BENGALLA Mining Company

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Regulatory Correspondence

Major Projects Assessment
Mining & Industry
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Our Ref: 10/13705

Andrea Sutton
General Manager Operations
Bengalla Mining Company Pty Ltd
Locked Mail Bag 5
MUSWELLBROOK NSW 2333

Dear Ms Sutton

State Significant Development – Director General's Requirements
Continuation of Bengalla Mine Project (SSD-5170)

I have attached a copy of the Director General's environmental assessment requirements (DGRs) for the preparation of an Environmental Impact Statement (EIS) for the Continuation of Bengalla Mine Project.

These requirements are based on the information you have provided to date and have been prepared in consultation with relevant government agencies and the affected councils. Their comments, which you should address appropriately in preparing the EIS, are also attached (see Attachment 2). Please note that the Department may alter these requirements at any time, and that you must consult further with the Department if you do not lodge a development application and EIS for the project within two years of the date of issue of these DGRs. The Department will review the EIS for the project carefully before putting it on public exhibition, and will require you to submit an amended EIS if it does not adequately address the DGRs.

The Department also advises that there are a number of recent key policy and planning documents that are relevant to the project. These include the draft Upper Hunter Strategic Regional Land Use Plan, and the draft Aquifer Interference Policy, which are available on the Department's website. These DGRs may be amended to reference these additional documents once they are finalised, to ensure that they are appropriately considered during the preparation of the EIS.

The Department's preliminary assessment of your project under the draft Upper Hunter Strategic Regional Land Use Plan shows the proposed mine extension is located within 2 kilometres of mapped Biophysical Strategic Agricultural Land and the Equine Critical Industry Cluster. The Department strongly recommends that you consider the draft Plan and in particular the draft gateway criteria in Chapter 11 of the Plan during preparation of your mine plan and EIS.

I also draw your attention to the need for the EIS to contain a rigorous assessment of the agricultural impacts of the project. Your assessment must be in accordance with the new Agricultural Impact Statement Guideline, which is available on the Department's website.

Your project may require separate approval under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The Department encourages you to confirm whether such an approval will be required as soon as possible. If an EPBC Act approval is required, I would appreciate it if you would advise the Department accordingly, as the Commonwealth approval process may be integrated into the NSW approval process, and supplementary DGRs may need to be issued.

I would appreciate it if you would contact the Department at least two weeks before you propose to submit the development application and EIS for your project. This will enable the Department to:

- confirm the applicable fee (see Division 1AA, Part 15 of the *Environmental Planning and Assessment Regulation 2000*); and
- determine the number of copies (hard-copy and CD-ROM) of the EIS required for review.

If you have any enquiries about these requirements, please contact David Mooney at the details listed above.

Yours sincerely,

Howard Reed 13.3.12
A/Director Mining & Industry
As delegate for the Director-General

Director-General's Environmental Assessment Requirements
State Significant Development

Section 78A(8A) of the *Environmental Planning and Assessment Act 1979*

Application Number	SSD 5170
Proposal	The Bengalla Mine Continuation Project, which includes: • continued open cut mining to the west of existing operations for a period of 24 years; • increased maximum annual production, from 10.7 million tonnes per annum (Mtpa) to 15 Mtpa of ROM coal; • an additional overburden emplacement area west of Dry Creek; • re-diversion of Dry Creek; and • relocation of a section of the Bengalla Link Road.
Location	Bengalla Road, 4 km west of Muswellbrook
Applicant	Bengalla Mining Company Pty Ltd
Date of Issue	13 March 2012
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.* In addition, the EIS must include a: • detailed description of the development, including: – need for the proposed development; – justification for the proposed mine plan, including efficiency of coal 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, particularly the approved but not yet operational Mt Pleasant mine and the Mt Arthur mine; – plans of any proposed building works; – forecast coal volumes and train movements • consideration of all relevant environmental planning instruments, including identification and justification of any inconsistencies with these instruments; • risk assessment of the potential environmental impacts of the development, identifying the key issues for further assessment; • detailed assessment of the key issues specified below, and any other significant issues identified in this risk assessment, which includes: – a description of the existing environment, using sufficient baseline data; – 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; and • consolidated summary of all the proposed environmental management and monitoring measures, highlighting commitments included in the EIS.

Key Issues	The EIS must address the following specific matters: • **Land Resources** – including an Agricultural Impact Statement and a detailed assessment of the potential impacts on: - soils and land capability (including salinisation and contamination); - landforms and topography, including steep slopes; and - land use, including agricultural, forestry, conservation and recreational use, with particular attention on the local viticulture and equine industries; • **Water Resources** – including: - detailed assessment of potential impacts on the quality and quantity of existing surface and ground water resources, including: o detailed modelling of potential groundwater impacts, including any potential impacts on the alluvial aquifers of the Hunter River and confirmation of the physical extent of the river's alluvium; o impacts on affected licensed water users and basic landholder rights; o impacts on riparian, ecological, geo-morphological and hydrological values of watercourses, including environmental flows; o details and staging for the proposed Dry Creek re-diversion; and o a flood assessment including identification of any necessary flood impact mitigation measures; - a detailed site water balance, including a description of site water demands, water disposal methods (inclusive of volume, salinity 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; - assessment of impacts of salinity from mining operations, including disposal and management of coal rejects and modified hydrogeology, a salinity budget and the evaluation of salt migration to surface and groundwater sources; - identification of any licensing requirements or other approvals under the *Water Act 1912* and/or *Water Management Act 2000*; - 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); - 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; - a detailed description of the proposed water management system (including sewage), water monitoring program and other measures to mitigate surface and groundwater impacts; and - compliance with the Hunter River Salinity Trading Scheme; • **Biodiversity** – including: - measures taken to avoid, reduce or mitigate impacts on biodiversity; - accurate estimates of proposed vegetation clearing; - a detailed assessment of potential impacts of the development on any: o terrestrial or aquatic threatened species or populations and their habitats, endangered ecological communities and groundwater dependent ecosystems; and o regionally significant remnant vegetation, or vegetation corridors; and - 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; • **Heritage** – including: - an Aboriginal cultural heritage assessment (including both cultural and archaeological significance) which must:

	○ 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); and - a Historic heritage assessment (including archaeology) which must: ○ include a statement of heritage impact (including significance assessment) for any State significant or locally significant heritage items; and ○ outline any proposed mitigation and management measures (including an evaluation of the effectiveness and reliability of the measures); • **Air Quality** – including a quantitative assessment of potential: - construction and operational impacts, with a particular focus on dust emissions (including $PM_{2.5}$ and PM_{10} emissions, and dust generation from coal transport), as well as diesel and blast fume emissions; - reasonable and feasible mitigation measures to minimise dust, diesel and blast fume emissions, including evidence that there are no such measures available other than those proposed; and - monitoring and management measures, in particular real-time air quality monitoring; • **Greenhouse Gases** – including: - a quantitative assessment of potential Scope 1, 2 and 3 greenhouse gas emissions; - a qualitative assessment of the potential impacts of these emissions on the environment; and - an assessment of reasonable and feasible measures to minimise greenhouse gas emissions and ensure energy efficiency; • **Noise, Vibration & Blasting** – including a quantitative assessment of potential: - construction, operational and off-site transport noise impacts; - blasting impacts on people, livestock and property; - 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; • **Traffic & Transport** – including: - accurate predictions of the road and rail traffic generated by the project; - a detailed assessment of the potential impacts of the development on the capacity, efficiency and safety of the: ○ local and regional rail network, having regard to the strategic objectives and cumulative impacts for the passenger and freight rail network; and ○ local and regional road network, with particular regard to a cumulative traffic impact assessment; condition assessment of the existing network; proposed new road infrastructure; and impacts of coal trains on level crossing operations; - details of mine to port or other domestic customer transport movements, train path availability and any required rail infrastructure works; and - 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; - details of the existing interactions with and potential opportunities to join inter-mine arrangements for maintenance and/or upgrade of public roads, particularly Thomas Mitchell Drive; and - details of interactions with the approved rail corridor for Mt Pleasant mine;

	• **Visual** – including: - a detailed assessment of the: o changing landforms on the site during the various stages of the project; and o 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; • **Waste** – including: - accurate estimates of the quantity and nature of the potential waste streams of the development, including tailings and coarse reject; - a tailings and coarse reject disposal strategy; and - a description of measures that would be implemented to minimise production of other waste, and ensure that that waste is appropriately managed; • **Hazards –** including bushfires; • **Social & Economic** – including an assessment of the: - potential direct and indirect economic benefits of the project for local and regional communities and the State; - potential impacts on local and regional communities, including: o increased demand for local and regional infrastructure and services (such as housing, childcare, health, education and emergency services); and o impacts on social amenity; - 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 mechanisms; and - 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; and • **Rehabilitation** – including the proposed rehabilitation strategy for the site, having regard to the key principles in the Strategic Framework for Mine Closure, including: - rehabilitation objectives, methodology, monitoring programs, performance standards and proposed completion criteria; - nominated final land uses and land forms, having regard to any relevant strategic land use planning or resource management plans or policies; and - the potential for integrating this strategy with any other rehabilitation and/or offset strategies in the region.
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.
Consultation	During the preparation of the EIS, you must consult with relevant local, State or Commonwealth Government authorities, service providers, community groups and affected landowners. In particular you must consult with the: • Commonwealth Department of Sustainability, Environment, Water, Population and Communities; • Office of Environment and Heritage (including the Environment Protection Authority and the Heritage Branch); • 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, Roads

	and Maritime Services); • NSW Health; • ARTC and coal chain operators including Railcorp, Newcastle Ports Corporation and the Hunter Valley Coal Chain Co-ordinator; • Dams Safety Committee; • Hunter-Central Rivers Catchment Management Authority; and • Muswellbrook Shire Council. 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.
Further consultation after 2 years	If you do not lodge a DA and an EIS for the development within 2 years of the issue date of these DGRs, you must consult further with the Director-General in relation to the requirements for lodgement.
References	The assessment of the key issues listed above must take into account relevant guidelines, policies, and plans as identified. While not exhaustive, Attachment 1 contains a list of some of the guidelines, policies, and plans that may be relevant to the environmental assessment of this development.

