

Director-General's Environmental Assessment Requirements

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

State Significant Development

Application Number	SSD 5850
Proposal	<p>The Mount Owen Continued Operations Project, which includes:</p> <ul style="list-style-type: none">• extension to the existing North Pit open cut mining area to recover an additional 60 million tonnes (Mt) of run-of-mine (ROM) coal over a period of 21 years;• an increase in capacity of the Mount Owen coal handling and processing plant (CHPP) and rail loading facility from 15 to 17 Mtpa of ROM coal;• construction and operation of a second rail line near the existing the Mount Owen rail spur with a northern turnout spur onto the Main Northern Railway;• transportation of up to 2 Mtpa of ROM coal and crushed gravel to the Liddell and Bayswater power stations, Liddell CHPP and Ravensworth Coal Terminal via the existing conveyor system;• increasing the maximum overburden height at Mount Owen by 10m to 240m AHD;• continued use of the Ravensworth East voids for tailings emplacement, as well as in-pit emplacement within the North Pit at Mount Owen;• a range of ancillary infrastructure upgrades, including a rail overpass at Hebden Road;• consolidation of the existing development consents for the Mount Owen and Ravensworth East coal mines; and• progressive rehabilitation of the site. <p>No change to the mining method, rate of extraction, or number of personnel at Mount Owen or Ravensworth East coal mines is proposed.</p>
Location	20 km northwest of Singleton
Applicant	Xstrata Mount Owen Pty Ltd
Date of Issue	13 March 2013
General Requirements	<p>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 <i>Environmental Planning and Assessment Regulation 2000</i>.</p> <p>In addition, the EIS must include a:</p> <ul style="list-style-type: none">• detailed description of the development, including:<ul style="list-style-type: none">– need for the proposed development;– justification for the proposed mine plan, including alternatives considered, efficiency of resource recovery, mine safety, environmental protection, and any changes to existing biodiversity offset obligations;– likely staging of the development - including construction, operational stage/s and rehabilitation;– consideration of opportunities for integration between the development and Xstrata's existing, approved and proposed mining operations in the region; and– interactions with other mines, including the Integra Underground Mine.

	<ul style="list-style-type: none"> • 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; • detailed assessment of the key issues specified below, and any other significant issues including: <ul style="list-style-type: none"> – 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 and policies; 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. <p>The DA must be accompanied by a certified report from a qualified quantity surveyor providing a detailed calculation of the capital investment value (as defined in Clause 3 of the <i>Environmental Planning and Assessment Regulation 2000</i>) of the proposed development, including details of all the assumptions and components from which the capital investment value calculation is derived.</p>
Key Issues	<p>The EIS must address the following specific matters:</p> <ul style="list-style-type: none"> • Air Quality – including a detailed quantitative assessment of potential construction, operational and cumulative air quality impacts on all potential receivers including: <ul style="list-style-type: none"> - dust impacts on privately-owned properties, mine-owned properties, and properties in the acquisition zone of Mount Owen or any other mine; - 24-hour cumulative PM₁₀ emissions using an appropriate probabilistic methodology, project-specific and cumulative PM_{2.5} emissions, and dust generated by the transportation of coal; - fumes from diesel, blasting activities and spontaneous combustion; - 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 and adaptive management protocols; • Noise, Vibration & Blasting – including a detailed quantitative assessment of potential: <ul style="list-style-type: none"> - construction, operational and off-site road/rail noise impacts; - blasting impacts on nearby mining operations; - 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; • Agricultural 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 gateway criteria in the <i>Strategic Regional Land Use Policy</i>. The EIS must also include a detailed description of the potential impacts on: <ul style="list-style-type: none"> - soils and land capability; - landforms and topography; and - other land uses within the vicinity of the mine, including land within the nearby Ravensworth State Forest;

