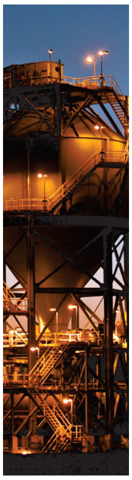
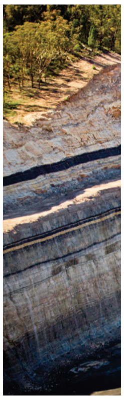
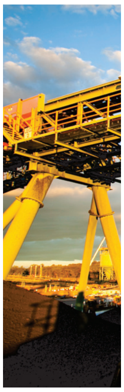






MOOLARBEN COAL COMPLEX
OC3 EXTENSION PROJECT

ENVIRONMENTAL IMPACT STATEMENT

ATTACHMENT I

Secretary's Environmental Assessment Requirements

YANCOAL
兖煤澳大利亚有限公司
MOOLARBEN COAL

Table A1-1
Secretary's Environmental Assessment Requirements – Reference Summary

Summary of EIS Requirements	EIS Reference
General Requirements	
The Environmental Impact Statement (EIS) must meet the minimum form and content requirements as prescribed by Schedule 2 of the *Environmental Planning and Assessment Regulation 2000* (EP&A Regulation) and must have regard to the *State Significant Development Guidelines*.	This EIS and Table A7-1 of Attachment 7
Notwithstanding the key issues specified below, the EIS must include an environmental risk assessment to identify the potential environmental impacts associated with the development.	Appendix Q
In particular, the EIS must include: • A stand-alone executive summary.	Executive Summary
• A full description of the Project, including:	Sections 1.3 and 2.2
o details of historical mining operations at the mine complex and in the surrounding region;	
o details of the resource to be extracted and justification of the proposed mine design, having regard to the advice of Regional NSW – Mining, Exploration and Geosciences;	Sections 3.2 and 3.6
o the mine layout and likely staging or sequencing of the development, including construction, exploration, operation and rehabilitation;	Section 3 and Attachment 8
o coal production rates (ROM and product) and a life of mine production schedule;	Section 3.6
o forecast production tonnages split into market segment, including export/domestic and thermal/metallurgical coal markets;	Section 3.6.4
o coal processing and transport arrangements;	Section 3.7
o surface infrastructure and facilities;	Section 3.12
o workforce requirements during all phases of the development (on a full-time equivalent basis);	Section 3.15 and Appendices E and K
o the likely interactions between the development and any other historical, existing, approved or proposed mining or infrastructure projects in the vicinity of the site.	Sections 1.2, 1.4 and 2.2
• Strategic context for the Project.	Section 2 and Attachment 6
• The statutory context for the Project including any approvals that must be obtained before the development may commence.	Section 4 and Attachment 7
• Consideration of alternatives.	Section 2.7
• An assessment of the likely impacts of all stages of the Project on the environment focusing on specific issues identified below, including: o a description of the existing environment likely to be affected by the development, using sufficient baseline data;	Section 6 and Appendices A to S
o an assessment of the likely impacts of all stages of the development, including appropriate worst-case scenarios, consideration of any cumulative impacts, taking into consideration any relevant legislation, environmental planning instruments, guidelines, policies, plans and industry codes of practice and with consideration to advice provided by agencies;	Sections 6 and Appendices A to S
o A description of the measures that would be implemented to avoid, minimise, mitigate and/or offset the likely impacts of the Project, and an assessment of: – whether these measures are consistent with industry best practice, and represent the full range of reasonable and feasible mitigation measures that could be implemented;	Section 6, Attachment 9 and Appendices A to S
– the likely effectiveness of these measures, including performance measures where relevant;	
– whether contingency plans would be necessary to manage any residual risks; and	
– a description of the measures that would be implemented to monitor and report on the environmental performance of the Project if it is approved.	
• A consolidated summary of all the proposed environmental management and monitoring measures, identifying all commitments in the EIS.	Attachment 9

Table A1-1 (Continued)
Secretary's Environmental Assessment Requirements – Reference Summary

Summary of EIS Requirements	EIS Reference
• An evaluation of the Project as a whole having regard to:	
○ relevant matters for consideration under the *Environmental Planning and Assessment Act 1979*, including the principles of Ecologically Sustainable Development and the objects of the Act;	Sections 4 and 7 and Attachment 7
○ the suitability of the site with respect to potential land use conflicts with existing and future surrounding land uses;	Sections 2 and 7
○ the strategic need and justification for the Project;	Sections 2 and 7
○ feasible alternatives to the development (and its key components), including the consequences of not carrying out the development; and	Sections 2.7 and 7.1.2
○ the biophysical, economic and social costs and benefits of the development; and	Section 7 and Appendix K
• A signed statement from the author of the EIS, certifying that the information contained within the document is neither false nor misleading.	Provided with this EIS
Where relevant, the assessment of key issues below, and any other significant issues identified in the risk assessment, must include: • adequate baseline data;	Section 6, Attachment 9, and Appendices A to S
• consideration of the potential cumulative impacts due to other developments in the vicinity (completed, underway or proposed); and	
• measures to avoid, minimise and if necessary, offset predicted impacts, including detailed contingency plans for managing any significant risks to the environment.	
The EIS must also be accompanied by: • a report from a qualified quantity surveyor providing a detailed calculation of the capital investment value (CIV) (as defined in clause 3 of the Regulation and detailed in Planning circular PS 21-020 dated 2 December 2021) of the proposal, including details of all assumptions and components from which the CIV calculation is derived. The report shall be prepared on company letterhead and indicate applicable GST component of the CIV with certification that the information provided is accurate at the date of preparation; and	Attachment 10
• an estimate of jobs that will be created during the construction and operational phases of the proposed development.	Section 3.15
Key Issues	
• Water Resources	Sections 6.3 and 6.4, Attachment 14 and Appendices A, B and S
• Heritage	Sections 6.11 and 6.12 and Appendices F and G
• Amenity	Sections 6.7, 6.8, 6.9 and 6.14 and Appendices H, I and N
• Greenhouse Gas	Section 6.16, Attachment 5 and Appendix J
• Biodiversity	Sections 6.5 and 6.6 and Appendices C and D
• Traffic and Transport	Section 6.10 and Appendix O
• Social	Section 6.17 and Appendix E
• Economic	Section 6.15 and Appendix K
• Rehabilitation and Final Landform	Sections 3.11 and 3.16, Attachment 8 and Appendix N
• Land and Soil	Section 6.13 and Appendices L and M

Table A1-1 (Continued)
Secretary's Environmental Assessment Requirements – Reference Summary

Summary of EIS Requirements	EIS Reference
• Hazards and Bushfire	Sections 6.1 and 6.18 and Appendices Q and R
• Waste.	Sections 3.8, 3.9 and 3.13 and Appendix P
Engagement	
During the preparation of the EIS, you must consult with the Moolarben Coal Complex Community Consultative Committee (CCC) in accordance with the *Community Consultative Committee Guidelines: State Significant Projects.*	Section 5 and Attachment 16
You must also consult with the relevant local, State or Commonwealth Government authorities including the Director of Siding Spring Observatory, service/ utility providers, community groups, Registered Aboriginal Parties and affected landowners.	
The EIS must detail the engagement undertaken and demonstrate how it was consistent with the *Undertaking Engagement Guide: Guidance for State Significant Projects*. The EIS must detail how issues raised and feedback provided have been considered and responded to in the Project.	

SECRETARY'S ENVIRONMENTAL ASSESSMENT REQUIREMENTS

Mr Michael Moore
Manager Approvals
Moolarben Coal Operations Pty Ltd
Darling Park Tower 2
Level 18, 201 Sussex Street
Sydney NSW 2000

21/01/2022

Dear Mr Moore

Moolarben OC3 Extension Project (SSD-33083358)
Planning Secretary's Environmental Assessment Requirements

Please find attached a copy of the Planning Secretary's environmental assessment requirements (SEARs) for the above Development Application (DA) and Environmental Impact Statement (EIS).

The SEARs have been prepared in consultation with relevant public authorities, based on the information you have provided. A copy of the advice from the public authorities is available on the Department's major project's portal at https://www.planningportal.nsw.gov.au/major-projects/project/43641.

Where relevant, the Planning Secretary may modify the SEARs to ensure the environmental assessment of the project covers all relevant matters and is consistent with contemporary assessment practice.

The SEARs will expire two years from the date of issue (or the date they were last modified) unless the Planning Secretary has granted an extension. If you would like to seek an extension, you should contact the Department at least three months prior to the expiry date.

If the DA and EIS are not submitted within two years (or by the agreed extension date), you will need to make a new application for SEARs to progress your project.

Preparing your EIS

The EIS must be prepared having regard to the Department's new *State Significant Development Guidelines* – including the *Preparing an Environmental Impact Statement Guideline.* All relevant guides for *State Significant Projects* that are referenced in the SEARs are available at www.planning.nsw.gov.au/Policy-and-Legislation/Planning-reforms/Rapid-Assessment-Framework.

Note - If you submit the EIS after 31 December 2022, a Registered Environmental Assessment Practitioner (REAP) will need to declare that your EIS meets certain standards in relation to compliance, completeness, accuracy and legibility.

Lodging your development application (DA)

Once you submit the EIS, we will check it for completeness to confirm it addresses the requirements in Schedule 2 of the *Environmental Planning and Assessment Regulation 2000*. We will also notify you of the DA fee for your project.

Please note that the DA is not taken to be lodged until the DA fee has been paid.

To minimise lodgement delays, **please contact the Department at least two weeks before you submit your DA and EIS** to confirm DA fee payment arrangements. This will give us sufficient time to ensure your fees can be determined quickly.

Information needed to determine the DA fee

The application will need to be accompanied by a Quantity Surveyor's Report supporting the estimated cost of works for your project. You must ensure that the information in the report is consistent with the information provided in your DA form.

If your project involves extractive industries or any subdivision of land, you must also ensure that your report includes a breakdown of estimated costs for any other component of your project.

Public exhibition requirements

When you contact us, regarding the applicable DA fee, we will also advise whether hard and/or electronic copies of the DA and EIS will be required for public exhibition.

Matters of National Environmental Significance

Any development likely to have a significant impact on matters of National Environmental Significance will require approval under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). This approval is in addition to approvals required under NSW legislation.

It is your responsibility to contact the Commonwealth Department of Agriculture, Water and the Environment to determine if you need approval under the EPBC Act (http://www.environment.gov.au or 6274 1111).

If you have any questions, please contact Gen Lucas, Team Leader on 02 9274 6489 or Gen.Lucas@planning.nsw.gov.au.

Yours sincerely,

Stephen O'Donoghue
Director Resource Assessments

as delegate for the Planning Secretary

Enclosed: Issued SEARS

Planning Secretary's Environmental Assessment Requirements

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

Schedule 2 of the Environmental Planning and Assessment Regulation 2000

Application Number	SSD-33083358
Project Name	Moolarben Coal Complex OC3 Extension Project, which includes: - extending open cut mining operations at the 'OC3' pit to the south; - extraction of up to 9 million tonnes of run-of-mine (ROM) coal from the extended mining area; - mining activities for a period of 10 years (ie 2026 to 2036), within the approved life of the complex (ie 2038); - construction and operation of ancillary infrastructure to support mining operations, including water management and water storage infrastructure; - construction of haul road crossings of Moolarben Creek and Murdering Creek; - excavation of borrow pits to provide construction materials; and - development of an integrated waste rock emplacement landform.
Location	Moolarben Coal Complex, Ulan-Wollar Road, approximately 40 kilometres north of Mudgee within the Mid-Western Regional local government area
Applicant	Moolarben Coal Operations Pty Ltd
Date of Issue	21/01/2022
General Requirements	The Environmental Impact Statement (EIS) must meet the minimum form and content requirements as prescribed by Schedule 2 of the *Environmental Planning and Assessment Regulation 2000* (EP&A Regulation) and must have regard to the *State Significant Development Guidelines*. Notwithstanding the key issues specified below, the EIS must include an environmental risk assessment to identify the potential environmental impacts associated with the development. In particular, the EIS must include: - a stand alone executive summary; - a full description of the development, including: o details of historical mining operations at the mine complex and in the

surrounding region;

- details of the resource to be extracted and justification for the proposed mine design, having regard to the advice of Regional NSW – Mining, Exploration and Geosciences;
- the mine layout and likely staging or sequencing of the development, including construction, exploration, operation and rehabilitation;
- coal production rates (ROM and product) and a life of mine production schedule;
- forecast production tonnages split into market segment, including export/domestic and thermal/metallurgical coal markets;
- coal processing and transportation arrangements;
- surface infrastructure and facilities;
- workforce requirements during all phases of the development (on a full-time equivalent basis);
- the likely interactions between the development and any other historical, existing, approved or proposed mining or infrastructure projects in the vicinity of the site;

- strategic context for the development;
- the statutory context for the development including any approvals that must be obtained before the development may commence;
- consideration of alternatives;
- an assessment of the likely impacts of the development on the environment focusing on the specific issues identified below, including:
  - a description of the existing environment likely to be affected by the development, using sufficient baseline data;
  - an assessment of the likely impacts of all stages of the development, including appropriate worst-case scenarios, consideration of any cumulative impacts, taking into consideration any relevant legislation, environmental planning instruments, guidelines, policies, plans and industry codes of practice and with consideration to advice provided by agencies;
  - a description of the measures that would be implemented to avoid, mitigate and/or offset the likely impacts of the development, and an assessment of:
    - whether these measures are consistent with industry best practice, and represent the full range of reasonable and feasible mitigation measures that could be implemented;
    - the likely effectiveness of these measures, including performance

measures where relevant;

  - whether contingency plans would be necessary to manage any residual risks; and
  - a description of the measures that would be implemented to monitor and report on the environmental performance of the development if it is approved;

- a consolidated summary of all the proposed environmental management and monitoring measures, identifying all the commitments in the EIS;
- an evaluation of the project as a whole having regard to:
  - relevant matters for consideration under the *Environmental Planning and Assessment Act 1979*, including the principles of Ecologically Sustainable development and the objects of the Act;
  - the suitability of the site with respect to potential land use conflicts with existing and future surrounding land uses;
  - the strategic need and justification for the project;
  - feasible alternatives to the development (and its key components), including the consequences of not carrying out the development; and
  - the biophysical, economic and social costs and benefits of the development; and
- a signed statement from the author of the EIS, certifying that the information contained within the document is neither false nor misleading.

Where relevant, the assessment of key issues below, and any other significant issues identified in the risk assessment, must include:

- adequate baseline data
- consideration of the potential cumulative impacts due to other developments in the vicinity (completed, underway or proposed); and
- measures to avoid, minimise and if necessary, offset predicted impacts, including detailed contingency plans for managing any significant risks to the environment.

