



APPENDIX 4

SEARs Checklist and
Regulatory
Correspondence

Table 1 SEARs Requirements and where they have been addressed

SEARs Requirements	Relevant EIS Section No.	Appendix No.
General Requirements		
The Environmental Impact Statement (EIS) for the development must comply with the requirements of Schedule 2 of the Environmental Planning and Assessment Regulation 2000.	5.2	8
In particular, the EIS must include: <ul style="list-style-type: none"> a stand-alone executive summary; 	Executive Summary	
<ul style="list-style-type: none"> a full description of the development, including: <ul style="list-style-type: none"> historical mining operations on and nearby the site; the resource to be extracted, demonstrating efficient resource recovery within environmental constraints; the mine layout and scheduling; coal processing and transport arrangements; infrastructure and facilities (including any existing infrastructure or infrastructure that would be required for the development, but the subject of a separate approval process); a waste (overburden, rejects, tailings, etc) management strategy; a water management strategy; a rehabilitation strategy; the likely interactions between the development and any other existing, approved or proposed mining development or power station in the vicinity of the site; 	2 3 and 4.2.1 3.2.1 and 3.3.1 3.2 and 3.3 3.2 and 3.3 3.2.5 and 3.3.5 3.2.6.4 3.2.17, 3.3.10 and 7.9 4.2, 4.3, 4.4 and 7	
<ul style="list-style-type: none"> a strategic justification of the development focusing on site selection and the suitability of the proposed site; 	4 and 8.2	
<ul style="list-style-type: none"> a list of any approvals that must be obtained before the development may commence; 	5.2, 5.3 and 5.4	8

SEARs Requirements	Relevant EIS Section No.	Appendix No.
<ul style="list-style-type: none"> an assessment of the likely impacts of the development on the environment, focusing on the key issues identified below, including: <ul style="list-style-type: none"> a description of the existing environment likely to be affected by the development, using sufficient baseline/background data; an assessment of the likely impacts for all stages of the development, including any cumulative impacts, taking into consideration any relevant laws, environmental planning instruments, guidelines, policies, plans and industry codes of practice; 	<p>4.2 and 4.3</p> <p>5 and 7</p>	
<ul style="list-style-type: none"> a description of the measures that would be implemented to avoid, minimise, mitigate and/or offset the likely impacts of the development, and an assessment of: <ul style="list-style-type: none"> 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; and whether contingency measures would be necessary to manage any residual risks; a description of the measures that would be implemented to monitor and report on the environmental performance of the development; 	<p>7</p>	<p>5</p>
<ul style="list-style-type: none"> a consolidated summary of all the proposed environmental management and monitoring measures, identifying all the commitments in the EIS; 		<p>5</p>
<ul style="list-style-type: none"> 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); 	<p>5</p>	<p>8</p>
<ul style="list-style-type: none"> the reasons why the development should be approved, having regard to: <ul style="list-style-type: none"> 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; 	<p>5 and 8.3</p> <p>8.1 and 8.3</p> <p>8.2.1</p> <p>1.3.2</p>	

SEARs Requirements	Relevant EIS Section No.	Appendix No.
<ul style="list-style-type: none"> a signed statement from the author of the EIS, certifying that the information contained within the document is neither false nor misleading. 		3
<ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> Estimate of Capital Investment Value – 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), including details of all the assumptions and components from which the capital investment value calculation is derived; and Gateway Certificate – a current gateway certificate in respect of the proposed development on Biophysical Strategic Agricultural Land, in accordance with clause 50A of the Environmental Planning and Assessment Regulation 2000 and Part 4AA of the State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007. 	<p>Provided separately to DPIE</p> <p>4.4.4</p>	4
<ul style="list-style-type: none"> Land Resources: <ul style="list-style-type: none"> an assessment of the likely impacts of the development on the soils and land capability of the site and surrounds; an assessment of the agricultural impacts of the development, including an assessment of likely impacts (both direct and indirect) on Biophysical Strategic Agricultural Land (BSAL), and detailed consideration of potential avoidance, mitigation and rehabilitation strategies for any areas of BSAL which may be impacted by the development; 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, paying particular attention to the agricultural land use in the region; and the recommendations of the Mining & Petroleum Gateway Panel’s Conditional Gateway Certificate, and the Panel’s accompanying report, both dated 24 July 2019 including: <ul style="list-style-type: none"> Further assessment and detail in relation to stockpiling and reconstitution of BSAL; and Consideration of re-routing the re-alignment of Hebden Road to avoid traversing an area of contiguous BSAL 	<p>7.12.2 and 7.12.3</p> <p>7.12.3 and 7.9.4.2</p> <p>7.12</p> <p>7.12 and 7.9</p>	<p>27</p> <p>27</p> <p>27</p> <p>27</p>

SEARs Requirements	Relevant EIS Section No.	Appendix No.
Key Issues		
<p>Air Quality – including:</p> <ul style="list-style-type: none"> a detailed assessment of potential construction and operational air quality impacts, in accordance with the Approved Methods for the Modelling and Assessment of Air Pollutants in NSW, and with a particular focus on dust emissions including PM2.5 and PM10, and having regard to the Voluntary Land Acquisition and Mitigation Policy; and an assessment of the likely greenhouse gas impacts of the development; 	<p>7.2</p> <p>7.2</p>	<p>13</p> <p>28</p>
<p>Rehabilitation and Final Landform – including:</p> <ul style="list-style-type: none"> a description of final landform design objectives, having regard to achieving a natural landform that is safe, stable, non-polluting, fit for the nominated post-mining land use and sympathetic with surrounding landforms; an analysis of final landform options, including the short and long-term cost and benefits, constraints and opportunities of each, and detailed justification for the preferred option; identification and assessment of post-mining land use options, having regard to any relevant strategic land use planning or resource management plans/policies; rehabilitation objectives and completion criteria to achieve the nominated post-mining land use; a detailed description of the progressive rehabilitation measures that would be implemented over the life of the development and how this rehabilitation would be integrated with surrounding mines and land uses; a detailed description of the proposed rehabilitation and mine closure strategies for the development, having regard to the key principles in Strategic Framework for Mine Closure; the measures which would be put in place for the long-term protection and/or management of the site and any biodiversity offset areas post-mining; and a geotechnical assessment and detailed design of the proposed Yorks Creek diversion 	<p>7.9.4</p> <p>7.9.5</p> <p>7.9.4</p> <p>7.9.4.3</p>	<p>1 and 24</p> <p>24</p> <p>24</p> <p>24</p> <p>7 and 18</p>
<p>Noise & Blasting – including:</p> <ul style="list-style-type: none"> a detailed assessment of the likely construction, operational and offsite transport noise impacts of the development in accordance with the Interim Construction Noise Guideline, NSW Noise Policy for Industry and the NSW Road Noise Policy respectively, and having regard to the Voluntary Land Acquisition and Mitigation Policy; proposed blasting hours, frequency and methods; 	<p>7.3</p> <p>7.4.1.2</p>	<p>14</p> <p>15</p>

