

Appendix 3

Coverage of Director- General's Requirements and Additional Matters for Consideration in the EIS

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Table A3.1
Coverage of Director-General's Requirements in the EIS

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Paraphrased Requirement	Relevant EIS Section(s)
GENERAL REQUIREMENTS	
The Environmental Impact Statement (EIS) for the development must meet the form and content requirements in Clauses 6 and 7 of Schedule 2 of the Environmental Planning and Assessment Regulation 2000.	
Clause 6 - Relevant information and declaration.	Declaration page (iii)
Clause 7 <ul style="list-style-type: none"> • (1) The EIS must include <ul style="list-style-type: none"> - 1(a) Summary of the EIS. - 1(b) Statement of objectives of the development. - 1(c) Analysis of feasible alternatives. - 1(d)(i) Full description of the development. - 1(d)(ii) Description of environment likely to be affected/significantly affected. - 1(d)(iii) Likely impact of the development on the environment. - 1(d)(iv) Measures to mitigate adverse effects of the development. - 1(d)(v) List of approvals required. - 1(e) Compilation of mitigation measures. • (2) Environmental Assessment Requirements for EIS. • (3) Waivered assessment and amended conditions. • (4) Principles of ecologically sustainable development. 	p.ES-1 2.1.1 6.1 Section 2 Sections 3 and 4 Section 4 Sections 4 and 5 2.1.3 Section 5 Appendix 2 N/A 6.2.2
In addition, the EIS must include a: <ul style="list-style-type: none"> • detailed description of the development, including: <ul style="list-style-type: none"> - need for the proposed development; - justification for the proposed mine plan, including efficiency of resource recovery, mine safety, and environmental protection; - likely staging of the development - including construction, operational stage/s and rehabilitation; - likely interactions between the development and existing, approved and proposed mining operations in the vicinity of the site; and - plans of any proposed building works. 	1.6, 6.3 2.16, 6.1 2.4.4, 2.17 4.15.5.7 2.6.2, 2.13.1 and Figure 2.9
<ul style="list-style-type: none"> • consideration of all relevant environmental planning instruments, including identification and justification of any inconsistencies with these instruments. 	3.3, 6.3.4
<ul style="list-style-type: none"> • risk assessment of the potential environmental impacts of the development, identifying the key issues for further assessment. 	3.5, 6.2.1
<ul style="list-style-type: none"> • detailed assessment of the key issues specified below, and any other significant issues identified in this risk assessment, which includes: <ul style="list-style-type: none"> - a description of the existing environment, using sufficient baseline data; 	Throughout Sections 2 and 4

Table A3.1 (Cont'd)
Coverage of Director-General's Requirements in the EIS

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Paraphrased Requirement	Relevant EIS Section(s)
GENERAL REQUIREMENTS (Cont'd)	
<ul style="list-style-type: none"> - an assessment of the potential impacts of all stages of the development, including any cumulative impacts, taking into consideration relevant guidelines, policies, plans and statutes; and - a description of the measures that would be implemented to avoid, minimise and if necessary, offset the potential impacts of the development, including proposals for adaptive management and/or contingency plans to manage any significant risks to the environment. 	<p>Throughout Sections 3, 4 and 6</p> <p>Throughout Section 4</p>
<ul style="list-style-type: none"> • consolidated summary of all the proposed environmental management and monitoring measures, highlighting commitments included in the EIS. 	<p>Section 5</p>
KEY ISSUES	
SOIL AND WATER	
<p>The EIS must address the following specific issues:</p> <ul style="list-style-type: none"> • Land Resources - including a detailed assessment of the potential impacts on: <ul style="list-style-type: none"> - soils and land capability (including salinisation and contamination); - landforms and topography; and - land use, including agricultural use. 	<p>4.11.4</p> <p>2.17.4, 4.1.2.1</p> <p>2.17.5, 4.1.5, 4.15.4 and Appendix 9</p>
<ul style="list-style-type: none"> • detailed assessment of potential impacts on the quality and quantity of existing surface and ground water resources, including: <ul style="list-style-type: none"> - detailed modelling of potential groundwater impacts; - impacts on affected licensed water users and basic landholder rights; - impacts on riparian, ecological, geomorphological and hydrological values of watercourses, including environmental flows; - a detailed site water balance, including a description of site water demands, water disposal methods (inclusive of volume and frequency of any water discharges), water supply infrastructure and water storage structures; - an assessment of proposed water discharge quantities and quality/ies against receiving water quality and flow objectives; - an assessment of proposed modifications to surface water management, including modelling the redistribution of waters and an assessment of the impact on neighbouring properties and the associated watercourse and floodplain. - identification of any licensing requirements or other approvals under the Water Act 1912 and/or Water Management Act 2000; and - demonstration that water for the construction and operation of the development can be obtained from an appropriately authorised and reliable supply in accordance with the operating rules of any relevant Water Sharing Plan (WSP); 	<p>4.6.2.4, SCSC Part 5 Section 5</p> <p>2.8.2 , 4.5.5 and Appendix 9</p> <p>4.5.5</p> <p>2.8, 4.5.4.4</p> <p>4.5.5, Part 4 of the SCSC</p> <p>4.5.5.2</p> <p>2.8.2, 4.5.4.4, Part 4 of the SCSC and Appendix 9</p> <p>2.8.2</p>
<ul style="list-style-type: none"> - a description of the measures proposed to ensure the development can operate in accordance with the requirements of any relevant WSP or water source embargo; and 	<p>4.5.4, Part 4 of the SCSC and Appendix 9</p>

Table A3.1 (Cont'd)
Coverage of Director-General's Requirements in the EIS

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Paraphrased Requirement	Relevant EIS Section(s)
KEY ISSUES (Cont'd)	
SOIL AND WATER	
<ul style="list-style-type: none"> - a detailed description of the proposed water management system (including sewage), water monitoring program and other measures to mitigate surface and groundwater impacts. 	4.5.4.2, Part 4 of the SCSC
BIODIVERSITY	
<p>The EIS must include:</p> <ul style="list-style-type: none"> • measures taken to avoid, reduce or mitigate impacts on biodiversity. 	2.17.8, 4.7.6, 4.8.6, Appendix 13 of Part 6 of the SCSC
<ul style="list-style-type: none"> • accurate estimates of proposed vegetation clearing. 	2.3.2 and Table 2.22
<ul style="list-style-type: none"> • a detailed assessment of potential impacts of the development on any: <ul style="list-style-type: none"> - terrestrial or aquatic threatened species or populations and their habitats, endangered ecological communities and groundwater dependent ecosystems; and - regionally significant remnant vegetation, or vegetation corridors. 	4.6.6.3, 4.7.6, 4.8.6 4.7.6, 3 and 4.7.6.4
<ul style="list-style-type: none"> • a comprehensive offset strategy to ensure the development maintains or improves the terrestrial and aquatic biodiversity values of the region in the medium to long term. 	2.17.8, 4.7.6.2
NOISE AND VIBRATION	
<p>The EIS must include:</p> <ul style="list-style-type: none"> • a quantitative assessment of potential: <ul style="list-style-type: none"> - construction, operational and transport noise impacts; - reasonable and feasible mitigation measures, including evidence that there are no such measures available other than those proposed; and - monitoring and management measures, in particular real-time, attended noise monitoring and predictive meteorological forecasting. 	4.2.7 4.2.6 4.2.8
AIR QUALITY	
<p>The EIS needs to include a quantitative assessment outlining:</p> <ul style="list-style-type: none"> • construction and operational impacts, with a particular focus on dust emissions (including PM_{2.5} and PM₁₀ emissions) and processing emissions. 	4.3.7
<ul style="list-style-type: none"> • reasonable and feasible mitigation measures to minimise dust and processing emissions, including evidence that there are no such measures available other than those proposed. 	4.3.6
<ul style="list-style-type: none"> • monitoring and management measures, in particular real-time air quality monitoring. 	4.3.8
TRAFFIC AND TRANSPORT	
<p>The EIS must include:</p> <ul style="list-style-type: none"> • accurate predictions of the road and rail traffic generated by the project. 	4.12.3
<ul style="list-style-type: none"> • an assessment of the capacity of the rail network to accommodate the transport of ore. 	2.2.4

Table A3.1 (Cont'd)
Coverage of Director-General's Requirements in the EIS

Paraphrased Requirement	Relevant EIS Section(s)
KEY ISSUES (Cont'd)	
TRAFFIC AND TRANSPORT	
<ul style="list-style-type: none"> an assessment of potential traffic impacts on the safety and efficiency of the road network. 	4.12.5
<ul style="list-style-type: none"> a detailed description of the measures that would be implemented to maintain and/or improve the capacity, efficiency and safety of the road and rail networks in the surrounding area over the life of the project. 	4.12.4
GREENHOUSE GASES	
The EIS must include:	
<ul style="list-style-type: none"> a quantitative assessment of potential Scope 1, 2 and 3 greenhouse gas emissions. 	4.3.7.10
<ul style="list-style-type: none"> a qualitative assessment of the potential impacts of these emissions on the environment. 	4.3.7.10
<ul style="list-style-type: none"> an assessment of reasonable and feasible measures to minimise greenhouse gas emissions and ensure energy efficiency. 	4.3.6.5
PLANS AND DOCUMENTS	
The EIS must include all relevant plans, architectural drawings, diagrams and relevant documentation required under Schedule 1 of the Environmental Planning and Assessment Regulation 2000. These documents should be included as part of the EIS rather than as separate documents.	Throughout this document
REHABILITATION AND MINE CLOSURE	
The EIS must include the proposed rehabilitation strategy for the site, having regard to the key principles in the Strategic Framework for Mine Closure, including:	
<ul style="list-style-type: none"> rehabilitation objectives, methodology, monitoring programs, performance standards and proposed completion criteria; 	2.17
<ul style="list-style-type: none"> nominated final land use, having regard to any relevant strategic land use planning or resource management plans or policies; and 	2.17.5
<ul style="list-style-type: none"> the potential for integrating this strategy with any other rehabilitation and/or offset strategies in the region. 	2.17.8
HERITAGE	
The EIS must include:	
<ul style="list-style-type: none"> an Aboriginal cultural heritage assessment (including both cultural and archaeological significance) which must: <ul style="list-style-type: none"> demonstrate effective consultation with Aboriginal communities in determining and assessing impacts, and developing and selecting mitigation options and measures; and outline any proposed impact mitigation and management measures (including an evaluation of the effectiveness and reliability of the measures). 	3.2.1.7, 4.9.4 4.9.8
<ul style="list-style-type: none"> a historic heritage assessment (including archaeology) which must: <ul style="list-style-type: none"> include a statement of heritage impact (including significance assessment) for any State significant or locally significant historic heritage items; and outline any proposed mitigation and management measures (including an evaluation of the effectiveness and reliability of the measures). 	4.10.6 4.10.5

