

Secretary's Environmental Assessment Requirements

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

State Significant Development

Application No.	SSD 8194
Development	<p>The Dendrobium Mine Extension Project, which includes:</p> <ul style="list-style-type: none"> • extending the Dendrobium Coal Mine into two new mining areas (Areas 5 and 6); • continued use of, and minor extensions and upgrades to, existing mine infrastructure sites, including the Dendrobium Pit-top, Kemira Valley Coal Loading Facility, Dendrobium Coal Preparation Plant, Kemira Valley Rail Line, West Cliff Colliery Stage 3 and Stage 4 Coal Wash Emplacement and access roadways and drifts, ventilation shaft sites and dewatering infrastructure; • extraction of run-of-mine (ROM) coal from the new mining areas by longwall mining methods, at a rate of 5.2 million tonnes per annum (Mtpa) for 18 years; • using existing infrastructure to deliver coal to the surface, process ROM coal and deliver product coal to Port Kembla; • transporting up to 1.1 Mtpa of coal wash by road to the West Cliff Colliery Stage 3 and Stage 4 Coal Wash Emplacement or to external customers for engineering or other beneficial uses; and • development of ancillary mine infrastructure including ventilation and gas management infrastructure, water management infrastructure, and other minor infrastructure, plant, equipment and activities
Location	Cordeaux Road, Mount Kembla - 8 kilometres from Wollongong
Applicant	Illawarra Coal Holdings Pty Limited
Date of Issue	6 February 2017
General Requirements	<p>The Environmental Impact Statement (EIS) for the development must comply with the requirements in Clauses 6 and 7 of Schedule 2 of the <i>Environmental Planning and Assessment Regulation 2000</i>. In particular, the EIS must include:</p> <ul style="list-style-type: none"> • an executive summary; • a full description of the development, including: <ul style="list-style-type: none"> - historical mining operations at the mine and in the region; - the resource which would be extracted, demonstrating efficient resource recovery within environmental constraints; - the proposed mine layout and scheduling; - minerals processing and transportation; - proposed infrastructure and facilities (including any existing or proposed infrastructure that would be required for the development, but the subject of a separate approvals process); - the likely interactions between the development and the existing Dendrobium Coal Mine, and any other existing, approved or proposed mining-related development in the vicinity of the site (including any relevant statutory approvals, environmental management regime relating to these operations); • a list of all approvals that must be obtained before the development can commence; • a risk assessment of the potential environmental impacts of the development, identifying key assessment issues; • an assessment of the likely impacts of the development on the environment, focusing on the specific issues identified below, and including: <ul style="list-style-type: none"> - a description of the existing environment likely to be affected by the development, using sufficient baseline data; - an assessment of the likely impacts of all stages of the development, including appropriate worst-case scenarios and consideration of any cumulative impacts, taking into consideration any relevant legislation, environmental planning instruments, guidelines, policies, plans and industry codes of practice;

	<ul style="list-style-type: none"> - a description of the measures that would be implemented to mitigate and/or offset the likely impacts of the development, and an assessment of: <ul style="list-style-type: none"> o whether these measures are consistent with industry best practice, and represent the full range of reasonable and feasible mitigation measures that could be implemented; o the likely effectiveness of these measures, including performance measures where relevant; and o whether contingency measures, (including Trigger Action Response Plans) would be necessary to manage any residual risks;
	<ul style="list-style-type: none"> - a description of the measures that would be implemented to monitor and report on the environmental performance of the development if it is approved; • consideration of alternatives, including development of the Area 3C and Area 4 mining domains, the development of a mine plan which avoids key sensitive surface features including swamps and water storage infrastructure, and the 'do nothing' option; • a consolidated summary of all the proposed environmental management and monitoring measures, identifying all the commitments in the EIS; • consideration of the development against all relevant environmental planning instruments (including Part 3 of the <i>State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007</i>); and • a conclusion justifying why the development should be approved, taking into consideration: <ul style="list-style-type: none"> - alternatives; - the suitability of the site for the development; - the economic, social, biophysical and environmental impacts of the project as a whole; and - whether the project is consistent with the objects of the <i>Environmental Planning and Assessment Act 1979</i>; and - a signed statement from the author of the EIS, certifying that the information contained within the document is neither false nor misleading. <p>While not exhaustive, Attachment 1 lists some of the environmental planning instruments, guidelines, policies, and plans that may be relevant to the environmental assessment of this development.</p> <p>In addition to the matters set out in Schedule 1 of the <i>Environmental Planning and Assessment Regulation 2000</i>, the development application must be accompanied by a signed report from a suitably qualified independent person that includes an accurate estimate of the:</p> <ul style="list-style-type: none"> • capital investment value of the development (as defined in Clause 3 of the <i>Environmental Planning and Assessment Regulation 2000</i>), including details of all the assumptions and components from which the capital investment value calculation is derived; and • jobs that would be created during each stage of the development.
<p>Specific Issues</p>	<p>The EIS must address the following specific issues:</p> <ul style="list-style-type: none"> • Subsidence – including a detailed assessment of the potential conventional and non-conventional subsidence effects, subsidence impacts and environmental consequences of the development on the natural and built environments, paying particular attention to features that are considered to have significant ecological, economic, social, cultural and environmental value, taking into consideration connective fracturing above the longwall panels and recorded regional and historic subsidence; • Water – including: <ul style="list-style-type: none"> - an assessment of the likely impacts of the development on the quantity and quality of surface and groundwater resources, having regard to EPA's, DPI Water's and WaterNSW's requirements and recommendations (see Attachment 2); - an assessment of the likely impacts of the development on aquifers, watercourses, swamps, riparian land, water supply infrastructure and systems including Cordeaux Dam and Avon Dam, and other water users;

