

**Mt Arthur Coal**



**Attachment 2 –  
Modification Director-General's  
Requirements**

# Director-General's Environmental Assessment Requirements Modification to Transitional Part 3A Project

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

<b>Application Number</b>	09_0062 MOD 1
<b>Proposal</b>	<p>Modification of the Mount Arthur Coal Project, which includes:</p> <ul style="list-style-type: none"> <li>• expansion of the existing open cut mine to extract an additional coal resource of approximately 128 million tonnes;</li> <li>• extension of the life of the open cut mine by 4 years (to 2026);</li> <li>• use of the existing conveyor corridor for overburden emplacement;</li> <li>• duplication of the existing rail loop, and increasing the maximum number of train movements from 12 to 19 a day;</li> <li>• relocation of conveyor infrastructure;</li> <li>• relocation and upgrade of the explosives storage facilities; and</li> <li>• construction of additional offices and control room; and</li> <li>• extension to the run-of-mine (ROM) coal stockpile.</li> </ul>
<b>Location</b>	Thomas Mitchell Drive, approximately 5 km south of Muswellbrook
<b>Applicant</b>	Hunter Valley Energy Coal Pty Limited
<b>Date of Issue</b>	April 2012
<b>General Requirements</b>	<p>The Environmental Assessment (EA) for the proposal should generally follow the form and content requirements for Environmental Impact Statements in Clauses 6 and 7 of Schedule 2 of the <i>Environmental Planning and Assessment Regulation 2000</i>. In addition, the EA 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 coal resource recovery, mine safety, environmental protection and the need and justification for additional out-of-pit overburden emplacement;</li> <li>– likely staging of the proposal - including construction, operational stage/s and rehabilitation;</li> <li>– likely interactions between the proposed modification and existing, approved and proposed mining operations in the vicinity of the site;</li> <li>– plans of any proposed building works;</li> <li>– forecast coal volumes and train movements;</li> </ul> </li> <li>• consideration of all relevant environmental planning instruments, including identification and justification of any inconsistencies with these instruments;</li> <li>• risk assessment of the potential environmental impacts of the proposal, 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>

## Key Issues

The EA must address the following specific matters:

- **Agricultural and Other Land Resources** – 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 draft gateway criteria in the draft Upper Hunter Strategic Regional Land Use Plan. The EA must also include a detailed description and 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;
    - o impacts on affected licensed water users and basic landholder rights; and
    - o impacts on riparian, ecological, geo-morphological and hydrological values of watercourses, including environmental flows and potential flooding impacts;
  - 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 modified project 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 proposal 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 proposal 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:
    - o demonstrate effective consultation with Aboriginal communities

