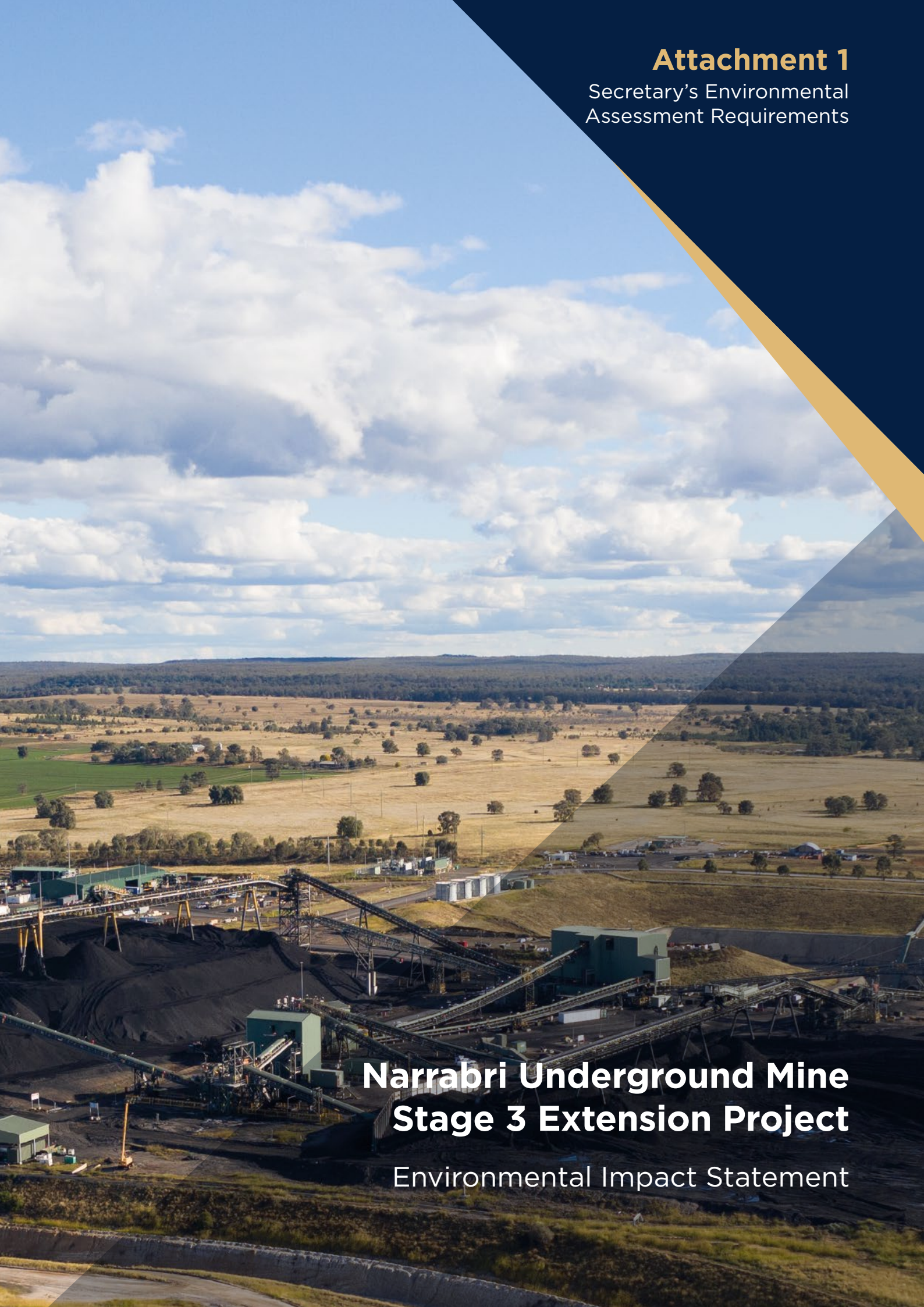
Attachment 1

Secretary's Environmental Assessment Requirements



Narrabri Underground Mine Stage 3 Extension Project

Environmental Impact Statement

Planning & Assessment
Energy & Resources
Contact: Philip Nevill
Tel: 82751036
Email: philip.nevill@planning.nsw.gov.au

Mr David Ellwood
Director NCO Stage 3 Project
Narrabri Coal Operations Pty Ltd
10 Kurrajong Creek Road
BAAN BAA NSW 2390

22/11/2019

Dear Mr Ellwood

Narrabri Underground Mine Stage 3 Extension Project (SSD-10269)
Revised Environmental Assessment Requirements

I refer to the Secretary's Environmental Assessment Requirements (SEARs) issued on 28 May 2019 for the preparation of and Environmental Impact Statement (EIS) for the Narrabri Underground Mine Stage 3 Extension Project (SSI 9837).

Since issuing these SEARs, the Mining Petroleum Gateway Panel granted a conditional gateway certificate for the project and a delegate of the Commonwealth Minister for the Environment and Energy determined that the project is a controlled action under the *Environment Protection and Biodiversity Conservation Act 1999* - (EPBC 2019/8427).

I can advise that the project will be assessed by the NSW Government under a process accredited by the Commonwealth Government.

Accordingly, the Commonwealth Government has provided its assessment requirements for the Matters of National Environmental Significance relevant to the project (ie Listed threatened species & Communities - under sections 18 and 18A, and a water resource, in relation to coal seam gas development and large coal mining development - under sections 24D and 24E).

I am providing you with modified SEARs to ensure that Commonwealth matters, and recommendations of the Gateway Panel are appropriately addressed in your EIS.

For completeness, the Department has re-enclosed agencies' comments in **Attachment 2**, the Commonwealth requirements in **Attachment 3** and copies of the Mining & Petroleum Gateway Panel's Conditional Gateway Certificate and recommendations in **Attachment 4**.

The panel's report documenting the reasons for its recommendation is available at: http://www.mpgp.nsw.gov.au/

The Department has also taken the opportunity to include minor updates to the SEARs in order to align with the Department's current drafting standards.

If you have any questions, please contact Philip Nevill on (02) 8275 1036.

Yours sincerely,

Stephen O'Donoghue
Director
Resource Assessments

as delegate for the Secretary

Environmental Assessment Requirements

State Significant Development

Section 4.12(8) of the *Environmental Planning and Assessment Act 1979*
Schedule 2 of the *Environmental Planning and Assessment Regulation 2000*

Application Number	SSD 10269
Development	The Narrabri Coal Mine Stage 3, which involves the expansion of the existing Narrabri Underground Coal Mine, including: · a southern extension of approved longwall panels; · an increase in the approved production rates; and · additional surface infrastructure and upgrades to existing infrastructure.
Location	10 Kurrajong Creek Road, Baan Baa, NSW, 2390 (approximately 25 kilometres south east of Narrabri)
Applicant	Narrabri Coal Operations Pty Ltd
Date of Issue	20 November 2019
General Requirements	The Environmental Impact Statement (EIS) for the development must comply with the requirements in Clauses 6 and 7 of Schedule 2 of the *Environmental Planning and Assessment Regulation 2000.* In particular, the EIS must include: · consideration of alternatives, including the development of a mine plan which avoids impacts on key sensitive surface features, and the 'do nothing' option; · a full description of the development, including: - historical mining operations at the mine and in the region; - details of the resource to be extracted (size and quality), demonstrating efficient resource recovery within environmental constraints; - the mine layout and development scheduling; - coal production rates (run-of-mine and product); - coal processing and transportation; - surface infrastructure and facilities (including any infrastructure that would be required for the development, but the subject of a separate approvals process); - workforce requirements during all phases of the development (on a full-time equivalent basis); - surface disturbance footprint; - a waste (overburden, coarse rejects, tailings, brine etc.) management strategy; - a water management strategy; - a rehabilitation strategy; - a landscape management plan, dealing with the Mining & Petroleum Gateway Panel's requirements (see Attachment 4); and - the likely interactions between the proposed development and the approved Narrabri Coal Mine, including the incremental and cumulative impacts of the extension and any other existing, approved or proposed mining-related and petroleum development in the vicinity of the site (including any relevant statutory approvals, environmental management regime relating to these operations); · a list of any approvals that must be obtained before the development may commence; · a risk assessment of the potential environmental impacts of the development, identifying key assessment issues;

- an assessment of the likely impacts of the development on the environment, noting that under Section 4.63 of the *Environmental Planning and Assessment Act 1979,* the likely impacts of the continued development of approved aspects of the project do not need to be reassessed. This assessment must focus on the specific issues identified below, including:
  - a description of the existing environment likely to be affected by the development, using sufficient baseline data;
  - an assessment of the likely impacts of all stages of the development, including appropriate worst-case scenarios and consideration of any cumulative impacts and taking into consideration any relevant legislation, environmental planning instruments, guidelines, policies, plans and industry codes of practice;
  - a description of the measures that would be implemented to mitigate and/or offset the likely impacts of the development, and an assessment of:
    - 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; and
    - whether contingency plans would be necessary to manage any residual risks; and
  - a description of the measures that would be implemented to monitor and report on the environmental performance of the development if it is approved;
- consideration of the development against all relevant environmental planning instruments (including Part 3 of the *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007);*
- a consolidated summary of all the proposed environmental management and monitoring measures, identifying all the commitments in the EIS;
- the reasons why the development should be approved, having regard to:
  - relevant matters for consideration under the *Environmental Planning and Assessment Act 1979*, including the objects of the Act;
  - the biophysical, economic and social impacts of the development, including the principles of ecologically sustainable development;
  - the suitability of the site with respect to potential land use conflicts with existing and future surrounding land uses; and
  - feasible alternatives to the development (and its key components), including the consequences of not carrying out the development;
- a conclusion evaluating the merits of the project as a whole, having regard to the requirements in Section 4.15 of the *Environmental Planning and Assessment Act 1979;* and
- a signed statement from the author of the EIS, certifying that the information contained within the document is neither false nor misleading.