	<ul style="list-style-type: none"> - an assessment of any drinking water catchment losses from mining, and whether the development can be operated to achieve a neutral or beneficial effect on water quality in the Sydney Drinking Water Catchment, consistent with the provisions of <i>State Environmental Planning Policy (Sydney Drinking Water Catchment) 2011</i>; - 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 and transfer infrastructure and water storage structures;
	<ul style="list-style-type: none"> - a detailed description of the proposed water management system (including sewerage), water monitoring regime, beneficial water re-use program and all other proposed measures to mitigate surface water and groundwater impacts; and - an assessment of the potential flooding impacts of the development; • Noise – including: <ul style="list-style-type: none"> - an assessment of the likely operational, rail “wheel squeal” and construction noise impacts of the development under the <i>NSW Industrial Noise Policy</i> (as may be updated or replaced), paying particular attention to the obligations in chapters 8 and 9 of the policy, and the <i>Voluntary Land Acquisition and Mitigation Policy</i> (DP&E); - if a claim is made for specific construction noise criteria for certain activities, then this claim must be justified and accompanied by an assessment of the likely construction noise impacts of these activities under the <i>Interim Construction Noise Guideline</i>; - an assessment of the likely road noise impacts of the development under the <i>NSW Road Noise Policy</i>; • Air – including: <ul style="list-style-type: none"> - an assessment of the likely air quality impacts of the development in accordance with the <i>Approved Methods and Guidance for the Modelling and Assessment of Air Pollutants in NSW</i>, having regard to EPA’s requirements (see Attachment 2); and - an assessment of the likely greenhouse gas impacts of the development; • Biodiversity – including: <ul style="list-style-type: none"> - an assessment of the likely biodiversity impacts of the development, including impacts to upland swamps, in accordance with the Framework for Biodiversity Assessment, by a person accredited in accordance with s142(B)(1)(c) of the <i>Threatened Species Conservation Act 1995</i>, and having regard to OEH’s requirements (Attachment 2); and - a strategy to offset any residual impacts of the development in accordance with the <i>NSW Biodiversity Offsets Policy for Major Projects</i>; • Land – including an assessment of the compatibility of the development with other land uses in the vicinity of the development in accordance with the requirements of Clause 12 of <i>State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007</i>; • Rehabilitation and Final Landform – including: <ul style="list-style-type: none"> - an assessment of the likely impacts of the development on existing landforms and topography, including justification of the final landform design of the West Cliff Stage 3 Coal Wash Emplacement and its long term geotechnical stability; - a detailed description of the progressive rehabilitation measures that would be implemented for the development; - a detailed description of the proposed rehabilitation and mine closure strategies for the project, having regard to DRE’s requirements (see Attachment 2) and the key principles in <i>Strategic Framework for Mine Closure</i>, and the: <ul style="list-style-type: none"> ○ rehabilitation objectives, methodology, monitoring programs, performance standards and proposed completion criteria; ○ decommissioning and management of surface infrastructure; ○ nominated final land uses, having regard to any relevant strategic land use planning or resource management plans or policies; and ○ potential for integrating the rehabilitation strategy with offset strategies proposed for the development; and

	<ul style="list-style-type: none"> - the measures which would be put in place for the long term protection and management of the site and any biodiversity offset areas following the cessation of mining. • Heritage – including an assessment of the likely Aboriginal and historic heritage (cultural and archaeological) impacts of the development, having regard to OEH’s requirements (Attachment 2); • Transport – including an assessment of the likely transport impacts of the development on the capacity, condition, safety and efficiency of the rail network and the local and State road network; and
	<ul style="list-style-type: none"> • Visual – including an assessment of the likely visual impacts of the development on private landowners in the vicinity of the development and key vantage points in the public domain, and minimising the lighting impacts of the development; • Hazards – including an assessment of the likely risks to public safety, paying particular attention to potential bushfire risks, and the handling and use of any dangerous goods; • Waste – including a waste management strategy; • Social & Economic – including: <ul style="list-style-type: none"> - an assessment of the likely social impacts of the development; and - an assessment of the likely economic impacts of the development, paying particular attention to: <ul style="list-style-type: none"> ○ the significance of the resource; ○ the costs and benefits of the development, identifying if it would result in a net benefit to NSW, including consideration of fluctuation in commodity markets and exchange rates; and ○ the demand for the provision of local infrastructure and services.
Consultation	<p>During the preparation of the EIS, you must consult with local government, State Government and Commonwealth Government authorities, service providers, community groups and affected landowners.</p> <p>The EIS must describe the consultation that was carried out, identify the issues raised during this consultation, and explain how these issues have been addressed in the EIS.</p>