ATTACHMENT 1
Technical and Policy Guidelines

The following guidelines may assist in the preparation of the Environmental Impact Statement. This list is not exhaustive and not all of these guidelines may be relevant to your proposal. Many of these documents can be found on the following websites:
http://www.planning.nsw.gov.au
http://www.bookshop.nsw.gov.au
http://www.publications.gov.au

Policies, Guidelines & Plans

Risk Assessment	
	AS/NZS 4360:2004 Risk Management (Standards Australia)
	HB 203: 203:2006 Environmental Risk Management – Principles & Process (Standards Australia)
Biodiversity	
	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 (DECC 2004)
	Threatened Species Assessment Guidelines: the Assessment of Significance (DECC 2007)
	Guidelines for Threatened Species Assessment (DoP 2005)
	BioBanking Assessment Methodology and Credit Calculator Operational Manual (DECCW 2008)
	NSW State Groundwater Dependent Ecosystem Policy (DLWC)
	Policy & Guidelines - Aquatic Habitat Management and Fish Conservation (NSW Fisheries)
	Policy & Guidelines - Fish Friendly Waterway Crossings (NSW Fisheries)
	State Environmental Planning Policy No. 44 – Koala Habitat Protection
Water Resources	
Surface Water	National Water Quality Management Strategy: Australian Guidelines for Fresh and Marine Water Quality (ANZECC/ARMCANZ)
	National Water Quality Management Strategy: Australian Guidelines for Water Quality Monitoring and Reporting (ANZECC/ARMCANZ)
	National Water Quality Management Strategy: Guidelines for Sewerage Systems – Effluent Management (ARMCANZ/ANZECC)
	National Water Quality Management Strategy: Guidelines for Sewerage Systems – Use of Reclaimed Water (ARMCANZ/ANZECC)
	Using the ANZECC Guideline and Water Quality Objectives in NSW (DEC)
	State Water Management Outcomes Plan
	Water Sharing Plan for the Hunter Unregulated and Alluvial Water Sources 2009
	NSW Government Water Quality and River Flow Objectives (DECC)
	Approved Methods for the Sampling and Analysis of Water Pollutants in NSW (DEC)
	Managing Urban Stormwater: Soils & Construction (Landcom) and associated Volume 2E: Mines and Quarries
	Managing Urban Stormwater: Treatment Techniques (DECC)
	Managing Urban Stormwater: Source Control (DECC)
	Floodplain Development Manual (DIPNR)
	Floodplain Risk Management Guideline (DECC)
	A Rehabilitation Manual for Australian Streams (LWRRDC and CRCCH)
	Technical Guidelines: Bunding & Spill Management (DECC)
	Environmental Guidelines: Use of Effluent by Irrigation (DECC)

Groundwater	National Water Quality Management Strategy Guidelines for Groundwater Protection in Australia (ARMCANZ/ANZECC)
	NSW State Groundwater Policy Framework Document (DLWC, 1997)
	NSW State Groundwater Quality Protection Policy (DLWC, 1998)
	NSW State Groundwater Quantity Management Policy (DLWC, 1998)
	Murray-Darling Basin Groundwater Quality. Sampling Guidelines. Technical Report No 3 (MDBC)
	Murray-Darling Basin Commission. Groundwater Flow Modelling Guideline (Aquaterra Consulting Pty Ltd)
	Guidelines for the Assessment & Management of Groundwater Contamination (DECC, 2007)
	Any relevant Water Sharing Plan for groundwater and surface water resources
Air Quality	
	Protection of the Environment Operations (Clean Air) Regulation 2002
	Approved Methods for the Modelling and Assessment of Air Pollutants in NSW (DEC)
	Approved Methods for the Sampling and Analysis of Air Pollutants in NSW (DEC)
Noise & Blasting	
	NSW Industrial Noise Policy (DECC)
	Environmental Noise Management – Assessing Vibration: a technical guide (DEC)
	NSW Road Noise Policy (DECCW)
	Interim Guidelines for the Assessment of Noise From Rail Infrastructure Projects (DECC)
	Technical basis for guidelines to minimise annoyance due to blasting overpressure and ground vibration (ANZECC)
Land Resources	
	Agricultural Impact Statement Guidelines 2012 (DP&I)
	Agfact AC25: Agricultural Land Classification (NSW Agriculture)
	State Environmental Planning Policy No. 55 – remediation of Land
	Australian and New Zealand Guidelines for the Assessment and Management of Contaminated Sites (ANZECC)
Traffic & Transport	
	Guide to Traffic Generating Development (RTA)
	Road Design Guide (RTA)
Heritage	
Aboriginal	Draft Guidelines for Aboriginal Cultural Heritage Assessment and Community Consultation (DEC 2005)
	The Burra Charter (The Australia ICOMOS charter for places of cultural significance)
Historic	NSW Heritage Manual (NSW Heritage Office)
	The Burra Charter (The Australia ICOMOS charter for places of cultural significance)
Greenhouse Gases	
	National Greenhouse Accounts Factors (Australian Department of Climate Change (DCC))
	Guidelines for Energy Savings Action Plans (DEUS)
Waste	
	Waste Classification Guidelines (DECC)
Hazards	
	State Environmental Planning Policy No. 33 – Hazardous and Offensive Development
	Hazardous and Offensive Development Application Guidelines - Applying SEPP 33
	Hazardous Industry Planning Advisory Paper No. 6 – Guidelines for Hazard Analysis

Rehabilitation	
	Mine Rehabilitation – Leading Practice Sustainable Development Program for the Mining Industry (Commonwealth of Australia)
	Mine Closure and Completion – Leading Practice Sustainable Development Program for the Mining Industry (Commonwealth of Australia)
	Strategic Framework for Mine Closure (ANZMEC-MCA)
Socio-Economic	
	Draft Economic Evaluation in Environmental Impact Assessment (DoP)
	Techniques for Effective Social Impact Assessment: A Practical Guide (Office of Social Policy, NSW Government Social Policy Directorate)
	Singleton Council Draft Community Strategic Plan: *A Blueprint for 2022*

Major Projects Assessment
Mining & Industry
Contact: David Mooney
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Email: david.mooney@planning.nsw.gov.au

Our Ref: 10/13705

Andrea Sutton
General Manager Operations
Bengalla Mining Company Pty Ltd
Locked Mail Bag 5
MUSWELLBROOK NSW 2333

Dear Ms Sutton

State Significant Development – Supplement to Director General's Requirements
Continuation of Bengalla Mine Project (SSD-5170)

I refer to the Director-General's requirements issued for the Bengalla Continuation Project, 13 March 2012.

As you are aware, this project has been declared a controlled action under the *Commonwealth Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The Department of Sustainability, Environment, Water, Populations and Communities has accredited the NSW Part 4 State Significant Development assessment process for the project.

To ensure that sufficient information is provided to enable an appropriate level of assessment of relevant matters of National Environmental Significance, the Director-General has issued supplementary requirements for the Environmental Impact Statement (EIS) under section 78A(8A) of the *Environmental Planning and Assessment Act 1979.* A copy of the supplementary requirements is attached

You must ensure that the EIS adequately addresses the Director-General's requirements issued on 13 March 2013, as well as the attached supplementary requirements.

To speed up the assessment process, it is recommended that the EIS for the project include separate appendices dealing with State and Commonwealth biodiversity matters. However, the main reports should deal with these matters in an integrated manner.

If you have any enquiries about these requirements, please contact David Mooney on the details above.

Yours sincerely

DKitto 12/7/12

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

Bridge St Office 23-33 Bridge St Sydney NSW 2000 GPO Box 39 Sydney NSW 2001 Telephone (02) 9228 6111
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Supplementary Director-General's Requirements

Section 78A(8A) of the *Environmental Planning and Assessment Act 1979*

A delegate for the Commonwealth Minister for Sustainability, Environment, Water, Population and Communities has determined the Continuation of Bengalla Mine, NSW (EPBC 2012/6378), involving the continuation of the existing Bengalla Coal Mine, approximately 4 kilometres west of Muswellbrook in the Upper Hunter Valley, NSW, to be a controlled action under section 75 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

The action is likely to have a significant impact on the EPBC Act listed critically endangered white-box – yellow box – Blakely's red gum grassy woodland and derived native grassland ecological community (box-gum woodland). Significant impacts are also considered possible for a number of other species and communities protected by the EPBC Act including, but not limited to, those listed in Appendix A.

In accordance with the one-off accredited assessment process for this project, the environmental assessment of the impacts of the controlled action must be assessed under the *Environmental Planning and Assessment Act 1979* (EP&A Act).

The assessment should include enough information about the action and its relevant impacts to allow the Minister for Sustainability, Environment, Water, Population and Communities to make an informed decision on whether or not to approve the action under the EPBC Act.

The following assessment requirements concerning matters in the EPBC Act and schedule 4 of the *Environment Protection and Biodiversity Conservation Regulations 2000* should be integrated into the assessment requirements of the EP&A Act.

General information

1. 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.

Description of the controlled action

2. A description of the action, including:
    a. all the components of the action;
    b. the precise location of any works to be undertaken, structures to be built or elements of the action that may have relevant impacts;
    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;
    d. the timing and duration of the works to be undertaken; and
    e. 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;

iii. sufficient detail to clarify why any alternative is preferred to another.

Description of the existing environment

3. A description of the existing environment of the proposal location and the surrounding areas that may be affected by the action, including but not limited to:

   a. surveys using accepted methodology for targeting listed threatened species, ecological communities and their respective habitat, including but not limited to OEH's *Survey and assessment guidelines* (2009), available at: http://www.environment.nsw.gov.au/threatenedspecies/surveymethodsfauna.htm and the Department of Sustainability, Environment, Water, Populations and Communities (DSEWPaC) species-specific survey guidelines for nationally threatened species, available at: http://www.environment.gov.au/cgi-bin/sprat/public/sprat.pl

   b. a description of the distribution and abundance of threatened species and ecological communities, as well as suitable habitat (including breeding, foraging, roosting habitat, habitat critical to the survival of threatened species) within the site and in surrounding areas that may be impacted by the proposal. Specifically, this must include but not be limited to the species at Attachment A;

   c. the regional distribution and abundance of suitable and potential habitat for threatened species and ecological communities surrounding the site.

Description of the relevant impacts of the controlled action

4. An assessment of all relevant impacts[1] with reference to the *EPBC Act Policy Statement 1.1 Significant Impact Guidelines Matters of National Environmental Significance (2009)* that the controlled action has, will have or is likely to have on: relevant threatened species and/or threatened ecological communities listed under sections 18 and 18A of the EPBC Act, including but not limited to the box-gum woodland. Information must include:

   a. a description of the relevant impacts of the action on matters of national environmental significance;

   b. a detailed assessment of the nature and extent of the likely short term and long term relevant impacts;

   c. a statement whether any relevant impacts are likely to be unknown, unpredictable or irreversible;

   d. analysis of the significance of the relevant impacts;

   e. any technical data and other information used or needed to make a detailed assessment of the relevant impacts.

5. A description of the relevant impacts on the box-gum woodland should include an analysis of the vegetation condition on the site, as well as the methods by which this was determined. Direct and indirect impacts must be included. Cumulative and facilitative impacts should also be included. Please include impacts on the:

   a. extent of the box-gum woodland, including connectivity with other areas of the ecological community;

   b. quality or integrity of the box-gum woodland including, but not limited to, assisting invasive species that are harmful to the ecological community to become established;

   c. EPBC Act listed species in, or in any way dependent upon, the box-gum woodland;

   d. composition of the box-gum woodland;

   e. habitat present on site critical to the survival of the box-gum woodland[2]; and

[1] The term "relevant impact" is defined in section 82 of the EPBC Act.

[2] "habitat critical to the survival of a species or ecological community" refers to areas that are necessary:
- for activities such as foraging, breeding, roosting, or dispersal;
- for the long-term maintenance of the species or ecological community (including the maintenance of species essential to the survival of the species or ecological community, such as pollinators);
- to maintain genetic diversity and long term evolutionary development; or
- for the reintroduction of population or recovery of the species or ecological community.

f. abiotic (non-living) factors (such as water, nutrients or soil) necessary for box-gum woodland survival, for example altering groundwater levels, soil disturbance or substantial alteration of surface water drainage patterns.

