

# Director-General's Requirements

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

<b>Application number</b>	DA 305-7-2003 MOD 12
<b>Modification Description</b>	<p>Modifying the South Wambo Underground Mine, which includes:</p> <ul style="list-style-type: none"> <li>• changing and extending the approved long-wall layout in the Arrowfield and Bowfield seams (including the addition of areas not previously approved for mining);</li> <li>• extending approved mine life by six years to 2031;</li> <li>• ancillary changes to gas drainage, surface facilities and mine access infrastructure.</li> </ul>
<b>Location</b>	Jerrys Plains Road, Warkworth
<b>Proponent</b>	Wambo Coal Pty Ltd.
<b>Date of Issue</b>	October 2012
<b>General Requirements</b>	<p>The Environmental Assessment (EA) for the proposed modification must include a:</p> <ul style="list-style-type: none"> <li>• detailed description of the proposed modification, including: <ul style="list-style-type: none"> <li>– need for the proposal;</li> <li>– justification for the proposed mine plan, including efficiency of resource recovery, mine safety, and environmental protection;</li> <li>– likely staging of the proposal - including construction, operational stage/s and rehabilitation;</li> <li>– likely interactions between the proposal and existing, approved and proposed mining operations in the vicinity of the site;</li> <li>– plans of any proposed building works;</li> </ul> </li> <li>• consideration of all relevant environmental planning instruments, including Part 3 of the <i>Mining, Petroleum Production and Extractive Industry State Environmental Planning Policy 2007</i>, and identification and justification of any inconsistencies with these instruments;</li> <li>• risk assessment of the potential environmental impacts of the development, identifying the key issues for further assessment;</li> <li>• detailed assessment of the key issues specified below, and any other significant issues identified in this risk assessment, which includes: <ul style="list-style-type: none"> <li>– a description of the existing environment, <u>using sufficient baseline data</u>;</li> <li>– an assessment of the potential impacts of all stages of the proposal, including any cumulative impacts, taking into consideration relevant guidelines, policies, plans and statutes; and</li> <li>– a description of the measures that would be implemented to avoid, minimise and if necessary, offset the potential impacts of the proposal, including proposals for adaptive management and/or contingency plans to manage any significant risks to the environment; and</li> </ul> </li> <li>• consolidated summary of all the proposed environmental management and monitoring measures, highlighting commitments included in the EA.</li> </ul>
<b>Key Issues</b>	<p>The EA must address the following specific matters:</p> <ul style="list-style-type: none"> <li>• <b>Subsidence</b> – including a detailed quantitative and qualitative assessment of the potential conventional and non-conventional subsidence impacts of the proposal that includes:</li> <li>• the identification of the natural and built features (both surface and sub-surface) within the area that could be affected by subsidence, and an assessment of the respective values of these features using any relevant statutory or policy documents;</li> <li>• accurate predictions of the potential subsidence effects and impacts of the proposal, including a robust sensitivity analysis of these predictions;</li> </ul>

