystems; • detailed explanation of potential groundwater volume, piezometric level, water table heights and the direction of flow and quality, through mine life and projections into the post-mine period, any identified connected water sources impacted by mining; • detailed explanation of groundwater drawdown or other impacts upon connected groundwaters; • explanation of the site water balance, including any changes to water balance inputs from rainfall runoff, additional supplies, dewatering requirements and/or groundwater seepage; • detailed description of any proposed water supply system utilising groundwater as a source, and assessment of current licensing arrangements against this; • detailed analysis of the impacts of dewatering if required for the project, identifying the magnitude and duration of pumping, the areal extent of water level drawdown, the likely quality of extracted groundwater, alterations to site water balance, and the monitoring and reporting protocols to be adopted to meet licensing requirements; • measures to prevent contamination of the groundwater; • identification of potential and likely groundwater-dependent ecosystems, and any impact upon these ecosystems which may result from the proposal; this must include <ul style="list-style-type: none"> Terrestrial vegetation with seasonal or episodic reliance on groundwater, and Aquatic and riparian ecosystems in, or adjacent streams or rivers dependent upon the input of groundwater to minimum base flows. <p>to,</p>	<p>4.4.2</p> <p>4.4.5</p> <p>4.4.5</p> <p>4.5.5</p> <p>2.1.3 and 2.10.2.6</p> <p>4.4.5</p> <p>4.4.3</p> <p>4.4.5.6 and 4.7.7</p>



Table A2-2
Coverage of Environmental Issues (cont'd)

Government Agency	Paraphrased Requirement	Relevant EA Section(s)
WATER (Cont)		
NSW Office of Water (01/04/10)	The Environmental Assessment report must include demonstration that the project is consistent with the spirit and principles of the NSW State Rivers and Estuaries Policy, Wetlands Management Policy, and relevant groundwater policies defined below. This must include, for the pre-, during, and post- development phases of the project the following:	
	<ul style="list-style-type: none"> • general description of channel form, river style or other descriptive category of any affected channel, including identification of key geomorphologic indicators and conditions within the zone of influence for the proposal (ie. either between most distant riverine controls surrounding the area of disturbance to the proposal area, and/or within the area of groundwater depressurisation); 	4.1.2
	<ul style="list-style-type: none"> • hydrologic character of the riverine system, stream energy and power relationships, energy relationships at bankfull height and at peak flow and assessment of stream power and critical tractive stress for existing and any modified conditions for any rivers affected by the proposal, which provides details of: <ul style="list-style-type: none"> ○ long profile and cross sectional survey along the channel, and identification of at least the closest upstream and downstream controls on the channel; ○ assessment of bed and bank material, identification of critical entrainment and destabilisation thresholds; ○ assessment of the constriction and resultant change in afflux through, past or over the structure, and resultant changes in energy profiles involving the structure; ○ nature of bedload transport, and mechanism(s) to permit bedload transport through the structure. 	4.1.2
	<ul style="list-style-type: none"> • procedures to develop stream relocation and reconstruction criteria which utilise best practice management, which must include the principles which underpin any embargoes currently in force under the Water Act, 1912, or operational rules of any Water Sharing Plan in force over the site; • methodologies by which proposed relocation or reinstatement of watercourses will be undertaken, and whether any proposed ecological offset provisions will provide adequate protection to any instream or groundwater dependent ecosystems which exist on the site; • Mechanism to maintain long profile grade through the structure, or to provide energy dissipation through the structure at the re-entry point design volumes/velocity downstream; 	Not applicable
		Not applicable
		Not applicable



Table A2-2
Coverage of Environmental Issues (cont'd)