These impacts should be described for both the construction and operational phases of the controlled action.

This information should be provided with reference to the ecological community as it is defined and listed under the EPBC Act.

6. Where there is a potential habitat for EPBC Act listed species (Appendix A), surveys must be undertaken. These surveys must be timed appropriately and undertaken for a suitable period of time by a qualified person[3]. A subsequent description of the relevant impacts on such EPBC Act listed species should include, inter alia, direct, indirect, cumulative and facilitative impacts on the:

   a. population of the species at the site;

   b. area of occupancy of the species;

   c. habitat critical to the survival of the species;

   d. breeding cycle of the population; and

   e. availability or quality of habitat for the species.

   If an endangered ecological community or threatened species listed at Appendix A is not believed to be present on the proposed site, detailed information must be included in the Environmental Impact Assessment to demonstrate that this community will not be impacted.

Proposed safeguards and mitigation measures

7. A description of feasible mitigation measures, changes to the action or procedures, which have been proposed by the proponent or suggested in public submissions, and which are intended to prevent or minimise relevant impacts. Information must include:

   a. a description of the mitigation measures that will be undertaken to prevent or minimise the relevant impacts of the action. These mitigation measures should be justified and based on best available practices;

   b. an assessment of the expected or predicted effectiveness of the mitigation measures including the effect on abundance and condition of species, suitable habitat and ecological communities;

   c. any statutory or policy basis for the mitigation measures;

   d. the cost of the mitigation measures;

   e. an environmental management plan that sets out the framework for continuing management, mitigation and monitoring programs (including any relevant thresholds for corrective actions) for the relevant impacts of the action. Include the person or agency responsible for implementing these programs and the effectiveness of all mitigation measures, including any provisions for independent environmental auditing;

   f. the name of the agency responsible for endorsing or approving each mitigation measure or monitoring program;

   g. identification of mitigation measures proposed to be undertaken by State governments, local governments or the proponent;

   h. any changes to the action which prevent or minimise relevant impacts on listed threatened species and communities.

Offsets

8. Should any residual impact exist that cannot be mitigated it may be necessary for offset measures to be considered in order to ensure the protection of matters of national environmental significance in

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Such habitat may be, but is not limited to: habitat identified in a recovery plan for the species or ecological community as habitat critical for that species or ecological community; and/or habitat listed on the register of Critical Habitat maintained by the Minister under the EPBC Act.

[3] Where available, species-specific survey guidelines can be obtained on the department's *Species Profile and Threats Database*: http://www.environment.gov.au/cgi-bin/sprat/public/sprat.pl

perpetuity. If required, the department may negotiate offsets with you during the assessment phase. Reference should be made to the department's draft policy statement, including any revisions to this statement, at : http://www.environment.gov.au/epbc/publications/draft-environmental-offsets.html

a. the description of any offset package should include how the offset compensates for the residual impacts, when the offset will be delivered and how the offset will be managed;

b. an assessment of the impact of the offsets on other matters of environmental, economic, or social significance; and

c. analysis of cost, both financial and other, related to offsets.

Other approvals and conditions

9. 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:

      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;

   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 EPBC Act), including any conditions that apply to the action;

   c. a statement identifying any additional approval that is required;

   d. a description of the monitoring, enforcement and review procedures that apply, or are proposed to apply, to the action.

Economic and social matters

10. A description of the short-term and long-term social and economic implications and/or impacts of the project.

Environmental record of person proposing to take the action

11. 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:

   a. the proponent; and

   b. for an action for which a person has applied for a permit, the person making the application.

12. Details of the proponent's environmental policy and planning framework.

Information sources

13. For information given in an environment assessment, the draft must state:

   a. the source of the information;

   b. how recent the information is;

   c. how the reliability of the information was tested; and

   d. what uncertainties (if any) are in the information.

Consultation

14. Any consultation about the action, including:

   a. any consultation that has already taken place;

   b. proposed consultation about relevant impacts of the action;

   c. if there has been consultation about the proposed action — any documented response to, or result of, the consultation.

15. Identification of affected parties, including a statement mentioning any communities that may be affected and describing their views.

Appendix A

Threatened Ecological Communities

- White box - yellow box - Blakely's red gum grassy woodland and derived native grassland (box-gum woodland, critically endangered)

Threatened Flora

- *Digitaria porrecta* (finger panic grass; endangered)
- *Prasophyllum sp. Wybong* (critically endangered)

Threatened Fauna

- *Lathamus discolor* (Swift Parrot)
- *Dasyurus maculatus maculatus* (spotted-tail quoll, endangered)
- *Pteropus poliocephalis* (Grey-headed Flying-fox)
- *Anthochaera phrygia* (regent honeyeater, endangered, migratory)
- *Nyctophilus corbeni (South-eastern Long-eared Bat)*
- *Chalinolobus dwyeri* (Large-eared Pied Bat)

Table 1
Continuation of Bengalla Mine EIS – Director-Generals Requirements and Responsibilities

Ref	Issue	Relevant Sections
DEPARTMENT OF PLANNING & INFRASTRUCTURE – GENERAL REQUIREMENTS		
1.	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*.	
2.	In addition, the EIS must include a: • Detailed description of the development, including: o Need for the proposed development; o Justification for the proposed mine plan, including efficiency of coal resource recovery, mine safety, and environmental protection; o Likely staging of the development - including construction, operational stage/s and rehabilitation; o Likely interactions between the development and existing, approved and proposed mining operations in the vicinity of the site, particularly the approved but not yet operational Mt Pleasant mine and the Mt Arthur mine; o Plans of any proposed building works; o Forecast coal volumes and train movements.	**Section 4** **Section 8.13.3** **Section 10** **Appendix C**
3.	• Consideration of all the relevant environmental planning instruments, including identification and justification of any inconsistencies with these instruments.	**Section 5.3**
4.	• Risk assessment of the potential environmental impacts of the development; including key issues for further assessment.	**Section 7** **Appendix F**
5.	• Detailed assessment of the key issues (see below) and any other significant issues identified within the risk assessment, which includes: o A description of the environment using sufficient baseline data; o An assessment of the potential impacts of all stages of the project including any cumulative impacts taking into consideration relevant guidelines, policies plans and statutes; and o 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 risk to the environment.	**Section 2** **Section 8** **Section 9**
6.	• A consolidated summary of all the proposed environmental management and monitoring measure, highlighting commitments included in the EIS.	**Section 9**
DEPARTMENT OF PLANNING & INFRASTRUCTURE – KEY ISSUES		
7.	• **Land Resources** – including an Agricultural Impact Statement and a detailed assessment of the potential impacts on: o Soils and land capability (including salinisation and contamination); o Landforms and topography, including steep slopes; and o Land use, including agricultural, forestry, conservation and recreational use, with particular attention on viticulture and equine industries.	**Section 8.19** **Section 8.20** **Appendix V** **Appendix W**
8.	• **Water Resources** – including: o Detailed assessment of potential impacts on the quality and quantity of existing surface and ground water resources, including: - Detailed modelling of potential groundwater impacts, including any potential impacts on the alluvial aquifers of the Hunter River and confirmation of the	**Section 8.6** **Section 8.7** **Appendix J**

Ref	Issue	Relevant Sections
	physical extent of the river's alluvium; - impacts on affected licensed water users and basic landholder rights; - impacts on riparian, ecological, geo-morphological and hydrological values of watercourses, including environmental flows; - details and staging for the proposed Dry Creek re-diversion; and - a flood assessment including identification of any necessary flood impact mitigation measures; o A detailed site water balance, including a description of site water demands, water disposal methods (inclusive of volume, salinity and frequency of any water discharges), water supply infrastructure and water storage structures; o An assessment of proposed water discharge quantities and quality against receiving water quality and flow objectives; o Assessment of impacts of salinity from mining operations, including disposal and management of coal rejects and modified hydrogeology, a salinity budget and the evaluation of salt migration to surface and groundwater sources; o Identification of any licensing requirements or other approvals under the *Water Act 1912* and/or *Water Management Act 2000*; o 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); o 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; o A detailed description of the proposed water management system (including sewage), water monitoring program and other measures to mitigate surface and groundwater impacts; and o Compliance with the Hunter River Salinity Trading Scheme.	**Appendix K**
9.	• **Biodiversity** – including: o Measures taken to avoid, reduce or mitigate impacts on biodiversity; o Accurate estimates of proposed vegetation clearing; o A detailed assessment of potential impacts of the development on any: - 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; and o 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;	**Section 8.11** **Section 8.12** **Appendix O** **Appendix P**
10.	• **Heritage** – including: o An Aboriginal cultural heritage assessment (including both cultural and archaeological significance) which must: - 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). o A historic heritage assessment (including archaeology) which must: - Include a statement of heritage impact (including significance assessment) for any State significant or locally significant heritage items; and - Outline any proposed mitigation and management measures (including an evaluation of the effectiveness and reliability of the measures).	**Section 8.9** **Section 8.10** **Appendix M** **Appendix N**
11.	• **Air Quality** – including a quantitative assessment of potential: o Construction and operational impacts, with a particular focus on dust emissions (including $PM_{2.5}$ and PM_{10} emissions, and dust generation from coal transport), as	**Section 8.1** **Appendix G**

Ref	Issue	Relevant Sections
	well as diesel and blast fume emissions; o Reasonable and feasible mitigation measures to minimise dust, diesel and blast fume emissions, including evidence that there are no such measures available other than those proposed; and o Monitoring and management measures, in particular real-time air quality monitoring.	
12.	• **Greenhouse Gases** – including: o A quantitative assessment of potential Scope 1, 2 and 3 greenhouse gas emissions; o A qualitative assessment of the potential impacts of these emissions on the environment; and o An assessment of reasonable and feasible measures to minimise greenhouse gas emissions and ensure energy efficiency.	**Section 8.2** **Appendix G**
13.	• **Noise, Vibration & Blasting** – including a quantitative assessment of potential: o Construction, operational and off-site transport noise impacts; o Blasting impacts on people, livestock and property; o Reasonable and feasible mitigation measures, including evidence that there are no such measures available other than those proposed; and o Monitoring and management measures, in particular real-time, attended noise monitoring and predictive meteorological forecasting;	**Section 8.3** **Section 8.4** **Appendix H**
14.	• **Traffic & Transport** – including: o Accurate predictions of the road and rail traffic generated by the project; o A detailed assessment of the potential impacts of the development on the capacity, efficiency and safety of the: - Local and regional rail network, having regard to the strategic objectives and cumulative impacts for the passenger and freight rail network; and - Local and regional road network, with particular regard to a cumulative traffic impact assessment; condition assessment of the existing network; proposed new road infrastructure; and impacts of coal trains on level crossing operations. o Details of mine to port or other domestic customer transport movements, train path availability and any required rail infrastructure works; and o 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; o Details of the existing interactions with and potential opportunities to join inter-mine arrangements for maintenance and/or upgrade of public roads, particularly Thomas Mitchell Drive; and o Details of interactions with the approved rail corridor for Mt Pleasant mine.	**Section 8.13** **Appendix Q**
15.	• **Visual** – including: o A detailed assessment of the: - changing landforms on the site during the various stages of the project; and - 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 o A detailed description of the measures that would be implemented to minimise the visual impacts of the project.	**Section 8.5** **Appendix I**
16.	• **Waste** – including: o Accurate estimates of the quantity and nature of the potential waste streams of the development, including tailings and coarse reject; o A tailings and coarse reject disposal strategy; and o A description of measures that would be implemented to minimise production of other waste, and ensure that that waste is appropriately managed.	**Section 8.17**

