



# Appendix 2

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## Director-General's Requirements and Coverage of Key Assessment Requirements in the *Environmental Assessment*

- Correspondence from the Director-General Department of Planning – 9 September 2009
- Table A2-1: Coverage of Director-General's Requirements in the *Environmental Assessment*
- Table A2-2: Policies, Guidelines & Plans Referenced by DGRs
- Table A2-3: Coverage of Requirements nominated by other Government Agencies in the *Environmental Assessment*

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NSW GOVERNMENT  
**Department of Planning**

**Major Development Assessment**

Contact Kane Winwood  
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Mr Ian Chalmers  
Managing Director  
Alkane Resources Limited  
PO Box 8178  
PERTH BUSINESS CENTRE WA 6849

Dear Mr Chalmers

**Tomingley Gold Project (09\_0155)  
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. The Commonwealth Government has accredited the NSW environmental assessment process, so if it is 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 for the project to determine the:

- applicable fee (see Division 1A, Part 15 of the *Environmental Planning and Assessment Regulation 2000*); and
- 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.

If you have any enquiries about these requirements, please contact Kane Winwood.

Yours sincerely

Chris Wilson  
**Executive Director**  
**Major Projects Assessment**  
as delegate of the Director-General



## Director-General's Requirements

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

<b>Application Number</b>	09_0155
<b>Project</b>	The Tomingley Gold Project, which includes: <ul style="list-style-type: none"> <li>• constructing, operating and rehabilitating an open cut gold mine and associated infrastructure;</li> <li>• extracting and processing up to 1 million tonnes of gold ore per year for up to 9 years; and</li> <li>• transporting the processed ore from the site via road.</li> </ul>
<b>Location</b>	Approximately 53 kilometres southwest of Dubbo
<b>Proponent</b>	Alkane Resources Limited
<b>Date of Issue</b>	9 September 2009
<b>General Requirements</b>	The Environmental Assessment must include <ul style="list-style-type: none"> <li>• an executive summary;</li> <li>• a detailed description of the project including: <ul style="list-style-type: none"> <li>– the need for the project;</li> <li>– a detailed resource and land use assessment;</li> <li>– alternatives considered, including a detailed justification for the proposed mine plan;</li> <li>– likely staging of the project; and</li> <li>– plans of any proposed building works;</li> </ul> </li> <li>• a risk assessment of the potential environmental impacts of the project, identifying the key issues for further assessment;</li> <li>• 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"> <li>– a description of the existing environment and its values, using sufficient baseline data;</li> <li>– 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);</li> <li>– 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</li> <li>– detailed contingency plans for managing any potentially significant risks to the environment;</li> </ul> </li> <li>• a statement of commitments;</li> <li>• 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</li> <li>• a signed statement from the author of the Environmental Assessment certifying that the information contained in the report is neither false nor misleading.</li> </ul>
<b>Key Issues</b>	<ul style="list-style-type: none"> <li>• <b>Noise and Blasting</b> – including construction, operational and road traffic noise;</li> <li>• <b>Soil and Water</b> – including: <ul style="list-style-type: none"> <li>– a detailed site water balance;</li> <li>– a detailed groundwater model;</li> <li>– potential water quality impacts on the environment and other land users, including a geochemical assessment of the potential leachate impacts; and</li> </ul> </li> </ul>

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	<ul style="list-style-type: none"> <li>- a description of final void water management;</li> <li>• <b>Hazards</b> – including a detailed description of the measures and safeguards that would be implemented to minimise the risks associated with transporting, handling and using cyanide.</li> <li>• <b>Biodiversity</b> – including:             <ul style="list-style-type: none"> <li>- accurate estimates of any vegetation disturbance associated with the project</li> <li>- impacts on threatened species, populations or ecological communities; critical habitats; and native vegetation generally;</li> <li>- a detailed description of the measures that would be implemented to maintain or improve the biodiversity values region in the medium to long term;</li> </ul> </li> <li>• <b>Visual</b> – including landform and lighting impacts;</li> <li>• <b>Heritage</b> – both Aboriginal and non-Aboriginal;</li> <li>• <b>Air Quality</b>;</li> <li>• <b>Traffic</b> – including a detailed description of the measures that would be implemented during construction and operation to minimise impacts on the Newell Highway and Tomingley West Road;</li> <li>• <b>Waste</b> – including:             <ul style="list-style-type: none"> <li>- accurate estimates of the quantity and nature of the potential waste streams of the project;</li> <li>- 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;</li> </ul> </li> <li>• <b>Energy</b> – 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;</li> <li>• <b>Rehabilitation</b>– including a detailed strategy that describes:             <ul style="list-style-type: none"> <li>- how the site would be progressively rehabilitated and integrated into the landscape; and</li> <li>- 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</li> </ul> </li> <li>• <b>Socio-economic.</b></li> </ul>
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"> <li>• Commonwealth Department of Environment, Water, Heritage and the Arts;</li> <li>• Department of Environment, Climate Change and Water;</li> <li>• Department of Industry and Investment;</li> <li>• Department of Transport and Infrastructure;</li> <li>• NSW Heritage Office;</li> <li>• Department of Services, Technology &amp; Administration;</li> <li>• Department of Transport and Infrastructure; and</li> <li>• Parkes and Narramine Shire Councils.</li> </ul> <p>Both the consultation process, and the issues raised during this consultation process, must be described in the environmental assessment.</p>
Deemed Refusal Period	<p>90 days</p>



Table A2-1  
Coverage of Director-General's Requirements in the *Environmental Assessment*

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Government Agency	Paraphrased Requirement	Relevant Section(s)
<b>GENERAL</b>		
DoP (09/09/09)	The Environmental Assessment must include	
	• an executive summary;	ES-1
	• a detailed description of the project including: <ul style="list-style-type: none"> <li>– the need for the project;</li> <li>– a detailed resource and land use assessment;</li> <li>– alternatives considered, including a detailed justification for the proposed mine plan;</li> <li>– likely staging of the project; and</li> <li>– plans of any proposed building works;</li> </ul>	6.3 1.3.3, 2.14.5 6.1 2.4.5 2.2
	• a risk assessment of the potential environmental impacts of the project, identifying the key issues for further assessment;	3.5
	• 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"> <li>– a description of the existing environment and its values, using sufficient baseline data;</li> <li>– 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);</li> <li>– 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</li> <li>– detailed contingency plans for managing any potentially significant risks to the environment;</li> </ul>	Throughout Section 4
	• a statement of commitments;	Section 5
	• 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	6.2 & 6.3
	• a signed statement from the author of the Environmental Assessment certifying that the information contained in the report is neither false nor misleading.	iii
<b>KEY ISSUES</b>		
DoP (09/09/09)	• <b>Noise and Blasting</b> – including construction, operational and road traffic noise;	4.2
	• <b>Soil and Water</b> – including: <ul style="list-style-type: none"> <li>– a detailed site water balance;</li> <li>– a detailed groundwater model;</li> <li>– potential water quality impacts on the environment and other land users, including a geochemical assessment of the potential leachate impacts; and</li> <li>– a description of final void water management;</li> </ul>	4.3, 4.4, 4.12 4.3.5.5 4.4.5.2, 4.4.6 4.4.7.2 4.4.7.3



Table A2-1 (Cont'd)  
Coverage of Director-General's Requirements in the *Environmental Assessment*

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Government Agency	Paraphrased Requirement	Relevant Section(s)
	<ul style="list-style-type: none"> <li>• <b>Hazards</b> – including a detailed description of the measures and safeguards that would be implemented to minimise the risks associated with transporting, handling and using cyanide.</li> </ul>	4.13
	<ul style="list-style-type: none"> <li>• <b>Biodiversity</b> – including: <ul style="list-style-type: none"> <li>– accurate estimates of any vegetation disturbance associated with the project</li> <li>– impacts on threatened species, populations or ecological communities; critical habitats; and native vegetation generally;</li> <li>– a detailed description of the measures that would be implemented to maintain or improve the biodiversity values region in the medium to long term;</li> </ul> </li> </ul>	2.14.8.1, 4.5.7.3 4.5.8.3 to 4.5.8.7 2.14.8, 4.5.7
	<ul style="list-style-type: none"> <li>• <b>Visual</b> – including landform and lighting impacts;</li> </ul>	4.8
	<ul style="list-style-type: none"> <li>• <b>Heritage</b> – both Aboriginal and non-Aboriginal;</li> </ul>	4.6 & 4.7
	<ul style="list-style-type: none"> <li>• <b>Air Quality</b>;</li> </ul>	4.9
	<ul style="list-style-type: none"> <li>• <b>Traffic</b> – including a detailed description of the measures that would be implemented during construction and operation to minimise impacts on the Newell Highway and Tomingley West Road;</li> </ul>	4.11
	<ul style="list-style-type: none"> <li>• <b>Waste</b> – including: <ul style="list-style-type: none"> <li>– accurate estimates of the quantity and nature of the potential waste streams of the project;</li> <li>– 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;</li> </ul> </li> </ul>	2.8 2.8
	<ul style="list-style-type: none"> <li>• <b>Energy</b> – 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;</li> </ul>	4.9.7.2
	<ul style="list-style-type: none"> <li>• <b>Rehabilitation</b> – including a detailed strategy that describes: <ul style="list-style-type: none"> <li>– how the site would be progressively rehabilitated and integrated into the landscape; and</li> <li>– 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</li> </ul> </li> </ul>	2.14 2.14.6 2.14.5, 2.14.7 & 2.14.8
	<ul style="list-style-type: none"> <li>• <b>Socio-economic.</b></li> </ul>	2.12, 4.14 & 6.3.3
<b>REFERENCES</b>		
DoP (09/09/09)	The environmental assessment of the project must take into account relevant State Government guidelines, policies and plans.	Throughout
<b>CONSULTATION</b>		
DoP (09/09/09)	Consultation 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.	3.2



