

Environmental Assessment Requirements

State Significant Development

Section 4.12(8) of the *Environmental Planning and Assessment Act 1979*

Schedule 2 of the *Environmental Planning and Assessment Regulation 2000*

Application Number	SSD 10269
Development	The Narrabri Coal Mine Stage 3, which involves the expansion of the existing Narrabri Underground Coal Mine, including: <ul style="list-style-type: none"> · a southern extension of approved longwall panels; · an increase in the approved production rates; and · additional surface infrastructure and upgrades to existing infrastructure.
Location	10 Kurrajong Creek Road, Baan Baa, NSW, 2390 (approximately 25 kilometres south east of Narrabri)
Applicant	Narrabri Coal Operations Pty Ltd
Date of Issue	20 November 2019
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>.</p> <p>In particular, the EIS must include:</p> <ul style="list-style-type: none"> · consideration of alternatives, including the development of a mine plan which avoids impacts on key sensitive surface features, and the 'do nothing' option; · a full description of the development, including: <ul style="list-style-type: none"> - historical mining operations at the mine and in the region; - details of the resource to be extracted (size and quality), demonstrating efficient resource recovery within environmental constraints; - the mine layout and development scheduling; - coal production rates (run-of-mine and product); - coal processing and transportation; - surface infrastructure and facilities (including any infrastructure that would be required for the development, but the subject of a separate approvals process); - workforce requirements during all phases of the development (on a full-time equivalent basis); - surface disturbance footprint; - a waste (overburden, coarse rejects, tailings, brine etc.) management strategy; - a water management strategy; - a rehabilitation strategy; - a landscape management plan, dealing with the Mining & Petroleum Gateway Panel's requirements (see Attachment 4); and - the likely interactions between the proposed development and the approved Narrabri Coal Mine, including the incremental and cumulative impacts of the extension and any other existing, approved or proposed mining-related and petroleum development in the vicinity of the site (including any relevant statutory approvals, environmental management regime relating to these operations); · a list of any approvals that must be obtained before the development may 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, noting that under Section 4.63 of the *Environmental Planning and Assessment Act 1979*, the likely impacts of the continued development of approved aspects of the project do not need to be reassessed. This assessment must focus on the specific issues identified below, including:
 - 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 and taking into consideration any relevant legislation, environmental planning instruments, guidelines, policies, plans and industry codes of practice;
 - a description of the measures that would be implemented to mitigate and/or offset the likely impacts of the development, and an assessment of:
 - 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 plans would be necessary to manage any residual risks; and
 - 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 the development against all relevant environmental planning instruments (including Part 3 of the *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007*);
- a consolidated summary of all the proposed environmental management and monitoring measures, identifying all the commitments in the EIS;
- the reasons why the development should be approved, having regard to:
 - relevant matters for consideration under the *Environmental Planning and Assessment Act 1979*, including the objects of the Act;
 - the biophysical, economic and social impacts of the development, including the principles of ecologically sustainable development;
 - the suitability of the site with respect to potential land use conflicts with existing and future surrounding land uses; and
 - feasible alternatives to the development (and its key components), including the consequences of not carrying out the development;
- a conclusion evaluating the merits of the project as a whole, having regard to the requirements in Section 4.15 of the *Environmental Planning and Assessment Act 1979*; and
- a signed statement from the author of the EIS, certifying that the information contained within the document is neither false nor misleading.

While not exhaustive, Attachment 1 contains a list of some of the environmental planning instruments, guidelines, policies, and plans that may be relevant to the environmental assessment of this development.

In addition to the matters set out in Schedule 1 of the *Environmental Planning and Assessment Regulation 2000*, the development application must be accompanied by a signed report from a suitably qualified and experienced person that includes an accurate estimate of the capital investment value (as defined in Clause 3 of the *Environmental Planning and Assessment Regulation 2000*) of the development, including details of all the

	assumptions and components from which the capital investment value calculation is derived.
Specific Issues	<ul style="list-style-type: none"> · The EIS must address the following specific issues: · Subsidence – including an assessment of the likely conventional and non-conventional subsidence effects and impacts of the development, and the potential consequences of these effects and impacts on the natural and built environment, paying particular attention to those features that are considered to have significant economic, social, cultural or environmental value, taking into consideration: <ul style="list-style-type: none"> - recorded regional and historic subsidence levels, impacts and environmental consequences; - the potential extent of fracturing of the strata above the longwall panels; and - the implementation of a comprehensive subsidence monitoring program which is capable of detecting vertical, horizontal and far-field subsidence movements; · Land – including: <ul style="list-style-type: none"> - an assessment of the likely agricultural impacts of the development including preparation of an Agricultural Impact Statement, prepared in accordance with DPI's <i>Agricultural Impact Statement: Technical Notes</i>; - an assessment of the likely impacts of the development on the soils and land capability of the site and surrounds, paying particular attention to any Biophysical Strategic Agricultural Land (BSAL) and having regard to the Mining & Petroleum Gateway Panel's requirements (see Attachment 4); - an assessment of the likely impact of the development on landforms (topography), including: <ul style="list-style-type: none"> - the potential subsidence impacts on cliffs, rock formations and steep slopes; and - the long term geotechnical stability of any new landforms; - 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> · Water – including: <ul style="list-style-type: none"> - an assessment of the likely impacts of the development on the quantity and quality of the region's surface and groundwater resources, having regard to the Mining & Petroleum Gateway Panel's requirements (see Attachment 4) and (Commonwealth) Department of Environment and Energy requirements under the <i>Environment Protection and Biodiversity Conservation Act 1999</i> (see Attachment 3); - an assessment of the likely impacts of the development on aquifers, watercourses, riparian land, groundwater dependent ecosystems, water-related infrastructure, and other water users; - an assessment of potential flooding and ponding impacts of the development; - a detailed site water balance, including a description of site water demands, water disposal methods (including the location, volume, and frequency of any water discharges and management of discharge water quality), water supply arrangements, water supply and transfer infrastructure and water storage structures; and - a detailed description of the proposed water management system (including sewerage), beneficial water re-use program and all other proposed measures to monitor and mitigate surface water and groundwater impacts; · Biodiversity – including:

