



# MAXWELL PROJECT

## **ATTACHMENT 1**

### **Secretary's Environmental Assessment Requirements**



# Planning Secretary's 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*

<b>Application Number</b>	SSD 9526
<b>Proposal</b>	<p>The Maxwell Underground Coal Mine Project, which involves:</p> <ul style="list-style-type: none"> <li>• developing an underground mining operation, employing both bord and pillar and longwall extraction techniques, to extract up to 150 million tonnes of run-of-mine coal over a period of approximately 26 years;</li> <li>• utilising and upgrading a range of existing Maxwell surface infrastructure and developing additional infrastructure;</li> <li>• exporting coal from the site; and</li> <li>• progressively rehabilitating the site.</li> </ul>
<b>Location</b>	About 16 kilometres south of Muswellbrook in the Upper Hunter Valley, along Thomas Mitchell Drive, Muswellbrook
<b>Applicant</b>	Maxwell Ventures (Management) Pty Ltd
<b>Date of Issue</b>	17 January 2019
<b>General Requirements</b>	<p>The Environmental Impact Statement (EIS) for the development must comply with the requirements 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"> <li>• a stand-alone executive summary;</li> <li>• a full description of the development, including:             <ul style="list-style-type: none"> <li>– historical mining operations on and nearby the site;</li> <li>– a summary of regional and local geology, and soils;</li> <li>– the resource to be extracted (size and quality), demonstrating efficient resource recovery within economic and environmental constraints;</li> <li>– the mine layout and scheduling;</li> <li>– coal production rates (run-of-mine and product);</li> <li>– coal processing and transport arrangements;</li> <li>– infrastructure and facilities (including any new, existing or shared infrastructure);</li> <li>– workforce requirements during all phases of the development (on a full-time equivalent basis);</li> <li>– surface disturbance footprint;</li> <li>– a waste (overburden, coarse rejects, tailings, etc) management strategy;</li> <li>– a water management strategy;</li> <li>– a rehabilitation strategy; and</li> <li>– the likely interactions with other nearby developments including Maxwell Infrastructure and the Antiene Rail Spur;</li> </ul> </li> <li>• a strategic justification of the development focusing on site selection and the suitability of the proposed site;</li> <li>• a list of any approvals that must be obtained before the development may commence;</li> <li>• an assessment of the likely impacts of the development on the environment, focusing on the key issues identified below, including:             <ul style="list-style-type: none"> <li>– a description of the existing environment likely to be affected by the development, using sufficient baseline/background data;</li> <li>– an assessment of the likely impacts for all stages of the development, including any cumulative impacts, taking into consideration any relevant legislation, environmental planning instruments, guidelines, policies, plans and industry codes of practice;</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>- a description of the measures that would be implemented to avoid, minimise, mitigate and/or offset the likely impacts of the development, and an assessment of: <ul style="list-style-type: none"> <li>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;</li> <li>o the likely effectiveness of these measures; and</li> <li>o whether contingency measures would be necessary to manage any residual risks;</li> </ul> </li> <li>- a description of the measures that would be implemented to monitor and report on the environmental performance of the development;</li> <li>• a consolidated summary of all the proposed environmental management and monitoring measures, identifying all the commitments in the EIS;</li> <li>• 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>);</li> <li>• the reasons why the development should be approved, having regard to: <ul style="list-style-type: none"> <li>- relevant matters for consideration under the <i>Environmental Planning and Assessment Act 1979</i>, including the objects of the Act;</li> <li>- the biophysical, economic and social impacts of the development, including the principles of ecologically sustainable development;</li> <li>- the suitability of the site with respect to potential land use conflicts with existing and future surrounding land uses (with a focus on the existing equine critical industry cluster); and</li> <li>- feasible alternatives to the development (and its key components), including the consequences of not carrying out the development;</li> </ul> </li> <li>• a signed statement from the author of the EIS, certifying that the information contained within the document is neither false nor misleading.</li> </ul> <p>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.</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 and experienced person that includes an accurate estimate of the <b>capital investment value</b> (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.</p>
<p><b>Key Issues</b></p>	<p>The EIS must address the following key issues:</p> <ul style="list-style-type: none"> <li>• <b>Subsidence</b> – including: <ul style="list-style-type: none"> <li>- preparation of a comprehensive subsidence model incorporating all available geotechnical, geological and geophysical data; and</li> <li>- 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 (including Edderton Road), paying particular attention to those features that are considered to have significant economic, social, cultural or environmental value;</li> </ul> </li> <li>• <b>Land Resources</b> – including: <ul style="list-style-type: none"> <li>- an assessment of the likely impacts of the development on the soils and land capability of the site and surrounds, paying particular attention to biophysical strategic agricultural land (BSAL), including verification of the extent and condition of BSAL within the site and assessment of potential direct and indirect impacts of the development on the agricultural productivity of verified BSAL;</li> <li>- justification for any significant long term changes to potential agricultural productivity post-mining, paying particular attention to</li> </ul> </li> </ul>

	<p>any highly productive agricultural land that would be affected by the development;</p> <ul style="list-style-type: none"> <li>- an assessment of the agricultural impacts of the development, including preparation of an Agriculture Impact Statement, in accordance with the <i>Strategic Regional Land Use Policy</i>, paying particular attention to the likely impacts of the development on nearby equine and viticulture industry clusters;</li> <li>- a description of measures that would be implemented to avoid, minimise or mitigate adverse impacts on nearby equine or viticulture critical industry clusters; and</li> <li>- 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>, paying particular attention to nearby equine and viticulture critical industry clusters;</li> </ul> <ul style="list-style-type: none"> <li>• <b>Air Quality</b> – including: <ul style="list-style-type: none"> <li>- a detailed assessment of potential construction and operational air quality impacts, in accordance with the <i>Approved Methods for the Modelling and Assessment of Air Pollutants in NSW</i>, and with a particular focus on dust emissions including PM<sub>2.5</sub> and PM<sub>10</sub>, and having regard to the <i>Voluntary Land Acquisition and Mitigation Policy</i>; and</li> <li>- an assessment of the likely greenhouse gas impacts of the development;</li> </ul> </li> <li>• <b>Rehabilitation and Final Landform</b> – including: <ul style="list-style-type: none"> <li>- a description of final landform design objectives, having regard to achieving a natural landform that is safe, stable, non-polluting, fit for the nominated post-mining land use and sympathetic with surrounding landforms;</li> <li>- a description of how any outstanding rehabilitation obligations for the former Drayton Mine would be satisfied or altered by the development;</li> <li>- an analysis of final landform and post-mining land use options for the site, including the short and long-term cost and benefits, constraints and opportunities of each, and detailed justification for the preferred option;</li> <li>- a detailed description of the progressive rehabilitation measures that would be implemented over the life of the development and how this rehabilitation would be integrated with surrounding mines and land uses;</li> <li>- a detailed description of the proposed rehabilitation and mine closure strategies for the development, having regard to the key principles in <i>Strategic Framework for Mine Closure</i>; and</li> <li>- the measures which would be put in place for the long-term protection and/or management of the site and any biodiversity offset areas post-mining;</li> </ul> </li> <li>• <b>Noise</b> – including a detailed assessment of the likely construction, operational and off- site transport noise impacts of the development in accordance with the <i>Interim Construction Noise Guideline</i>, <i>NSW Noise Policy for Industry</i> and the <i>NSW Road Noise Policy</i> respectively, and having regard to the <i>Voluntary Land Acquisition and Mitigation Policy</i>;</li> <li>• <b>Visual</b> – including a detailed assessment of the likely visual impacts (including lighting) of the development (before, during and post-mining) on private landowners in the vicinity of the development and key vantage points in the public domain;</li> <li>• <b>Waste</b> – including estimates of the quantity and nature of the waste streams that would be generated by the project (including tailings and coarse rejects) and any measures that would be implemented to minimise, manage or dispose of these waste streams;</li> <li>• <b>Water</b> – including: <ul style="list-style-type: none"> <li>- an assessment of the likely impacts of the development on the quantity and quality of existing surface and groundwater resources including an assessment of existing connectivity between surface</li> </ul> </li> </ul>
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	<p>water, alluvial and Permian aquifers and how that could be impacted by the development;</p> <ul style="list-style-type: none"> <li>- accurate predictions of water take from each water source based on a calibrated transient 3D groundwater flow model that includes both a sensitivity and uncertainty analysis, has been independently peer reviewed and has regard to the Hunter Bioregional Assessment;</li> <li>- an assessment of the likely impacts of the development on watercourses, riparian land, water-related infrastructure, and other water users (private bores and groundwater dependent ecosystems);</li> <li>- an assessment of the likely impacts of the development on a water resource in relation to coal seam gas development and large coal mining development under the <i>Environment Protection and Biodiversity Conservation Act 1999</i> (see Attachment 4);</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> (including both general and high security licences);</li> <li>- demonstration that water take for the construction and operation of the proposed development can be obtained from an appropriately authorised and reliable supply in accordance with the operating rules of any relevant Water Sharing Plan (WSP) or water source embargo;</li> <li>- an assessment of any likely flooding impacts of the development;</li> <li>- a salinity investigation study; and</li> <li>- the measures which would be put in place to control sediment run-off and avoid erosion;</li> </ul> <ul style="list-style-type: none"> <li>• <b>Biodiversity</b> – including: <ul style="list-style-type: none"> <li>- accurate predictions of any vegetation to be cleared on site;</li> <li>- an assessment of the likely biodiversity impacts of the development, paying particular attention to threatened species, populations and ecological communities, undertaken in accordance with <i>Biodiversity Assessment Method</i> and documented in a Biodiversity Development Assessment Report (BDAR) or, subject to agreement with OEH and the Department, undertaken in accordance with the Upper Hunter Strategic Assessment (UHSA);</li> <li>- assessment of the likely impacts of the development on listed threatened species and communities under the <i>Environment Protection and Biodiversity Conservation Act 1999</i> (see Attachment 4);</li> <li>- a strategy to offset any residual impacts of the development in accordance with the offset rules under the <i>Biodiversity Offsets Scheme</i>; and</li> <li>- consideration of potential resource sterilisation in relation to any proposed biodiversity offset areas;</li> </ul> </li> <li>• <b>Heritage</b> – including: <ul style="list-style-type: none"> <li>- an assessment of the potential impacts of the development on Aboriginal heritage (cultural and archaeological), including consultation with relevant Aboriginal communities/parties and documentation of the views of these stakeholders regarding the likely impact of the development on their cultural heritage; and</li> <li>- an assessment of the potential impacts of the development on historic heritage items and cultural landscapes, including preparation of a Heritage Impact Statement and/or Historical Archaeological Assessment, prepared by a suitably qualified heritage expert;</li> </ul> </li> <li>• <b>Traffic &amp; Transport</b> – including: <ul style="list-style-type: none"> <li>- an assessment of the likely transport impacts of the development on the capacity, condition, safety and efficiency of the road and rail networks, including undertaking a road safety audit; and</li> <li>- a traffic analysis of any major/relevant intersections impacted, using SIDRA or a similar traffic model;</li> </ul> </li> <li>• <b>Hazards</b> – including:</li> </ul>
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	<ul style="list-style-type: none"> <li>- an assessment of the likely risks to public safety, paying particular attention to potential bushfire risks, interactions with nearby prescribed dams (including the possibility of far field horizontal movements) and the handling and use of any dangerous goods; and</li> <li>- a health risk assessment that considers the adverse effects from human exposure to acute and cumulative project related environmental hazards, in accordance with <i>Environmental Health Risk Assessment: Guidelines for assessing human health risk from environmental hazards</i>;</li> <li>• <b>Social</b> – including a detailed assessment of the potential social impacts of the development that builds on the findings of the Social Impact Assessment Scoping Report, in accordance with the <i>Social impact assessment guideline for State significant mining, petroleum production and extractive industry development</i>, including impacts on the operation and reputation of nearby equine, viticulture and tourism industries, paying particular consideration to: <ul style="list-style-type: none"> <li>- how the development might affect people’s way of life, community, access to and use of infrastructure, services and facilities, culture, health and wellbeing, surroundings, personal and property rights, decision-making systems, and fears and aspirations;</li> <li>- the principles in Section 1.3 of the guideline;</li> <li>- the review questions in Appendix D of the guideline; and</li> <li>- the recommendations made in Attachment 3; and</li> </ul> </li> <li>• <b>Economic</b> – including a detailed assessment of the likely economic impacts of the development, in accordance with the <i>Guidelines for the economic assessment of mining and coal seam gas proposals 2015</i>, paying particular attention to: <ul style="list-style-type: none"> <li>- the significance of the coal resource;</li> <li>- the costs and benefits of the project; identifying whether the development as a whole would result in a net benefit to NSW, including consideration of fluctuation in commodity markets and exchange rates; and</li> <li>- the demand on local infrastructure and services.</li> </ul> </li> </ul>
<p>Consultation</p>	<p>During the preparation of the EIS, you must consult with relevant local, State and Commonwealth Government authorities, service providers, Aboriginal stakeholders, community groups and affected landowners.</p> <p>In particular you must consult with:</p> <ul style="list-style-type: none"> <li>- affected landowners;</li> <li>- Maxwell Infrastructure (formerly Drayton Mine) Community Consultative Committee;</li> <li>- local community groups;</li> <li>- Muswellbrook Shire Council;</li> <li>- Office of Environment and Heritage (including the Heritage Branch);</li> <li>- Environment Protection Authority;</li> <li>- Division of Resources and Geoscience within the Department;</li> <li>- NSW Resources Regulator;</li> <li>- Subsidence Advisory NSW;</li> <li>- Department of Primary Industries (including NSW Forestry, Agriculture and Fisheries);</li> <li>- Department of Industry (including the Lands and Water Division);</li> <li>- Hunter Local Land Services;</li> <li>- NSW Health;</li> <li>- NSW Rural Fire Service; and</li> <li>- Roads and Maritime Services.</li> </ul> <p>The EIS 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;</li> <li>• identify where the design of the development has been amended and/or mitigation proposed to address issues raised; and</li> <li>• otherwise demonstrate that issues raised have been appropriately addressed in the assessment.</li> </ul>