Table A2-1 (Cont'd)  
Coverage of Director-General's Requirements in the *Environmental Assessment*

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Government Agency	Paraphrased Requirement	Relevant Section(s)
	In particular you must consult with the: <ul style="list-style-type: none"> <li>• Commonwealth Department of Environment, Water, Heritage and the Arts;</li> <li>• Department of Environment, Climate Change and Water;</li> <li>• Department of Industry and Investment;</li> <li>• Department of Transport and Infrastructure;</li> <li>• NSW Heritage Office;</li> <li>• Department of Services, Technology &amp; Administration;</li> <li>• Department of Transport and Infrastructure; and</li> <li>• Parkes and Narromine Shire Councils.</li> </ul>	3.2.2
	Both the consultation process, and the issues raised during this consultation process, must be described in the environmental assessment.	3.2



**Table A2-2**  
**Policies, Guidelines & Plans Referenced by DGRs**

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



**Table A2-2 (Cont'd)**  
**Policies, Guidelines & Plans Referenced by DGRs**

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<b>Parameter</b>	<b>Guideline</b>
<b>Biodiversity</b>	
	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)
<b>Heritage</b>	
<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 <sup>nd</sup> 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
<b>Air Quality</b>	
	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)
<b>Traffic &amp; Transport</b>	
	Guide to Traffic Generating Development (RTA)
	Road Design Guide (RTA)
<b>Waste</b>	
	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
<b>Greenhouse Gas</b>	
	AGO Factors and Methods Workbook (AGO)
	Guidelines for Energy Savings Action Plans (DEUS, 2005)
<b>Rehabilitation</b>	
	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 A2-3**  
**Coverage of Requirements nominated by Other Government Agencies in the Environmental Assessment**

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Government Agency	Paraphrased Requirement	Relevant Section(s)
<b>GENERAL</b>		
RTA (28/08/09)	<ul style="list-style-type: none"> <li>The construction of the mine can be expected to generate additional traffic accessing the existing Highway rest area. The RTA may have requirements for an intersection upgrade to cater for additional traffic movements; this will be at full cost to the developer.</li> </ul>	2.2.4, 2.2.5, 2.9.3.2 & 4.11.4
	<ul style="list-style-type: none"> <li>The developer will be required to submit a construction traffic management plan to address management of construction traffic accessing the site prior to the underpass being complete</li> </ul>	Noted
	<ul style="list-style-type: none"> <li>Road Safety Audits are to be conducted at the design and pre-opening stages in accordance with Austroads (2009) Guide to Road Safety Part 6; Road Safety Audit. The developer is responsible for mitigating deficiencies noted within the audit report. This is relevant for works impacting on the Newell Highway</li> </ul>	Noted
I&I NSW (02/09/09)	<b>Mineral Resources Issues</b>	
	<ul style="list-style-type: none"> <li>Mining operations for this proposal will require the grant of a mining lease. Any mining lease granted will include the Mining Rehabilitation Environmental Management Process (MREMP).</li> </ul>	Noted
	<ul style="list-style-type: none"> <li>Alkane will be required to prepare and comply with the MREMP which includes the preparation of a Mining Operations Plan (MOP) and an Annual Environments Management Report (AEMR).</li> </ul>	Noted
	<b>Mineral Resource/Geology</b>	
	The EA must provide an overview of the regional and local geology in addition to the geology of the deposit (stratigraphy, structure etc) and outline in the size of the mineral resource to be mine and how this has been determined. The EA will also need to demonstrate that sufficient investigative drilling has been undertaken within areas of proposed infrastructure development to minimise possible sterilisation of valuable mineral resources.	4.1.4 & 1.3
	<b>Mine Planning</b>	
	A description of the mining sequence and layout is required. Processing techniques including the use of cyanide, destruction method and discharge levels will also need to be documented.	2.4
	<b>Landform Design/Management</b>	
	<ul style="list-style-type: none"> <li>Visual Amenity – A description of the visual impact and mitigation measures should be given. Consideration should be given to the aesthetics to Tomingley village, the surrounding rural area and the Newell Highway which dissects the site.</li> </ul>	4.8.4
	<ul style="list-style-type: none"> <li>Open Cuts – A description of the open cut pit geotechnical stability (especially Caloma due to its close proximity to the highway).</li> </ul>	2.4.2 & 2.4.3
<ul style="list-style-type: none"> <li>Residue Storage Facilities – A description of residue storage facility design, including final cover design, should be given. The company should also demonstrate that permeability rates for the floor of the facility meet with current standards. A description of the characterization of residue also needs to be provided.</li> </ul>	2.7	
As this facility is located near a creek line a description of the flood mitigation measures are to be provided.	4.3.5.3	



**Table A2-3 (Cont'd)**  
**Coverage of Requirements nominated by Other Government Agencies in the *Environmental Assessment***

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Government Agency	Paraphrased Requirement	Relevant Section(s)
I&I NSW (02/09/09)	<ul style="list-style-type: none"> <li>Waste Rock Emplacements – A description of the final landform design should be given including final surface water management. Waste rock characterization should detail the types of waste produced and the management and handling proposed to ensure long term stability of any potential leachates.</li> </ul>	2.5
	<ul style="list-style-type: none"> <li>Rehabilitation and Revegetation – Progressive rehabilitation methods are to be described including the management of topsoil and subsoil. A description of sediment and erosion control will also need to be provided. Vegetation types and species are required to be documented. A description of potential species selection to be used in the regeneration of the area for future land use should also be given.</li> </ul>	2.14
	<b>Closure</b>	
	<ul style="list-style-type: none"> <li>Stakeholder Liaison – A commitment to effectively liaise with relevant stakeholders and the community regarding mine closure and concepts are to be documented.</li> </ul>	3.2
	<ul style="list-style-type: none"> <li>Final Land Use – Conceptual final landforms are to be documented, including final surface water drainage design. Final land use options are to be consistent with relevant planning, environmental, rural and community values.</li> </ul>	2.14.4, 2.14.5 & 4.14.3.1
	<ul style="list-style-type: none"> <li>Monitoring should include the provision of baseline data before mining commences, continuing to the end of mine life to ensure that the mining area is not contributing to any long term environmental degradation.</li> <li>Parameters should be measured by licensing conditions and consultation with Industry and Investment NSW.</li> </ul>	Throughout Section 4
DECCW (28/08/09)	<p>In summary, the Departments' key information requirements for the proposal are:</p> <ol style="list-style-type: none"> <li>The impact on threatened flora and fauna species, and endangered ecological communities and their habitats.</li> <li>The impact on vegetation communities (in addition to threatened species) and provision of an offset strategy that will be implemented to ensure a maintain or improve outcome for biodiversity.</li> <li>The impact on noise and vibration amenity.</li> <li>The impact of potential acid generation from waste rock, including proposed methods of encapsulation.</li> <li>The impact on surface water and groundwater quality and quantity (including water demand and management requirements).</li> <li>The impact on Aboriginal Cultural Heritage.</li> <li>The impact on air quality (including odour).</li> <li>The management of cyanide onsite and in transport.</li> </ol>	<p>4.5.8.6</p> <p>4.5.8.3</p> <p>4.2.6</p> <p>2.5</p> <p>4.3.5 &amp; 4.4.7</p> <p>4.6.9</p> <p>4.9.7</p> <p>2.6.3.3, 2.6.4 &amp; 2.7</p>



**Table A2-3 (Cont'd)**  
**Coverage of Requirements nominated by Other Government Agencies in the *Environmental Assessment***