Table A3.1 (Cont'd)
Coverage of Director-General's Requirements in the EIS

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Paraphrased Requirement	Relevant EIS Section(s)
KEY ISSUES (Cont'd)	
VISUAL	
The EIS must include:	
<ul style="list-style-type: none"> • a detailed assessment of the: <ul style="list-style-type: none"> - changing landforms on the site during the various stages of the project; - potential visual impacts of the project on private landowners in the surrounding area as well as key vantage points in the public domain, including lighting impacts; and - a detailed description of the measures that would be implemented to minimise the visual impacts of the project. 	2.4.3, 2.17.4 (Figures 2.16 to 2.20) 4.13.4 (Figures 4.46 to 4.49) 4.13.3
WASTE	
The EIS must include:	
<ul style="list-style-type: none"> • accurate estimates of the quantity and nature of the potential waste streams of the development, including tailings, coarse reject and acid generating potential; 	2.9, 2.11
<ul style="list-style-type: none"> • a tailings and coarse reject disposal strategy; and 	2.9.2, Appendix 6
<ul style="list-style-type: none"> • a description of measures that would be implemented to minimise production of other waste, and ensure that that waste is appropriately managed. 	2.11
SOCIAL & ECONOMIC	
The EIS must include an assessment of the:	
<ul style="list-style-type: none"> • potential direct and indirect economic benefits of the project for local and regional communities and the State. 	4.15.4, Part 12 of the SCSC and Appendix 9
<ul style="list-style-type: none"> • potential impacts on local and regional communities, including: <ul style="list-style-type: none"> - increased demand for local and regional infrastructure and services (such as housing, childcare, health, education and emergency services); and - impacts on social amenity; 	4.15.5.3, 4.15.5.4 4.15.5.5
<ul style="list-style-type: none"> • a detailed description of the measures that would be implemented to minimise the adverse social and economic impacts of the project, including any infrastructure improvements or contributions and/or voluntary planning agreement or similar mechanism. 	4.15.3
<ul style="list-style-type: none"> • a detailed assessment of the costs and benefits of the development as a whole, and whether it would result in a net benefit for the NSW community. 	4.15.6
HAZARDS	
The EIS must include:	
<ul style="list-style-type: none"> • a screening of potential hazards off and on site to determine the potential for offsite impacts and if a Preliminary Hazard Analysis (PHA) is required. If required, a PHA must be prepared in accordance with the Department's Hazardous Industry Planning Advisory Paper No. 6 - Guidelines for Hazard Analysis and must: <ul style="list-style-type: none"> - consider the risks from the proposal; and - demonstrate that the proposal would comply with the criteria set out in Hazardous Industry Planning Advisory Paper No. 4 - Risk Criteria for Land Use Safety Planning; 	3.5, 4.14.2, Appendix 4 4.14.2.3, Appendix 4

Table A3.1 (Cont'd)
Coverage of Director-General's Requirements in the EIS

Paraphrased Requirement	Relevant EIS Section(s)
KEY ISSUES (Cont'd)	
CONSULTATION	
<p>During the preparation of the EIS, you must consult with relevant local, State and Commonwealth Government authorities, service providers, community groups and affected landowners.</p> <p>In particular you must consult with the:</p> <ul style="list-style-type: none"> • Commonwealth Department of Sustainability, Environment, Water, Population and Communities; • Office of Environment and Heritage (including the Heritage Branch); • Environment Protection Authority; • Division of Resources and Energy within the Department of Trade and Investment, Regional Infrastructure and Services; • Department of Primary Industries (including the NSW Office of Water, NSW Forestry, Agriculture and Fisheries sections, Catchments and Lands (Crown Lands Division)); • Transport for NSW (including the Centre for Transport Planning, and Roads and Maritime Services); • TransGrid; • Central West Catchment Management Authority; and • Dubbo City Council. <p>The EIS must describe the consultation process and the issues raised, and identify where the design of the development has been amended in response to these issues. Where amendments have not been made to address an issue, a short explanation should be provided.</p>	<p>3.2.2</p>

Table A3.2
Supplementary Director General's Requirements (Commonwealth Department of Sustainability, Environment, Water, Population and Communities)

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Paraphrased Requirement	Relevant EIS Section(s)
KEY ASSESSMENT REQUIREMENTS	
1. Impacts on threatened species and ecological communities listed under Sections 18 and 18A of the <i>Environment Protection and Biodiversity Conservation Act 1999</i> ;	4.7.6.7
2. Any relevant Commonwealth and State Government technical and policy guidelines;	4.7.1, 4.7.6
3. Matters outlined in Schedule 4 of the Environment Protection and Biodiversity Conservation Regulation 2000, included in the requirements below; and	See below
4. The requirements outlined below:	See below
GENERAL INFORMATION	
The background of the action including: a) the title of the action; b) the full name and postal address of the designated proponent; c) a clear outline of the objective of the action; d) the location of the action; e) the background to the development of the action; f) how the action relates to any other actions (of which the proponent should reasonably be aware) that have been, or are being, taken or that have been approved in the region affected by the action; g) the current status of the action; and h) the consequences of not proceeding with the action.	Section 1
DESCRIPTION OF THE ACTION	
A description of the action, including:	
a) all the components of the action;	Section 2
b) the precise location of the preferred option for any works to be undertaken, structures to be built or elements of the action that may have relevant impacts;	Section 1, Section 2
c) how the works are to be undertaken and design parameters for those aspects of the structures or elements of the action that may have relevant impacts;	Section 2, Section 5
d) to the extent reasonably practicable, a description of any feasible alternatives to the controlled action that have been identified through the assessment, and their likely impact, including: (i) if relevant, the alternative of taking no action; (ii) a comparative description of the impacts of each alternative on the matters protected by the controlling provisions for the action; and (iii) sufficient detail to make clear why any alternative is preferred to another.	Section 6.3.5 Section 6.1 Section 6.1
e) A description of long-term and short-term economic and social considerations regarding the project.	4.15, Part 12 of the SCSC

Table A3.2 (Cont'd)
Supplementary Director General's Requirements (Commonwealth Department of Sustainability, Environment, Water, Population and Communities)

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Paraphrased Requirement	Relevant EIS Section(s)
PROPOSED SAFEGUARDS, MITIGATION AND OFFSET MEASURES (Cont'd)	
d) a description of the objectives of the mitigation measures, thresholds for corrective actions, and the corrective actions to be implemented should these thresholds be exceeded;	4.7.5
e) any statutory or policy basis for the mitigation measures;	4.7.5.5, 4.7.6.2, 4.7.6.7
f) details of environmental management plans that set out the framework for continuing management, mitigation and monitoring programs for the relevant impacts of the action, including the person or agency responsible for implementing these programs and provisions for independent environmental auditing;	2.17.8.5, Commitment 19.2
g) the name of the agency responsible for endorsing or approving each mitigation measure or monitoring program; and	
h) in the event that impacts cannot be avoided or mitigated, a description of any offsets to compensate for any predicted or potential residual impacts on threatened species and ecological communities. This should be in accordance with the department's Offsets Policy (http://www.environment.gov.au/epbc/publications/environmental-offsets-policy.html) and include: <ul style="list-style-type: none"> i. an assessment of how any proposed offset compensates for the residual impacts on threatened species and ecological communities likely to remain following avoidance and mitigation measures to be implemented; ii. the location of any proposed offset; iii. the timing of the delivery of any offset; and iv. how the offset will be secured and managed in perpetuity. 	2.17.8, 4.7.5.5 2.17.8.4, 4.7.6.2 Figure 2.26 2.17.8.5 2.17.8.5
OTHER APPROVALS AND CONDITIONS	
Any other requirements for approval or conditions that apply, or that the proponent reasonably believes are likely to apply, to the proposed action. Information must include:	
a) details of any local or State government planning scheme, or plan or policy under any local or State government planning system that deals with the proposed action, including: <ul style="list-style-type: none"> i. what environmental assessment of the proposed action has been, or is being, carried out under the scheme, plan or policy; and ii. how the scheme provides for the prevention, minimisation and management of any relevant impacts. 	4.7.6.2 4.7.6.2
b) a description of any approval that has been obtained from a State, Territory or Commonwealth agency or authority (other than an approval under the relevant Act) including any conditions that apply to the action;	N/A
c) a statement identifying any additional approval that is required; and	N/A
d) a description of the monitoring, enforcement and review procedures that apply, or are proposed to apply, to the action.	4.17.8.5

Table A3.2 (Cont'd)
Supplementary Director General's Requirements (Commonwealth Department of Sustainability, Environment, Water, Population and Communities)

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Paraphrased Requirement	Relevant EIS Section(s)	
ENVIRONMENTAL RECORD OF PERSON PROPOSING TO TAKE THE ACTION		
A description of the environmental record of the person proposing to take the action, including: <ul style="list-style-type: none"> a) Details of any proceedings under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources against: <ul style="list-style-type: none"> i. the person proposing to take the action; and ii. for an action for which a person has applied for a permit, the person making the application. 	1.3.1, Part 6 of the SCSC	
<ul style="list-style-type: none"> b) If the person proposing to take the action is a corporation — details of the corporation's environmental policy and planning framework. 	1.3.1	
INFORMATION SOURCES		
For information given in an environment assessment, the draft must state:	Provided as relevant throughout the EIS and Part 6 of the SCSC	
<ul style="list-style-type: none"> a) the source of the information; 		
<ul style="list-style-type: none"> b) how recent the information is; 		
<ul style="list-style-type: none"> c) how the reliability of the information was tested; and 		
<ul style="list-style-type: none"> d) what uncertainties (if any) are in the information. 		
CONSULTATION		
A description of any consultation undertaken during the assessment, including: <ul style="list-style-type: none"> a) Any consultation about the action, including: <ul style="list-style-type: none"> i. any consultation that has already taken place; ii. proposed consultation about relevant impacts of the action; and iii. if there has been consultation about the proposed action — any documented response to, or result of, the consultation. 	3.2	
<ul style="list-style-type: none"> b) Identification of affected parties, including a statement mentioning any communities that may be affected and describing their views. 	3.2	
ECONOMIC AND SOCIAL MATTERS		
The economic and social impacts of the action, both positive and negative, must be analysed. This analysis must include:		
<ul style="list-style-type: none"> a) details of any public consultation activities undertaken, and their outcomes; 		3.2.1
<ul style="list-style-type: none"> b) projected economic costs and benefits of the project, including the basis for their estimation through cost/benefit analysis or similar studies; and 		2.15
<ul style="list-style-type: none"> c) employment opportunities expected to be generated by the project (including construction and operational phases). 	2.15, 4.15.4.2	

Table A3.2 (Cont'd)
Supplementary Director General's Requirements (Commonwealth Department of Sustainability, Environment, Water, Population and Communities)

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Paraphrased Requirement	Relevant EIS Section(s)
THE PINK-TAILED WORM-LIZARD (<i>Aprasia parapulchella</i>)	
<p>The following information regarding the Pink-tailed Worm-Lizard (PTWL) should be included in the EIS, preferably in the proposed PTWL Management Plan:</p> <ul style="list-style-type: none"> A map depicting the locations of subpopulations of the PTWL on the site in relation to the proposed open cut mine, other infrastructure and proposed offset areas. 	<p>Part 3 of the SCSC Appendix 13</p>
<ul style="list-style-type: none"> Estimates of the number of individuals in each subpopulation and the area of PTWL habitat which will be lost at each location. 	<p>4.7.4.2.2, Part 3 of the SCSC (Section 5.5.4)</p>
<ul style="list-style-type: none"> Analysis of the measures proposed in the referral to reduce potential impacts on the PTWL such as the proposed PTWL monitoring and research program, including analysis of the risks and potential benefits of translocation, the provision of offset areas and additional research and field work. 	<p>4.7.5.4.2, Part 3 of SCSC Appendix 13</p>
<ul style="list-style-type: none"> The success or failure of PTWL management programs at other sites should be discussed in detail to assist consideration of the management and mitigation measures proposed for the Toongi Zirconia site. 	<p>Part 3 of the SCSC Appendix 13</p>