	<ul style="list-style-type: none"> <li>• a detailed assessment of the potential environmental consequences of these effects and impacts on both the natural and built environment, paying particular attention to those features that are considered to have significant economic, social, cultural or environmental values; and</li> <li>• a detailed description of the measures that would be implemented to avoid, minimise, remediate and/or offset subsidence impacts and environmental consequences (including adaptive management and proposed performance measures);</li> <li>• <b>Agriculture and Other Land Resources</b> – including an Agricultural Impact Statement that includes a specific focused assessment of the impacts of the proposal on strategic agricultural land, having regard to the gateway criteria in the Upper Hunter Strategic Regional Land Use Plan. The EA must also include a detailed description of the potential impacts on: <ul style="list-style-type: none"> <li>- soils and land capability (including salinity and contamination);</li> <li>- landforms and topography, including steep slopes; and</li> <li>- land use, including agricultural, forestry, conservation and recreational use, with particular attention on the local viticulture and equine industries;</li> </ul> </li> <li>• <b>Water Resources</b> – including: <ul style="list-style-type: none"> <li>- detailed assessment of potential impacts on the quality and quantity of existing surface and ground water resources, including: <ul style="list-style-type: none"> <li>o detailed modelling of potential groundwater impacts including any potential impacts on the alluvial aquifers;</li> <li>o impacts on affected licensed water users and basic landholder rights; and</li> <li>o impacts on riparian, ecological, geo-morphological and hydrological values of watercourses, including environmental flows;</li> </ul> </li> <li>- a detailed site water balance, including a description of site water demands, water disposal methods (inclusive of volume and frequency of any water discharges), water supply infrastructure and water storage structures;</li> <li>- identification of any licensing requirements or other approvals under the <i>Water Act 1912</i> and/or <i>Water Management Act 2000</i>;</li> <li>- demonstration that water for the construction and operation of the proposed modification can be obtained from an appropriately authorised and reliable supply in accordance with the operating rules of any relevant Water Sharing Plan (WSP);</li> <li>- 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;</li> <li>- a detailed description of the proposed water management system (including sewerage), water monitoring program and measures to mitigate surface and groundwater impacts;</li> </ul> </li> <li>• <b>Biodiversity</b> – including: <ul style="list-style-type: none"> <li>- measures taken to avoid, reduce or mitigate impacts on biodiversity;</li> <li>- accurate estimates of proposed vegetation clearing;</li> <li>- a detailed assessment of potential impacts of the proposal on any: <ul style="list-style-type: none"> <li>o terrestrial or aquatic threatened species or populations and their habitats, endangered ecological communities and groundwater dependent ecosystems; and</li> <li>o regionally significant remnant vegetation, or vegetation corridors; and</li> </ul> </li> <li>- an offset strategy to ensure the proposal maintains or improves the terrestrial and aquatic biodiversity values of the region in the medium to long term;</li> </ul> </li> <li>• <b>Heritage</b> – including: <ul style="list-style-type: none"> <li>- an Aboriginal cultural heritage assessment (including both cultural and archaeological significance) which must: <ul style="list-style-type: none"> <li>o demonstrate effective consultation with Aboriginal communities in</li> </ul> </li> </ul> </li> </ul>
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	<p>determining and assessing impacts, and developing and selecting mitigation options and measures;</p> <ul style="list-style-type: none"> <li>o outline any proposed impact mitigation and management measures (including an evaluation of the effectiveness and reliability of the measures); and</li> <li>- a Historic heritage assessment (including archaeology) which must: <ul style="list-style-type: none"> <li>o include a statement of heritage impact (including significance assessment) for any State significant or locally significant historic heritage items; and,</li> <li>o outline any proposed mitigation and management measures (including an evaluation of the effectiveness and reliability of the measures);</li> </ul> </li> </ul> <ul style="list-style-type: none"> <li>• <b>Air Quality</b> – including a quantitative assessment of potential: <ul style="list-style-type: none"> <li>- construction and operational impacts, with a particular focus on dust emissions including PM<sub>2.5</sub> and PM<sub>10</sub> emissions and dust generation from coal transport;</li> <li>- reasonable and feasible mitigation measures to minimise dust emissions, including evidence that there are no such measures available other than those proposed; and</li> <li>- monitoring and management measures, in particular real-time air quality monitoring;</li> </ul> </li> <li>• <b>Greenhouse Gases</b> – including: <ul style="list-style-type: none"> <li>- a quantitative assessment of potential Scope 1, 2 and 3 greenhouse gas emissions;</li> <li>- a qualitative assessment of the potential impacts of these emissions on the environment; and</li> <li>- an assessment of reasonable and feasible measures to minimise greenhouse gas emissions and ensure energy efficiency;</li> </ul> </li> <li>• <b>Noise</b> – including a quantitative assessment of potential: <ul style="list-style-type: none"> <li>- construction, operational and off-site transport noise impacts;</li> <li>- reasonable and feasible mitigation measures, including evidence that there are no such measures available other than those proposed; and</li> <li>- monitoring and management measures, in particular real-time and attended noise monitoring;</li> </ul> </li> <li>• <b>Traffic &amp; Transport</b> – including: <ul style="list-style-type: none"> <li>- a detailed assessment of the proposal on the capacity, efficiency and safety of the road and rail networks; and</li> <li>- a description of the measures that would be implemented to maintain and/or improve the capacity, efficiency and safety of the road and rail networks over the life of the project;</li> </ul> </li> <li>• <b>Visual</b> – including: <ul style="list-style-type: none"> <li>- a detailed assessment of the: <ul style="list-style-type: none"> <li>o changing landforms on site during the various stages of the proposed modification;</li> <li>o potential visual impacts of the proposal on private landowners in the surrounding area as well as from key vantage points in the public domain; and</li> </ul> </li> <li>- a detailed description of the measures that would be implemented to minimise the visual impacts of the project;</li> </ul> </li> <li>• <b>Waste</b> – including: <ul style="list-style-type: none"> <li>- accurate estimates of the quantity and nature of the potential waste streams of the proposal, including tailings and coarse reject;</li> <li>- a tailings and coarse reject disposal strategy; and</li> <li>- a description of measures that would be implemented to minimise production of other waste, and ensure that that waste is appropriately managed;</li> </ul> </li> <li>• <b>Hazards</b> – paying particular attention to public safety, including bushfires;</li> <li>• <b>Social &amp; Economic</b> – including an assessment of the: <ul style="list-style-type: none"> <li>- potential direct and indirect economic benefits of the proposal for local and regional communities and the State;</li> <li>- potential impacts on local and regional communities, including:</li> </ul> </li> </ul>
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	<ul style="list-style-type: none"> <li>○ increased demand for local and regional infrastructure and services (such as housing, childcare, health, education and emergency services); and</li> <li>○ impacts on social amenity;</li> <li>- a detailed description of the measures that would be implemented to minimise the adverse social and economic impacts of the proposed modification, including any infrastructure improvements or contributions and/or voluntary planning agreement or similar mechanism; and</li> <li>- a detailed assessment of the costs and benefits of the proposed modification as a whole, and whether it would result in a net benefit for the NSW community; and</li> <li>● <b>Rehabilitation</b> – including the proposed rehabilitation strategy for the site, having regard to the key principles in the Strategic Framework for Mine Closure, including: <ul style="list-style-type: none"> <li>- rehabilitation objectives, methodology, monitoring programs, performance standards and proposed completion criteria;</li> <li>- nominated final land use, having regard to any relevant strategic land use planning or resource management plans or policies; and</li> </ul> </li> <li>● the potential for integrating this strategy with any other rehabilitation and/or offset strategies in the region.</li> </ul>
<b>References</b>	<p>The environmental assessment of the key issues listed above must take into account relevant guidelines, policies, and plans. While not exhaustive, the following attachment contains a list of guidelines, policies and plans that may be relevant to the environmental assessment of this modification.</p>
<b>Consultation</b>	<p>During the preparation of the EA, you should consult with the relevant local, State or Commonwealth government authorities, service providers, community groups or affected landowners. The consultation process and the issues raised must be described in the EA.</p> <p>In particular you must consult with the:</p> <ul style="list-style-type: none"> <li>● Office of Environment and Heritage (including the Heritage Branch and Environment Protection Authority);</li> <li>● Division of Resources and Energy, within the Department of Trade and Investment, Regional Infrastructure and Services;</li> <li>● Department of Primary Industries (including the NSW Office of Water, Agriculture and Fisheries sections, Catchments and Lands (Crown Lands Division));</li> <li>● NSW Health;</li> <li>● Transport for NSW (including the Centre for Transport Planning and Roads and Maritime Services);</li> <li>● Australian Rail Track Corporation, and downstream coal chain operators including Railcorp and Newcastle Ports Corporation;</li> <li>● Mine Subsidence Board;</li> <li>● Hunter Central Rivers Catchment Management Authority;</li> <li>● Singleton Shire Council; and</li> <li>● relevant Aboriginal groups.</li> </ul> <p>The EA must:</p> <ul style="list-style-type: none"> <li>● describe the consultation process used and demonstrate that effective consultation has occurred;</li> <li>● describe the issues raised by public authorities, service providers, community groups and landowners;</li> <li>● identify where the design of the proposed modification has been amended in response to issues raised; and</li> </ul> <p>otherwise demonstrate that issues raised have been appropriately addressed in the assessment.</p>
<b>Deemed refusal period</b>	60 days