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Government Agency	Paraphrased Requirement	Relevant Section(s)
DECCW (28/08/09)	<b>Objectives of the Proposal</b>	
	The objectives of the proposal should be clearly stated and refer to:	
	a) the size and type of the operation, the nature of the processes and the products, by-products and wastes produced	Section 2
	b) a life cycle approach to the production, use or disposal of products	Section 2
	c) the anticipated level of performance in meeting required environmental standards and cleaner production principles	Section 4
	d) the staging and timing of the proposal and any plans for future expansion	2.4.5
	e) the proposal's relationship to any other industry or facility.	Section 2
	<b>Description of the Proposal</b>	
	Outline the production process including:	
	a) the environmental "mass balance" for the process – quantify in-flow and out-flow of materials, any points of discharge to the environment and their respective destinations (sewer, stormwater, atmosphere, recycling, landfill, etc)	Section 2
b) any life-cycle strategies for the products.	Section 2	
Outline cleaner production actions, including:		
a) measures to minimise waste (typically through addressing source reduction)	2.8	
b) proposals for use or recycling of by-products	2.8	
c) proposed disposal methods for solid and liquid waste	2.5, 2.6.3.3 & 2.8	
d) air management systems including all potential sources of air emissions, proposals to re-use or treat emissions, emission levels relative to relevant standards in regulations, discharge points	4.9	
e) water management system including all potential sources of water pollution, proposals for re-use, treatment, etc., emission levels of any wastewater discharged, discharge points, summary of options explored to avoid a discharge, reduce its frequency or reduce its impacts, and rationale for selection of option to discharge	4.3 & 4.4	
f) soil contamination treatment and prevention systems.	4.13.7.2	
Outline construction works including:		
a) actions to address any existing soil contamination	N/A	
b) any earthworks or site clearing; re-use and disposal of cleared material (including use of spoil on-site)	2.3	
c) construction timetable and staging; hours of construction; proposed construction methods	2.2, 2.4.5 & 2.11	
d) environment protection measures, including noise mitigation measures, dust control measures and erosion and sediment control measures.	Throughout Section 4	
Parkes Shire Council (14/08/09)	• Ensure adequacy of social infrastructure and housing for Tomingley and Peak Hill. This may need some detailed analysis of where the work force may come from.	4.14.2
	• The EA should include detail on any consultation with the CSIRO in respect of how the construction and operation of the mine may impact on the Parkes Radio Telescope.	N/A



**Table A2-3 (Cont'd)**  
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<b>Government Agency</b>	<b>Paraphrased Requirement</b>	<b>Relevant Section(s)</b>
	<ul style="list-style-type: none"> <li>Some more detail on the specific route the power line from Peak Hill may take and how this may impact on Parkes Shire Roads.</li> </ul>	N/A
<b>CONSIDERATION OF ALTERNATIVES AND JUSTIFICATION OF THE PROPOSAL</b>		
DECCW 28/08/09	Consider the environmental consequences of adopting alternatives, including alternative: <ol style="list-style-type: none"> <li>sites and site layouts</li> <li>access modes and routes</li> <li>materials handling and production processes</li> <li>waste and water management</li> <li>impact mitigation measures</li> <li>energy sources</li> </ol>	6.1.3 2.9.3.4 N/A 6.1.6 Throughout Section 4 N/A
	Selection of the preferred option should be justified in terms of: <ol style="list-style-type: none"> <li>ability to satisfy the objectives of the proposal</li> <li>relative environmental and other costs of each alternative</li> <li>acceptability of environmental impacts and contribution to identified environmental objectives</li> <li>acceptability of any environmental risks or uncertainties</li> <li>reliability of proposed environmental impact mitigation measures</li> <li>efficient use (including maximising re-use) of land, raw materials, energy and other resources.</li> </ol>	Section 6.1
<b>EXISTING ENVIRONMENT</b>		
DECCW 28/08/09	Provide an overview of the affected environment to place the proposal in its local and regional environmental context including: <ol style="list-style-type: none"> <li>meteorological data (e.g rainfall, temperature and evaporation, wind speed and direction)</li> <li>topography (landform element, slope type, gradient and length)</li> <li>surrounding land uses (potential synergies and conflicts)</li> <li>geomorphology (rates of landform change and current erosion and deposition processes)</li> <li>soil types and properties (including erodibility; engineering and structural properties; dispersibility; permeability; presence of acid sulfate soils and potential acid sulfate soils)</li> <li>ecological information (water system habitat, vegetation, fauna)</li> <li>availability of services and the accessibility of the site for passenger and freight transport.</li> </ol>	4.1.3 4.1.2 4.1.5 4.3.2 4.12.2.3 4.5.2, 4.5.3 & 4.5.5 N/A
<b>IDENTIFICATION AND PRIORITISATION OF ISSUES</b>		
DECCW 28/08/09	Provide an overview of the methodology used to identify and prioritise issues.	Section 3
	Provide a summary of the outcomes of the process including:	
	<ol style="list-style-type: none"> <li>all issues identified including local, regional and global impacts (eg increased/ decreased greenhouse emissions)</li> </ol>	3.4



**Table A2-3 (Cont'd)**  
**Coverage of Requirements nominated by Other Government Agencies in the *Environmental Assessment***

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<b>Government Agency</b>	<b>Paraphrased Requirement</b>	<b>Relevant Section(s)</b>
	b) key issues which will require a full analysis (including comprehensive baseline assessment)	3.5
	c) issues not needing full analysis though they may be addressed in the mitigation strategy	3.5.2
	d) justification for the level of analysis proposed (the capacity of the proposal to give rise to high concentrations of pollution compared with the ambient environment or environmental outcomes is an important factor in setting the level of assessment).	3.5.2
<b>CUMULATIVE IMPACTS</b>		
DECCW 28/08/09	Identify the extent that the receiving environment is already stressed by existing development and background levels of emissions to which this proposal will contribute.	Throughout Section 4
	Assess the impact of the proposal against the long term air, noise and water quality objectives for the area or region.	4.9, 4.2, 4.3 & 4.4
	Identify infrastructure requirements flowing from the proposal (e.g. water and sewerage services, transport infrastructure upgrades).	2.10.3
	Assess likely impacts from such additional infrastructure and measures reasonably available to the proponent to contain such requirements or mitigate their impacts (eg. travel demand management strategies).	4.14
<b>ABORIGINAL HERITAGE</b>		
DECCW 28/08/09	<b>Aboriginal Cultural Heritage Assessment</b> <b>a) <u>Aboriginal Community Group/s Consultation</u></b> Applicants should contact (as early as possible) local Aboriginal community groups, including: Local Aboriginal Land Councils, any known Tribal Elders Corporations and Native Title Claimants to ensure that proper consultation processes are carried out. Local Aboriginal community groups will require time to consider a proposal and to discuss any issues with its members, and sufficient time must be allowed for this to occur. The purpose of Aboriginal participation in the assessment process is: <ul style="list-style-type: none"> <li>• To notify the local Aboriginal people in sufficient detail and in a timely manner about activities or developments which may impact on Aboriginal heritage, so that their concerns and possible options for action can be identified on a fully informed basis;</li> <li>• To ensure that Aboriginal people who hold cultural knowledge, including native title holders or applications, are able to contribute to the assessment process in ways that are culturally acceptable to them;</li> <li>• To identify locations and cultural values of Aboriginal sites and places of significance to the Aboriginal community that may be affected by the proposal so that potential impacts can be avoided wherever possible; and</li> <li>• To identify whether there are culturally acceptable mitigative measures when impacts are considered to be unavoidable by the applicant.</li> </ul> It is essential that applicants provide the DEC with documentation from the Aboriginal community groups regarding their views and recommendations for actions.	3.2.1.5 & 4.6.5

Table A2-3 (Cont'd)  
Coverage of Requirements nominated by Other Government Agencies in the *Environmental Assessment*

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Government Agency	Paraphrased Requirement	Relevant Section(s)
	<p><b>b) <u>Aboriginal Cultural Heritage Assessment Report</u></b> The report should contain:</p> <ol style="list-style-type: none"> <li>1. Information on the nature, timing and location of consultation, including the identification of individuals and/or groups consulted and copies of any correspondence from those individuals and/or groups;</li> <li>2. A statement of the Aboriginal community group/s understanding of the values of the known Aboriginal site/s and/or Aboriginal place located on the development site. This may include social, spiritual, historic, and archaeological values.</li> <li>3. A statement of the Aboriginal community groups response to the development and their recommendations (if any) for mitigation of impacts and/or conservation of known Aboriginal sites and/or Aboriginal place/s.</li> </ol> <p>The results of this assessment must be integrated with the technical (archaeological) assessment and provide the basis for the final assessment of Aboriginal heritage values and recommendations for management options. The DEC will also require a clear demonstration .in the development application of how the proponent proposes to address any issues which have been raised as part of the Aboriginal cultural assessment, and whether. This is acceptable to the Aboriginal community.</p>	<p>4.6 and Part 5 of the SCSC</p>
	<p><b>Archaeological Assessment</b></p>	
	<p><b>a) <u>Locational Context</u></b></p> <ul style="list-style-type: none"> <li>• description of location of study.</li> <li>• legislative context.</li> <li>• cadastral context (eg: Lot, DP)</li> <li>• identification of any associated Aboriginal cultural heritage studies undertaken in the study area</li> </ul>	<p>4.6.4</p>
	<p><b>b) <u>Description of Development Impact</u></b></p> <ul style="list-style-type: none"> <li>• type of development.</li> <li>• extent of direct impacts.</li> <li>• extent of potential indirect impacts (eg: run-off, increased visitation)</li> <li>• flexibility of project design</li> <li>• staging and how this might affect present or future management decisions</li> </ul>	<p>Section 2, 4.6.8, 4.6.9 and Part 5 of the SCSC</p>
	<p><b>c) <u>Assessment Context</u></b></p> <ul style="list-style-type: none"> <li>• the brief for the work being undertaken for this particular project</li> <li>• objectives of the assessment</li> </ul>	<p>4.6 and Part 5 of the SCSC</p>
	<p><b>d) <u>Archaeological Context</u></b></p> <ul style="list-style-type: none"> <li>• targeted review of known archaeology of region and previous work in the study area to identity range of expected archaeological evidence relative to the project and landscape.</li> <li>• type/s of Aboriginal sites.</li> <li>• <b>synthesis</b> and <b>evaluation</b> of this information to identify archaeological issues. This will provide the basis for defining the archaeological assessment and management context relevant to this study, and the development of appropriate management options, with protection/conservation being the primary consideration. It should be noted that a summary of previous work is not adequate.</li> </ul>	<p>4.6.4, 4.6.7 &amp; 4.6.8</p>