Further consultation after 2 years	If you do not lodge a development application and EIS for the development within 2 years of the issue date of these requirements, you must consult further with the Planning Secretary in relation to the preparation of the EIS.
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## ATTACHMENT 1

### ENVIRONMENTAL PLANNING INSTRUMENTS, POLICIES, GUIDELINES & PLANS

Land	
	Interim Protocol for Site Verification & Mapping of Biophysical Strategic Land (OEH)
	Soil and Landscape Issues in Environmental Impact Assessment (NOW)
	Agfact AC.25: Agricultural Land Classification (NSW Agriculture)
	Strategic Regional Land Use Policy, Guideline for Preparing Agricultural Impact Statements 2012 (DPI) and the Agricultural Impact Statement Technical Notes 2013 (DPI)
	Strategic Regional Land Use Plan Upper Hunter 2012 (DPI)
	State Environmental Planning Policy No. 55 – Remediation of Land
	Australian and New Zealand Guidelines for the Assessment and Management of Contaminated Sites (ANZECC)
	Land Use Conflict Risk Assessment Guide (DPI)
Water	
Water Sharing Plans	Hunter Unregulated and Alluvial Water Sources 2009
	Hunter Regulated River Water Source
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)
	Hunter Bioregional Assessment 2018 (Commonwealth)
	National Water Quality Management Strategy Guidelines for Groundwater Protection in Australia (ARMCANZ/ANZECC)
	Guidelines for the Assessment & Management of Groundwater Contamination (EPA)
	Hunter River Salinity Trading Scheme (EPA)
	NSW State Rivers and Estuary Policy (NOW)
Surface Water	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)
	Flooding
Floodplain Risk Management Guideline (OEH)	
Biodiversity	
	Biodiversity Assessment Method (OEH)
	Fisheries NSW policies and guidelines

Guidelines for developments adjoining Department of Environment, Climate Change and Water (DECCW, 2010)

Guidelines for Threatened Species Assessment (DP&E)

Guidance to assist a decision-maker to determine a serious and irreversible impact (OEH)

NSW State Groundwater Dependent Ecosystem Policy (NOW)

Revocation, recategorisation and road adjustment policy (OEH, 2012)

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)

Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (OEH)

Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW 2010 (DECCW)

Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW 2010 (DECCW)

Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW 2011 (OEH)

NSW Heritage Manual (OEH)

Statements of Heritage Impact (OEH)

Archaeological Assessments Guidelines 1996 (Heritage Council)

Assessing Significance for Historical Archaeological Sites and Relics 2009 (Heritage Council)

Criteria for the Assessment of Excavation Directors 2011 (Heritage Council)

Hunter Regional Environmental Plan 1989 (Heritage)

## Noise & Blasting

NSW Noise Policy for Industry (EPA)

Interim Construction Noise Guideline (DECC)

NSW Road Noise Policy (EPA)

Rail Infrastructure Noise Guideline (EPA)

Voluntary Acquisition and Mitigation Policy for State Significant Mining, Petroleum and Extractive Industry Developments (DP&E)

Technical basis for guidelines to minimise annoyance due to blasting overpressure and ground vibration (ANZEC)

Assessing Vibration: A Technical Guideline (DEC)

## 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)

National Greenhouse Accounts Factors (Commonwealth)

Voluntary Acquisition and Mitigation Policy for State Significant Mining, Petroleum and Extractive Industry Developments (DP&E)

## Transport

Guide to Traffic Generating Development (RTA)

Road Design Guide (RMS) & relevant Austroads Standards

Muswellbrook Mine Affected Roads – Network Plan

## Hazards

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 (RFS)



	Dams Safety Act 1978
<b>Resource</b>	Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves 2012 (JORC)
<b>Waste</b>	Waste Classification Guidelines (DECC)
<b>Rehabilitation</b>	<p>Mine Rehabilitation – Leading Practice Sustainable Development Program for the Mining Industry (Commonwealth)</p> <p>Mine Closure and Completion – Leading Practice Sustainable Development Program for the Mining Industry (Commonwealth)</p> <p>Strategic Framework for Mine Closure (ANZMEC-MCA)</p> <p>Synoptic Plan: Integrated landscapes for coal mine rehabilitation in the Hunter Valley 1999 (DMR)</p>
<b>Social &amp; Economic</b>	<p>Guidelines for the economic assessment of mining and coal seam gas proposals (NSW Government)</p> <p>Social impact assessment guideline for State significant mining, petroleum production and extractive industry development (DP&amp;E)</p>
<b>Environmental Planning Instruments - General</b>	<p>State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007</p> <p>State Environmental Planning Policy (State and Regional Development) 2011</p> <p>State Environmental Planning Policy (Infrastructure) 2007</p> <p>Muswellbrook Local Environmental Plan 2009</p> <p>Hunter Regional Plan 2036</p>

**ATTACHMENT 2**

**AGENCIES' CORRESPONDENCE**



Jack Murphy  
Environment Assessment Officer  
Resource Assessments | Planning Services  
Department of Planning and Environment

Via Email: [Jack.Murphy@planning.nsw.gov.au](mailto:Jack.Murphy@planning.nsw.gov.au)

Dear Mr Murphy

**Maxwell Project (SSD 9526)**

Thank you for the opportunity to provide comment with relation to the Environmental Impact Statement (EIS) requirements for the Maxwell Project (SSD 9526).

Subsidence Advisory NSW has no additional requirements.

It should be noted however, if consent to mine is granted, Subsidence Advisory NSW would intend to declare the area within EL 5460 a Mine Subsidence District.

I can be contacted at [Matthew.Montgomery@finance.nsw.gov.au](mailto:Matthew.Montgomery@finance.nsw.gov.au) or on 0425 275 564 if you wish to discuss this further.

Yours sincerely

**Matthew Montgomery**  
Infrastructure Manager, Subsidence Advisory NSW

27/8/2018



Our Ref: DOC18/590689

Jack Murphy  
Environmental Assessment Officer  
Resource Assessments  
Department of Planning and Environment  
GPO Box 39  
Sydney NSW 2001

By email: [jack.murphy@planning.nsw.gov.au](mailto:jack.murphy@planning.nsw.gov.au)

**Malabar Coal Limited – Maxwell Project (SSD 9526)**

Dear Mr Murphy

I refer to the Department's email dated 9 August 2018 inviting the Resources Regulator to provide Secretary's Environmental Assessment Requirements (SEARs) for the State Significant Development application for the Maxwell Project (the Project).

The project involves the establishment of an underground coal mining operation. The proposed operation would utilise existing 'Maxwell Infrastructure' at the site formerly known as the Drayton Mine).

The Resources Regulator has reviewed the application and recommends that the standard mining development rehabilitation SEARs, provided in the Advice Response section, be applied to this project.

Should you have any questions of the Resources Regulator over this matter, please don't hesitate to contact me on 4063 6444.

Yours sincerely

Matthew Newton  
Director Compliance Operations  
NSW Resources Regulator

29 August 2018

## ADVICE RESPONSE

### Mining Development Rehabilitation Standard SEARs

#### **Post-mining land use**

- (a) Identification and assessment of post-mining land use options;
- (b) Identification and justification of the preferred post-mining land use outcome(s), including a discussion of how the final land use(s) are aligned with relevant local and regional strategic land use objectives;
- (c) Identification of how the rehabilitation of the project will relate to the rehabilitation strategies of neighbouring mines within the region, with a particular emphasis on the coordination of rehabilitation activities along common boundary areas;

#### **Rehabilitation objectives and domains**

- (d) Inclusion of a set of project rehabilitation objectives and preliminary completion criteria that clearly define the outcomes required to achieve the post-mining land use for each domain. Completion criteria should be specific, measurable, achievable, realistic and time-bound. If necessary, objective criteria may be presented as ranges;

#### **Rehabilitation Methodology**

- (e) Details regarding the rehabilitation methods for disturbed areas and expected time frames for each stage of the rehabilitation process;
- (f) Mine layout and scheduling, including maximising opportunities for progressive final rehabilitation. The final rehabilitation schedule should be mapped against key assumptions (eg. production milestones) of the mine layout sequence, before being translated to indicative timeframes throughout the mine life. The mine plan should maximise opportunities for progressive rehabilitation;

#### **Conceptual Final Landform Design**

- (g) Inclusion of a drawing at an appropriate scale identifying key attributes of the final landform, including final landform contours and the location of the proposed final land use(s);

#### **Monitoring and Research**

- (h) Outlining the monitoring programs that will be implemented to assess how rehabilitation is trending towards the nominated land use objectives and completion criteria;
- (i) Details of the process for triggering intervention and adaptive management measures to address potential adverse results as well as continuously improve rehabilitation practices;
- (j) Outlining any proposed rehabilitation research programs and trials, including their objectives. This should include details of how the outcomes of research are considered as part of the ongoing review and improvement of rehabilitation practices;

#### **Post-closure maintenance**

- (k) Description of how post-rehabilitation areas will be actively managed and maintained in accordance with the intended land use(s) in order to demonstrate progress towards meeting the rehabilitation objectives and completion criteria in a timely manner;

#### **Barriers or limitations to effective rehabilitation**

- (l) Identification and description of those aspects of the site or operations that may present barriers or limitations to effective rehabilitation, including:
  - (i) evaluation of the likely effectiveness of the proposed rehabilitation techniques against the rehabilitation objectives and completion criteria;
  - (ii) an assessment and life of mine management strategy of the potential for geochemical constraints to rehabilitation (e.g. acid rock drainage, spontaneous combustion etc.), particularly associated with the management of overburden/interburden and reject material;



- (iii) the processes that will be implemented throughout the mine life to identify and appropriately manage geochemical risks that may affect the ability to achieve sustainable rehabilitation outcomes;
  - (iv) a life of mine tailings management strategy, which details measures to be implemented to avoid the exposure of tailings material that may cause environmental risk, as well as promote geotechnical stability of the rehabilitated landform; and
  - (v) existing and surrounding landforms (showing contours and slopes) and how similar characteristics can be incorporated into the post-mining final landform design. This should include an evaluation of how key geomorphological characteristics evident in stable landforms within the natural landscape can be adapted to the materials and other constraints associated with the site.
- (m) Where a void is proposed to remain as part of the final landform, include:
- (i) a constraints and opportunities analysis of final void options, including backfilling, to justify that the proposed design is the most feasible and environmentally sustainable option to minimise the sterilisation of land post-mining;
  - (ii) a preliminary geotechnical assessment to identify the likely long term stability risks associated with the proposed remaining high wall(s) and low wall(s) along with associated measures that will be required to minimise potential risks to public safety; and
  - (iii) outcomes of the surface and groundwater assessments in relation to the likely final water level in the void. This should include an assessment of the potential for fill and spill along with measures required be implemented to minimise associated impacts to the environment and downstream water users.
- (n) Consideration of the controls likely to be required to either prevent or mitigate against rehabilitation risks as part of the closure plan for the site;
- (o) Where an ecological land use is proposed, demonstrate how the revegetation strategy (e.g. seed mix, habitat features, corridor width etc.) has been developed in consideration of the target vegetation community(s);
- (p) Where the intended land use is agriculture, demonstrate that the landscape, vegetation and soil will be returned to a condition capable of supporting this; and
- (q) Consider any relevant government policies.

The following risks have been identified that require the application of non-standard SEARs:

- (s) Where a creek diversion is proposed:
- (i) a geotechnical assessment of the proposed location of the diversion to identify risks with regard to stability during construction and for long term (post mining);
  - (ii) a detailed design that identifies and demonstrates how the risks identified above would be managed to meet objectives for the ecological function of the diversion, integration with surrounding land uses , as well as final landuse,, and for water quality with consideration given to the water source and volume and flow velocity; and
  - (iii) an assessment of constraints and opportunities with regard to soils salvaged during channel decommissioning and final land uses.

<sup>1</sup> The following government policies should be considered when addressing rehabilitation issues:

- Mine Rehabilitation (Leading Practice Sustainable Development Program for the Mining Industry, 2006)
- Mine Closure and Completion (Leading Practice Sustainable Development Program for the Mining Industry, 2006)
- Strategic Framework for Mine Closure (ANZMEC-MCA, 2000)



17 August 2018

Department of Planning & Environment  
Resource Assessments  
GPO Box 39  
SYDNEY NSW 2001

**Attention: Jack Murphy**

**PROPOSAL – MAXWELL PROJECT, THOMAS MITCHELL DRIVE MUSWELLBROOK, SSD NO. 9526**

Reference is made to Department of Planning and Environment's email dated 9 August 2018, requesting Roads and Maritime Services' (Roads and Maritime) requirements under Schedule 2 of the *Environmental Planning and Assessment Regulation 2000* for the Environmental Impact Statement (EIS) for the proposed underground mining project at Thomas Mitchell Drive Muswellbrook.

Transport for NSW and Roads and Maritime's primary interests are in the road network, traffic and broader transport issues. In particular, the efficiency and safety of the classified road network, the security of property assets and the integration of land use and transport.

Roads and Maritime have reviewed the Scoping Report, prepared by Malabar Coal, and dated August 2018, and understands the project is for the development of an underground coal mining operation which would extract approximately 150 million tonnes of run-of-mine coal over a period of approximately 26 years.