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

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

	assumptions and components from which the capital investment value calculation is derived.
Specific Issues	· The EIS must address the following specific issues: · **Subsidence** – including an assessment of the likely conventional and non-conventional subsidence effects and impacts of the development, and the potential consequences of these effects and impacts on the natural and built environment, paying particular attention to those features that are considered to have significant economic, social, cultural or environmental value, taking into consideration: - recorded regional and historic subsidence levels, impacts and environmental consequences; - the potential extent of fracturing of the strata above the longwall panels; and - the implementation of a comprehensive subsidence monitoring program which is capable of detecting vertical, horizontal and far-field subsidence movements; · **Land** – including: - an assessment of the likely agricultural impacts of the development including preparation of an Agricultural Impact Statement, prepared in accordance with DPI's *Agricultural Impact Statement: Technical Notes;* - an assessment of the likely impacts of the development on the soils and land capability of the site and surrounds, paying particular attention to any Biophysical Strategic Agricultural Land (BSAL) and having regard to the Mining & Petroleum Gateway Panel's requirements (see Attachment 4); - an assessment of the likely impact of the development on landforms (topography), including: - the potential subsidence impacts on cliffs, rock formations and steep slopes; and - the long term geotechnical stability of any new landforms; - an assessment of the compatibility of the development with other land uses in the vicinity of the development in accordance with the requirements of Clause 12 of *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007* · **Water** – 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 Mining & Petroleum Gateway Panel's requirements (see Attachment 4) and (Commonwealth) Department of Environment and Energy requirements under the *Environment Protection and Biodiversity Conservation Act 1999* (see Attachment 3); - an assessment of the likely impacts of the development on aquifers, watercourses, riparian land, groundwater dependent ecosystems, water-related infrastructure, and other water users; - an assessment of potential flooding and ponding impacts of the development; - a detailed site water balance, including a description of site water demands, water disposal methods (including the location, volume, and frequency of any water discharges and management of discharge water quality), water supply arrangements, water supply and transfer infrastructure and water storage structures; and - a detailed description of the proposed water management system (including sewerage), beneficial water re-use program and all other proposed measures to monitor and mitigate surface water and groundwater impacts; · **Biodiversity** – including:

- an assessment of the biodiversity values and the likely biodiversity impacts of the project in accordance with Section 7.9 of the *Biodiversity Conservation Act 2016* (NSW), the Biodiversity Assessment Method (BAM) and documented in a Biodiversity Development Assessment Report (BDAR), unless OEH and DPE determine that the proposed development is not likely to have any significant impacts on biodiversity values;
- the BDAR must document the application of the avoid, minimise and offset framework including assessing all direct, indirect and prescribed impacts in accordance with the BAM;
- assessment of the likely impacts of the development on listed threatened species and communities under the *Environment Protection and Biodiversity Conservation Act 1999* (see Attachment 3);

· **Heritage –** including an assessment of the likely Aboriginal and historic heritage (cultural and archaeological) impacts of the development;

· **Noise and Vibration**– including:
- an assessment of the likely noise impacts of the development under the *NSW Noise Policy for Industry* and the *Voluntary Land Acquisition and Mitigation Policy* (DP&E);
- if a claim is made for specific construction noise criteria for certain activities, then this claim must be justified and accompanied by an assessment of the likely construction noise impacts of these activities under the *Interim Construction Noise Guideline*;
- an assessment of the likely road noise impacts of the development under the *NSW Road Noise Policy*;
- an assessment of the likely rail noise impacts of the project under the *Rail Infrastructure Noise Guidelines;*
- an assessment of the potential vibration and low frequency noise impacts of the development;

· **Air** – including:
- an assessment of the likely air quality impacts of the development in accordance with the *Approved Methods and Guidance for the Modelling and Assessment of Air Pollutants in NSW*; and
- an assessment of the likely greenhouse gas impacts of the development;

· **Transport** – including an assessment of the likely transport impacts of the development on the capacity, condition, safety and efficiency of the local and State road network and the rail network;

· **Visual and Light** – including an assessment of the likely visual impacts of the development on private landowners in the vicinity of the development and key vantage points in the public domain, paying particular attention to the creation of any new landforms and minimising the lighting impacts of the development, with particular consideration of the impacts on the Siding Springs Observatory;

· **Hazards** - including an assessment of the likely risks to public safety, paying particular attention to potential subsidence risks, bushfire risks, and the handling and use of any dangerous goods;

· **Social** – including:
- an assessment of the social impacts of the project, prepared in accordance with the *Social Impact Assessment Guideline for State Significant Mining, Petroleum Production and Extractive Industry Development (2017)*, including the likely impacts of the development on the local community, cumulative impacts (considering other mining developments in the locality), and consideration of workforce accommodation;

· **Economic** – including an assessment of the likely economic impacts of the development, paying particular attention to:

	- the significance of the resource; - economic benefits of the project for the State and region; and - the demand for the provision of local infrastructure and services; · **Rehabilitation and Final Landform** – including - a conceptual final landform design; - an assessment of the likely impacts of the development on existing landforms and topography, including justification of the final landform design and its long-term geotechnical stability; - a detailed description of the progressive rehabilitation measures that would be implemented for the development and how this rehabilitation would integrate with the final landform of the mine; - a detailed description of the proposed rehabilitation and mine closure strategies for the development, including rehabilitation objectives, performance standards and completion criteria; - decommissioning and management of surface infrastructure; and - nominated final land uses, having regard to any relevant strategic land use planning or resource management plans or policies; and · **Waste** – including identification, quantification and classification of the likely waste streams likely to be generated (including tailings and course rejects) during construction and operation, and describe the measures to be implemented to manage, reuse, recycle and safely dispose of this waste.
Consultation	During the preparation of the EIS, you must consult with relevant local, State or Commonwealth Government authorities, service providers, community groups and affected landowners. The EIS must describe the consultation that was carried out, identify the issues raised during this consultation, and explain how these issues have been addressed in the EIS.

ATTACHMENT 1

Environmental Planning Instruments, Policies, Guidelines & Plans

Land	
	Guideline for Agricultural Impact Statements (DP&E)
	Agricultural Impact Statement: Technical Notes (DPI)
	Agfact AC25: Agricultural Land Classification (NSW Agriculture)
	Interim Protocol for Site Verification & Mapping of Biophysical Strategic Land (OEH)
	Soil and Landscape Issues in Environmental Impact Assessment (NOW)
	State Environmental Planning Policy No. 55 – Remediation of Land
	Australian and New Zealand Guidelines for the Assessment and Management of Contaminated Sites (ANZECC)
Water	
Water Sharing Plans	Relevant water sharing plans
Groundwater	NSW State Groundwater Policy Framework Document (NOW)
	NSW State Groundwater Quality Protection Policy (NOW)
	NSW State Groundwater Quantity Management Policy (NOW)
	NSW Aquifer Interference Policy 2012 (NOW)
	Australian Groundwater Modelling Guidelines 2012 (Commonwealth)
	National Water Quality Management Strategy Guidelines for Groundwater Protection in Australia (ARMCANZ/ANZECC)
	Guidelines for the Assessment & Management of Groundwater Contamination (EPA)
Surface Water	NSW State Rivers and Estuary Policy (NOW)
	NSW Government Water Quality and River Flow Objectives (EPA)
	Using the ANZECC Guideline and Water Quality Objectives in NSW (EPA)
	National Water Quality Management Strategy: Australian Guidelines for Fresh and Marine Water Quality (ANZECC/ARMCANZ)
	National Water Quality Management Strategy: Australian Guidelines for Water Quality Monitoring and Reporting (ANZECC/ARMCANZ)
	National Water Quality Management Strategy: Guidelines for Sewerage Systems – Effluent Management (ARMCANZ/ANZECC)
	National Water Quality Management Strategy: Guidelines for Sewerage Systems – Use of Reclaimed Water (ARMCANZ/ANZECC)
	Approved Methods for the Sampling and Analysis of Water Pollutants in NSW (EPA)
	Managing Urban Stormwater: Soils & Construction (Landcom) Volume 1 and Volume 2 (A: Installation of services; C: Unsealed roads; D: Main Roads; E: Mines and Quarries) (DECC)
	Managing Urban Stormwater: Treatment Techniques (EPA)
	Managing Urban Stormwater: Source Control (EPA)
	Technical Guidelines: Bunding & Spill Management (EPA)
	Environmental Guidelines: Use of Effluent by Irrigation (EPA)
	A Rehabilitation Manual for Australian Streams (LWRRDC and CRCCH)
	NSW Guidelines for Controlled Activities (NOW)
Flooding	Floodplain Development Manual (OEH)
	Floodplain Risk Management Guideline (OEH)

Biodiversity	
	Biodiversity Assessment Method (OEH)
	Biosecurity Act 2015
	Threatened Species Assessment Guidelines (OEH)
	Policy and Guidelines for Aquatic Habitat Management and Fish Conservation (Fisheries NSW)
	NSW State Groundwater Dependent Ecosystem Policy (NOW)
	Risk Assessment Guidelines for Groundwater Dependent Ecosystems (NOW)
	State Environmental Planning Policy No. 44 – Koala Habitat Protection
Heritage	
	The Burra Charter (The Australia ICOMOS charter for places of cultural significance)
	Draft Guidelines for Aboriginal Cultural Heritage Assessment and Community Consultation (DP&E)
	Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010 (OEH)
	Code of Practice for Archaeological Investigations of Objects in NSW (OEH)
	Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW (OEH)
	NSW Heritage Manual (OEH)
	Statements of Heritage Impact (OEH)
Noise	
	NSW Noise Policy for Industry (EPA)
	Interim Construction Noise Guideline (EPA)
	NSW Road Noise Policy (EPA)
	Assessing Vibration: a Technical Guideline (EPA)
	Voluntary Land Acquisition and Mitigation Policy (DP&E)
	Australian and New Zealand Environment Council – Technical basis for guidelines to minimise annoyance due to blasting overpressure and ground vibration (ANZEC, 1990)
Air	
	Approved Methods and Guidance for the Modelling and Assessment of Air Pollutants in NSW (EPA)
	Approved Methods for the Sampling and Analysis of Air Pollutants in NSW (EPA)
	Coal Mine Particulate Matter Control Best Practice – Site Specific Determination Guideline (EPA)
	Generic Guidance and Optimum Model Settings for the CALPUFF Modelling System for Inclusion in the Approved Methods for the Modelling and Assessment of Air Pollutants in NSW (EPA)
	Voluntary Land Acquisition and Mitigation Policy (DP&E)
	National Greenhouse Accounts Factors (Commonwealth)
Light	
	Dark Sky Planning Guideline: Protecting the observing conditions at Siding Spring (DPE)
Transport	
	Guide to Traffic Generating Development (RTA)
	Road Design Guide (RMS) & relevant Austroads Standards
Socio-Economic	
	Social Impact Assessment Guideline: For State Significant Mining, Petroleum Production and Extractive Industry Development (DPE)