- an assessment of the biodiversity values and the likely biodiversity impacts of the project in accordance with Section 7.9 of the *Biodiversity Conservation Act 2016* (NSW), the Biodiversity Assessment Method (BAM) and documented in a Biodiversity Development Assessment Report (BDAR), unless OEH and DPE determine that the proposed development is not likely to have any significant impacts on biodiversity values;
- the BDAR must document the application of the avoid, minimise and offset framework including assessing all direct, indirect and prescribed impacts in accordance with the BAM;
- assessment of the likely impacts of the development on listed threatened species and communities under the *Environment Protection and Biodiversity Conservation Act 1999* (see Attachment 3);
- **Heritage** – including an assessment of the likely Aboriginal and historic heritage (cultural and archaeological) impacts of the development;
- **Noise and Vibration**– including:
 - an assessment of the likely noise impacts of the development under the *NSW Noise Policy for Industry* and the *Voluntary Land Acquisition and Mitigation Policy* (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 *Interim Construction Noise Guideline*;
 - an assessment of the likely road noise impacts of the development under the *NSW Road Noise Policy*;
 - an assessment of the likely rail noise impacts of the project under the *Rail Infrastructure Noise Guidelines*;
 - an assessment of the potential vibration and low frequency noise impacts of the development;
- **Air** – including:
 - an assessment of the likely air quality impacts of the development in accordance with the *Approved Methods and Guidance for the Modelling and Assessment of Air Pollutants in NSW*; and
 - an assessment of the likely greenhouse gas impacts of the development;
- **Transport** – including an assessment of the likely transport impacts of the development on the capacity, condition, safety and efficiency of the local and State road network and the rail network;
- **Visual and Light** – 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, paying particular attention to the creation of any new landforms and minimising the lighting impacts of the development, with particular consideration of the impacts on the Siding Springs Observatory;
- **Hazards** - including an assessment of the likely risks to public safety, paying particular attention to potential subsidence risks, bushfire risks, and the handling and use of any dangerous goods;
- **Social** – including:
 - an assessment of the social impacts of the project, prepared in accordance with the *Social Impact Assessment Guideline for State Significant Mining, Petroleum Production and Extractive Industry Development (2017)*, including the likely impacts of the development on the local community, cumulative impacts (considering other mining developments in the locality), and consideration of workforce accommodation;
- **Economic** – including 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; - economic benefits of the project for the State and region; and - the demand for the provision of local infrastructure and services; • Rehabilitation and Final Landform – including <ul style="list-style-type: none"> - a conceptual final landform design; - an assessment of the likely impacts of the development on existing landforms and topography, including justification of the final landform design and its long-term geotechnical stability; - a detailed description of the progressive rehabilitation measures that would be implemented for the development and how this rehabilitation would integrate with the final landform of the mine; - a detailed description of the proposed rehabilitation and mine closure strategies for the development, including rehabilitation objectives, performance standards and completion criteria; - decommissioning and management of surface infrastructure; and - nominated final land uses, having regard to any relevant strategic land use planning or resource management plans or policies; and • Waste – including identification, quantification and classification of the likely waste streams likely to be generated (including tailings and course rejects) during construction and operation, and describe the measures to be implemented to manage, reuse, recycle and safely dispose of this waste.
Consultation	<p>During the preparation of the EIS, you must consult with relevant local, State or Commonwealth Government authorities, service providers, community groups and affected landowners. 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	
	Guideline for Agricultural Impact Statements (DP&E)
	Agricultural Impact Statement: Technical Notes (DPI)
	Agfact AC25: Agricultural Land Classification (NSW Agriculture)
	Interim Protocol for Site Verification & Mapping of Biophysical Strategic Land (OEH)
	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	Relevant water sharing plans
Groundwater	NSW State Groundwater Policy Framework Document (NOW)
	NSW State Groundwater Quality Protection Policy (NOW)
	NSW State Groundwater Quantity Management Policy (NOW)
	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) Volume 1 and Volume 2 (A: Installation of services; C: Unsealed roads; D: Main Roads; E: 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)	
Flooding	Floodplain Development Manual (OEH)
	Floodplain Risk Management Guideline (OEH)

Biodiversity	Biodiversity Assessment Method (OEH) Biosecurity Act 2015 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 Noise Policy for Industry (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) Australian and New Zealand Environment Council – Technical basis for guidelines to minimise annoyance due to blasting overpressure and ground vibration (ANZEC, 1990)
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)
Light	Dark Sky Planning Guideline: Protecting the observing conditions at Siding Spring (DPE)
Transport	Guide to Traffic Generating Development (RTA) Road Design Guide (RMS) & relevant Austroads Standards
Socio-Economic	Social Impact Assessment Guideline: For State Significant Mining, Petroleum Production and Extractive Industry Development (DPE)

	Guidelines for the economic assessment of mining and coal seam gas proposals (2015)
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
	Planning for Bush Fire Protection (2006)
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 No. 44 – Koala Habitat Protection
	Narrabri Local Environmental Plan 2012