SEARs Requirements	Relevant EIS Section No.	Appendix No.
<ul style="list-style-type: none"> a detailed assessment of the likely blasting impacts of the development (including ground vibrations, overpressure, flyrock, visual and fumes/odour) on people, animals, buildings/structures, infrastructure and significant natural features, having regard to the relevant ANZEC guidelines; 	7.4.2	15
<p>Visual – including:</p> <ul style="list-style-type: none"> a detailed assessment of the likely visual impacts of the development (before, during and post-mining) on private landowners in the vicinity of the development and key vantage points in the public domain, including vehicles traveling along the New England Highway; and reasonable and feasible mitigation measures to minimise visual impacts (including lighting) of the development; 	7.10 7.10.6	25
<p>Waste – including estimates of the quantity and nature of the waste streams that would be generated by the project (including tailings and coarse rejects) and any measures that would be implemented to minimise, manage or dispose of these waste streams;</p>	7.15	
<p>Water – including:</p> <ul style="list-style-type: none"> a detailed site water balance, including a description of site water demands, water disposal methods (inclusive of volume and frequency of any water discharges), water supply infrastructure and water storage structures; identification of any licensing requirements or other approvals under the Water Act 1912 and/or Water Management Act 2000; demonstration that water for the construction and operation of the proposed development can be obtained from an appropriately authorised and reliable supply in accordance with the operating rules of any relevant Water Sharing Plan (WSP) or water source embargo; an assessment of any likely flooding impacts of the development; the measures which would be put in place to control sediment run-off and avoid erosion; an assessment of the likely impacts of the development on the quantity and quality of existing surface water resources including a detailed assessment of proposed water discharge quantities and quality against receiving water quality and flow objectives; <p>an assessment of the likely impacts of the development on groundwater resources, which addresses:</p> <ul style="list-style-type: none"> the Commonwealth Department of the Environment and Energy's Assessment Requirements set out in Attachment 4; and 	7.5.5 and 7.5.7 7.5.8 7.5.8 7.5.7.6 7.5.9 7.5.7.5	16 and 17 16 and 17 16 and 17 16 and 17 16 and 17 16 and 17 10 and 17

SEARs Requirements	Relevant EIS Section No.	Appendix No.
<ul style="list-style-type: none"> the recommendations of the Mining & Petroleum Gateway Panel's Conditional Gateway Certificate, and the Panel's accompanying report, both dated 24 July 2019, including: <ul style="list-style-type: none"> Groundwater modelling to quantify impacts on nearby water assets (bores, wells and groundwater dependent ecosystems; and Monitoring and reporting of actual mine water inflows and the development of a strategy for complying with Water Sharing Plan rules. an assessment of the likely impacts of the development on aquifers, watercourses, riparian land, water-related infrastructure, and other water users, including downstream impacts from the Yorks Creek diversion; 	<p>7.5.6 and 7.6.2</p> <p>7.5.8</p> <p>7.5 and 7.6</p>	<p>10 and 16</p> <p>16 and 17</p> <p>16 and 20</p>
<p>Biodiversity – including:</p> <ul style="list-style-type: none"> accurate predictions of any vegetation to be cleared on site; an assessment of the likely biodiversity impacts of the development, paying particular attention to threatened species, populations and ecological communities and groundwater dependent ecosystems, undertaken in accordance with the Biodiversity Assessment Method and documented in a Biodiversity Development Assessment Report or, subject to agreement with OEH and the Department, undertaken in accordance with the Upper Hunter Strategic Assessment (UHSA); assessment of the likely impacts of the development on listed threatened species and communities under the Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (see Attachment 4); a strategy to offset any residual impacts of the development in accordance with the offset rules under the Biodiversity Offsets Scheme; and where the Yorks Creek diversion is proposed: <ul style="list-style-type: none"> demonstrate how a 'natural' system can be successfully created; and include an assessment of potential impacts to aquatic habitat and fish populations; 	<p>7.6.1</p> <p>7.6.3</p> <p>7.6.4</p> <p>7.6.2</p> <p>7.6.2</p>	<p>20</p> <p>20</p> <p>10</p> <p>20</p> <p>18 and 20</p> <p>20</p>
<p>Heritage – including:</p> <ul style="list-style-type: none"> an assessment of the potential impacts of the development on Aboriginal heritage (cultural and archaeological), including consultation with relevant Aboriginal communities/parties and documentation of the views of these stakeholders regarding the likely impact of the development on their cultural heritage; identification of historic heritage in the vicinity of the development and an assessment of the likelihood and significance of impacts on heritage items, having regard to the relevant policies and guidelines listed in Attachment 1; and 	<p>6.5.1 and 7.7</p> <p>7.8</p>	<p>22</p> <p>23d</p>

SEARs Requirements	Relevant EIS Section No.	Appendix No.
<ul style="list-style-type: none"> in relation to Ravensworth Homestead, the EIS must include: <ul style="list-style-type: none"> a detailed heritage significance and historical archaeological assessment of the homestead, including consideration of its surrounding garden and landscape; an analysis of all reasonable and feasible options to preserve the Homestead (including leaving in situ); if relocation is selected as the preferred option, please include an analysis of all feasible relocation options and how the Ravensworth Homestead Advisory Committee was involved in the decision; 	<p>7.8</p> <p>7.8.6</p> <p>7.8.6, 7.8.6.1 and 7.8.7</p>	<p>23a</p> <p>1 and 23e</p> <p>23f, 23g and 23h</p>
<p>Traffic & Transport – including:</p> <ul style="list-style-type: none"> an assessment of the likely transport impacts of the development on the capacity, condition, safety and efficiency of the road and rail networks, including undertaking a road safety audit; a description of the measures that would be implemented to mitigate any impacts; and an assessment of the need to realign Hebden Road, and if so a conceptual design of the Hebden Road realignment, developed in consultation with Singleton Council, including a plan to avoid disruptions to existing traffic, and ensure local traffic requirements are met; 	<p>7.11.2, 7.11.3</p> <p>7.11.5</p> <p>7.11.5</p>	<p>26</p> <p>26</p> <p>26</p>
<p>Hazards – including:</p> <ul style="list-style-type: none"> an assessment of the likely risks to public safety, paying particular attention to potential bushfire risks, interactions with nearby prescribed dams and the handling and use of any chemicals and dangerous goods; and a health risk assessment that considers the adverse effects from human exposure to acute and cumulative project related environmental hazards, in accordance with Environmental Health Risk Assessment: Guidelines for assessing human health risk from environmental hazards; and 	<p>7.14.2 and 7.14.3</p> <p>7.14.1</p>	
<p>Social – including a detailed assessment of the potential social impacts of the development that builds on the findings of the Social Impact Assessment Scoping Report, in accordance with the Social impact assessment guideline for State significant mining, petroleum production and extractive industry development, paying particular consideration to:</p> <ul style="list-style-type: none"> how the development might affect people’s way of life, community, access to and use of infrastructure, services and facilities, culture, health and wellbeing, surroundings, personal and property rights, decision-making systems, and fears and aspirations; the principles in Section 1.3 of the guideline; the review questions in Appendix D of the guideline; and the recommendations made in Attachment 3 of the SEARs 	<p>7.16</p> <p>7.16</p> <p>7.16</p>	<p>11</p> <p>11</p> <p>11</p> <p>11</p>