Government Agency	Paraphrased Requirement	Relevant EA Section(s)
WATER (Cont)		
NSW Office of Water (01/04/10)	<ul style="list-style-type: none"> Nature of existing controls along all watercourses on the site, and proposed use of engineered structures and vegetation to provide long term control to the channel; final configuration of any relocation, modification or other impact upon rivers and watercourses on or surrounding the site, including geomorphic character mimicking conditions of undisturbed rivers or watercourses adjacent to the proposal area. 	<p>Not applicable</p> <p>2.14.3</p>
	<p>The Environmental Assessment report must include:</p> <ul style="list-style-type: none"> justification of the proposed final landform with regard to its impact on local and regional groundwater systems; a detailed description of how the site would be progressively rehabilitated and integrated into the surrounding landscape; detailed modelling of potential groundwater volume, flow and quality impacts of the presence of an inundated final void on identified receptors specifically considering those environmental systems that are likely to be groundwater dependent; a detailed description of the measures to be put in place to ensure that sufficient resources are available to implement the proposed rehabilitation; and the measures that would be established for the long-term protection of local and regional aquifer systems and for the ongoing management of the site following the cessation of the project. 	<p>4.4.5 and 4.5.6</p> <p>2.14</p> <p>4.4.5</p> <p>2.14</p> <p>4.4.3</p>
AIR QUALITY		
Department of Environment, Climate Change & Water (01/04/10)	The existing ambient air quality in the vicinity of the proposal should be characterised and discussed.	4.10.2
	The EA must identify all sources of air emissions from the project, including:	
	<ul style="list-style-type: none"> the quantities and physio-chemical parameters (eg concentration, moisture content, bulk density, particle sizes etc) of materials to be used, transported, produced or stored; 	4.10.5 & Table 4.40
	<ul style="list-style-type: none"> an outline of procedures for handling, transport, production and storage; and 	4.10.6
	<ul style="list-style-type: none"> the management of solid, liquid and gaseous waste streams with potential for significant air impacts <p><i>Note: emissions can be classed as either:</i></p> <ul style="list-style-type: none"> - <i>point (eg emissions from stack or vent) or</i> - <i>fugitive (from wind erosion, leakages or spillages, associated with loading or unloading, conveyors, storage facilities, plant and yard operation, vehicle movements (dust from road, exhausts, loss from load), land clearing and construction works).</i> 	4.10.3, 4.10.6 & 4.10.7



Table A2-2
Coverage of Environmental Issues (cont'd)

Government Agency	Paraphrased Requirement	Relevant EA Section(s)
AIR QUALITY (Cont)		
	The EA must describe in detail the measures proposed to mitigate the impacts and the extent to which the mitigation measures are likely to be effective in achieving the relevant environmental outcomes. An analysis of different mitigation measures/technologies that have been investigated should also be included.	4.10.6 & 4.10.7
NOISE		
Department of Environment, Climate Change & Water (01/04/10)	The EA should identify all potential noise sources and describe the extent to which noise emissions are likely to impact on any residential and/or other sensitive receivers in the vicinity of the site. The publication New South Wales Industrial Noise Policy (EPA 2000) provides the methodology and assessment criteria applied by the EPA to assess the impacts and to determine project-specific noise planning levels. The EA should include a noise impact assessment in accordance with this Policy.	4.2
	The noise impact assessment should take into account the variety of operational work of the project, clearly specify the proposed hours of operation, and take into account adverse weather conditions including temperature inversions. Sound power levels (measured or estimated) for all plant and equipment should be clearly stated and justified. There should be an assessment of cumulative noise impacts, having regard to any other developments existing and/or approved for the locality. Where adverse noise impacts are predicted, the impact assessment should provide details on proposed noise control measures.	4.2.4 to 4.2.6
	To assess the extent of the road traffic noise impact, the noise impact assessment should identify the transport route(s) to be used, the hours of operation, anticipated traffic movements, and expected increase in noise levels.	4.2.4.2 & 4.2.6.4
	The methodology, data and assumptions used to assess the impact of road haulage on residential properties must be fully documented and justified. Where disturbance due to road transport is likely to exceed the recommended criteria, the EA must describe the measures proposed to mitigate the impacts and the extent to which the measures are likely to be effective in achieving the relevant criteria.	4.2.4.2 and Part 1 of the SCSC
Council (06/04/10)	Council requests noise and vibration be addressed adequately with reference to Best Practice Guidelines for Noise, Vibration and Airblast Control, produced by Environment Australia and any other relevant publication.	4.2.4.3 & 4.2.6.5
	The impacts of 24 hour operation need to be addressed so that there is no adverse impact on nearby residences.	4.2.6

Table A2-2
Coverage of Environmental Issues (cont'd)