**Table A2-3 (Cont'd)**  
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Government Agency	Paraphrased Requirement	Relevant Section(s)
	<p>e) <u>Landscape Context</u></p> <ul style="list-style-type: none"> <li>• description of landscape classification and land units being used for the study (at the different levels of landscape, landscape unit, landform, topographic unit)</li> <li>• identification of any paleo-features</li> <li>• assessment of how the landscape context and previous land surface change is relevant to the study</li> <li>• assessment of how the landscape relates to models of site location and archaeology (as per synthesis above), and development of a framework for assessing the sites and landscapes within the study area</li> <li>• identification of areas of archaeological sensitivity.</li> </ul> <p>The landscape analysis may need to include a geomorphic study to ensure that significant features are identified and considered in the overall assessment (e.g.: paleofeatures with the potential to include older sites).</p>	<p>4.6.4, 4.6.6, 4.6.7.6 and Part 5 of the SCSC</p>
	<p>f) <u>Condition of Landsurface</u></p> <ul style="list-style-type: none"> <li>• identify previous land surface impacts across the study area, with the view to assessing whether sites may be buried such as campsites, burials, and the integrity of the land surface in those locations.</li> <li>• description of ground surface conditions and supporting tabulated data (for surveys).</li> <li>• assessment of how the land surface conditions have revealed, concealed, destroyed, impacted on or preserved archaeological evidence and how this relates to archaeological potential, the condition of Aboriginal sites and the geomorphology in these contexts</li> </ul>	<p>4.6.6 and Part 5 of the SCSC</p>
	<p>g) <u>Methodology for Investigation</u></p> <ul style="list-style-type: none"> <li>• description of input from the Aboriginal community to the method proposed for undertaking the study</li> <li>• the proposed field methodology, such as type of sampling strategies and survey coverage (this should be targeted to the objectives of the study)</li> <li>• description of the scope and method of recording and analysis by which the objectives of the study will be achieved</li> <li>• the method whereby a clear and supportable significance assessment will be undertaken a supportable rationale for any proposed test excavations</li> <li>• the program of work</li> <li>• rationale for any variation in the methods adopted o test excavation methodology, if relevant</li> </ul>	<p>4.6.3, 4.6.4 and Part 5 of the SCSC</p>
	<p>h) <u>Survey Coverage Data</u></p> <ul style="list-style-type: none"> <li>• description of survey coverage and the effectiveness of that coverage for detecting potentially buried Aboriginal sites (this needs to be fully described and evaluated within the context of the objectives and the study plan. Specific methods are detailed in the DEC Standards &amp; Guidelines Kit)</li> </ul>	<p>4.6.7 and Part 5 of the SCSC</p>



Table A2-3 (Cont'd)  
Coverage of Requirements nominated by Other Government Agencies in the *Environmental Assessment*

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Government Agency	Paraphrased Requirement	Relevant Section(s)
	<p>i) <u>Analysis and Reporting</u></p> <ul style="list-style-type: none"> <li>• detailed Aboriginal site description/s including tabulated data summarising site content and any analysis, as per the DEC Guidelines</li> <li>• comprehensive evaluation of the study results (for potentially buried archaeological deposits this includes incorporating the information on archaeological potential and the reliability of survey coverage) results of test excavations, if relevant</li> </ul>	<p>4.6.7, 4.6.8, 4.6.9 and Part 5 of the SCSC</p>
	<p>j) <u>Archaeological Significance Assessment</u></p> <ul style="list-style-type: none"> <li>• the significance criteria and attributes used for the assessment need to be fully supported by the information presented on the archaeological and landscape context of the site/s (e.g.: representativeness, items and landscape elements considered to be rare, information potential, social/historical values). The criteria for assessment need to be measurable.</li> </ul>	<p>4.6.7.6 and Part 5 of the SCSC</p>
	<p>k) <u>Conclusions of the Study</u></p> <ul style="list-style-type: none"> <li>• evaluation of potential impacts on known Aboriginal sites and areas of</li> <li>• archaeological sensitivity and potential (if relevant)</li> <li>• establish clear relationship between significance assessment and impacts</li> <li>• consideration of cumulative impact of development on comparable sites and landscapes at both a local and regional level consideration of various management options, <b>specifically identification of conservation options</b>, including on-site conservation and compensatory areas (for larger scale projects) . description of mitigation works required for specific sites to be impact on</li> </ul>	<p>4.6.9 and Part 5 of the SCSC</p>
	<p>l) <u>Management Options</u></p> <ul style="list-style-type: none"> <li>• recommendations for conservation and other management options based on the results of the archaeological report and discussions with the land owner / manager and the Aboriginal community group/s</li> <li>• incorporation of management options from Aboriginal community group/s where these relate to the management options being proposed for sites or places</li> </ul>	<p>4.6.8 and Part 5 of the SCSC</p>
	<p>The following maps are required as a minimum (more detailed specifications are set out in the DEC Guidelines). Mapping should be at the same scale throughout the report.</p> <ul style="list-style-type: none"> <li>• location of study area (1:25,000 map series where available, more detailed maps are useful additions)</li> <li>• development layout if known, flexible components of design if applicable</li> <li>• locations of previous survey undertaken and sites recorded (referred to in text)</li> </ul>	<p>Part 5 of the SCSC</p>



**Table A2-3 (Cont'd)**  
**Coverage of Requirements nominated by Other Government Agencies in the *Environmental Assessment***

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Government Agency	Paraphrased Requirement	Relevant Section(s)
	<ul style="list-style-type: none"> <li>• survey coverage data showing location and extent of different methods used</li> <li>• land units and topographic information used</li> <li>• land surface history highlighting the location and boundaries of the disturbed and intact deposits</li> <li>• Aboriginal site locations</li> <li>• A comprehensive glossary of terms used should also be provided.</li> </ul>	
<b>AIR QUALITY</b>		
DECCW 28/08/09	Identify all sources of air emissions from the development. <i>Note: emissions can be classed as either:</i> <ul style="list-style-type: none"> <li>• <i>point (eg emissions from stack or vent) or</i></li> <li>• <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></li> </ul>	Appendix 3 of Part 6 of the SCSC
	Provide details of the project that are essential for predicting and assessing air impacts including: <ol style="list-style-type: none"> <li>a) the quantities and physio-chemical parameters (eg concentration, moisture content, bulk density, particle sizes etc) of materials to be used, transported, produced or stored</li> <li>b) an outline of procedures for handling, transport, production and storage</li> <li>c) the management of solid, liquid and gaseous waste streams with potential for significant air impacts.</li> </ol>	Part 6 of the SCSC <i>(Appendix 3)</i> Section 2 & 4.9.6 2.5, 2.6.3.3, 2.7 & 2.8
	Describe the topography and surrounding land uses. Provide details of the exact locations of dwellings, schools and hospitals. Where appropriate provide a perspective view of the study area such as the terrain file used in dispersion models. Describe surrounding buildings that may effect plume dispersion. Provide and analyse site representative data on following meteorological parameters: <ol style="list-style-type: none"> <li>a) temperature and humidity</li> <li>b) rainfall, evaporation and cloud cover</li> <li>c) wind speed and direction</li> <li>d) atmospheric stability class</li> <li>e) mixing height (the height that emissions will be ultimately mixed in the atmosphere)</li> <li>f) katabatic air drainage</li> <li>g) air re-circulation.</li> </ol>	Part 6 of the SCSC
	Provide a description of existing air quality and meteorology, using existing information and site representative ambient monitoring data.	4.9.3
	Identify all pollutants of concern and estimate emissions by quantity (and size for particles), source and discharge point.	4.9.2