**Table A3.3
 Coverage of Environmental Issues**

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Government Agency	Paraphrased Requirement	Relevant EIS Section(s)
GENERAL		
NSW Resources and Energy (20/04/12)	The EIS must provide a comprehensive description of all aspects of the project. In terms of text, plans or charts, it must clearly show the proposed extent and sequence of development.	Section 2
	All areas affected by the mining proposal must be shown in their environmental context and in sufficient detail to enable an understanding of the scale of impacts and the effectiveness of proposed control measures.	Section 4
	Impacts associated with the operational and post-closure stages of the project must also be identified in detail and control strategies outlined.	Section 2 & Section 4
Central West Catchment Management Authority (03/05/12)	The EIS must include a strategic assessment of the need, scale, scope and location of the project in relation to the current and future demands for zirconium, yttrium, niobium and rare earth element resources and current supplies.	1.6
SOIL		
EPA (26/04/12)	The EIS should include: <ol style="list-style-type: none"> 1. An assessment of potential impacts on soil and land resources being guided by Soil and Landscape Issues in Environmental Impact Assessment (DLWC 2000). The nature and extent of any significant impacts should be identified. Particular attention should be given to: <ol style="list-style-type: none"> a) Soil erosion and sediment transport - in accordance with Managing urban storm water: soils and construction, vol. 1 (Landcom 2004) and vol. 2 (A E). b) Mass movement (landslides) - in accordance with Landslide risk management guidelines presented in Australian Geomechanics Society (2007). c) Urban and regional salinity - guidance given in the Local Government Salinity Initiative booklets which includes Site Investigations for Urban Salinity (DLWC, 2002). 2. A description of the mitigation and management options that will be used to prevent, control, abate or minimise identified soil and land resource impacts associated with the project. This should include an assessment of the effectiveness and reliability of the measures and any residual impacts after these measures are implemented. 	4.11.4 4.5.4.2, Part 4 of the SCSC N/A 4.6.5, 4.11.2.1.3
		4.5.4.2, 4.11.3
Central West Catchment Management Authority (03/05/12)	The assessment must outline the soil types covered in the proposed site and outline how the operation will mitigate risks in regard to the removal of the topsoil, storage of the overburden, replacement of the waste material and rehabilitation of the area upon completion of operation.	2.17.6, 4.11.2, 4.11.3
NSW Resources and Energy (02/04/12)	The EIS must outline map soil characteristics across all proposed areas of surface disturbance and assesses their value and limitations for rehabilitation. Significant limitations need to be addressed in terms of their impact on rehabilitation.	4.11.2, 4.11.4
	Land Capability and Agricultural Suitability mapping also needs to be undertaken and presented.	4.11.4.2, 4.11.4.3, Appendix 9

Table A3.3 (Cont'd)
Coverage of Environmental Issues

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Government Agency	Paraphrased Requirement	Relevant EIS Section(s)
WATER – GENERAL		
NSW Office of Water (27/04/12)	If the proposal is within a gazetted WSP area the assessment is required to demonstrate how the proposal is consistent with the relevant access and trading rules of the WSP.	2.8.2
	The EIS must demonstrate the following: 1. Adequate and secure water supply for the proposal. Confirmation that water supplies for construction and operation are sourced from an appropriately authorised and reliable supply,	2.8.2 and Appendices 7 to 9
	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. The water balance is to outline the proposed water management on the site and to also include details of any water reticulation infrastructure that supplies water to and within the site, Water use efficiency and recycling needs to be maximised to reduce the need for disposal via evaporation basins.	2.8, 4.5.4.3, 4.5.4.4
	3. An impact assessment on adjacent licensed water users (surface and groundwater), riparian ecosystems and groundwater-dependent ecosystems. This is to meet the requirements of relevant state policy in addition to the objects and principles of the Water Management Act.	4.5.5, 4.6.6 and Appendices 7 to 9
	4. An assessment of the potential to intercept groundwater and predicted dewatering volumes, water quality and disposal/retention methods. This is to also include the modelled zone of influence for a number of stages both during mining operations and post mine life until equilibrium is achieved.	4.6.4
	5. An assessment of existing base flow contributions to local surface water systems and potential impacts to the environment and water users due to proposed dewatering activities and other potential impediments to natural groundwater flow paths.	Part 4 of the SCSC (Section 3)
	6. An impact assessment of the construction, operation and final landform of the proposed onsite waste rock emplacement, evaporation basins, residue storage facility and other potentially contaminating facilities.	4.5.4.2, 4.5.5, 4.6.4, 4.6.5, Part 5 of the SCSC
	7. 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 .	4.5.5, 4.6.5
	8. An impact assessment of any proposed works within or adjacent to watercourses and adequate provision of buffer requirements. This is to also include proposed pipelines, bridge upgrades and temporary or permanent vehicle crossings within the project application area. Ability to achieve the principles of the <i>Water Management Act 2000</i> and the requirements of the Guidelines for Controlled Activity Approvals and the Riparian Corridor Objective Setting stream category classification will be required.	4.5.5, Part 4 of the SCSC

Table A3.3 (Cont'd)
Coverage of Environmental Issues

Government Agency	Paraphrased Requirement	Relevant EIS Section(s)
WATER – GENERAL (Cont'd)		
NSW Office of Water (27/04/12) (Cont'd)	9. Preparation of a surface water management plan and groundwater management plan to integrate the proposed water balance and management for the site and to identify adequate mitigating and monitoring requirements for both water quality and water volume.	4.5.4.2, 4.6.6
	Basic Landholder Rights Pipeline constructions and easements may therefore affect existing BLR users and therefore all potentially affected BLR users need to be identified and the impacts quantified.	4.5.5, 4.6.6
	Sustainable Water Supply In areas where a Water Sharing Plan (WSP) has commenced, a long term average extraction limit has been established which constrains overall growth in an area. In most instances new enterprises are required to enter the water market to purchase adequate water licences to meet their water demand requirements. In areas where a WSP has not yet commenced, the NSW Government has established embargoes on applying for new licences. There are limited exemptions in some areas which need to be considered and applied for by a proponent.	Appendix 7
	The onus is on the proponent to assess which of the above is relevant and identify the potential sources of water of an appropriate reliability and quantity to meet their water supply requirements. The water supply requirements and potential water available should be identified in the EA to enable NOW to assess the viability of the water supply required. Assurances should also be made that the proponent will enter the water market as required.	2.8, 4.5.4.4 and Appendices 7 to 9
	Therefore the assessment is required to address the issue of provision of a sustainable water supply for any project proposal. The assessment should include Water Management Plans detailing how a sustainable water supply can be sourced and implemented.	2.8, 4.5.4.4 and Appendices 7 to 9
SURFACE WATER		
EPA (26/04/12)	The EIS should address the following:	4.5.4, 4.5.5, 4.6.4.2, 4.6.5
	<ul style="list-style-type: none"> There is no pollution of waters (including surface and groundwater) 	
	<ul style="list-style-type: none"> Polluted water (including process waters, wash down waters, polluted stormwater or sewage) is captured onsite and collected, treated and beneficially' reused, where safe and practical to do so. 	4.5.4
	<ul style="list-style-type: none"> The Project is assessed in relation to the relevant NSW Water Quality Objectives as defined in the individual catchment action plans and against ANZECC 2000 water quality criteria. Construction activities will need to demonstrate best practice sediment and erosion control and management in accordance with the reference document Managing Urban Stormwater: Soils and Construction (NSW Landcom 2004).	Part 4 of the SCSC (Section 3.1.3.3) 4.5.4.2

Table A3.3 (Cont'd)
Coverage of Environmental Issues

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Government Agency	Paraphrased Requirement	Relevant EIS Section(s)
SURFACE WATER (Cont'd)		
EPA (26/04/12) (Cont'd)	The EIS should identify potential impact on watercourses and the management and mitigation measures that will be implemented where works are conducted in the vicinity of watercourses.	4.5.3, 4.5.4
	The EIS should demonstrate how the project will contribute to achieving the most current government endorsed Water Quality and River Flow Objectives for each of the relevant catchments and should utilise the Australian and New Zealand Guidelines for Fresh and Marine Water Quality (2000).	Part 4 of the SCSC (Section 3.1.3.3)
	A detailed water balance must be prepared to model water management through the life cycle of the project.	4.5.4.4, Part 4 of the SCSC (Section 6)
	Where an offsite discharge is proposed, the EIS will need to identify:	4.5.4.2, Part 4 of the SCSC
	<ul style="list-style-type: none"> • Details regarding proposed discharges i.e. treatment requirements, infrastructure to enable a discharge etc. 	
<ul style="list-style-type: none"> • All proposed discharge points. 		
<ul style="list-style-type: none"> • Estimates of the frequency and volume of discharges. 		
NSW Office of Water (27/04/12)	The EIS is required to consider the impact of the proposal on the watercourses and associated riparian vegetation within the site and provide the following:	
	<ul style="list-style-type: none"> • Identify the sources of surface water. 	4.5.4.4
	<ul style="list-style-type: none"> • Details of stream order (using the Strahler System). 	Part 4 of the SCSC (Section 3.1.2)
	<ul style="list-style-type: none"> • Details of any proposed surface water extraction, including quantity, purpose, location of existing pumps, dams, diversions, cuttings and levees. 	4.5.4.4, Part 4 of the SCSC Section 6
	<ul style="list-style-type: none"> • Details of available surface water licences that could be purchased to account for any proposed extractions. 	2.8.2, 4.5.4.4 and Appendix 7
	<ul style="list-style-type: none"> • Detailed description of any proposed development or diversion works including all construction, clearing, draining, excavation and filling. 	4.5.4.2
	<ul style="list-style-type: none"> • An assessment of the impacts of the proposed methods of excavation, construction and material placement on the watercourse and associated vegetation. 	4.5.5
	<ul style="list-style-type: none"> • A detailed description of all potential water related environmental impacts of any proposed development in terms of riparian vegetation, sediment movement, water quality and hydrologic regime. 	4.5.5
<ul style="list-style-type: none"> • A description of the design features and measures to be incorporated into any proposed development to guard against anything more than minimal long term actual and potential environmental disturbances, particularly in respect of maintaining the natural hydrologic regime and sediment movement patterns and the identification of riparian buffers. 	4.5.4	

Table A3.3 (Cont'd)
Coverage of Environmental Issues

Government Agency	Paraphrased Requirement	Relevant EIS Section(s)
SURFACE WATER (Cont'd)		
NSW Office of Water (27/04/12) (Cont'd)	<ul style="list-style-type: none"> Details of the impact on water quality and remedial measures proposed to address more than minimal adverse effects. 	4.5.5, 4.5.6, Part 4 of the SCSC (Section 10)
Central West Catchment Management Authority (03/05/12)	The EIS should include an assessment of the surface water impacts of the proposed developments, particularly in terms of the surface water flow in the site and potential for contamination from leachate and soil/sedimentation risks.	4.5.5
	The assessment should outline the potential water demands during operation and demonstrate the availability of adequate and secure water supplies for the life of the project.	4.5.4.4
	If the area is determined as being on flood prone land, the assessment needs to include the likelihood of flood risks and how flood design has been considered in the operation.	4.5.5.7
GROUNDWATER		
EPA (26/04/12)	The EIS should address the following: <ul style="list-style-type: none"> there is no pollution of waters (including surface and groundwater); 	4.6.5
Central West Catchment Management Authority (03/05/12)	The EIS should provide an assessment of the risks of groundwater interference during establishment and operation and that assessment outlines mitigation measures to these risks.	4.6.4
NSW Resources and Energy (20/04/12)	The EIS must identify groundwater impacts associated with dewatering of the open cut mine and any bore field proposed for water supply purposes. Long term recovery patterns of groundwater and any bearing these may have on subsequent land uses.	4.6.5
NSW Office of Water (27/04/12)	The EIS must include:	
	<ul style="list-style-type: none"> Details of the predicted highest groundwater table at the development site. 	2.4.2, 4.6.4.2
	<ul style="list-style-type: none"> Details of any works likely to intercept, connect with or result in pollutants infiltrating into the groundwater sources. 	2.4.2, 4.6.4.2
	<ul style="list-style-type: none"> Details of any proposed groundwater extraction, including purpose, location. 	2.8.2 and Appendix 8
	<ul style="list-style-type: none"> Construction details of all proposed bores and expected annual extraction volumes. 	2.8.2 and Appendix 8
	<ul style="list-style-type: none"> A description of the flow directions and rates and the physical and chemical characteristics of the groundwater source. 	4.6.2.3, Part 5 of the SCSC (Section 5.6)
	<ul style="list-style-type: none"> Details of the predicted impacts of any final landform on the groundwater regime. 	4.6.4.1
<ul style="list-style-type: none"> Details of the existing groundwater users within the area (including the environment) and include details of any potential impacts on these users. 	4.6.2.2, Part 5 of the SCSC (Sections 5.6.3 and 5.10)	