	Guidelines for the economic assessment of mining and coal seam gas proposals (2015)
Public Safety	
	State Environmental Planning Policy No. 33 – Hazardous and Offensive Development
	Hazardous and Offensive Development Application Guidelines – Applying SEPP 33
	Hazardous Industry Planning Advisory Paper No. 6 – Guidelines for Hazard Analysis
	Planning for Bush Fire Protection (2006)
Resource	
	Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves 2012 (JORC)
Waste	
	Waste Classification Guidelines (EPA)
Rehabilitation	
	Mine Rehabilitation – Leading Practice Sustainable Development Program for the Mining Industry (Commonwealth)
	Mine Closure and Completion – Leading Practice Sustainable Development Program for the Mining Industry (Commonwealth)
	Strategic Framework for Mine Closure (ANZMEC-MCA)
Environmental Planning Instruments - General	
	State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007
	State Environmental Planning Policy (State and Regional Development) 2011
	State Environmental Planning Policy (Infrastructure) 2007
	State Environmental Planning Policy No. 44 – Koala Habitat Protection
	Narrabri Local Environmental Plan 2012

ATTACHMENT 2

DOC19/320327
SSD 10269

Ms Rose-Anne Hawkeswood
A/Team Leader
Resource and Energy Assessments, Planning Services
Department of Planning and Environment
Rose-Anne.Hawkeswood@planning.nsw.gov.au

Dear Rose-Anne,

SEARs Request for Narrabri Coal Mine Stage 3 – SSD 10269

I refer to your email dated 8 April 2019 seeking input into the Department of Planning and Environment (DPE) Secretary's Environmental Assessment Requirements (SEARs) for the preparation of an Environmental Impact Assessment (EIS) for the Narrabri Coal Mine Stage 3 project (SSD 10269).

OEH has considered your request and provides SEARs for the proposed development in **Attachment A,** and guidance material in **Attachment B**. OEH understands that the proposed project is seeking a new development consent that will involve an extension of the existing underground mining areas, the development of supporting infrastructure, and an extension to the mine life.

OEH recommends the EIS needs to appropriately address the following:

1. Biodiversity and offsetting
2. Aboriginal cultural heritage
3. Historic heritage
4. Water and soils
5. Flooding

The information in the scoping report indicates that potential environmental impacts from the proposed project may be subsidence effects, impacts on surface and groundwater resources, impacts on biodiversity from clearing, and potential impacts on Aboriginal cultural heritage items.

The Biodiversity Assessment Methodology (BAM) must be used to assess impacts to biodiversity in accordance with the *Biodiversity Conservation Act 2016* (BC Act). A Biodiversity Development Assessment Report (BDAR) must accompany the EIS.

Earlier this year OEH had discussions with DPE and the proponent regarding the Aboriginal cultural heritage requirements for this proposal. Given that a new development consent is being sought for this project, OEH recommend that a new consultation process be commenced rather than

continuing consultation with the two existing registered Aboriginal parties associated with the Narrabri Coal Stage 2 project. Consultation with Aboriginal people must be undertaken and documented in accordance with the *Aboriginal cultural heritage consultation requirements for proponents* document.

If you have any questions regarding this matter further, please contact Renee Shepherd, Senior Conservation Planning Officer on 02 6883 5355 or renee.shepherd@environment.nsw.gov.au.

Yours sincerely

PETER CHRISTIE
Director North West
Conservation and Regional Delivery

17 April 2019

Contact officer: RENEE SHEPHERD
02 6883 5355

Attachment A - Environmental Assessment Requirements

Attachment B - Guidance Material

ATTACHMENT A

Standard Environmental Assessment Requirements

Biodiversity
1. Biodiversity impacts related to the proposed Narrabri Coal Mine Stage 3 project are to be assessed in accordance with Section 7.9 of the Biodiversity Conservation Act 2017 the Biodiversity Assessment Method and documented in a Biodiversity Development Assessment Report (BDAR). The BDAR must include information in the form detailed in the *Biodiversity Conservation Act 2016* (s6.12), *Biodiversity Conservation Regulation 2017* (s6.8) and Biodiversity Assessment Method, unless OEH and DPE determine 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 and prescribed impacts in accordance with the Biodiversity Assessment Method.
3. The BDAR must include details of the measures proposed to address the offset obligation as follows; • The total number and classes of biodiversity credits required to be retired for the development/project; • The number and classes of like-for-like biodiversity credits proposed to be retired; • The number and classes of biodiversity credits proposed to be retired in accordance with the variation rules; • Any proposal to fund a biodiversity conservation action; • Any proposal to conduct ecological rehabilitation (if a mining project); • Any proposal to make a payment to the Biodiversity Conservation Fund. If seeking approval to use the variation rules, the BDAR must contain details of the reasonable steps that have been taken to obtain requisite like-for-like biodiversity credits.
4. The BDAR must be 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*.
Aboriginal cultural heritage
6. The EIS must identify and describe the Aboriginal cultural heritage values that exist across the whole area that will be affected by the project 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 Investigations of Aboriginal Objects in NSW (OEH 2010), and guided by the *Guide to investigating, assessing and reporting on Aboriginal Cultural Heritage in NSW* (DECCW, 2011) and consultation with OEH regional branch officers.
7. Consultation with Aboriginal people must be undertaken and documented in accordance with the Aboriginal cultural heritage consultation requirements for proponents 2010 *(DECCW).* The significance of cultural heritage values for Aboriginal people who have a cultural association with the land must be documented in the ACHAR.

8. Impacts on Aboriginal cultural heritage values are to be assessed and documented in the ACHAR. The ACHAR must demonstrate attempts to avoid impact upon cultural heritage values and identify any conservation outcomes. Where impacts are unavoidable, the ACHAR must outline measures proposed to mitigate impacts. Any objects recorded as part of the assessment must be documented and notified to OEH.

Historic heritage

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

Water and soils

10. 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.

11. 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 http://www.environment.nsw.gov.au/ieo/index.htm) including groundwater as appropriate that represent the community's uses and values for the receiving waters.

d. Indicators and trigger values/criteria for the environmental values identified at (c) in accordance with the ANZECC (2000) Guidelines for Fresh and Marine Water Quality and/or local objectives, criteria or targets endorsed by the NSW Government.
e. Risk-based Framework for Considering Waterway Health Outcomes in Strategic Land-use Planning Decisions http://www.environment.nsw.gov.au/research-and-publications/publications-search/risk-based-framework-for-considering-waterway-health-outcomes-in-strategic-land-use-planning

12. 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.
    c. Consistency with any relevant certified Coastal Management Program (or Coastal Zone Management Plan).

13. 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, 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, 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

14. The EIS must map the following features relevant to flooding as described in the Floodplain Development Manual 2005 (NSW Government 2005) including:
    a. Flood prone land.
    b. Flood planning area, the area below the flood planning level.
    c. Hydraulic categorisation (floodways and flood storage areas).
    d. Flood hazard

15. 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.

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

a. Current flood behaviour for a range of design events as identified in 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.

17. Modelling in the EIS must consider and document:
18. Existing council flood studies in the area and examine consistency to the flood behaviour documented in these studies.
19. 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.
20. 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.
21. Relevant provisions of the NSW Floodplain Development Manual 2005.

22. 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 river banks 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.

ATTACHMENT B

Guidance Material

Title	Web address
Relevant Legislation	
Biodiversity Conservation Act 2016	https://www.legislation.nsw.gov.au/#/view/act/2016/63/full
Coastal Management Act 2016	https://www.legislation.nsw.gov.au/#/view/act/2016/20/full
Commonwealth Environment Protection and Biodiversity Conservation Act 1999	http://www.austlii.edu.au/au/legis/cth/consol_act/epabca1999588/
Environmental Planning and Assessment Act 1979	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+203+1979+cd+0+N
Fisheries Management Act 1994	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+38+1994+cd+0+N
Marine Parks Act 1997	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+64+1997+cd+0+N
National Parks and Wildlife Act 1974	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+80+1974+cd+0+N
Protection of the Environment Operations Act 1997	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+156+1997+cd+0+N
Water Management Act 2000	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+92+2000+cd+0+N
Wilderness Act 1987	http://www.legislation.nsw.gov.au/viewtop/inforce/act+196+1987+FIRST+0+N
Biodiversity	
Biodiversity Assessment Method (OEH, 2017)	https://biodiversity-ss.s3.amazonaws.com/Uploads/1494298079/Biodiversity-Assessment-Method-May-2017.pdf
Biodiversity Development Assessment Report	https://www.legislation.nsw.gov.au/#/view/act/2016/63/part6/div3/sec6.12
Guidance and Criteria to assist a decision maker to determine a serious and irreversible impact (OEH, 2017)	https://biodiversity-ss.s3.amazonaws.com/Uploads/1494298198/Serious-and-Irreversible-Impact-Guidance.PDF
Accreditation Scheme for Application of the Biodiversity Assessment Method Order 2017	https://www.legislation.nsw.gov.au/regulations/2017-471.pdf
Biodiversity conservation actions	www.environment.nsw.gov.au/resources/bcact/ancillary-rules-biodiversity-actions-170496.pdf
Reasonable steps to seek like-for-like biodiversity credits for the purpose of applying the variation rules	www.environment.nsw.gov.au/resources/bcact/ancillary-rules-reasonable-steps-170498.pdf
OEH Threatened Species Website	www.environment.nsw.gov.au/threatenedspecies/
NSW BioNet (Atlas of NSW Wildlife)	www.bionet.nsw.gov.au/
NSW guide to surveying threatened plants (OEH 2016)	www.environment.nsw.gov.au/resources/threatenedspecies/160129-threatened-plants-survey-guide.pdf
OEH threatened species survey and assessment guideline information	www.environment.nsw.gov.au/threatenedspecies/surveyassessmentgdlns.htm