	<p>in determining and assessing impacts, and developing and selecting mitigation options and measures; and</p> <ul style="list-style-type: none"> <li>○ 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>○ include a statement of heritage impact (including significance assessment) for any State significant or locally significant heritage items; and</li> <li>○ 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), as well as diesel and blast fume emissions;</li> <li>- 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</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, Vibration &amp; Blasting</b> – including a quantitative assessment of potential: <ul style="list-style-type: none"> <li>- construction, operational and off-site transport noise impacts;</li> <li>- blasting impacts on people, livestock and property including any heritage items (Aboriginal and non-Aboriginal);</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, attended noise monitoring and predictive meteorological forecasting;</li> </ul> </li> <li>• <b>Traffic &amp; Transport</b> – including: <ul style="list-style-type: none"> <li>- accurate predictions of the road and rail traffic generated by the proposal;</li> <li>- a detailed assessment of the potential impacts of the modified project on the capacity, efficiency and safety of the: <ul style="list-style-type: none"> <li>○ local and regional rail network, having regard to the strategic objectives and cumulative impacts for the passenger and freight rail network; and</li> <li>○ 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;</li> </ul> </li> <li>- details of mine to port or other domestic customer transport movements, train path availability and any required rail infrastructure works; and</li> <li>- 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;</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>○ changing landforms on the site during the various stages of the project; and</li> <li>○ potential visual impacts of the proposal on private landowners in</li> </ul> </li> </ul> </li> </ul>
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	<p>the surrounding area as well as key vantage points in the public domain, including lighting impacts; and</p> <ul style="list-style-type: none"> <li>- a detailed description of the measures that would be implemented to minimise the visual impacts of the proposal;</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 modified project, 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> – including bushfires and hazard/risk associated with the proposed explosives storage facilities;</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: <ul style="list-style-type: none"> <li>o increased demand for local and regional infrastructure and services (such as housing, childcare, health, education, emergency services and Council's water and wastewater supply services); and</li> <li>o impacts on social amenity;</li> </ul> </li> <li>- a detailed description of the measures that would be implemented to minimise the adverse social and economic impacts of the proposal, including any infrastructure improvements or contributions and/or voluntary planning agreement or similar mechanisms; and</li> <li>- a detailed assessment of the costs and benefits of the modified project as a whole, and whether it would result in a net benefit for the NSW community; and</li> </ul> </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 and domains, methodology, monitoring programs, performance standards and proposed completion criteria;</li> <li>- nominated final land uses and land forms, having regard to any relevant strategic land use planning or resource management plans or policies;</li> <li>- investigation of measures to minimise (any) final void(s) as far as practicable; and</li> <li>- the potential for integrating this strategy with any other rehabilitation and/or offset strategies in the region.</li> </ul> </li> </ul>
<b>Plans and Documents</b>	<p>The EA should include all relevant plans, architectural drawings, diagrams and relevant documentation listed under Schedule 1 of the <i>Environmental Planning and Assessment Regulation 2000</i>. These documents should be included as part of the EA rather than as separate documents.</p>
<b>Consultation</b>	<p>During the preparation of the EA, you must consult with relevant local, State or Commonwealth Government authorities, service providers, community groups and affected landowners.</p> <p>In particular you must consult with the:</p> <ul style="list-style-type: none"> <li>• Commonwealth Department of Sustainability, Environment, Water, Population and Communities;</li> <li>• Office of Environment and Heritage (including the Environment Protection Authority and the Heritage Branch);</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; NSW Forestry, Agriculture and Fisheries sections; Catchments and Lands (Crown Lands Division));</li> <li>• Transport for NSW (including the Centre for Transport Planning, Roads and Maritime Services);</li> </ul>

	<ul style="list-style-type: none"> <li>• NSW Health;</li> <li>• ARTC and coal chain operators including Railcorp, Newcastle Ports Corporation and the Hunter Valley Coal Chain Co-ordinator;</li> <li>• Dams Safety Committee;</li> <li>• Hunter-Central Rivers Catchment Management Authority;</li> <li>• Muswellbrook Shire Council;</li> <li>• special interest groups, including but not limited to Hunter Thoroughbred Breeders Association; and</li> <li>• community groups and potentially affected landowners.</li> </ul> <p>The EA must describe the consultation process and the issues raised, and identify where the design of the proposal has been amended in response to these issues. Where amendments have not been made to address an issue, a short explanation should be provided.</p>
<b>Further consultation after 2 years</b>	If you do not lodge the EA for the proposal 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.
<b>References</b>	The assessment of the key issues listed above must take into account relevant guidelines, policies, and plans as identified. While not exhaustive, Attachment 2 contains a list of some of the guidelines, policies, and plans that may be relevant to the environmental assessment of this proposal.

**ATTACHMENT 1**  
**POLICY STATEMENT**  
**INTERIM STRATEGIC AGRICULTURAL LAND POLICY FOR STATE SIGNIFICANT AND**  
**TRANSITIONAL PART 3A MINING AND COAL SEAM GAS PROPOSALS IN THE UPPER**  
**HUNTER AND NEW ENGLAND NORTH WEST REGIONS**

**Background**

Draft Strategic Regional Land Use Plans (SRLUPs) for the Upper Hunter and New England North West regions are on public exhibition until 3 May 2012. The draft SRLUPs identify strategic agricultural land in these regions and propose to apply a gateway process to State significant mining and coal seam gas proposals on or within 2km of this land.