Government Agency	Paraphrased Requirement	Relevant EA Section(s)
WASTE		
Department of Environment, Climate Change & Water (01/04/10)	The EA should describe all wastes that will be generated by the proposal including, for each of the main waste streams, the process from which it will be generated; its quantity and composition; its classification under the Protection of the Environment Operations Act 1997; and the proposed management of the waste. Consideration should also be given to disposal of cleared vegetation and excess spoil material.	2.5, 2.7 and 2.8
	The EA must provide details of procedures for the assessment, handling, storage, transport and disposal of all hazardous and dangerous materials used, stored, processed or disposed of at the site, in addition to the requirements for liquid and non-liquid wastes, and identify any fuel or chemical storage areas to be established on the site and describe the measures proposed to minimise the potential for leakage or migration of pollutants into the soil, groundwater or surface water systems.	2.10.2.4
Council (06/04/10)	No waste from the mining operation is to be taken to the Majors Creek landfill as this site is small and has a limited life. The EIS will need to identify the amount and make up of waste that cannot be recycled and will need to go to landfill. Council may accept a certain amount of waste at the Braidwood landfill provided the costs of Council accepting this waste are borne by the mine. A Trade Waste agreement is recommended.	2.8
	Appropriate Local Government approvals for existing and proposed on-site effluent management systems need to be obtained. It is noted that the existing system on site does not appear to have approval. All applications should include supporting information to ensure any system is adequately sized and located.	2.8
REHABILITATION		
Department of Environment, Climate Change & Water (01/04/10)	The EA must describe the options for rehabilitation work on the site, including proposed revegetation and proposed final landforms.	2.14
	The EA must identify any areas of previous environmental damage which will be rehabilitated during the operation of the project. Details about revegetation plans and final landforms for these sites should be provided.	2.15.4
NSW Industry and Investment (21/04/10)	The Proponent must include a Rehabilitation section in the EA which addresses the following aspects:	
	<ul style="list-style-type: none"> • Post Mining Land Use – the Proponent must identify and assess post mining land use options and provide a statement of the preferred post mining land use outcome in the EA. This should include a discussion of the benefits of the post mining land to a subsequent landowner, the local community and the state of NSW. 	2.14.3

**Table A2-2
Coverage of Environmental Issues (cont'd)**

Government Agency	Paraphrased Requirement	Relevant EA Section(s)
REHABILITATION (Cont)		
	<ul style="list-style-type: none"> • Rehabilitation Objectives and Domains – a set of project rehabilitation objectives must be included that clearly define the environmental outcomes required to achieve the final land use. Identify each rehabilitation domain and describe rehabilitation objectives for each domain. 	2.14.2
	<ul style="list-style-type: none"> • Rehabilitation Methodology – outline general rehabilitation methods and procedures that will be employed by the project to ensure the rehabilitation objectives are met. 	2.14.4 to 2.14.10
	<ul style="list-style-type: none"> • Strategic Rehabilitation Completion Criteria – nominate strategic completion criteria for the five phases of the rehabilitation process, namely (1) Decommissioning; (2) Landform Establishment; (3) Growth Media Development; (4) Ecosystem Establishment; and (5) Ecosystem Development. If necessary, objective criteria may be presented as ranges rather than finite indicator levels. Subjective criteria may also apply where a gap in technical knowledge is experienced. It is expected that further refinement of these criteria will be undertaken and included in the Rehabilitation and Environmental Management Plan. 	2.14.2 and Mining Operations Plan
	<ul style="list-style-type: none"> • Conceptual Final Landform Design – a drawing at an appropriate scale with final landform contours should be provided. This drawing should identify the following attributes of the final landform: vegetation types; habitat features; contaminated areas; final voids; access and internal roads; fencing design; and other remaining infrastructure such as sheds, dams, bores and pipelines. 	Figure 2.9
CONTAMINATED LAND & SOILS		
Department of Environment, Climate Change & Water (01/04/10)	<p>The EA must identify any likely impacts on soil or land resulting from the construction or operation of the project, including the likelihood of:</p> <ol style="list-style-type: none"> disturbing any existing contaminated soil, contamination of soil by operation of the activity, subsidence or instability, soil erosion, and disturbing acid sulfate or potential acid sulfate soils. 	<p>Not applicable</p> <p style="text-align: center;">2.10.2.4</p> <p>Not applicable</p> <p style="text-align: center;">4.12.5</p> <p style="text-align: center;">4.12.3</p>
	<p>The EA must describe and assess the effectiveness or adequacy of any soil management and mitigation measures during construction and operation of the project including:</p> <ol style="list-style-type: none"> erosion and sediment control measures, proposals for site remediation – see Managing Land Contamination, Planning Guidelines SEPP 55 – Remediation of Land (DUAP and NSW EPA 1998), and proposals for the management of these soils – see Assessing and Managing Acid Sulfate Soils (NSW EPA 1995) (note that this is the only methodology accepted by the DECCW). 	<p style="text-align: center;">4.5.4</p> <p>Not applicable</p> <p>Not applicable</p>



Table A2-2
Coverage of Environmental Issues (cont'd)