Roads and Maritime response & requirements

The EIS should refer to the following guidelines with regard to the traffic and transport impacts of the proposed development:

- Road and Related Facilities within the Department of Planning EIS Guidelines, and,
- Section 2 Traffic Impact Studies of Roads and Maritime's *Guide to Traffic Generating Developments 2002*.

Furthermore, a traffic and transport study shall be prepared in accordance with the Roads and Maritime's *Guide to Traffic Generating Developments 2002* and is to include (but not be limited to) the following:

- Assessment of all relevant vehicular traffic routes and intersections for access to / from the subject properties.
- Current traffic counts for all of the traffic routes and intersections.
- The anticipated additional vehicular traffic generated from both the construction and operational stages of the project.

- The distribution on the road network of the trips generated by the proposed development. It is requested that the predicted traffic flows are shown diagrammatically to a level of detail sufficient for easy interpretation.
- Consideration of the traffic impacts on existing and proposed intersections, and the capacity of the local and classified road network to safely and efficiently cater for the additional vehicular traffic generated by the proposed development during both the construction and operational stages. The traffic impact shall also include the cumulative traffic impact of other proposed developments in the area.
- Identify the necessary road network infrastructure upgrades that are required to maintain existing levels of service on both the local and classified road network for the development. In this regard, preliminary concept drawings shall be submitted with the EIS for any identified road infrastructure upgrades. However, it should be noted that any identified road infrastructure upgrades will need to be to the satisfaction of Roads and Maritime and Council.
- Traffic analysis of any major / relevant intersections impacted, using SIDRA or similar traffic model, including:
  - Current traffic counts and 10 year traffic growth projections
  - With and without development scenarios
  - 95<sup>th</sup> percentile back of queue lengths
  - Delays and level of service on all legs for the relevant intersections
  - Electronic data for Roads and Maritime review.
- Any other impacts on the regional and state road network including consideration of pedestrian, cyclist and public transport facilities and provision for service vehicles.

On determination of this matter, please forward a copy of the SEARs to Roads and Maritime for record and / or action purposes. Should you require further information please contact Hunter Land Use on 4924 0688 or by emailing [development.hunter@rms.nsw.gov.au](mailto:development.hunter@rms.nsw.gov.au).

Yours sincerely



**Peter Marler**  
Manager Land Use Assessment  
Hunter Region





# NSW RURAL FIRE SERVICE



The Secretary  
NSW Planning & Environment  
GPO Box 39  
SYDNEY NSW 2001

Your Ref: SSD 9526  
Our Ref: D18/6800  
DA18081514553 AB

**ATTENTION:** Jack Murphy

12 September 2018

Dear Mr Murphy

## **Agency Comment - SEARs for Maxwell Project (SSD 9526); Muswellbrook LGA**

I refer to your letter dated 9 August 2018 seeking NSW Rural Fire Service (NSW RFS) input to the Secretary's environmental assessment requirements for the above State Significant Development proposal.

The NSW RFS notes that the land is mapped bush fire prone by Muswellbrook Shire Council.

The NSW RFS has reviewed the submitted documentation and the draft SEARs and supports the inclusion of a requirement for the preparation of a bush fire hazard assessment as outlined in Key Issues - Hazards of the draft SEARs.

For any queries regarding this correspondence please contact Alan Bawden on 6691 0400.

Yours sincerely,

Paul Creenaune

**Acting Team Leader – Development Assessment & Planning**

*The RFS has made getting information easier. For general information on 'Planning for Bush Fire Protection, 2006', visit the RFS web page at [www.rfs.nsw.gov.au](http://www.rfs.nsw.gov.au) and search under 'Planning for Bush Fire Protection, 2006'.*

### **Postal address**

Records  
NSW Rural Fire Service  
Locked Bag 17  
GRANVILLE NSW 2142

### **Street address**

NSW Rural Fire Service  
Planning and Environment Services (North)  
Suite 1, 129 West High Street  
COFFS HARBOUR NSW 2450

T (02) 6691 0400  
F (02) 6691 0499  
[www.rfs.nsw.gov.au](http://www.rfs.nsw.gov.au)  
Email: [pes@rfs.nsw.gov.au](mailto:pes@rfs.nsw.gov.au)





Office of  
Environment  
& Heritage

DOC566995-2  
SSD 9526

Jack Murphy  
Environmental Assessment Officer  
Department of Planning and Environment  
jack.murphy@planning.nsw.gov.au

Dear Jack

**Input into Secretary's Environmental Assessment Requirements – Maxwell project – Malabar Coal - Muswellbrook LGA (SSD 9526)**

I refer to your email dated 9 August 2018 seeking input into the Secretary's Environmental Assessment Requirements (SEARs) for the Maxwell project located in the Muswellbrook local government area.

The Office of Environment and Heritage (OEH) understands that Malabar Coal is seeking to establish an underground coal mining operation utilising existing infrastructure at the site formerly known as the Drayton Mine. The proposal is a State Significant Development (SSD 9526) project under the *Environmental Planning and Assessment Act 1979*.

OEH has reviewed the Scoping Report as prepared by Malabar Coal (dated August 2018) and has prepared Standard SEARs which are presented in **Attachment A**. There are no project-specific SEARs provided for this project (**Attachment B**). Details of guidance documents are provided in **Attachment C**.

With respect to Aboriginal cultural heritage, OEH notes that any Aboriginal cultural heritage assessment undertaken prior to 2010 is unlikely to meet current OEH Aboriginal cultural heritage guidelines for the assessment of Aboriginal cultural heritage in NSW. The OEH 2011 *Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW* should be referenced in this instance.

If you have any further questions in relation to this matter, please contact Steven Cox, Senior Team Leader Planning, on 02 4927 3140.

Yours sincerely

**SHARON MOLLOY**  
**Director Hunter Central Coast Branch**  
**Conservation and Regional Delivery Division**

Enclosure: Attachments A, B, C



## Attachment A – Standard Environmental Assessment Requirements

### Biodiversity

1. Biodiversity impacts related to the proposed development (SSD 9510) are to be assessed in accordance with the [Biodiversity Assessment Method](#) and documented in a Biodiversity Development Assessment Report (BDAR). The BDAR must include information in the form detailed in the *Biodiversity Conservation Act 2016* (s6.12), *Biodiversity Conservation Regulation 2017* (s6.8) and [Biodiversity Assessment Method](#).
2. 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 [Biodiversity Assessment Method](#).
3. The BDAR must include details of the measures proposed to address the offset obligation as follows;
  - The total number and classes of biodiversity credits required to be retired for the development/project;
  - The number and classes of like-for-like biodiversity credits proposed to be retired;
  - The number and classes of biodiversity credits proposed to be retired in accordance with the variation rules;
  - Any proposal to fund a biodiversity conservation action;
  - Any proposal to conduct ecological rehabilitation (if a mining project);
  - Any proposal to make a payment to the Biodiversity Conservation Fund.

If seeking approval to use the variation rules, the BDAR must contain details of the [reasonable steps](#) that have been taken to obtain requisite like-for-like biodiversity credits.

4. The BDAR must be prepared by a person accredited in accordance with the Accreditation Scheme for the Application of the Biodiversity Assessment Method Order 2017 under s6.10 of the *Biodiversity Conservation Act 2016*.

### Aboriginal cultural heritage

5. The Environmental Impact Assessment (EIS) must identify and describe the Aboriginal cultural heritage values that exist across the whole area that will be affected by the development and document these in the Aboriginal Cultural Heritage Assessment Report (ACHAR). This may include the need for surface survey and test excavation. The identification of cultural heritage values should be guided by the [Guide to investigating, assessing and reporting on Aboriginal Cultural Heritage in NSW \(DECCW, 2011\)](#) and consultation with OEH regional branch officers.
6. Consultation with Aboriginal people must be undertaken and documented in accordance with the [Aboriginal cultural heritage consultation requirements for proponents 2010 \(DECCW\)](#). The significance of cultural heritage values for Aboriginal people who have a cultural association with the land must be documented in the ACHAR.
7. Impacts on Aboriginal cultural heritage values are to be assessed and documented in the ACHAR. The ACHAR must demonstrate attempts to avoid impact upon cultural heritage values and identify any conservation outcomes. Where impacts are unavoidable, the ACHAR must outline measures proposed to mitigate impacts. Any objects recorded as part of the assessment must be documented and notified to OEH.

### Historic heritage

8. The EIS must provide a heritage assessment including but not limited to an assessment of impacts to State and local heritage including conservation areas, natural heritage areas, places of Aboriginal heritage value, buildings, works, relics, gardens, landscapes, views, trees should be assessed. Where impacts to State or locally significant heritage items are identified, the assessment shall:
- a. outline the proposed mitigation and management measures (including measures to avoid significant impacts and an evaluation of the effectiveness of the mitigation measures) generally consistent with the NSW Heritage Manual (1996),
  - b. be undertaken by a suitably qualified heritage consultant(s) (note: where archaeological excavations are proposed the relevant consultant must meet the NSW Heritage Council's Excavation Director criteria),
  - c. include a statement of heritage impact for all heritage items (including significance assessment),
  - d. consider impacts including, but not limited to, vibration, demolition, archaeological disturbance, altered historical arrangements and access, landscape and vistas, and architectural noise treatment (as relevant), and
  - e. where potential archaeological impacts have been identified develop an appropriate archaeological assessment methodology, including research design, to guide physical archaeological test excavations (terrestrial and maritime as relevant) and include the results of these test excavations.

### Water and soils

9. The EIS must map the following features relevant to water and soils including:
- a. Acid sulfate soils (Class 1, 2, 3 or 4 on the Acid Sulfate Soil Planning Map).
  - b. Rivers, streams, wetlands, estuaries (as described in s4.2 of the Biodiversity Assessment Method).
  - c. Wetlands as described in s4.2 of the Biodiversity Assessment Method.
  - d. Groundwater.
  - e. Groundwater dependent ecosystems.
  - f. Proposed intake and discharge locations.
10. The EIS must describe background conditions for any water resource likely to be affected by the development, including:
- a. Existing surface and groundwater.
  - b. Hydrology, including volume, frequency and quality of discharges at proposed intake and discharge locations.
  - c. Water Quality Objectives (as endorsed by the NSW Government <http://www.environment.nsw.gov.au/ieo/index.htm>) including groundwater as appropriate that represent the community's uses and values for the receiving waters.
  - d. Indicators and trigger values/criteria for the environmental values identified at (c) in accordance with the [ANZECC \(2000\) Guidelines for Fresh and Marine Water Quality](#) and/or local objectives, criteria or targets endorsed by the NSW Government.

11. The EIS must assess the impacts of the development on water quality, including:

- a. The nature and degree of impact on receiving waters for both surface and groundwater, demonstrating how the development protects the Water Quality Objectives where they are currently being achieved, and contributes towards achievement of the Water Quality Objectives over time where they are currently not being achieved. This should include an assessment of the mitigating effects of proposed stormwater and wastewater management during and after construction.
- b. Identification of proposed monitoring of water quality.

12. The EIS must assess the impact of the development on hydrology, including:

- a. Water balance including quantity, quality and source.
- b. Effects to downstream rivers, wetlands, estuaries, marine waters and floodplain areas.
- c. Effects to downstream water-dependent fauna and flora including groundwater dependent ecosystems.
- d. Impacts to natural processes and functions within rivers, wetlands, estuaries and floodplains that affect river system and landscape health such as nutrient flow, aquatic connectivity and access to habitat for spawning and refuge (e.g. river benches).
- e. Changes to environmental water availability, both regulated/licensed and unregulated/rules-based sources of such water.
- f. Mitigating effects of proposed stormwater and wastewater management during and after construction on hydrological attributes such as volumes, flow rates, management methods and re-use options.
- g. Identification of proposed monitoring of hydrological attributes.

#### **Flooding and coastal erosion**

13. The EIS must map the following features relevant to flooding as described in the Floodplain Development Manual 2005 (NSW Government 2005) including:

- a. Flood prone land.
- b. Flood planning area, the area below the flood planning level.
- c. Hydraulic categorisation (floodways and flood storage areas).

14. The EIS must describe flood assessment and modelling undertaken in determining the design flood levels for events, including a minimum of the 1 in 10 year, 1 in 100 year flood levels and the probable maximum flood, or an equivalent extreme event.

15. The EIS must model the effect of the proposed development (including fill) on the flood behaviour under the following scenarios:

- a. Current flood behaviour for a range of design events as identified in 11 above. This includes the 1 in 200 and 1 in 500 year flood events as proxies for assessing sensitivity to an increase in rainfall intensity of flood producing rainfall events due to climate change.

16. Modelling in the EIS must consider and document:

- a. The impact on existing flood behaviour for a full range of flood events including up to the probable maximum flood.
- b. Impacts of the development on flood behaviour resulting in detrimental changes in potential flood affection of other developments or land. This may include redirection of flow, flow velocities, flood levels, hazards and hydraulic categories.
- c. Relevant provisions of the NSW Floodplain Development Manual 2005.

17. The EIS must assess the impacts on the proposed development on flood behaviour, including:

- a. Whether there will be detrimental increases in the potential flood affectation of other properties, assets and infrastructure.
- b. Consistency with Council floodplain risk management plans.
- c. Compatibility with the flood hazard of the land.
- d. Compatibility with the hydraulic functions of flow conveyance in floodways and storage in flood storage areas of the land.
- e. Whether there will be adverse effect to beneficial inundation of the floodplain environment, on, adjacent to or downstream of the site.
- f. Whether there will be direct or indirect increase in erosion, siltation, destruction of riparian vegetation or a reduction in the stability of river banks or watercourses.
- g. Any impacts the development may have upon existing community emergency management arrangements for flooding. These matters are to be discussed with the SES and Council.
- h. Whether the proposal incorporates specific measures to manage risk to life from flood. These matters are to be discussed with the SES and Council.
- i. Emergency management, evacuation and access, and contingency measures for the development considering the full range of flood risk (based upon the probable maximum flood or an equivalent extreme flood event). These matters are to be discussed with and have the support of Council and the SES.
- j. Any impacts the development may have on the social and economic costs to the community as consequence of flooding.