Ref	Issue	Relevant Sections
17.	• **Hazards –** including bushfires.	**Section 8.16** **Appendix T**
18.	• **Social & Economic** – including an assessment of the: o Potential direct and indirect economic benefits of the project for local and regional communities and the State; o Potential impacts on local and regional communities, including: - increased demand for local and regional infrastructure and services (such as housing, childcare, health, education and emergency services); and - impacts on social amenity; o 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 mechanisms; and o 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; and	**Section 8.14** **Section 8.15** **Appendix R** **Appendix S**
19.	• **Rehabilitation** – including the proposed rehabilitation strategy for the site, having regard to the key principles in the Strategic Framework for Mine Closure, including: o Rehabilitation objectives, methodology, monitoring programs, performance standards and proposed completion criteria; o Nominated final land uses and land forms, having regard to any relevant strategic land use planning or resource management plans or policies; and o The potential for integrating this strategy with any other rehabilitation and/or offset strategies in the region.	**Section 8.21**
DEPARTMENT OF PLANNING & INFRASTRUCTURE – PLANS AND DOCUMENTS		
20.	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.	**Appendix C**
DEPARTMENT OF PLANNING & INFRASTRUCTURE – REFERENCES		
21.	The assessment of the key issues listed above must take into account relevant guidelines, policies, and plans as identified. While not exhaustive, Attachment 1 contains a list of some of the guidelines, policies, and plans that may be relevant to the environmental assessment of this development.	**Section 8**
DEPARTMENT OF PLANNING & INFRASTRUCTURE – CONSULTATION		
22.	During the preparation of the EIS, you must consult with relevant local, State or Commonwealth Government authorities, service providers, community groups and affected landowners. In particular you must consult with the: • Commonwealth Department of Sustainability, Environment, Water, Population and Communities; • Office of Environment and Heritage (including the Environment Protection Authority and the Heritage Branch); • 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, Roads and Maritime Services); • NSW Health; • ARTC and coal chain operators including Railcorp, Newcastle Ports Corporation and the Hunter Valley Coal Chain Co-ordinator; • Dams Safety Committee;	**Section 6**

Ref	Issue	Relevant Sections
	• Hunter-Central Rivers Catchment Management Authority; and • Muswellbrook Shire Council. 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.	
DEPARTMENT OF PLANNING & INFRASTRUCTURE – FURTHER CONSULTATION AFTER 2 YEARS		
23.	If you do not lodge a DA and an EIS for the development within 2 years of the issue date of these DGRs, you must consult further with the Director-General in relation to the requirements for lodgement.	**N/A**
TRANSPORT FOR NSW		
24.	Transport for NSW interests would be adequately covered if the following points were added to the pro−forma requirements for other similar projects such as the recent Bulga open cut optimisation project: • Bengalla mining work with ARTC on issues associated with access to the ARTC rail network for the coal railed to the Port Waratah Coal Loader and Macquarie Generation Stations.	**Section 8.13** **Appendix Q**
DEPARTMENT OF PRIMARY INDUSTRIES – FISHERIES NSW		
25.	To assess any such works the Department would require longitudinal surveys of the waterway to determine habitat types and physical structure (including slope) to ensure any modifications or suggested offsets comply with Departmental recommendations of replacing like for like.	**Appendix J** **Appendix O** **Appendix X**
26.	The proponent must clearly outline the final use and any proposed remediation to be carried out on final voids. Many voids will be left to fill with water and be potential aquatic habitat or remain as areas of risk to the recreational fishers of the region.	**Section 8.21**
27.	Area which may be affected either directly or indirectly by the development or activity should be identified and shown on an appropriately scaled map (1:25000) and aerial photographs.	**Section 2**
28.	All waterbodies and waterways within the proposed area of development are to be identified.	**Section 8.6** **Appendix J**
29.	Description and maps of aquatic vegetation, snags, gravel beds and any other protected, threatened or dominant habitats should be presented. Description should include area, density and species composition.	**Appendix O**
30.	A survey of fish species should be carried out and results included. Existing data should be used only if collected less than 5 years previously.	**Appendix O**
31.	Identification of recognised recreational and commercial fishing grounds, aquaculture farms and/or other waterways users.	**Section 2.4**
32.	Details of the location of all component parts of the proposal, including any auxiliary infrastructure, timetable for construction of the proposal with details of various phases of construction	**Section 4**
33.	Aspects of the management of the proposal, both during construction and after completion, which relate to impact minimisation and site rehabilitation eg Environment Management Plans, Rehabilitation Plans, Compensatory offsets	**Section 9**
34.	For each freshwater body identified, the plan should include, either by annotation or by an accompanying table, hydrological and stream morphology information such as: flow characteristics, including any seasonal variations, bed substrate, and bed width	**Section 8.6.1** **Appendix J**

Ref	Issue	Relevant Sections
35.	Activities that damage aquatic habitat • Type of activity eg works in a stream that changes flow or morphological characteristics of the stream. • Activities that remove habitat structure, eg snag removal, removal of aquatic vegetation • Surface water management issues that increase or decrease flows in a waterway. This should include the impact the modified flow regimes (including flows and velocities) on water quality and stream morphology. • Remediation or compensatory works to offset any impacts, noting the Department has a 2 for 1 habitat compensation policy.	**Section 8.6.3** **Section 8.11** **Appendix J** **Appendix O**
36.	Activities that block fish passage • Type of activity eg works in a stream that change flow or morphological characteristics of the stream, including culvert and causeway construction, sediment and erosion control measures, stormwater diversion structures. • Length of time fish passage is to be restricted, whether permanent or temporary • Timing of proposed restriction. Should be timed to avoid interfering with migratory movements of fish. • Remediation or compensatory works to offset any impacts	**Section 8.6.3** **Section 8.11.3** **Appendix J** **Appendix O**
37.	Threatened Species • Threatened aquatic species assessment (Section 5C, EP&A Act 1979). This must be addressed even if there are no Threatened Species present on the site. • Seven Part Test	**Appendix O**
38.	A list of threatened species, endangered populations and endangered ecological communities must be provided. In determining these species, consideration must be given to the habitat types present within the study area, recent records of threatened species in the locality and the known distributions of these species.	**Section 8.11** **Appendix O**
39.	In describing the locality in the vicinity of the proposal, discussion must be provided in regard to the previous land and water uses and the effect of these on the proposed site. Relevant historical events may include land clearing, agricultural activities, water abstraction/diversion, dredging, de-snagging, reclamation, siltation, commercial and recreational activities.	**Section 2.4**
40.	A description of habitat including such components as stream morphology, instream and riparian vegetation, water quality and flow characteristics, bed morphology, vegetation (both aquatic and adjacent terrestrial), water quality and tide/flow characteristics must be given. The condition of the habitat within the area must be described and discussed, including the presence and prevalence of introduced species. A description of the habitat requirements of threatened species likely to occur in the study area must be provided.	**Section 8.6** **Section 8.11** **Appendix J** **Appendix O**
41.	In defining the proposal area, discussion must be provided in regard to possible indirect effects of the proposal on species/habitats in the area surrounding the subject site: for example, through altered hydrological regimes, soil erosion or pollution. The study area must extend downstream and/or upstream as far as is necessary to take all potential impacts into account.	**Appendix O**
42.	The EA must: • describe and discuss significant habitat areas within the study area; • outline the habitat requirements of threatened species likely to occur in the study area;	**Section 8.11** **Appendix O**

Ref	Issue	Relevant Sections
	• indicate the location, nature and extent of habitat removal or modification which may result from the proposed action; • discuss the potential impact of the modification or removal of habitat; • identify and discuss any potential for the proposal to introduce barriers to the movement of fish species; and • describe and discuss any other potential impacts of the proposal on fish species or their habitat.	
43.	For all species likely to have their lifecycle patterns disrupted by the proposal to the extent that individuals will cease to occupy any location within the subject site, the EA must describe and discuss other locally occurring populations of such species. The relative significance of this location for these species in the general locality must be discussed in terms of the extent, security and viability of remaining habitat in the locality.	**Appendix O**
44.	<u>Ameliorative Measures</u> The EA must consider how the proposal has been or may be modified and managed to conserve fisheries habitat on the subject site and in the study area. In discussing alternatives to the proposal, and the measures proposed to mitigate any effects of the proposal, consideration must be given to developing long term management strategies to protect areas within the study area which are of particular importance for fish species. This may include proposals to restore or improve habitat. Any proposed pre-construction monitoring plans or on-going monitoring of the effectiveness of the mitigation measures must be outlined in detail, including the objectives of the monitoring program, method of monitoring, reporting framework, duration and frequency.	**Section 9** **Section 10.3.1** **Appendix O**
NSW OFFICE OF WATER		
45.	The EIS is required to demonstrate that the proposed development complies with the relevant requirements of the following applicable NSW water legislation: • Water Management Act 2000 (WMA) - The EIS must demonstrate that the proposal is consistent with the objects of this Act and the water management principles prescribed in section 5, and • Water Act 1912.	**Section 5.4.4** **Appendix J** **Appendix K**
46.	A water licence from the Office of Water is generally required to take water from a water source. This licensing requirement is fundamental to sustainable water management as it facilitates water accounting, which ensures the total volume of water taken from a water source remains within defined extraction limits. Accordingly, the Office of Water advises that the EIS should include a detailed assessment of water requirements for the proposal and that adequate and secure water supply is available for the life of the proposed development. This includes confirmation that water supplies are taken from an appropriately authorised and reliable supply.	**Section 5.4.4** **Section 8.6** **Section 8.7** **Appendix J** **Appendix K**
47.	The proposed development is located within the plan area for the Water Sharing Plan for the Hunter Regulated River Water Source 2003 (WSPHRRWS) and the Water Sharing Plan for the Hunter Unregulated and Alluvial Water Sources 2009 (WSPHUAWS). The EIS is required to demonstrate how the proposed development is consistent with the rules for access licences and other applicable requirements in these WSPs.	**Section 5.4.4** **Section 8.6** **Section 8.7** **Appendix J** **Appendix K**