SEARs Requirements	Relevant EIS Section No.	Appendix No.
<p>Economic – including a detailed assessment of the likely economic impacts of the development, in accordance with the Guidelines for the economic assessment of mining and coal seam gas proposals 2015, paying particular attention to:</p> <ul style="list-style-type: none"> the significance of the coal resource; the costs and benefits of the project; identifying whether the development as a whole would result in a net benefit to NSW, including consideration of fluctuation in commodity markets and exchange rates; and the demand on local infrastructure and services. 	<p>4.1, 4.2.1 and 7.17</p> <p>7.17, 8.2</p> <p>7.17</p>	<p>30</p> <p>30</p> <p>30</p>
Consultation		
<p>During the preparation of the EIS, you must consult with relevant local, State and Commonwealth Government authorities, service providers, Aboriginal stakeholders, community groups and affected landowners.</p> <ul style="list-style-type: none"> In particular, you must consult with: <ul style="list-style-type: none"> Affected landowners; Local community groups; Singleton Council; Biodiversity and Conservation Division within the Department; Heritage Branch of the Department of Premier and Cabinet; Environment Protection Authority; Division of Resources and Geoscience within the Department; Resources Regulator within the Department; Primary Industries Group within the Department (including the Forestry, Agriculture and Fisheries branches); Crown Lands Group within the Department; Water Group within the Department; Singleton Local Land Services; Dams Safety Committee; Roads and Maritime Services; and Mount Owen Complex Community Consultative Committee. 	<p>6</p>	

SEARs Requirements	Relevant EIS Section No.	Appendix No.
<ul style="list-style-type: none"> The EIS must: <ul style="list-style-type: none"> Describe the consultation process used and demonstrate that effective consultation has occurred; describe the issues raised; identify where the design of the development has been amended and/or mitigation proposed to address issues raised; and otherwise demonstrate that issues raised have been appropriately addressed in the assessment. 	<p>6 and 7.16</p> <p>6.7</p> <p>7</p> <p>7.15.15 and 7.15.16</p>	<p>11</p> <p>11</p> <p>11</p> <p>11</p>

Table 2 DoEE and IESC Requirements and where they have been addressed

Requirement	Where Addressed
DoEE - Biodiversity (threatened species and communities and migratory species)	
<p>Key significant impacts associated with proposed action on MNES are associated with the removal of native vegetation, particularly the Central Hunter Valley Eucalypt Forest and Woodland ecological community, and habitat for the Swift Parrot, Regent Honeyeater, Spotted-tailed Quoll, Koala, Grey-headed Flying-fox, New Holland Mouse, Large-eared Pied Bat and the Green and Golden Bell Frog. These impacts must be appropriately offset for EPBC Act purposes.</p>	
<p>For each of the EPBC Act controlling provisions impacted by the proposed action, the EIS must provide:</p> <ol style="list-style-type: none"> 1. Survey results, including details of the scope, timing and methodology for studies or surveys used and how they are consistent with (or justification for divergence from) published Commonwealth guidelines and policy statements. For ecological communities, this includes any condition thresholds provided in the listing advice or approved conservation advice. 2. A description and quantification of habitat in the study area (including suitable breeding habitat, suitable foraging habitat, important populations and habitat critical for survival), with consideration of, and reference to, any relevant Commonwealth guidelines and policy statements including listing advices, conservation advices and recovery plans, threat abatement plans. 3. Maps displaying the above information (specific to EPBC matters) overlaid with the proposed action. It is acceptable, where possible, to use the mapping and assessment of Plant Community Types (PCTs) and the species surveys prescribed by the BAM as the basis for identifying EPBC Act-listed species and communities. The EIS must clearly identify which PCTs are considered to align with habitat for the relevant EPBC Act-listed species or community and provide individual maps for each species or community. 4. 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. 5. Information on proposed avoidance and mitigation measures to deal with the impacts of the action, and a description of the predicted effectiveness and outcomes that the avoidance and mitigation measures will achieve. 6. Quantification of the offset liability for each species and community significantly impacted, and information on the proposed offset strategy, including discussion of the conservation benefit for each species and community, how offsets will be secured, and the timing of protection. It is a requirement that offsets directly contribute to the ongoing viability of the specific protected matter impacted by a proposed action i.e. 'like-for-like'. <p>Like-for-like includes protection of native vegetation that is the same ecological community or habitat being impacted (preferably in the same region where the impact occurs), or funding to provide a direct benefit to the matter being impacted e.g. threat abatement, breeding and propagation programs or other relevant conservation measures.</p>	<p>Appendix 10, Appendix 20 and Appendix 21</p> <p>Appendix 10, Appendix 20 and Appendix 21</p> <p>Appendix 10 and Appendix 20</p> <p>Appendix 10</p> <p>Appendix 10</p> <p>Appendix 10</p>
<p>Key significant impacts associated with groundwater (both alluvium associated with water courses and deeper hard rock aquifers) and surface water resources and quality, including:</p> <ul style="list-style-type: none"> • Groundwater drawdown/depressurisation • Groundwater-surface water connectivity 	<p>Appendix 10</p>