Government Agency	Paraphrased Requirement	Relevant EA Section(s)
GREENHOUSE EMISSIONS		
Department of Environment, Climate Change & Water (01/04/10)	A comprehensive assessment of and report on the project's predicted greenhouse gas emissions (tCO ₂ e). Emissions should be reported on a:	
	a. Greenhouse intensity (emissions per unit of production) basis;	4.10.7.2
	b. Total annual emissions basis; and	4.10.7.2
	c. Total project lifetime basis, including construction, operation and decommissioning.	4.10.7.2
	The assessment of project emissions should include direct emissions (ie., those occurring on the project site), indirect emissions (eg those offsite as a result of the project, such as through electricity use) and any significant upstream and/or downstream emissions associated with the project.	4.10.7.2
	The emissions should be estimated using an appropriate methodology, in accordance with the Department of Planning's Draft "Guidelines: Energy and Greenhouse in EIA" (2002) and the Australian Greenhouse Office's "Factors and Methods Workbook" (2006).	4.10.5.2 & 4.10.7.2
Emissions should be compared in the EA against:	a. Industry 'best practice' emissions intensity for the activity; and	Not available
	b. Total annual NSW emissions, so the impact of the proposal on NSW emission reduction targets can be evaluated.	4.10.7.2
	The Proponent should evaluate and report on the feasibility of measures to further reduce greenhouse gas emissions associated with the project.	Not applicable
FLORA AND FAUNA		
Department of Environment, Climate Change & Water (01/04/10)	A number of threatened entities are known to occur or have potential to occur in the Majors Creek area. A complete fauna and flora survey should be conducted and documented in accordance with the draft "Guideline for Threatened Species Assessment" (DEC and DPI, 2005) as it provides the assessment framework for threatened species issues associated with the site. All survey work should be undertaken at the appropriate time of year for each species to maximise the survey results.	4.3
	Of particular concern to DECCW is the potential for the Majors Creek Leek Orchid on site. This critically endangered species has only been identified on a site near the project site, and any occurrence of this species must be recorded for further investigation by DECCW.	4.3
	The project site may also support Endangered Ecological Communities (EEC). The EA must describe actions proposed to avoid or mitigate impacts caused by the project for all threatened species found or likely to be found at the site. Threatened species that could potentially occur onsite and should be considered are listed in Table 1 below.	4.3.6



**Table A2-2
Coverage of Environmental Issues (cont'd)**

Government Agency	Paraphrased Requirement	Relevant EA Section(s)																																										
FLORA AND FAUNA (Cont)																																												
	The locations of the <i>subject species, populations</i> or <i>ecological communities</i> recorded in any survey conducted for the purposes of the EA shall be represented on a map of the <i>study area</i> that shows the proposal (preferred scale 1:4,000 or finer).	Figure 4.14																																										
Department of Environment, Climate Change & Water (01/04/10)	<p>Likely impacts on regionally significant, protected, and threatened species and their habitats need to be assessed, evaluated and reported. The assessment should specifically report on the considerations listed in Step 3 of the Draft Threatened Species Assessment Guidelines (DECC and DPI, 2005) as stated below:</p> <p style="text-align: center;">Step 3, Involves identifying not only the magnitude and extent of impacts but also the significance of the impacts as related to the conservation importance of the habitat, individuals and population likely to be affected.</p> <p>The EA should clearly state whether it meets each of the key thresholds set out in Step 5 of the draft guidelines and describe the actions that will be taken to avoid or mitigate impacts or compensate to prevent unavoidable impacts of the project on threatened species, populations, ecological communities, or their habitats. This should include an assessment of the effectiveness and reliability of the measures and any residual impacts after the measures are implemented.</p>	4.3.6																																										
	<p>For the purposes of this Evaluation of Impacts (EI), the species listed below are to be addressed as subject species:</p> <table border="0" style="width: 100%;"> <tr> <td style="vertical-align: top;">FAUNA</td> <td></td> </tr> <tr> <td>Giant Burrowing Frog</td> <td>Hooded Robin</td> </tr> <tr> <td>Littlejohn's Tree Frog</td> <td>Scarlet Robin</td> </tr> <tr> <td>Southern Bell Frog</td> <td>Flame Robin</td> </tr> <tr> <td>Striped Legless Lizard</td> <td>Pink Robin</td> </tr> <tr> <td>Koala</td> <td>Barking Owl</td> </tr> <tr> <td>Squirrel Glider</td> <td>Powerful Owl</td> </tr> <tr> <td>Yellow-bellied Glider</td> <td>Gang-gang Cockatoo</td> </tr> <tr> <td>Spotted-tailed Quoll</td> <td>Glossy Black-Cockatoo</td> </tr> <tr> <td>White-footed Dunnart</td> <td>FLORA</td> </tr> <tr> <td>Eastern Pygmy Possum</td> <td>Araluen Gum</td> </tr> <tr> <td>Eastern False Pipistrelle</td> <td>Araluen Zieria</td> </tr> <tr> <td>Eastern Bentwing Bat</td> <td>Austral toadflax</td> </tr> <tr> <td>Greater Broad-nosed Bat</td> <td>Dense Cord-rush</td> </tr> <tr> <td>Golden-tipped Bat</td> <td>Majors Creek Leek Orchid</td> </tr> <tr> <td>Large-footed Myotis</td> <td>Mauve Burr Daisy</td> </tr> <tr> <td>Yellow-bellied Sheath-tail-bat</td> <td>Michelago Parrot-Pea</td> </tr> <tr> <td>Little Eagle</td> <td>Pale Golden Moths</td> </tr> <tr> <td>Square-tailed Kite</td> <td>Small Snake Orchid</td> </tr> <tr> <td>Brown Treecreeper</td> <td>Small-leaved Gum</td> </tr> <tr> <td>Diamond Firetail</td> <td>Tangled Bedstraw</td> </tr> </table>	FAUNA		Giant Burrowing Frog	Hooded Robin	Littlejohn's Tree Frog	Scarlet Robin	Southern Bell Frog	Flame Robin	Striped Legless Lizard	Pink Robin	Koala	Barking Owl	Squirrel Glider	Powerful Owl	Yellow-bellied Glider	Gang-gang Cockatoo	Spotted-tailed Quoll	Glossy Black-Cockatoo	White-footed Dunnart	FLORA	Eastern Pygmy Possum	Araluen Gum	Eastern False Pipistrelle	Araluen Zieria	Eastern Bentwing Bat	Austral toadflax	Greater Broad-nosed Bat	Dense Cord-rush	Golden-tipped Bat	Majors Creek Leek Orchid	Large-footed Myotis	Mauve Burr Daisy	Yellow-bellied Sheath-tail-bat	Michelago Parrot-Pea	Little Eagle	Pale Golden Moths	Square-tailed Kite	Small Snake Orchid	Brown Treecreeper	Small-leaved Gum	Diamond Firetail	Tangled Bedstraw	4.3.6.3
FAUNA																																												
Giant Burrowing Frog	Hooded Robin																																											
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	In determining whether other entities should also be addressed as subject species, populations and ecological communities, consideration shall be given to the habitat types present within the study area, recent records of threatened species, populations or ecological communities in the locality and the known distributions of threatened species, populations and ecological communities. This analysis and its conclusion are to be documented in the Evaluation of Impacts.	4.3.6																																										