Ref	Issue	Relevant Sections
48.	The EIS is required to identify state and federal water management policies and guidelines that are relevant to the proposed development. The EIS must detail the extent to which the proposal is consistent with relevant policies and guidelines, and justify any inconsistencies. The following water management policies and guidelines may be relevant to the proposal: • The NSW State Rivers and Estuaries Policy (1993) and its component policies, • The NSW State Groundwater Policy Framework Document (1997) and its component policies, consisting of: - The NSW Groundwater Quality Protection Policy (1998); and -The NSW State Groundwater Dependent Ecosystems Policy (2002). • NSW Water Extraction Monitoring Policy {2007), • National Water Quality Management Strategy, including: - Australian and New Zealand Guidelines for Fresh and Marine Water Quality (2000); - Australian and New Zealand Guidelines for Water Quality Monitoring and Reporting (2000); and - Guidelines for Groundwater Protection in Australia (1995).	**Appendix J** **Appendix K**
49.	Note: Assessment and design principles relating to the proposed diversion and reconstruction of Dry Creek should be in accordance with A Rehabilitation Manual for Australian Streams Vol 2, CRC for Catchment Hydrology, LWRRDC 2000 ISBN 0 642 76030 6.	**Appendix X**
50.	The EIS is required to demonstrate that the proposed development is consistent with the following strategies: • NSW Water Conservation Strategy (2000), and • NSW Salinity Strategy {2000).	**Appendix J**
51.	<u>Water licences to take surface water</u> The EIS must identify all current and proposed surface water interception and/or extraction including details of the purpose and expected annual extraction volumes of all proposed surface water take.	**Section 8.6.3** **Appendix J**
52.	<u>Water supply works to take surface water</u> For water supply works which are proposed to be used for the purpose of taking water from a surface water source (such as a water pump), the EIS must provide details regarding purpose, location, construction and expected annual extraction volumes of all such works.	**Section 4.8** **Section 8.6.3** **Appendix J**
53.	<u>Flood works, drainage works and other water supply works</u> For flood works, drainage works and water supply works which capture, store, convey, divert or impound water (such as a tank, dam, water pipe, irrigation channel, bank, levee, or weir), the EIS must provide the following details: • Purpose, location, and construction, • Whether the work is on a watercourse,	**Section 8.6** **Appendix J**

Ref	Issue	Relevant Sections
	• Size, storage capacity and expected annual extraction volumes, • Whether the work is affected by flood flows, • Details of any proposal for shared use, rights and entitlement of the work, and • For existing works: - date of construction; legal status (i.e. approval status); - details of any proposal to change the purpose of the work; - whether the work may be affected by any changes in the hydraulic and/or energy regime occurring as a consequence of the proposed project; and - detail of any remedial work required to maintain integrity.	
54.	If the proposed development involves the use of new or existing dams, the EIS must include a calculation of the maximum harvestable right dam capacity for the site	**Appendix J**
55.	Although certain exemptions apply under provisions of the Environmental Planning and Assessment Act 1979, the EIS must detail the extent to which the proposed development is consistent with the approval requirements for water supply works prescribed in section 97 of the WMA.	**Section 5**
56.	<u>Watercourse and riparian protection</u> The EA must include an assessment of the impact of the proposed project on watercourses and associated riparian vegetation.	**Section 8.6.3** **Appendix J**
57.	In particular, the EIS should provide the following: Baseline monitoring of surface water quality and quantity for all watercourses within and adjacent to the proposed project area (minimum monthly data collected over a minimum time period of two years); • Geomorphic assessment of Dry Creek, including details of stream order (using Strahler System), river styles and energy regimes both in channel and on the Hunter River floodplain; • Detailed description of any proposed development including construction, clearing, draining, excavation, diversion and filling; and an evaluation of the proposed methods of development; • Detailed assessment of all potential impacts of any proposed development in terms of vegetation, sediment movement, channel stability, water quality and hydraulic regime; • Detailed description of surface water dependent ecosystems and existing surface water users within the area, and detailed assessment of any potential impacts on surface water dependent ecosystems and existing surface water users; • Detailed description of any measures to be incorporated into the proposed development to avoid or minimise long-term actual and potential environmental impacts, particularly in respect of the natural hydrological regime, sediment movement patterns and riparian buffers; • Details of ongoing monitoring programs for surface water quality; • Contingency strategies to remediate, reduce or manage potential impacts, in particular: - reporting procedures for ongoing monitoring programs, including mechanism for transfer of information to Office of Water; - identification of any nominal thresholds as to the level of impact beyond which remedial measures or contingency strategies would be initiated; - detailed description of the remedial measures or contingency strategies proposed; and - any funding assurances covering the anticipated post development maintenance cost, for example, stream rehabilitation maintenance, ongoing monitoring. • Details of critical thresholds for negligible impacts to surface water sources; • Rehabilitation programs related to channel and riparian vegetation; • Details of the extent to which the proposal is consistent with The NSW State Rivers and Estuaries Policy (1993), NSW Wetlands Policy (2010) and the Office of Water	**Section 8.6** **Appendix J**

Ref	Issue	Relevant Sections
	Guidelines for Controlled Activities.	
58.	Although SSD is exempt from requiring a Controlled Activity Approval (section 89(J) of the EPAA), the EIS must detail the extent to which the proposal is consistent with the water management principles and approval requirements for controlled activities prescribed in sections 5(7) and 97(4) respectively, of the WMA.	**Section 5**
59.	Water licences to take groundwater The EIS must identify all current and proposed groundwater extraction including details of the purpose and expected annual extraction volumes of all proposed groundwater extraction.	**Section 8.7.3** **Appendix K**
60.	Water supply works to take groundwater For all water supply works which are proposed to be used for the purpose of taking water from a groundwater source (such as water bores for the purpose of investigation, testing, extraction, dewatering and monitoring), the EIS must provide details regarding purpose, location, construction and expected annual extraction volumes of all such works.	**Section 8.7.4** **Appendix K**
61.	The EIS must detail the extent to which the proposed development is consistent with the approval requirements for water supply works prescribed in section 97 of the WMA.	**Appendix K**
62.	Aquifer interference activities which intercept groundwater For all proposed aquifer interference activities which may intercept groundwater (including activities which involve the penetration of an aquifer (such as an excavation), the interference with water in an aquifer, and the taking of water from an aquifer in the course of carrying out mining), the EA must provide details regarding purpose, location, construction and expected annual extraction volumes.	**Section 8.7.3** **Appendix K**
63.	The EA must also detail the extent to which the proposed project is consistent with the water management principles for aquifer interference activities prescribed in section 5(8) of the *Water Management Act 2000.*	**Appendix K**
64.	Groundwater source protection The EIS must include an assessment of the impact of the proposed development on groundwater sources and provide the following: • Identification of all groundwater sources which will be intersected or connected with as part of the proposal; • Baseline monitoring of groundwater quality and quantity for all aquifers within and adjacent to the proposed development site (minimum monthly data collected over a minimum time period of two years); • Description of flow directions and rates, physical and chemical characteristics, and highest predicted groundwater table for all aquifers within and adjacent to the proposed development site; • Extent of alluvium within the proposed development site and details on the connectivity of aquifers to watercourses within the proposed project area and adjacent catchments; • Details of any potential works likely to result in pollutants infiltrating into the groundwater; • Details of proposed methods of waste water disposal and approval from the relevant authority; • Assessment of salinity in catchments downstream of the proposed development; • Potential for salt water intrusion; • Identification of any groundwater source or aquifer that may be sterilised as a consequence of the proposed development; • Detailed description of existing groundwater users within the area, and detailed assessment of any potential impacts on existing groundwater users; • Details of critical thresholds for negligible impacts to groundwater sources; • Detailed description of any measures to be incorporated into the proposal to avoid or minimise long-term actual and potential environmental impacts, particularly in respect of groundwater pollution;	**Section 8.7** **Appendix K**

Ref	Issue	Relevant Sections
	• Details of ongoing monitoring programs for groundwater quality and quantity (minimum monthly data). • Contingency strategies to remediate, reduce or manage potential impacts, in particular: - reporting procedures for ongoing monitoring programs, including mechanism for transfer of information to Office of Water; - identification of any nominal thresholds as to the level of impact beyond which remedial measures or contingency strategies would be initiated; - detailed description of the remedial measures or contingency strategies proposed; and - any funding assurances covering the anticipated post development maintenance cost, for example, ongoing groundwater monitoring. • Details of the predicted impacts of any final landform on the groundwater regime; and • Details of the extent to which the proposed development is consistent with The NSW State Groundwater Policy Framework Document (1997), The NSW Groundwater Quality Protection Policy (1998) and the Guidelines for Groundwater Protection in Australia (1995).	
65.	<u>Groundwater dependent ecosystems (GDEs)</u> GDEs rely on groundwater for their species composition and their natural ecological processes. Examples of ecosystems which depend on groundwater are wetlands, terrestrial vegetation such as red gum forests, ecosystems in streams fed by groundwater (gaining streams), limestone cave systems, springs, and hanging valleys and swamps. The EIS should provide the following: • Identification of potential GDEs within and adjacent to the proposed development site; • Details of current GDEs condition based on minimum monthly data collected over a minimum time period of two years; • Details of groundwater quality and quantity requirements for all GDEs based on minimum fortnightly data collected over a minimum time period of two years; • Details of a flora and fauna assessment for all GDEs, including both terrestrial and aquatic (stygofauna, macroinvertebrate and macrophyte) diversity and abundance assessments; • Detailed assessment of any potential impacts on GDEs; • Critical thresholds for negligible impacts; • Detailed description of any measures to be incorporated into the proposal to avoid or minimise adverse impacts on GDEs, including measures to: - maintain natural patterns of groundwater flow; - avoid disrupting groundwater levels that are critical for ecosystems; - avoid pollution or causing adverse changes in groundwater quality; and - rehabilitate degraded groundwater systems where practical. • Details of ongoing monitoring and protection programs for potential offset areas. • Contingency strategies to remediate, reduce or manage potential impacts, in particular: - reporting procedures for ongoing monitoring programs, including mechanism for transfer of information to Office of Water; - identification of any nominal thresholds as to the level of impact beyond which remedial measures or contingency strategies would be initiated; - detailed description of the remedial measures or contingency strategies proposed; and - any funding assurances covering the anticipated post development maintenance cost, for example, ongoing groundwater monitoring. - Details of the extent to which the proposal is consistent with The NSW State Groundwater Dependent Ecosystems Policy (2002).	**Section 8.7** **Section 8.11** **Section 8.12** **Appendix K** **Appendix O** **Appendix P**
66.	The EIS must provide the following: • Details of proposed rehabilitation measures to restore any land, water sources and dependent ecosystems which are degraded by the proposed development;	**Section 8.21**

Ref	Issue	Relevant Sections
	• Justification of criteria regarding completion of any rehabilitation program; • Details of the measures to be undertaken to ensure that sufficient resources are available to implement the proposed rehabilitation program; • Justification of the proposed final landform with regard to minimising impacts on local and regional surface and groundwater sources, basic landholder rights to, adjacent/downstream licensed water users and GDEs; and • Details of measures for the ongoing management of the site following the cessation of the proposed development.	
ENVIRONMENT PROTECTION AUTHORITY		
67.	Impacts related to the following environmental issues need to be assessed, quantified and reported on: • Aboriginal cultural heritage	**Section 8.9** **Appendix M**
68.	• Air Issues - air quality - greenhouse gas	**Section 8.1** **Section 8.2** **Appendix G**
69.	• Biodiversity	**Section 8.11** **Appendix O**
70.	• Noise and vibration	**Section 8.3** **Section 8.4** **Appendix H**
71.	• Waste including hazardous materials and radiation - General waste - any proposal - Hazardous materials and radiation	**Section 8.16** **Section 8.17** **Appendix T**
72.	• Water and Soils - Acid sulfate soils - Contaminated sites - Flooding and coastal erosion - Soils – general - Water quality and discharges	**Section 8.6** **Section 8.18** **Section 8.19** **Appendix J** **Appendix U** **Appendix V**
73.	Bengalla Mining Company Pty Limited holds Environment Protection Licence (EPL) 6538 for Bengalla Coal Mine. The EIS should address the requirements of Section 45 of the *Protection of the Environment Operations Act 1997 (POEO Act)* by determining the extent of any impacts, and provide sufficient information to enable the EPA to determine if any variation of the current EPL would be required.	**Section 8**