Requirement	Where Addressed
<ul style="list-style-type: none"> Potential cumulative impacts and interaction with impacts from neighbouring projects Potential long term impacts of mine void, including groundwater losses to evaporation 	
IESC Requirements	
<ul style="list-style-type: none"> Provide further information on the baseline conditions of both groundwater and surface water resources including water quality, flow regimes and hydrological connectivity. 	Appendix 10
<ul style="list-style-type: none"> After completion of the proposed field mapping of alluvial aquifers in the project area, provide estimation of groundwater drawdown and the likely effects on surface flows (especially low flows and ecologically important flow components) in associated creeks. 	Appendix 10
<ul style="list-style-type: none"> Update the groundwater model, including a sensitivity and uncertainty analysis and quantification of surface water-groundwater connectivity. 	Appendix 10
<ul style="list-style-type: none"> Flood modelling that incorporates infrastructure changes, the Yorks Creek diversion and the final landform to assess flood risks to mine pits and detention storages and changed floodplain behaviour. 	Appendix 10
<ul style="list-style-type: none"> A detailed site water balance that specifies uncertainties in inputs and performance under future climatic conditions. 	Appendix 10 and Appendix 17
<ul style="list-style-type: none"> A geochemistry study specific to the project area which assesses all waste rock material. 	Appendix 10 and Appendix 19
<ul style="list-style-type: none"> Further information on the salt balance of the site and salt sources and stores within the final landform, including salt derived from the alluvial aquifer. 	Appendix 10 and Appendix 17
<ul style="list-style-type: none"> Provide a general ecohydrological conceptual model showing potential impact-effect pathways on water-related ecological assets, including GDEs and aquatic biota. An additional ecohydrological model specifically addressing the proposed Yorks Creek diversion and its confluence with Bowmans Creek may be needed to further understand potential impacts from changes to flows, bank and bed stability and hyporheic conditions in Bowmans Creek. 	Appendix 10
<ul style="list-style-type: none"> Provide detail on the proposed diversion of Yorks Creek and how the diversion will be built and managed to preserve ecological functions (including those occurring in hyporheic and riparian corridors) currently supported by Yorks Creek. 	Appendix 7 and Appendix 18
<ul style="list-style-type: none"> Ecological studies to determine the baseline condition of the aquatic ecosystems including permanent and semi-permanent pools (e.g. surface water flora and fauna), riparian vegetation and alluvial sediments (e.g. stygofauna, hyporheos) in all creeks potentially affected by the project. 	Appendix 10, Appendix 20 and Appendix 21
<ul style="list-style-type: none"> Explicit consideration and assessment of project-specific risks, and their materiality at different stages of the project, including during rehabilitation. This is required to inform the selection of appropriate mitigation options and development of management plans 	Appendix 5 and Appendix 10
<ul style="list-style-type: none"> Assessment of potential cumulative impacts on groundwater and surface water quality, dynamics (e.g. flow regimes, groundwater flux) and biota (e.g. riparian vegetation, fish). 	Appendix 10, Appendix 16 and Appendix 17



Mr Shane Scott
Project Manager
Glendell Tenements Pty Limited
Private Mail Bag 8
Singleton NSW 2330

Dear Mr Scott

**Glendell Continued Operations Project (SSD 9349)
Revised Environmental Assessment Requirements**

I refer to the Planning Secretary's Environmental Assessment Requirements (SEARs) issued on 11 July 2018 for the Glendell Continued Operations Project.

On 10 July 2019, the Project was determined to be a controlled action under section 75 of the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The Commonwealth Department of the Environment and Energy has also determined that the Project will be assessed using an accredited process under Part 4, Division 4.7 of the *Environmental Planning and Assessment Act 1979*. The Planning Secretary has modified the SEARs to incorporate relevant matters for assessment under the EPBC Act. These requirements are outlined in **Attachment 4**.

On 24 July 2019, the Mining and Petroleum Gateway Panel granted a Conditional Gateway Certificate for the Project under Part 4AA, Division 4 of *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007*. Under clause 3(4B) of Schedule 2 of the *Environmental Planning and Assessment Regulation 2000*, the Department has now modified the SEARs to align with the recommendations of the Gateway Panel.

The modified SEARs are enclosed for your attention. If you have any enquiries about these requirements, please contact Lauren Evans on the details listed above.

Yours sincerely

Howard Reed
Director Resource Assessments
Coal & Quarries Assessments
as delegate for the Planning Secretary

Planning Secretary's Environmental Assessment Requirements

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

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

Application Number	SSD-9349
Project Name	Glendell Continued Operations Project
Location	20 kilometres north-west of Singleton
Applicant	Glendell Tenements Pty Ltd
Date of Issue	12/08/2019
Proposal	<p>The Glendell Continued Operations Project, includes:</p> <ul style="list-style-type: none"> · extension of open cut coal mining to the north of the existing Glendell Mine until approximately 2044; · extraction of approximately 140 million tonnes of run-of-mine (ROM) coal until approximately 2044; · increase in production rate from 4.5 to 10 million tonnes per annum later in the mine life; · continued integration of the mine with the wider Mount Owen Complex, including use of the Mount Owen coal handling and preparation plant, rail loop and associated infrastructure for ROM coal processing and product coal transport; · demolition/relocation of the existing Glendell Mine Infrastructure Area (MIA), construction of a new MIA and/or utilisation of the existing Liddell or Mount Owen MIAs; · continued employment of existing Mount Owen Complex employees; · progressive rehabilitation of the site including taking over the remaining rehabilitation obligations under DA 80/952; · realignment of a section of Hebden Road; · diversion of Yorks Creek; · relocation of Ravensworth Homestead; and · other ancillary infrastructure works such as the construction of a heavy vehicle access road and relocation of a pipeline and powerlines.
General Requirements	<p>The Environmental Impact Statement (EIS) for the development must comply with the requirements of Schedule 2 of the <i>Environmental Planning and Assessment Regulation 2000</i>.</p> <p>In particular, the EIS must include:</p> <ul style="list-style-type: none"> · a stand-alone executive summary; · a full description of the development, including: <ul style="list-style-type: none"> - historical mining operations on and nearby the site; - the resource to be extracted, demonstrating efficient resource recovery within environmental constraints; - the mine layout and scheduling; - coal processing and transport arrangements; - infrastructure and facilities (including any existing infrastructure or infrastructure that would be required for the development, but the subject of a separate approval process); - a waste (overburden, rejects, tailings, etc) management strategy; - a water management strategy; - a rehabilitation strategy; - the likely interactions between the development and any other existing, approved or proposed mining development or power station in the vicinity of the site; · a strategic justification of the development focusing on site selection and the suitability of the proposed site;

- a list of any approvals that must be obtained before the development may commence;
- an assessment of the likely impacts of the development on the environment, focusing on the key issues identified below, including:
- a description of the existing environment likely to be affected by the development, using sufficient baseline/background data;
- an assessment of the likely impacts for all stages of the development, including any cumulative impacts, taking into consideration any relevant laws, environmental planning instruments, guidelines, policies, plans and industry codes of practice;
- a description of the measures that would be implemented to avoid, minimise, mitigate and/or offset the likely impacts of the development, and an assessment of:
 - o whether these measures are consistent with industry best practice, and represent the full range of reasonable and feasible mitigation measures that could be implemented;
 - o the likely effectiveness of these measures; and
 - o whether contingency measures would be necessary to manage any residual risks;
- a description of the measures that would be implemented to monitor and report on the environmental performance of the development;
- a consolidated summary of all the proposed environmental management and monitoring measures, identifying all the commitments in the EIS;
- 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*);
- 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 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:

- **Estimate of Capital Investment Value** – 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*), including details of all the assumptions and components from which the capital investment value calculation is derived; and
- **Gateway Certificate** – a current gateway certificate in respect of the proposed development on Biophysical Strategic Agricultural Land, in accordance with clause 50A of the *Environmental Planning and Assessment Regulation 2000* and Part 4AA of the *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007*.