	<ul style="list-style-type: none"> • Water Resources – including: <ul style="list-style-type: none"> - detailed assessment of potential impacts (including cumulative impacts) on the quality and quantity of existing surface and ground water resources, including: <ul style="list-style-type: none"> o detailed modelling of potential groundwater impacts, including any potential impacts on alluvial aquifers; 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; 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 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; - assessment of groundwater impacts against the minimal impact considerations in the <i>NSW Aquifer Interference Policy</i>; - identification of any licensing requirements or other approvals under the <i>Water Act 1912</i> and/or <i>Water Management Act 2000</i>; - 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 measures to mitigate surface and groundwater impacts; and - compliance with the Hunter River Salinity Trading Scheme; • Biodiversity – including: <ul style="list-style-type: none"> - measures taken to avoid, reduce or mitigate impacts on biodiversity; - identification of existing vegetation within disturbance areas, and the ecological values of this habitat; - accurate estimates of proposed vegetation clearing; - a detailed assessment of potential impacts of the development on any: <ul style="list-style-type: none"> o terrestrial or aquatic threatened species or populations and their habitats, endangered ecological communities and groundwater dependent ecosystems; and o remnant vegetation, habitat corridors, and existing biodiversity offset areas; and - a comprehensive offset strategy for the development including a justification of how the strategy would maintain or improve the terrestrial and aquatic biodiversity values of the region in the medium to long term, and how the strategy would be integrated with the <i>Upper Hunter Strategic Assessment</i> process. • Heritage – including: <ul style="list-style-type: none"> - an Aboriginal cultural heritage assessment (including both cultural and archaeological significance) which must: <ul style="list-style-type: none"> o demonstrate effective consultation with Aboriginal communities in determining and assessing impacts, and developing and selecting mitigation options and measures; and o outline any proposed impact mitigation and management
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	<p>measures (including an evaluation of the effectiveness and reliability of the measures); and</p> <ul style="list-style-type: none"> - a Historic heritage assessment (including archaeology) which must: <ul style="list-style-type: none"> o include a statement of heritage impact (including significance assessment) for any State significant or locally significant heritage items; and o outline any proposed mitigation and management measures (including an evaluation of the effectiveness and reliability of the measures); • Greenhouse Gases – including: <ul style="list-style-type: none"> - 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; • Traffic & Transport – including: <ul style="list-style-type: none"> - accurate predictions of the road and rail traffic generated by the development; - justification for the proposed road or rail upgrade works, and a clear description of how the upgraded road/rail operations would be integrated with the existing road/rail network; - a detailed assessment of the potential impacts of the development on the capacity, efficiency and safety of the: <ul style="list-style-type: none"> o local and regional rail network, having regard to the strategic objectives and cumulative impacts for the passenger and freight rail network, and the impacts of coal trains on level crossings; and o local and regional road network, with particular regard to a cumulative traffic impact assessment; condition assessment of the existing network; and the operation of the proposed new infrastructure on Hebden Road; - details of mine to port or other domestic customer transport movements, train path availability and any required rail infrastructure works on the Main Northern Railway; 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 development, including consideration of road maintenance contributions to Singleton Shire Council; • Visual – including: <ul style="list-style-type: none"> - a detailed assessment of the: <ul style="list-style-type: none"> o changing landforms on the site during the various stages of the development; and o potential visual impacts of the development 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 development; • Waste – including: <ul style="list-style-type: none"> - 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 and public safety; • Social & Economic – including an assessment of the: <ul style="list-style-type: none"> - potential direct and indirect economic benefits of the development for local and regional communities and the State; - potential impacts on local and regional communities, including increased demand for local and regional infrastructure and services;
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	<ul style="list-style-type: none"> - a detailed description of the measures that would be implemented to minimise the adverse social and economic impacts of the development, 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 <i>Strategic Framework for Mine Closure</i>, including: <ul style="list-style-type: none"> - rehabilitation objectives, methodology, monitoring programs, performance standards and proposed completion criteria; - nominated final land uses and land forms (including cross sections), 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, including the <i>Upper Hunter Strategic Assessment</i>.
Plans and Documents	The EIS must include all relevant plans, architectural drawings, diagrams and relevant documentation required under Schedule 1 of the <i>Environmental Planning and Assessment Regulation 2000</i> . These documents should be included as part of the EIS rather than as separate documents.
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.</p> <p>In particular you must consult with the:</p> <ul style="list-style-type: none"> • Commonwealth Department of Sustainability, Environment, Water, Population and Communities; • Office of Environment and Heritage (including the Heritage Branch); • Environment Protection Authority; • 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; and the Crown Lands Division); • NSW Roads and Maritime Services; • NSW Health; • NSW Rural Fire Service; • Australian Rail Track Corporation and the Hunter Valley Coal Chain Co-ordinator; • Dams Safety Committee; • Hunter-Central Rivers Catchment Management Authority; and • Singleton Shire Council. <p>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.</p>
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)
	Risk Management Handbook for the Mining Industry (DPI)
	Risk Management Policy Framework for Dam Safety (Dam Safety Committee)
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)
	Principles for the Use of Biodiversity Offsets in NSW (OEH)
	Environmental Offsets Policy (SEWPac 2012)
	Upper Hunter Strategic Assessment – Interim Policy (DP&I 2012)
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)
	Hunter River Salinity Trading Scheme (EPA)
	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)