## Attachment B – Project specific environmental assessment requirements

<b>Biodiversity - nil</b>
<b>Aboriginal cultural heritage - nil</b>
<b>Historic heritage - nil</b>
<b>Water and soils - nil</b>
<b>Flooding and coastal erosion - nil</b>



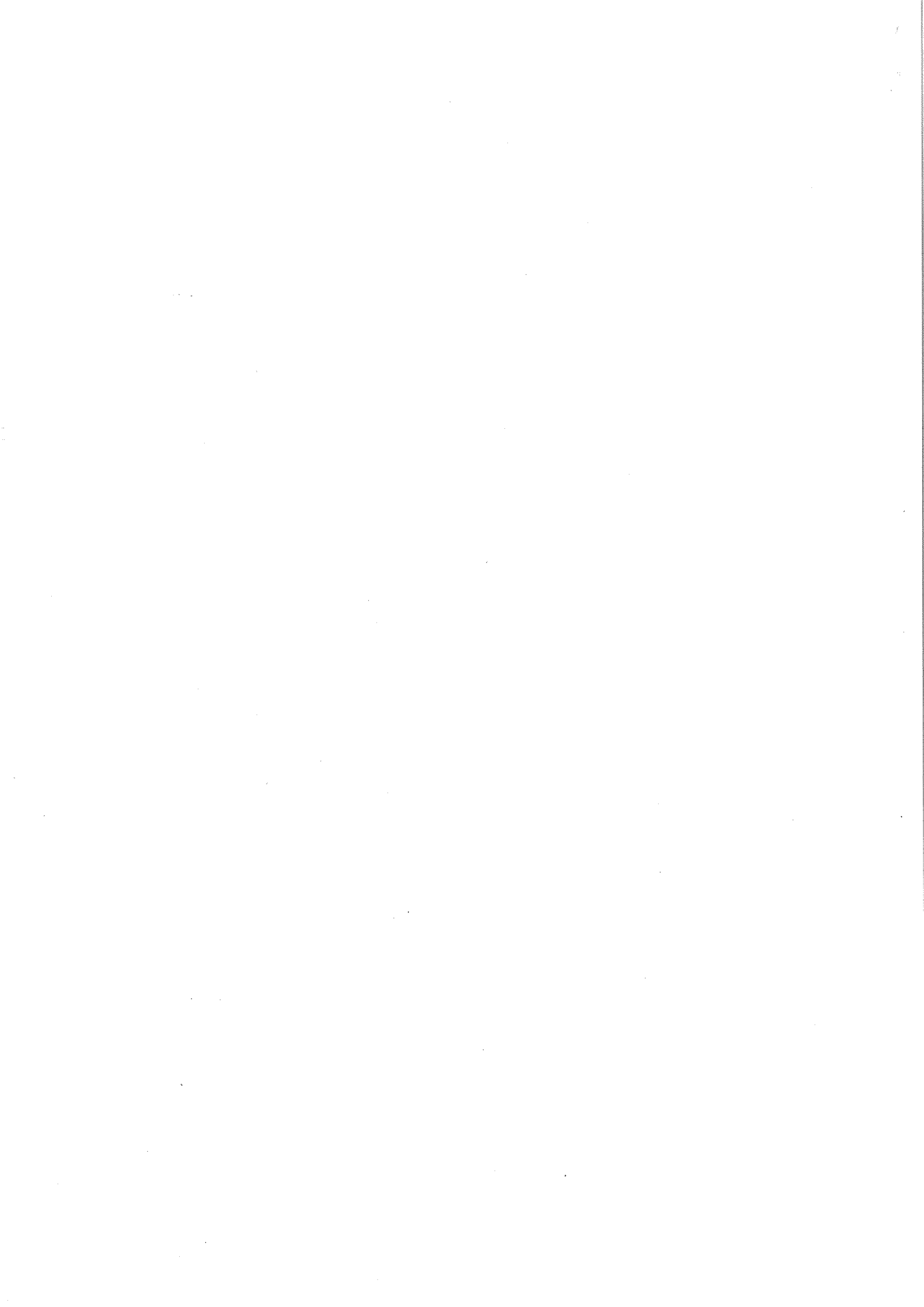
## Attachment C – Guidance material

Title	Web address
<b>Relevant legislation</b>	
<i>Biodiversity Conservation Act 2016</i>	<a href="https://www.legislation.nsw.gov.au/#/view/act/2016/63/full">https://www.legislation.nsw.gov.au/#/view/act/2016/63/full</a>
<i>Coastal Management Act 2016</i>	<a href="https://www.legislation.nsw.gov.au/#/view/act/2016/20/full">https://www.legislation.nsw.gov.au/#/view/act/2016/20/full</a>
<i>Commonwealth Environment Protection and Biodiversity Conservation Act 1999</i>	<a href="http://www.austlii.edu.au/au/legis/cth/consol_act/epabca1999588/">http://www.austlii.edu.au/au/legis/cth/consol_act/epabca1999588/</a>
<i>Environmental Planning and Assessment Act 1979</i>	<a href="http://www.legislation.nsw.gov.au/maintop/view/inforce/act+203+1979+cd+0+N">http://www.legislation.nsw.gov.au/maintop/view/inforce/act+203+1979+cd+0+N</a>
<i>Fisheries Management Act 1994</i>	<a href="http://www.legislation.nsw.gov.au/maintop/view/inforce/act+38+1994+cd+0+N">http://www.legislation.nsw.gov.au/maintop/view/inforce/act+38+1994+cd+0+N</a>
<i>Marine Parks Act 1997</i>	<a href="http://www.legislation.nsw.gov.au/maintop/view/inforce/act+64+1997+cd+0+N">http://www.legislation.nsw.gov.au/maintop/view/inforce/act+64+1997+cd+0+N</a>
<i>National Parks and Wildlife Act 1974</i>	<a href="http://www.legislation.nsw.gov.au/maintop/view/inforce/act+80+1974+cd+0+N">http://www.legislation.nsw.gov.au/maintop/view/inforce/act+80+1974+cd+0+N</a>
<i>Protection of the Environment Operations Act 1997</i>	<a href="http://www.legislation.nsw.gov.au/maintop/view/inforce/act+156+1997+cd+0+N">http://www.legislation.nsw.gov.au/maintop/view/inforce/act+156+1997+cd+0+N</a>
<i>Water Management Act 2000</i>	<a href="http://www.legislation.nsw.gov.au/maintop/view/inforce/act+92+2000+cd+0+N">http://www.legislation.nsw.gov.au/maintop/view/inforce/act+92+2000+cd+0+N</a>
<i>Wilderness Act 1987</i>	<a href="http://www.legislation.nsw.gov.au/viewtop/inforce/act+196+1987+FIRST+0+N">http://www.legislation.nsw.gov.au/viewtop/inforce/act+196+1987+FIRST+0+N</a>
<b>Biodiversity</b>	
Biodiversity Assessment Method (OEH, 2017)	<a href="http://www.environment.nsw.gov.au/resources/bcact/biodiversity-assessment-method-170206.pdf">http://www.environment.nsw.gov.au/resources/bcact/biodiversity-assessment-method-170206.pdf</a>
Guidance and Criteria to assist a decision maker to determine a serious and irreversible impact (OEH, 2017)	<a href="http://www.environment.nsw.gov.au/resources/bcact/guidance-decision-makers-determine-serious-irreversible-impact-170204.pdf">http://www.environment.nsw.gov.au/resources/bcact/guidance-decision-makers-determine-serious-irreversible-impact-170204.pdf</a>
NSW Guide to Surveying Threatened Plant	<a href="http://www.environment.nsw.gov.au/resources/threatenedspecies/160129-threatened-plants-survey-guide.pdf">http://www.environment.nsw.gov.au/resources/threatenedspecies/160129-threatened-plants-survey-guide.pdf</a>
Fisheries NSW policies and guidelines	<a href="http://www.dpi.nsw.gov.au/fisheries/habitat/publications/policies,-guidelines-and-manuals/fish-habitat-conservation">http://www.dpi.nsw.gov.au/fisheries/habitat/publications/policies,-guidelines-and-manuals/fish-habitat-conservation</a>
List of national parks	<a href="http://www.environment.nsw.gov.au/NationalParks/parksearchatoz.aspx">http://www.environment.nsw.gov.au/NationalParks/parksearchatoz.aspx</a>
Revocation, recategorisation and road adjustment policy (OEH, 2012)	<a href="http://www.environment.nsw.gov.au/policies/RevocationOfLandPolicy.htm">http://www.environment.nsw.gov.au/policies/RevocationOfLandPolicy.htm</a>
Guidelines for developments adjoining land and water managed by the Department of Environment, Climate Change and Water (DECCW, 2010)	<a href="http://www.environment.nsw.gov.au/protectedareas/developmentadjoiningdecc.htm">http://www.environment.nsw.gov.au/protectedareas/developmentadjoiningdecc.htm</a>
<b>Heritage</b>	
The Burra Charter (The Australia ICOMOS charter for places of cultural significance)	<a href="http://australia.icomos.org/wp-content/uploads/The-Burra-Charter-2013-Adopted-31.10.2013.pdf">http://australia.icomos.org/wp-content/uploads/The-Burra-Charter-2013-Adopted-31.10.2013.pdf</a>
Statements of Heritage Impact 2002 (HO & DUAP)	<a href="http://www.environment.nsw.gov.au/resources/heritagebranch/heritage/hmstatementsofhi.pdf">http://www.environment.nsw.gov.au/resources/heritagebranch/heritage/hmstatementsofhi.pdf</a>
NSW Heritage Manual (DUAP) (scroll through alphabetical list to 'N')	<a href="http://www.environment.nsw.gov.au/Heritage/publications/">http://www.environment.nsw.gov.au/Heritage/publications/</a>



Title	Web address
<b>Aboriginal cultural heritage</b>	
Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW, 2010)	<a href="http://www.environment.nsw.gov.au/resources/cultureheritage/commconsultation/09781ACHconsultreq.pdf">http://www.environment.nsw.gov.au/resources/cultureheritage/commconsultation/09781ACHconsultreq.pdf</a>
Code of Practice for the Archaeological Investigation of Aboriginal Objects in New South Wales (DECCW, 2010)	<a href="http://www.environment.nsw.gov.au/resources/cultureheritage/10783FinalArchCoP.pdf">http://www.environment.nsw.gov.au/resources/cultureheritage/10783FinalArchCoP.pdf</a>
Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW (OEH 2011)	<a href="http://www.environment.nsw.gov.au/resources/cultureheritage/20110263ACHguide.pdf">http://www.environment.nsw.gov.au/resources/cultureheritage/20110263ACHguide.pdf</a>
Aboriginal Site Recording Form	<a href="http://www.environment.nsw.gov.au/resources/parks/SiteCardMainV1_1.pdf">http://www.environment.nsw.gov.au/resources/parks/SiteCardMainV1_1.pdf</a>
Aboriginal Site Impact Recording Form	<a href="http://www.environment.nsw.gov.au/resources/cultureheritage/120558asirf.pdf">http://www.environment.nsw.gov.au/resources/cultureheritage/120558asirf.pdf</a>
Aboriginal Heritage Information Management System (AHIMS) Registrar	<a href="http://www.environment.nsw.gov.au/contact/AHIMSRegistrar.htm">http://www.environment.nsw.gov.au/contact/AHIMSRegistrar.htm</a>
Care Agreement Application form	<a href="http://www.environment.nsw.gov.au/resources/cultureheritage/20110914TransferObject.pdf">http://www.environment.nsw.gov.au/resources/cultureheritage/20110914TransferObject.pdf</a>
<b>Acid sulphate soils</b>	
Acid Sulfate Soils Planning Maps via Data.NSW	<a href="http://data.nsw.gov.au/data/">http://data.nsw.gov.au/data/</a>
Acid Sulfate Soils Manual (Stone et al. 1998)	<a href="http://www.environment.nsw.gov.au/resources/epa/Acid-Sulfate-Manual-1998.pdf">http://www.environment.nsw.gov.au/resources/epa/Acid-Sulfate-Manual-1998.pdf</a>
Acid Sulfate Soils Laboratory Methods Guidelines (Ahern et al. 2004)	<a href="http://www.environment.nsw.gov.au/resources/soils/acid-sulfate-soils-laboratory-methods-guidelines.pdf">http://www.environment.nsw.gov.au/resources/soils/acid-sulfate-soils-laboratory-methods-guidelines.pdf</a> This replaces Chapter 4 of the Acid Sulfate Soils Manual above.
<b>Flooding and coastal erosion</b>	
Reforms to coastal erosion management	<a href="http://www.environment.nsw.gov.au/coasts/coastalerosionmgmt.htm">http://www.environment.nsw.gov.au/coasts/coastalerosionmgmt.htm</a>
Floodplain development manual	<a href="http://www.environment.nsw.gov.au/floodplains/manual.htm">http://www.environment.nsw.gov.au/floodplains/manual.htm</a>
Guidelines for Preparing Coastal Zone Management Plans	Guidelines for Preparing Coastal Zone Management Plans <a href="http://www.environment.nsw.gov.au/resources/coasts/130224CZMPGuide.pdf">http://www.environment.nsw.gov.au/resources/coasts/130224CZMPGuide.pdf</a>
NSW Climate Impact Profile	<a href="http://climatechange.environment.nsw.gov.au/">http://climatechange.environment.nsw.gov.au/</a>
Climate Change Impacts and Risk Management	<a href="#">Climate Change Impacts and Risk Management: A Guide for Business and Government, AGIC Guidelines for Climate Change Adaptation</a>
<b>Water</b>	
Water Quality Objectives	<a href="http://www.environment.nsw.gov.au/ieo/index.htm">http://www.environment.nsw.gov.au/ieo/index.htm</a>
ANZECC (2000) Guidelines for Fresh and Marine Water Quality	<a href="http://www.environment.gov.au/water/publications/quality/australian-and-new-zealand-guidelines-fresh-marine-water-quality-volume-1">www.environment.gov.au/water/publications/quality/australian-and-new-zealand-guidelines-fresh-marine-water-quality-volume-1</a>
Applying Goals for Ambient Water Quality Guidance for Operations Officers – Mixing Zones	<a href="http://deccnet/water/resources/AWQGuidance7.pdf">http://deccnet/water/resources/AWQGuidance7.pdf</a>

Title	Web address
Approved Methods for the Sampling and Analysis of Water Pollutant in NSW (2004)	<a href="http://www.environment.nsw.gov.au/resources/legislation/approvedmethods-water.pdf">http://www.environment.nsw.gov.au/resources/legislation/approvedmethods-water.pdf</a>





29 August 2018

**Mr J. Murphy**  
**Environmental Assessment Officer**  
**Department of Planning & Environment**  
**GPO Box 39**  
**SYDNEY NSW 2001**

Dear Mr Murphy,

**Maxwell Project (SSD 9526)**

I refer to your email dated Thursday 9 August 2018 requesting Council's requirements to inform the preparation of an EIS for the above project. Council thanks you for the opportunity to provide its comments in relation to the project and allowing it an extension of time for their preparation.