Table A2-2
Coverage of Environmental Issues (cont'd)

Government Agency	Paraphrased Requirement	Relevant EA Section(s)
FLORA AND FAUNA (Cont)		
Department of Environment, Climate Change & Water (01/04/10)	Databases such as the DECCW Atlas of NSW Wildlife and BioNet, as well as databases held by the Australian Museum and Royal Botanic Gardens, should be consulted to assist in compiling the list of possible entities to be analysed.	4.3.2
	A description of habitats including such components as the frequency of tree hollows, the presence of wetlands, the density of understorey vegetation, the composition of the ground cover, the soil type and the presence of heath and permanent or ephemeral swamps shall be given. The condition of these habitats within the study area shall be discussed, including the prevalence of introduced species. A description of the habitat requirements of threatened species, populations or ecological communities likely to occur in the study area shall be provided.	4.3.4
	Any areas which may provide habitat connectivity between the study area and adjacent areas of likely habitat for subject species, populations or ecological communities shall be identified and described.	4.3.4
	In defining the study area, consideration shall be given to possible indirect impacts of the proposed action on species/habitats in and surrounding the subject site. These could include impacts arising from altered fire and hydrology regimes, soil erosion or pollution, fencing, habitat fragmentation and disruption of wildlife movement corridors, edge effects, altered light and noise regimes, disturbance of roosting areas or other impacts due to increased use of the area by humans, and the impacts of increased levels of domestic and feral predators.	4.3.6
	Survey technique(s) shall be described and a reference given, where available, outlining the survey technique employed.	4.3.3
	Survey site(s) shall be identified on a map with a clear legend. The size, orientation and dimensions of quadrant or length of transect shall be clearly noted for each type of survey technique undertaken. Full AMG grid references for the survey site(s) shall be provided.	Figures 4.12 and 4.13
	DECCW survey proformas are to be used by field staff when applying a range of standard fauna survey techniques. Copies of standard proformas are included in Appendix 2 to these DGEARs. Digital copies of these proformas can be requested from the nominated DECCW contact officer. These proformas shall be used by field staff when undertaking fauna surveys and completed data sheets are to be included as an appendix to the Evaluation of Impacts.	Appendices to Part 2 of SCSC
	The time invested in each survey technique shall be summarised in the Evaluation of Impacts, based on completed proformas, e.g. number of person hours / transect, duration of call playback, number of nights that traps are set.	Appendices to Part 2 of SCSC