The EIS must also be accompanied by:

- a report from a qualified quantity surveyor providing a detailed calculation of the capital investment value (CIV) (as defined in clause 3 of the Regulation and detailed in Planning circular PS 21-020 dated 2 December 2021) of the proposal, including details of all assumptions and components from which the CIV calculation is derived. The report shall be prepared on company letterhead and indicate applicable GST component of the CIV with certification that the information provided is accurate at the date of preparation; and

	- an estimate of jobs that will be created during the construction and operational phases of the proposed development.
Key issues	The EIS must address the following specific matters: **1. Water Resources -** including: - an assessment of the likely impacts of the development on the quantity and quality of the region's surface and groundwater resources, having regard to the *NSW Aquifer Interference Policy* and the advice of DPE Water and the Environment Protection Authority (EPA); - an assessment of the likely impacts of the development on aquifers, watercourses, swamps, riparian land, groundwater dependent ecosystems, water-related infrastructure, basic landholder rights and other water users; - an assessment of all water take for the life of the project and post-closure, including water taken directly and indirectly and itemised to quantify the contributions from each water source; - an assessment of post-mining groundwater recovery and the potential long-term impacts on water quality and quantity; - a detailed site water balance, including a description of site water demands, water disposal methods (including the location, volume and frequency of any water discharges and management of discharge water quality), water supply and transfer infrastructure and water storage structures, including an assessment of the reliability of water supply, including consideration of a range of climatic conditions and climate change projections; - identification of an adequate and secure authorised water supply for the life of the project and any licensing requirements or other approvals under the *Water Act 1912* and/or *Water Management Act 2000*, including a description of the measures proposed to ensure the development can operate in accordance with the requirements of any relevant water sharing plan or water source embargo, or any alternative mechanisms agreed following consultation with relevant NSW government agencies/ statutory authorities; - a detailed description of the proposed water management system, beneficial water re-use program, water monitoring program and other measures to mitigate surface water and groundwater impacts; - an assessment of the potential flooding impacts of the development; - a description of proposed surface and groundwater monitoring activities and methodologies; - a description of the reasonable and feasible mitigation and management measures proposed to prevent pollution of waters and to avoid or mitigate impacts to the quality or quantity of surface and groundwater resources, including assessment of the predicted effectiveness and cost of the mitigation measures; and - an independent peer review of the groundwater model and the assessment of groundwater impacts prepared for the development. **2. Heritage –** including: - an assessment of the likely Aboriginal heritage (cultural and archaeological) impacts of the development, having regard to the advice from Heritage NSW, including consultation with the Aboriginal

stakeholders in accordance with the *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (DECCW, 2010); and
- an assessment of the likely impacts of the development on the historic heritage significance of the site and adjacent areas, prepared by a suitably qualified heritage consultant in accordance with the guidelines in the NSW Heritage Manual.

3. Amenity – including:
- an assessment of the likely construction, operational and traffic noise impacts of the development, in accordance with the *Interim Construction Noise Guideline*, *NSW Noise Policy for Industry* (EPA) and *NSW Road Noise Policy*, and having regard to the *Voluntary Land Acquisition and Mitigation Policy*;
- the likely blasting impacts of the development on people, animals, buildings and infrastructure, and significant natural features, having regard to the relevant ANZECC guidelines;
- an assessment of the likely air quality impacts of the development in accordance with the *Approved Methods and Guidance for the Modelling and Assessment of Air Pollutants in NSW*; and
- an assessment of the likely visual impacts of the development from key public and private vantage points, and methods to minimise the lighting impacts of the development; and
- the lighting impacts of the development on local receivers and on Siding Spring Observatory in accordance with the Dark Sky Planning Guideline, including measures to minimise lighting impacts.

4. Greenhouse Gas – including:
- an assessment of the likely greenhouse gas emissions of the development;
- analysis of how the development's greenhouse gas emissions would affect State and national greenhouse gas emission reduction targets;
- a review of available best practice greenhouse gas emissions reduction measures available to the development for Scope 1 and Scope 2 emissions;
- details of proposed greenhouse gas emissions avoidance, mitigation and/or offset measures for Scope 1 and Scope 2 emissions; and
- an independent peer review of the greenhouse gas emission estimates and emission reduction measures.

5. Biodiversity – including:
- an assessment of the biodiversity values and the likely biodiversity impacts of the development throughout its life, and cumulative biodiversity impacts, in accordance with Section 7.9 of the *Biodiversity Conservation Act 2016 (NSW)*, and the *Biodiversity Assessment Method* (BAM 2020), and documented in a Biodiversity Development Assessment Report (BDAR);
- the BDAR must document the application of the avoid, minimise, offset and reporting framework including assessing all direct, indirect and prescribed impacts of the development over time in accordance with the BAM; and
- a strategy to offset any residual impacts of the development in accordance with the *Biodiversity Conservation Act 2016* (NSW).

5. Traffic and Transport – including:

- an assessment of the likely transport impacts of the development on the capacity, condition, safety and efficiency of the surrounding transport network, including cumulative impacts (considering other mining developments in the locality); and
- a description of the measures that would be implemented to mitigate and/or manage any impacts, including any proposed road and rail upgrades, road and rail maintenance contributions, and other traffic control measures developed in consultation with the relevant road and rail authorities;

6. Social – including:

- a Social Impact Assessment prepared in accordance with the *Social Impact Assessment Guideline*.

7. Economic – including:

- the likely economic impacts of the development, paying particular attention to:
  - the significance of the resource;
  - the costs and benefits of the development identifying if it would result in a net benefit to NSW, including consideration of fluctuations in commodity markets and exchange rates, and costs of residual Scope 1 and 2 greenhouse gas emissions appropriately apportioned to NSW; and
  - the demand for the provision of local infrastructure and services; and
- the need for a voluntary planning agreement; in relation to infrastructure, services, and community benefits to address residual social impacts.

8. Rehabilitation and Final Landform – including:

- a Rehabilitation Strategy, having regard to the advice of the Resources Regulator and addressing:
  - final land-use options and preferred final land use;
  - final landform including the conceptual final landform design;
  - how the rehabilitation of the project will relate to the rehabilitation strategies of the existing mine complex and neighboring mines; and
  - inclusion of rehabilitation objectives and completion criteria to achieve the nominated post-mining land use for each mining domain; and
- identification and discussion of opportunities to improve rehabilitation and environmental outcomes for existing disturbed areas within the project site, and barriers or limitations to effective rehabilitation.

Land and Soil – including an assessment of:

- the likely impacts of the development on the soils and land capability of

	the site and surrounds, and a description of the mitigation and management measures to prevent, control or minimise impacts of the development; - the likely agricultural impacts of the development, including biosecurity risks; and - the compatibility of the development with other land uses in the vicinity of the development in accordance with the requirements of Clause 12 of *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007,* paying particular attention to the agricultural land use in the region; and - consideration of potential land contamination consistent with the requirements of State Environmental Planning Policy 55 – Remediation of Land. **9. Hazards and Bushfire –** including: - an assessment of the likely risks to public safety, paying particular attention to potential geochemical risks, bushfire risks, and the handling and use of any dangerous goods; - an assessment of bushfire risk, including consideration of the impacts of climate change and predicted hydrological changes within the local landscape; and - consideration of *State Environmental Planning Policy 33 – Hazardous and Offensive Development* with clear justification to support any conclusion that SEPP 33 does not apply. **Waste –** including: - identification, quantification and classification of the waste streams likely to be generated (including tailings, course rejects and waste tyres) during construction and operation; - a description of the measures to be implemented to manage, reuse, recycle and safely dispose of the identified waste streams; and - details of proposed methods of storage and management of chemicals, including consideration of any infrastructure required to prevent spills and leaks.
Plans and Documents	The EIS must include all relevant plans, architectural drawings, diagrams and relevant documentation required under Schedule 1 of the Regulation. Provide these as part of the EIS rather than as separate documents. In addition, the EIS must include high quality files of maps and figures of the subject site and proposal.
Engagement	During the preparation of the EIS, you must consult with the Moolarben Coal Complex Community Consultative Committee (CCC) in accordance with the *Community Consultative Committee Guidelines: State Significant Projects.* You must also consult with the relevant local, State or Commonwealth Government authorities including the Director of Siding Spring Observatory, service/ utility providers, community groups, Registered Aboriginal Parties and affected landowners. The EIS must detail the engagement undertaken and demonstrate how it was consistent with the *Undertaking Engagement Guide: Guidance for State*

	Significant Projects. The EIS must detail how issues raised and feedback provided have been considered and responded to in the project.
Expiry Date	If you do not lodge a Development Application and EIS for the development within 2 years of the issue date of these SEARs, your SEARs will expire. If an extension to these SEARs will be required, please consult with the Planning Secretary 3 months prior to the expiry date.
References	The assessment of the key issues listed above must take into account relevant guidelines, policies, and plans as identified. While not exhaustive, Attachment 1 contains a list of some of the guidelines, policies, and plans that may be relevant to the environmental assessment of this proposal.

SECRETARY'S ENVIRONMENTAL ASSESSMENT REQUIREMENTS

ATTACHMENT 1

ENVIRONMENTAL PLANNING INSTRUMENTS, POLICIES, GUIDELINES & PLANS

ATTACHMENT 1

Environmental Planning Instruments, Policies, Guidelines & Plans

Please also refer to the Department's Policies and Guidelines including strategic plans and guidelines at:

https://www.planningportal.nsw.gov.au/major-projects/assessment/policies-and-guidelines

Land and Contamination	
	Primefact 1063: Infrastructure proposals on rural land (DPI)
	Australian Soil and Land Survey Handbook (CSIRO)
	Australian Soil and Land Survey Handbook (CSIRO)
	Guidelines for developments adjoining land and water managed by the Department of Environment, Climate Change and Water (DECCW, 2010)
	Contaminated Sites Sampling Design Guidelines 1995 (EPA)
	Soil and Landscape Issues in Environmental Impact Assessment (DPI)
	Guidelines for Surveying Soil and Land Resources (CSIRO)
	Australian and New Zealand Guidelines for the Assessment and Management of Contaminated Sites (ANZECC)
	The land and soil capability assessment scheme: second approximation (OEH)
Water	
Water Sharing Plans	Relevant Water Sharing Plans
Groundwater	NSW State Groundwater Policy Framework Document (DPI)
	NSW State Groundwater Quality Protection Policy (DPI)
	NSW State Groundwater Quantity Management Policy (DPI)
	NSW Aquifer Interference Policy 2012 (DPI)
	Australian Groundwater Modelling Guidelines 2012 (Commonwealth)
	National Water Quality Management Strategy Guidelines for Groundwater Protection in Australia (ARMCANZ/ANZECC)
	Guidelines for the Assessment & Management of Groundwater Contamination (EPA)
Surface Water	NSW State Rivers and Estuary Policy (DPI)
	NSW Government Water Quality and River Flow Objectives at http://www.environment.nsw.gov.au/ieo/
	Using the ANZECC Guideline and Water Quality Objectives in NSW (DEC, 2006)
	ANZECC Guidelines for Fresh and Marine Water Quality (ANZECC/ARMCANZ)
	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 – 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 Volumes 2A to 2E (DECC)

	Managing Urban Stormwater: Treatment Techniques (EPA)
	Managing Urban Stormwater: Source Control (EPA)
	Technical Guidelines: Bunding & Spill Management (EPA)
	A Rehabilitation Manual for Australian Streams (LWRRDC and CRCCH)
	NSW Guidelines for Controlled Activities on Waterfront Land (NRAR)
Flooding	Floodplain Development Manual (OEH)
	Floodplain Risk Management Guideline (OEH)
Biodiversity	
	Biodiversity Conservation Act 2016
	Biodiversity Assessment Method 2020 (DPIE)
	Biosecurity Act 2015
	NSW State Groundwater Dependent Ecosystem Policy (NOW)
	Risk Assessment Guidelines for Groundwater Dependent Ecosystems (DPI)
	Policy and Guidelines for Fish Habitat Conservation and Management (DPI)
Heritage	
	The Burra Charter (The Australia ICOMOS charter for places of cultural significance)
	Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW)
	Code of Practice for Archaeological Investigations of Objects in NSW (OEH)
	Guide to investigating, assessing and reporting on aboriginal cultural heritage in NSW (OEH).
	Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW (DECCW)
	Assessing Heritage Significance (NSW Heritage Office, 2001)
	Statements of Heritage Impact (Heritage Office and Department of Urban Affairs and Planning, 2002)
	NSW Heritage Manual (OEH)
Noise, Vibration and Blasting	
	Voluntary Land Acquisition and Mitigation Policy: For State Significant Mining, Petroleum and Extractive Industry Developments (NSW Government 2018)
	NSW Noise Policy for Industry (EPA)
	Interim Construction Noise Guideline (EPA) or Construction Noise Guideline (EPA) – currently draft only – application subject to any transitional arrangements
	NSW Road Noise Policy (EPA)
	Rail Infrastructure Noise Guideline (EPA)
	Environmental Noise Management – Assessing Vibration: a technical guide (DEC)
	Technical Basis for Guidelines to Minimise Annoyance Due to Blasting Overpressure and Ground Vibration (ANZECC)
Air Quality	
	Voluntary Land Acquisition and Mitigation Policy: For State Significant Mining, Petroleum and Extractive Industry Developments (NSW Government 2018)
	Approved Methods for the Modelling and Assessment of Air Pollutants in NSW (EPA)
	Approved Methods for the Sampling and Analysis of Air Pollutants in NSW (DEC)
	National Greenhouse Accounts Factors (Commonwealth)
	NSW Climate Change Policy Framework
Transport	

	Guide to Traffic Generating Developments (RTA)
	Road Design Guide (RMS) & relevant Austroads Standards
	Austroads Guide to Traffic Management Part 12: Traffic Impacts of Development and RMS Supplements
Socio-Economic	
	Social Impact Assessment Guideline (DPIE 2021)
	Guidelines for the Economic Assessment of Mining and Coal Seam Gas Proposals Dec 2015
Hazards	
	Australian Dangerous Goods Code
	Australian Standard 4452 Storage and Handling of Toxic Substances
	Hazardous and Offensive Development Application Guidelines – Applying SEPP 33
	Hazardous Industry Planning Advisory Paper No. 6 – Guidelines for Hazard Analysis
	Multi-level Risk Assessment (DPI)
Waste	
	Waste Classification Guidelines (EPA)
	Protection of the Environment Operations (Waste) Regulation 2014
	Environmental Guidelines: Solid Waste Landfills (EPA 2016)
	Tailings Management – Leading Practice Sustainable Development Program for the Mining Industry (Australian Government 2016)
Resource	
	Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves 2012 (JORC)
Rehabilitation	
	Mine Rehabilitation – Leading Practice Sustainable Development Program for the Mining Industry (Commonwealth)
	Mine Closure and Completion – Leading Practice Sustainable Development Program for the Mining Industry (Commonwealth)
	Strategic Framework for Mine Closure (ANZMEC-MCA)
	Integrated Mine Closure: Good Practice Guide (ICMM, 2019)
	Guidelines on Tailings Dams – Planning, Design, Construction, Operation and Closure – Revision 1 (ANCOLD, July 2019)
Environmental Planning Instruments	
	State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007
	State Environmental Planning Policy (State and Regional Development) 2011
	State Environmental Planning Policy (Infrastructure) 2007
	State Environmental Planning Policy (Primary Production and Rural Development) 2019
	State Environmental Planning Policy No. 33 – Hazardous and Offensive Development
	State Environmental Planning Policy No. 55 – Remediation of Land
	Mid-Western Regional Local Environmental Plan 2012

SECRETARY'S ENVIRONMENTAL ASSESSMENT REQUIREMENTS

ATTACHMENT 2

AGENCY ADVICE

Our ref: DOC21/1095322
Senders ref: SSD 33083358

Ms Gen Lucas
Senior Environmental Assessment Officer
Minerals Quarry Assessments
Department of Planning, Industry and Environment
gen.lucas@planning.nsw.gov.au

Dear Gen

Moolarben OC3 Extension Project – Secretary's Environmental Assessment Requirements (SEARs)

I refer to your email dated 7 December 2021 seeking input into the Department of Planning, Industry and Environment Secretary's Environmental Assessment Requirements (SEARs) for the preparation of an Environmental Impact Assessment (EIS) for the proposed Moolarben OC3 Extension Project (SSD 33083358)

The Biodiversity, Conservation and Science Directorate (BCS) has considered your request and provides SEARs for the proposed development in **Attachments A** and **B**.