**Table A2-3 (Cont'd)**  
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Government Agency	Paraphrased Requirement	Relevant Section(s)
	Estimate the resulting ground level concentrations of all pollutants. Where necessary (eg potentially, significant impacts and complex terrain effects), use an appropriate dispersion model to estimate ambient pollutant concentrations. Discuss choice of model and parameters with the DECCW.	4.9.7
	Describe the effects and significance of pollutant concentration on the environment, human health, amenity and regional ambient air quality standards or goals.	4.9.7.1
	Describe the contribution that the development will make to regional and global pollution, particularly in sensitive locations.	4.9.7.2
	For potentially odorous emissions provide the emission rates in terms of odour units (determined by techniques compatible with EPA/DECCW procedures). Use sampling and analysis techniques for individual or complex odours and for point or diffuse sources, as appropriate.	N/A
	Outline specifications of pollution control equipment (including manufacturers performance guarantees where available) and management protocols for both point and fugitive emissions. Where possible, this should include cleaner production processes.	4.9.6
<b>ECOLOGICALLY SUSTAINABLE DEVELOPMENT</b>		
DECCW 28/08/09	Demonstrate that the planning process and any subsequent development incorporates objectives and mechanisms for achieving ESD, including: a) an assessment of a range of options available for use of the resource, including the benefits of each option to future generations b) proper valuation and pricing of environmental resources c) identification of who will bear the environmental costs of the proposal.	6.2.2
<b>ECOLOGY</b>		
I&I NSW (02/09/09)	<b>Aquatic Ecological Assessment</b>	
	The aquatic ecological environmental assessment should include the following information. <ul style="list-style-type: none"> <li>• A recent aerial photograph (preferably colour) of the waterway crossings (or reproduction of such a photograph) should be provided.</li> <li>• Area which may be affected either directly or indirectly by the development of the corridor of the proposed pipeline to the north of Tomingley and the proposed power transmission line to the south of Tomingley should be identified and shown on an appropriately scaled map (and aerial photographs).</li> <li>• Description of aquatic and riparian vegetation should be presented and mapped.</li> <li>• The extent of aquatic habitat removal or modification which may result from the proposed development.</li> <li>• Details of the location of all waterway crossings along the water pipeline and the power transmission line, including any access tracks with details of various phases of construction.</li> </ul>	4.5.8.6.8 and Part 4 of the SCSC

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Government Agency	Paraphrased Requirement	Relevant Section(s)
	<ul style="list-style-type: none"> <li>Details of the methodology (for example directional drilling, trenching, boring) at each waterway crossing.</li> </ul>	2.2.2.2 and Part 4 of the SCSC
	<ul style="list-style-type: none"> <li>Aspects of the management of the proposal, both during construction and after completion, which relate to impact minimisation, such as Environment Management Plans. A vegetation rehabilitation plan is to include the rehabilitation of the riparian zone damaged during waterway construction activities.</li> </ul>	4.5.7
	<b>Key Issues</b>	
	<ul style="list-style-type: none"> <li>Directional Drilling for Sensitive Waterways – The Department’s Aquatic Habitat Protection Unit (AHPU) is to be consulted with regards to the crossing methodology and site specific mitigation measures for each watercourse, particularly methods of dredging, trenching or directional drilling to be used in each waterway, and the proposed mitigation measures to protect riparian and aquatic habitat. The Department supports the use of directional drilling under waterways. While directional drilling generally achieves good outcomes, it is highlighted that appropriate contingency actions be detailed addressing potential problems that could be experienced during the process. Recovery operations for a damaged drill for instance may require dredging and reclamation activities.</li> </ul>	Part 4 of the SCSC
	<ul style="list-style-type: none"> <li>Waterway Crossings – The AHPU also needs to be consulted with regards to the crossing methodology for the proposed Main Access Road across Gundong Creek. A classification scheme such as that used by the Department which classifies waterways into Class 1-4 habitats is available in the document <i>Why Do Fish Need to Cross the Road? Fish Passage Requirements for Waterway Crossings</i> available on the website at <a href="http://www.dpi.nsw.gov.au/fisheries/habitat/protecting-habitats/toolkit#Policies-&amp;-guidelines">http://www.dpi.nsw.gov.au/fisheries/habitat/protecting-habitats/toolkit#Policies-&amp;-guidelines</a>. The Department has some concerns regarding the potential construction of temporary waterway crossings for heavy machinery during the pipeline construction and the powerline construction and maintenance. Badly designed and constructed waterways crossings can have significant impacts on fish populations. The design and construction of roads and tracks across all waterways should be undertaken in accordance with the document outlined above.</li> </ul>	Part 4 of the SCSC
	<ul style="list-style-type: none"> <li>Threatened Species, populations and ecological communities – <i>Fisheries Management Act 1994</i> – The proposal should include a threatened aquatic species assessment (as per part 7A <i>Fisheries Management Act 1994</i>) to address whether there are likely to be any significant impacts on listed threatened species, populations or ecological communities listed under the <i>Fisheries Management Act 1994</i>.</li> <li>Riparian Buffer Zones – The Department’s policy advocates the use of terrestrial buffer zones as per the <i>Policy and Guidelines Aquatic Habitat Management and Fish Conservation 1999</i> available on the Department’s website at</li> </ul>	Part 4 of the SCSC



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Government Agency	Paraphrased Requirement	Relevant Section(s)
	<p><a href="http://www.fisheries.nsw.gov.au/pub/aquahab.htm">http://www.fisheries.nsw.gov.au/pub/aquahab.htm</a>. The guidelines state that "Terrestrial areas adjoining freshwater, estuarine or coastal habitats be carefully managed in order to minimise land use impacts on these aquatic habitats. As a precautionary approach, buffer zones at least 50 metres wide should be established and maintained where possible, with their natural features and vegetation preserved" particularly along Gundong Creek.</p>	Part 4 of the SCSC
<b>NOISE AND BLASTING</b>		
DECCW 28/08/09	Identify all noise sources from the development (including both construction and operation phases). Detail all potentially noisy activities including ancillary activities such as transport of goods and raw materials.	4.2.4 (including <b>Figures 4.11</b> to <b>4.15</b> )
	Specify the times of operation for all phases of the development and for all noise producing activities	
	For projects with a significant potential traffic noise impact provide details of road alignment (include gradients, road surface, topography, bridges, culverts etc), and land use along the proposed road and measurement locations — diagrams should be to a scale sufficient to delineate individual residential blocks.	N/A
	Identify any noise sensitive locations likely to be affected by activities at the site, such as residential properties, schools, churches, and hospitals. Typically the location of any noise sensitive locations in relation to the site should be included on a map of the locality.	4.2.2 & <b>Figure 4.9</b>
	Identify the land use zoning of the site and the immediate vicinity and the potentially affected areas.	4.1.5
	Determine the existing background ( $L_{A90}$ ) and ambient ( $L_{Aeq}$ ) noise levels in accordance with the <i>NSW Industrial Noise Policy</i> .	4.2.2
	Determine the existing road traffic noise levels in accordance with the <i>NSW Environmental Criteria for Road Traffic Noise</i> , where road traffic noise impacts may occur.	4.2.2
	The noise impact assessment report should provide details of all monitoring of existing ambient noise levels including: a) details of equipment used for the measurements b) a brief description of where the equipment was positioned c) a statement justifying the choice of monitoring site, including the procedure used to choose the site, having regards to the definition of 'noise sensitive locations(s)' and 'most affected locations(s)' described in Section 3.1.2 of the <i>NSW Industrial Noise Policy</i> d) details of the exact location of the monitoring site and a description of land uses in surrounding areas e) a description of the dominant and background noise sources at the site f) day, evening and night assessment background levels for each day of the monitoring period g) the final Rating Background Level (RBL) value	4.2.2 and Part 1 of SCSC

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Government Agency	Paraphrased Requirement	Relevant Section(s)
	<p>h) graphs of the measured noise levels for each day should be provided</p> <p>i) a record of periods of affected data (due to adverse weather and extraneous noise), methods used to exclude invalid data and a statement indicating the need for any re-monitoring under Step 1 in Section B1.3 of the <i>NSW Industrial Noise Policy</i></p> <p>j) determination of <math>L_{Aeq}</math> noise levels from existing industry.</p>	4.2.2 and Part 1 of SCSC
	<p>Determine the project specific noise levels for the site. For each identified potentially affected receiver, this should include:</p> <p>a) determination of the intrusive criterion for each identified potentially affected receiver</p> <p>b) selection and justification of the appropriate amenity category for each identified potentially affected receiver</p> <p>c) determination of the amenity criterion for each receiver</p> <p>d) determination of the appropriate sleep disturbance limit.</p>	4.2.3
	<p>Maximum noise levels during night-time period (10pm-7am) should be assessed to analyse possible effects on sleep. Where <math>L_{A1(1min)}</math> noise levels from the site are less than 15 dB above the background <math>L_{A90}</math> noise level, sleep disturbance impacts are unlikely. Where this is not the case, further analysis is required. Additional guidance is provided in Appendix B of the <i>NSW Environmental Criteria for Road Traffic Noise</i>.</p>	4.2.3 & 4.2.6
	<p>Determine expected noise level and noise character (eg tonality, impulsiveness, vibration, etc) likely to be generated from noise sources during:</p> <p>a) site establishment</p> <p>b) construction</p> <p>c) operational phases</p> <p>d) transport including traffic noise generated by the proposal</p> <p>e) other services.</p> <p><i>Note: The noise impact assessment report should include noise source data for each source in 1/1 or 1/3 octave band frequencies including methods for references used to determine noise source levels. Noise source levels and characteristics can be sourced from direct measurement of similar activities or from literature (if full references are provided).</i></p>	4.2.6
	<p>Determine the noise levels likely to be received at the most sensitive locations (these may vary for different activities at each phase of the development). Potential impacts should be determined for any identified significant adverse meteorological conditions. Predicted noise levels under calm conditions may also aid in quantifying the extent of impact where this is not the most adverse condition.</p>	4.2.6