In the preparation of Council's response to your request Council Officers have reviewed the following documentation relating to the project:

- The SEAR's Application Form,
- Project Scoping Report dated August 2018, and
- Social Impact Assessment Scoping Report dated July 2018.

Council makes the following submission based on the review of the above documents and your request to provide comment on the preparation of an EIS for this project:

1. **Infrastructure considerations** – Council is the Roads Authority for the local road network in the Muswellbrook Shire Local Government Area. As such it has an interest in ensuring that the project does not cause undue disruption to the road network or impose additional financial burdens on Council as the authority responsible for the maintenance of this infrastructure. In view of Council's responsibility as the roads authority the following representations are made for consideration in the preparation of EIS in relation to the project:

- The project should be designed so that associated vehicle traffic is directed toward parts of the road network more suited to managing any anticipated additional light and heavy vehicle movements. It is therefore submitted that the project should be designed so that the principle access to the project is via Thomas Mitchell Drive and not Edderton Road. Council holds this position as Thomas Mitchell Drive is a well-established heavy vehicle route that services a number of industrial premises with connections to both Denman Road and the New England Highway, while Edderton Road is less trafficked road that primarily services local and rural traffic with connections to the Golden Highway and Denman Road.
- A thorough traffic impact assessment should be prepared in relation to the project which investigates the effect of additional traffic movements associated with the construction, operational and decommissioning phases of the project

on the local and regional road network. It will be necessary for this assessment to identify any improvements to the road network required to support the project as well as the anticipated wear and tear and associated maintenance costs arising throughout the lifetime of the project.

- Section 3.3.7 of the Project Scoping Report references the potential for the project to have subsidence impacts on Edderton Road. Any EIS should include a thorough geotechnical investigation relating to this subsidence and its anticipated impact on the safety and maintenance of Edderton Road. Where this investigation identifies the project is likely to have considerable implications for the safety or operability of Edderton Road or increase road maintenance requirements it may be necessary for the proponent to investigate the realignment of the road around the mine and a Voluntary Planning Agreement in relation to the long-term maintenance and upkeep of this community asset. It would also be relevant for any EIS to consider the proposed development against the provisions of Council's document 'Muswellbrook Mine Affected Roads – Road Network Plan' which outlines Council's objectives and intentions for the management of aspects of its road network affected by mining operations.
2. **Surface and Water and groundwater considerations** – The project is situated in the Saddlers Creek catchment. The Department of Primary Industries Salinity Study 'Hydrogeological Landscapes Study' (HGL's) identified Saddlers Creek and the adjacent catchments as having a high salt loads, saline discharge areas and soils and waters with high Electro Conductivity readings. Accordingly Council requests the impact of the project on and offsite be considered in the preparation of any EIS. To identify any such impacts a Salinity Investigation Study and Management Plan should be undertaken in relation to the project and should consider the sites geology, soils, vegetation, surface and groundwater. Council would also have an interest in the methodology proposed to manage groundwater seepage into the mine, the above ground control of water to avoid on and off-site contamination and how it is intended to be disposed.
  3. **Soils and Land Degradation** – The Project site is identified within the most highly degraded catchment in the Hunter Valley out of 139 catchments by the 'Soil Conservation Erosion Survey' prepared by K.A Emery. Council acknowledges that this Survey was completed in the 1980's, however it maintains that it provides a good base point for some of the soil and land degradation issues that will need to be considered and addressed. Council understands that there are erosion issues in the area, degrading gullies, soil fertility, pH, salinity and structural issues away from the alluvial flat areas. Detailed assessment of the soils and geology will need to be included in the EIS to support establish mechanisms for erosion and sediment control, inform the sites management and intended rehabilitation strategies.
  4. **Productive Land** – The EIS should consider how productive land within the site area and wider locality is to be maintained through the project lifetime and post mining operations. It is recommended that the project is carried out so as not to inhibit the productive use of land wherever possible and that the proponent give consideration to employing a monitored sustainable grazing regime for highly productive land sustainable cropping enterprises within the project site.
  5. **Vegetation** – The EIS will need to be accompanied by a detailed ecological study to identify the native species of flora and fauna at the site. Strategies should be prepared to support the management of identified ecological communities on non-operational land and the information obtained should be used to inform post mining rehabilitation strategies. Council also requests that any conservation strategies



gives consideration to landscape connectivity and looks to support vegetation corridors between established ecological communities wherever possible.

6. **Dust and air pollution** – There are a number of operating Coal Mines in the Muswellbrook Shire Local Government Area and in close proximity to the Muswellbrook Township. The cumulative impact of dust and air pollution issues associated with mining operations is of increasing concern to the local community and Council. Accordingly, it is Council's position that any EIS should be accompanied by an air quality impact assessment that considers the anticipated dust and pollution outputs from the project against relevant air quality guidelines and in context with the cumulative effect of emissions from existing mining operations in the vicinity of the site. Council also has an interest in ensuring that dust modelling and monitoring carried out to a high standard and accounts for day and night time atmospheric inversions. In recent times Council has become increasingly aware of the impact local of atmospheric temperature inversions on the movement of dust particles into upper atmospheric levels. It is understood that these atmospheric inversions which are most prevalent during the colder months of a year restrict the movement of dust particles into the upper atmosphere during night time hours and result in a higher concentration of dust and air pollution in the lower atmosphere levels over prolonged periods. For accurate and reliable dust modelling to be prepared it would be necessary for models to incorporate an understanding of atmospheric inversions into any working, while any proposed operational dust modelling should use both day and night time measurements to present a holistic picture of dust and air quality emissions associated with the Project.

It was also observed that the project involved a new internal surface road between the mine entry and the CHPP. It is understood that this road would be used 24/7 and would be the route for early ROM coal transported to the CHPP. Council recommends this road to be sealed to minimise dust and noise impacts associated with its use as well as to prevent the potential for possible salinity and sedimentation issues that may occur as a result of regular water cart use on a gravel road.

7. **Visual impact** – The project involves the establishment of an underground mine and not an open cut mine as has previously been proposed for the site. Accordingly, it is Council's impression that visual impacts associated with the proposal would not be as substantial as those associated with previous projects. This notwithstanding it is Council's position that any EIS for the project should give due consideration to potential visual impacts associated with the project. The EIS should also include details relating to how impacts associated with the project will be managed via measures including, but not limited to, the location of above ground infrastructure and material stores to minimise their visual impact on the existing environment and the use of high quality design for above ground features of the project which would be visible outside the project site in line with the objectives of the Environmental Planning and Assessment Act 1979.
8. **Rehabilitation** – Council understands that it is the proponent's intention for existing rehabilitation activities associated with the Project Approval 06\_0202 to be included within the scope of the Project and that it is intended for these requirements to be consolidated into any project approval. Council has a keen interest in ensuring that the rehabilitation of mine sites is completed to high standards, in line with industry best practice and to support post mining land uses. It is therefore requested that any EIS includes sufficient information of intended post mining rehabilitation for both the subject site and former Drayton Mine. It is requested that the EIS and any accompanying rehabilitation strategy gives consideration to the employment of

micro-relief to all existing and proposed over-burden emplacements in line with the principles of Geofluv design.

9. **Compatibility with existing land uses** – The project site is situated in close proximity to an existing equine critical industry cluster. As you would be aware a key issue for the assessment of previous mining projects for the site was their compatibility with the existing horse studs in the locality. Council expects that the compatibility of the proposed development with equine related land uses would be a key issue for the Department of Planning and Environment in the assessment of this project. Muswellbrook Shire has a long history with mining and primary productive enterprises and recognises the role both play in the economic prosperity of the region. Accordingly, it is Council's expectation that the Department of Planning and Environment would require any EIS to be accompanied by a detailed analysis of the social, economic and environmental impacts anticipated as an outcome of the project in respect to existing equine industries in the vicinity of the project.
10. **Economic Opportunities** – Council observes that the project scoping analysis identifies that if approved the project would have economic benefits for the local area, NSW more broadly and the national economy. The Report proceeds to reference that the project would generate 350 direct long term jobs, support local business, community groups and generate approximately \$1.3 billion in NSW Government royalties over the mines operational life. Recent fluctuations of the coal price and uncertainties surrounding the mining and electricity generating industries have affected the economic fortune of both the Muswellbrook Shire Local Government Area and wider Upper Hunter Region. Given the above Council has a direct interest in ensuring its community, as the community that would be affected by any adverse environmental outcomes or legacy impacts of the project, would be the beneficiaries of the reported economic and employment opportunities. Accordingly it is requested that the EIS and accompanying documentation considers measures that can be put in place to ensure that the project supports local jobs and businesses as reported and that there is reasonable reinvestment of the revenue and royalties associated with the project in the local area.
11. **Local Housing and managing shift impacts.** It is in the social, economic and safety interests of the broader community that as many mine workers as possible live in Muswellbrook, Denman or Singleton. The EIS should identify what measures will be taken to assist this outcome. The construction activities and mining activities are expected to occur 24/7. Large influxes and departures of staff/workers and construction vehicles from the site in a concentrated manner will have impacts on nearby traffic intersections, and local road capacity and, if occurring between 10:00pm and 6:00am, can generate noise/traffic issues in nearby urban areas. The EIS should address how these shift impacts will be managed.
12. **Cumulative regional impacts on water, road and rail networks.** The project will utilise water resources, putting pressure on availability of raw water for other industries. Mines have demonstrated an ability to out compete other sectors to buy water allocations, an unintended consequence being a difficulty for new, non-coal related industries and businesses to establish in the Shire. This in turn makes it difficult to achieve the desired outcomes of the Hunter Regional Plan 2036 and Upper Hunter Diversification Action Plan. The EIS should address what impact the water requirements of this project will have on the amount of water that will be available for non-coal related uses under the water sharing plans applying in the region. The project will add to traffic movements on the New England Highway and train movements Main Northern Railway Line. Projected movements should be included in models held by Transport NSW and Roads and Maritime Services to understand the cumulative impacts on:



- the level of service on State Roads and significant intersections from Muswellbrook through to the Newcastle Link Road and Pacific Highway.
- Passenger rail service movements, including future ability to increase frequencies of service between Muswellbrook and Newcastle.
- Rail noise and dust along the railway corridor from Muswellbrook to the Newcastle Port.

The above comments are not intended as an exhaustive list of assessment considerations or Council comments in relation to the project, but to guide the preparation of the EIS for the project based on Council's review of the referenced documentation and its understanding of the Project to date. In addition to the above Council expects that the proponent would carry out a thorough investigation of all other potential environmental impacts associated with the project at the direction of the Department of Planning Environment and other Government Agencies. The most recent legislation and state planning policies should be referenced.

The proposal to consolidate past approvals (e.g. project approval 06-0202) with the current project is supported by Council.

Council appreciates the opportunity to comment and would be pleased to provide additional information if requested.

Yours faithfully



Fiona Plesman  
**GENERAL MANAGER**





File No: SF18/64152  
Ref No: DOC18/573236

Mr Jack Murphy  
Environmental Assessment Officer  
Resource Assessments, Planning Services  
Department of Environment & Planning  
GPO Box 39  
SYDNEY NSW 2001

Email: [jack.murphy@planning.nsw.gov.au](mailto:jack.murphy@planning.nsw.gov.au)

Dear Mr Murphy

**Secretary's Environmental Assessment Requirements (SEARS) for Maxwell Project – Underground Coal Mine, at Thomas Mitchell Drive, Muswellbrook, Muswellbrook LGA (SSD 9526)**

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I refer to your correspondence received on 9 August 2018 requesting advice on SEARs from the Heritage Council of NSW (Heritage Council) in relation to a proposed underground mining operation at Thomas Mitchell Drive, Muswellbrook.