Title	Web address
BioNet Vegetation Classification - NSW Plant Community Type (PCT) database	www.environment.nsw.gov.au/research/Vegetationinformationsystem.htm
OEH Data Portal (access to online spatial data)	http://data.environment.nsw.gov.au/
Fisheries NSW policies and guidelines	http://www.dpi.nsw.gov.au/fisheries/habitat/publications/policies,-guidelines-and-manuals/fish-habitat-conservation
List of national parks	http://www.environment.nsw.gov.au/NationalParks/parksearchatoz.aspx
Revocation, recategorisation and road adjustment policy (OEH, 2012)	http://www.environment.nsw.gov.au/policies/RevocationOfLandPolicy.htm
Guidelines for developments adjoining land and water managed by the Department of Environment, Climate Change and Water (DECCW, 2010)	http://www.environment.nsw.gov.au/protectedareas/developmntadjoiningdecc.htm
Heritage	
The Burra Charter (The Australia ICOMOS charter for places of cultural significance)	http://australia.icomos.org/wp-content/uploads/The-Burra-Charter-2013-Adopted-31.10.2013.pdf
Statements of Heritage Impact 2002 (HO & DUAP)	http://www.environment.nsw.gov.au/resources/heritagebranch/heritage/hmstatementsofhi.pdf
NSW Heritage Manual (DUAP) (scroll through alphabetical list to 'N')	http://www.environment.nsw.gov.au/Heritage/publications/
Aboriginal Cultural Heritage	
Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW, 2010)	http://www.environment.nsw.gov.au/resources/cultureheritage/commconsultation/09781ACHconsultreq.pdf
Code of Practice for the Archaeological Investigation of Aboriginal Objects in New South Wales (DECCW, 2010)	http://www.environment.nsw.gov.au/resources/cultureheritage/10783FinalArchCoP.pdf
Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW (OEH 2011)	http://www.environment.nsw.gov.au/resources/cultureheritage/20110263ACHguide.pdf
Aboriginal Site Recording Form	http://www.environment.nsw.gov.au/resources/parks/SiteCardMainV1_1.pdf
Aboriginal Site Impact Recording Form	http://www.environment.nsw.gov.au/resources/cultureheritage/120558asirf.pdf
Aboriginal Heritage Information Management System (AHIMS) Registrar	http://www.environment.nsw.gov.au/contact/AHIMSRegistrar.htm
Care Agreement Application form	http://www.environment.nsw.gov.au/resources/cultureheritage/20110914TransferObject.pdf
Water and Soils	
Acid sulphate soils	
Acid Sulfate Soils Planning Maps via Data.NSW	http://data.nsw.gov.au/data/
Acid Sulfate Soils Manual (Stone et al. 1998)	http://www.environment.nsw.gov.au/resources/epa/Acid-Sulfate-Manual-1998.pdf

Title	Web address
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 and Coastal Erosion	
Reforms to coastal erosion management	http://www.environment.nsw.gov.au/coasts/coastalerosionmgmt.htm
Floodplain development manual	http://www.environment.nsw.gov.au/floodplains/manual.htm
Guidelines for Preparing Coastal Zone Management Plans	Guidelines for Preparing Coastal Zone Management Plans http://www.environment.nsw.gov.au/resources/coasts/130224CZMPGuide.pdf
NSW Climate Impact Profile	http://climatechange.environment.nsw.gov.au/
Climate Change Impacts and Risk Management	Climate Change Impacts and Risk Management: A Guide for Business and Government, AGIC Guidelines for Climate Change Adaptation
Water	
Water Quality Objectives	http://www.environment.nsw.gov.au/ieo/index.htm
ANZECC (2000) Guidelines for Fresh and Marine Water Quality	www.environment.gov.au/water/publications/quality/australian-and-new-zealand-guidelines-fresh-marine-water-quality-volume-1
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

Our reference: : SF14/12226; DOC19/312416
Contact: : Duncan McGregor – 02 6773 7000 – armidale@epa.nsw.gov.au
Date : 18 April 2019

The Director
Resource & Energy Assessments
Department of Planning and Environment
PO Box 39
SYDNEY NSW 2001

Attention: Ms Rose-Anne Hawkeswood

Email: Rose-Anne.Hawkeswood@planning.nsw.gov.au **BY EMAIL**

Dear Ms Hawkeswood,

RE: Request for input into SEARs - Narrabri Coal Mine Stage 3

I refer to your request for the Environment Protection Authority (EPA) to review draft Secretary's Environmental Assessment Requirements (SEARs) for the proposed Narrabri Coal Mine Stage 3, received by the EPA on 8 April 2019. The Narrabri Coal Mine currently operates under Environment Protection Licence 12789.

The EPA has considered the draft SEARs and has identified that Attachment 1 of the draft SEARs does not include a section on surface water impacts. The EPA recommends the SEARs are revised to refer to relevant guidelines that should be used to assess potential impacts to surface water quality and quantity.

The information the EPA requires to assess the proposal is detailed in **Attachment A**. Experience with the Narrabri underground coal mine suggests that the following issues should be specifically addressed in an Environmental Impact Statement (EIS):

1. Noise from gas drainage and ventilation: The EIS needs to assess all potentially affected sensitive receivers. With the progression of the long wall, potential impacts on receivers from gas drainage and ventilation infrastructure needs to be assessed, specifically the residence on Lot 5 DP1084395 should be assessed in the EIS.
2. Air quality: Dust and odour issues have at times been generated from underground mining, surface stockpiles and other surface activities at the site. The EIS needs to demonstrate that air quality impacts can be feasibly and reasonably managed so that the EPA's criteria are met, and offensive odour is not generated.
3. Water management: The EIS needs to demonstrate that the site will not pollute waters. This includes appropriate management of pollutants generated through coal contact water, sediment-laden water from exposed areas of the site and other activities including any groundwater extraction from the underground mine.

The EIS should also demonstrate that any exploration on the licensed premises can be conducted in compliance with licence conditions, including noise limits derived in accordance with the *Noise Policy for Industry* (EPA 2017).

Email: armidale@epa.nsw.gov.au
PO Box 494 Armidale NSW 2350
85 Faulkner Street, Armidale NSW 2350
Tel: (02) 6773 7000 Fax: (02) 6772 2336
ABN 43 692 285 758
www.epa.nsw.gov.au

To assist in assessing the EIS, the EPA requests that it follows the format of Department of Planning and Environment's EIS guidelines and addresses the EPA's specific requirements in Attachment A.

The EPA requests that the proponent provide one (1) electronic copy of the EA when lodging it application with the EPA. These documents should be sent to the EPA's Armidale office at armidale@epa.nsw.gov.au

Please contact Duncan McGregor on (02) 6773 7000 or by email to armidale@epa.nsw.gov.au to discuss this matter further.

Yours sincerely,

REBECCA SCRIVENER
Head Regional Operations Unit - Armidale
Environment Protection Authority

ATTACHMENT A: Environmental Assessment Requirements – Narrabri Coal Mine Stage 3

1. Environmental impacts of the project

1.1. The EIS must address the requirements of Section 45 of the Protection of the Environment Operations Act 1997 (POEO Act) by determining the extent of each impact and providing sufficient information to enable the EPA to determine appropriate conditions, limits and monitoring requirements for an Environment Protection Licence (EPL).

1.2. Impacts related to the following environmental issues need to be assessed, quantified and reported on:

- **Air Issues**: air quality including dust generation from the operation on the surrounding landscape and/or community;
- **Noise and vibration impacts** associated with blasting, and operational noise particularly machinery and plant movements;
- **Waste** including hazardous materials and radiation. Consideration needs to be given to disposal options for general waste, sanitary waste as well as hazardous materials and radiation, where relevant.
- **Water and Soils** including site water balance and sediment and erosion controls during construction and operation phases.

The Environmental Impact Statement (EIS) should address the specific requirements outlined under each heading below and assess impacts in accordance with the relevant guidelines mentioned.

2. Licensing requirements

2.1. The development is a scheduled activity under the *Protection of the Environment Operations Act 1997* (POEO Act) and will therefore require an Environment Protection Licence (EPL) if approval is granted.

2.2. Should project approval be granted, the proponent will need to make an application to the EPA for its EPL for the proposed facility prior to undertaking any on site works. Additional information is available through the *EPA Guide to Licensing* document (www.epa.nsw.gov.au/licensing/licenceguide.htm).

SPECIFIC ISSUES

3 Air issues

3.1. The EIS must demonstrate the proposal's ability to comply with the relevant regulatory framework, specifically the *Protection of the Environment Operations (POEO) Act (1997)* and the *POEO (Clean Air) Regulation (2002)*. Particular consideration should be given to section 129 of the POEO Act concerning control of "offensive odour".

3.2. The EIS must include an air quality impact assessment (AQIA).

3.3. The AQIA must be carried out in accordance with the document, *Approved Methods for the Modelling and Assessment of Air Pollutants in NSW* (2005) http://www.epa.nsw.gov.au/resources/air/ammodelling05361.pdf.