<i>Groundwater</i>	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)
	Office of Water Guidelines for Controlled Activities (2012)
	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)
Air Quality	NSW Aquifer Interference Policy 2012 (NOW)
	Any relevant Water Sharing Plan for groundwater and surface water resources
Noise & Blasting	The Assessment and Management of Odour from Stationary Sources in NSW: Technical Framework and Notes (OEH)
	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)
Land Resources	NSW Industrial Noise Policy (DECC)
	Environmental Noise Management Manual (RTA) Dec 2001
	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)
Traffic & Transport	Agricultural Impact Statement Guidelines 2012 (DP&I)
	Agfact AC25: Agricultural Land Classification (NSW Agriculture)
	Australian and New Zealand Guidelines for the Assessment and Management of Contaminated Sites (ANZECC)
	Interim Guidelines for the Assessment of Noise From Rail Infrastructure Projects (DECC)
	Guide to Traffic Generating Development (RTA)
<i>Aboriginal</i>	Road Design Guide (RTA)
	Heritage
	Draft Guidelines for Aboriginal Cultural Heritage Assessment and Community Consultation (DEC 2005)
	The Burra Charter (The Australia ICOMOS charter for places of cultural significance)
	Ask First; A Guide to Respecting Indigenous Heritage Places and Values (AHC) 2002
	Aboriginal Cultural Heritage; Standards and Guidelines Kit (NSW NPWS) Working Draft 1997
	Aboriginal History and Heritage: A Guide (NSW Heritage Office)
	NPW Act 1974: Part 6 Approvals: Interim Community Consultation Requirements for Applicants (NSW NPWS) 2004
	Aboriginal Cultural Heritage Consultation and Investigation (RTA) 2008

<i>Historic</i>	NSW Heritage Manual (NSW Heritage Office)
	The Burra Charter (The Australia ICOMOS charter for places of cultural significance)
	The Australian Natural Heritage Charter (For the Conservation of Places of Natural Heritage Significance) 2nd ed. 2002
	Standard Exemptions for Works Requiring Heritage Council Approval (NSW Heritage Office) 2006
	How to Prepare Archival Records Of Heritage Items (NSW Heritage Office)
	Photographic Recording of Heritage Items Using Film or Digital Capture (NSW Heritage Office) 2006
	Statements of Heritage Impact (NSW Heritage Office)
	Skeletal Remains: Guidelines for Management of Human Skeletal Remains under the Heritage Act 1977 (NSW Heritage Office) 1998
	NSW Heritage Manual: Assessing Heritage Significance (NSW Heritage Office) 2001
	NSW Heritage Manual: Conservation Management Documents 1996
	NSW Heritage Manual: Heritage Terms and Abbreviations 1996
	Historical Archaeology Code of Practice (NSW Heritage Council DoP) 2006
Greenhouse Gases	
	National Greenhouse Accounts Factors (Australian Department of Climate Change (DCC))
	Guidelines for Energy Savings Action Plans (DEUS)
	AGO Factors and Methods Workbook (AGO)
Waste	
	Waste Classification Guidelines (DECC)
Hazards	
	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 Community Strategic Plan - Our Place: A Blueprint for 2022 (Singleton Council 2012)