## ATTACHMENT 1 Technical and Policy Guidelines

The following guidelines may assist in the preparation of the EA. 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)

BioBanking Assessment Methodology and Credit Calculator Operational Manual (DECCW 2008)

The Threatened Species Assessment Guideline – The Assessment of Significance (DECC 2007)

NSW State Groundwater Dependent Ecosystem Policy (DLWC)

Policy & Guidelines - Aquatic Habitat Management and Fish Conservation (NSW Fisheries)

State Environmental Planning Policy No. 44 – Koala Habitat Protection

#### Water Resources

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

#### Surface Water

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
<b>Air Quality</b>	
	Protection of the Environment Operations (Clean Air) Regulation 2002
	Approved Methods for the Modelling and Assessment of Air Pollutants in NSW (DEC)
	Approved Methods for the Sampling and Analysis of Air Pollutants in NSW (DEC)
<b>Noise</b>	
	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)
<b>Land Resources</b>	
	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)
<b>Traffic &amp; Transport</b>	
	Guide to Traffic Generating Development (RTA)
<b>Heritage</b>	
<i>Aboriginal</i>	Draft Guidelines for Aboriginal Cultural Heritage Assessment and Community Consultation (DEC 2005)
	The Burra Charter (The Australia ICOMOS charter for places of cultural significance)
<i>Historic</i>	NSW Heritage Manual (NSW Heritage Office)
	The Burra Charter (The Australia ICOMOS charter for places of cultural significance)
<b>Greenhouse Gases</b>	
	National Greenhouse Accounts Factors (Australian Department of Climate Change (DCC))
	Guidelines for Energy Savings Action Plans (DEUS)
<b>Waste</b>	
	Waste Classification Guidelines (DECC)
<b>Hazards</b>	
	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
<b>Rehabilitation</b>	
	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)
<b>Socio-Economic</b>	
	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)