3.4. The EIS must detail emission control techniques/practices that will be employed at the site and identify how the proposed control techniques/practices will meet the requirements of the POEO Act, *POEO (Clean Air) Regulation* and associated air quality limits or guideline criteria.

4. Noise and Vibration

The EIS must assess the following noise and vibration aspects of the proposed development

4.1. Construction noise associated with the proposed development should be assessed using the *Interim Construction Noise Guideline (*DECC, 2009). These are available at:https://www.epa.nsw.gov.au/your-environment/noise/industrial-noise/interim-construction-noise-guideline

4.2. Vibration from all activities (including construction and operation) to be undertaken on the premises should be assessed using the guidelines contained in the *Assessing Vibration: a technical guideline* (DEC, 2006). These are available at: https://www.epa.nsw.gov.au/your-environment/noise/industrial-noise/assessing-vibration

4.3. If blasting is required for any reasons during the construction or operational stage of the proposed development, blast impacts should be demonstrated to be capable of complying with the guidelines contained in *Australian and New Zealand Environment Council – Technical basis for guidelines to minimise annoyance due to blasting overpressure and ground vibration* (ANZEC, 1990).These are available at: https://www.epa.nsw.gov.au/your-environment/noise/industrial-noise/interim-construction-noise-guideline

4.4. Operational noise from all industrial activities (including private haul roads and private railway lines) to be undertaken on the premises should be assessed using the guidelines contained in the *NSW Noise Policy for Industry* (EPA, 2017). https://www.epa.nsw.gov.au/your-environment/noise/industrial-noise/noise-policy-for-industry-(2017)

4.5. Noise on public roads from increased road traffic generated by land use developments should be assessed using the guidelines contained in the *NSW Road Noise Policy* and associated application notes (EPA, 2011).https://www.epa.nsw.gov.au/your-environment/noise/transport-noise

5 Waste, chemicals, hazardous materials and radiation

5.1. The EIS must assess all aspects of waste generation, management and disposal associated with the proposed development.

5.2. The EIS must demonstrate compliance with all regulatory requirements outlined in the POEO Act and associated waste regulations.

5.3. The EIS must identify, characterise and classify the following in accordance with the EPA's *Waste Classification Guidelines (2014)* and associated addendums:

(i) all waste that will be generated onsite through excavation, demolition or construction activities, including proposed quantities of the waste;

(ii) all waste that is proposed to be disposed of to an offsite location, including proposed quantities of the waste and the disposal locations for the waste. This includes waste that is intended for re-use or recycling.

Note: The EPA's W*aste Classification Guidelines (2014)* and associated addendums are available at: https://www.epa.nsw.gov.au/your-environment/waste/classifying-waste

5.4. The EIS must outline contingency plans for any event that may result in environmental harm, such as excessive stockpiling of material, or dirty water volumes exceeding the storage capacity available on-site.

5.5. The EIS must demonstrate that appropriate spill containment will be provided for storage, filling and loading of all fuels and other chemicals to be used on site, in accordance with the relevant Australian Standard.

6 Water

6.1. The EIS must demonstrate how the proposed development will meet the requirements of section 120 of the POEO Act.

6.2. The EIS must include a water balance for the development including water requirements (quantity, quality and source(s)) and proposed storm and wastewater disposal, including type, volumes, proposed treatment and management methods and re-use options.

6.3. If the proposed development intends to discharge waters to the environment, the EIS must demonstrate how the discharge(s) will be managed in terms of water quantity, quality and frequency of discharge and include an impact assessment of the discharge on the receiving environment. This should include:

- Description of the proposal including position of any intakes and discharges, volumes, water quality and frequency of all water discharges.
- Description of the receiving waters including upstream and downstream water quality as well as any other water users.
- Demonstration that all practical options to avoid discharge have been implemented and environmental impact minimised where discharge is necessary.

6.4. The EIS must refer to Water Quality Objectives for the receiving waters and indicators and associated trigger values or criteria for the identified environmental values of the receiving environment. This information should be sourced from the ANZECC (2000) Guidelines for Fresh and Marine Water Quality (http://www.environment.gov.au/water/policy-programs/nwqms/).

6.5. The EIS must describe how stormwater will be managed in all phases of the project, including details of how stormwater and runoff will be managed to minimise pollution. Information should include measures to be implemented to minimise erosion, leachate and sediment mobilisation at the site. The EIS should consider the guidelines *Managing urban stormwater: soils and construction,* vol. 1 (Landcom 2004) and vol. 2 (A. Installation of services; C. Unsealed roads; D. Main Roads; E. Mines and quarries) (DECC, 2008).

6.6. The EIS must describe any water quality monitoring programs to be carried out at the project site. Water quality monitoring should be undertaken in accordance with the *Approved Methods for the Sampling and Analysis of Water Pollutant in NSW* (2004) which is available at: http://www.epa.nsw.gov.au/resources/legislation/approvedmethods-water.pdf.

OUT19/4628

Rose-Anne Hawkeswood
A/ Team Leader
Resource & Energy Assessments
NSW Department of Planning and Environment

Rose-Anne.Hawkeswood@planning.nsw.gov.au

Dear Ms Hawkeswood

Narrabri Coal Mine Stage 3 (10269)
Comment on the Secretary's Environmental Assessment Requirements (SEARs)

I refer to your email of 8 April 2019 to the Department of Industry (DoI) about the above matter.

The following advice for you to consider is from relevant branches of DoI Lands & Water and the Department of Primary Industries.

DoI -– Water and Natural Resources Access Regulator

The SEARS should include:

- 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://www.industry.nsw.gov.au/water).

DPI Agriculture

- DPI Agriculture Notes the Draft SEARs request "an Agricultural Impact Statement, prepared in accordance with DPI's Agricultural Impact Statement: Technical Notes, to assess the likely impacts of the development on the soils and land capability of the site and surrounds, paying particular attention to any Biophysical Strategic Agricultural Land (BSAL)", this is supported and will cover issues related to Agricultural land and industries.

Any further referrals to Department of Industry can be sent by email to landuse.enquiries@dpi.nsw.gov.au.

Yours sincerely

Simon Francis
Senior Policy Officer, Assessments
Lands and Water - Strategic Relations
23 April 2019

DOC19/349097

DIVISION OF RESOURCES & GEOSCIENCE ADVICE RESPONSE

Rose-Anne Hawkeswood
Resource Assessments - Planning Services Division
Department of Planning & Environment
GPO Box 39
SYDNEY NSW 2001

rose-anne.hawkewood@planning.nsw.gov.au

Dear Rose-Anne

Project: Narrabri Underground Coal Mine - Stage 3 Extension Project (Narrabri South)
Stage: Secretary's Environmental Assessment Requirements
Development Application: SSD 10269

I refer to your email dated 8 April 2019 inviting the Division of Resources & Geoscience (the Division) to provide input into the Secretary's Environmental Assessment Requirements (SEARs) on the *Narrabri Underground Coal Mine - Stage 3 Extension Project (Narrabri South)* (the Project).

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

The Division recommends that the Environmental Impact Statement (EIS) for the Project includes all the requirements set out in both the '*Mine Application Guideline (2015)*', where it relates to the EIS, and the *'Indicative Secretary's Environmental Assessment Requirements (SEARs) for state significant mining developments (October 2015)'.* These inclusions will ensure the resource has been adequately assessed to facilitate appropriate and efficient recovery and utilisation of the State's resources.

The Division acknowledges that the Project Scoping Report contains some of the general requirements outlined in the documents referred to above. Further, the EIS must also include the following specific requirements:

1. Project Description

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

2. Geology

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

3. Resource and Reserve Statement

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

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

4. Resource Recovery

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

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

5. Life of Mine Schedule

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

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

6. Project Economics

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

- Coal price forecasts by coal type used by the Proponent. The Division requires these forecasts to analyse the Proponent's calculations of royalty value and export value.
- Product tonnages split into market segment. These estimates are necessary to arrive at total revenue value and royalty calculations. Include justification for market segment based on quality parameters.
- CAPEX & OPEX necessary for the Project – broken down into the various sub-categories and equipment type.
- Estimates of employment generation broken down into direct, indirect, ongoing, construction and contract workers.
- Total royalty generated to the state over the life of the Project.

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

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

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

Additional Matters for Attention

Biodiversity Offsets

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

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

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

Consultation with the Narrabri Gas Project

The Project is located adjacent to the Santos NSW Pty Ltd held Narrabri Gas Project. The Division recommends continued consultation with Santos regarding their project and any associated potential impacts.

Mining Titles

The Division notes that this Project is located within the existing operations area of Mining Lease 1609 (Act 1992) (ML 1609) and the project extension area within Exploration Licence 6243 (Act 1992) (EL 6243).

The Proponent must obtain the appropriate mining title(s), such as a mining lease, from the Division allowing for mineral extraction (coal) under the *Mining Act (1992)* over the project extension area within EL 6243.

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.

For further enquiries regarding this matter please contact Adam Banister, Senior Advisory Officer, Assessment Coordination Unit on 02 4063 6534 or assessment.coordination@planning.nsw.gov.au.

Yours sincerely

Scott Anson
Manager Assessment Coordination
Resource Operations
Division of Resources & Geoscience
23 April 2019

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

Planning & Environment
Resources Regulator

Our Ref: DOC19/327655

Rose-Anne Hawkeswood
A/ Team Leader
Resource & Energy Assessments - Planning Services
Department of Planning and Environment
GPO Box 39
Sydney NSW 2001

By email: Rose-Anne.Hawkeswood@planning.nsw.gov.au

Narrabri Coal Mine Stage 3 (SSD 10269): Request for Resources Regulator Secretary's Environmental Assessment Requirements

Dear Ms Hawkeswood,

I refer to the Department of Planning and Environment – Resources Assessments (DPE – Resources & Assessment) email dated 8 April 2019 inviting the Resources Regulator to provide Secretary's Environmental Assessment Requirements (SEARs) for the Narrabri Coal Mine Stage 3 (SSD 10269).