<p>Key Issues</p>	<p>The EIS must address the following key issues:</p> <ul style="list-style-type: none"> • Land Resources – including: <ul style="list-style-type: none"> - an assessment of the likely impacts of the development on the soils and land capability of the site and surrounds; - an assessment of the agricultural impacts of the development, including an assessment of likely impacts (both direct and indirect) on Biophysical Strategic Agricultural Land (BSAL), and detailed consideration of potential avoidance, mitigation and rehabilitation strategies for any areas of BSAL which may be impacted by the development; and - an assessment of the compatibility of the development with other land uses in the vicinity of the development, in accordance with the requirements of Clause 12 of <i>State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007</i>, paying particular attention to the agricultural land use in the region; • Air Quality – including: <ul style="list-style-type: none"> - a detailed assessment of potential construction and operational air quality impacts, in accordance with the <i>Approved Methods for the Modelling and Assessment of Air Pollutants in NSW</i>, and with a particular focus on dust emissions including PM_{2.5} and PM₁₀, and having regard to the <i>Voluntary Land Acquisition and Mitigation Policy</i>, and - an assessment of the likely greenhouse gas impacts of the development; • Rehabilitation and Final Landform – including: <ul style="list-style-type: none"> - a description of final landform design objectives, having regard to achieving a natural landform that is safe, stable, non-polluting, fit for the nominated post-mining land use and sympathetic with surrounding landforms; - an analysis of final landform options, including the short and long-term cost and benefits, constraints and opportunities of each, and detailed justification for the preferred option; - identification and assessment of post-mining land use options, having regard to any relevant strategic land use planning or resource management plans/policies; - rehabilitation objectives and completion criteria to achieve the nominated post-mining land use; - a detailed description of the progressive rehabilitation measures that would be implemented over the life of the development and how this rehabilitation would be integrated with surrounding mines and land uses; - a detailed description of the proposed rehabilitation and mine closure strategies for the development, having regard to the key principles in <i>Strategic Framework for Mine Closure</i>; - the measures which would be put in place for the long-term protection and/or management of the site and any biodiversity offset areas post-mining; and - a geotechnical assessment and detailed design of the proposed Yorks Creek diversion; • Noise & Blasting – including: <ul style="list-style-type: none"> - a detailed assessment of the likely construction, operational and off-site transport noise impacts of the development in accordance with the <i>Interim Construction Noise Guideline</i>, <i>NSW Noise Policy for Industry</i> and the <i>NSW Road Noise Policy</i> respectively, and having regard to the <i>Voluntary Land Acquisition and Mitigation Policy</i>, - proposed blasting hours, frequency and methods; and - a detailed assessment of the likely blasting impacts of the development (including ground vibrations, overpressure, flyrock, visual and fumes/odour) on people, animals, buildings/structures,
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infrastructure and significant natural features, having regard to the relevant ANZEC guidelines;

- **Visual** – including:
 - a detailed assessment of the likely visual impacts of the development (before, during and post-mining) on private landowners in the vicinity of the development and key vantage points in the public domain, including vehicles traveling along the New England Highway; and
 - reasonable and feasible mitigation measures to minimise visual impacts (including lighting) of the development;
- **Waste** – including estimates of the quantity and nature of the waste streams that would be generated by the project (including tailings and coarse rejects) and any measures that would be implemented to minimise, manage or dispose of these waste streams;
- **Water** – including:
 - a detailed site water balance, including a description of site water demands, water disposal methods (inclusive of volume and frequency of any water discharges), water supply infrastructure and water storage structures;
 - identification of any licensing requirements or other approvals under the *Water Act 1912* and/or *Water Management Act 2000*;
 - demonstration that water for the construction and operation of the proposed development can be obtained from an appropriately authorised and reliable supply in accordance with the operating rules of any relevant Water Sharing Plan (WSP) or water source embargo;
 - an assessment of any likely flooding impacts of the development;
 - the measures which would be put in place to control sediment run-off and avoid erosion;
 - an assessment of the likely impacts of the development on the quantity and quality of existing surface water resources including a detailed assessment of proposed water discharge quantities and quality against receiving water quality and flow objectives;
 - an assessment of the likely impacts of the development on groundwater resources, which addresses:
 - o the recommendations of the Mining & Petroleum Gateway Panel's Conditional Gateway Certificate, and the Panel's accompanying report, both dated 24 July 2019; and
 - o the Commonwealth Department of the Environment and Energy's Assessment Requirements set out in Attachment 4; and
 - an assessment of the likely impacts of the development on aquifers, watercourses, riparian land, water-related infrastructure, and other water users, including downstream impacts from the Yorks Creek diversion;
- **Biodiversity** – including:
 - accurate predictions of any vegetation to be cleared on site;
 - an assessment of the likely biodiversity impacts of the development, paying particular attention to threatened species, populations and ecological communities and groundwater dependent ecosystems, undertaken in accordance with the *Biodiversity Assessment Method* and documented in a Biodiversity Development Assessment Report or, subject to agreement with OEH and the Department, undertaken in accordance with the *Upper Hunter Strategic Assessment (UHSA)*;
 - assessment of the likely impacts of the development on listed threatened species and communities under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (see Attachment 4);
 - a strategy to offset any residual impacts of the development in accordance with the offset rules under the *Biodiversity Offsets Scheme*; and

- where the Yorks Creek diversion is proposed:
 - o demonstrate how a 'natural' system can be successfully created; and
 - o include an assessment of potential impacts to aquatic habitat and fish populations;
- **Heritage** – including:
 - an assessment of the potential impacts of the development on Aboriginal heritage (cultural and archaeological), including consultation with relevant Aboriginal communities/parties and documentation of the views of these stakeholders regarding the likely impact of the development on their cultural heritage;
 - identification of historic heritage in the vicinity of the development and an assessment of the likelihood and significance of impacts on heritage items, having regard to the relevant policies and guidelines listed in Attachment 1; and
 - in relation to Ravensworth Homestead, the EIS must include:
 - o a detailed heritage significance and historical archaeological assessment of the homestead, including consideration of its surrounding garden and landscape;
 - o an analysis of all reasonable and feasible options to preserve the Homestead (including leaving in situ); and
 - o if relocation is selected as the preferred option, please include an analysis of all feasible relocation options and how the Ravensworth Homestead Advisory Committee was involved in the decision;
- **Traffic & Transport** – including:
 - an assessment of the likely transport impacts of the development on the capacity, condition, safety and efficiency of the road and rail networks, including undertaking a road safety audit;
 - a description of the measures that would be implemented to mitigate any impacts; and
 - an assessment of the need to realign Hebden Road, and if so a conceptual design of the Hebden Road realignment, developed in consultation with Singleton Council, including a plan to avoid disruptions to existing traffic, and ensure local traffic requirements are met;
- **Hazards** – including:
 - an assessment of the likely risks to public safety, paying particular attention to potential bushfire risks, interactions with nearby prescribed dams and the handling and use of any chemicals and dangerous goods; and
 - a health risk assessment that considers the adverse effects from human exposure to acute and cumulative project related environmental hazards, in accordance with *Environmental Health Risk Assessment: Guidelines for assessing human health risk from environmental hazards*; and
- **Social** – including a detailed assessment of the potential social impacts of the development that builds on the findings of the Social Impact Assessment Scoping Report, in accordance with the *Social impact assessment guideline for State significant mining, petroleum production and extractive industry development*, paying particular consideration to:
 - how the development might affect people's way of life, community, access to and use of infrastructure, services and facilities, culture, health and wellbeing, surroundings, personal and property rights, decision-making systems, and fears and aspirations;
 - the principles in Section 1.3 of the guideline;
 - the review questions in Appendix D of the guideline; and
 - the recommendations made in Attachment 3; and
- **Economic** – including a detailed assessment of the likely economic impacts of the development, in accordance with the *Guidelines for the*