**Table A2-2
Coverage of Environmental Issues (cont'd)**

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Government Agency	Paraphrased Requirement	Relevant EA Section(s)
FLORA AND FAUNA (Cont)		
Department of Environment, Climate Change & Water (01/04/10)	Personnel details including name of surveyor(s), contact phone number, qualifications and experience must be included. The person who identified records (e.g. Anabat, hair tubes, scat analysis) shall also be identified in this manner.	4.3.1
	Environmental conditions during the survey shall be noted from the commencement of each survey technique until its completion. These conditions must be documented in the Evaluation of Impacts.	4.3.3
	An assessment of the efficacy of each survey regime in detecting each species under the intensity utilised by the study is to be provided.	4.3.3
	A full list of all flora and fauna species recorded during the course of surveys shall be included (such information is indicative of the habitat quality of the site).	Appendices to Part 2 of SCSC
	Appendix 1 of Attachment B of the DECCW letter details the specific survey requirements for the subject species, populations or ecological communities identified in Table 1 of these DGEARs. The flora and fauna survey of the study area must include the use of these survey methods.	4.4.3
	<p>The remaining requirements need only be addressed for those threatened species or populations that are likely to be affected by the proposal.</p> <ul style="list-style-type: none"> • Discussion of local and regional abundance <ul style="list-style-type: none"> ○ Discussion of other known local populations ○ Discussion of habitat utilisation ○ Description of vegetation ○ Discussion of corridors • Assessment of Habitat <ul style="list-style-type: none"> ○ Description of Habitat Values ○ Distribution and condition of Regional Habitats • Discussion of Conservation Status 	4.3.6
	In accordance with the Draft Guidelines for Threatened Species Assessment policy of Improve or Maintain, the ameliorative measures described for this development should meet the improve or maintain test for biodiversity values.	4.3.6
	Consideration shall be given to the information contained in approved and draft recovery plans or threat abatement plans for existing taxa, known or likely to occur in the study area, and whether any recommendation is applicable to the proposal.	Not applicable
	The development of long-term management strategies shall be considered to protect areas within the study area which are of particular importance for the subject species, populations or ecological communities likely to be affected by the proposal.	2.15 and 4.3.6.8



Table A2-2
Coverage of Environmental Issues (cont'd)

Government Agency	Paraphrased Requirement	Relevant EA Section(s)
FLORA AND FAUNA (Cont)		
Department of Environment, Climate Change & Water (01/04/10)	For all subject species, populations and ecological communities, the Evaluation of Impacts shall describe the following: <ul style="list-style-type: none"> a. the location, nature and extent of habitat removal or modification which will result from the action proposed; b. the likely and potential impact of the removal of habitat. Particular attention shall be given to the loss of: <ul style="list-style-type: none"> i. Natural temperate grasslands, ii. Grassland habitat for Striped Legless Lizard, iii. Hollow-bearing trees, foraging habitat and termite mounds utilised for breeding, roosting or denning by threatened fauna such as micro-chiropteran bats, small woodland birds and Rosenberg's Goanna respectively, iv. Native grassland habitat for the Majors Creek Leek Orchid or Small Snake Orchid, and v. Loss of food resources and the impact this may have on the subject species, populations or ecological communities. 	4.3.4 and 4.3.6
	<ul style="list-style-type: none"> c. Any direct and indirect impacts of the proposal including: <ul style="list-style-type: none"> i. the fragmentation or isolation of local populations and/or local occurrences, and the increased distance required for the movement of individuals/genetic material between habitat patches, ii. change in vegetation floristics and structure resulting from edge effects, iii. altered hydrology regimes (including increased runoff, raising or lowering of the water table, decrease in habitat due to damming), iv. soil erosion and pollution, particularly associated with changes to nutrient loads and water flow, and the long term impacts on the viability of the EEC's occurring onsite, v. disturbance to feeding or nesting/breeding of species, vi. trampling or other impacts including increase in weeds and compactions of soil due to increased use of the area by humans on the native grassland habitats, vii. habitat fragmentation and disruption of wildlife movement corridors and pollination mechanisms, viii. altered light and noise regimes, ix. the likely contribution of the action proposed to the threatening processes already acting on populations of those subject species or populations and occurrences of subject ecological communities in the locality. 	4.3.6



Table A2-2
Coverage of Environmental Issues (cont'd)