It is noted that the proposed mine is within the approximate location of the Drayton South Coal Project (SSD 6875) for which the Heritage Council provided comment.

It is noted that no State Heritage Register (SHR) items, under the *Heritage Act 1977*, are present within the proposed project area; however, the heritage impact assessment for the Drayton South Coal Project, identified several potential heritage items, including the Drayton South Cultural Landscape (DSCL) and the Muswellbrook-Jerrys Plains Cultural Landscape Area (MJPLCA). The boundaries of the DSCL are unclear as is if there is an overlap between the two cultural landscapes.

The Heritage Council has identified the depletion of cultural landscapes as an important issue threatening the cultural values and lifestyle of our cities. The identification of scenic landscapes has occurred since the 1960s, however cultural landscapes are still not comprehensively identified and their significance is not well understood. The Heritage Council has a strategic focus to systematically identify and manage important cultural landscapes across NSW. The Heritage Council has commissioned a report on the identification, investigation, assessment and management of cultural landscapes.

Accordingly, it is recommended that the following SEARS be included:

1. The Environmental Impact Statement (EIS) must include a Heritage Impact Statement (HIS), prepared by a suitably qualified Heritage Consultant, with experience in the assessment of cultural landscapes. The HIS should identify any State and local heritage items and heritage conservation areas within the SSD site and in the vicinity and provide an assessment of heritage impacts. Where impacts are identified, the HIS should outline the proposed mitigation measures.
2. The EIS is to include an assessment of the cumulative impacts resulting from the proposal on other known or potential impacts on heritage items and cultural landscapes. Where impacts are identified, the HIS should outline the proposed mitigation measures.

3. The EIS is to assess a method of mitigation/compensation to the community in the event the cultural landscape is impacted by potential subsidence.
4. The EIS must include a Historical Archaeological Assessment (HAA), prepared by a suitably qualified Historical Archaeologist, in accordance with the guideline documents, Archaeological Assessments Guidelines 1996; and Assessing Significance for Historical Archaeological Sites and 'Relics' 2009. The HAA should identify what relics, if any, are likely to be present within the SSD site or in the vicinity, assess their significance and consider the impacts from the proposal on this potential resource. Where harm is likely to occur, it is recommended that the significance of the relics be considered in determining an appropriate mitigation strategy. If harm cannot be avoided in whole or part, an appropriate Research Design and Excavation Methodology should also be prepared to guide any proposed excavations.

Please note that this advice does not relate to Aboriginal archaeological and cultural heritage values. A request for SEARs regarding Aboriginal cultural heritage and archaeology should be separately referred to the Regional Operations Planning Unit of the Office of Environment & Heritage.

In addition, the following list of documents are recommended to be included in the SEARs as policy and guideline reference material:

- **Heritage Council of NSW. Archaeological Assessments Guidelines 1996.**  
Which are located in Appendix 8.7 of Heritage Council of NSW, Local Government Guidelines March 2002  
<http://www.environment.nsw.gov.au/resources/heritagebranch/heritage/localgovernmentheritageguidelines.pdf>
- **Heritage Council of NSW. Assessing significance for historical archaeological sites and relics 2009.**  
<http://www.environment.nsw.gov.au/resources/heritagebranch/heritage/ArchSignificance.pdf>
- **Heritage Council of NSW. Criteria for the Assessment of Excavation Directors. Updated 2011.**  
<http://www.environment.nsw.gov.au/resources/heritagebranch/heritage/excavationdirectors.pdf>

If you have any questions regarding the Maxwell Project, please contact James Quoyle, Senior Heritage Assessment Officer, at the Heritage Division, Office of Environment and Heritage on (02) 9873 8612 or [james.quoyle@environment.nsw.gov.au](mailto:james.quoyle@environment.nsw.gov.au).

Yours sincerely



21/08/2018

**Katrina Stankowski**  
STL, Regional Heritage Assessments - North  
Heritage Division  
Office of Environment and Heritage  
**As a Delegate of NSW Heritage Council**



DOC18/569526-03 ; EF13/2546

Department of Planning and Environment  
GPO Box 39  
SYDNEY NSW 2001

Attention: Mr Jack Murphy

By email: [jack.murphy@planning.nsw.gov.au](mailto:jack.murphy@planning.nsw.gov.au)

23 August 2018

Dear Mr Murphy

**MAXWELL PROJECT UNDERGROUND COAL MINE PROJECT – (SSD 9526)  
SECRETARY'S ENVIRONMENTAL ASSESSMENT REQUIREMENTS**

I refer to your email to the Environment Protection Authority (EPA) received 10 August 2018, seeking the provision of Secretary's Environment Assessment Requirements (SEARs) to assist with the preparation of an Environmental Impact Statement (EIS) for the establishment of an underground coal mining operation which would utilise existing 'Maxwell Infrastructure' at the site formerly known as the Drayton Mine, application reference SSD 9526.

The EPA understands that the proposal involves construction of a new underground mine entry, internal access roads, mine ventilation and gas management and conveyor system to the existing Coal Handling Preparation Plant. The proponent intends to emplace coarse rejects and tailings in the existing mine east void, and water and brine from water treatment activities will be stored in existing voids.

The key issues of interest to the EPA are:

- Potential noise impacts due to construction and operation;
- Potential air quality impacts due to construction and operation;
- Impacts on water quality and site wide water management; and
- Waste management and disposal.

In carrying out the EIS assessment, the EPA recommends that the proponent refers to the relevant guidelines listed in the publication titled "Indicative Secretary's Environmental Assessments (SEARs) for State Significant Mining Developments, October 2015". The proponent should also consider any relevant industry codes of practice and best practice management guidelines to ensure that it adequately addresses the appropriate matters relevant to the development proposal.

The link is as follows:

<http://www.planning.nsw.gov.au/Policy-and-Legislation/Mining-and-Resources/~media/6A2B386AFC324ECA9B4FFD0BC5D3AF20.ashx>


The Noise Policy for Industry 2017 (NPfI) was developed following a review of the NSW Industrial Noise Policy and using input from public consultation on proposed policy amendments, and should be consulted in addition to the Noise Policy reference documents contained within the Indicative Secretary's Environmental Assessments publication.

The EIS must provide sufficient information to demonstrate that the proposed development can be operated whilst complying with the *Protection of the Environment Operations Act 1997*, in particular, the protection of water quality during construction and operation of the facility. Accordingly, pollution control measures should not be proposed if they are impractical, unrealistic, or beyond the financial viability of the development.

The EPA will require an electronic copy of the EIS and any supporting or background reports when the application is referred to the EPA. These documents should be provided to the EPA at [hunter.region@epa.nsw.gov.au](mailto:hunter.region@epa.nsw.gov.au) or PO Box 488G, Newcastle NSW 2300.

If you require any further information regarding this matter please contact Genevieve Lorang on (02) 4908 6809.

Yours sincerely



**MITCHELL BENNETT**  
**Head Strategic Programs Unit - Hunter**  
**Environment Protection Authority**

Contact officer: GENEVIEVE LORANG  
(02) 4908 6869  
[hunter.region@epa.nsw.gov.au](mailto:hunter.region@epa.nsw.gov.au)



**From:** Bill Ziegler  
**To:** [Jack Murphy](#)  
**Subject:** Maxwell Project (SSD 9526)  
**Date:** Tuesday, 21 August 2018 12:12:33 PM

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Jack

I have reviewed the Maxwell Project Scoping Report and have the following comments:

-Adjacent to the project area is the Plashett Dam, a 46m high embankment dam which is a prescribed dam under the Dam Safety Act 1978 with a High 'C' consequence if failure were to occur.

- The dam is surrounded by a Notification Area. The proposed mining may overlap with the Notification Area.

There is no mention of the Dam Safety Act 1978 in the Report. The 1978 Act is current and it is "business as usual" until the 2015 Dam Safety Act is commenced.

The possibility of "far field horizontal movement" on the dam embankment should be addressed in the EIS.

later

*Bill Ziegler*

*Manager Mining Projects*

*Dams Safety Committee*

*ph 02 9842 8077*

*Level 11, 10 Valentine Ave. Parramatta*

**LOCKED BAG 5123**

**PARRAMATTA NSW 2124**

[www.damsafety.nsw.gov.au](http://www.damsafety.nsw.gov.au)

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More information is on our website under <http://www.damsafety.nsw.gov.au/DSC/Services/policy.shtm>

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Jack Murphy  
Environmental Assessment Officer  
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Department of Planning & Environment  
GPO Box 39  
SYDNEY NSW 2001

[jack.murphy@planning.nsw.gov.au](mailto:jack.murphy@planning.nsw.gov.au)

Dear Mr Murphy

**Maxwell Project (SSD 9526)**  
**Request for Secretary's Environmental Assessment Requirements**

I refer to your email dated 9 August 2018 inviting the Division of Resources & Geoscience (the Division) to provide comments on the Maxwell Project (the Project) submitted by Maxwell Ventures (Management) Pty Ltd, a wholly owned subsidiary of Malabar Coal Ltd (the Proponent).

The relevant units internal to the Division have been consulted where required in generating this advice. Further, the Department of Planning and Environment - Planning Services Division and the Proponent should be aware that matters pertaining to rehabilitation, final landform, environmental impacts of subsidence, subsidence management, mine operator and safety are assumed and assessed by the Resources Regulator.

The Division has reviewed the information supplied within the Proponent's Scoping Report document and consistent with the intent of the *'Indicative Secretary's Environmental Assessment Requirements (SEARs) for state significant mining developments (October 2015)'*, to ensure the project and its interactions can be understood and assessed by the Division, the Environmental Impact Statement (EIS) must include the following specific requirements:

**1. Project Description**

A comprehensive description of all aspects of the Project (including mineral extraction and mining purposes).

**2. Geology**

- Provide a summary of the regional and local geology, including information of the stratigraphic unit or units within which the resource is located.
- Document the physical dimensions of the coal resource. Plans and cross-sections showing the location of drill holes and the area proposed for extraction. Relevant supporting documentation such as drill logs should be included or appended.

**3. Resource and Reserve Statement**

Include an updated resource/reserve statement outlining the tonnage of coal present in the subject area, that has been prepared in accordance with the current version of the Joint Ore Reserve Committee Code (JORC code) to a minimum of Indicated Resource level of confidence. It is preferred that at least some of the resource estimate is to a higher confidence level (measured/proved/probable). The statement must include resource and reserve estimates for each

coal seam proposed to be mined. The statement must include the coal quality parameters for each seam including product specifications and yields.

The Division understands that it may not be feasible to convert the majority of an Inferred Resource to Indicated (or higher) level of confidence, however the Proponent needs to demonstrate that there are sufficient resources to support the majority of the initial life of mine production schedule. Any contribution from Inferred Resource(s) to the schedule needs to be justified.

#### **4. Resource Recovery**

The Proponent is to supply a full assessment of resource recovery including:

- Does the proposed mine plan and method maximise resource recovery?
- Will any resources be sterilised or excluded and with what justification?
- List seams excluded from reserves. Note why each seam was excluded from reserve estimates.
- Compare seams included/excluded in reserve estimates to those in nearby operations. Being an underground operation, justify the selected working section.
- List all economic, environmental, other constraints to the resource/reserve impacting the Project.

#### **5. Life of Mine Schedule**

The Proponent must supply a life of mine production schedule for each year of operation of the mine and for the life of the Project. The production schedule is to include:

- Details of run-of-mine ore, low grade ore-mineralised waste and waste rock tonnage planned to be extracted for each year and for the life of the Project, and an estimate of the saleable product produced for each year and the life of the Project.
- In terms of text, plans or charts, an EIS must clearly show the proposed extent and sequence of the development.
- An estimate of which market segment that product tonnes would be sold into, for example export/domestic and thermal/metallurgical coal.

It is understood that an estimate of product tonnes split into a particular market segment is difficult to estimate at a particular point in time and is dependent on market conditions as the life of the mine progresses, however the Division requires the Proponent to provide its best estimate of their market mix at the initial stages of the Project.

#### **6. Project Economics**

The Proponent is to supply an assessment of project economics including:

- Coal price forecasts by coal type used by the Proponent. The Division requires these forecasts to analyse the Proponent's calculations of royalty value and export value. It should be noted that the Division has its own independent view on coal price forecasts which it will use in its royalty and export value calculations.
- Product tonnages split into market segment - estimates necessary to arrive at total revenue value and royalty calculations. Include justification for market segment based on quality parameters.
- CAPEX & OPEX necessary for the Project – broken down into the various sub-categories and equipment type.
- Estimates of employment generation broken down into direct, indirect, ongoing, construction and contract workers.
- Total royalty generated to the State over the life of the Project.

- Relationship and interaction with other mines. How the Project impacts on the existing mine and surrounding mines.
- Details on derivation/analysis of Run-of-Mine (ROM) production rate, that is why is this the optimum rate?

The Division understands that an estimate of product (tonnes) split into individual market segments is difficult to estimate at a point in time and is dependent on market conditions as the life of the Project progresses, however the Division requires the Proponent to provide its best estimate of their market mix at the initial stages of the Project.

**The above information should be summarised in the EIS, with full documentation appended. If deemed commercial-in-confidence, the resource assessment summary included in the EIS must commit to providing the Division with full resource assessment documentation separately via the Division's Assessment Coordination Unit.**

### ***Additional Matters for Attention***

#### **Biodiversity Offsets**

The Division requests that the Proponent consider potential resource sterilisation in relation to any proposed biodiversity offsets areas. Biodiversity offsets have the potential to preclude access for future resource discovery and extraction and could also potentially permanently sterilise access to mineral resources.