BCS recommends the EIS needs to appropriately address the following:

1. Biodiversity and offsetting
2. Water and soils
3. Flooding

If you have any questions about this advice, please do not hesitate to contact Michelle Howarth, Senior Conservation Planning Officer, via michelle.howarth@environment.nsw.gov.au or (02) 6883 5339.

Yours sincerely,

Samantha Wynn

Samantha Wynn
Senior Team Leader Planning North West
Biodiversity, Conservation and Science Directorate

13 December 2021

Attachment A - Environmental Assessment Requirements

Attachment B - Guidance Material

Standard Environmental Assessment Requirements

BCS	Biodiversity, Conservation and Science Directorate of the NSW Department of Planning, Industry and Environment
The Department	NSW Department of Planning, Industry and Environment
NPWS	National Parks and Wildlife Service

Category 1 – exempt land

Clearing of native vegetation on land that meets the definition of Category 1 - exempt land (as defined under the Local Land Services Act 2013 (LLS Act)) does not require assessment or offsetting under the Biodiversity Conservation Act 2016. Prescribed impacts as outlined in chapter 6 of the Biodiversity Assessment Method (2020) must still be considered on Category 1 - exempt land. In addition, potential impacts to Matters of National Environmental Significance under the Environment Protection and Biodiversity Conservation Act 1999 on Category 1 – exempt land must be considered.

Section 60F Local Land Services Act 2013 (LLS Act) Act provides the transitional arrangements that are in place until a comprehensive NVR Map with all the land categories is published. During the 'transitional period' assessors can make a reasonable approximation of land categorisation for unpublished layers, in consultation with the landholder.

Where a reasonable approximation is required, it is recommended that:

- assessors first identify whether land meets criteria for Category 2 - Regulated Land, prior to Category 1 - Exempt Land.
    - In some circumstances, land may meet multiple map criteria i.e. criteria for Category 2 - Regulated Land, AND Category 1 - Exempt Land
    - In most circumstances' Category 2 - Regulated Land criteria will determine the categorisation of the land, rather than Category 1 - Exempt Land criteria.

Section 60I of the LLS Act defines the criteria in which land can be classified as Category 2 Regulated Land, this includes land which:

- was not cleared of native vegetation as at 1 January 1990;
- was unlawfully cleared of native vegetation between 1 January 1990 and 25 August 2017;
- contains native vegetation that was grown or preserved with the assistance of public funds (other than funds for forestry purposes);
- contains grasslands that are not low conservation grasslands;
- is subject to a private land conservation agreement;
- is a 'set aside' under a Land Management (Native Vegetation) Code;
- is an offset under a property vegetation plan or a set aside under the former native vegetation laws;
- is subject to an approved conservation measure that was the basis for other land being biocertified;
- is identified as coastal wetlands or littoral rainforest;

- is identified as koala habitat;
- is a declared RAMSAR wetland; or
- is mapped as containing Critically Endangered species of plants or a Critically Endangered Ecological Community

The above criteria are inclusive of both Category 2 Vulnerable Regulated Land and Sensitive Regulated Land categories.

Where an assessor identifies land that does not meet the criteria for Category 2 Vulnerable or Sensitive Regulated land, the assessor should then assess whether or not the land meets the definition of Category 1 – exempt land.

Where the assessor identifies land as Category 1 – exempt land it must be adequately demonstrated that the identified land meets the criteria as set out in section 60H of the LLS Act. Multiple pieces of evidence should be used to demonstrate a Category 1 – exempt land designation. This might include:

- Publicly available data sets on the SEED data portal, such as:
  - Land use mapping – used to identify and map existing and historical agricultural land use in NSW – see the *2017 landuse map*
  - Woody vegetation extent – used to identify and map native vegetation extent – see *2008 Woody extent* *2011 woody extent*
  - State-wide Landcover and Tree Survey (SLATS) woody clearing for NSW – used to identify detectable clearing events since January 1990 – *available here*
- Published information on the Native Vegetation Regulatory Map, including Category 2-sensitive regulated, Category 2-vulnerable regulated, and excluded land - *available here*
- Site-based information and records, including:
  - Current and historical high-resolution aerial photography
  - current and historical photographs of the subject land
  - historical land management records maintained by the landowner
  - vegetation survey data collected on the subject land
  - documentation demonstrating history of authorised clearing and/or development

The published *Native Vegetation regulatory map: method statement* should be reviewed to determine how the datasets can be best interrogated to support any identification of Category 1 – exempt land.

Where datasets/information provide contradictory information, a precautionary approach should be applied and the land should be categorised as Category 2 – regulated land.

Where Category 1 – exempt land is likely to be present on a development site, early engagement with BCS is encouraged. Prior to the Biodiversity Development Assessment Report being submitted to the consent authority, the accredited assessor should submit a proposed land categorisation method to the BCS North West Planning team at *rog.nw@environment.nsw.gov.au* for endorsement.

Controlled Actions under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act)
If the proposed development is likely to be a 'Controlled Action' under the EPBC Act, the accredited assessor should contact the BCS North West Planning team at *rog.nw@environment.nsw.gov.au* prior to submission of the EIS. The BCS North West Planning team can provide guidance on the minimum information requirements for the EIS for any entities that have been or are likely to be deemed a 'Controlled Action'

Biodiversity
1. Biodiversity impacts related to the proposed project are to be assessed in accordance with *Section 7.9 of the Biodiversity Conservation Act 2016* the *Biodiversity Assessment Method 2020* 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 2020*, unless the Department determines that the proposed development is not likely to have any significant impacts on biodiversity values. 2. The BDAR must document the application of the avoid, minimise, and offset framework; including assessing all direct, indirect, uncertain and prescribed impacts in accordance with the *Biodiversity Assessment Method 2020*. 3. The BDAR must include details of the measures proposed to address the offset obligation as follows: a. The total number and classes of biodiversity credits required to be retired for the development/project; b. The number and classes of like-for-like biodiversity credits proposed to be retired; c. The number and classes of biodiversity credits proposed to be retired in accordance with the variation rules; d. Any proposal to fund a *biodiversity conservation action*; e. Any proposal to conduct ecological rehabilitation (if a mining project); f. 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 submitted with all spatial data associated with the survey and assessment as per Appendix 11 of the BAM. 5. 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*.
Water and soils
6. 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.
7. The EIS must describe background conditions for any water resource likely to be affected by the project, 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*) 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; e. *Risk-based Framework for Considering Waterway Health Outcomes in Strategic Land-use Planning Decisions.*
8. The EIS must assess the impacts of the project on water quality, including: a. The nature and degree of impact on receiving waters for both surface and groundwater, demonstrating how the project 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.
9. The EIS must assess the impact of the project 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
10. The EIS must map the following features relevant to flooding as described in the *Floodplain Development Manual 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); d. Flood hazard.
11. The EIS must describe flood assessment and modelling undertaken in determining the design flood levels for events, including a minimum of the 5% Annual Exceedance Probability (AEP), 1% AEP, flood levels and the probable maximum flood, or an equivalent extreme event.
12. The EIS must model the effect of the proposed project (including fill) on the flood behaviour under the following scenarios: a. Current flood behaviour for a range of design events as identified in 14 above. This includes the 0.5% and 0.2% AEP year flood events as proxies for assessing sensitivity to an increase in rainfall intensity of flood producing rainfall events due to climate change.
13. Modelling in the EIS must consider and document:

a. Existing council flood studies in the area and examine consistency to the flood behaviour documented in these studies; b. The impact on existing flood behaviour for a full range of flood events including up to the probable maximum flood, or an equivalent extreme flood; c. 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, hazard categories and hydraulic categories; d. Relevant provisions of the NSW *Floodplain Development Manual 2005*.
14. The EIS must assess the impacts on the proposed project 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. Consistency with any Rural Floodplain Management Plans; d. Compatibility with the flood hazard of the land; e. Compatibility with the hydraulic functions of flow conveyance in floodways and storage in flood storage areas of the land; f. Whether there will be adverse effect to beneficial inundation of the floodplain environment, on, adjacent to or downstream of the site; g. Whether there will be direct or indirect increase in erosion, siltation, destruction of riparian vegetation or a reduction in the stability of riverbanks or watercourses; h. Any impacts the development may have upon existing community emergency management arrangements for flooding. These matters are to be discussed with the NSW SES and Council; i. Whether the proposal incorporates specific measures to manage risk to life from flood. These matters are to be discussed with the NSW SES and Council; j. Emergency management, evacuation and access, and contingency measures for the development considering the full range or 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 NSW SES; k. Any impacts the development may have on the social and economic costs to the community as consequence of flooding.

Guidance Material

Title	Web address
Relevant Legislation	
Biodiversity Conservation Act 2016	*https://www.legislation.nsw.gov.au/view/html/inforce/current/act-2016-063*
Environment Protection and Biodiversity Conservation Act 1999	*https://www.legislation.gov.au/Details/C2014C00140/Download*
Environmental Planning and Assessment Act 1979	*https://www.legislation.nsw.gov.au/view/html/inforce/current/act-1979-203*
Fisheries Management Act 1994	*https://www.legislation.nsw.gov.au/view/html/inforce/current/act-1994-038*
National Parks and Wildlife Act 1974	*https://www.legislation.nsw.gov.au/view/html/inforce/current/act-1974-080*
Protection of the Environment Operations Act 1997	*https://www.legislation.nsw.gov.au/view/html/inforce/current/act-1997-156*
Water Management Act 2000	*https://www.legislation.nsw.gov.au/view/html/inforce/current/act-2000-092*
Wilderness Act 1987	*https://www.legislation.nsw.gov.au/view/html/inforce/current/act-1987-196*
Biodiversity	
Biodiversity Assessment Method (OEH, 2020)	*https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-2020*
Changes to the Biodiversity Assessment Method from 2017 to 2020	*https://www.environment.nsw.gov.au/research-and-publications/publications-search/changes-to-the-biodiversity-assessment-method-from-2017-to-2020*
BAM 2020 Operational Manual Stage 1	*https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-manual-2020-operational-manual-stage-1*
BAM Operational Manual Stage 2	*https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-operational-manual-stage-2*
BAM 2020 Operational Manual Stage 3	*https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-operational-manual-stage-3*
BAM Calculator User Guide	*https://www.environment.nsw.gov.au/research-and-publications/publications-search/biodiversity-assessment-method-user-guide*
Serious and irreversible impacts of development on biodiversity	*https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity/biodiversity-offsets-scheme/serious-and-irreversible-impacts*
Practice Note - Guidance for assessors and decision makers in applying modified benchmarks to assessments of vegetation integrity: Biodiversity Assessment Method	*https://www.environment.nsw.gov.au/research-and-publications/publications-search/guidance-assessors-decision-makers-applying-modified-benchmarks-to-assessments-vegetation-integrity*

Title	Web address
Guidance and Criteria to assist a decision maker to determine a serious and irreversible impact (OEH, 2017)	*https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Animals-and-plants/Biodiversity/guidance-decision-makers-determine-serious-irreversible-impact-190511.pdf*
Accreditation Scheme for Application of the Biodiversity Assessment Method Order 2017	*https://www.legislation.nsw.gov.au/view/pdf/asmade/sl-2017-471*
Ancillary rules: Biodiversity conservation actions	*https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Animals-and-plants/Biodiversity/ancillary-rules-biodiversity-conservation-actions-170496.pdf*
Ancillary rules: Reasonable steps to seek like-for-like biodiversity credits for the purpose of applying the variation rules	*https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Animals-and-plants/Biodiversity/ancillary-rules-reasonable-steps-like-for-like-biodiversity-credits-170498.pdf*
Ancillary rules: Impacts on threatened species and ecological communities excluded from application of variation rules	*https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Animals-and-plants/Biodiversity/ancillary-rules-impacts-on-threatened-entities-excluded-from-variation-170497.pdf?la=en&hash=C38840BFF49F012433532DF72E3D90C741E4DAC1*
The Department's Threatened Species Website	*https://www.environment.nsw.gov.au/topics/animals-and-plants/threatened-species*
NSW BioNet (Atlas of NSW Wildlife)	*www.bionet.nsw.gov.au/*
Surveying Threatened Plants and their Habitats - NSW Survey Guide For The Biodiversity Assessment Method (DPIE 2020).	*https://www.environment.nsw.gov.au/research-and-publications/publications-search/surveying-threatened-plants-and-their-habitats-survey-guide-for-the-biodiversity-assessment-method*
Threatened Biodiversity Survey and Assessment: Guidelines for Developments and Activities - November 2004	*https://www.environment.nsw.gov.au/surveys/BiodiversitySurveyGuidelinesDraft.htm*
Threatened species survey and assessment guidelines: field survey methods for fauna – amphibians	*https://www.environment.nsw.gov.au/research-and-publications/publications-search/threatened-species-field-survey-methods-for-fauna-amphibians*
NSW Survey Guide for Threatened Frogs	*https://www.environment.nsw.gov.au/research-and-publications/publications-search/nsw-survey-guide-for-threatened-frogs*
Surveying 'species credit' threatened bats and their habitats – NSW survey guide for the Biodiversity Assessment Method	*https://www.environment.nsw.gov.au/research-and-publications/publications-search/species-credit-threatened-bats-nsw-survey-guide-for-biodiversity-assessment-method*
Bat calls of NSW - region-based guide to the echolocation calls of Microchiropteran bats	*https://www.environment.nsw.gov.au/surveys/Batcalls.htm*
Community Biodiversity Survey Manual	*https://www.environment.nsw.gov.au/surveys/CommunityBiodiversitySurveyManual.htm*
BioNet Vegetation Classification - NSW Plant Community Type (PCT) database	*www.environment.nsw.gov.au/research/Vegetationinformationsystem.htm*