Government Agency	Paraphrased Requirement	Relevant EA Section(s)
FLORA AND FAUNA (Cont)		
Department of Environment, Climate Change & Water (01/04/10)	Any measures proposed to mitigate the effect of the proposal on local populations of threatened species and populations and/or local occurrences of ecological communities shall be described. The potential effectiveness of any such amelioration in maintaining a viable local population and/or local occurrence in the short, medium and long term shall be discussed (e.g. fauna underpasses, vegetation management).	4.3.5
	The areas proposed to be used for compensatory strategies must be described in full including a detailed description of their biodiversity. These areas should be assessed in accordance with the Principles for the use of biodiversity offsets in NSW.	2.15 and 4.3.6.8
	Any proposed pre-construction monitoring plans or on-going monitoring of the effectiveness of the mitigation measures shall be outlined in detail.	4.3.7
	An evaluation of Impacts must include details of the qualifications and experience in threatened species conservation of the person preparing the statement and of any other person who has conducted research or investigations relied on in preparing the statement.	Appendix 5 of Part 2 of SCSC
	Persons conducting flora and fauna surveys must have appropriate licences or approvals under relevant legislation.	4.3.1
Council (06/04/10)	A full flora and fauna study should be undertaken using the DECCW guidelines.	4.3.3
	There is a significant weed infestation on the subject land, particular on the block adjoining Majors Creek Road. Rehabilitation and mitigation measures should be included in the EIS.	4.3.5
NSW Industry and Investment (21/04/10)	The proposed mining development should include consideration of the following issues:	
	<ul style="list-style-type: none"> • Description of any aquatic environments (watercourses, wetlands) located on the site or adjacent to the site and their regional significance. 	Section 6.1 of Part 2 of SCSC
	<ul style="list-style-type: none"> • Predictions of any impacts of the development upon aquatic environments both on the site and downstream (both temporary and permanent). 	Not applicable
	<ul style="list-style-type: none"> • Safeguards to mitigate any impacts upon aquatic environments and riparian habitats (e.9. full details of proposed riparian buffer zones and riparian rehabilitation and revegetation plans). 	Not applicable
<ul style="list-style-type: none"> • Predictions of any impacts upon water quality and any aquatic threatened species, populations and ecological communities listed under the <i>Fisheries Management Act 1994</i> (both temporary and permanent). 	4.5.6	

Table A2-2
Coverage of Environmental Issues (cont'd)

Government Agency	Paraphrased Requirement	Relevant EA Section(s)
FLORA AND FAUNA (Cont)		
NSW Industry and Investment (21/04/10)	<ul style="list-style-type: none"> Safeguards to mitigate any impacts upon water quality, including impacts downstream into Majors Creek (e.g. details of proposed mine dewatering management, site stormwater management, and surface and groundwater quality monitoring downstream of the site). 	4.5.6
	<ul style="list-style-type: none"> Details of any proposed waterway crossings or possible obstruction of fish passage (e.g. access roads and water supply pipeline crossings). 	2.2.3
	<ul style="list-style-type: none"> Full details of the proposed tailings storage facility (e.9. dimensions, capacity, construction methods and materials, proposed management and monitoring of any leachate during operation, proposed future removal and rehabilitation of drainage line etc.) 	2.7.2
	<ul style="list-style-type: none"> Full details of proposed management of transport of sulphide concentrate both on site and on public roads, including management of potential spills from pipelines and truck movements. 	2.9
	<p>I&I NSW recommends the inclusion of riparian corridors where possible to provide a buffer between the development areas and adjacent waterways or natural drainage lines to provide protection to riparian and aquatic habitats. Retention and replanting of native riparian vegetation will help to protect receiving waters from erosion and runoff. Where the riparian zone has become degraded or disturbed due to past use, rehabilitation of the zone is recommended including planting of endemic riparian vegetation.</p>	Not applicable
	<p>The design and construction of any new or upgraded crossings of Majors Creek should be undertaken in accordance with the Department's <i>Policy and Guidelines for Fish Friendly Waterway Crossings (2004)</i> and <i>Why Do Fish Need to Cross the Road? Fish Passage Requirements for Waterway Crossings (2004)</i>. These documents are available on our website www.industry.nsw.gov.au, under 'Aquatic Habitats' and 'Publications'.</p>	2.7.2
Department of Environment, Climate Change & Water (01/04/10)	<p>The EA should clearly outline the extent to which the project footprint will impact on areas of native vegetation.</p>	4.3.6.2 and Figure 4.15
	<p>Offsetting biodiversity and habitat loss would be required as identified in the threatened species guidelines.</p>	2.15 & 4.3.6.8
ABORIGINAL HERITAGE		
Department of Environment, Climate Change & Water (01/04/10)	<p>The EA for the project should address and document the information requirements set out in the <i>"Draft Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation"</i>.</p>	4.6.2

Table A2-2
Coverage of Environmental Issues (cont'd)