The EIS must therefore clearly illustrate the location (including offsite locations) of any biodiversity offsets being considered for the project (including both the mine site and pipe line corridor) and their spatial relationship to known and potential mineral and construction material resources and existing mining titles and exploration tenements.

The Division requests consultation with both the Geological Survey of NSW and holders of existing mining and exploration authorities affected by planned biodiversity offsets. Evidence of consultation should be included in the EIS.

#### **Mining Titles**

The Division notes that this Project is located wholly within Exploration Licence 5460 (Act 1992) (EL 5460) which will require a mining lease under the *Mining Act (1992)* over the Project area if development consent is granted.

For further enquiries regarding this matter please contact Mr Adam W. Banister, Senior Advisor Assessment Coordination on (02) 4063 6601 or [assessment.coordination@planning.nsw.gov.au](mailto:assessment.coordination@planning.nsw.gov.au)

Yours sincerely



Matt Gagan  
**A/Manager Assessment Coordination**  
24 August 2018

for  
Dr David Blackmore  
**A/Executive Director Resource Operations**  
**Division of Resources & Geoscience**



# Department of Industry

OUT18/12367

Mr Jack Murphy  
Environmental Assessment Officer  
Resource Assessments  
NSW Department of Planning and Environment

[jack.murphy@planning.nsw.gov.au](mailto:jack.murphy@planning.nsw.gov.au)

Dear Mr Murphy

**Maxwell Project (SSD 9526)**  
**Comment on the Secretary's Environmental Assessment Requirements (SEARs)**

I refer to your email of 9 August 2018 to the Department of Industry (DoI) in respect to the above matter. Comment has been sought from relevant branches of Lands & Water and Department of Primary Industries (DPI), and the following requirements for the proposal are provided:

**DoI - Water**

- The identification of an adequate and secure water supply for the life of the project. This includes confirmation that water can be sourced from an appropriately authorised and reliable supply. This is also to include an assessment of the current market depth where water entitlement is required to be purchased.
- A detailed and consolidated site water balance.
- Assessment of impacts on surface and ground water sources (both quality and quantity), related infrastructure, adjacent licensed water users, basic landholder rights, watercourses, riparian land, and groundwater dependent ecosystems, and measures proposed to reduce and mitigate these impacts.
- Proposed surface and groundwater monitoring activities and methodologies.
- Consideration of relevant legislation, policies and guidelines, including the NSW Aquifer Interference Policy (2012), the DPI Water Guidelines for Controlled Activities on Waterfront Land (2018) and the relevant Water Sharing Plans (available at <https://www.industry.nsw.gov.au/water>).

**DPI – Agriculture**

- The completion of an Agricultural Impact Statement (AIS). Specific guidance on satisfying the requirements for the AIS should be taken from the DPI's AIS Technical Notes, available at: <http://www.dpi.nsw.gov.au/agriculture/resources/lup/development-assessment>

Yours sincerely

Alison Collaros  
**A/Manager, Assessment Advice**  
28 August 2018

**ATTACHMENT 3**

**INTERNAL REVIEW OF SIA SCOPING REPORT**



## ATTACHMENT 3

### INTERNAL REVIEW OF SIA SCOPING REPORT

Maxwell Project (SSD 18\_9526)

## Internal review of Social Impact Assessment (SIA) Scoping Report

15/08/2018

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### Context and approach to this review

The *Environmental Planning and Assessment Act 1979* establishes the framework for assessing all types of development in New South Wales, including State significant development (SSD) projects. The Act requires the consent authority to consider social impacts of a proposed development.

To inform how social impacts should be considered, the Department of Planning and Environment (DP&E) adopted the *Social Impact Assessment (SIA) guideline for State significant mining, petroleum production, and extractive industry development* in September 2017. The guideline was informed by existing good practice, expert advice, and extensive stakeholder consultation, and thereby provides a benchmark against which to review SIA reports.

This review considers the SIA Scoping Report prepared for the Maxwell Project (SSD 18\_9526) (Elliot Whiteing, July 2018). The SIA Scoping Report was provided by Elliott Whiteing Social Planning Solutions on behalf of Malabar Coal, with a Request for SEARs.

The proposal is for an underground mining operation that would produce high quality coals primarily for the steel industry.

This review evaluates the SIA Scoping Report's consistency with the principles and methodology set out in the SIA guideline, particularly in relation to the Review Questions 1, 2, and 8-14 in Appendix D of the guideline:

- **Q1 and 2** address the SIA principles and authorship.
- **Q8-11** relate to defining and describing the area of social influence.
- **Q12-14** relate to identification and description of social impacts.

This review is limited to desktop study only, and has not independently sought the views of potentially affected people and groups.

## Review comments

### 1. Has the applicant applied the principles in Section 1.3? How?

<b>Principle</b>	<b>Assessment</b>
<b>Action-oriented</b>	Satisfied – Section 1.3, Section 3.2, Section 3.7, Section 3.8, Section 4 and Section 5. Section 1.3 and Section 4 presents the methodology used to identify the area of social influence and identify key stake holders. Section 3.2, Section 3.7, Section 3.8 and Section 5 identifies the perceived project impacts. Section 5 presents the practicable, achievable and effective next steps of the SIA program.
<b>Adaptive</b>	Partial – Table 3.7 and Section 5. Table 3.7 provides a summary of stakeholder engagement to date. Section 5 provides details on the further research and engagement that will be undertaken. However, in the SIA details surrounding the frequency of community engagement would be useful in determining the ability to actively respond to new or different circumstance and information. Furthermore, discussion of how new information, community feedback or unanticipated impacts will influence the proposal or will contribute towards development of mitigation measures should also be included.
<b>Distributive equity</b>	<p>Partial – Section 3 provided some detail on current social equity and Table 4-1 provided details on how different social groups may be impacted by the project. However, the SIA scoping report fails to consider how social impacts may be distributed between the current and future generations.</p> <p>For example, little practical recognition of how social impacts and benefits will be distributed across the community – geographically, over time and across stakeholders – especially those most vulnerable to project impacts.</p> <p>In the SIA the opportunity to frame project benefits and mitigation measures (training and employment for local, youth and Aboriginal people, women), should also be undertaken wherever possible.</p>
<b>Impartial</b>	<p>Partial – Section 1, Section 2, Section 3, Annexure A, Annexure B and Annexure C. Section 1 references the guidelines and Annexure B includes the Scoping tool. However, there is a lack of detail surrounding the development of the community survey in Annexure C. The structure of the main section of the survey (question 8) does not make sense, making the findings unreliable. Whilst Question 6 is biased towards positive answers. The summary in Section 3.6 of the SIA Scoping Study does not mention the number of responses received (although it is noted in Annexure A).</p> <p>Sections 2 and 3 clearly acknowledge concerns with previous proposals, but arguably fail to convey the details and strength of feeling associated with these concerns. By taking the emotion out of the arguments, the report provides an overly technical impression of the impacts. Comments reported in Annexure A are not fully, or accurately, reflected in summary of social concerns. The SIA should ensure that ‘community voices’ are reported faithfully and impartially.</p> <p>Furthermore, no details are provided on the consultancy or individual(s) who undertook the assessment, these will be required in the SIA.</p>
<b>Inclusive</b>	Partial – Table 3.7, Table 4.1, Table 5.4 and Appendix A. The Scoping Report identified a range of stakeholders, but did not satisfactorily include community stakeholders in the process of scoping. With likely social impacts, being overly skewed towards informing.

	<p>Similarly, the approach to engagement for the EIS proposed in Sections 5.5 and 5.6 largely comprises informing processes that do not facilitate meaningful inclusion.</p> <p>In addition to this, some duplication amongst stakeholder groups was present within the Scoping Report.</p>
<b>Integrated</b>	Partial – Section 3.4 and Section 5.4. Section 3.4 draws on information from previous SIAs undertaken. Section 5.4 notes a range of specialist studies that will be undertaken as part of the EIS, which will provide the necessary information for the SIA. However, a heritage assessment (Aboriginal and non-Aboriginal) will need to be included.
<b>Life cycle focus</b>	Partial – The SIA will need to consider social impacts post-closure.
<b>Material</b>	Partial – Table 3.8, Table 4.1 and Table 5.1. Provide a breakdown of social impacts which appear to matter the most to the impacted community. However, not enough primary evidence is presented to demonstrate that these actually are the things that matter most; the SIA will need to demonstrate a stronger evidence base for its assessment of significance, informed by engagement.
<b>Precautionary</b>	NA – Early stages of assessment still. Full impact not yet determined.
<b>Proportionate</b>	Satisfied – Table 5.3. Details how each social impact will be addressed in the SIA.
<b>Rigorous</b>	Partial – Section 1.3, Section 3 and Section 5. Detail the methodology employed for the assessment and where data sources were collected from and how they were collected and steps that will be undertaken for the SIA. However, no mention of academic literature and findings from other similar projects are made. The EIS should include findings from the literature when discussing and weighing up implications of the project on stakeholders and the community (especially in relation to potential for health, community cohesion, housing and employment impacts). Health data could be sourced from NSW Healthstats.
<b>Transparent</b>	<p>Partial– Whole document. The document provides a good level of detail on how the preliminary SIA was undertaken and the steps that will be taken in the SIA. However, some conflict between appearance of transparency in the document's tone, and the actual comments reported in Annexure A. The SIA will need to demonstrate that the conclusions derived from the primary research and engagement findings are accurately reflected in the evaluation.</p> <p>The SIA should also demonstrate exactly how proposed mitigation measures are derived from community responses to perceived social impacts and concerns and how these impacts are specifically addressed. For example, youth unemployment is identified as an issue, so the SIA should identify strategies to address this in its employment policies.</p>

Recommendations: The SIA should ensure the SIA principles in the guideline are explicitly addressed, particularly with reference to adaptive management, distributive equity, rigour, inclusivity and impartial research. The SIA should also provide detail on how the social impact categories were developed. Where new social impacts are identified through technical studies, literature or community feedback, they should supplement those included in Table 6.3.

**2. Does the lead author of the Scoping Report meet the qualification and skill requirements in Box 2?**

Unsatisfactory – Details of lead author(s) not provided.

Recommendations: The SIA should include details of the lead author within the document, including relevant qualifications and experience.

**8. Does the scoping report identify and describe all the different social groups that may be affected by the project?**

Satisfied – Table 3.7, Table 4.1, Table 5.4 and Appendix A. Identified a range of different stakeholders and provided details on how the engagement was tailored to suit each group.

**9. Does the Scoping Report identify and describe all the built or natural features located on or near the project site or in the surrounding region that have been identified as having social value or importance?**

Satisfied – Section 4 provides the areas of social influence. Providing details on the project area and nearby properties, nearby communities, Local Government Areas, the regional context, traditional owners and potentially impacted features. Specifically, Section 4.6 details the natural features, cultural features and built features that have been identified as having social value or importance to the region.

**10. Does the Scoping Report identify and describe current and expected social trends or social change process being experienced by communities near the project site and within the surrounding region?**

Partial – Section 3.3 and Section 3.4 provided details on social trends and social change processes, housing availability, economic outlook, workforce planning and health. However, further detail and data is required across all these sections.

Recommendations: The SIA should include a much more rigorous analysis of the current and expected social trends or social change. Furthermore, the use of data from a wider range of sources will also be required in the SIA e.g. census data and NSW Health Statistics.

**11. Does the Scoping Report impartially describe the history of the proposed project, and how communities near the project site and within the surrounding region have experienced the project to date and other like it?**

Partial – Section 2.2 provides the history of the region and the proposed project. Section 3.2 provides an insight into how the community have reacted to previous applications. Table 3.6 provides a breakdown of current community views on coal mining within the region, but does not fully convey the comments reported in Annexure A, nor the depth of feeling among some groups, particularly on the question of whether coal mining can co-exist with horse breeding and viticulture industries.

Recommendations: The SIA should include further details on the history of mining in the region, documenting the views and experiences of relevant stakeholder groups from their own perspectives.

**12. Does the Scoping Report adequately describe and categorise the social impacts (negative and positive), and explain the supporting rationale, assumptions, and evidence for those categories?**

Partial – A number of social impacts are identified and categorised in Section 3.8, Table 4.1 and Table 5.1. Section 3.7 highlights the stakeholder engagement process and Appendix C provides the community survey.

Table 6.1 picks up on a wide range of potential social impacts, but without further details of the community engagement feedback and inclusion of literature findings on mining's social impacts, it is not possible to determine whether all relevant social impacts are identified. For example, there is no explicit discussion of distributive equity, or social impacts attributable to an influx of a larger mining workforce, or impacts on rural cultural values or sense of place. Some impacts (eg road connectivity, travel time impacts, displacement) are mentioned without any context. Some (eg dust deposition, night lighting, noise from train loading, road safety) are mentioned in the engagement feedback but not in Table 6.1). The SIA will need to ensure all relevant social impacts are considered and findings from other technical disciplines are integrated into the SIA where there are social dimensions (ie evaluation of the impacts as experienced by community members).

In relation to atmospheric emissions, the assertion (Annexure B) that the project's contribution to greenhouse-gas emissions would be small may be technically correct, but overlooks the social dimension of this impact. If people have fears or concerns in relation to the project's contribution, then it may present a material social impact, and therefore cannot be dismissed as out of scope.

Overall, further details on the supporting rationale, assumptions and evidence for the chosen categories will be required in the SIA.

Recommendations: The SIA should provide further detail (including disaggregation) surrounding the stakeholder engagement process and how the social impact categories were developed. The project's contribution to climate change should also be assessed from a social perspective, to the level of 'Standard SIA'.