Title	Web address
The Departments Data Portal (access to online spatial data)	*http://data.environment.nsw.gov.au/*
Fisheries NSW policies and guidelines	*https://www.dpi.nsw.gov.au/fishing/habitat/publications/pubs/fish-habitat-conservation*
List of national parks	*https://www.nationalparks.nsw.gov.au/conservation-and-heritage/national-parks*
Revocation, recategorisation and road adjustment policy (OEH, 2012)	*https://www.environment.nsw.gov.au/topics/parks-reserves-and-protected-areas/park-policies/revocation-recategorisation-and-road-adjustment*
Guidelines for consent and planning authorities for Developments adjacent to National Parks and Wildlife Service Land (NPWS, 2020)	*https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Parks-reserves-and-protected-areas/Development-guidelines/developments-adjacent-npws-lands-200362.pdf*
Water and Soils	
Acid sulphate soils	
Acid Sulfate Soils Planning Maps via Data.NSW	*https://data.nsw.gov.au/data/dataset/acid-sulphate-soils-ass-planning-maps*
Acid Sulfate Soils Manual (Stone et al. 1998)	*https://www.environment.nsw.gov.au/resources/epa/Acid-Sulfate-Manual-1998.pdf*
Acid Sulfate Soils Laboratory Methods Guidelines (Ahern et al. 2004)	*http://www.environment.nsw.gov.au/resources/soils/acid-sulfate-soils-laboratory-methods-guidelines.pdf* This replaces Chapter 4 of the Acid Sulfate Soils Manual above.
Flooding	
Floodplain development manual	*https://www.environment.nsw.gov.au/topics/water/floodplains/floodplain-manual*
Floodplain Risk Management Guidelines	*http://www.environment.nsw.gov.au/topics/water/coasts-and-floodplains/floodplains/floodplain-guidelines*
NSW Climate Impact Profile	*http://climatechange.environment.nsw.gov.au/*
Climate Change Impacts and Risk Management	*https://www.environment.gov.au/climate-change/adaptation/publications/climate-change-impact-risk-management*
Water	
Water Quality Objectives	*http://www.environment.nsw.gov.au/ieo/index.htm*
ANZECC & ARMCANZ (2000) Water Quality Guidelines	*https://www.waterquality.gov.au/anz-guidelines/resources/previous-guidelines/anzecc-armcanz-2000*
Applying Goals for Ambient Water Quality Guidance for Operations Officers – Mixing Zones	*http://deccnet/water/resources/AWQGuidance7.pdf*
Approved Methods for the Sampling and Analysis of Water Pollutant in NSW (2004)	*http://www.environment.nsw.gov.au/resources/legislation/approvedmethods-water.pdf*

OUT21/17793

Gen Lucas
Planning and Assessment Group
NSW Department of Planning, Industry and Environment

gen.lucas@planning.nsw.gov.au

Dear Ms Lucas

Moolarben OC3 Extension Project (SSD-33083358)
Comment on the Secretary's Environmental Assessment Requirements (SEARs)

I refer to your email of 7 December 2021 to the Department of Planning, Industry and Environment (DPIE) Water and the Natural Resources Access Regulator (NRAR) about the above matter.

The following recommendations are provided by DPIE Water and NRAR.

<u>The SEARS should include:</u>

- 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 Guidelines for Controlled Activities on Waterfront Land (2018) and the relevant Water Sharing Plans (available at https://water.dpie.nsw.gov.au/home).

Any further referrals to DPIE Water and NRAR can be sent by email to water.assessments@dpie.nsw.gov.au. or to the following coordinating officer within DPIE Water: Alistair Drew, Project Officer, E: Alistair.drew@dpie.nsw.gov.au

Yours sincerely

Alistair Drew
Project Officer, Assessments, Knowledge Division
Department of Planning, Industry and Environment: Water
9 December 2021

Department of Primary Industries

OUT21/18575

Gen Lucas
Major Projects Assessment
Department of Planning Industry and Environment

C/Major Projects Portal

Dear Ms Lucas

Advice on SEARs – Moolarben OC3 Extension Project (SSD- 33083358) (Mid Western Regional)
Public Authority Consultation (PAE-33093708)

Thank you for your correspondence dated 7 December 2021 about the opportunity to supply Secretary's Environmental Assessment Requirements (SEARs).

The NSW Department of Primary Industries (NSW DPI) Agriculture is committed to the protection and growth of agricultural industries, and the land and resources upon which these industries depend.

My Department wishes to confirm that an Agricultural Impact Statement is required. Specific guidance on satisfying the requirements for the AIS should be taken from the Department of Primary Industries, Agricultural Impact Statement Technical Notes available at:https://www.dpi.nsw.gov.au/__data/assets/pdf_file/0010/463789/Agricultural-Impact-Statement-technical-notes.pdf We note the commitments made to the main aspects of this in the Scoping Report.

Should you require clarification on any of the information contained in this response, please contact myself on 0427949987 or by email at landuse.ag@dpi.nsw.gov.au

Yours sincerely

Mary Kovac

Mary Kovac
Agricultural Land Use Planning Officer
Central and Far West

23. 12. 21.

15 December 2021

Record Number: 21/04539#42

Planning Number: SSD-33083358 PAE-33086334

Moolarben OC3 Extension Project

The Department of Planning, Industry and Environment – Crown Lands (Crown Lands) has reviewed the proposal.

Crown land contained within the project footprint is Lot 152 DP 755442 – R1001220 – Public School Site (Gaz 21 January 1890), Lot 239 DP 755442 – R120004 – FPR (Gaz 6 June 1986), Lot 266 DP 755442 – R92260 – FPR (Gaz 24 April 1980) & R36305 – Water Supply (Gaz 5 September 1903), Lot 290 DP 704098 – R755442 – FPR (Gaz 29 June 2007), multiple Crown roads and part of the Moolarben Creek.

If the proposal requires the use of Crown land in order to implement the Moolarben OC3 Extension Project proposal, the land will need to be acquired under the *Land Acquisition (Just Terms Compensation) Act 1991* (LAJTC Act).

Further information regarding Crown land and the LATJC Act is located at the following link:- https://www.industry.nsw.gov.au/lands/access/compulsory-acquisition.

For use and access to Crown land

As per section 2.2 Project Overview and Figure 2-2 of the MCO OC3 Extension EIS Scoping Report, Crown Lands notes that there are a number of Crown roads within the project area. These roads may provide legal access to the development but may not provide practical access. The Department advises that these roads should not be relied upon for practical access to the project site.

The Department will need to be referenced, prior to any use or occupation of any Crown roads or land, during the assessment phase.

Authority to use, traverse, access or build infrastructure on Crown land is required under the *Crown Land Management Act 2016* and/or the *Roads Act 1993*. It is recommended that the proponent contact Crown Lands as early as possible to discuss and initiate the processes required to authorise the use of and/or access to Crown land including Crown roads.

If infrastructure needs to be built on Crown land or Crown roads, the consent of the Minister for Water, Property and Housing must be obtained, via Crown Lands, and constructed Crown roads may need to be transferred to Council. Further information regarding land owner's consent for Crown land and Crown roads can be found at the following link:-

https://www.industry.nsw.gov.au/__data/assets/pdf_file/0003/144345/landowners-consent-application-form.pdf

There are multiple Crown roads, including Crown roads with enclosure permits, both within and adjoining the proposed development area. Please refer to the attached map, where Crown roads are shown in purple and Crown roads with enclosure permits are shown in green. Any Crown road required for access to the development/proposal, will need to be transferred to Council, or application made to close and purchase the roads. As authority to access or use Crown roads is required prior to the commencement of any works or access, and to avoid any delays for the proposal, a tenure may be required in the interim. More information regarding Crown roads and Enclosure permits can be found at the following links:

https://www.industry.nsw.gov.au/lands/access/roads

https://www.industry.nsw.gov.au/lands/use/enclosure-permits

Reserves /Aboriginal Land Claims/Native Title

It is noted that Lots 266 and 239 DP 755442 are currently the subject of an undetermined Aboriginal Land Claim, which may limit how the land can be used. Further information regarding Aboriginal Land Claims can be found at the following link:-

https://www.industry.nsw.gov.au/lands/what-we-do/our-work/aboriginal-land-claims

Lot 239 DP 755442 (Reserve 120004), Lot 266 DP 755442 (Reserve 92260) and Lot 290 DP 704098 (Reserve 755442) are reserves for future public requirements. Lot 152 DP 755442 (Reserve 1001220) is a reserve for Public School Site. These parcels are within the proposed site area. Please see the attached map for location. If at any stage this parcel is required for the proposal, or will be impacted in relation to operations associated with the proposal, a tenure may be required to authorise use of and/or access to the land. Native Title will need to be a consideration for the tenure.

Information regarding Native Title can be found at the following link:-

https://www.industry.nsw.gov.au/lands/what-we-do/our-work/native-title

If encroachment of the Moolarben Creek occurs, authority to access and/or use the Crown waterway will be required.

It is recommended that the proponent contact Crown Lands to discuss any requirements as soon as possible, to avoid any possible delays and to ascertain to what extent Crown land, roads or waterways are required for the proposal.

Biodiversity/Environmental

It is noted that a Biodiversity Development Assessment Report will be prepared for the Project as part of the EIS.

If any environmental offsets are being considered for proposed clearing under the *Biodiversity Conservation Act 2016*; I refer you to information regarding biodiversity offsets at the following link:- https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity-offsets-scheme/about-the-biodiversity-offsets-scheme.

Crown Land and Crown Roads Subject to Mining Leases and Exploration Licences

For mining operations involving Crown land or Crown Roads, the following requirements apply:

1. All Crown Land and Crown Roads within a Mining Lease (with surface rights), subject to mining or mining related activity, must be subject to a Compensation Agreement issued under Section 265 of the *Mining Act 1992*, to be agreed and executed prior to any mining activity taking place. The Compensation Agreement may include conditions requiring the Mining Lease Holder to purchase Crown land impacted on by mining activity.
2. All Crown Land and Crown Roads located within an Exploration Licence, subject to exploration activity, must be subject to an Access Arrangement issued under Section 141 of *the Mining Act 1992*, to be agreed and executed prior to any exploration activity taking place.
3. All Crown Land and Crown Roads within a Mining Lease (with sub-surface rights only) must be subject to a Section 81 Consent under the *Mining Act 1992* where surface activities are proposed, to be agreed and executed prior to any surface activity taking place.
4. All Crown Roads within a Mining Lease or Exploration Licence must be subject to a works consent approval under s138 and or s71 of the *Roads Act 1993* where exploration, mining or mining related activity impact on these roads.

Crown Land and Crown Roads Subject to Mining Subsidence

Crown Lands further reserves its right to review the impact of any subsidence on Crown land and Crown roads and if management measures and remediation works undertaken by the mining lease holder do not sufficiently addressed the impacts from any subsidence or sufficiently meet any concerns of Crown Lands, then an application for compensation under the *Coal Mine Subsidence Compensation Act 2017* may be considered.

If the proponent requires further information, or has any questions, please contact Karen Hocking, Senior Property Management Officer in Crown Lands, on 02 6883 3332 or at karen.hocking@crownland.nsw.gov.au.

Yours sincerely

Jacky Wiblin
Group Leader – Dubbo Land & Asset Management
T 02 6883 5427 | **E** email jacky.wiblin@crownland.nsw.gov.au

Diagram 1

Project Area – highlighted Orange

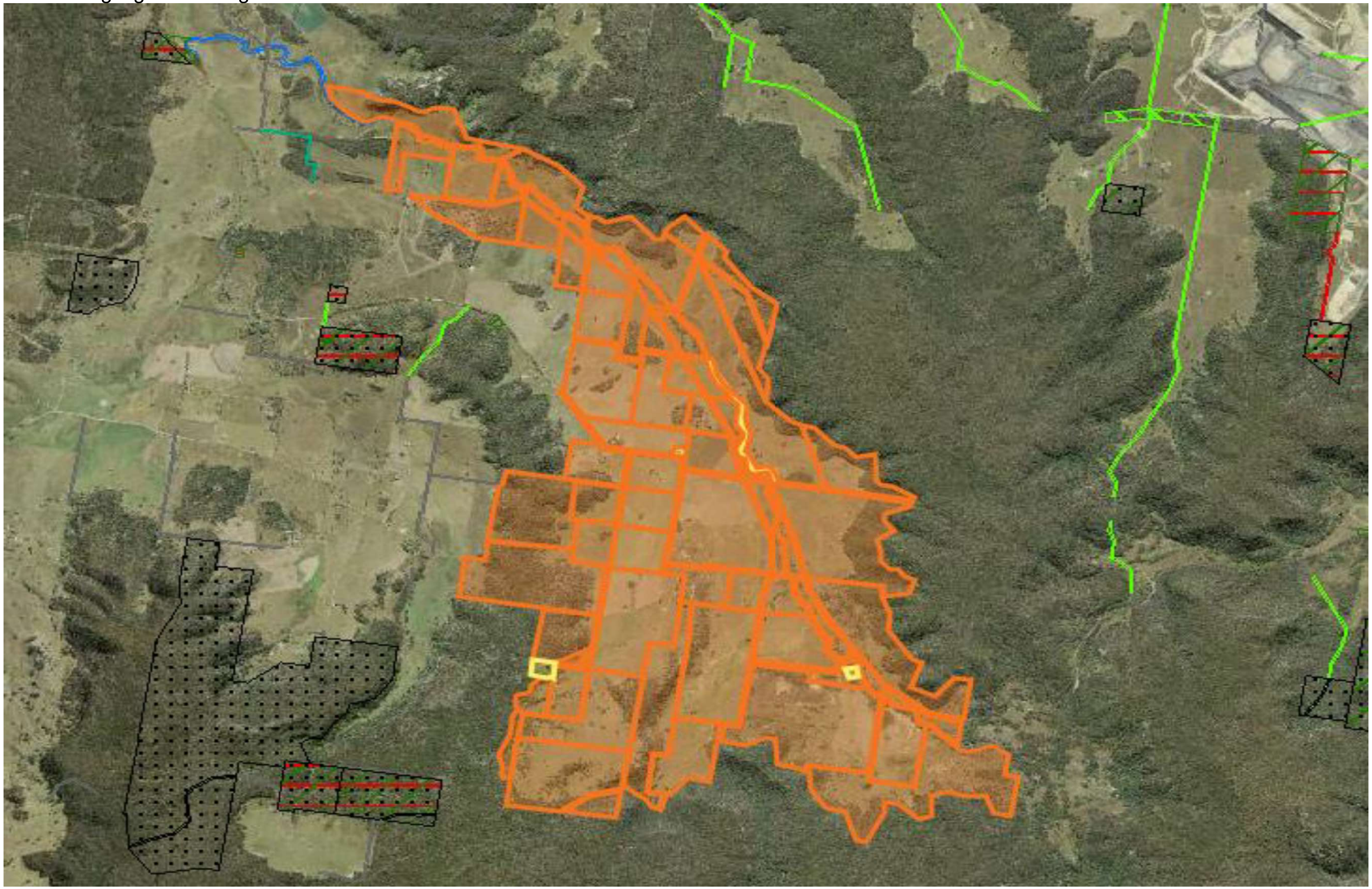


Diagram 2

Crown land – R92660 highlighted yellow

Licence 47392 for Environmental Protection and Sustainable Grazing (Moolarben Coal Pty Ltd) – red lines