Table A3.3 (Cont'd)
Coverage of Environmental Issues

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Government Agency	Paraphrased Requirement	Relevant EIS Section(s)
GROUNDWATER (Cont'd)		
NSW Office of Water (27/04/12) (Cont'd)	<ul style="list-style-type: none"> An assessment of the quality of the groundwater for the local groundwater catchment. 	4.6.2.3, Part 5 of the SCSC (Section 5.9)
	<ul style="list-style-type: none"> Details of how the proposed development will not potentially diminish the current quality of groundwater, both in the short and long term. 	4.6.5
	<ul style="list-style-type: none"> Details on preventing groundwater pollution so that remediation is not required. 	4.6.6
	<ul style="list-style-type: none"> Quantification of impacts on groundwater dependent ecosystems (GDEs). 	4.6.4.5
	<ul style="list-style-type: none"> Details on protective measures to minimise any impacts on groundwater dependent ecosystems. 	4.6.4.5
	<ul style="list-style-type: none"> Details of proposed methods of the disposal of waste water and approval from the relevant authority. 	2.9.2, 2.13.2.6
	<ul style="list-style-type: none"> An assessment of the potential for saline intrusion of the groundwater and measures to prevent such intrusion into the groundwater aquifer. 	4.6.4.3.6, 4.6.4.6, Part 5 of the SCSC (Section 5.6)
	<ul style="list-style-type: none"> Details of the results of any models or predictive tools used to predict groundwater drawdown, inflows to the site and impacts on affected water sources. 	N/A
	<p>Where potential impacts are identified the assessment will need to identify limits to the level of impact and contingency measures that would remediate, reduce or manage potential impacts to the existing groundwater resource and any dependent groundwater environment or water users, including information on:</p> <ul style="list-style-type: none"> Details of any proposed monitoring programs, including water levels and quality data. 	4.6.6
	<ul style="list-style-type: none"> Reporting procedures for any monitoring program including mechanism for transfer of information. 	4.6.6
	<ul style="list-style-type: none"> An assessment of any groundwater source/aquifer that may be sterilised as a consequence of the proposal. 	N/A
	<ul style="list-style-type: none"> Identification of any nominal thresholds as to the level of impact beyond which remedial measures or contingency plans would be initiated (this may entail water level triggers or a beneficial use category). 	4.6.6
	<ul style="list-style-type: none"> Description of the remedial measures or contingency plans proposed. 	4.6.6
	<ul style="list-style-type: none"> Any funding assurances covering the anticipated post development maintenance cost, for example on-going groundwater monitoring for the nominated period. 	Not relevant for EIS
	<ul style="list-style-type: none"> Any other assurances to account for the post-closure impacts such as retiring held water licences or ongoing pumping return proposals to minimise base flow losses. 	Not relevant for EIS

**Table A3.3 (Cont'd)
 Coverage of Environmental Issues**

Government Agency	Paraphrased Requirement	Relevant EIS Section(s)
GROUNDWATER (Cont'd)		
NSW Office of Water (27/04/12) (Cont'd)	The assessment is required to identify any impacts on Groundwater Dependent Ecosystems.	4.6.4.5
	1. Existing and proposed water licensing requirements in accordance with the Water Act 1912 and Water Management Act 2000 (whichever is relevant). This is to demonstrate that existing licences (include licence numbers) and licensed uses are appropriate, and to identify where additional licences are proposed. The proponent will be required to ensure they hold adequate licensed entitlement commensurate with the anticipated volume of groundwater take prior to this take occurring. Groundwater take includes the volume of water intercepted by the proposed activities both via the mine pit and any extraction bores, in addition to any ongoing take induced by evaporative loss when the pit begins to fill. The annual requirements need to be regularly reviewed through updates of modelling and reviews of metering data.	2.8.2 and Appendices 7 to 9
	2. Adequate mitigating and monitoring requirements to address surface water and groundwater impacts.	4.5.4, 4.6.4, 4.6.6
BIODIVERSITY		
OEH (12/04/12)	Biodiversity impacts can be assessed using either the BioBanking Assessment Methodology (scenario 1) or a detailed biodiversity assessment (scenario 2). The BioBanking Assessment Methodology can be used either to obtain a BioBanking statement, or to assess impacts of a proposal and to determine required offsets without obtaining a statement. In the latter instances, if the required credits are not available for offsetting, appropriate alternative options may be developed in consultation with OEH officers and in accordance with the 'NSW OEH interim policy on assessing and offsetting biodiversity impacts of Part 3A, State significant development (SSD) and State significant infrastructure (SSI) projects.	Scenario 2 used
	Scenario 2 Where a proposal is assessed outside the BioBanking Assessment Methodology the EIS should include. 1. a detailed biodiversity assessment, including assessment of impacts on threatened biodiversity, native vegetation and habitat. This assessment should address the matters included in the following sections.	4.7, 4.8
	2. a field survey of the site should be conducted and documented in accordance with relevant guidelines, including: • the Threatened Species Survey and Assessment Guidelines: Field Survey Methods for Fauna -Amphibians (DECCW, 2009); • Threatened Biodiversity Survey and Assessment: Guidelines for Developments and Activities - Working Draft (DEC, 2004); and • Threatened species survey and assessment guideline information on www.environment.nsw.gov.au/threatenedspecies/surveyassessmentguidelines.htm .	4.7.1, 4.7.3.2, 4.8.3, Part 6 of the SCSC

Table A3.3 (Cont'd)
Coverage of Environmental Issues

Government Agency	Paraphrased Requirement	Relevant EIS Section(s)
BIODIVERSITY (Cont'd)		
OEH (12/04/12) (Cont'd)	<ul style="list-style-type: none"> Commonwealth survey requirements (birds, bats, reptiles, frogs, fish and mammals): http://www.environment.gov.au/epbc/publications/guidelines.html. These are relevant when species or communities listed under the <i>Environment Protection and Biodiversity Conservation Act</i> are present. 	4.7.3 and Part 6 of the SCSC, 4.8.3 and Part 7 of the SCSC
	It is preferable for proponents to use the Interim Veg Mapping Standard data form to collect the vegetation plot data for the project site, and any offset site associated with the project.	Noted
	If a proposed survey methodology is likely to vary significantly from the above methods, the proponent should discuss the proposed methodology with the OEH prior to undertaking the EIS, to determine whether the OEH considers that it is appropriate.	Noted
	Determining the list of potential threatened species for the site must be done in accordance with the Threatened Biodiversity Survey and Assessment: Guidelines for Developments and Activities - Working Draft (DEC, 2004) and the Guidelines for Threatened Species Assessment (Department of Planning, July 2005). The OEH Threatened Species website and the Atlas of NSW Wildlife database must be the primary information sources for the list of threatened species present. The BioBanking Threatened Species Database, the Vegetation Types databases and other data sources (e.g. PlantNET, Online Zoological Collections of Australian Museums previous or nearby surveys etc.) may also be used to compile the list.	Part 6 of the SCSC (Appendices 2 to 5) and Part 7 of the SCSC
	<ol style="list-style-type: none"> The Pink-tailed Worm-lizard is known from the impact area and this area is a very significant site for the species. For this species a detailed survey is required that compares the quality and area of habitat lost with that in areas surrounding the area to be disturbed. Habitat quality should be based on a quantitative assessment of search effort versus individuals/skins sighted (taking care to undertake surveys at suitable times of day and times of year and control for this variable when comparing different areas). The suitability of habitat should be quantified from an assessment of soil type, prey populations (primarily ants associated with galleries under rocks) and density of suitable shelter (primarily lightly-embedded surface rocks but also woody debris). Cover of vegetation is also a factor with dense cover affecting the sunlight that reaches the ground which will influence ant populations as well as the temperature of rocks used as shelter (important for reptiles). It is expected that a "maintain or improve" outcome for the species result from the development. Hence management of areas of habitat outside the disturbance area will need to be considered. Prior to clearing of habitat, surface rocks and any individuals found in the development area should be relocated (as part of pre-disturbance surveys) to an area adjoining a location where the worm-lizard occurs to increase the area of habitat. 	4.7.5.2.2, 4.7.5.4.2, Part 6 of the SCSC (Appendix 13)

Table A3.3 (Cont'd)
Coverage of Environmental Issues

Government Agency	Paraphrased Requirement	Relevant EIS Section(s)
BIODIVERSITY (Cont'd)		
OEH (12/04/12) (Cont'd)	SPECIES SURVEY REQUIREMENTS	
	Pink-tailed Worm-lizard Surveys of the subject site and study area shall be undertaken for this species. These shall involve rock rolling and searching under logs and debris at a suitable intensity to provide appropriate survey coverage. Surveys shall be undertaken between mid-August and the end of October preferably after rain. Daily temperatures shall not exceed 250C during the survey period. Rocks, logs and debris shall be replaced carefully to sustain habitat integrity. Surveys of the locality for habitat of the species shall be undertaken. These shall involve determining the extent of potentially suitable habitat from aerial photographs or other means, and ground truthing selected sites to validate habitat suitability, condition and extent. The sites sampled shall be used to provide context to the habitat affected by the action proposed. Habitat surveys can be undertaken at any time of the year under varied seasonal conditions.	4.7.3.2.4, Part 6 of the SCSC (Appendix 13)
	1. The EIS should contain the following information as a minimum: a) The requirements set out in the Guidelines for Threatened Species Assessment (Department of Planning, July 2005);	2.17.8.2, Part 6 of the SCSC (Section 4, Table 5)
	b) Description and geo-referenced mapping of study area (and associated spatial data files), e.g. overlays on topographic maps, satellite images and /or aerial photos, including details of map datum, projection and zone, all survey locations, vegetation communities (including classification and methodology used to classify), key habitat features and reported locations of threatened species, populations and ecological communities present in the subject site and study area. Separate spatial files (.shp format) to be provided to the OEH should include, at a minimum, shapefiles of the project site, impact footprint, vegetation mapping and classification for both the impact and any	4.7.4, Part 6 of the SCSC (Figures 13 to 20)
	c) Description of survey methodologies used, including timing, location and weather conditions;	4.7.3, 4.8.3
	d) Detailed description of vegetation communities (including classification and methodology used to classify) and including all plot data. The vegetation classification used needs to be matched with Biometric and Endangered Ecological Community classifications. The condition of vegetation needs to be documented included areas of derived grassland. Plot data should be supplied to the OEH in electronic format (e.g. MS-Excel) and organised by vegetation community;	4.7.4.1
	e) Details, including qualifications and experience of all staff undertaking the surveys, mapping and assessment of impacts as part of the EIA;	Part 7 of the SCSC (Section 1.5, Appendix 16)
	f) Identification of national and state listed threatened biota known or likely to occur in the study area and their conservation status;	4.7.3.1, 4.8.3.2