Attachment 1

Environmental Planning Instruments, Policies, Guidelines & Plans

Land

Soil and Landscape Issues in Environmental Impact Assessment (NOW)
 State Environmental Planning Policy No. 55 – Remediation of Land
 Australian and New Zealand Guidelines for the Assessment and Management of Contaminated Sites (ANZECC)

Water

Water Sharing Plans Greater Metropolitan Region Unregulated River Water Sources Water Sharing Plan
Water Sharing Plan for the Greater Metropolitan Region Groundwater Sources 2011

Groundwater NSW State Groundwater Policy Framework Document (NOW)
 NSW State Groundwater Quality Protection Policy (NOW)
 NSW State Groundwater Quantity Management Policy (NOW)

Groundwater NSW Aquifer Interference Policy 2012 (NOW)
 Australian Groundwater Modelling Guidelines 2012 (Commonwealth)
 National Water Quality Management Strategy Guidelines for Groundwater Protection in Australia (ARMCANZ/ANZECC)
 Guidelines for the Assessment & Management of Groundwater Contamination (EPA)

Surface Water NSW State Rivers and Estuary Policy (NOW)
 NSW Government Water Quality and River Flow Objectives (EPA)
 Using the ANZECC Guideline and Water Quality Objectives in NSW (EPA)
 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)
 Approved Methods for the Sampling and Analysis of Water Pollutants in NSW (EPA)
 Managing Urban Stormwater: Soils & Construction (Landcom) and associated Volume 2E: Mines and Quarries (DECC)
 Managing Urban Stormwater: Treatment Techniques (EPA)
 Managing Urban Stormwater: Source Control (EPA)
 Technical Guidelines: Bunding & Spill Management (EPA)
 Environmental Guidelines: Use of Effluent by Irrigation (EPA)
 A Rehabilitation Manual for Australian Streams (LWRRDC and CRCCH)
 NSW Guidelines for Controlled Activities (NOW)
 Neutral or Beneficial Effect on Water Quality Assessment Guideline (WaterNSW)

Biodiversity

Framework for Biodiversity Assessment (OEH)
 NSW Biodiversity Offsets Policy for Major Projects (OEH)
 NSW Swamp Offsets Policy (OEH)
 Threatened Species Assessment Guidelines (OEH)
 Policy and Guidelines for Aquatic Habitat Management and Fish Conservation (Fisheries NSW)
 NSW State Groundwater Dependent Ecosystem Policy (NOW)
 Risk Assessment Guidelines for Groundwater Dependent Ecosystems (NOW)
 State Environmental Planning Policy No. 44 – Koala Habitat Protection

Heritage

The Burra Charter (The Australia ICOMOS charter for places of cultural significance)
 Draft Guidelines for Aboriginal Cultural Heritage Assessment and Community Consultation (DP&E)
 Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (OEH)

Code of Practice for Archaeological Investigations of Objects in NSW (OEH)
Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW (OEH)
NSW Heritage Manual (OEH)
Statements of Heritage Impact (OEH)

Noise

NSW Industrial Noise Policy (EPA)
Interim Construction Noise Guideline (EPA)
NSW Road Noise Policy (EPA)
Assessing Vibration: a Technical Guideline (EPA)
Voluntary Land Acquisition and Mitigation Policy (DP&E)

Air

Approved Methods and Guidance for the Modelling and Assessment of Air Pollutants in NSW (EPA)
Approved Methods for the Sampling and Analysis of Air Pollutants in NSW (EPA)
Coal Mine Particulate Matter Control Best Practice – Site Specific Determination Guideline (EPA)
Generic Guidance and Optimum Model Settings for the CALPUFF Modelling System for Inclusion in the Approved Methods for the Modelling and Assessment of Air Pollutants in NSW (EPA)
Voluntary Land Acquisition and Mitigation Policy (DP&E)
National Greenhouse Accounts Factors (Commonwealth)

Transport

Guide to Traffic Generating Development (RTA)
Road Design Guide (RMS) & relevant Austroads Standards

Public Safety

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

Resource

Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves 2012 (JORC)

Waste

Waste Classification Guidelines (EPA)

Rehabilitation

Mine Rehabilitation – Leading Practice Sustainable Development Program for the Mining Industry (Commonwealth)
Mine Closure and Completion – Leading Practice Sustainable Development Program for the Mining Industry (Commonwealth)
Strategic Framework for Mine Closure (ANZMEC-MCA)

Environmental Planning Instruments - General

State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007
State Environmental Planning Policy (State and Regional Development) 2011
State Environmental Planning Policy (Infrastructure) 2007
State Environmental Planning Policy (Sydney Drinking Water Catchment) 2011
Wollongong Local Environmental Plan 2009
Wingecarribee Local Environmental Plan 2010
Wollondilly Local Environmental Plan 2011

Attachment 2
Agency Input into Key Assessment Issues