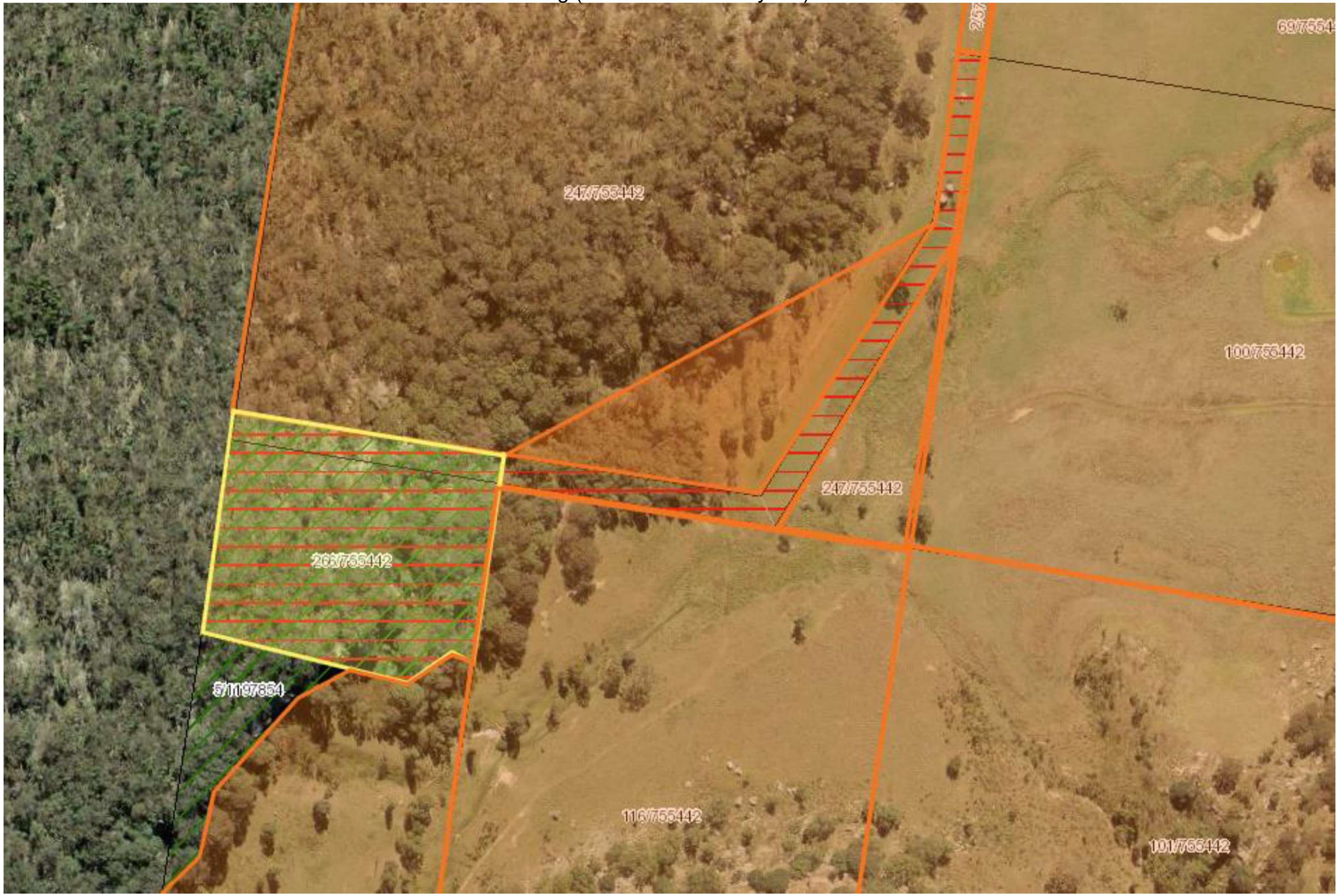


Diagram 3

Crown Land – highlighted yellow – R120004 for Future Public Requirements

Crown Road – highlighted purple

Diagram 4

Project area – highlighted Orange

Crown Road – highlighted purple

Crown Road with enclosure permits – green lines

Crown Waterway – blue lines

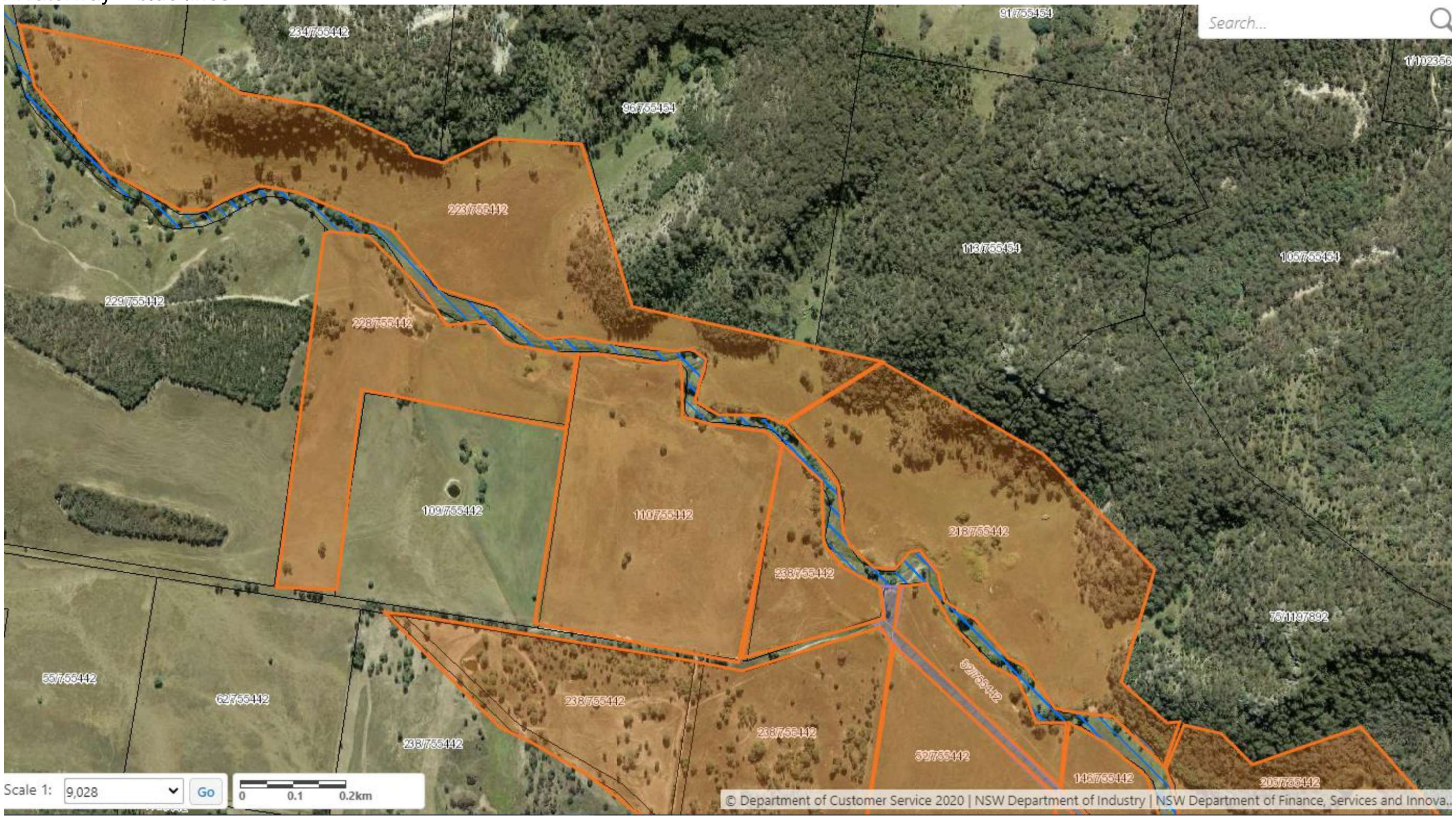


Diagram 5

Project area – highlighted Orange

Crown Road – highlighted purple

Crown Road with enclosure permits – green lines

Crown Waterway – blue lines

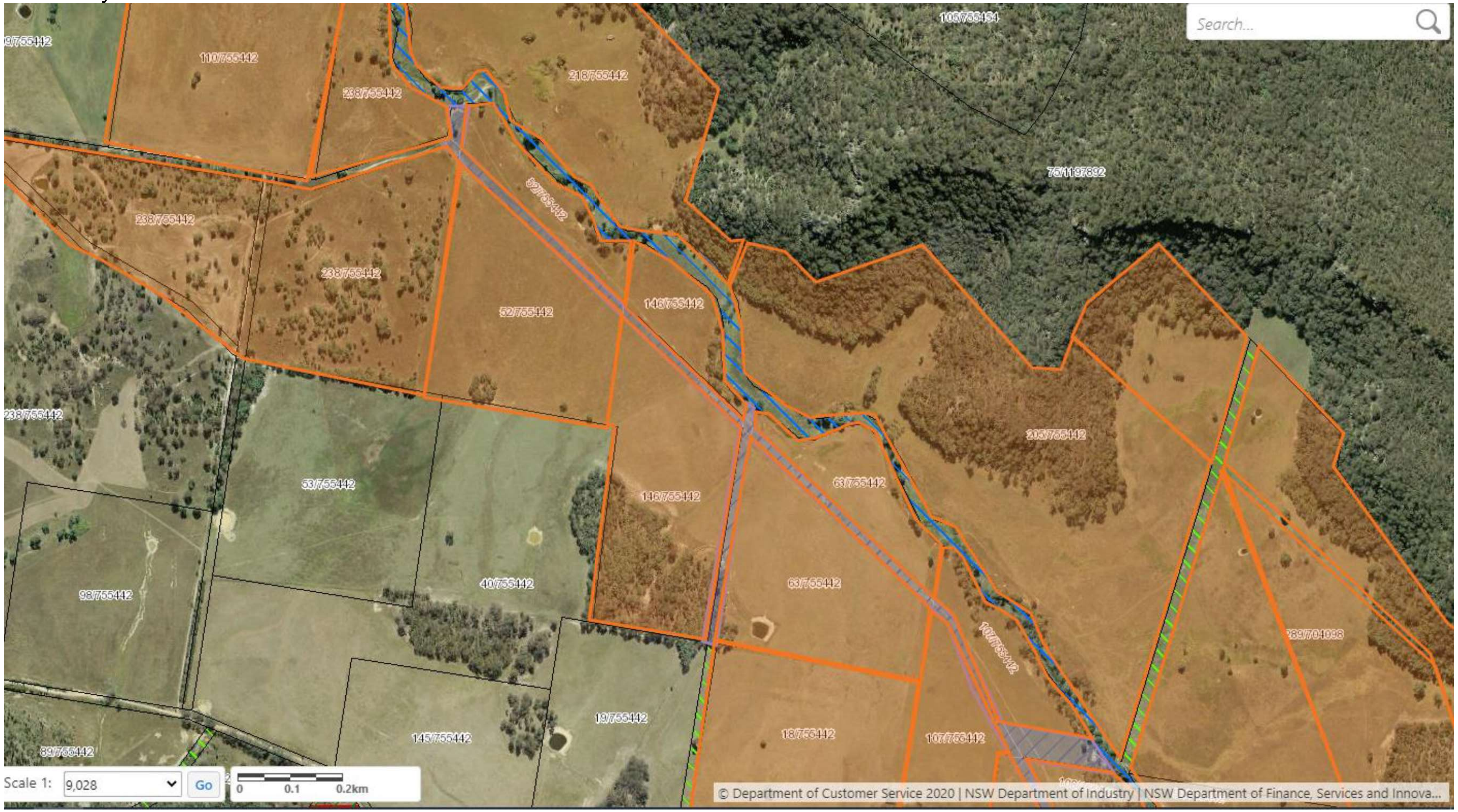


Diagram 6

Project area – highlighted Orange

Crown Road – highlighted purple

Crown Road with enclosure permits – green lines

Crown Reserve –highlighted yellow

Crown Waterway – blue lines

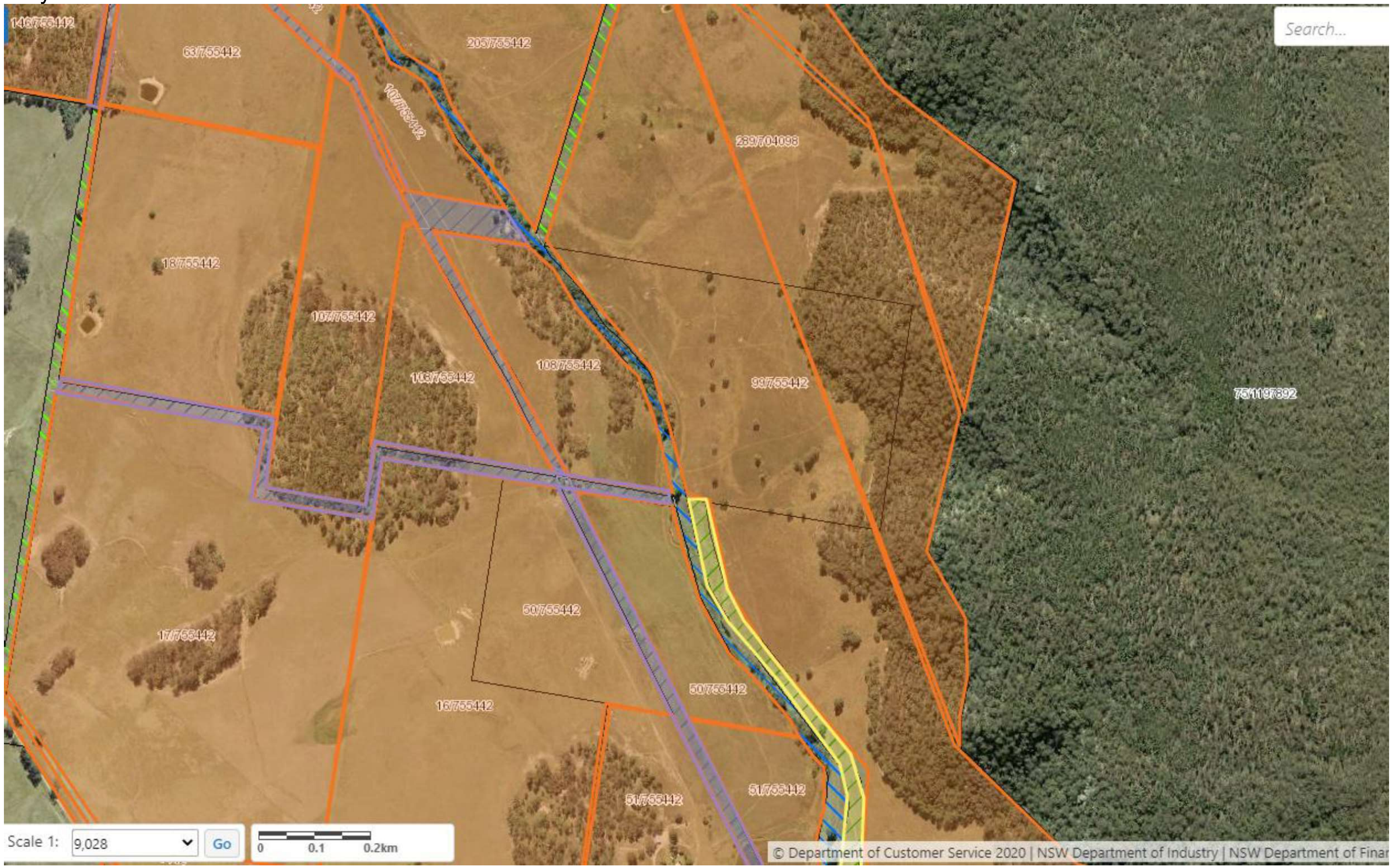


Diagram 7

Project area – highlighted Orange
Crown Road – highlighted purple
Crown Road with enclosure permits – green lines
Crown Reserve – highlighted yellow
Crown Waterway – blue lines