The Compliance Operations unit within the Resources Regulator has responsibility for providing strategic advice for environmental issues pertaining to the proposed project in so far as they relate to or affect rehabilitation.

Development Details and Assessment

Narrabri Coal Operations Pty Ltd has submitted a project Scoping Report, March 2019 and a draft request for SEARs in support of a development application for Narrabri Coal Mine Stage 3. The application is to gain access to additional areas of run-of-mine (ROM) coal reserves within Exploration Licence (EL) 6243.
Narrabri Mine is an underground coal operation located approximately 25 kilometres south east of Narrabri, NSW. The Narrabri Coal Mine Stage 3 proposes the expansion of the existing Narrabri Underground Coal Mine, including:

The Project involves longwall mining operations in ML 1609 and new MLA areas (within EL 6243) to extract coal within the Hoskissons Seam through a southern extension of approved longwall panels and one additional longwall panel
The Project would involve an increase from the approved production limit of 11 Mtpa of ROM coal to 13 Mtpa of ROM coal, total ROM coal production increased from 170Mt to approximately 280 Mt, and an increase in the mine life from 2031 to 2045.

Other associated infrastructure and activities would include:

- Total rejects production increased. Increased rejects emplacement capacity of existing coal reject emplacement area

- Continued use of the existing surface facilities (with minor upgrades and extension) and development of additional surface infrastructure associated with mine ventilation, gas management and other ancillary infrastructure above the extended underground mining area to support underground mining, similar to the existing Narrabri Mine. Exploration activities would continue to be undertaken over the life of the Project.

- The project component Rehabilitation Strategy is proposed in this Project to remain unchanged.

The Project does not include changes to the approved underground mining operations in Longwalls 101 to 111 and 201 to 202 (and associated surface activities [such as monitoring and remediation]).

Response

The Resources Regulator has reviewed the application and recommends that the standard mining development rehabilitation SEARs be applied to this development (see attached).

For enquiries regarding this matter please contact me on 4063 6444 or minres.environment@planning.nsw.gov.au

Yours sincerely

Megan Hobbs
Inspector Environment

On behalf of
Matthew Newton
Director Compliance Operations
Resources Regulator
NSW Department of Planning and Environment

12 April 2019

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; Including exploration (within the mining lease) and subsidence in addition to the rehabilitation of the mine site as a whole.

(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 reject management strategy, which details measures to be implemented to avoid the exposure of reject 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 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.

(n) Consideration of the controls likely to be required to either prevent or mitigate against rehabilitation risks as part of the closure plan for the site;

(o) Where an ecological land use is proposed, demonstrate how the revegetation strategy (e.g. seed mix, habitat features, corridor width etc.) has been developed in consideration of the target vegetation community(s);

(p) Where the intended land use is agriculture, demonstrate that the landscape, vegetation and soil will be returned to a condition capable of supporting this; and

(q) Consider any relevant government policies[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)

16 April 2019

SF2012/000358; WST07/00087

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

Dear Sir

SSD 10269: Narrabri Underground Mine Stage 3 Extension Project
Request for Secretary's Environmental Assessment Requirements (SEARs)

Thank you for your email on 8 April referring the *Scoping Report* for SSD 10269 and seeking input from Roads and Maritime Services for the preparation of an Environmental Impact Statement. The information has been reviewed; Roads and Maritime notes the proposal is for an extension of the existing Narrabri coal mine.

Roads and Maritime has reviewed the submitted documentation and identified the following key issues that need to be addressed in the Environmental Impact Statement being prepared in support of the project:

- A traffic impact study prepared in accordance with the methodology set out in Section 2 of the *RTA Guide to Traffic Generating Developments 2002* and including:
    - For the construction and operation of the development, road transport volumes and vehicle types broken down into:
        - Origin and destination
        - Travel/haulage routes
        - Peak hours.
    - The study is to provide details of projected transport operations including:
        - Traffic volumes (both proposed and cumulative).
        - Materials to be transported and types of vehicles used for transport.
        - Measures to be employed to ensure a high level of safety for all road users interacting with traffic generated by the development.

Roads and Maritime Services

51-55 Currajong Street Parkes NSW 2870 | PO Box 334 Parkes NSW 2870 | DX20256
T 02 6861 1444 | **F** 02 6861 1414 **www.rms.nsw.gov.au | 131 782**

- Any over size and over mass vehicles and loads expected for the operation of the site.
- Temporary and permanent staff numbers (including employees and contractors) and staff parking arrangements during operation of the site.
- Any mitigating measures required to address expected traffic generation.

- Access locations and treatments need to be identified and in accordance with *Austroads Guide to Road Design* and relevant Roads and Maritime supplements, including safe intersection sight distance. In particular, an assessment of the intersection of Kurrajong Creek Road with the Kamilaroi Highway is required.

Roads and Maritime appreciates the opportunity to contribute to the SEARs and requests that a copy of the SEARs be forwarded to Roads and Maritime at the same time they are sent to the applicant. Should you require further information please contact the undersigned on 02 6861 1449.

Yours faithfully

Ainsley Bruem
Acting Manager Land Use Assessment
Western Region

Hunter New England Local Health District
Hunter New England Population Health
Direct Contact Details
Phone: (02) 67648000 Fax: (02) 67663003
Email: glenn.pearce@hnehealth.nsw.gov.au

NSW GOVERNMENT Health
Hunter New England
Local Health District

18 April 2019

Rose-Anne Hawkeswood
Resource & Energy Assessments | Planning Services
Sydney GPO Box 39
SYDNEY NSW 2001

Dear Ms Hawkeswood

SEARs - Narrabri Coal Mine Stage 3 SSD 10269

I refer to the Environmental Impact Statement (EIS) exhibited on the NSW Planning & Environment website. Narrabri Coal Operations Pty Ltd has submitted a request for Secretary's Environmental Assessment Requirements (SEARs) for Narrabri Coal Mine Stage 3 Extension Project, located at 10 Kurrajong Creek Road, Baan Baa, NSW, approximately 25 kilometres south east of Narrabri.
The Project involves the expansion of the existing Narrabri Underground Coal Mine, increasing production of up to 13 Mtpa ROM coal (increased from 11 Mtpa); including;

- a southern extension of approved longwall panels and one additional longwall panel;
- an increase in the approved run-of mine coal mining and production rates;
- continued use of approved ancillary underground and surface ancillary infrastructure, rail load out facility and transport of product coal from the site by rail; and
- additional surface development areas and ancillary surface infrastructure.

In the preparation of the EIS, proponents should consider and provide discussion, and by no means an exhaustive list;
Noise and Vibration– including:

- an assessment of the likely noise impacts of the development under the NSW Noise Policy for Industry and the Voluntary Land Acquisition and Mitigation Policy (DP&E);
- if a claim is made for specific construction noise criteria for certain activities, then this claim must be justified and accompanied by an assessment of the likely construction noise impacts of these activities under the Interim Construction Noise Guideline;

Hunter New England Local Health District
ABN 63 598 010 203

Hunter New England Population Health
Locked Bag 10
Wallsend NSW 2287
Phone (02) 4924 6477 Fax (02) 4924 6490
Email HNELHD-PHEnquiries@hnehealth.nsw.gov.au
www.hnehealth.nsw.gov.au/hneph

- an assessment of the likely road noise impacts of the development under the NSW Road Noise Policy;
- an assessment of the likely rail noise impacts of the project under the Rail Infrastructure Noise Guidelines;
- an assessment of the potential vibration and low frequency noise impacts of the development; figure 2.2 page 8 of Narrabri Underground Mine Stage 3 Extension Project – SIA Scoping Report indicates a number of private in and around the proposed Longwall sites with 1 residence directly above Longwall 120;
- Potential for cumulative impact in development stage and operating stage for surrounding communities i.e. Baan Baa, Boggabri.

Air – including:

- An assessment of the likely air quality impacts of the development in accordance with the Approved Methods and Guidance for the Modelling and Assessment of Air Pollutants in NSW;
- Particulate matter emissions (principally from the Project's coal handling operations) and the impact surrounding receivers;
- Potential for cumulative impact in development stage and operating stage for surrounding communities i.e. Baan Baa, Boggabri.

Water – including:

- An assessment of the likely impacts of the development on the quantity and quality of the region's surface and groundwater resources;
- An assessment of the likely impacts of the development on aquifers, watercourses, riparian land, water-related infrastructure, and other water users;
- An assessment of potential flooding and ponding impacts of the development;
- A detailed site water balance, including a description of site water demands, water disposal methods (inclusive of volume and frequency of any water discharges), water supply and transfer infrastructure and water storage structures;
- A detailed description of the proposed water management system (including sewerage), beneficial water re-use program and all other proposed measures to mitigate surface water and groundwater impacts;

It is expected that there is no town water supply to the site. Therefore the assessment should include comment on issues associated with drinking water quality and rainwater tanks. The peak

reference document in Australia for information in relation to rainwater tanks is enHealth's *Guidance on use of rainwater tanks* (2010), which is accessible at:
http://www.health.gov.au/internet/main/publishing.nsf/Content/ohp-enhealth-raintank-cnt.htm

Businesses or facilities that supply drinking water from an independent water supply (i.e. not town water) need to follow the *NSW Health Private Water Supply Guidelines* (2014). The *Public Health Act 2010* and the *Public Health Regulation 2012* require drinking water suppliers, including private water suppliers, to develop and adhere to a 'quality assurance program' (or drinking water management system). Further information and templates can be found at:
http://www.health.nsw.gov.au/environment/water/Pages/private-supplies.aspx

NSW Health recommends regular testing of drinking water at facilities with a private supply. If a private water supply is contaminated, or is not monitored or not treated then consumers should be warned.

We look forward to reviewing the proponent's EIS when on exhibition.

Should you wish to discuss this matter further, please contact Mr Glenn Pearce, Senior Environmental Health Officer on 6764 8000.