Table A3.3 (Cont'd)
Coverage of Environmental Issues

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Government Agency	Paraphrased Requirement	Relevant EIS Section(s)
BIODIVERSITY (Cont'd)		
OEH (12/04/12) (Cont'd)	g) Description of the likely impacts of the proposal on biodiversity and wildlife corridors, including direct and indirect and construction and operation impacts. Wherever possible, quantify these impacts such as the amount of each vegetation community or species habitat to be cleared or impacted, or any fragmentation	2.17.8.3, 4.7.6.4, 4.8.6
	h) Identification of the avoidance, mitigation and management measures that will be put in place as part of the proposal to avoid or minimise impacts, including details about alternative options considered and how long term management arrangements will be guaranteed;	4.7.5, 4.8.5
	i) Description of the residual impacts of the proposal. If the proposal cannot adequately avoid or mitigate impacts on biodiversity, then a biodiversity offset package is expected (see the requirements for this below); and	4.7.6, 4.8.6
	j) Provision of specific Statement of Commitments relating to biodiversity.	Section 5 (Commitments 9.1 to 9.27 and 10.1 to 10.10)
	1. An assessment of the significance of direct and indirect impacts of the proposal must be undertaken for threatened biodiversity known or considered likely to occur in the study area based on the presence of suitable habitat. This assessment must take into account: a) the factors identified in s.5A of the EP&A Act; and b) the guidance provided by The Threatened Species Assessment Guideline – The Assessment of Significance (DECCW, 2007)	4.7.6.7, Part 6 of the SCSC (Appendix 10)
	2. Where an offsets package is proposed by a proponent for impacts to biodiversity (and a BioBanking Statement has not been sought) this package should: a) Meet either the OEH's Principles for the use of biodiversity offsets in NSW or the OEH Interim policy on assessing and offsetting biodiversity impacts of part 3A developments.	2.17.8.2, 4.7.6.2.2
	b) Take account of landscape design principles such patch size and building onto and connecting existing remnants.	Noted
	c) Identify the conservation mechanisms to be used to ensure the long term protection and management of the offset sites; and	2.17.8.5
	d) Include an appropriate Management Plan (such as vegetation or habitat) that has been developed as a key amelioration measure to ensure any proposed compensatory offsets, retained habitat enhancement features within the development footprint and/or impact mitigation measures (including proposed rehabilitation and/or monitoring programs) are appropriately managed and funded.	2.17.8.5, 4.7.5.4.2

Table A3.3 (Cont'd)
Coverage of Environmental Issues

Government Agency	Paraphrased Requirement	Relevant EIS Section(s)
BIODIVERSITY (Cont'd)		
OEH (12/04/12) (Cont'd)	3. Where appropriate, likely impacts (both direct and indirect) on any adjoining and/or nearby OEH estate reserved under the National Parks and Wildlife Act 1974 or any marine and estuarine protected areas under the Fisheries Management Act 1994 or the Marine Parks Act 1997 should be considered.	N/A
	4. With regard to the Commonwealth <i>Environment Protection and Biodiversity Conservation Act 1999</i> , the assessment should identify any relevant Matters of National Environmental Significance and whether the proposal has been referred to the Commonwealth or already determined to be a controlled action.	4.7.1, 4.7.6.2.3
NSW Resources and Energy (20/04/12)	The flora, fauna and ecological attributes of the disturbed area should be recorded and placed in a regional context.	4.7.2, 4.8.2
Catchment Management Authority (03/05/12)	The EIS should include identification of any Endangered Ecological Communities (EEC) vegetation and outline a <i>Biodiversity Offset Strategy</i> to compensate for the destruction of any mature trees with habitat values such as hollows.	2.17.8.5, 4.7.4, 4.7.5
	The assessment will require identification of any threatened species in the proposed project area and a clear outline of how the risks to native fauna will be mitigated during site preparation and operation.	4.7.4, 4.7.7
NSW Office of Water (27/04/12)	The EIS is required to identify any impacts on GDEs.	4.6.4.5
AQUATIC ECOLOGY		
NSW Primary Industries (14/5/12)	The EIS should specifically address the impacts on the aquatic ecology, waterway crossings, off-site impacts, threatened species and proposed offsets and compensatory habitats as proposed below:	
	<ul style="list-style-type: none"> A recent aerial photograph (preferably colour) of the locality (or reproduction of such a photograph) should be provided. 	Figure 4.37
	<ul style="list-style-type: none"> Area which may be affected either directly or indirectly by the development or activity should be identified and shown on an appropriately scaled map (and aerial photographs). 	4.8, Part 7 of the SCSC
	<ul style="list-style-type: none"> Waterways within the area of development are to be identified. 	4.1.2, 4.8.2
	<ul style="list-style-type: none"> A description and quantification of aquatic and riparian vegetation should be presented and mapped. This should include an assessment of the extent and condition of riparian vegetation and the extent and condition of freshwater aquatic vegetation and the presence of significant habitat features (e.g. gravel beds, snags, reed beds, etc.) 	4.8.4.4
	<ul style="list-style-type: none"> Quantification of the extent of aquatic and riparian habitat removal or modification which will result from the proposed development, 	4.8.5
	<ul style="list-style-type: none"> Details of the location of all waterways crossings and construction designs, such as bridges, culverts, access tracks, or water pipelines. 	2.2

Table A3.3 (Cont'd)
Coverage of Environmental Issues

Government Agency	Paraphrased Requirement	Relevant EIS Section(s)
AQUATIC ECOLOGY (Cont'd)		
NSW Primary Industries (14/5/12) (Cont'd)	<ul style="list-style-type: none"> Aspects of the management of the proposal, both during construction and after completion, which relate to impact minimisation e.g. Monitoring of the water quality in receiving waters such as Wambangalang Creek. 	4.8.5, 4.8.7
	<p>Waterway Crossings</p> <p>The design and construction of bridges, culverts, access tracks and pipeline crossings across all waterways should be undertaken in accordance with the Department's Policy and Guidelines for Fish Friendly Waterway Crossings (2004) and Why Do Fish Need to Cross the Road? The waterway crossings need to ensure that the works are undertaken with minimal impact on the aquatic environment within the immediate vicinity of the proposed works. Fisheries NSW need to be consulted with regards to any temporary measures that will result in blocking fish passage. This includes coffer dams, temporary access tracks or redirecting flows whilst works are conducted.</p>	4.8.5.3
	<p>Off-site impacts – Macquarie Pipeline</p> <p>The construction of a pipeline from the Macquarie River is likely to potentially have significant impacts on the aquatic ecology on the Macquarie River. The department has been collaboratively working with the irrigation industry for several years to reduce the impacts of irrigation infrastructure removing and damaging juvenile/adult fish from river systems through the use of extraction screen technology on irrigation pump inlet valves.</p> <p>The EIS should address the use of pump extraction screen technology for water extraction from the Macquarie River to minimise the impacts of fish mortality.</p> <p>These potential impacts (both direct and indirect) include:</p> <ul style="list-style-type: none"> The entrainment and loss of eggs, larvae, and juvenile fish (including threatened species) extracted via the pump and pipeline system. Mechanical damage and fish mortality from pumps. Impacts on refuge pools, key fish habitats and threatened species habitat due to extraction during low flows. Alterations to the existing hydrology within the Macquarie River as a result of extraction. 	2.2.2, 4.8.5.7
	<p>Riparian Buffer Zones</p> <p>Fisheries NSW policy advocates the use of terrestrial buffer zones in accordance with the Policy and Guidelines Aquatic Habitat Management and Fish Conservation 1999 available on the Department's website at http://www.fisheries.nsw.gov.au/pub/aquahab.htm which states 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, with their natural features and vegetation preserved. Such buffer zones may need to be fenced or marked by signs. The width of these buffer zones may need to be increased to 100 metres or more where they are adjacent to ecologically sensitive areas."</p>	Provided

Table A3.3 (Cont'd)
Coverage of Environmental Issues

Government Agency	Paraphrased Requirement	Relevant EIS Section(s)
AQUATIC ECOLOGY (Cont'd)		
NSW Primary Industries (14/5/12) (Cont'd)	Threatened Species, Populations And Ecological Communities–Fisheries Management Act 1994	
	The EIS should include a threatened aquatic species assessment (in accordance with part 7A Fisheries Management Act 1994) 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> . Assessment of the impacts should include initial 'Seven-Part Test's. Species, populations and ecological communities likely to be present within this catchment include:	
	<ul style="list-style-type: none"> The olive perchlet <i>Ambassis agassizii</i> listed under Schedule 4, (Endangered populations) of the FM Act. 	4.8.6.3
	<ul style="list-style-type: none"> The Murray Darling Basin population of eel tail catfish tandanus tandanus is listed under Schedule 4 of the FM Act. 	4.8.6.3
	<ul style="list-style-type: none"> The purple-spotted gudgeon <i>Mogurnda adspersa</i> is listed under Schedule 4, (Endangered species) of the FM Act. 	4.8.6.3
	<ul style="list-style-type: none"> The Trout cod <i>Maccullochella macquariensis</i> listed under Schedule 4 (Endangered species) of the FM Act. 	4.8.6.3
	<ul style="list-style-type: none"> The silver perch <i>Bidyanus bidyanus</i> listed under Schedule 5 (Vulnerable species) of the FM Act. 	4.8.6.3
<ul style="list-style-type: none"> The Murray cod <i>Maccullochella peellii peellii</i> is nationally listed as vulnerable under the EPBC Act. 	4.8.6.3	
Compensatory Habitats And Offsets		
The EIS must provide details of compensatory habitats if the environmental assessment indicates there may be a loss of aquatic or riparian habitats, and may need to be included in site rehabilitation plans or compensatory aquatic habitat offsets elsewhere in the catchment on other aquatic rehabilitation projects. Fisheries NSW has guidelines for compensatory habitat outlined in the document Policy and Guidelines Aquatic Habitat Management and Fish Conservation.		No loss of aquatic habitat
NOISE AND VIBRATION		
EPA (26/4/12)	<p>Potential impacts on the noise amenity of the surrounding area should be assessed in accordance with the NSW Government's Industrial Noise Policy (INP) (and other relevant guidelines mentioned below) accounting for all noise sources associated with the project.</p> <p>The noise assessment must include (but not be limited to) an assessment of the C-Weighted noise (low frequency) as well as A- Weighted noise.</p> <p>The noise assessment should be based on adequate monitoring of pre-mine background noise which represents seasonal variations and the influence of weather factors such as temperature inversions and other unusual features which influence noise.</p>	4.2.2, 4.2.4.2, 4.2.4.3
General		
1. Construction noise associated with the proposed development should be assessed using the Interim Construction Noise Guideline (DECC, 2009).		4.2.7.1