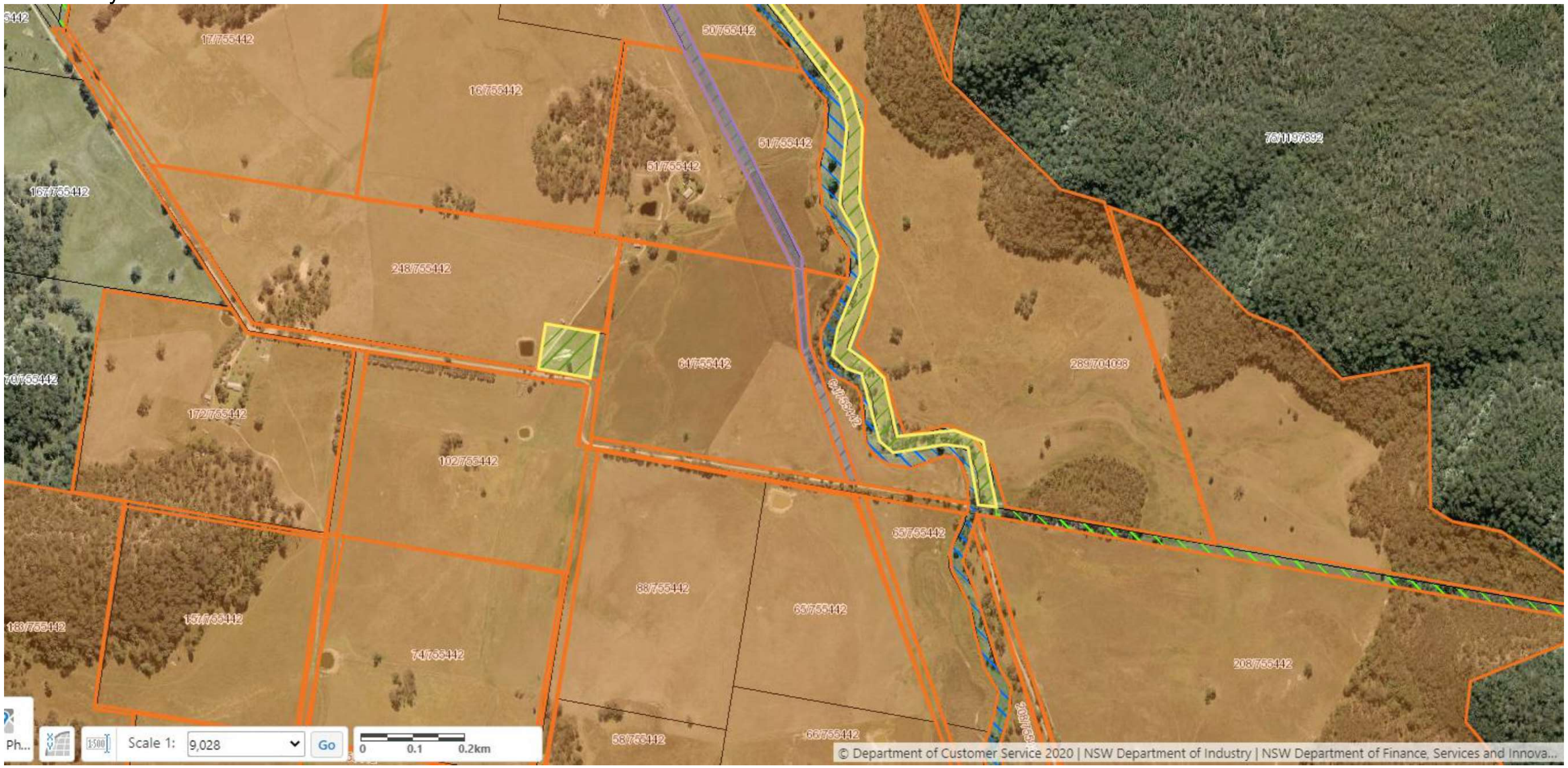


Diagram 8

Project area – highlighted Orange

Crown Road – highlighted purple

Crown Road with enclosure permits – green lines

Crown Reserve – highlighted yellow

Crown Waterway – blue lines

Diagram 9

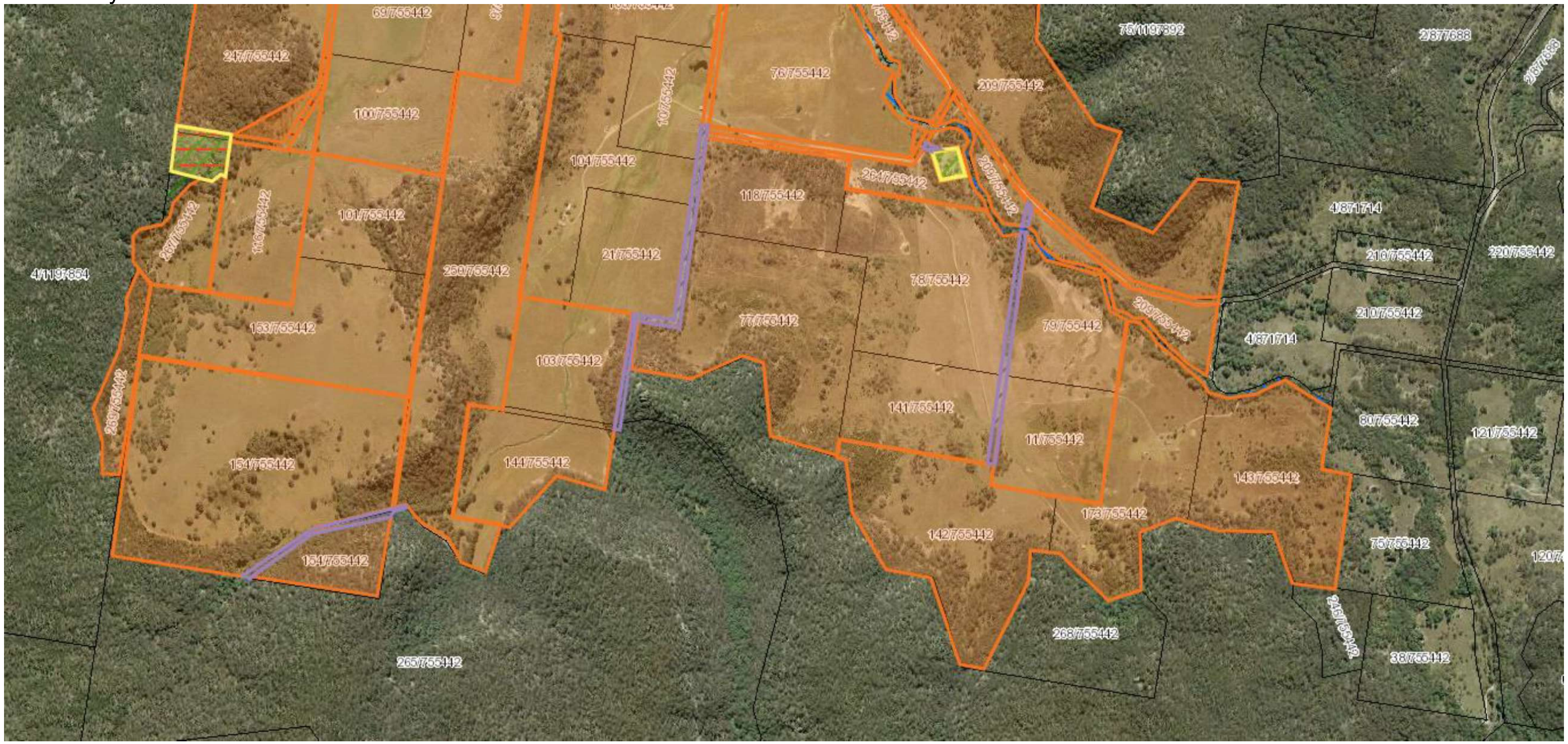
Project area – highlighted Orange

Crown Road – highlighted purple

Crown Road with enclosure permits – green lines

Crown Reserve – highlighted yellow

Crown Waterway – blue lines



FE21/1203 C21/779
9 December 2021
Gen Lucas
Department of Planning, Industry and Environment

Dear Gen

RE: Request for Advice – Moolarben OC3 Extension Project (SSD-33083358)

DPI Fisheries are responsible for ensuring that fish stocks are conserved and that there is "no net loss" of key fish habitats upon which they depend. To achieve this, the Department ensures that developments comply with the requirements of the *Fisheries Management Act 1994* (namely the aquatic habitat protection and threatened species conservation provisions in Parts 7 and 7A of the Act respectively) and the associated *Policy and Guidelines for Fish Habitat Conservation and Management (Update 2013)* as outlined on the Department's website at www.dpi.nsw.gov.au/fishing/habitat/protecting-habitats/toolkit.

The EIS should specifically address impacts on the aquatic ecology and controls to be established for permanent or temporary access tracks, in or adjacent to Key Fish Habitats (Third order streams or larger (Strahler Stream Order System)) such as Moolarben Creek.

GENERAL AQUATIC ECOLOGICAL ASSESSMENT

The aquatic ecological environmental assessment should include the following information;

- A recent aerial photograph (preferably colour) of the locality (or reproduction of such a photograph) should be provided.
- Area which may be affected either directly or indirectly by the development or activity should be identified and shown on an appropriately scaled map (and aerial photographs).
- Waterways within the area of development are to be identified.
- Description and quantification of aquatic and riparian vegetation should be presented and mapped. This should include an assessment of the extent and condition of riparian vegetation and the extent and condition of significant habitat features (e.g. gravel beds, snags, reed beds, etc)
- Quantification of the extent of aquatic and riparian habitat removal or modification which will result from the proposed development,
- Details of the location of all waterways crossings and construction designs, such as bridges, culverts, or access tracks for proposed haul roads.

KEY ISSUES

WATERWAY CROSSINGS AND FISH PASSAGE

DPI Fisheries need to be consulted with regards to the crossing methodology and site-specific mitigation measures for infrastructure corridors crossing Key Fish Habitats such as Moolarben Creek. The design and construction of bridges, culverts,

and access tracks across all waterways should be undertaken in accordance with the Department's *Policy and Guidelines for Fish Habitat Conservation and Management (Update 2013)* and the department's Guideline document: *Why Do Fish Need to Cross the Road? Fish Passage Requirements for Waterway Crossings (2003).*
DPI Fisheries need to be consulted with regards to any temporary measures that will result in blocking fish passage. This includes coffer dams, temporary access tracks or redirecting flows whilst works are conducted. The EIS should describe the type, extent and duration of such works.

RIPARIAN BUFFER ZONES
DPI Fisheries policy advocates the use of terrestrial buffer zones as per the *Policy and Guidelines for Fish Habitat Conservation and Management (Update 2013)* available on the Department's website at http://www.dpi.nsw.gov.au/fisheries/habitat/publications/policies,-guidelines-and-manuals/fish-habitat-conservation which states that "*NSW DPI will generally require riparian buffer zones to be established and maintained for developments or activities in or adjacent to TYPE 1 or 2 habitats or CLASS 1-3 waterways.*" Whilst it is acknowledged in the Scoping Report that open cut mining will be avoided within 200 metres of Moolarben Creek, other development including flood bunds adjacent to haul roads are likely to be within the required buffer distance. The department anticipate that adequate riparian buffer zones will be maintained adjacent to the watercourses that may be impacted by this project.

Threatened Species, Populations and Ecological Communities– Fisheries Management Act 1994
The proposal should include a threatened aquatic species assessment (as per part 7A *Fisheries Management Act* 1994) to address whether there are likely to be any significant impacts on listed threatened species, populations or ecological communities listed under the *Fisheries Management Act 1994*. Threatened fish species mapping distributions are available at: http://www.dpi.nsw.gov.au/fishing/species-protection/threatened-species-distributions-in-nsw

Should you have any queries regarding this correspondence please contact David Ward, Fisheries Manager (Tamworth) on (02) 6763 1255 or 0429 908 856.

DOC21/1082078-3

Ms Gen Lucas
Senior Environmental Assessments Officer
Department of Planning, Industry and Environment

Via Major Projects portal

21 December 2021

Dear Ms Lucas

MOOLARBEN OC3 EXTENSION PROJECT - SSD-33083358

I refer to your request, received via the Major Projects Portal (PAE-33086327) on 7 December 2021, seeking the Environment Protection Authority's (EPA) input into the preparation of Secretary's Environmental Assessment Requirements (SEARs) for the above project.

The EPA has reviewed the accompanying '*Moolarben Coal Complex OC3 Extension Project - Scoping Report*' prepared by Moolarben Coal Operations. Table 3 in Section 6.2 of this report summarises the key matters that will require further assessment in the Environmental Impact Assessment (EIS). The EPA concurs with the environmental matters identified, particularly the potential impacts on air quality, noise from vibration/blasting and water quality.

The EPA considers that the proposed level and scope of assessment summarised for each environmental matter in Table 3 is appropriate. The EPA supports the proposed use of '*applicable policies, guidelines and plans as listed on DPIE's website'* in the EIS. The EPA recommends that the Department of Planning, Industry and Environment consolidate the environmental matters summarised in Table 3 into the SEARs prepared for this project.

If you have any specific questions regarding this matter please contact Mr Andrew Helms on 6333 3805 or via e-mail at EPA.Southopsregional@epa.nsw.gov.au. For general enquiries to the EPA please call (02) 9995 5000 or e-mail info@epa.nsw.gov.au.