The SRLUPs will be finalised following the consideration of all submissions received during the exhibition period, including final maps of strategic agricultural land and final details of the gateway process. In the meantime, there are a number of current and pending State significant mining and coal seam gas applications that are proposed on or within 2 km of land mapped as strategic agricultural land in the draft SRLUPs.

In March 2012 (concurrent with the release of the draft SRLUPs), the NSW Government introduced a requirement for an Agricultural Impact Statement (AIS) for all State significant development (SSD) applications for mining and petroleum (including coal seam gas) projects (as well as applications for associated State significant infrastructure such as pipelines) which have the potential to affect agricultural resources or industries. The purpose of an AIS is to ensure a focused assessment of the potential impacts of these projects on agricultural resources or industries. The information will form a key component of the assessment process in terms of evaluating and avoiding impacts on and loss of agricultural lands. A guideline that sets out the purpose and content of an AIS is available at <http://haveyoursay.nsw.gov.au/document/show/195>.

**Purpose of this policy statement**

Until the final policy position on protecting strategic agricultural land is finalised as part of the Upper Hunter and New England North West SRLUPs, it is important to ensure that the potential impacts of mining and coal seam gas projects on strategic agricultural land are comprehensively considered as part of the assessment process.

This policy statement outlines the interim arrangements for State significant and transitional Part 3A mining and coal seam gas applications on or within 2 km of land mapped as strategic agricultural land in the draft SRLUPs.

**Interim policy arrangements**

The following interim arrangements apply to all SSD and Part 3A mining and petroleum (including coal seam gas) applications and significant modifications that:

- are located on or within 2 kilometres of land mapped as strategic agricultural land in the draft SRLUPs, and
  - have been or will be lodged with the Department before the finalisation of the SRLUPs.
- (1) Projects which have not commenced public exhibition or that have not been deemed adequate for exhibition as at 6 March 2012 (date of commencement of exhibition of the draft SRLUPs) will be required to submit an AIS that includes a specific focused assessment of the impacts of the proposal on strategic agricultural land, having regard to the draft gateway criteria in the draft SRLUPs.

The implementation of this requirement will vary according to the stage of the project, ie:

- A Projects for which Director General's Requirements are yet to be issued:  
This requirement will be included in the DGRs.
  - B Projects for which Director General's Requirements have been issued but which have not yet commenced public exhibition (SSD) or which have not yet been deemed adequate for public exhibition (Part 3A):  
The Department will issue supplementary DGRs to include this requirement.
- (2) For SSD and Part 3A applications that have progressed to or beyond public exhibition, the Department will conduct an assessment of the impacts of the proposal on strategic agricultural land as part of its assessment of the project and may, in limited circumstances, require additional information from the applicant to assist this assessment.

It is acknowledged that the gateway criteria are draft only. Applicants should use their best endeavours to address the draft gateway criteria when assessing the impacts of the proposal on strategic agricultural land. In addition, the assessment can include site verification information if the applicant believes that the land mapped as strategic agricultural land does not meet the published draft criteria for strategic agricultural land. Finally, as the Government is yet to publish a cost benefit methodology, the applicant may submit any additional information relating to the social, environmental and economic aspects of the proposal that may be relevant to the consideration of whether the proposal would be in the public interest.

## ATTACHMENT 2 Technical and Policy Guidelines

The following guidelines may assist in the preparation of the Environmental Assessment. 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	
<i>Surface Water</i>	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)

<i>Groundwater</i>	Environmental Guidelines: Use of Effluent by Irrigation (DECC)
	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)
<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 &amp; Blasting</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)
	Technical basis for guidelines to minimise annoyance due to blasting overpressure and ground vibration (ANZECC)
<b>Land Resources</b>	
	Agricultural Impact Statement Guideline 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)
<b>Traffic &amp; Transport</b>	
	Guide to Traffic Generating Development (RTA)
	Road Design Guide (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

**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)