	<p><i>economic assessment of mining and coal seam gas proposals 2015</i>, paying particular attention to:</p> <ul style="list-style-type: none"> - the significance of the coal resource; - the costs and benefits of the project; identifying whether the development as a whole would result in a net benefit to NSW, including consideration of fluctuation in commodity markets and exchange rates; and - the demand on local infrastructure and services.
Consultation	<p>During the preparation of the EIS, you must consult with relevant local, State and Commonwealth Government authorities, service providers, Aboriginal stakeholders, community groups and affected landowners.</p> <p>In particular, you must consult with:</p> <ul style="list-style-type: none"> - affected landowners; - local community groups; - Singleton Council; - Biodiversity and Conservation Division within the Department; - Heritage Branch of the Department of Premier and Cabinet; - Environment Protection Authority; - Division of Resources and Geoscience within the Department; - Resources Regulator within the Department; - Primary Industries Group within the Department (including the Forestry, Agriculture and Fisheries branches); - Crown Lands Group within the Department; - Water Group within the Department; - Singleton Local Land Services; - Dams Safety Committee; - Roads and Maritime Services; and - Mount Owen Complex Community Consultative Committee. <p>The EIS must:</p> <ul style="list-style-type: none"> - describe the consultation process used and demonstrate that effective consultation has occurred; - describe the issues raised; - identify where the design of the development has been amended and/or mitigation proposed to address issues raised; and - otherwise demonstrate that issues raised have been appropriately addressed in the assessment.
Further consultation after 2 years	<p>If you do not lodge a development application and EIS for the development within 2 years of the issue date of these requirements, you must consult further with the Secretary in relation to the preparation of the EIS.</p>

ATTACHMENT 1

Environmental Planning Instruments, Policies, Guidelines & Plans

Land		
		Interim Protocol for Site Verification & Mapping of Biophysical Strategic Land (OEH)
		Soil and Landscape Issues in Environmental Impact Assessment (NOW)
		Agfact AC.25: Agricultural Land Classification (NSW Agriculture)
		Strategic Regional Land Use Policy, Guideline for Preparing Agricultural Impact Statements 2012 (DPI) and the Agricultural Impact Statement Technical Notes 2013 (DPI)
		State Environmental Planning Policy No. 55 – Remediation of Land
		Australian and New Zealand Guidelines for the Assessment and Management of Contaminated Sites (ANZECC)
		Land Use Conflict Risk Assessment Guide (DPI)
		Site Investigations for Urban Salinity (DLCW)
		Landslide risk management guidelines (AGS)
Water		
Water Plans	Sharing	Hunter Unregulated and Alluvial Water Sources 2009
		Hunter Regulated River Water Source
Groundwater		NSW State Groundwater Policy Framework Document (NOW)
		NSW State Groundwater Quality Protection Policy (NOW)
		NSW State Groundwater Quantity Management Policy (NOW)
		NSW Aquifer Interference Policy 2012 (NOW)
		Australian Groundwater Modelling Guidelines 2012 (Commonwealth)
		National Water Quality Management Strategy Guidelines for Groundwater Protection in Australia (ARMCANZ/ANZECC)
		Guidelines for the Assessment & Management of Groundwater Contamination (EPA)
Surface Water		Hunter River Salinity Trading Scheme (EPA)
		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) and associated Volume 2E: Mines and Quarries (DECC)
	Managing Urban Stormwater: Treatment Techniques (EPA)
	Managing Urban Stormwater: Source Control (EPA)
	Technical Guidelines: Bunding & Spill Management (EPA)
	Environmental Guidelines: Use of Effluent by Irrigation (EPA)
	A Rehabilitation Manual for Australian Streams (LWRRDC and CRCCH)
	NSW Guidelines for Controlled Activities (NOW)
Flooding	Floodplain Development Manual (OEH)
	Floodplain Risk Management Guideline (OEH)
Biodiversity	
	Biodiversity Assessment Method (OEH)
	Fisheries NSW policies and guidelines
	Guidelines for developments adjoining Department of Environment, Climate Change and Water (DECCW, 2010)
	Guidance to assist a decision-maker to determine a serious and irreversible impact (OEH)
	NSW State Groundwater Dependent Ecosystem Policy (NOW)
	Revocation, recategorisation and road adjustment policy (OEH, 2012)
	Risk Assessment Guidelines for Groundwater Dependent Ecosystems (NOW)
	State Environmental Planning Policy No. 44 – Koala Habitat Protection
Heritage	
	The Burra Charter (The Australia ICOMOS charter for places of cultural significance)
	Aboriginal Cultural Heritage Consultation Requirements for Proponents (OEH)
	Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW (OEH)
	Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW (OEH)
	Assessing Significance for Historical Archaeological Sites and Relics (OEH)

	Archaeological Assessments Guidelines (OEH)
	Criteria for the Assessment of Excavation Directors (OEH)
	NSW Heritage Manual (OEH)
	Statements of Heritage Impact (OEH)
	Hunter Regional Environmental Plan 1989 (Heritage)
Noise & Blasting	
	NSW Noise Policy for Industry (EPA)
	A Guide to the Noise Policy for Industry (EPA)
	Interim Construction Noise Guideline (DECC)
	NSW Road Noise Policy (EPA)
	Rail Infrastructure Noise Guideline (EPA)
	Voluntary Land Acquisition and Mitigation Policy for State Significant Mining, Petroleum and Extractive Industry Developments (DP&E)
	Technical basis for guidelines to minimise annoyance due to blasting overpressure and ground vibration (ANZEC)
	Assessing Vibration: A Technical Guideline (DEC)
Air	
	Approved Methods and Guidance for the Modelling and Assessment of Air Pollutants in NSW (EPA)
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	Coal Mine Particulate Matter Control Best Practice – Site Specific Determination Guideline (EPA)
	Generic Guidance and Optimum Model Settings for the CALPUFF Modelling System for Inclusion in the Approved Methods for the Modelling and Assessment of Air Pollutants in NSW (EPA)
	National Greenhouse Accounts Factors (Commonwealth)
	Voluntary Land Acquisition and Mitigation Policy for State Significant Mining, Petroleum and Extractive Industry Developments (DP&E)
Transport	
	Guide to Traffic Generating Development (RTA)
	Road Design Guide (RMS) & relevant Austroads Standards
	Draft NSW Freight and Ports Plans (TfNSW)
	Austroads Guide to Traffic Management Part 12: Traffic Impacts of Development
	Future Transport 2056 (TfNSW) and supporting documents
Hazards	
	State Environmental Planning Policy No. 33 – Hazardous and Offensive Development
	Hazardous and Offensive Development Application Guidelines – Applying SEPP 33