Yours sincerely

Dr David Durrheim
Director - Health Protection
Hunter New England Population Health

NSW RURAL FIRE SERVICE

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

Your Ref: SSD 10269
Our Ref: D19/1185
DA19041018233 PC

ATTENTION: Rose-Anne Hawkeswood

15 April 2019

Dear Ms Hawkeswood,

Request for Environmental Assessment Requirements – Narrabri Coal Mine (Stage 3)

I refer to the NSW Environment and Planning correspondence dated 8 April 2019 seeking comment from the NSW Rural Fire Service on matters to be included in the Secretary's Environmental Assessment Requirements for the above proposal.

The subject land is partly mapped as bush fire prone land by Narrabri Shire Council. The NSW Rural Fire Service considers that the environmental assessment for the development involving expansion of the existing Narrabri Underground Coal Mine should address the following matters relating to bush fire:

- the aim and objectives of 'Planning for Bush Fire Protection 2006';
- identification of potential ignition sources during construction and operation of the development;
- storage of fuels and other hazardous materials;
- proposed bush fire protection measures for the development, including vegetation management and fire suppression capabilities;
- operational access to the site for fire fighting appliances; and
- emergency and evacuation planning.

For any queries regarding this correspondence please contact Paul Creenaune on 6691 0400.

Yours sincerely,

Wayne Sketchley
Acting Team Leader – Development Assessment & Planning

Postal address
Records
NSW Rural Fire Service
Locked Bag 17
GRANVILLE NSW 2142

Street address
NSW Rural Fire Service
Planning and Environment Services (North)
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NSW GOVERNMENT

Subsidence Advisory

117 Bull Street, Newcastle West, NSW, 2302 | T: (02) 4908 4300
99 Menangle Street, Picton, NSW, 2571 | T: (02) 4677 6500
24 Hour Emergency Service: 1800 248 083 (Free Call)

Ms Rose-Anne Hawkeswood
A/ Team Leader
Resource Assessments | Planning Services
NSW Department of Planning and Environment

Via email: Rose-Anne.Hawkeswood@planning.nsw.gov.au

Dear Ms Hawkeswood

Request for input into SEARs – Narrabri Coal Mine Stage 3

I refer to your email dated 8 April 2019 inviting Subsidence Advisory to provide comment on the draft copy of the proposed Secretary's Environmental Assessment Requirements (SEARs).

Subsidence Advisory understands the Project involves the expansion of the existing Narrabri Underground Coal Mine including;

- a southern extension of approved longwall panels and one additional longwall panel
- increase in the approved run-of-mine coal mining production rates
- continued use of approved surface and underground facilities
- additional surface development areas and ancillary surface infrastructure.

Subsidence Advisory notes the Environmental Impact Statement (EIS) scoping worksheet identifies built features for inclusion within the EIS. Subsidence Advisory has no further comment.

Please contact me on (02) 4677 1967 or at matthew.montgomery@finance.nsw.gov.au if you have any questions or wish to discuss.

Yours sincerely

Matthew Montgomery
Infrastructure Manager, Subsidence Advisory NSW

16 April 2019

Rose-Anne Hawkeswood

From: Matthew Davidson <matthew.davidson@lls.nsw.gov.au>
Sent: Tuesday, 23 April 2019 2:11 PM
To: Rose-Anne Hawkeswood
Subject: Re: FW: Request for input into SEARs - Narrabri Coal Mine Stage 3

Hi Rose-Anne
I assume this will be covered:
Any impacts on Travelling Stock Reserves and other Crown Land to be identified and impact assessed.
Thanks
Matt

Matthew Davidson | Manager, Land Services
North West Local Land Services
Tamworth Agricultural Institute
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M: 0429 120 007 | T: 02 6764 5915
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NARRABRI SHIRE COUNCIL ABN 95 717 801 656
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NARRABRI NSW 2390
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E: council@narrabri.nsw.gov.au
W: www.narrabri.nsw.gov.au

Heart of the North West

Our Reference: ED:KDK: 451537
Your Reference: SSD 10269
Contact Name: Erika Dawson
Telephone: (02) 6799 6866

Rose-Anne Hawkeswood – A/Team Leader
Resource & Energy Assessments
Planning Services
GPO Box 39
SYDNEY NSW 2001

18 April 2019

E: Rose-Anne.Hawkeswood@planning.nsw.gov.au

Dear Ms Hawkeswood,

Re: NARRABRI COAL MINE STAGE 3 (SSD 10269) - REQUEST FOR INPUT INTO SECRETARY'S ENVIRONMENT ASSESSMENT REQUIREMENTS (SEARS)

I refer to your email dated 8 April 2019 requesting input from Narrabri Shire Council in relation to the above State Significant Development. We have reviewed the Preliminary Environmental Assessment (PEA) as supplied. Please find following the Council's comments:

1. Draft SEARs

Council is generally satisfied with the proposed draft SEARs. The following additional matters are also requested to be included.

2. Narrabri Local Environmental Plan 2012 (LEP)

The following provisions of the LEP are to be addressed within the EIS:

a. Clause 6.1 – Earthworks
b. Clause 6.5 – Essential Services

3. Mining SEPP

Full consideration of the relevant clauses of the *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007* (Mining SEPP) is to be provided within the EIS. In particular the following are to be specifically addressed in the EIS:

a. An assessment of the greenhouse gas emissions (including downstream emissions) of the development, and must do so having regard to any applicable State or national policies, programs or guidelines concerning greenhouse gas emissions.
b. Impacts on surface and groundwater.
c. The suitability of the site to return to agricultural land uses following completion of the development, considering any subsidence and on-going management of groundwater or gas production from the underground workings.

4. Sensitive Receptors

a. Council has received advice that not all sensitive receptors have been included in previous environmental assessments and ongoing monitoring commitments. It is requested that as part of this assessment a review of sensitive receptors be undertaken to ensure all are included, including (but not limited to) those on Davis Road, Turrawan.

b. It is recommended that consultation be undertaken with all the identified sensitive receptors during the EIS preparation process.

5. Bushfire

The site is partially mapped as being bushfire prone. Other areas of grassland, that are not currently mapped, provide a bushfire risk in accordance with the NSW Rural Fire Services' *Guideline for Council to Bushfire Prone Area Land Mapping* which includes a Category 3 incorporating grasslands.

The change of land use/extension of use has the potential to create a bushfire risk both through activities on site and change in land management practices, particularly in the area retains for ecological purposes. In this regard, it is recommended that a Bush Fire Assessment Report be prepared as part of the EIS documentation, in accordance with the NSW Rural Fire Services' *Planning for Bush Fire Protection*.

6. Water

a. A Water Balance is to be provided for the project (expansion and intensification) to demonstrate sufficient water supply can be made available for the development and to enable assessment of the impacts of any proposed measures.

b. The stormwater generation shall be considered as part of the EIS, including potential erosion and sediment generation. Measures shall be included in the development to mitigate any adverse impacts from stormwater, erosion and sedimentation both on and off site.

7. Rail Impacts

It is understood that there are capacity issues with the rail network. With the proposed intensification of the project, it should be demonstrated that the network is capable of accommodating the proposed intensification of the project.

8. Road Impacts

The impacts on the local road network, in terms of the extension and expansion of the project, need to be considered. There have been some issues to date with mine related traffic using alternate routes to the site and adversely impacting upon Kurrajong Creek Road. In particular consideration needs to be given to improving road safety and on-going maintenance of the local roads affected by the project related traffic.

9. Risks & Hazards

Details of risks and hazards from the development shall be considered and assessed as part of the EIS and in accordance with SEPP 33.

10. Economic Impacts

An Economic Assessment is to be undertaken in accordance with the *Guidelines for the economic assessment of mining and coal seam gas proposals*.

11. Cumulative/Interaction Impacts

The Project Area is situated directly adjacent to the project area of the proposed Narrabri Gas Project. Consideration needs to be given to any impacts (including risks) occurring as a result of the two projects operating concurrently and any cumulative impacts that may result from the two projects operating.

12. Voluntary Planning Agreement

Council requests further consultation with the applicant during the EIS preparation process regarding the terms of any Voluntary Planning Agreement proposed. Any VPA with Council is to reflect the socio-economic impacts in, and immediately around, the local community and provides a lasting net economic benefit to the local community and, the wider Narrabri Shire.

13. Ecologically Sustainable Development

a. The project is to ensure that it is ecologically sustainable from an economic, environmental and social perspective.
b. The precautionary principle is to be applied in the assessment of the economic, environmental and social impact of the Project.

I trust this information is to your satisfaction, should you require any further clarification, please do not hesitate to contact me on (02) 6799 6866.

Yours faithfully,

Erika Dawson
ACTING MANAGER PLANNING AND DEVELOPMENT

ATTACHMENT 3

Commonwealth Department of Environment and Energy assessment requirements

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

Narrabri Underground Mine Stage 3 Extension Project (EPBC 2019/8427) (SSD 10269)

Introduction

1. On 30 September 2019, a delegate of the Federal Minister for the Department of the Environment and Energy (DoEE) determined that the Narrabri Undergound Mine Stage 3 Project was a controlled action under section 75 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The EPBC Act controlling provisions for the proposed action are:
   i. listed threatened species and communities (sections 18 and 18A); and
   ii. a water resource, in relation to coal seam gas development and large coal mining development (sections 24D and 24E).

2. The proposed action will be assessed using an accredited process for the purposes of the EPBC Act. The assessment documentation must include:
   i. an assessment of all impacts that the action is likely to have on each matter protected by a provision of Part 3 of the EPBC Act;
   ii. enough information about the proposal and its relevant impacts to allow the Federal Minister to make an informed decision on whether or not to approve; and
   iii. information addressing the matters outlined in Schedule 4 of the *Environment Protection and Biodiversity Conservation Regulations 2000* (EPBC Regulations).