Table A3.3 (Cont'd)
Coverage of Environmental Issues

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Government Agency	Paraphrased Requirement	Relevant EIS Section(s)
NOISE AND VIBRATION (Cont'd)		
EPA (26/4/12) (Cont'd)	2. Vibration from all activities (including construction and operation) to be undertaken on the premises should be assessed using the guidelines contained in the Assessing Vibration: a technical guideline (DEC, 2006). http://www.environment.nsw.gov.au/noise/vibrationguide.htm	4.2.7.6, 4.2.7.7
	3. Blast impacts should be demonstrated to be capable of complying with the guidelines contained in Australian and New Zealand Environment Council Technical basis for guidelines to minimise annoyance due to blasting overpressure and ground vibration (ANZEC, 1990).	4.2.7.7
	Industry 4. Operational noise from all industrial activities (including private haul roads and private railway lines) to be undertaken on the premises should be assessed using the guidelines contained in the NSW Industrial Noise Policy (EPA, 2000) and Industrial Noise Policy Application Notes.	4.2.7.1 to 4.2.7.4
	Road 5. Noise on public roads from increased road traffic generated by land use developments should be assessed using the guidelines contained in the Environmental Criteria for Road Traffic Noise (EPA, 1999).	4.2.7.5
	6. Noise from new or upgraded public roads should be assessed using the Environmental Criteria for Road Traffic Noise (EPA, 1999).	4.2.7.5
	Railway 7. Noise from new or upgraded railways (other than railways on private premises) should be assessed using the Interim Guideline for the Assessment of Noise from Rail Infrastructure Projects (DECC, 2007).	4.2.7.6
	8. Noise from increased rail traffic on the NSW Rail Network resulting from rail traffic generating development (e.g. an extractive industry) should be assessed using the environmental assessment requirements for rail traffic-generating developments available at	4.2.7.6
	Dubbo City Council (01/05/12)	The EIS must include: • detailed analysis of any impact of rail noise on future residential development in this area (Southeast Residential Development) of the City.
Country Regional Network c/o John Holland Rail (29/08/12)	Assess the potential impact of railway operations on current noise levels including: • reagent sourcing and associated train movements; and • the Margaret Crescent area where properties adjacent to the railway line have been constructed since the railway was last operational.	4.2.7.6 4.2.7.6
	Consider the use of concrete sleepers supporting correctly profiled rail through absorbent rail pads and the provision of a resilient track base to reduce the potential impact of noise and vibration.	Noted

**Table A3.3 (Cont'd)
 Coverage of Environmental Issues**

Government Agency	Paraphrased Requirement	Relevant EIS Section(s)
NOISE AND VIBRATION (Cont'd)		
Country Regional Network c/o John Holland Rail (29/08/12)	Consider using a lineside vegetation strategy to provide a barrier to noise created by the movement of trains and boundary security needs.	Noted
LAND USE		
Dubbo City Council (01/05/12)	The EIS must address the provisions of the Dubbo Urban Areas Development Strategy, any relative loss of productive farming land and the impact of the proposal on adjoining or adjacent productive lands within the locality.	4.15, Appendix 9
CROWN LANDS		
NSW DPI (Catchments and Lands) (26/04/12)	Crown Lands have been identified within or adjoining the proposed development: It is requested that the proponent consult with DPI Crown Lands, Dubbo Office, to accurately identify the affected Crown Parcels and determine the relevant actions required.	4.1.4.1
AIR QUALITY		
EPA (26/04/12)	The goal should be to maintain existing rural air quality and protect sensitive receptors, both on and off site, from adverse impacts of dust and odour in particular and other relevant air pollutants. Background ambient air levels should be identified to inform the assessment.	4.3.3
	The EIS should include a detailed Air Quality Impact Assessment (AQIA). The AQIA should: 1. Assess the risk associated with potential discharges of fugitive and point source emissions for all stages of the proposal. Assessment of risk relates to environmental harm, risk to human health and amenity.	4.3.7, Part 2 of the SCSC (Section 10)
	2. Justify the level of assessment undertaken on the basis of risk factors, including but not limited to: a. proposal location; b. characteristics of the receiving environment; and c. type and quantity of pollutants emitted.	4.3.2, 4.3.3
	3. Describe the receiving environment in detail. The proposal must be contextualised within the receiving environment (local, regional and inter-regional as appropriate). The description must include but need not be limited to: a) meteorology and climate; b) topography; c) surrounding land-use; receptors; and d) ambient air quality.	4.1.2, 4.1.3, 4.1.5, 4.3.3, Part 2 of the SCSC

Table A3.3 (Cont'd)
Coverage of Environmental Issues

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Government Agency	Paraphrased Requirement	Relevant EIS Section(s)
AIR QUALITY (Cont'd)		
EPA (26/04/12) (Cont'd)	4. Include a detailed description of the proposal. All processes that could result in air emissions must be identified and described. Sufficient detail to accurately communicate the characteristics and quantity of all emissions must be provided.	Section 2, 4.3.2.1
	5. Include a consideration of 'worst case' emission scenarios and impacts at proposed emission limits.	4.3.5
	6. Account for cumulative impacts associated with existing emission sources as well as any currently approved developments linked to the receiving environment.	4.3.5, 4.3.7
	7. Include air dispersion modelling where there is a risk of adverse air quality impacts, or where there is sufficient uncertainty to warrant a rigorous numerical impact assessment.	4.3.5, Part 2 of the SCSC (Section 9)
	8. Demonstrate the proposal's ability to comply with the relevant regulatory framework, specifically the Protection of the Environment Operations (POEO) Act (1997) and the POEO (Clean Air) Regulation (2002).	4.3.7, Part 2 of the SCSC (Section 13)
	9. Provide an assessment of the project in terms of the priorities and targets adopted under the NSW State Plan 2010 and its implementation plan Action for Air; and	Part 2 of the SCSC
	10. Detail emission control techniques/practices that will be employed by the proposal.	4.3.6
Country Regional Network c/o John Holland Rail (29/08/12)	Assess potential impact of locomotive exhausts from train and diesel locomotives used for haulage.	4.3.7.10
TRAFFIC AND TRANSPORT		
NSW Roads and Maritime Services (24/04/12)	<ul style="list-style-type: none"> A traffic study is to be undertaken which includes, but is not limited to origin-destination of vehicles, including staff, contractors, construction, and maintenance personnel during both the construction and operation phases of the development. The study should include vehicle types, volumes and times of peak travel and include existing, proposed, and projected figures for the life of the project. The traffic study should also address internal traffic movement and parking facilities. The traffic study is to address impacts on key intersections with the Newell Highway including Obley Road. 	4.12, Part 11 of the SCSC (Section 3)
	<ul style="list-style-type: none"> 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. Concept plans for those improvements should be included in the study. 	4.12.4, Part 11 of the SCSC (Appendix D)



**Table A3.3 (Cont'd)
 Coverage of Environmental Issues**

Government Agency	Paraphrased Requirement	Relevant EIS Section(s)
TRAFFIC AND TRANSPORT (Cont'd)		
NSW Roads and Maritime Services (24/04/12) (Cont'd)	<ul style="list-style-type: none"> The traffic impact study and proposed intersection treatments are to include the cumulative impacts of any existing approved developments in the vicinity of the site. 	Part 11 of the SCSC
	<ul style="list-style-type: none"> Details of all railway level crossings that will be reinstated or affected by an increase in traffic associated with the development. 	4.12.5.7
	<ul style="list-style-type: none"> Details of any proposed crossings of classified roads for water, gas, or electricity lines. The relevant State classified roads in the Dubbo area are the Newell, Mitchell and Golden Highways. 	2.2
	<ul style="list-style-type: none"> The layout of the internal road network, parking facilities and infrastructure within the project boundary 	2.2, 2.12, 2.13
	<ul style="list-style-type: none"> Any proposed road facilities and intersection treatments are to be in accordance with the Austroads Guide 10 Road Design and RMS supplements. 	2.2.5, 2.2.6, Part 11 of the SCSC (Appendix D)
GREENHOUSE GASES		
EPA (26/04/12)	The EA should include a comprehensive assessment of, and report on, the project's predicted greenhouse gas emissions (tCO ₂ e). Emissions should be reported broken down by:	
	<ul style="list-style-type: none"> direct emissions (scope 1 as defined by the Greenhouse Gas Protocol – see reference below); 	4.3.7.10
	<ul style="list-style-type: none"> scope 2 and 3 indirect emissions (all other emissions that are a consequence of the mine's activities, including annual emissions for each year of the project; and 	4.3.7.10
	<ul style="list-style-type: none"> before and after implementation of the project, including annual emissions for each year of the project (construction, operation and decommissioning). 	4.3.7.10, Part 2 of the SCSC (Section 12)
	If relevant, greenhouse emissions intensity (per unit of production) should be compared before and after the project. Emissions intensity should be compared with best practice if possible.	N/A
	Greenhouse emissions should be estimated using an appropriate methodology, in accordance with NSW, Australian and International Guidelines.	4.3.5.6, Part 2 of the SCSC (Section 12)
	The EIS should identify which emissions would be covered by the Federal Government's proposed Carbon Pollution Reduction Scheme (CPRS) once commenced.	4.3.7.10, Part 2 of the SCSC (Section 12)
	The EIS should also evaluate and report on the feasibility of measures to reduce greenhouse gas emissions associated with the project, concentrating on emissions not covered by the CPRS.	4.3.6

Table A3.3 (Cont'd)
Coverage of Environmental Issues

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Government Agency	Paraphrased Requirement	Relevant EIS Section(s)
REHABILITATION AND FINAL LAND USE		
NSW Resources and Energy (20/04/12)	The EIS must show the proposed location and indicative geometry of any final void in the rehabilitated landscape. The proposal should be justified in terms of stability, safety and any long term environmental impacts, including any risks that may be posed to public or private property.	2.17.3.3, 2.17.4
	The EIS must describe the strategic rehabilitation objectives for the project and how these comply with relevant Government legislation or policies, research outcomes or industry leading practice. Describe the potential for integrating the rehabilitation strategy with any other offset (or conservation) strategies in the region.	2.17.2
	The EIS must describe proposed final land uses for each disturbance domain (infrastructure areas, out of pit dumps, final void etc.) and provide a conceptual plan depicting these uses and final landforms.	2.17.5
	For each disturbance domain, identify relevant performance measures (e.g. open woodland revegetation) and indicative criteria (e.g. stems per hectare after 5 years).	2.17.3.3
	Outline the proposed rehabilitation methods and techniques and proposed monitoring and research programs.	2.17.6, 2.17.7
	Describe any post-rehabilitation maintenance requirements for the project site and how these will be managed.	2.17.7
Central West Catchment Management Authority (03/05/12)	The EIS must include a detailed outline of how the site will be rehabilitated at the end of the project's operational phase. This plan should have the objective of rehabilitating the site to a level that demonstrates an increase in the environmental values of sites when compared to the pre-operational site.	
	This rehabilitation strategy should strive to include the employment of local people throughout implementation.	2.17
	The strategy also needs to outline ongoing environmental monitoring of the site, post rehabilitation to ensure minimal potential for degradation in the future.	2.17.7
INFRASTRUCTURE		
Dubbo City Council (01/05/12)	Council is overwhelmingly supportive of the intention by Australian Zirconia Ltd (AZL) to reopen the Dubbo-Molong Railway Line between Dubbo and Toongi for the transport of the estimated 400,000 tonnes per annum of reagents and product. However, re-opening of the line should be conditioned to include the following: The EA should show:	
	<ul style="list-style-type: none"> • Vehicular level crossings at Wingewarra Street, Cobra Street (Mitchell Highway), Boundary Road and Macquarie Street shall be controlled by flashing lights, bells and boom gates. 	2.2.4.4
	<ul style="list-style-type: none"> • Vehicular level crossings on the Obley Road at Cumboogle and Hyandra Creek shall be controlled by flashing lights and bells (as a minimum). The road pavement at each crossing is to be reconstructed to a suitable horizontal and vertical alignment as part of any reopening of same. 	2.2.4.4
	<ul style="list-style-type: none"> • A suitable level crossing shall be provided at the Dundullimal Historic Homestead tourist attraction (private crossing) just outside of Dubbo on the southern side of the Macquarie River bridge crossing. 	2.2.4.4