Hazardous Industry Planning Advisory Paper No. 6 – Guidelines for Hazard Analysis

Planning for Bush Fire Protection 2006 (RFS)

Environmental Health Risk Assessment: Guidelines for assessing human health risk from environmental hazards (enHealth)

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)

Social & Economic

Guidelines for the economic assessment of mining and coal seam gas proposals (NSW Government)

Social impact assessment guideline for State significant mining, petroleum production and extractive industry development (DP&E)

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

Singleton Local Environment Plan 2013

The Singleton Council Community Strategic Plan (2017-2027)

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	The Singleton Council Community Strategic Plan (2017-2027)

ATTACHMENT 2

AGENCIES' CORRESPONDENCE

7 June 2018

Mr Jack Murphy
Environmental Assessment Officer
Resource Assessments - Planning Services
GPO Box 39
Sydney NSW 2001

Dear Mr Murphy

DPE request for SEARs - Glendell Continued Operations Project - SSD 9349

I refer to your email dated 31 May 2018 requesting Singleton Council input into the Secretary's Environmental Assessment Requirements (**SEARs**) for the Glendell Continued Operations Project (**SSD9349**). Council has reviewed the Preliminary Environmental Assessment and provides the following recommendations for inclusion in the SEARs.

Approval Requirements

Whilst it is correct that the consent authority is not required to re-assess the likely impact of the continued development of the Glendell Mine, as approved under DA80/952; the consent authority *'may modify the manner of the continued development for the purposes of consolidation of the development consents applying to the land concerned'* (clause 4.63 (3)(c)).

The proposed project includes complex interactions with other approved, and yet to be approved, operations in the vicinity of the proposal. These complex interactions will require careful consideration within the Environmental Impact Statement, particularly in the areas of final landform and final land use, set within the local and regional context.

Hebden Road

The proposed project is seeking to relocate Hebden Road. As Hebden Road is a local road, Council should be consulted during the assessment phase to ensure local traffic requirements are met. Council would recommend that the SEARs include a requirement to consult with Council on the realignment of Hebden Road, as well as an assessment of all options, including the no relocation option.

Ravensthorpe Homestead

The Ravensthorpe Homestead is listed on Council's Local Environment Plan as an item of local heritage significance. The community interest in the proposed relocation of the Ravensthorpe Homestead cannot be understated. The Proponent has proposed one option for the management of the Homestead. This option will result in the maximum benefit to the Proponent. Council recommends that the SEARs include

a requirement for the Proponent to consider all options regarding the long term, in perpetuity management and maintenance of the Ravensworth Homestead, including (but not limited to) relocation, alternative mining methods that will avoid or minimise impacts to the Homestead and its surrounds, and not relocating the Homestead. These options should include a full and detailed social and economic analysis, including a local effects analysis, specific to the proposed impacts on Ravensworth Homestead.

Voluntary Planning Agreement

Council anticipates that the proposed project will impact Council's infrastructure and services. The proponent and Council have commenced discussions around a Voluntary Planning Agreement for the proposed project. Council recommends that the SEARs reflect the need to consult and agree to a VPA.

Consideration of Singleton Council's Community Strategic Plan

The Singleton Council Community Strategic Plan (2017-2027) is the document that underpins Council's strategic planning for the future of Singleton. This Plan identifies community concerns regarding the long term environmental, social and economic sustainability of the Singleton community, and Council's planned response to these concerns. Concerns raised by the community during the development of this Plan included a planned transition away from mining. Council recommends that, in addition to consideration of the strategic planning documents (including the Singleton Land Use Strategy or it's latest equivalent) under the *Environmental Planning and Assessment Act 1979*, the Proponent consider the strategic planning documents developed by Council under the *Local Government Act 1993*.

I would like to thank you for the opportunity to provide input into the SEARs for the proposed project. Please contact me on 02 6578 7290 if you have any questions.

Yours sincerely

A handwritten signature in dark ink, appearing to read 'Mary-Anne Crawford', with a stylized, sweeping flourish extending from the bottom left.

Mary-Anne Crawford
Manager Development and Environmental Services

OUT18/7907

Mr Jack Murphy
Resource Assessments
NSW Department of Planning and Environment

Jack.Murphy@planning.nsw.gov.au

Dear Mr Murphy

**Glendell Continued Operations Project (SSD 9349)
Comment on the Secretary's Environmental Assessment Requirements (SEARs)**

I refer to your email of 17 May 2018 to the Department of Industry (DoI) in respect to the above matter. Comment has been sought from relevant branches of Lands & Water and Department of Primary Industries (DPI), and the following requirements for the proposal are provided:

DoI - Water

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

DoI - Crown Lands

Crown Land and Crown Roads within the Mining Lease must be subject to a Compensation Agreement (issued under Section 265 of the *Mining Act 1992*), to be agreed and executed prior to any mining activity taking place and within 12 months of Project Approval. The Compensation Agreement may include conditions requiring the Mining Lease Holder to purchase of any Crown land impacted on by mining activity.

DPI - Fisheries

DPI Fisheries has significant concerns about the changed geomorphology, slope and length of the proposed diversion of Yorks Creek compared to the existing Creek. This has the potential to impact the receiving waters of Bowmans Creek, which DPI Fisheries has listed as a Key Fish Habitat. Therefore, DPI Fisheries requires a comprehensive assessment of the diversion of Yorks Creek, with the following information being included in the EIS:

- The complete design of the creek diversion including changes in slope, length and habitat structures proposed in the diversion compared to the existing creek line.
- A detailed outline on how a “natural” system can be created in this landscape.
 - Note - the preliminary report identifies the difficulty in establishing natural systems within large engineered cuttings, and is recommending a cutting of approximately 2km in length and 20 to 30m in depth in soil that is considered erodible. DPI Fisheries does not consider a trapezoidal rock lined drain as an appropriate natural system.
- Identification of how the design will mitigate or offset the areas of aquatic habitat that is lost due to the shortening of the creek by the proposed diversion.
- A complete assessment of the fish population in Yorks Creek to determine the presence or absence of any threatened fish species. Reliance on past assessments may not give a complete picture as the species are small and similar species in inland waters have been shown to be quite mobile in ephemeral streams. This information is required to complete the required test of Significance under Part 7a of the *Fisheries Management Act 1994*.
- An assessment of the diversion shall also include an assessment on the changes in flows entering Bowmans Creek at the proposed junction and ascertain how these flows can be introduced to the stream without creating erosion and turbidity issues in Bowmans Creek.

Relevant Guidelines/policies for assessment of impacts and requirements that should be addressed can be found in DPI Fisheries Policy & Guideline document: *Policy and Guidelines for Fish Habitat Conservation and Management* (2013 update) available on the Department's website at www.dpi.nsw.gov.au/fishing/habitat/publications/pubs/fish-habitat-conservation.