Ref	Issue	Relevant Sections
74.	Aboriginal Cultural Heritage 1. The EIS must address and document the information requirements set out in the draft "Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation' (Department of Environment and Conservation, 2005). This document is available from OEH and DoP upon request. 2. The EIS must include surveys by suitably qualified archaeological consultants in consultation with all of the local Aboriginal knowledge holders. 3. The EIS should identify the nature and extent of impacts on Aboriginal cultural heritage values across the project area and clearly articulate strategies proposed to avoid/minimise these impacts. If impacts are proposed as part of the final development, clear justification for such impacts should be provided. 4. The EIS must assess and document the archaeological and Aboriginal significance of the sites Aboriginal cultural heritage values. 5. The EIS must describe the actions that will be taken to avoid or mitigate impacts of the project on Aboriginal cultural heritage values. This must include an assessment of the effectiveness and reliability of the measures and any residual impacts after these measures are implemented. Any proposed methodology for investigation should reflect best practice standards set by OEH (2010) in the *Code of Practice for Archaeological Investigations of Objects in New South Wales*.' 6. The EIS must provide documentary evidence to demonstrate that effective community consultation with Aboriginal communities has been undertaken in assessing impacts, developing protection and mitigation options and making final recommendations. OEH supports broad-based Aboriginal community consultation and as a guide OEH's 'Aboriginal cultural heritage consultation requirements for proponents 2010' provides a useful model to follow. This requirement is available on OEH's website at: http://www.environment.nsw.gov.au/licences/consultation.htm. 7. If impacts on Aboriginal cultural heritage values are proposed as part of the final development, an assessment of the proposed impacts in the context of 'inter generational equity' and cumulative impact must be undertaken. This assessment must examine both cultural and archaeological perspectives equally at both the local and regional levels, with consideration given to the site level and broader landscape level. Note: If the EIS is relying on past surveys it is critical to confirm that the surveys are consistent with the requirements of the above guidelines. Further, whilst there is no requirement for obtaining an Aboriginal Heritage Impact Permit (AHIP) under Part 6 of the *National Parks and Wildlife Act 1974* (NPW Act), as amended for projects approved under Part 4.1 (State Significant Development) of the EP&A Act, the remainder of Part 6 remains valid: This includes the requirement to obtain a Care Agreement for salvaged objects (Section 85) and reporting to OEH on the status of new or impacted Aboriginal sites (Section 89A).	**Section 8.9** **Appendix M**

Ref	Issue	Relevant Sections
75.	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. 2. Justify the level of assessment undertaken on the basis of risk factors, including but not limited to: a. proposal location; b. characteristics of the receiving environment; and c. type and quantity of pollutants emitted. 3. Describe the receiving environment in detail. The 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. 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. 5. Include a consideration of 'worst case' emission scenarios and impacts at proposed emission limits. 6. Account for cumulative impacts associated with existing emission sources as well as any currently approved developments linked to the receiving environment. This must include an assessment of cumulative 24-hour PM10 impacts. 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. Air dispersion modelling must be conducted in accordance with the Approved Methods for the Modelling and Assessment of Air Pollutants in NSW (2005) http://www.environment.nsw.gov.au/resources/air/ammodelling05361.pdf. 8. Demonstrate the proposal's ability to comply with the relevant regulatory framework, specifically the Protection of the *Environment Operations Act 1997* (POEO Act) and the *Protection of the Environment Operations (Clean Air) Regulation 2010* (the Clean Air Regulation). 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'. 10. Provide details of all emission control techniques/practices that will be employed to mitigate air emission impacts from the project.	**Section 8.1** **Appendix G**
76.	1. The EIS should include a comprehensive assessment of, and report on, the project's predicted greenhouse gas emissions (tC02e). Emissions should be reported broken down by:	**Section 8.2** **Appendix G**

Ref	Issue	Relevant Sections
	a) direct emissions (scope 1 as defined by the Greenhouse Gas Protocol- see reference below); b) indirect emissions from electricity (scope 2) and c) upstream and downstream emissions (scope 3) both before and after implementation of the project, including annual emissions for each year of the project (construction, operation and commissioning). 2. The EIS should include an estimate of the greenhouse emissions intensity (per unit of production). Emissions intensity should be compared with best practice if possible. 3. The emissions should be estimated using an appropriate methodology, in accordance with NSW, Australian and international guidelines (see below). 4. The proponent should also evaluate and report on the feasibility of measures to reduce greenhouse gas emissions associated with the project. This could include a consideration of energy efficiency opportunities or undertaking an energy use audit for the site.	
77.	Biodiversity impacts can be assessed using **either** the BioBanking Assessment Methodology (scenario 1) or a detailed biodiversity assessment (scenario 2). The requirements for each of these approaches are detailed below.	**Appendix O**
78.	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 residual Part 3A, State Significant Development (SSD) and State Significant Infrastructure (SSI) projects.'	**Appendix O**
79.	*Scenario 1 - Where a proposal is assessed using the BioBanking Assessment Methodology (BBAM):*	**Appendix O**
80.	1. Where a BioBanking Statement is being sought under Part 7 A of the *Threatened Species Conservation Act 1995* (TSC Act), the assessment must be undertaken by an accredited BioBanking assessor (as specified under Section 1428 (1)(c) of the TSC Act 1995) and done in accordance with the BioBanking Assessment Methodology and Credit Calculator Operational Manual (DECCW, 2008). To qualify for a BioBanking Statement a proposal must meet the 'improve or maintain' standard.	**Appendix O**
81.	1a. The Environmental Impact Statement (EIS) should include a specific Statement of Commitments that reflects all requirements of the BioBanking Statement including the number of credits required and any DG approved variations to impact on Red Flags.	**Appendix O**
82.	2. Where the BioBanking Assessment Methodology is being used to assess impacts of a proposal and to determine required offsets, and a BioBanking Statement is not being obtained, the EIS should contain a detailed biodiversity assessment and all components of the assessment must be undertaken in accordance with the BioBanking Assessment Methodology and Credit Calculator Operational Manual (DECCW, 2008).	**Appendix O**
83.	2a. The EIS should include a specific Statement of Commitments which: • is informed by the outcomes of the proposed BioBanking assessment offset package; • sets out the ecosystem and species credits required by the BioBanking Assessment Methodology and how these ecosystem and/or species credits will be secured and obtained; • if the ecosystem or species credits cannot be obtained, provides appropriate alternative options to offset expected impacts, noting that an appropriate alternative option may be developed in consultation with OEH officers and in accordance with OEH policy; • demonstrates how all options have been explored to avoid red flag areas; and • includes all relevant 'BioBanking files (e.g. *.xml output files), data sheets, underlying assumptions (particularly in the selection of vegetation types from the vegetation types	**Section 9**

Ref	Issue	Relevant Sections
	database), and documentation (including maps, aerial photographs, GIS shape files, other remote sensing imagery etc.) to ensure that the OEH can conduct an appropriate review of the assessment.	
84.	3. Where the 'NSW OEH interim policy on assessing and offsetting biodiversity impacts of Part 3A, State significant development (SSD) and State significant infrastructure (SSI) projects' is being used then the proponent must stipulate which level(s) of offset is being offered. In accordance with the interim policy, justification must be provided as to why it is appropriate to apply the Tier 2 ('no net loss') or Tier 3 ('mitigated net loss') outcomes. In considering whether the mitigated netloss standard is appropriate, justification must be provided on: (i) whether the credits required by the calculator are available on the market; (ii) whether alternative offset sites (other than credits) are available on the market; and (iii) the overall cost of the offsets and whether these costs are reasonable given the circumstances'. This must be to satisfaction of and in consultation with OEH. Tier 2 and Tier 3 offset proposals will likely require a larger area of remnant vegetation to be offered in the offset package than if Tier 1 ('improve or maintain') had been met.	**Appendix O**
85.	4. 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. Please refer to the Guidelines for developments adjoining land and water managed by the *Department of Environment. Climate Change and Water* (DECCW, 2010).	**Appendix O**
86.	5. With regard to the *Commonwealth Environment Protection and Biodiversity Conservation Act 1999*, the assessment should identify and assess 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.	**Appendix O**
87.	*Scenario 2 - Where a proposal is assessed outside the BioBanking Assessment Methodology:*	**Appendix O**
88.	1. The EIS should include 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.	**Appendix O**
89.	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/surveyassessmentgdlns.htm.	**Appendix O**
90.	It is preferable for proponents to use the Interim Vegetation Mapping Standard Data form to collect vegetation plot and transect data for the project site, and any offset site associated with the project: (available on the OEH website at http://www.environment.nsw.gov .au/resources/nativeveg/1 0060nvinttypestand.pdf). This data can then be used in the BioBanking Assessment Methodology (BBAM) ('BioBanking Assessment Methodology and Credit Calculator Operational Manual') (even when the proponent does not intend to use the BBAM credit calculator.	**Appendix O**
91.	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.	**Appendix O**
92.	Recent (less than five years old) surveys and assessments may be used. However, previous surveys should not be used if they have: • been undertaken in seasons, weather conditions or following extensive disturbance events when the subject species are unlikely to be detected or present, or • utilised methodologies, survey sampling intensities, timeframes or baits that are not the most appropriate for detecting the target subject species, unless these differences	**Appendix O**

Ref	Issue	Relevant Sections
	can be clearly demonstrated to have had an insignificant impact upon the outcomes of the surveys. If a previous survey is used, any additional species listed under the TSC Act since the previous survey took place, must be surveyed for.	
93.	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 http://www.environment.nsw.gov.au/threatenedspecies/ and the At/as 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 (available on OEH website at http://www.environment.nsw.gov.au/biobanking/biobankingtspd.htm and http://www.environment.nsw.gov.au/biobanking/vegtvpedatabase.htm, respectively) and other data sources (e.g. PlantNET, Online Zoological Collections of Australian Museums (http://www.ozcam.org/),previous or nearby surveys etc.) may also be used to compile the list.	**Appendix O**
94.	3. 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); b. Description and geo-referenced mapping of study area (and 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 offset site(s); c. Description of survey methodologies used, including timing, location and weather conditions; d. Detailed description of vegetation communities (including classification and methodology used to classify) and including all plot data. Plot data should be supplied to the OEH in electronic format (eg MS-Excel) and organised by vegetation community; e. Details, including qualifications and experience of all staff undertaking the surveys, mapping and assessment of impacts as part of the EIS; f. Identification of national and state listed threatened biota known or likely to occur in the study area and their conservation status; 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 of a wildlife corridor; 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; 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 at point 6 below); and j. Provision of specific Statement of Commitments relating to biodiversity.	**Section 8.11** **Appendix O**
95.	4. 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) which is available at:http://www.environment.nsw.gov.au/resources/threatenedspecies/tsaguide07393.pdf	**Appendix O**
96.	5. 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, which are available at: www.environment.nsw.gov.aulbiocertification/offsets.htm, or the OEH Interim policy on assessing and offsetting biodiversity impacts of part 3A developments (available from OEH); b) Identify the conservation mechanisms to be used to ensure the long term protection and management of the offset sites; and	**Appendix O**