**13. How has the feedback from potentially affected people and other interested parties been considered in determining those categories? Does the Scoping Report outline how they will be engaged to inform the preparation of the SIA component of the EIS?**

The survey provided in Appendix C appears to have potentially created the social impact categories. Table 4.1 and Table 5.1 provide a breakdown of stakeholder profiles and social impacts stakeholders considered likely. Table 5.3 provides a summary of potential social impacts and how they will be investigated. Table 5.4 outlines the future engagement strategy for the potentially affected people and organisations.

See comments about inclusiveness in Q1. The finding from the meeting with Muswellbrook Shire Council that 'community members feel they aren't being listened to' illustrates the need for a genuinely participatory approach to engagement for the SIA.

Recommendations: The SIA should provide further detail surrounding the stakeholder engagement process and how the social impact categories were developed. Along with further details of the frequency of engagement that will continue during the life of the project. The SIA should also include genuine opportunities for affected and interested people and groups to participate in activities to identify, characterise, predict, and assess the likely significance of social impacts. The SIA should also report on the differential impacts of the proposal on these different stakeholders (distributive equity).

**14. Does the Scoping Report identify potential cumulative social impacts?**

Partial – Section 5.2 identifies cumulative impacts in general, citing recent research and noting cumulative impacts the EIS will assess. Section 5.2 also identified other nearby mines which may contribute to cumulative impacts. However, much more detail could have been provided along with considering spatial, temporal and linked impacts. In many cases, social impacts are by definition cumulative – ie multiple impacts as experienced by a particular group or in a particular location.

Recommendations: The SIA should provide a much deeper analysis of specific cumulative impacts that may result from the project. Taking into account cumulative impacts from multiple projects or occurring in single locations and across time-frames to understand the full extent of expected impacts.



## ATTACHMENT 4

### COMMONWEALTH DEPARTMENT OF ENVIRONMENT AND ENERGY ASSESSMENT REQUIREMENTS

#### Guidelines for preparing assessment documentation relevant to the EPBC Act for proposals being assessed under an Accredited NSW Assessment Process

#### Maxwell Project (EPBC 2018/8287) (SSD 9526)

##### Introduction

1. On 12 November 2018, a delegate of the Federal Minister for the Environment and Energy determined that the Maxwell Project was a controlled action under section 75 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The EPBC Act controlling provisions for the proposed action are:

- i. listed threatened species and communities (sections 18 and 18A); and
- ii. a water resource, in relation to coal seam gas development and large coal mining development (section 24D & section 24E).

The delegate also decided under section 87 of the EPBC Act that the proposed action will be assessed under the State's accredited assessment process under Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act). These guidelines provide information on MNES environmental assessment requirements.

2. The Applicant must undertake an assessment of all protected matters that may be impacted by the development under the controlling provisions identified in paragraph 1. The Commonwealth Department of the Environment and Energy (DoEE) considers that there is likely to be a significant impact on the following:

- i. listed threatened species and communities (sections 18 and 18A):
  - a) Central Hunter Valley eucalypt forest and woodland - Critically Endangered;
  - b) White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland -Critically Endangered;
  - c) Regent Honeyeater (*Anthochaera phrygia*) - Critically Endangered; and
  - d) Swift Parrot (*Lathamus discolor*) - Critically Endangered; and
- ii. a water resource, in relation to coal seam gas development and large coal mining development (sections 24D and 24E):
  - a) the hydrological characteristics, value and quality of a water resource.

3. Based on DoEE's Environment Reporting Tool and information provided by the Species Profiles and Threats Database (SPRAT), DoEE considers that the following matters are possibly at risk of being impacted:

- a) Hunter Valley Weeping Myall (*Acacia pendula*) Woodland ecological community - Critically Endangered;
- b) Green and Golden Bell Frog (*Litoria aurea*) – Vulnerable;
- c) Large-eared Pied Bat (*Chalinolobus dwyeri*) – Vulnerable;
- d) Spot-tailed Quall (*Dasyurus maculatus maculatus*) – Endangered;
- e) Corben's Long-eared Bat (*Nyctophilus corbeni*) – Vulnerable;
- f) Koala (QLD, NSW, ACT) (*Phascolarctos cinereus*) – Vulnerable;
- g) New Holland Mouse (*Pseudomys novaehollandiae*) – Vulnerable;
- h) Grey-headed Flying-fox (*Pteropus poliocephalus*) – Vulnerable;
- i) White-flowered Wax Plant (*Cynanchum e/egans*) – Endangered;

- j) Slaty Red Gum (*Eucalyptus glaucina*) – Vulnerable;
- k) a leek-orchid (*Prasophyllum* sp. *Wybong*) - Critically Endangered;
- l) Illawarra Greenhood (*Pterostylis gibbosa*) – Endangered; and
- m) Austral Toadflax (*Thesium australe*) – Endangered.

These species require further assessment, surveys and analysis to determine whether they are likely to be significantly impacted. Note that this may not be a complete list and it is the responsibility of the Applicant to ensure any protected matters under this controlling provision are assessed for the Commonwealth decision-maker's consideration.

4. The Applicant must consider each of the protected matters under the triggered controlling provisions that may be impacted by the action. Note that this may not be a complete list and it is the responsibility of the Applicant to undertake an analysis of the relevant impacts and ensure all protected matters that are likely to be impacted are assessed for the Commonwealth Minister's consideration.

## **General Requirements**

### *Relevant Regulations*

5. The Environmental Impact Statement (EIS) must address the matters outlined in Schedule 4 of the EPBC Regulations and the matters outlined below in relation to the controlling provisions.

### *Project Description*

6. The title of the action, background to the action of the action and current status.
7. The precise location and description of all works to be undertaken (including associated offsite works and infrastructure), structures to be built or elements of the action that may have impacts on MNES.
8. How the action relates to any other actions that have been, or are being taken in the region affected by the action.
9. How the works are to be undertaken and design parameters for those aspects of the structures or elements of the action that may have relevant impacts on MNES.

### *Impacts*

10. The EIS must include an assessment of the relevant impacts<sup>1</sup> of the action on the matters protected by the controlling provisions, including:
  - i. a description and detailed assessment of the nature and extent of the likely direct, indirect and consequential impacts, including short term and long term relevant impacts;
  - ii. a statement whether any relevant impacts are likely to be unknown, unpredictable or irreversible;
  - iii. analysis of the significance of the relevant impacts; and
  - iv. any technical data and other information used or needed to make a detailed assessment of the relevant impacts.

### *Avoidance, mitigation and offsetting*

11. For each of the relevant matters protected that are likely to be significantly impacted by the action, the EIS must provide information on proposed avoidance and mitigation measures to manage the relevant impacts of the action including:
  - i. a description, and an assessment of the expected or predicted effectiveness of the mitigation measures,
  - ii. any statutory policy basis for the mitigation measures;

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<sup>1</sup> Relevant impacts are those impacts likely to significantly impact on any matter protected under the EPBC Act

- iii. the cost of the mitigation measures;
  - iv. an outline of an environmental management plan that sets out the framework for continuing management, mitigation and monitoring programs for the relevant impacts of the action, including any provisions for independent environmental auditing;
  - v. the name of the agency responsible for endorsing or approving each mitigation measure or monitoring program.
12. Where a significant residual adverse impact to a relevant protected matter is considered likely, the EIS must provide information on the proposed offset strategy, including discussion of the conservation benefit associated with the proposed offset strategy.
13. For each of the relevant matters likely to be impacted by the action the EIS must provide reference to, and consideration of, relevant Commonwealth guidelines and policy statements including any:
- i. conservation advice or recovery plan for the species or community,
  - ii. relevant threat abatement plan for a process that threatens the species or community
  - iii. wildlife conservation plan for the species
  - iv. any strategic assessment.

[Note: the relevant guidelines and policy statements for each species and community are available from the Department of the Environment Species Profiles and Threats Database. <http://www.environment.gov.au/cgi-bin/sprat/public/sprat.pl>]

## **Key Issues**

### **Biodiversity (threatened species and communities and migratory species)**

#### Comments

14. Detailed ecological surveys were not provided at the referral stage. Consequently, it is recommended that the Applicant further engages with DoEE before the EIS is finalised and exhibited, to consider the assessments of significance and determine which species are relevant to assessment of the action for EPBC Act purposes.
15. Based on the extent of direct clearing as described in the referral, DoEE considers significant impacts to listed threatened species and ecological communities are likely. However, the extent of impacts to species, species habitat and ecological communities likely to result from subsidence requires assessment.
16. More information is required to quantify the extent of all threatened ecological communities likely to occur within the referral area, including above and surrounding the underground mining area, as the referral documentation only quantifies the extent of ecological communities in areas proposed for direct clearing.
17. The extent of grassland habitat that may be considered White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland is not described within the referral, and will require further assessment.

#### Assessment Requirements

18. For each of the EPBC Act listed species predicted to occur in the project site, and each of the EPBC Act listed ecological communities likely to be significantly impacted, the EIS/Biodiversity Development Assessment Report (BDAR) must provide:
- a. survey results, including details of the scope, timing and methodology for studies or surveys used and how they are consistent with (or justification for divergence from) published Commonwealth guidelines and policy statements and/or the NSW Biodiversity Assessment Method (BAM);

- b. a description and quantification of habitat in the study area (including suitable breeding habitat, suitable foraging habitat, important populations and habitat critical for survival), with consideration of, and reference to, any relevant Commonwealth guidelines and policy statements including listing advices, conservation advices and recovery plans, threat abatement plans and wildlife conservation plans; and
- c. maps displaying the above information (specific to each EPBC protected matter) overlaid with the proposed action.

[Note - it is acceptable, where possible, to use the mapping and assessment of Plant Community Types (PCTs) and the species surveys prescribed by the BAM as the basis for identifying EPBC Act-listed species and communities. The EIS/BDAR must clearly identify which PCTs are considered to align with habitat for the relevant EPBC Act listed species or community, and provide individual maps for each species or community.]

- 19. The EIS/BDAR must describe the nature, geographic extent, magnitude, timing and duration of any likely direct, indirect and consequential impacts on any relevant EPBC Act listed species and communities. It must clearly identify the location and quantify the extent of all impact areas to each relevant EPBC Act listed species or community.
- 20. For each of the EPBC Act listed species and communities likely to be impacted by the development, the EIS/BDAR must provide information on proposed avoidance and mitigation measures to deal with the impacts of the action, and a description of the predicted effectiveness and outcomes that the avoidance and mitigation measures will achieve.
- 21. The EIS/BDAR must identify each EPBC Act listed species and community likely to be significantly impacted by the proposed action. Where a significant impact is likely, the EIS must provide information on the proposed offset strategy, including discussion of the conservation benefit, how offsets will be secured, and timing of protection.

[Note - not all of the offset options under the NSW Biodiversity Conservation Act 2016 are endorsed under the EPBC Act for approval purposes. It is a requirement that offsets directly contribute to the ongoing viability of the specific protected matter impacted by a proposed action i.e. 'like for like'. Like-for-like includes protection of native vegetation that is the same EEC or habitat being impacted, or funding to provide a direct benefit to the matter being impacted i.e. threat abatement, breeding and propagation programs or other relevant conservation measures.]

## **Water resource, in relation to coal seam gas development and large coal mining development**

### Comments

- 22. DoEE considers the proposed action is likely to have significant impacts on a water resource, and that further assessment will be required to assess the nature and extent of these impacts, including the likely extent of these impacts on listed threatened species and ecological communities.

### Assessment Requirements

- 23. The EIS must provide a description of the location, extent and ecological characteristics and values of the identified water resource potentially affected by the project.
- 24. The assessment of impacts should include information on:
  - i. any substantial and measurable changes to the hydrological regime of the water resource, for example a substantial change to the volume, timing, duration or frequency of ground and surface water flows;
  - ii. the habitat or lifecycle of native species, including invertebrate fauna and fish species, dependent upon the water resource being seriously affected
  - iii. substantial and measurable change in the water quality and quantity of the water resource—for example, a substantial change in the level of salinity, pollutants, or nutrients in the wetland; or water temperature that may adversely impact on biodiversity, ecological integrity, social amenity or human health.

25. The EIS must provide adequate information to allow the project to be reviewed by the Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Development, as outlined in the *Information Guidelines for Independent Expert Scientific Committee advice on coal seam gas and large coal mining development proposals (IESC, October 2015)*.

#### **Other approvals and conditions**

26. Information in relation to any other approvals or conditions required must include the information prescribed in Schedule 4 Clause 5 (a) (b) (c) and (d) of the EPBC Regulations 2000.

#### **Environmental Record of person proposing to take the action**

27. Information in relation to the environmental record of a person proposing to take the action must include details as prescribed in Schedule 4 Clause 6 of the EPBC Regulations 2000.

#### **Information Sources**

28. For information given in an EIS, the EIS must state the source of the information, how recent the information is, how the reliability of the information was tested; and what uncertainties (if any) are in the information.

#### **Anticipated Engagement**

29. As discussed paragraph 14, the Applicant should consult with DoEE again after detailed survey work is undertaken and before the EIS is finalised to ensure that all relevant species have been considered.

#### **REFERENCES**

- *Environment Protection and Biodiversity Conservation Act 1999* - section 51-55, section 96A(3)(a)(b), 101A(3)(a)(b), section 136, section 527E
- *Environment Protection and Biodiversity Conservation Regulations 2000 Schedule 4*
- NSW Assessment Bilateral Agreement (2015) - Item 18.1, Item 18.5, Schedule 1
- *Matters of National Environmental Significance - Significant impact guidelines 1.1* (2013) EPBC Act
- *Environment Protect and Biodiversity Conservation Act 1999* Environmental Offsets Policy October 2012
- *Information Guidelines for Independent Expert Scientific Committee advice on coal seam gas and large coal mining development proposals* (2014)