Yours sincerely

CARLIE ARMSTRONG
A/Unit Head - Regulatory Operations

Our reference: DOC21/1081638
Date: 13 December 2021

HERITAGE NSW – Aboriginal Cultural Heritage - SEARs

Project Name: Major Projects - New Request for Advice - Moolarben OC3 Extension Project - SSD-33083358

1. The 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 an Aboriginal Cultural Heritage Assessment Report (ACHAR). This may include the need for surface survey and test excavation. The identification of cultural heritage values must be conducted in accordance with the Code of Practice for Archaeological Investigation in NSW (DECCW 2010), and be guided by the Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in New South Wales (OEH 2011).
2. Consultation with Aboriginal people must be undertaken and documented in accordance with the Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW 2010). The significance of cultural heritage values for Aboriginal people who have a cultural association with the land must be documented in the ACHAR.
3. 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 EIS must outline measures proposed to mitigate impacts. Any objects recorded as part of the assessment must be documented and notified to Heritage NSW.
4. The assessment of Aboriginal cultural heritage values must include a surface survey undertaken by a qualified archaeologist. The result of the surface survey is to inform the need for targeted test excavation to better assess the integrity, extent, distribution, nature and overall significance of the archaeological record. The results of surface surveys and test excavations are to be documented in the ACHAR.
5. The ACHAR must outline procedures to be followed if Aboriginal objects are found at any stage of the life of the project to formulate appropriate measures to manage unforeseen impacts.
6. The ACHAR must outline procedures to be followed in the event Aboriginal burials or skeletal material is uncovered during construction to formulate appropriate measures to manage the impacts to this material.

NOTE: The process described in the *Due Diligence Code of Practice for the protection of Aboriginal objects in NSW* (DECCW 2010) is not sufficient to assess the impacts on Aboriginal cultural heritage of Major Projects.

DOC21/ 1086305

MINING, EXPLORATION & GEOSCIENCE ADVICE RESPONSE

Gen Lucas
Energy, Industry & Compliance Division
Planning & Assessment Group
Department of Planning, Industry and Environment
Locked Bag 5022
PARRAMATTA NSW 2150

Gen.Lucas@planning.nsw.gov.au

Dear Gen

Project: Moolarben OC3 Extension Project
Stage: Secretary's Environmental Assessment Requirements
Development Application: SSD-33083358

I refer to your correspondence dated 7 December 2021 inviting the Department of Regional NSW – Mining, Exploration & Geoscience (MEG) to provide comments on the Moolarben OC3 Extension Project (the Project), submitted by Yancoal Australia Pty Ltd (the Proponent).

MEG has reviewed the information supplied in relation to the abovementioned Project and requires that the Project's Environmental Impact Statement (EIS) refers to and includes all requirements set out in the Regional NSW – Mining, Exploration & Geoscience Secretary's Environmental Assessment Requirements provided in Attachment 1 (DOC 21/1086310).

For further advice concerning this matter, please contact Katherine Courtney, Project Officer Industry Development on 02 4063 6966 or mining.concierge@regional.nsw.gov.au.

Yours sincerely

Scott Anson
Manager Industry Advisory & Mining Concierge
Industry Development
Department of Regional NSW – Mining, Exploration & Geoscience
20 December 2021

for
Anthony Keon
Executive Director Strategy, Performance & Industry Development
Department of Regional NSW – Mining, Exploration & Geoscience

DOC21/1086310

Mining, Exploration &Geoscience

Secretary’s Environmental Assessment Requirements

for proposed significant state development applications requiring consultation under Schedule 2 Part 2(3) of the Environmental Planning & Assessment Regulation 2000

Project	Moolarben OC3 Extension Project
Issue date of SEARs:	20 December 2021
Type of Approval:	Mining operation - open cut
Proponent:	Yancoal Australia Pty Ltd
DA Number:	SSD-33083358
LGA:	Mid Western Regional
Mineral:	Coal

In preparing the environmental assessment requirements with respect to an application for State significant development, the Planning Secretary must consult relevant public authorities and have regard to the need for the requirements to assess any key issues raised by those public authorities.

This development may require an approval under *the Mining Act 1992* to be issued by the Department of Regional NSW – Mining, Exploration & Geoscience (MEG). The proponent must apply to MEG for the relevant approval (mining lease) during the development assessment process, or once consent has been granted, and before the commencement of any mining or ancillary activity.

A development application under the *Environmental Planning and Assessment Act 1979* must be approved before a mining lease can be granted. A mining lease will only be granted for activities specified in the development consent.

Environmental Impact Statement (EIS) requirements for mining

1. Project description

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

(a) Location map showing the project area, mining titles, nearest town/s, major roads etc.

(b) Status of all titles (including mining and exploration), and development consents in place and/or timeline to obtain necessary approvals.

(c) Any relationships between the resource and existing mines or other infrastructure.

(d) Nature of operation (e.g. underground, open cut) and ore mineral/s to be extracted.

(e) Proposed life of mine and summary of production schedule.

2. Geology

(a) A summary of the regional and local geology, including information of the stratigraphic unit or units within which the resource is located.

(b) 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

The Proponent is to supply a copy of the most recent resource and/or reserve statement:

(a) Include a full and 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).

(b) 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.

MEG 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 and mine design

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

(a) Explain how the proposed mine plan and extraction method maximises resource recovery.

(b) A summary of resources that will be sterilised or excluded, with justification.

(c) List seams excluded from reserves (noting why each seam was excluded from reserve estimates).

(d) Compare seams included/excluded in reserve estimates to those in nearby operations. If an underground operation, justify the selected working section.

(e) List all economic, environmental, other constraints to the resource/reserve impacting the Project.

5. Geotechnical assessment

The Proponent is to supply a full geotechnical assessment supporting the mine design and method selected including, but not limited to, the following:

(a) Wall design geometries and slope stability analysis and designs of pit walls/overburden emplacements (including possible failure mechanisms).

(b) Structural trends, stress magnitude and orientation, jointing and cleating.

(c) Explanation of current understanding of the geological constraints (including paleochannel(s)) and their expected impact on operations and planning. Describe risk reduction measures to be implemented.

(d) Long term stability of final voids.

6. 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:

(a) year by year production schedule detailing, mineable reserves extracted, ROM tonnages produced, product tonnes produced, including seam by seam details.

(b) in terms of text, plans or charts, show the proposed extent and sequence of the development

(c) life-of-mine schedule should include estimates of non-acid forming (NAF) and potentially acid-forming (PAF) material in waste/tailings. Projections of handling and placement should be provided, including maps and diagrams. Tonnages of limestone, lime and any other material required for acid neutralisation should be included

(d) for modifications and extensions, a comparison of the life-of-mine production schedule of the approved operation against the proposed project.

7. Project economics and target market

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

(a) Coal price forecasts by coal type used by the Proponent. MEG requires these forecasts to analyse the Proponent's calculations of royalty value and export value.

(b) Product tonnages split into market segment, for example, export/domestic and thermal/metallurgical coal. These estimates are necessary to arrive at total revenue value and royalty calculations. Include justification for market segment based on quality parameters.

(c) CAPEX & OPEX necessary for the Project – broken down into the various sub-categories and equipment type.

(d) Estimates of employment generation broken down into direct, indirect, ongoing, construction and contract workers.

(e) Total royalty generated to the state over the life of the Project.

(f) Relationship and interaction with other mines. How the Project impacts on the existing mine and surrounding mines.

(g) Details on derivation/analysis of Run-of-Mine (ROM) production rate; to answer why this the optimum rate.

MEG 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 MEG 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 summary included in the EIS must commit to providing MEG with full resource documentation separately via MEG's Industry Advisory and Mining Concierge Unit.

Additional matters for attention

Resource and Economic Assessment

The Resource and Economic Assessment (REA) is designed to review the resource/reserve estimates stated in the submitted EIS and supporting material. The REA also examines whether the project will deliver significant social and economic benefits to NSW from the efficient development of the resource, by optimising resource recovery and mine design and minimising waste. It also aims to ensure an appropriate return to the state from developing the resource. This process commences two months prior to lodgement of the EIS and the proponent must contact the Industry Advisory and Mining Concierge Unit to arrange.

Biodiversity offsets

MEG 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 and their spatial relationship to known and potential mineral and construction material resources and existing mining & exploration titles.

MEG requests consultation with both the Geological Survey of NSW – Land Use Assessment team and holders of existing mining and exploration authorities affected by planned biodiversity offsets. Evidence of consultation should be included in the EIS.

Mining Titles

As coal is a prescribed mineral under the *Mining Act 1992*, the Proponent is required to hold an appropriate mining title(s) from MEG in order to mine the mineral.

MEG notes that this Project is located within the existing operations area of Mining Lease 1691 (Act 1992) (ML 1691) and Mining Lease 1628 (Act 1992) (ML 1628) and the project extension area within Exploration Licence 7073 (Act 1992) (EL 7073) and Exploration Licence 6288 (Act 1992) (EL 6288).

The Proponent must obtain the appropriate mining title(s), such as a mining lease, from MEG allowing for mineral extraction (coal) under the Mining Act (1992) over the project extension area within EL 7073 and EL 6288.

A development application under the *Environmental Planning and Assessment Act 1979* must be approved before a mining lease can be granted. A mining lease will only be granted for activities specified in the development consent.

Application of section 380AA of the *Mining Act 1992* – restrictions on planning applications for coal mining and titles required to undertake mining

As coal is a prescribed mineral under the Act, the Proponent is required to hold appropriate mining titles from MEG to undertake mining.

In addition, section 380AA requires that an application for development consent (or modification to consent) to mine for coal cannot be made or determined unless the applicant is also the holder of a title under the Act or has the written consent of the holder of a title, where the parties are different.

Section 380AA(1) states:

> *An application for development consent, or for the modification of a development consent, to mine for coal cannot be made or determined unless (at the time it is made or determined) the applicant is the holder of an authority that is in force in respect of coal and the land where mining for coal is proposed to be carried out, or the applicant has the written consent of the holder of such an authority to make the application.*

Based on current title information MEG advises that the Proponent holds the appropriate titles as required for mining operations as relating to the project and satisfies the requirements of section 380AA.

Position	Approval	Date
Endorsing Officer: Katherine Courtney Project Officer Industry Development (02) 4063 6966	Approved in CM9	17/12/2021
Approving Officer: Scott Anson Manager Industry Advisory & Mining Concierge Industry Development (02) 4063 6972	Approved in CM9	20/12/2021

DOC SF22/4104
MAAG0013083

Ms Gen Lucas
Department of Planning, Industry and Environment

Via: Major Projects Portal / Email

Dear Ms Lucas,

Re. Moolarben OC3 Extension Project

I refer to your request of 7 December 2021 for advice regarding the Moolarben OC3 Extension Project. The Resources Regulator has reviewed the request and requests that the attached environmental assessment requirements are addressed in the development application.

Regulatory requirements if approved
The proponent will be required to comply with rehabilitation requirements under the mining authorisation(s) when undertaking works associated with the proposal.

The Resources Regulator may undertake assessments of the mine operators' proposed mining activities under the *Work Health and Safety (Mines and Petroleum Sites) Act 2013* and Regulation as well as other WHS regulatory obligations.

Background
The Mining Act Inspectorate within the Resources Regulator undertake risk-based compliance and enforcement activities in relation to obligations under the *Mining Act 1992*. This includes undertaking assessment and compliance activities in relation to mine rehabilitation activities and determination of security deposits.

The Mine Safety Inspectorate within the Resources Regulator is responsible for ensuring the mine operators' compliance with the Work Health and Safety (WHS) legislation, in particular the effective management of risks associated with the principal hazards as specified in the *Work Health and Safety (Mines and Petroleum Sites) Regulation 2014*.

Contact
Should you require any further information or clarification, please contact the Office of the Executive Director (ED.ResourcesRegulator@planning.nsw.gov.au)

Yours sincerely,

Garvin Burns
Chief Inspector of Mines
Resources Regulator

19 January 2022

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 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 production milestones (i.e. ROM tonnes) 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) Where the mine includes underground workings:

(i) determine (with reference to the groundwater assessment) the likelihood and associated impacts of groundwater accumulating and subsequently discharging (e.g. acid or neutral mine drainage) from the underground workings post cessation of mining; and

(ii) consideration of the likely controls required to either prevent or mitigate against these risks as part of the closure plan for the site.

(o) 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;

(p) 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);

(q) 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

(r) Consider any relevant government policies[1].

[1] 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)

File Ref. No: FRN21/3617 BFS21/4851 8000018692
TRIM Doc. No: D21/134242
Contact: Leading Firefighter Timothy Wilson

20 December 2021

Gen Lucas
NSW Department of Planning, Industry and Environment
Locked Bag 5022
PARRAMATTA NSW 5022

Dear Gen,

Re: Request for advice on Secretary's Environmental Assessment Requirements (SEARs) for Moolarben OC3 Extension Project (SSD-33083358)

Fire & Rescue NSW (FRNSW) acknowledge correspondence received on 7 December 2021, requesting input into the preparation of the SEARs for the Moolarben OC3 Extension Project (SSD-33083358).

FRNSW have reviewed the MCO OC3 Extension EIS Scoping Report and make the following recommendations:

FRNSW will not be providing comment at this time as there is currently insufficient information available regarding the fire safety and emergency response management aspects of the project.

We request that we be given the opportunity to review and provide comment once approvals have been granted and the project has progressed such that there is more relevant detailed information available. FRNSW note that a SEPP 33 screening process may be potentially relevant to the project.

As additional details become available Fire & Rescue NSW requests to be consulted with respect to the proposed fire and life safety systems and their configuration at the project's preliminary and final design phases.

While there is currently no requirement for a fire safety study, FRNSW may request one be undertaken at a later stage should information be provided such it is deemed that the development poses unique challenges to the response to and management of an incident.

For further information please contact the Operational Liaison and Special Hazards Unit, referencing FRNSW file number BFS21/4851. Please ensure that all correspondence in relation to this matter is submitted electronically to firesafety@fire.nsw.gov.au.

Yours sincerely

Superintendent John Hawes
Manager
Operational Liaison and Special Hazards Unit

Cc: gen.lucas@planning.nsw.gov.au

22/12/2021

WST12/00016/13 I SF2012/002404

The Manager
Resource and Energy Assessments
Department of Planning, Industry and Environment
GPO Box 39
Sydney NSW 2001

Attention: Genevieve Lucas

Dear Genevieve Lucas

Development Application 08_0135 Moolarben Coal Mine (MCO) Secretary Environmental Assessment Requirements for Open Cut 3 (OC3) extension

Thank you for referring the request for Secretary Environmental Assessment Requirements (SEARs) for Moolarben Coal Mine Open Cut 3 (OC3) extension via the Major Projects Planning Portal on the 9 December 2021.

From review of the scoping report TfNSW understands the proposal will include:

- The Project proposes extraction of additional coal reserves within existing mining and exploration tenements held by MCO, on Moolarben-owned freehold land
- Up to 9 Mt of ROM coal would be extracted from the Project in any calendar year. All ROM coal extracted from the Project would be hauled to the existing Stage 1 infrastructure for processing and transport to market via rail. No change (cumulatively) to Stage 1 processing and transport limits (16 Mtpa coal washed and 22 Mtpa of total coal produced, average of 8 trains per day and peak of 11 trains per day) because of the Project.
- Extension of employment of the Stage 1 open cut workforce to 2036 (Operational workforce of 740 and construction workforce of 250). No increase cumulatively in previously assessed peak workforce at the Moolarben Coal Complex.
- Access will be via Ulan Road and CHPP access via Ulan-Wollar Road.