3. The Applicant must undertake an assessment of all protected matters that may be impacted by the development under the controlling provisions identified in paragraph 1. The DoEE considers that the proposed action is likely to have a significant impact on the following:

   i. listed threatened species and communities (sections 18 and 18A):
      a) White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland - Critically Endangered;
      b) Koala (*Phascolarctus cinereus*) – Vulnerable;
      c) Piliga Mouse (*Pseudomys pilligaensis)* – Vulnerable;
      d) South-eastern Long-eared Bat (*Nyctophilus corbeni*) – Vulnerable;
      e) *Tylophora linearis* (a vine) – Endangered; and
      f) *Bertya opponens* (a shrub) – Vulnerable.

   ii. a water resource, in relation to coal seam gas development and large coal mining development (sections 24D and 24E):
      a) the proposed action is likely to result in changes to groundwater and surface water.

4. Based on DoEE's Environment Reporting Tool and information provided by the Species Profiles and Threats Database (SPRAT), DoEE also considers that the proposed action may result in significant impacts to the following species:

   a) Regent Honeyeater (Anthochaera phrygia) - Critically Endangered;
   b) Superb Parrot (Polytelis swainsonil) – Vulnerable; and
   c) Large-eared Pied Bat (Chalinolobus dwyeri) – Vulnerable.

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

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

General Requirements

Relevant Regulations

6. 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

7. The title of the action, background to the action of the action and current status.
8. The precise location and description of all works to be undertaken (including associated offsite works and infrastructure), structures to be built or elements of the action that may have impacts on MNES.
9. How the action relates to any other actions that have been, or are being taken in the region affected by the action.
10. 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

11. The EIS must include an assessment of the relevant impacts[1] 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

12. For <u>each</u> 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.

[1] Relevant impacts are those impacts likely to significantly impact on any matter protected under the EPBC Act

13. 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.

14. For each of the relevant matters likely to be impacted by the action the EIS must provide reference to, and consideration of, relevant Commonwealth guidelines and policy statements including any:

    i. conservation advice or recovery plan for the species or community,
    ii. relevant threat abatement plan for a process that threatens the species or community
    iii. wildlife conservation plan for the species
    iv. any strategic assessment.

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

Key Issues

Biodiversity (threatened species and communities and migratory species)

Comments

15. The significant impacts associated with the proposed action on threatened species relate to the removal of native vegetation, fragmentation of the remaining native vegetation (and subsequent indirect impacts), as well as subsidence. These impacts must be appropriately offset for EPBC Act purposes.

Assessment Requirements

For each of the EPBC Act listed species predicted to occur in the project site, and each of the EPBC Act listed ecological communities likely to be significantly impacted, the EIS must provide:

16. Survey results, including details of the scope, timing and methodology for studies or surveys used and how they are consistent with (or justification for divergence from) published Commonwealth guidelines and policy statements and/or the relevant NSW offsetting method.

17. 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, recovery plans, and threat abatement plans.

18. Maps displaying the above information (specific to each EPBC protected matter) 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.

19. 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.

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

Comments

20. To date, the Applicant has provided preliminary hydrological information that is insufficient for an adequate assessment of the impacts of the proposed action on water resources, however the Department considers key impacts to water resources are likely to arise from altered surface hydrology and quality as well as increased groundwater drawdown. The Department understands that the Applicant will provide detailed water modelling as part of the EIS which will allow a detailed assessment of the potential impacts of the proposed action on water resources be undertaken. A

joint Request for Advice (RFA) from the Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Development (I ESC) will need to be developed for this project.

Assessment Requirements

The EIS must include a detailed water assessment. The water assessment must be undertaken in accordance with the IESC Information Guidelines (http://iesc.erlvirurlrnerll.yov.Clu/publiGCllions/information-guidelines-independent-expertscientific-committee-advice-coal-seam-gas) and provide the information outlined in these guidelines including:

Improved groundwater modelling

21. Include a refined groundwater model that uses a wider variety of parameters and predictions to enable clarification of potential drawdown impacts and revise, accordingly, the assessment of impacts on both the Upper Namoi Alluvium and the Namoi River.
22. Include a groundwater model that has been integrated with the subsidence model to provide an improved understanding of impacts on surface water and alluvium.
23. Address the issues identified in Paragraph 3 of the IESC 2019-102: Narrabri Underground Mine Stage 3 Extension Project (Narrabri Mine Extension) (State Ref No 9882) - Expansion, February 2019 (IESC advice) in regards to further information and refinements to the groundwater model.

Analysing potential impacts to groundwater dependant ecosystems (GOEs)

24. Confirm the distribution of GOEs in the region and the depth to groundwater in areas of potential GOE's.
25. Conduct a detailed cumulative impact assessment of potential risks to groundwater and surface water ecosystems of the Namoi River catchment that may be impacted by the project.
26. Include an assessment of GOEs as outlined in Paragraph 18 of the IESC advice.

Improved surface water modelling

27. The EIS should provide surface water modelling which considers water loss from surface waters due to groundwater drawdown, cracking and ponding.
28. Include a surface water assessment in accordance with Paragraph 17 of the IESC advice. Include a quantitative site-specific water balance modelling approach as per the recommendations provided in Paragraph 14 of the IESC advice.

Comprehensive and detailed monitoring

29. The EIS should derive site-specific water quality guidelines and provide more information on how they plan to monitor impacts. For example, the parameters and frequency of monitoring should be detailed.
30. The groundwater monitoring network should be expanded to include locations to the west and south of the project.

EPBC Act and NSW EP&A Project Differences

Comments

31. It is noted the project referred under the EPBC Act differs to the project seeking approval (works not already approved) under the NSW Environment Planning and Assessment Act 1979 (EP&A Act). The table below outlines the key components of the EPBC Act action.

Action component	EPBC Act action
Total run-of mine (ROM) coal production	192 million tonnes (mt)
Extraction rate	11 mt per annum (pa)

Project footprint	Approximately 5,425 ha Includes the entire length of the longwall panels 203-210
Surface infrastructure	Development of additional surface infrastructure associated with mine ventilation and gas management, and other ancilliary infrastructure above, and adjacent to, Longwalls 203 to 210 (see Appendix B)

Other approvals and conditions

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

Environmental Record of person proposing to take the action

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

Information Sources

34. 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.

REFERENCES

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

ATTACHMENT 4

Conditional Gateway Certificate

Narrabri Underground Mine Stage 3 Extension Project

Part 4AA, Division 4 Of State Environmental Planning Policy (Mining<petroleum Production and Extractive Industries) 20017

Pursuant to clause 17H of State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007, we determine the application made by Narrabri Coal Operations Pty Ltd by issuing this certificate.

We certify that in the opinion of the Mining and Petroleum Gateway Panel, with regards to the relevant criteria in clause 17H(4) of State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007, the proposed development described in Schedule 1:

- does meet the following relevant BSAL criteria:
  - 17H(4)(a) (iv),
  - 17H(4)(a) (v).

- does not meet the following relevant BSAL criteria:
  - 17H(4)(a) (i),
  - 17H(4)(a) (ii),
  - 17H(4)(a) (iii),
  - 17H(4)(a) (vi).

- does not include any CIC land in the Application area.

The reasons for forming the opinion on each of the relevant criteria, together with recommendations of the Gateway Panel, are contained in Schedule 2.

Prof. Snow Barlow	Mr George Gates PSM	Dr Ian Lavering
Chairperson	**Member of the Gateway Panel**	**Member of the Gateway Panel**

Date certificate issued: 4 June 2019

This certificate will remain current for 5 years from the date of issue

SCHEDULE 1

Site:

The site is located approximately 25 kilometres south-east of the township of Narrabri and 60 kilometres north-west of Gunnedah within the Narrabri Shire Council Local Government Area, in the New England North West region of New South Wales.

Development description:

The Narrabri Underground Mine Stage 3 Extension Project proposes to undertake further longwall mining as an extension to the south of the exiting Narrabri Coal Mine, and other associated activities within part of EL6243 while utilising ML1609 where the existing mine is located. The Stage 3 Extension Project will allow an increase of total production of coal to approximately 280 million tonnes (Mt) of run-of-mine (ROM) coal (up from 170 million tonnes) and extend the life of the mine from 2031 to 2045.

Applicant:

Narrabri Coal Operations Pty Ltd

SCHEDULE 2

Relevant criteria	Consideration	Recomendations
17H4(a)(i)	The Gateway Panel considers that the underground longwall mining will disturb the soil surface with cracking and subsidence of up to 2.8 meters	The panel requires a landscape management plan to be prepared as part of the EIS detailing how surface cracking and altered drainage patterns will be managed as subsidence occurs. This plan must include detailed mapping of potential BSAL currently not verified
17H4(a)(ii)	The Gateway Panel considers that underground longwall mining and subsequent subsidence could affect BSAL soil drainage and therefore rooting depth	The panel requires a landscape management plan to be prepared as part of the EIS detailing how altered drainage patterns resulting in soil saturation for extended periods will be managed as subsidence occurs
17H4(a)(iii)	The Gateway Panel considers that underground longwall mining and subsequent subsidence will	The panel requires within the EIS landscape management plan a documented procedure for managing the altered micro-

	significantly affect soil micro-relief	relief resulting from subsidence within the current agricultural production systems
7H4(a)(iv)	The Gateway Panel recognises that the groundwater modelling work completed to date is adequate for this early stage of assessment of water impacts under the Aquifer interference policy	The Panel requires more geological detail and baseline data acquisition in any upgraded groundwater model that is to be used in an EIS. Also, any future groundwater flow modelling should include cumulative impact studies of the nearby (proposed) Santos Coal Seam Gas Project. Additional studies are required to more fully identify and evaluate cracking formed from the effects of mining and the possible loss of water in ephemeral streams due to surface cracking.
7H4(a)(vi)	The Gateway Panel notes that significant verified BSAL will be covered by mine surface infrastructure for the duration of mining	The panel requires a detailed plan for the storage of BSAL topsoil removed for surface infrastructure development and its subsequent re-establishment in the mine rehabilitation process at the end of mine life

Note: Further information on the Gateway Panel's reasoning in relation to the relevant criteria is contained in the Gateway Panel report available at: www.mpgp.nsw.gov.au