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Government Agency	Paraphrased Requirement	Relevant EA Section(s)
ABORIGINAL HERITAGE		
Council (06/04/10)	The assessment and consultation should identify the nature and extent of impacts on Aboriginal cultural heritage values across the study area; the extent and significance of each Aboriginal site and value located; formulate actions to mitigate impacts on Aboriginal cultural heritage values in association with the Aboriginal communities; and develop long term management recommendations for the Aboriginal cultural values located in the study area. This should include an assessment of the effectiveness and reliability of the measures and any residual impacts after these measures are implemented.	4.6
	Adequate heritage impact assessment of the site, due to existing mining relics being present and potential pre-European occupation, and identify measures to protect any significant sites, structures and artefacts should be identified in the EIS.	4.6 and 4.7
TRAFFIC		
Roads & Traffic Authority (25/03/10)	Details regarding the expected number and type of vehicles to access the site and their distribution onto the road network are requested. Predicted traffic volumes are to be adequately justified. Depending on the volume of vehicles expected a Traffic Impact Study may be required.	4.9.3.3 & 4.9.5.2
	If the traffic volume are significant, intersection modelling using SIDRA should be undertaken for the junction of Araluen Road with the Kings Highway considering the following: <ul style="list-style-type: none"> • AM and PM peaks volumes and holiday peak volumes. • Existing traffic volumes with and without development and 10 year projected volumes with and without the development. 	4.9.5.1 and Part 6 of SCSC 4.9.5.2
	The applicant should identify suitable infrastructure required to ameliorate any traffic impacts and safety impacts associated with the development.	4.9.4.3
	The RTA strongly recommends that the developer considers the environmental impacts of any proposed roadworks as part of the Statement of Environmental Effects. If these impacts are not considered, then the RTA would require the applicant to provide a separate environmental impact assessment, a 'Review of Environmental Factors' prior to commencing any works that were conditioned as requirements of the development.	4.9.5
Council (06/04/10)	There is a need to address pavement damage, road safety and traffic noise issues that will arise from transport of resources to site and the haulage operations from site.	4.9.4.3 & 4.9.5.3
	The EIS needs to indicate the number of vehicle movements for both light and heavy vehicles, and identify the proposed haulage route.	4.9.5.2
	The EIS should indicate the route(s) of the haulage trucks after they reach the Kings Highway at Braidwood.	Yet to be determined and not relevant



Table A2-2
Coverage of Environmental Issues (cont'd)

Government Agency	Paraphrased Requirement	Relevant EA Section(s)
TRAFFIC (CONT'D)		
Council (06/04/10)	Majors Creek Road has a relatively narrow carriageway. Conflicts with haulage trucks will occur especially on the more pronounced crests and over a narrow culvert at about mid section. Some widening and line marking over the crests would ameliorate the problem. Widening and/or better delineation/guardrail are requested to address the narrow culvert.	4.9.4.3
	The proposed intersection of the mine access road off Majors Creek Road will need to be constructed to RTA standards and an additional acceleration lane is requested for loaded trucks leaving the site up hill.	4.9.4.1
	The intersection of Majors Creek Road with Araluen Road should be upgraded with an RTA BAR treatment to make a safer intersection for the increase in traffic turning towards the mine.	4.9.4.1
	Potential damage/wear and tear on other Council roads and/or MR92 (Nerriga Road) needs to be addressed in the EIS with some assessment of the expected damage to pavements on the haulage routes and proposed the actions to address these.	4.9.4.3
	Council proposes a planning agreement where impacts are identified and an amount is agreed and is paid up front for each year, so that Council can repair the damage when it occurs without bearing the expense of these repairs.	4.9.4.3
	Further it is requested that the hours of haulage operations be restricted to daylight hours to avoid traffic noise at night, especially through Braidwood.	2.11.2
SOCIO-ECONOMIC		
Roads & Traffic Authority (25/03/10)	The impact of the mine operations on the local amenity, especially the haulage operations through Braidwood, should be addressed by compensatory contribution towards better community facilities. In any case, many of the mine's employees are likely to live in Braidwood and Majors Creek and increase the demand for public facilities. A formalised planning agreement is requested for payments to be paid towards identified community project(s).	4.9.4.3 and 4.13.3
Council (06/04/10)	Details regarding how community impacts will be monitored and complaints handled need to be incorporated in the EIS.	4.13
INFRASTRUCTURE		
Council (06/04/10)	Council requests that justification for the location of the infrastructure on site, especially the proximity of the stockpile and proposed treatment plant to rural dwellings be addressed.	2.7 & 2.16.8, 2.2.4, 2.6.3 & 2.16.5