TfNSW provides the following advice as the input into the SEARs:

- TfNSW requires an updated Traffic Impact Assessment to consider the following:
  - Cumulative traffic generation associated with the overlapping timeframes for OC1,OC4,OC4 and UG2 in terms of the traffic generation at the AM/PM peaks at the Ulan Access and Ulan-Wollar Road access points. Will there be any likely changes to the distribution of the traffic because of the proposal? Will there be any changes to the number of heavy vehicles at the Ulan Road or Ulan-Wollar Road access? Is there likely to be a change to the design vehicle size or type?
  - The Traffic Impact Assessment should review cumulative impacts of the background traffic on Ulan Road because of the surrounding mines and other large construction projects within the vicinity.
  - All haulage movements should remain internal as shown and identified within the scoping report and should be assessed in this manner as a part of the TIA.
  - The haul routes associated with ancillary components of the extension to OC3 should be identified within the TIA, as well as any works required within the state classified road network.

- In addition to the above, the following should be considered as a part of the TIA:
  Project schedule:
  - Hours and days of work, number of shifts and start and end times,
  - Project schedule:
    - Hours and days of work, number of shifts and start and end times,
    - Phases and stages of the project, including construction, operation and decommissioning,
  - Traffic volumes:
    - Projected cumulative traffic at commencement of operation, and a 10-year horizon post-commencement,
  - Traffic characteristics:
    - Number and ratio of heavy vehicles to light vehicles,
    - Peak times for existing traffic,
    - Peak times for project-related traffic including commuter periods,
    - Proposed hours for transportation and haulage,
    - Interactions between existing and project-related traffic,
  - A description of all over size and over mass vehicles and the materials to be transported
  - The origins, destinations and routes for:
    - Commuter (employee and contractor) light vehicles and pool vehicles,
    - Heavy (haulage) vehicles,
    - Over size and over mass vehicles,
  - Road safety assessment of key haulage route/s,
  - The impact of traffic generation on the public road network and measures employed to ensure traffic efficiency and road safety during construction, operation and decommissioning of the project,
  - The need for improvements to the road network, and the improvements proposed such as road widening and intersection treatments, to cater for and mitigate the impact of project related traffic,
  - Proposed road facilities, access and intersection treatments are to be identified and be in accordance with Austroads Guide to Road Design including provision of Safe Intersection Sight Distance (SISD),
  - Local climate conditions that may affect road safety during the life of the project (e.g. fog, wet and dry weather, icy road conditions),
  - The layout of the internal road network, parking facilities and infrastructure,
  - Impact on rail corridors and level crossings detailing any proposed interface treatments,

  Impact on public transport (public and school bus routes) and consideration for alternative transport modes such as walking and cycling, Phases and stages of the project, including construction, operation and decommissioning,

  Traffic volumes:
  - Existing background traffic,
  - Project-related traffic for each phase or stage of the project,
  - Projected cumulative traffic at commencement of operation, and a 10-year horizon post-commencement,

  Traffic characteristics:
  - Number and ratio of heavy vehicles to light vehicles,
  - Peak times for existing traffic,

    - Peak times for project-related traffic including commuter periods,
    - Proposed hours for transportation and haulage,
    - Interactions between existing and project-related traffic,

    A description of all over size and over mass vehicles and the materials to be transported

  The origins, destinations and routes for:

    - Commuter (employee and contractor) light vehicles and pool vehicles,
    - Heavy (haulage) vehicles,
    - Over size and over mass vehicles,
    - Road safety assessment of key haulage route/s,
    - The impact of traffic generation on the public road network and measures employed to ensure traffic efficiency and road safety during construction, operation and decommissioning of the project,
    - The need for improvements to the road network, and the improvements proposed such as road widening and intersection treatments, to cater for and mitigate the impact of project related traffic,
    - Proposed road facilities, access and intersection treatments are to be identified and be in accordance with Austroads Guide to Road Design including provision of Safe Intersection Sight Distance (SISD),
    - Local climate conditions that may affect road safety during the life of the project (e.g. fog, wet and dry weather, icy road conditions),
    - The layout of the internal road network, parking facilities and infrastructure,
    - Impact on rail corridors and level crossings detailing any proposed interface treatments,
    - Impact on public transport (public and school bus routes) and consideration for alternative transport modes such as walking and cycling,

- TfNSW notes the adjacent rail corridor is managed by ARTC. Consultation with ARTC is required to determine the impacts of the subject modification on the Main Western Line in accordance with the relevant rail provisions of the *State Environmental Planning Policy (Infrastructure) 2007* and *Development Near Rail Corridors and Busy Roads – Interim Guideline (2008).*

TfNSW does not believe the development will have a significant impact on the state road network and on this basis, does not object to the development modification.

Please ensure that any further email correspondence is sent to development.west@transport.nsw.gov.au.

Yours faithfully

Alexandra Power
Team Leader Development Services
Development Services West
Regional and Outer Metropolitan

SECRETARY'S ENVIRONMENTAL ASSESSMENT REQUIREMENTS

ATTACHMENT 3

COMMONWEALTH DEPARTMENT OF CLIMATE CHANGE, ENERGY, THE ENVIRONMENT AND WATER ASSESSMENT REQUIREMENTS

(Previously Department of Agriculture, Water and the Environment)

ATTACHMENT 3

Commonwealth Department of Agriculture, Water and the Environment assessment requirements

Moolarben Coal Complex OC3 Extension Project, NSW
(EPBC 2022/9162) (SSD 33083358)

Introduction

1. On 2 May 2022, a delegate of the Minister for the Environment, determined that the Moolarben Coal Complex OC3 Extension Project (the proposed action) is 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);
   ii. a water resource, in relation to coal seam gas development and large coal mining development (section 24D & 24E).
2. The delegate confirmed that the proposed action will be assessed under the accredited bilateral agreement with New South Wales (*Amending Agreement No. 1*), and as such, is required to be assessed in the manner specified in Schedule 1 to that Agreement, including, addressing the matters outlined in Schedule 4 of the *Environment Protection and Biodiversity Conservation Regulations 2000* (EPBC Regulations).
3. The designated proponent must undertake an assessment of all protected matters that may be impacted by the proposed action under the controlling provisions identified in paragraph 1. The Commonwealth Department of Agriculture, Water and the Environment (DAWE) considers that the proposed action is likely to have a significant impact on the protected matters listed in **Appendix A**.
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 proponent 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 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 Matters of National Environmental Significance (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 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;
    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 the species;
    iii. wildlife conservation plan for the species; and
    iv. any strategic assessment.

Note: the relevant guidelines and policy statements for each species and community are available from the Department of Agriculture, Water and the Environment Species Profile and Threats Database. http://www.environment.gov.au/cgi-bin/sprat/public/sprat.pl

Key Issues

14. Key risks associated with the proposed action from the Commonwealth perspective include:

    i. Impacts on species and ecological communities:
        - The removal of native vegetation, particularly 645 ha of the critically endangered White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland ecological community and habitat for Cotoneaster Pomaderris (*Pomaderris cotoneaster*), Regent Honeyeater (*Anthochaera phrygia*), Koala (*Phascolarctos cinereus*) (combined populations of Qld, NSW and the ACT) and Large-eared Pied Bat (*Chalinolobus dwyeri*). These impacts must be appropriately offset for EPBC Act purposes. The Department considers there are other listed species possibly at risk of being impacted as listed in **Appendix A**.

    ii. Impacts on water resources:
        - Water resources through groundwater drawdown and depressurisation, potential impacts to surface and groundwater quality, and cumulative impacts with existing coal mine developments.

Assessment Requirements

<u>*Biodiversity (threatened species and ecological communities)*</u>

15. The EIS must address the matters outlined in Schedule 4 of the Environment Protection and Biodiversity Conservation Regulations 2000 and the matters outlined below in relation to the controlling provisions.

16. For each of the EPBC Act controlling provisions impacted by the proposed action, the EIS must provide:

    i. 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. For ecological communities, this includes any condition thresholds provided in the listing advice or approved conservation advice.

    ii. 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.

    iii. Maps displaying the above information (specific to EPBC matters) overlaid with the proposed action. 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 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.

    iv. Description of 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.

    v. 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.

vi. Quantification of the offset liability for each species and community significantly impacted, and information on the proposed offset strategy, including discussion of the conservation benefit for each species and community, how offsets will be secured, and the timing of protection. 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'.

vii. Like-for-like includes protection of native vegetation that is the same ecological community or habitat being impacted (preferably in the same region where the impact occurs), or funding to provide a direct benefit to the matter being impacted e.g. threat abatement, breeding and propagation programs or other relevant conservation measures

A water resource, in relation to coal seam gas development and large coal mining development (section 24D & 24E)

17. The EIS must include a detailed water assessment. The water assessment must be undertaken in accordance with the IESC Information Guidelines (https://iesc.environment.gov.au/information-guidelines) and provide the information outlined in these guidelines.

18. To adequately assess the impact of the proposed action on water resources, the EIS requires:

    i. site specific information based on scientific evidence or modelled data.

    ii. the cumulative impact assessment for surface and groundwater resources including the current approvals and all foreseeable actions or future developments associated with current operations around the project area, including (but not limited to) modifications, approval variations and potential expansions.

    iii. Information regarding the potential for significant impacts to surface water resources to support or independently assess the impact of the proposed action that include:

        a) the information on the potential impacts to water resources;

        b) impact assessment data from mining to date;

        c) predictions of ground water impacts from the proposed action.

    iv. Key Matters Requiring Further Assessments in EIS:

        a) detailed description and characterisation of current groundwater conditions, particularly considering the extensive mining activities occurring within and around the project area;

        b) the influence of climatic factors such as flooding events and an increase in consecutive low- and zero-flow days on groundwater behaviour; and

        c) a detailed assessment of the aquifer(s) that might be impacted by potential groundwater level fluctuations resulting from the project. This should also consider the potential interaction and/or dependency of the groundwater dependent feature "The Drip", which is also recognised as having a significant Aboriginal cultural heritage.

Environmental Record of person proposing to take the action

19. 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.

Information Sources

20. 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

21. The Applicant should consult with DAWE again after detailed survey work is undertaken and before the EIS is finalised to ensure that all relevant species have been considered and the above assessment requirements have been met.

Relevant Reference and Guidelines

International Conventions, Management Plans and Principles

The international conventions, management plans and principles that must be considered in relation to this proposal include:

- Listed threatened species and communities
  - Australia's obligations under the:
    - Convention on Biological Diversity
    - The Convention on Conservation of Nature in the South Pacific (Apia Convention)
    - The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).
  - Any relevant recovery plans or threat abatement plans.

Policies and Plans

The polices and plans that must be considered in relation to this proposal include:

- Relevant conservation advice/s: http://www.environment.gov.au/cgibin/sprat/public/sprat.pl

Commonwealth Listing Advice, Survey Guidelines and Referral Guidelines contain information on threatened species and ecological communities which may provide further support to proponents and NSW DPIE in considering and evaluating the significance of residual impacts on the action's controlling provisions. These documents may be found in the Department of Agriculture, Water and the Environment's Species Profile and Threats Database:
http://www.environment.gov.au/cgi-bin/sprat/public/sprat.pl

Other References

- Amending Agreement No. 1 (2020) - Item 18.1, Item 18.5, Schedule 1
- *Environment Protection and Biodiversity Conservation Act 1999* - section 51-55, section 101A, section 136, section 527E
- *Environment Protect and Biodiversity Conservation Act 1999* Environmental Offsets Policy (Department of Sustainability, Environment, Water, Population and Communities, 2012)
- *Environment Protection and Biodiversity Conservation Regulations 2000 Schedule 4*
- *Information Guidelines for Independent Expert Scientific Committee advice on coal seam gas and large coal mining development proposals* (IESC, 2014)

- *Significant impact guidelines 1.1: Matters of National Environmental Significance* (Department of the Environment, 2013)
- *Significant Impact Guidelines 1.3: Coal Seam Gas and Large Coal Mining Developments – impacts on water resources* (Department of the Environment, 2013)

Appendix A

Matters of National Environmental Significance

There are likely to be significant impacts on the following controlling provisions:

- Listed threatened species and communities (sections 18 and 18A)
- A water resource, in relation to coal seam gas development and large coal mining development (section 24D and 24E).

All matters of national environmental significance (MNES) protected under the triggered controlling provisions are potentially relevant, however the Department of Agriculture, Water and the Environment considers that there is likely to be a significant impact on the following:

Listed threatened species and communities (s18 & s18A)

- White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland – Critically Endangered
- Cotoneaster Pomaderris (*Pomaderris cotoneaster*) – Endangered
- Regent Honeyeater (*Anthochaera phrygia*) – Critically Endangered
- Koala (*Phascolarctos cinereus*) (combined populations of Qld, NSW and the ACT) – Endangered
- Large-eared Pied Bat (*Chalinolobus dwyeri*) – Vulnerable.

Based on the Department's Environment Reporting Tool and information provided by the Department's Species Profiles and Threats Database (SPRAT) (located at http://www.environment.gov.au/cgi-bin/sprat/public/sprat.pl), the Department considers that the following matters protected under Part 3 are possibly at risk of being impacted.

- Broad-headed Snake (*Hoplocephalus bungaroides*) – Vulnerable
- Brush-tailed Rock-wallaby (*Petrogale penicillata*) – Vulnerable
- Central Hunter Valley eucalypt forest and woodland – Critically Endangered
- Corben's Long-eared Bat (*Nyctophilus corbeni*) – Vulnerable
- Painted Honeyeater (*Grantiella picta*) – Vulnerable
- Pink-tailed Legless Lizard (*Aprasia parapulchella*) – Vulnerable
- Spot-tailed Quoll (*Dasyurus maculatus maculatus*) (SE mainland population) – Endangered
- Superb Parrot (*Polytelis swainsonii*) – Vulnerable
- Swift Parrot (*Lathamus discolor*) – Critically Endangered
- Gang-gang Cockatoo (*Callocephalon fimbriatum*) – Endangered
- Greater Glider (*Petauroides volans*) – Vulnerable
- Grey-headed Flying-Fox (*Pteropus poliocephalus*) – Vulnerable
- Grey Falcon (*Falco hypoleaucos*) – Vulnerable
- New Holland Mouse (*Pseudomys novaehollandiae*) – Vulnerable;
- Pilotbird (*Pycnoptilus floccosus*) – Vulnerable
- Smooth Bush-pea (*Pultenaea glabra*) – Vulnerable.

Note that this may not be a complete list and it is the responsibility of the proponent to ensure any protected matters under this controlling provision are assessed for the Commonwealth decision-maker's consideration.

A water resource, in relation to coal seam gas development and large coal mining development (s24D and s24E)

The proposed action is likely to have significant impacts on water resources through groundwater drawdown and depressurisation, potential impacts to surface and groundwater quality, and cumulative impacts with existing coal mine developments.