Ref	Issue	Relevant Sections
	c) 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.	
97.	6. 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. Refer to the Guidelines for developments adjoining land and water managed by the *Department of Environment. Climate Change and Water*(DECC, 2010).	**Appendix O**
98.	7. With regard to the *Commonwealth Environment Protection and Biodiversity Conservation Act 1999*, 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.	**Section 8.11** **Appendix O**
99.	In relation to noise, the following matters should be addressed (where relevant) as part of the EIS. 1. Construction noise associated with the proposed development should be assessed using the *Interim Construction Noise Guideline* (OEH, 2009). Note that in general the construction noise guideline does not apply to coal mining developments. 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 (EPA, 2006). 3. If blasting is required for any reasons during the construction or operational stage of the proposed development, blast impacts should be demonstrated to be capable of complying with the guidelines contained in *Australian and New Zealand Environment Council* - Technical basis for guidelines to minimise annoyance due to blasting overpressure and ground vibration (ANZECC, 1990). 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. 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). 6. Noise from new or upgraded public roads should be assessed using the *Environmental Criteria for Road Traffic Noise* (EPA, 1999). 7. 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	**Section 8.3** **Section 8.4** **Appendix H**
100.	The EIS should:	
101.	1. Include a detailed plan for in-situ classification of waste material, including the sampling locations and sampling regime that will be employed to classify the waste, particularly with regards to the identification of contamination hotspots.	**Section 8.17**
102.	2. Identify, characterise and classify all waste that will be generated onsite through excavation, demolition or construction activities, including proposed quantities of the waste. Note: All waste must be classified in accordance with the EPA's Waste Classification Guidelines.	**Section 8.17**
103.	3. Identify, characterise and classify all waste that is proposed to be disposed of to an offsite location, including proposed quantities of the waste and the disposal locations for the waste. This includes waste that is intended for re-use or recycling. Note: All waste must be classified in accordance with the EPA's Waste Classification Guidelines.	**Section 8.17**

Ref	Issue	Relevant Sections
104.	4. Include a commitment to retaining all sampling and classification results for the life of the project to demonstrate compliance with the EPA's Waste Classification Guidelines.	**Section 8.17**
105.	5. Provide details of how waste will be handled and managed onsite to minimise pollution, including:	**Section 8.17**
106.	a) Stockpile location and management • Labelling of stockpiles for identification, ensuring that all waste is clearly identified and stockpiled separately from other types of material (especially the separation of any contaminated and non-contaminated waste). • Proposed height limits for all waste to reduce the potential for dust and odour. • Procedures for minimising the movement of waste around the site and double handling. • Measures to minimise leaching from stockpiles into the surrounding environment, such as sediment fencing, geofabric liners etc.	**Section 8.17** **Section 4**
107.	b) Erosion, sediment and leachate control including measures to be implemented to minimise erosion, leachate and sediment mobilisation at the site during works. The EIS should show the location of each measure to be implemented. The Proponent should consider measures such as: • Sediment traps • Diversion banks • Sediment fences • Bunds (earth, hay, mulch) • Geofabric liners • Other control measures as appropriate The Proponent should also provide details of: • how leachate from stockpiled waste material will be kept separate from stormwater runoff; • treatment of leachate through a wastewater treatment plant (if applicable); and • any proposed transport and disposal of leachate off-site.	**Section 8.17** **Appendix J** **Appendix X**
108.	6. Provide details of how the waste will be handled and managed during transport to a lawful facility. If the waste possesses hazardous characteristics, the Proponent must provide details of how the waste will be treated or immobilised to render it suitable for transport and disposal.	**Section 8.17** **Appendix T** **Appendix U**
109.	7. Include details of all procedures and protocols to be implemented to ensure that any waste leaving the site is transported and disposed of lawfully and does not pose a risk to human health or the environment.	**Section 8.17** **Appendix T** **Appendix U**
110.	8. Include a statement demonstrating that the Proponent is aware of the EPA's requirements with respect to notification and tracking of waste.	**Section 8.17**
111.	9. Include a statement demonstrating that the Proponent is aware of the relevant legislative requirements for disposal of the waste, including any relevant Resource Recovery Exemptions, as gazetted by the EPA from time to time.	**Section 8.17**
112.	10. Outline contingency plans for any event that affects operations at the site that may result in environmental harm, including: excessive stockpiling of waste, volume of leachate generated exceeds the storage capacity available on-site etc.	**Section 8.17** **Appendix L**

Ref	Issue	Relevant Sections
113.	1. The potential impacts of the development on acid sulfate soils must be assessed in accordance with the relevant guidelines in the *Acid Sulfate Soils Manual* (Stone et a/. 1998) and the *Acid Sulfate Soils Laboratory Methods Guidelines* (Ahern eta/. 2004).	**Appendix V**
114.	2. Describe mitigation and management options that will be used to prevent, control, abate or minimise potential impacts from the disturbance of acid sulfate soils associated with the project and to reduce risks to human health and prevent the degradation of the environment. This should include an assessment of the effectiveness and reliability of the measures and any residual impacts after these measures are implemented.	**Appendix V**
115.	1. The EIS should include an assessment of the contaminated site that is conducted in accordance with the guidelines made or approved under section 105 of the *Contaminated Land Management Act 1997*, for example: Guidelines for *Consultants Reporting on Contaminated Sites* (EPA, 2000), Guidelines for the *NSW Site Auditor Scheme- 2nd edition* (EPA, 2006), *Sampling Design Guidelines* (EPA, 1995), *National Environment Protection* (Assessment of Site Contamination*) Measure 1999* (or update).	**Appendix U Section 8.18**
116.	2. The EIS should provide the details on how the site contamination will be remediated and/or managed so that the site is, or can be, made suitable for the proposed use.	**Appendix U Section 8.18**
117.	3. All reports should be prepared in accordance with the *Guidelines for Consultants Reporting on Contaminated Sites* (EPA, 2000).	**Appendix U Section 8.18**
118.	4. The EIS should specify whether or not a site auditor, accredited under the *Contaminated Land Management Act 1997*, has been or will be engaged to issue a site audit statement to certify on the suitability of the current or proposed uses.	**Appendix U Section 8.18**
119.	The EIS should include an assessment of the following referring to the relevant guidelines in Attachment 2: 1. Whether the proposal is consistent with any floodplain risk management plans. 2. Whether the proposal is compatible with the flood hazard of the land. 3. Whether the proposal will significantly adversely affect flood behaviour resulting in detrimental increases in the potential flood affectation of other development or properties. 4. Whether the proposal will significantly adversely affect the environment or cause avoidable erosion, siltation, destruction of riparian vegetation or a reduction in the stability of river banks or watercourses. 5. Whether the proposal incorporates appropriate measures to manage risk to life from flood. 6. Whether the proposal is likely to result in unsustainable social and economic costs to the community as a consequence of flooding.	**Appendix J Section 8.6**
120.	The EIS should include: 1. An assessment of potential impacts on soil and land resources should be undertaken, being guided by *Soil and Landscape issues in Environmental Impact Assessment* (DLWC 2000). The nature and extent of any significant impacts should be identified. Particular attention should be given to: a. Soil erosion and sediment transport - in accordance with Managing urban stormwater: soils and construction, vol. 1 (Landcom 2004) and vol. 2 (A. Installation of services; 8 Waste landfills; C. Unsealed roads; D. Main Roads; E. Mines and quarries) (OEH 2008). 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	**Appendix V Section 8.19**

Ref	Issue	Relevant Sections
	project. This should include an assessment of the effectiveness and reliability of the measures and any residual impacts after these measures are implemented. 3. Where required, add any specific assessment requirements relevant to the project.	
121.	1. Describe the proposal including position of any intakes and discharges, volumes, water quality and frequency of all water discharges.	**Appendix J**
122.	2. Demonstrate that all practical options to avoid discharge have been implemented and environmental impact minimised where discharge is necessary.	**Appendix J**
123.	3. Where relevant include a water balance for the development including water requirements (quantity, quality and source(s)) and proposed storm and wastewater disposal, including type, volumes, proposed treatment and management methods and re-use options.	**Appendix J**
124.	4. Describe existing surface and groundwater quality. An assessment needs to be undertaken for any water resource likely to be affected by the proposal.	**Appendix J** **Appendix K**
125.	Proponents are generally only expected to source available data and information. However, proponents of relatively large and/or high risk developments may be required to collect some ambient water quality I river flow I groundwater data to enable a suitable level of impact assessment. Issues to include in the description of the receiving waters could also include, for example: • water chemistry • a description of receiving water processes, circulation and mixing characteristics and hydrodynamic regimes • lake or estuary flushing characteristics • sensitive ecosystems or species conservation values • specific human uses (e.g. fishing, proximity to recreation areas) • a description of any impacts from existing industry or activities on water quality • a description of the condition of the local catchment e.g. erosion, soils, vegetation cover, etc. • an outline of baseline groundwater information, including, for example, depth to watertable, flow direction and gradient, groundwater quality, reliance on groundwater by surrounding users and by the environment • historic river flow data • State the Water Quality Objectives for the receiving waters relevant to the proposal. These refer to the community's agreed environmental values and human uses endorsed by the NSW Government's goals for ambient waters (http://www.environment.nsw.gov.au/ieo/index.htm). Where groundwater May be impacted the assessment should identify appropriate groundwater environmental values. • State the indicators and associated trigger values or criteria for the identified environmental values. This information should be sourced from the ANZECC (2000) Guidelines for Fresh and Marine Water Quality (http://www.mincos.gov.au/publications/australian and New Zealand guidelines for fresh and marine water quality). • State any locally specific objectives, criteria or targets which have been endorsed by the NSW Government.	**Appendix J** **Appendix K**
126.	5. Describe the nature and degree of impact that any proposed discharges will have on the receiving environment.	**Appendix J**
127.	6. Assess impacts against the relevant ambient water quality outcomes. Demonstrate how the proposal will be designed and operated to:	**Appendix J** **Appendix K**