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Government Agency	Paraphrased Requirement	Relevant Section(s)
	<p>The noise impact assessment report should include:</p> <ul style="list-style-type: none"> <li>a) a plan showing the assumed location of each noise source for each prediction scenario</li> <li>b) a list of the number and type of noise sources used in each prediction scenario to simulate all potential significant operating conditions on the site</li> <li>c) any assumptions made in the predictions in terms of source heights, directivity effects, shielding from topography, buildings or barriers, etc</li> <li>d) methods used to predict noise impacts including identification of any noise models used. Where modelling approaches other than the use of the ENM or SoundPlan computer models are adopted, the approach should be appropriately justified and validated</li> <li>e) an assessment of appropriate weather conditions for the noise predictions including reference to any weather data used to justify the assumed conditions</li> <li>f) the predicted noise impacts from each noise source as well as the combined noise level for each prediction scenario under any identified significant adverse weather conditions as well as calm conditions where appropriate</li> <li>g) for developments where a significant level of noise impact is likely to occur, noise contours for the key prediction scenarios should be derived</li> <li>h) an assessment of the need to include modification factors as detailed in Section 4 of the <i>NSW Industrial Noise Policy</i>.</li> </ul>	<p><b>Figures 4.11 to 4.15</b></p> <p><b>Table 4.17 &amp; Figures 4.11 to 4.15</b></p> <p>4.2.5</p> <p>4.2.4 and Part 1 of SCSC</p> <p>Part 1 of SCSC</p> <p>4.2.6 and Part 1 of SCSC</p> <p>4.2.4 (including <b>Figures 4.11 to 4.15</b>)</p> <p>Part 1 of SCSC</p>
	<p>Discuss the findings from the predictive modelling and, where relevant noise criteria have not been met, recommend additional mitigation measures.</p>	<p>4.2.1.2.6</p>
	<p>The noise impact assessment report should include details of any mitigation proposed including the attenuation that will be achieved and the revised noise impact predictions following mitigation.</p>	<p>4.2.5</p>
	<p>Where relevant noise/vibration criteria cannot be met after application of all feasible and cost effective mitigation measures the residual level of noise impact needs to be quantified by identifying:</p> <ul style="list-style-type: none"> <li>a) locations where the noise level exceeds the criteria and extent of exceedance</li> <li>b) numbers of people (or areas) affected</li> <li>c) times when criteria will be exceeded</li> <li>d) likely impact on activities (speech, sleep, relaxation, listening, etc)</li> <li>e) change on ambient conditions</li> <li>f) the result of any community consultation or negotiated agreement.</li> </ul>	<p>4.2.5, <b>Table 4.17 &amp; Figures 4.11 to 4.15</b></p>
	<p>For the assessment of existing and future traffic noise, details of data for the road should be included such as assumed traffic volume; percentage heavy vehicles by time of day; and details of the calculation process. These details should be consistent with any traffic study carried out in the EIS.</p>	<p>4.2.6.2</p>



**Table A2-3 (Cont'd)**  
**Coverage of Requirements nominated by Other Government Agencies in the *Environmental Assessment***

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Government Agency	Paraphrased Requirement	Relevant Section(s)
	<p>Where blasting is intended an assessment in accordance with the <i>Technical Basis for Guidelines to Minimise Annoyance due to Blasting Overpressure and Ground Vibration</i> (ANZECC, 1990) should be undertaken. The following details of the blast design should be included in the noise assessment:</p> <ul style="list-style-type: none"> <li>a) bench height, burden spacing, spacing burden ratio</li> <li>b) blast hole diameter, inclination and spacing</li> <li>c) type of explosive, maximum instantaneous charge, initiation, blast block size, blast frequency</li> </ul> <p>Determine the most appropriate noise mitigation measures and expected noise reduction including both noise controls and management of impacts for both construction and operational noise. This will include selecting quiet equipment and construction methods, noise barriers or acoustic screens, location of stockpiles, temporary offices, compounds and vehicle routes, scheduling of activities, etc.</p>	2.4.3.4
	<p>For traffic noise impacts, provide a description of the ameliorative measures considered (if required), reasons for inclusion or exclusion, and procedures for calculation of noise levels including ameliorative measures. Also include, where necessary, a discussion of any potential problems associated with the proposed ameliorative measures, such as overshadowing effects from barriers. Appropriate ameliorative measures may include:</p> <ul style="list-style-type: none"> <li>a) use of alternative transportation modes, alternative routes, or other methods of avoiding the new road usage</li> <li>b) control of traffic (eg: limiting times of access or speed limitations)</li> <li>c) resurfacing of the road using a quiet surface</li> <li>d) use of (additional) noise barriers or bunds</li> <li>e) treatment of the facade to reduce internal noise levels buildings where the night-time criteria is a major concern</li> <li>f) more stringent limits for noise emission from vehicles (ie. using specially designed 'quite' trucks and/or trucks to use air bag suspension</li> <li>g) driver education</li> <li>h) appropriate truck routes</li> <li>i) limit usage of exhaust breaks</li> <li>j) use of premium muffles on trucks</li> <li>k) reducing speed limits for trucks</li> <li>l) ongoing community liaison and monitoring of complaints m) phasing in the increased road use.</li> </ul>	4.2.5
<b>REHABILITATION</b>		
DECCW 28/08/09	Outline considerations of site maintenance, and proposed plans for the final condition of the site (ensuring its suitability for future uses).	2.14.4



Table A2-3 (Cont'd)  
Coverage of Requirements nominated by Other Government Agencies in the *Environmental Assessment*

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Government Agency	Paraphrased Requirement	Relevant Section(s)
<b>SOIL CONTAMINATION ISSUES</b>		
DECCW 28/08/09	Provide details of site history – if earthworks are proposed, this needs to be considered with regard to possible soil contamination, for example if the site was previously a landfill site or if irrigation of effluent has occurred.	4.1.5.2
	Provide any details (in addition to those provided in the location description – Section C) that are needed to describe the existing situation in terms of soil types and properties and soil contamination.	4.12.2
	Identify any likely impacts resulting from the construction or operation of the proposal, including the likelihood of: a) disturbing any existing contaminated soil b) contamination of soil by operation of the activity c) subsidence or instability d) soil erosion e) disturbing acid sulfate or potential acid sulfate soils.	N/A 4.13.7 N/A 4.3.3.2 & 4.12.3 2.5.2
	Describe and assess the effectiveness or adequacy of any soil management and mitigation measures during construction and operation of the proposal including: a) erosion and sediment control measures b) proposals for site remediation – see <i>Managing Land Contamination, Planning Guidelines SEPP 55 – Remediation of Land</i> (Department of Urban Affairs and Planning and Environment Protection Authority, 1998) c) proposals for the management of these soils – see <i>Assessing and Managing Acid Sulfate Soils</i> , Environment Protection Authority, 1995 (note that this is the only methodology accepted by the DECCW).	4.3.3.2 3.3.2.7 N/A (2.5.2)
	<b>TRAFFIC</b>	
RTA 28/08/09	• Existing traffic volumes of the Newell Highway (HW17) including traffic type break up, peak volumes, peak times and future growth rates.	4.11.2.3
	• A Traffic Impact Study detailing expected vehicle types, volumes and movements during both construction and operation. The study is to be broken down into peak and general times.	4.11 and Part 7 of SCSC
	• Intersection treatments and mitigation measures to cater for predicted traffic impacts. This is to include any required temporary or staged treatments and other measures. Treatments are to be provided for any proposed new junctions as well as any other temporary junctions or existing intersection upgrades. The intersections are to cater for all heavy and over dimensional vehicles that will be accessing the development. Intersection design will be assessed on RTA Road Design Guide requirements. This traffic study should also address internal traffic movement and parking facilities.	Part 7 of SCSC
	• A formal agreement in the form of a Works Authorisation Deed or deed of agreement will be required between the developer and the RTA. Other ancillary works including an underbore of the Mitchell Highway for a water pipeline and two crossings of the Newell Highway for 66kV electrical transmission lie would also be covered by this Deed.	Noted



**Table A2-3 (Cont'd)**  
**Coverage of Requirements nominated by Other Government Agencies in the *Environmental Assessment***