Table A3.3 (Cont'd)
Coverage of Environmental Issues

Government Agency	Paraphrased Requirement	Relevant EIS Section(s)
INFRASTRUCTURE (Cont'd)		
Dubbo City Council (01/05/12) (Cont'd)	<ul style="list-style-type: none"> A suitable Stop Sign controlled crossing shall be provided at the Bellevue Road (public road) level crossing. 	2.2.4.4
	<ul style="list-style-type: none"> Whilst the majority of former level crossings can generally be reinstated at a similar vertical elevation to their original, the rail crossing at Macquarie Street in Dubbo will now need to match current, developed road levels approximately one metre lower than existed in 1980 when nearby lands were still rural in nature. 	2.2.4.4
	<ul style="list-style-type: none"> Council has two trial longitudinal sections available demonstrating how the track can be regraded on both sides of the level crossing and will expect the track to be reconstructed accordingly. Option #1 has maximum track grades of 1%, no vertical curves and requires approximately 1400 metres of track to be lowered; Option #2 has some grades in excess of 1%, vertical curves and requires 1100 metres of track to be lowered. 	Noted
	<ul style="list-style-type: none"> The Applicant and the Proponent will be expected to consult effectively with residents in the vicinity of the railway line who have not experienced a train using the track for nearly 30 years. This will be most evident in the Margaret Crescent area of South Dubbo. 	3.2.1
	<ul style="list-style-type: none"> Fencing of the railway permanently will be an emotive issue for some community members, especially in the Margaret Crescent area where defacto walking tracks have come into existence through regular usage by local residents. The Applicant, Proponent and the Rail Infrastructure Corporation will be expected to consult effectively with the local community on this issue. 	3.2.1
	<ul style="list-style-type: none"> Council is aware that major signalling upgrades with an estimated cost in the millions of dollars will be required in and around the Railway Triangle in East Dubbo. Council expects these deficiencies to be addressed and overcome as part of the rail line recommissioning process. 	2.2.4.5
	<ul style="list-style-type: none"> Unacceptable delays are already experienced by motorists in Dubbo because of the non-automation of the existing system where trains transit from west to north via the Triangle, and this will be complicated even more by trains having to transit from north to south and vice versa through the triangle to access Toongi. 	Noted
	<ul style="list-style-type: none"> The level crossing at Cobra Street is less than one train length south of the Triangle and if trains are forced to stop there by inadequate signalling equipment then the Mitchell Highway will be cut on a regular basis, which is unacceptable to Council and presumably Roads and Maritime Services. 	Noted

Table A3.3 (Cont'd)
Coverage of Environmental Issues

Government Agency	Paraphrased Requirement	Relevant EIS Section(s)
INFRASTRUCTURE (Cont'd)		
Dubbo City Council (01/05/12) (Cont'd)	Council is overwhelmingly supportive of the intention of the Applicant and the Proponent to upgrade the Obley Road between the Newell Highway and Toongi, and the Toongi Road between the Obley Road and the processing site, to B-double standard for the transport of the estimated 150,000 tonnes per annum of reagents, general freight and employees/visitors.	
	In this regard the EIS should provide details outlining: ·	
	<ul style="list-style-type: none"> • New bridges or major culverts to be constructed on the Obley Road at Hyandra and Twelve Mile Creeks and on the Toongi Road at Wambangalang Creek. 	2.2.5
	<ul style="list-style-type: none"> • Realignment of the dangerous curve in the Obley Road between Camp Road and Morris Park Speedway. 	2.2.5.2
	<ul style="list-style-type: none"> • Reconstruction of all pavement sections more than 20 years old (i.e. last built or reconstructed prior to 1992), or where the current alignment does not conform to a 10 metre seal on a 12 metre gravel formation. 	2.2.5
	<ul style="list-style-type: none"> • Reconstruction of the Toongi Road to a suitable, new standard. 	2.2.5.3
	<ul style="list-style-type: none"> • Road pavements shall be constructed to give a 60 year design life (Council's current standard) under the traffic and axle loads expected. 	2.2.5
	<ol style="list-style-type: none"> 1. Dubbo City Council shall be consulted at all stages of the investigation and detailed design process for both the railway line recommissioning and the upgrading of the Obley and Toongi Roads. Council will be required to approve all road and bridge construction plans prior to construction. 	3.2.2
	<ol style="list-style-type: none"> 2. Traffic issues will arise with the transport of large loads through the Dubbo urban area during the mine construction phase, especially at river crossings and on highway entries. 	
	Detailed and consultative planning shall be undertaken prior to any such transports occurring.	2.12.4, 3.2.2, 4.12.5
	<ol style="list-style-type: none"> 3. Council would expect reliable mobile phone coverage to be extended to the Toongi locality as part of the development. 	Noted
	The EIS should include a detailed environmental assessment for all infrastructure proposed as part of the development should be included	Section 2
	Open Space and Recreation	
Council's Parks and Landcare Division have undertaken a detailed assessment of the proposal. Comments provided in relation to the proposal are provided attached to this correspondence.	Noted	
The Dubbo – Molong rail corridor has become an important link in the open space network in the urban area of Dubbo. The role of the Dubbo – Molong rail corridor is reflected in the Open Space Master Plan adopted by Council in 2009.		
Council requires on the western side of the rail line the minimum distance possible for safety from the rail track. This will allow the installation of a shared pathway between the road reserve and the fenced portion of the rail reserve. It is Council's preference for the main maintenance track for vehicles is located on the eastern side of the rail line in order that a minimum amount of the rail reserve is inaccessible.	2.2.4	

Table A3.3 (Cont'd)
Coverage of Environmental Issues

Government Agency	Paraphrased Requirement	Relevant EIS Section(s)
INFRASTRUCTURE (Cont'd)		
Dubbo City Council (01/05/12) (Cont'd)	Council requires provision of a pedestrian/ push bike crossing. This will allow integration of all pathways within the network and reduce the motivation by the public to damage a fence and access/ cross the railway at a number of informal points.	Noted
	There are two other crossings that exist for pedestrians and bikes. These will need to be formalised and could potentially be consolidated into one crossing utilising more of the rail corridor for north-south travel after crossing the actual line.	Noted
	Any fencing of the rail corridor as well as minimising the amount of space taken up to the west of the line should minimise the intrusiveness of the fence line.	2.2.4.2
	A preference would be for a 1.5 metre fence to be placed along the rail line on the western side that adjoins the above identified crossings. In relation to the colour of the fence, Council's preference would be for a black fence, which would minimise the visual intrusiveness of a new fence line.	2.2.4.2
	Pedestrian crossings would require lighting preferably of a LED low energy use variety.	2.2.4.4
	Council has a new pathway corridor that runs alongside the rail line from Macquarie Street to the Macquarie River. It is understood that the rail line may require substantial upgrading. Council cannot move the pathway easement and would like any works to be restricted to the current extent of the fenced rail corridor in this precinct.	Noted
	In the block between Cobra Street and Birch Avenue there are similar issues with trees and shared pathway crossings. The minimising of enclosure to the west of the rail line should continue from Margaret Crescent up to and including this block. This will minimise tree loss and will allow the installation of a shared pathway along the Chelmsford Avenue side of the railway corridor. The railway crossings will have to be fenced appropriately as other existing crossings are in the urban area. Apex Oval East Dubbo football complex is a major node in the Open Space network.	Noted
Country Regional Network c/o John Holland Rail (29/08/12)	It should be noted that Engineering and Operating Standards as well as Environmental, Safety and Interface requirements have changed significantly since the existing railway line was operational. All current standards and requirements must be incorporated in the reconstruction of the railway line with consideration of the proposed heavier rolling stock than has previously operated over this line.	2.2.4.2
	Funding considerations should include the appropriate future status of the line, and the entity responsible for the management of the infrastructure.	Noted
	Assess the potential impact of number and frequency of train movements and the likely hours of operation of the railway line on adjacent property owners and communities, along with level crossing users and the existing ARTC rail network through the Dubbo City area.	2.2.4, 4.12.5
	Assess the potential impact of reagent sourcing on the operating plan for the railway and also on railway operations in Dubbo City, which will in turn impact on level crossing usage and other environmental issues.	2.7, 2.12.3

Table A3.3 (Cont'd)
Coverage of Environmental Issues

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Government Agency	Paraphrased Requirement	Relevant EIS Section(s)
INFRASTRUCTURE (Cont'd)		
Country Regional Network c/o John Holland Rail (29/08/12) (Cont'd)	Consider the construction of a direct connection from the Orange line to join the Toongi line in the vicinity of Wingewarra Street should a limestone source be selected that is on the railway line towards Orange.	Noted
	Assess the potential impact on the railway, highway, level crossing, and the local community of loading limestone to rail wagons at Geurie.	2.7.4
	Ensure that rail traffic generated by the Toongi development is integrated with existing passenger, coal, grain and general freight services on appropriate railway lines.	2.12.3
	Consult with ARTC, JHR and Railcorp to develop a train operations plan that considers the potential impact to hours of operation on the Toongi railway line, as well as the resources required to perform the rail task.	3.2.2
	Ensure the reinstatement and requirements for the upgrading of level crossings should be determined through application of the Australian Level Crossing Assessment Model (ALCAM). The outcome of this process will identify the level of protection and equipment to be provided at each location. All 'passive' level crossings will be required to meet ASA1742.7.	2.2.4.4
	It is noted that significant subsidence has occurred around several level crossings and the provision of a suitable horizontal and vertical alignment of the roadway will also be a requirement. All work on the roadways should be completed in consultation with the appropriate highway authorities and Dubbo City Council to ensure that the appropriate road profiles are achieved.	3.2.2
	Consider the potential impact of the configuration of the railway network and the location of some level crossings in Dubbo City on the time when these level crossings may be closed to road traffic.	2.12.3
	Consider the need for fencing and trespass control on the section of the rail line that passes through the Dubbo suburbs.	2.2.4.2
	Consider the need for access roads and fire breaks along the length of the rail line for construction and operation of the line as well as effective incident response.	2.2.4.2
	Consider the introduction of a control, such as a permanent signal, that will enable the uninterrupted movement of a train approaching Dubbo from south of the Macquarie Street level crossing through to the ARTC network at Dubbo Yard or beyond Dubbo North Junction. Provision of this control and the mandatory adoption of this method of operation would address the following significant issues: <ul style="list-style-type: none"> • The risk of trains blocking Wingerra Street and Cobra Street level crossings whilst awaiting acceptance to proceed onto the ARTC network. 	2.2.4.5
	<ul style="list-style-type: none"> • The risk of noise, vibration and exhaust emissions from trains which may otherwise be required to stop and restart. 	4.2.7.6, 4.3.6.5
	<ul style="list-style-type: none"> • Minimised and predictable transit times through a sensitive populated area reducing exposure to vandalism and interference and the temptation to cross the railway just ahead of, or through the train. 	2.12.3
	<ul style="list-style-type: none"> • Reduced overall 'footprint' for railway operations through this area. 	2.12.3