Ref	Issue	Relevant Sections
	• protect the Water Quality Objectives for receiving waters where they are currently being achieved; and • Contribute towards achievement of the Water Quality Objectives over time where they are not currently being achieved.	
128.	7. Where a discharge is proposed that includes a mixing zone, the proposal should demonstrate how wastewater discharged to waterways will ensure the ANZECC (2000) water quality criteria for relevant chemical and non-chemical parameters are met at the edge of the initial mixing zone of the discharge, and that any impacts in the initial mixing zone are demonstrated to be reversible.	**Appendix J** **Appendix K**
129.	8. Assess impacts on groundwater and groundwater dependent ecosystems.	**Appendix O** **Appendix K** **Appendix P** **Section 8.7** **Section 8.11** **Section 8.12**
130.	9. Describe how stormwater will be managed both during and after construction.	**Appendix J**
131.	10. Describe how predicted impacts will be monitored and assessed over time. For relatively large and/or high risk developments, proponents should develop a water quality and aquatic ecosystem monitoring program to monitor the responses for each component or process that affects the Water Quality Objectives that includes, for example: • adequate data for evaluating compliance with water quality standards and/or Water Quality Objectives • measurement of pollutants identified or expected to be present in any discharge	**Appendix J**
132.	11. Water quality monitoring should be undertaken in accordance with the *Approved Methods for the Sampling and Analysis of Water Pollutant in NSW* (2004) (http://www.environment.nsw.gov.au/resources/legislation/approvedmethods-water.pdf).	**Appendix J** **Appendix K**
NSW DEPARTMENT OF RESOURCES AND ENERGY		
133.	*NSW Trade & Investment, Regional Infrastructure & Services, Division of Resources & Energy* (DRE) has reviewed the Bengal/a Mining Company, Continuation of Bengal/a Mine Background Document dated February 2012.	**Section 5.4** **Section 6.2**
134.	DRE understands that the project proposal includes open cut mining and mine infrastructure on land to which the proponent holds no valid coal title under the *Mining Act 1992* and as such DRE does not support this project.	
135.	DRE discussed this issue with the proponent on 21 February 2012 and advised that Bengalla should as a matter of urgency, submit a request to the Minister for Resources and Energy requesting consent for Bengalla to apply for a title over land to which they have no current title.	
136.	As you are aware DRE has a uniform Policy on *Conceptual Project Development Plan* (CPDP) for Mining Projects to initiate the approvals process for proposed coal development projects.	

Ref	Issue	Relevant Sections
137.	The CPDP process assesses whether a mining proposal is practical, feasible and optimises resource utilisation as per the Mining Act 1992. ORE considers that this is the first step in obtaining development approval and subsequently a mining lease.	
138.	DREs Policy on Conceptual Project Development Plans is available on our website at http://www.dpi.nsw.gov.au/minerals/titles/policies/policies/development plans.	
139.	DRE considers that the Continuation of Bengalla Coal Mine Project which would include an additional 24 years of mining at a rate of up to 15Mtpa run-of-mine coal is a major expansion of the existing mine operation and should have been subject to ORE's CPDP assessment.	
140.	DRE can not support the Continuation of Bengalla Coal Mine Project or provide input into the DGRs for the project until the proponent amends the proposal to include only land to which they have a valid coal title under the *Mining Act 1992*.	
NSW DEPARTMENT OF PRIMARY INDUSTRIES		
141.	The Continuation of Bengalla Mine Background Document has been reviewed and the presence of Crown road reserves within the project boundary as shown by green and yellow colours on the attached Land Status Report is noted.	**Section 5.4**
142.	The Crown road reserve shown by green colour on the attached Land Status Report is part Enclosure Permit 45237 held by Coal and Allied Operations Pty Ltd and is the subject of a current road closing and purchase application in relation to the Mount Pleasant Mine Project.	
143.	With regard to the Crown road reserves shown by yellow colour on the attached Land Status Report, under Part 1, Section 11 of the *Crown Lands Act 1989*, Crown land management must encourage the multiple use of land. As the project will curtail public use of the subject Crown road/s, the Department requests the following condition be included in the DGRs: • That Bengalla Mining Company Pty Limited complies with the Department of Primary Industries' current processes relating to road closure and purchase applications. Parts 3 and 4 of the Crown Lands Act 1989 set out the Department's obligations regarding land assessment and the consent of the Minister prior to the sale of any Crown land. A purchase price would be determined in accordance with current legislative requirements and would reflect the commercial nature of the project.	
MUSWELLBROOK SHIRE COUNCIL		
144.	1. The Assessment must address the requirements of: (a) Council's Land Use Development Strategy (Coal Mining Component); (b) The Muswellbrook Local Environmental Plan; and (c) Council's Local Offset Strategy.	**Section 5**
145.	It is noted, with particular reference to the Project, that:	
146.	• Intensification of existing and approved mining activities is favoured over an increase in the footprint of mining activities;	
147.	• Catchments of the river systems and underground waters must be planned and managed to ensure an adequate supply and quality of water for development, management and use of water resources, and that the provision for different land use activities complements and integrates with coal resource planning in both the Shire and regional catchments;	**Appendix J** **Appendix K**

Ref	Issue	Relevant Sections
148.	• The rehabilitation plan for each coal mining proposal must include a soil rehabilitation and enhancement plan (or make further commitment for the development of such a plan) that considers, amongst other things, the use of biochar as a soil ameliorant and as a form of carbon sequestration;	**Section 8.21**
149.	• Council will not support the use of land for a mining purpose near any perennial waterway adjoining a national park or nature reserve if any part of that national park or nature reserve forms part of the catchment for that waterway;	**Appendix O**
150.	• Council will not support the use of land for coal mining if it would fetter the development of land reasonably open to the development (and likely to be developed for) the tourism or eco-tourism industries. For the removal of doubt, the use of land for a coal mining purpose (whether the coal be proposed to be won by open cut or underground methods) will not be supported on land adjoining the Wollemi and Goulburn River national parks or the Manobalai Nature Reserve which would fetter access to the those national parks or that reserve;	**Appendix O**
151.	• Council will not support the use of land for open-cut coal mining (or for underground coal mining to the extent of any infrastructure associated with such mining) if any part of the disturbance area or any associated infrastructure is visible from any public area adjoining an existing thoroughbred horse stud, winery, cellar door, olive processing facility or wholesale facility, a tourist facility, or from any area of such an enterprise to which the public are routinely invited for a purpose associated with that enterprise;	**Appendix I**
152.	• Council will not support the use of land for a coal mining purpose if it would cause any ecological damage (whether by an alteration in a catchment boundary, an infestation of exotic species, subsidence, disturbance, a change to water flow or to any aquifer, or the removal of any vegetation) to any alluvial land or any land functionally associated with any alluvial land;	**Appendix O** **Appendix J** **Appendix K**
153.	• Council will not support the use of land for the extraction of coal by open-cut or underground methods where it would have the potential to disturb or interfere with the preservation of remnant vegetation, native revegetation, or may compromise native vegetation connectivity.	**Appendix O**
154.	2. The Assessment must provide a: (a) table setting out proposed yearly coal extraction amounts (ROM) for each year of the Project; (b) construction timetable; and (c) post-mining rehabilitation timetable.	**Section 4**
155.	3. A traffic assessment should be undertaken which assesses: (a) the impact of the Project on roads and intersections in Muswellbrook Shire including (without limitation); (i) Bengalla Link Road, (ii) Wybong Road (incorporating proposed diversions), (iii) Edderton Road (incorporating proposed diversions), (iv) Thomas Mitchell Drive, (v) Skellatar Stock Route, and (vi) The State road network, Note: Traffic assessments should be undertaken with a high level of fidelity as Council is likely to seek conditions which bind the Project traffic to its predictions.	**Appendix Q** **Section 8.13**
156.	(b) any impact on emergency access and the use of roads in emergency situations; and	**Appendix Q**
157.	(c) contemplates the management of oversize vehicles.	**Appendix Q**

Ref	Issue	Relevant Sections
158.	4. The traffic assessment should: (a) consider the impact on Council's road network with reference to the principles set out in RMS's "Network Planning Practice Notes;" (b) assess travel distances and times for all major users and routes; (c) take into account the wider context of traffic growth from all development in the region. It is also noted that Edderton Road is a designated detour route for the State Road network, and consideration must be made for its intermittent use for that purpose; and (d) include estimates of vehicle mass and equivalent standard axles (ESA) as well as volume for all road traffic assessment so that pavement life and maintenance impacts can be determined.	**Appendix Q** **Section 8.13**
159.	5. Where any Council local road is sought to be closed (including any realignment of a road outside its reserve), the assessment must include an alternative mine plan and final landform plan in the event that Council does not resolve to close that road in accordance with the *Roads Act 1993.*	**Section 5** **Appendix Q** **Section 8.13**
160.	6. The assessment must assess the impact on and, where appropriate, review and make recommendations concerning (in consultation with the broader mining industry): (a) *Council's Mine Affected Road Strategy* (formerly Western Road Strategy); (b) *Council's Land Transport Asset Management Plan*; and (c) *Council's Resourcing of Mine Affected Roads Strategy*.	**Section 5**
161.	7. Any rail development or traffic in Muswellbrook Shire should consider existing noise on Muswellbrook -Ulan rail line and must have regard to the current Draft Rail Infrastructure Noise Guideline.	**Appendix H** **Section 8.3**
162.	8. Assessment of pre-mining and predicted operational maximum and m1mmum PM1, PM2.5, and PM10 particulate generation must be made for all particulate matter: (a) Leaving the proposed disturbance approval; (b) Leaving the Mining lease; (c) Affecting a township or village; and (d) Affecting any landholder, leasee, or licencee impacted upon by the Project. For both daytime and night time hours. Note: Air quality assessments should be undertaken with a high level of fidelity as Council is likely to seek conditions which bind the Project to its predictions.	**Appendix G** **Section 8.1**
163.	9. An assessment of the Project's labour force requirements must be made which identifies or predicts: (a) The projected construction workforce and composition by local government area for each year of the construction phase; (b) The total direct operational workforce and composition by local government area for each year of the Project life; (c) The total indirect operational workforce and composition by local government area for each year of the Project life; and (d) The total number of apprentices and trainees required to manage workforce replacement over the life the Project;	**Appendix R** **Appendix S** **Section 8.14** **Section 8.15**
164.	10. Assessment of social infrastructure and services should explicitly include: (a) Health Services; medical, dental and hospital; (b) Emergency Services: ambulance, fire and rescue, Rural Fire Service, State Emergency Service; (c) Secondary, vocational and higher education; (d) Child care; and	**Appendix R** **Section 8.14**

Ref	Issue	Relevant Sections
	(e) Recreation.	
165.	11. Housing affordability and accommodation demand should be addressed for all stages of the project. Assessment should be based on current housing stock and the capacity of rental and existing or approved motel accommodation to satisfy accommodation demands throughout the project.	**Appendix R Section 8.14**
166.	12. The assessment should include a landform model for each year of the project which: (a) depicts impacted landform geomorphology to a 1:25,000 scale; (b) contains detail for all anthropogenic landform changes at a scale of 1:5,000 where the final landforms avoid planar slope and include areas of flow convergence that reflect the pre-disturbance geomorphology of the region; (c) provides a range of cross-sections; (d) provides a range of visual montages at significant locations including adjoining property holdings, public roads, and other public vantage points.	**Appendix I Section 8.5**
167.	13. The Assessment should include details as to ongoing community, key stakeholder, and Council consultation in the operation of the project and the development and amendment of documents proposed for compilation under the Assessment.	**Section 6**