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Government Agency	Paraphrased Requirement	Relevant Section(s)
	<ul style="list-style-type: none"> <li>A Road Occupancy Licence is required prior to any works commencing within 3m of the travel lanes of the Newell Highway. This can be obtained by contacting Mr Paul Maloney on 02 6861 1686. Submission of a traffic control plan is required as part of this licence.</li> </ul>	Noted
	<b>Newell Highway Underpass</b>	
	<ul style="list-style-type: none"> <li>The proponent will be required to construct a sidetrack of the Newell Highway to cater for two-way traffic during construction of the proposed underpass. Sidetrack requirements are to be designed to 90km/h standard with an 80km/h speed zone throughout in accordance with the RTA Road Design Guide. The sidetrack is to be a minimum 9m width seal and verge with edge line marking. The pavement is to be minimum 400mm pavement thickness; the pavement design is to be approved by the RTA. The sidetrack is also to be designed to cater for oversized loads up to 8m wide that travel the Highway. This sidetrack should be included in the Part 3A assessment by Department of Planning</li> </ul>	2.2.4
	<ul style="list-style-type: none"> <li>Typical cross section width of the Newell Highway at the underpass is to cater for 2x3.5m travel lanes, 1.2m central median, 2m sealed shoulders, with allowance for approved safety barriers (to AS 5100 where appropriate) and verges behind the barriers in accordance with the RTA Road Design Guide.</li> </ul>	<b>Figures 2.3 &amp; 2.4</b>
	<ul style="list-style-type: none"> <li>The pavement design for the Newell Highway is to be to the satisfaction of the RTA.</li> </ul>	Noted
	<ul style="list-style-type: none"> <li>The applicant is to demonstrate proposed method for drainage of the underpass structure and associated works to ensure that the Highway will not be compromised.</li> </ul>	2.2.4
	<ul style="list-style-type: none"> <li>The applicant will be responsible for maintenance and subsequent removal of the proposed underpass structure at the completion of the mine operation and will be required to lodge a security deposit/bond adjusted annually for CPI increase as part of the Deed to ensure this.</li> </ul>	2.2.4 & 2.14.6.2
	<b>Culvert Augmentation Works</b>	
	<ul style="list-style-type: none"> <li>Any required upgrade of existing Highway drainage structures is to be at full cost to the developer.</li> </ul>	Noted
	<ul style="list-style-type: none"> <li>A sidetrack of the Newell Highway will be required to conduct culvert augmentation works. The sidetrack pavement width and depth is as per the above requirements for the underpass sidetrack.</li> </ul>	2.2.4
	<ul style="list-style-type: none"> <li>Hydrological analysis for the impact on existing Highway drainage structures is to be provided to the RTA for assessment.</li> </ul>	4.3.3.2.7
<b>WASTE AND CHEMICALS</b>		
DECCW 28/08/09	Provide details of the quantity, quality and type of both liquid waste and non-liquid waste generated, handled, processed or disposed of at the premises. Waste must be classified according to the <i>Environmental Guidelines: Assessment, Classification and Management of Liquid and Non-liquid Wastes (NSW EPA, 1999)</i> .	2.6.4
	Provide details of liquid waste and non-liquid waste management at the facility, including: a) the transportation, assessment and handling of waste arriving at or generated at the site	Appendix 3

**Table A2-3 (Cont'd)**  
**Coverage of Requirements nominated by Other Government Agencies in the *Environmental Assessment***

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Government Agency	Paraphrased Requirement	Relevant Section(s)
	b) any stockpiling of wastes or recovered materials at the site c) the method for disposing of all wastes or recovered materials at the facility d) the emissions arising from the handling, storage, processing and reprocessing of waste at that facility e) the proposed controls for managing the environmental impacts of these activities.	2.5.4, 2.6.3.3, 2.7.2.5 & 2.8
	Provide details of spoil disposal with particular attention to: a) the quantity of spoil material likely to be generated b) proposed strategies for the handling, stockpiling, reuse/recycling and disposal of spoil c) the need to maximise reuse of spoil material in the construction industry d) identification of the history of spoil material and whether there is any likelihood of contaminated material, and if so, measures for the management of any contaminated material e) designation of transportation routes for transport of spoil.	2.6.3.3 & 2.7
	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.	2.6.4 and <b>Appendix 3</b>
	Provide details of the type, quantity and quality of any chemical substances to be used or stored or describe arrangements for their safe use and storage	2.6.4
	Reference should be made to the guidelines: <i>Waste Classification Guidelines Part 1: Classifying Waste (NSW EPA, 2008)</i> .	Noted
	Assess the adequacy of proposed measures to minimise natural resource consumption and minimise impacts from the handling, transporting, storage, processing and reprocessing of waste and/o, chemicals.	<b>Appendix 3</b>
	Assess potential impacts to fauna and the environment in general due to the storage, use and disposal of cyanide.	4.5.8
	Outline measures to minimise the consumption of natural resources.	Throughout Section 4
	Outline measures to avoid the generation of waste and promote the re-use and recycling and reprocessing of any waste.	
	Outline measures to mitigate or reduce potential for impact to fauna or other aspects of the environment due to the storage, use and disposal of cyanide.	4.5.7.3.3
	Outline measures to support any approved regional or industry waste plans.	N/A

**Table A2-3 (Cont'd)**  
**Coverage of Requirements nominated by Other Government Agencies in the Environmental Assessment**

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Government Agency	Paraphrased Requirement	Relevant Section(s)
<b>WATER</b>		
DECCW 28/08/09	<p>Provide details of the project that are essential for predicting and assessing impacts to waters:</p> <p>a) including the quantity and physio-chemical properties of all potential water pollutants and the risks they pose to the environment and human health, including the risks they pose to Water Quality Objectives in the ambient waters (as defined on <a href="http://www.environment.nsw.gov.au/ieo">www.environment.nsw.gov.au/ieo</a>, using technical criteria derived from the Australian and New Zealand Guidelines for Fresh and Marine Water Quality, ANZECC 2000)</p> <p>b) the management of discharges with potential for water impacts</p> <p>c) drainage works and associated infrastructure; land forming and excavations; working capacity of structures; and water resource requirements of the proposal.</p>	<p>4.3.2 &amp; 4.4.2</p> <p>4.3.5.4</p> <p>4.3.3</p>
	Outline site layout, demonstrating efforts to avoid proximity to water resources (especially for activities with significant potential impacts eg effluent ponds) and showing potential areas of modification of contours, drainage etc.	<b>Figure 2.1 &amp; 4.3.3</b>
	Outline how total water cycle considerations are to be addresses 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.	4.3.5.5
	Describe the catchment including proximity of the development to any waterways and provide an assessment of their sensitivity/significance from a public health, ecological and/or economic perspective. The Water Quality and River Flow Objectives on the website: <a href="http://www.environment.nsw.gov.au/ieo">www.environment.nsw.gov.au/ieo</a> should be used to identify the agreed environmental values and human uses for any affected waterways. This will help with the description of the local and regional area.	4.3.2, 4.3.5.8 and Part 2 of SCSC
	Describe existing surface and groundwater quality – an assessment needs to be undertaken for any water resource likely to be affected by the proposal and for all conditions (eg. a wet weather sampling program is needed if runoff events may cause impacts).	4.3.2 & 4.4.2
	Provide site drainage details and surface runoff yield.	4.3.3, <b>Figure 2.5</b> and 4.3.5
	State the ambient Water Quality and River Flow Objectives for the receiving waters. These refer to the community's agreed environmental values and human uses endorsed by the Government as goals for the ambient waters. These environmental values are published on the website: <a href="http://www.environment.nsw.gov.au/ieo">www.environment.nsw.gov.au/ieo</a> . The EIS should state the environmental values listed for the catchment and waterway type relevant to your proposal. NB: A consolidated and approved list of environmental values are not available for groundwater resources. Where groundwater may be affected the EIS should identify appropriate groundwater environmental values and justify the choice.	4.3.5.8 and Part 2 of SCSC

**Table A2-3 (Cont'd)**  
**Coverage of Requirements nominated by Other Government Agencies in the *Environmental Assessment***

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Government Agency	Paraphrased Requirement	Relevant Section(s)
	State the indicators and associated trigger values or criteria for the identified environmental valuer This information should be sourced from the ANZECC 2000 <i>Guidelines for Fresh and Marine Water Quality</i> ( <a href="http://www.deh.gov.au/water/quality/nwqms/volume1.html">http://www.deh.gov.au/water/quality/nwqms/volume1.html</a> ) (Note that, as at 2004, the NSW Water Quality Objectives booklets and website contain technical criteria derived from the 1992 version of the ANZECC Guidelines. The Water Quality Objectives remain as Government Policy, reflecting the community's environmental values and long-term goals, but the technical criteria are replaced by the more recent ANZECC 2000 Guidelines). NB: While specific guidelines for groundwater are not available, the ANZECC 2000 Guidelines endorse the application of the trigger values and decision trees as a tool to assess risk to environmental values in groundwater.	4.3.5.4 and Part 2 of SCSC
	State any locally specific objectives, criteria or targets, which have been endorsed by the government, eg. the Healthy Rivers Commission Inquiries ( <a href="http://www.hrc.nsw.gov.au">www.hrc.nsw.gov.au</a> ) or the NSW Salinity Strategy (DLWC, 2000) ( <a href="http://www.dlwc.nsw.gov.au/care/salinity/#Strategy">www.dlwc.nsw.gov.au/care/salinity/#Strategy</a> ).	4.3.5.8 and Part 2 of SCSC
	Where site specific studies are proposed to revise the trigger values supporting the ambient Water Quality and River Flow Objectives, and the results are to be used for regulatory purposes (eg. to assess whether a licensed discharge impacts on water quality objectives), then prior agreement from the DECCW on the approach and study design must be obtained.	N/A
	Describe the state of the receiving waters and relate this to the relevant Water Quality and River Flow Objectives (ie. are Water Quality and River Flow Objectives being achieved?). Proponents are generally only expected to source available data and information. However, proponents of large or high risk developments may be required to collect some ambient water quality / river flow / groundwater data to enable a suitable level of impact assessment. Issues to include in the description of the receiving waters could include: a) lake or estuary flushing characteristics b) specific human uses (eg. exact location of drinking water offtake) c) sensitive ecosystems or species conservation values d) a description of the condition of the local catchment eg. erosion levels, soils, vegetation cover, etc e) an outline of baseline groundwater information, including, but not restricted to, depth to watertable, flow direction and gradient, groundwater quality, reliance on groundwater by surrounding users and by the environment f) historic river flow data where available for the catchment.	4.3.5.8 and Part 2 of SCSC
	No proposal should breach clause 120 of the <i>Protection of the Environment Operations Act 1997</i> (ie. pollution of waters is prohibited unless undertaken in accordance with relevant regulations).	Noted
	Identify and estimate the quantity of all pollutants that may be introduced into the water cycle by source and discharge point including residual discharges after mitigation measures are implemented.	4.3.5.8 and Part 2 of SCSC
	Include a rationale, along with relevant calculations, supporting the prediction of the discharges.	4.3.5.8 and Part 2 of SCSC