Table A3.3 (Cont'd)
Coverage of Environmental Issues

Government Agency	Paraphrased Requirement	Relevant EIS Section(s)
INFRASTRUCTURE (Cont'd)		
Country Regional Network c/o John Holland Rail (29/08/12) (Cont'd)	Consider utilising a permanent signal as the control mentioned above such that it cannot be cleared until the train can be accepted onto the ARTC network. In addition an Interface Protocol would be developed for trains operating in the reverse direction based on existing Safeworking rules, which would ensure that trains cannot depart from the ARTC network until they have obtained an authority to proceed from the Network Control Officer responsible for the Dubbo to Toongi line.	2.2.4.5
	Consult with JHR on the potential construction of a gas pipeline between Purvis Lane, Dubbo and the mine site, using the existing rail easement.	2.2.3, 3.2.2
HERITAGE		
OEH (12/04/12)	The EIS should contain:	
	1. A description of the Aboriginal objects and declared Aboriginal places located within the area of the proposed development.	4.9.7
	2. A description of the sensitivity (in relation to cultural heritage) of different landforms present in the landscape affected by the project. A description of the cultural heritage values, including the significance of the Aboriginal objects and declared Aboriginal places, that exist across the whole area that will be affected by the proposed development, and the significance of these values for the Aboriginal people who have a cultural association with the land.	4.9.5, 4.9.6, 4.9.9
	3. A description of how the requirements for consultation with Aboriginal people as specified in clause 80C of the <i>National Parks and Wildlife Regulation 2009</i> have been met.	4.9.4
	4. The views of those Aboriginal people regarding the likely impact of the proposed development on their cultural heritage. If any submissions have been received as a part of the consultation requirements, then the report must include a copy of each submission and your response.	3.2.1.7, 4.9.7.3.3
	5. A description of the actual or likely harm posed to the Aboriginal objects or declared Aboriginal places from the proposed activity, with reference to the cultural heritage values identified.	4.9.7.3.3
	6. A description of any practical measures that may be taken to protect and conserve those Aboriginal objects or declared Aboriginal places.	4.9.8
	7. A description of any practical measures that may be taken to avoid or mitigate any actual or likely harm, alternatives to harm or, if this is not possible, to manage (minimise) harm.	4.9.8
8. Documentation of discussions with the Aboriginal stakeholders regarding commitments from the proponent related to social, economic and/or conservation gains to offset any loss of cultural heritage.	Part 8 of the SCSC (Appendix 1)	

Table A3.3 (Cont'd)
Coverage of Environmental Issues

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Government Agency	Paraphrased Requirement	Relevant EIS Section(s)
HERITAGE (Cont'd)		
OEH (12/04/12) (Cont'd)	<p>9. A specific Statement of Commitment that the proponent will complete an Aboriginal Site Impact Recording Form and submit it to the Aboriginal Heritage Information Management System (AHIMS) Registrar, for each AHIMS site that is harmed through the proposed development.</p>	Part 8 of the SCSC
	<p>In addressing these requirements, the proponent must refer to the following documents:</p> <ul style="list-style-type: none"> a) Draft Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation (Department of Planning, 2005). b) Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (DECCW, 2010). c) Code of Practice for the Archaeological Investigation of Aboriginal Objects in New South Wales (DECCW, 2010). 	4.9.3, 4.9.8.4, Part 8 of the SCSC
NSW Heritage Council (19/04/12)	<p>The EIS must include a heritage impact assessment that addresses the following issues:</p> <ul style="list-style-type: none"> • the heritage significance of the site and any impacts the development may have upon this significance should be assessed. This assessment should include natural areas and places of Aboriginal, historic or archaeological significance. It should also include a consideration of wider heritage impacts in the area surrounding the site. 	4.9.9, 4.10.6
	<ul style="list-style-type: none"> • The Heritage Council maintains the State Heritage Inventory which lists some items protected under the Heritage Act, 1977 (e.g. listed on the NSW State Heritage Register) and other statutory instruments. 	4.10.3.4
	<ul style="list-style-type: none"> • non-Aboriginal heritage items within the area affected by the proposal should be identified by field survey. This should include any buildings, works, relics (including relics underwater), gardens, landscapes, views, trees or places of non-Aboriginal heritage significance. A statement of significance and an assessment of the impact of the proposal on the heritage significance of these items should be undertaken. Any policies/measures to conserve their heritage significance should be identified. This assessment should be undertaken in accordance with the guidelines in the NSW Heritage Manual. 	4.10.4
	<ul style="list-style-type: none"> • The proposal should have regard to any impacts on places, items or relics of significance to Aboriginal people. Where it is likely that the project will impact on Aboriginal heritage, adequate community consultation should take place regarding the assessment of significance, likely impacts and management/mitigation measures. 	4.9.4, 4.9.9
	<ul style="list-style-type: none"> • The relics provisions in the Heritage Act require an excavation permit to be obtained from the Heritage Council, or an exception to be endorsed by the Heritage Council, prior to commencement of works if disturbance to a site with known or potential archaeological relics is proposed. If any unexpected archaeological relics are uncovered during the course of work excavation should cease and an excavation permit, or an exception notification endorsement, obtained. 	Noted

**Table A3.3 (Cont'd)
 Coverage of Environmental Issues**

Government Agency	Paraphrased Requirement	Relevant EIS Section(s)
HERITAGE (Cont'd)		
NSW Heritage Council (19/04/12) (Cont'd)	<ul style="list-style-type: none"> If approval is required under the Heritage Act due to the listing of an item or place on the State Heritage Register, or being subject to an Interim Heritage Order, the Heritage Council's approval must be sought prior to an approval being issued by the consent authority under the Environmental Planning and Assessment Act 1979 (except where application relates to Integrated Development OR SSI & SSD Major Projects under Part 4 or 5 of the EP&A Act, 1979). 	Not Applicable
Central West Catchment Management Authority (03/05/12)	The assessment must include the impacts on Aboriginal cultural heritage. information to demonstrate the impacts on Aboriginal heritage values, both archaeological and culturally in the broader sense.	4.9
	The assessment must demonstrate the consultation processes with the local Aboriginal community and the Central West CMA prefers to see a proposed approach that undertakes a more detailed consultation with local people than simply the requirements outlined in the OEH Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation.	4.9.4
WASTE		
EPA (20/04/12)	The EIS should identify all wastes to be generated by all aspects of the project and identify procedures for the handling and management of all wastes produced. The handling of overburden material is an important aspect for consideration.	2.5, 2.9, 2.11
	At the Planning Focus meeting it was noted that the 'daughter products' of the process stream were being audited by the Australian Nuclear Science and Technology Organisation (ANSTO). The results of the audit should be included in the EIS.	4.4, Part 3 of the SCSC
	An assessment of the potential for acid mine drainage from acid forming materials should be assessed and management / mitigation measures identified.	2.5.2.2
	Management actions for tailings material during processing should be identified, including actions to prevent potential impacts to groundwater, surface water or any other environmental aspect.	2.9
	<ul style="list-style-type: none"> Provide details of the quantity and type of both liquid waste and non-liquid waste generated, handled, processed or disposed of at the premises. Waste must be classified according to the Waste classification Guidelines (DECC, 2008). 	2.9, 2.11
	<ul style="list-style-type: none"> Provide details of liquid waste and non-liquid waste management at the facility, including: <ol style="list-style-type: none"> the transportation, assessment and handling of waste arriving at or generated at the site; 	2.9, 2.11
	<ol style="list-style-type: none"> any stockpiling of waste or recovered materials at the site; 	2.5, 2.9, 2.11
<ol style="list-style-type: none"> any waste processing related to the facility, including reuse, recycling, reprocessing (including composting) or treatment both on or off-site; 	2.5, 2.9, 2.11	

Table A3.3 (Cont'd)
Coverage of Environmental Issues

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Government Agency	Paraphrased Requirement	Relevant EIS Section(s)
WASTE (Cont'd)		
EPA (20/04/12) (Cont'd)	d) the methods of disposing of all wastes or recovered materials at the facility;	2.9, 2.11, 2.13
	e) the emissions arising from the handling, storage, processing and reprocessing of waste at the facility; and	2.10
	f) the proposed controls for managing the environmental impacts of these activities.	2.5, 2.9, 2.10, 2.11
	<ul style="list-style-type: none"> • Provide details of spoil disposal with particular attention to: <ul style="list-style-type: none"> a) the quantity of spoil material likely to be generated; 	2.9, 2.11
	<ul style="list-style-type: none"> <ul style="list-style-type: none"> b) proposed strategies for the handling, storage stockpiling, reuse/recycling and disposal of spoil; 	2.9, 2.11
	c) the need to maximise the reuse of spoil material in the construction industry;	2.9, 2.11
	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; and	2.9, 2.11
	e) designation of transport routes for transport of spoil.	2.12
	<ul style="list-style-type: none"> • 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. 	2.9, 2.11, 4.4.7
	<ul style="list-style-type: none"> • Provide details of the type and quantity of any chemical substances to be used or stored and describe arrangements for their safe use and storage. 	2.7
<ul style="list-style-type: none"> • Reference should be made to the Waste Classification Guidelines (DECC 2008). 	2.9	
NSW Resources and Energy (20/04/12)	<p>The EIS must include an outline of:</p> <p>Waste Characterisation</p> <p>All waste materials to be stored on the site must be characterised in terms of their chemical constituents. The potential for poor quality leachates to occur must also be identified. It is understood from the on-site meeting that tailings and waste rock have a low acid rock drainage potential, however it is essential that this is confirmed in the EIS following an appropriate level of test work.</p>	2.9, 2.11
	<p>Site Soil Contamination:</p> <p>The storage of hydrocarbons and process chemical reagents poses certain risks to land and the future potential of land. The assessment of these risks must be presented in the EIS in conjunction with appropriate management strategies.</p>	2.9, 2.11

**Table A3.3 (Cont'd)
 Coverage of Environmental Issues**

Government Agency	Paraphrased Requirement	Relevant EIS Section(s)
CUMULATIVE IMPACTS		
EPA (26/04/12)	The EIS must: <ul style="list-style-type: none"> Identify the extent that the receiving environment is already stressed by existing development arid background levels of emissions to which this proposal will contribute. 	Section 4
	<ul style="list-style-type: none"> Assess the impact of the proposal against the long term air, noise, and water quality objectives for the area or region. 	4.2, 4.3, 4.5, 4.6
	<ul style="list-style-type: none"> Identify infrastructure requirements flowing from the proposal (e.g. water and sewerage services, transport infrastructure upgrades). 	2.2
	<ul style="list-style-type: none"> Assess likely impacts from such additional infrastructure and measure reasonably available to the proponent to contain such requirements or mitigate their impacts (e.g. travel demand management strategies). 	2.2, 4.12
	<ul style="list-style-type: none"> Consider the cumulative impact of other similar developments in the region in regards to the environmental impacts identified above. 	4.15
LICENSING		
EPA (26/04/12)	The EIS should address the requirements of Section 45 of the POEO Act determining the extent of each impact and providing sufficient information to enable the EPA to determine appropriate limits for the EPL.	4.2.7, 4.3.7, 4.5.5
NSW Office of Water (27/04/12)	The EIS should identify all proposed groundwater works, including bores for the purpose of investigation, extraction, dewatering, testing or monitoring and an approval obtained from the Office of Water prior to their installation.	2.8, 4.6.2.3
	All predicted groundwater take must be accounted for through adequate licensing.	Noted
NSW Office of Water (27/04/12) (Cont'd)	If the proposal includes existing or proposed water management structures/dams, the assessment should provide information on the following: <ul style="list-style-type: none"> Date of construction (for existing structure/s). Details of the legal status/approval for existing structure/s. Details of any proposal to change the purpose of existing structure/s. Details if any remedial work is required to maintain the integrity of the existing structure/s Clarification if the structure/s is on a watercourse. Details of the purpose, location and design specifications for the structure/s. Size and storage capacity of the structure/s. Calculation of the Maximum Harvestable Right Dam Capacity (MHRDC) for the site. Details if the structure/s is affected by flood flows. Details of any proposal for shared use, rights and entitlement of the structure/s. Details if the proposed development/subdivision has the potential to bisect the structure/s. 	2.8, 4.5, Part 4 of the SCSC