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**Coverage of Requirements nominated by Other Government Agencies in the *Environmental Assessment***

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Government Agency	Paraphrased Requirement	Relevant Section(s)
	Describe the effects and significance of any pollutant loads on the receiving environment. This should include impacts of residual discharges through modelling, monitoring or both, depending on the scale of the proposal. Determine changes to hydrology (including drainage patterns, surface runoff yield, flow regimes, wetland hydrologic regimes and groundwater).	4.3.5.8 and Part 2 of SCSC
	Describe water quality impacts resulting from changes to hydrologic flow regimes (such as nutrient enrichment or turbidity resulting from changes in frequency and magnitude of stream flow).	4.3.5.2 and Part 2 of SCSC
	Identify any potential impacts on quality or quantity of groundwater describing their source.	4.4.7.2
	Identify potential impacts associated with geomorphological activities with potential to increase surface water and sediment runoff or to reduce surface runoff and sediment transport. Also consider possible impacts such as bed lowering, bank lowering, instream siltation, floodplain erosion and floodplain siltation.	4.3.5 and Part 2 of SCSC
	Identify impacts associated with the disturbance of acid sulfate soils and potential acid sulfate soils.	N/A (2.5.2)
	Containment of spills and leaks shall be in accordance with the technical guidelines section 'Bunding and Spill Management' of the Authorised Officers Manual (EPA, 1995) ( <a href="http://www.environment.nsw.gov.au/mao/bundingspill.htm">http://www.environment.nsw.gov.au/mao/bundingspill.htm</a> ) and the most recent versions of the Australian Standards referred to in the Guidelines. Containment should be designed for no-discharge.	4.13.7
	The significance of the impacts listed above should be predicted. When doing this it is important to predict the ambient water quality and river flow outcomes associated with the proposal and to demonstrate whether these are acceptable in terms of achieving protection of the Water Quality and River Flow Objectives. In particular the following questions should be answered: a) will the proposal protect Water Quality and River Flow Objectives where they are currently achieved in the ambient waters; and b) will the proposal contribute towards the achievement of Water Quality and River Flow Objectives over time, where they are not currently achieved in the ambient waters.	4.3.5.8 and Part 2 of SCSC
	Consult with the DECCW as soon as possible if a mixing zone is proposed (a mixing zone could exist where effluent is discharged into a receiving water body, where the quality of the water being discharged does not immediately meet water quality objectives. The mixing zone could result in dilution, assimilation and decay of the effluent to allow water quality objectives to be met further downstream, at the edge of the mixing zone). The DECCW will advise the proponent under what conditions a mixing zone will and will not be acceptable, as well as the information and modelling requirements for assessment.  <i>Note: The assessment of water quality impacts needs to be undertaken in a total catchment management context to provide a wide perspective on development impacts, in particular cumulative impacts.</i>	Noted

**Table A2-3 (Cont'd)**  
**Coverage of Requirements nominated by Other Government Agencies in the *Environmental Assessment***

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<b>Government Agency</b>	<b>Paraphrased Requirement</b>	<b>Relevant Section(s)</b>
	Any proposed monitoring should be undertaken in accordance with the <i>Approved Methods for the Sampling and Analysis of Water Pollutants in NSW</i> (DECCW 2004).	4.3.6
DECCW – Office of Water	1. Adequate and secure water supply for the proposal.	4.3.5.5
	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 the site.	2.10.3.5 & 4.3.5.5
	3. Proposed water management on the site based on the site water balance. This is to also include a surface water management plan to identify the existing and proposed surface water management structures and flow paths.	<b>Figure 2.5</b> and 4.3.3
	4. An assessment of any proposed modification to surface water management including modelling of redistribution of waters and an assessment of impact on neighbouring properties and the associated watercourse and floodplain.	4.3.3 & 4.3.4
	5. Proposed water licensing requirements in accordance with the <i>Water Act 1912</i> , <i>Water Management Act 2000</i> and NSW Inland Groundwater Water Shortage Zones Order No. 1 & 2, 2008 (19 December 2008). This is to demonstrate that existing licences (include licence numbers) and licensed uses are appropriate, and to identify where additional licences are proposed.	2.1.3 and Part 3 of SCSC
	6. An assessment of impact on adjacent licensed water users, basic landholder rights, and groundwater-dependent ecosystems.	4.4.7.1
	7. Requirement to intercept groundwater and predicted dewatering volumes, water quality and disposal/retention methods.	4.4.6, 4.4.7.1 and Part 3 SCSC
	8. An impact assessment of the construction, operation and final landform of the proposed on-site waste rock emplacements, residue storage facilities and other potentially contaminating facilities to meet the requirements of the NSW State Groundwater Policy framework document.	4.3.6
	9. Proposal to construct watercourse crossings and carry out works within 40m of a watercourse in accordance with former DWE Controlled Activity Approval Guidelines.	
	10. Adequate mitigating and monitoring requirements to address surface and groundwater impacts.	4.3.6 and 4.4.8



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Government Agency	Paraphrased Requirement	Relevant Section(s)
	<p><b>Key issue: Water supply and water balance</b></p> <ul style="list-style-type: none"> <li>• The EA must include assessment of water supply and/or water interception and extraction against any Water Sharing Plan and water licences 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: <ul style="list-style-type: none"> <li>– 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</li> <li>– explanation of any embargoes or full commitment declarations for the proposal, and any identified means to source water supply for the proposal</li> <li>– examination of reliability of water supply to the proposal, including alternatives to site rainfall runoff harvesting in the event of drought</li> <li>– demonstration of prioritisation and effective reuse of saline or other contaminated water within the proposal</li> <li>– explanation of water circuitary and means to segregate contaminated, sediment-laden and clean water volumes within the proposal and proposal site. This would require development of surface water management plan.</li> </ul> </li> </ul>	<p>2.10.3.5 &amp; 4.3.5.5</p> <p>Part 3 of SCSC</p> <p>4.3.5.5</p> <p>4.3.5.5 and Part 2 SCSC</p> <p>4.3.3</p>
	<p><b>Key Issue: Groundwater Resource Protection</b></p> <ul style="list-style-type: none"> <li>• Groundwater — the EA must include demonstration that the project is consistent with the 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: <ul style="list-style-type: none"> <li>– identification of surrounding water users and any groundwater dependent ecosystems;</li> <li>– detailed explanation of potential groundwater volume, piezometric level, water table heights and the direction of flow and quality, any identified connected water sources impacted by extraction</li> <li>– detailed explanation of groundwater drawdown or other impacts upon connected groundwaters.</li> <li>– explanation of the site water balance, including any changes to water balance inputs from rainfall runoff, additional supplies, dewatering requirements and/or groundwater seepage;</li> <li>– detailed description of any proposed water supply system utilising groundwater as a source, and identification of licensing requirements;</li> <li>– 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;</li> </ul> </li> </ul>	<p>4.4.2</p> <p>4.4.2.6</p> <p>4.4.6, 4.4.7 and Part 3 SCSC</p> <p>4.3.5.5</p> <p>Part 3 SCSC</p> <p>4.4.6, 4.4.7 and Part 3 SCSC</p>



Table A2-3 (Cont'd)  
Coverage of Requirements nominated by Other Government Agencies in the *Environmental Assessment*

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Government Agency	Paraphrased Requirement	Relevant Section(s)
	<ul style="list-style-type: none"> <li>– measures to prevent contamination of the groundwater.</li> <li>– 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"> <li>o Terrestrial vegetation with seasonal or episodic reliance on groundwater, and</li> <li>o Aquatic and riparian ecosystems in, or adjacent to, streams or rivers dependent upon the input of groundwater to minimum base flows</li> </ul> </li> </ul>	<p>4.4.4</p> <p>4.4.7.4</p>
	<p><b>Key Issue: Landform or Void Rehabilitation</b></p>	
	<ul style="list-style-type: none"> <li>• <b>Rehabilitation, Final Landform</b> – the EA must include:                             <ul style="list-style-type: none"> <li>– justification of the proposed final landform with regard to its impact on local and regional groundwater systems and surface water systems;</li> <li>– a detailed description of how the site would be progressively rehabilitated and integrated into the surrounding landscape;</li> <li>– 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;</li> <li>– a detailed description of the measures to be put in place to ensure that sufficient resources are available to implement the proposed rehabilitation; and</li> <li>– the measures that would be established for the long-term protection of local and regional aquifer and surface water systems and for the ongoing management of the site following the cessation of the project.</li> </ul> </li> </ul>	<p>2.14.4</p> <p>2.14.6</p> <p>4.4.6.3</p> <p>MOP</p> <p>2.14.7</p>



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