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

Yours sincerely



Alex King
Director Cabinet and Legislation Services
Lands and Water - Strategy and Policy
31 May 2018

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

Jack.Murphy@planning.nsw.gov.au

Dear Jack

**Glendell Continued Operations Project
Request for Secretary's Environmental Assessment Requirements (SEARs)**

I refer to your email dated 17 May 2018 inviting the Division of Resources & Geoscience (the Division) to provide comments on the Glendell Continued Operations Project (the Project) submitted by Umwelt, on behalf of Glendell Tenements Pty Limited, a subsidiary of Glencore (the Proponent).

The Division has reviewed the adequacy of information supplied in relation to the abovementioned Project and provides the following advice:

Consistent with the intent of the Indicative Secretary's Environmental Assessment Requirements (SEARs) for state significant mining developments (October 2015), to ensure that the Project and its environmental interactions can be understood and assessed by the Division, an Environmental Impact Statement (EIS) should provide a comprehensive description of all aspects, including the mineral extraction and mining purposes, of the project.

The Division notes that this proposal is located wholly within existing mining titles suitable for the extraction of coal as detailed in the supplied Preliminary Environmental Assessment (PEA) and recommends that the following SEARs be applied:

MAPPING REQUIREMENTS

1. In terms of text, plans or charts, it must clearly show the proposed extent and sequence of the development.
2. Clearly identify (in text and maps):
 - a. Existing coal (and Group 9) authorisations over the project area, and
 - b. Final proposed mining lease areas for coal and ancillary mining activities including the location and depths of applications lodged, or to be lodged.

GEOLOGY

1. Provide a summary of the regional and local geology, including information of the stratigraphic unit or units within which the resource is located.
2. 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.

RESOURCE AND RESERVE STATEMENT

1. 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 must 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.

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.

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:

1. 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.
2. In terms of text, plans or charts, an EIS must clearly show the proposed extent and sequence of the development.
3. An estimate of which market segment that product tonnes would be sold into, for example, export/domestic thermal/metallurgical coal.

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

BIODIVERSITY OFFSETS

The Division requests that the Geological Survey of NSW – Land Use team be consulted in relation to the proposed location of any biodiversity offset areas (both on and off-site) or any supplementary biodiversity measures to ensure there is no consequent reduction in access to prospective land for mineral exploration or potential for sterilisation of mineral or extractive resources.

For further enquiries regarding this matter please contact:

Adam W. Banister, Senior Advisor - Resources Development & Operations,
Assessment Coordination Unit, (02) 4063 6601 or advisory.services@planning.nsw.gov.au.

Yours sincerely



Matthew Gagan
Manager Assessment Coordination
31 May 2018

31st May, 2018

Jack Murphy
Environmental Assessment Officer
Resource Assessments | Planning Services
NSW Dept of Planning & Environment
GPO Box 39
SYDNEY NSW 2001

Our ref: 10.121.046

Your ref: SSD 9349

Dear Jack,

Re: Glendell Continued Operations Project SDD 9349:

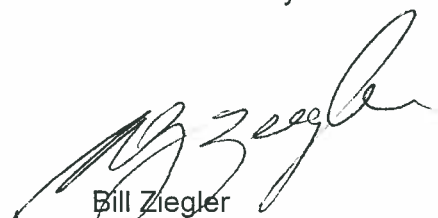
The DSC has reviewed the Preliminary Environmental Assessment for the proposal to expand the Glendell Operations (SSD 9349), as requested in your email of 17/05/2018.

The project application area appears to overlap with; the Mount Owen North, Mount Owen and Ravensworth East Notification Areas which surround the Mount Owen North Void Tailings Dam, Mount Owen Rail Loop Tailings Dams and Ravensworth Void 4 East Tailings Dam respectively. The Tailings Dams are prescribed dams of significant consequence category in the event of dam failure.

Proposed mining undertaken as part of the Glendell Continuation Project within the Notification Areas will need to be endorsed by the DSC and the Company will need to apply to the DSC to this end. The companies' PEA has not recognised the Dams Safety Act 1978 as requiring compliance.

If you have any further queries please do not hesitate to contact me on 9842 8077.

Yours Sincerely



Bill Ziegler
Manager Mining Projects
Dams Safety Committee

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DOC18/335609; EF13/4478

Department of Planning & Environment
Resource Assessment, Planning Services
GPO Box 39
SYDNEY NSW 2001

Attention: Jack Murphy
Email: jack.murphy@planning.nsw.gov.au

30 May 2018

Dear Mr Murphy

**Glendell Continued Operations Project – Open cut coal mine
666 Hebden Road, Ravensworth - SSD 9349**

SECRETARY'S ENVIRONMENTAL ASSESSMENT REQUIREMENTS

I refer to your email to the Environment Protection Authority (EPA) dated 17 May 2018, seeking the EPA's recommended Secretary Environmental Assessment Requirements (SEARS) for the proposed Glendell Continued Operations Project at Ravensworth.

The EPA has considered the proposal and has identified in **Attachment A** the information it requires to assess the project. In summary, the EPA's key information requirements for the project include an adequate description and assessment of:

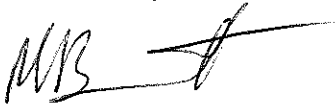
1. Impacts on air quality, including any potential for spontaneous combustion of coal,
2. Potential impacts on water quality and site water management,
3. Potential noise impacts,
4. Waste management and disposal.

In carrying out the assessment, the proponent should refer to the relevant guidelines listed in **Attachment B** and any relevant industry codes of practice and best practice management guidelines.

The proponent should also be aware that any commitments made in the Environmental Impact Statement may be formalised as approval conditions and subsequently environment protection licence conditions. Pollution control measures should not be proposed if they are impractical, unrealistic or beyond the financial viability of the development. It is important that all conclusions are supported by adequate data.

If you require any further information regarding this matter please contact Bill George on 4908 6821 or by email to hunter.region@epa.nsw.gov.au.

Yours sincerely

A handwritten signature in black ink, appearing to read 'MB', followed by a long horizontal stroke that extends to the right and then curves upwards.

MITCHELL BENNETT
Head Strategic Programs Unit - Hunter
Environment Protection Authority

Encl: **Attachment A** – EPA's Recommended Secretary's Environmental Assessment Requirements – Glendell
Continued Operations Project at Ravensworth – SSD 9349

Attachment B – Guidance Material

ATTACHMENT A

EPA's Recommended Secretary's Environmental Assessment Requirements – Glendell Continued Operations Project at Ravensworth SSD 9349

1 Environmental impacts of the project

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

- Air Quality
- Noise and Vibration
- Water and Soil Quality and Management
- Waste Management
- Dangerous Goods, Chemical Storage and Bunding

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. A full list of guidelines is at Attachment B.

2 Licensing requirements

The Glendell Mine currently holds Environmental Protection Licence (EPL 12840) under s48 Protection of the *Environment Operations Act* ("POEO Act") and is also part of the Mount Owen Complex.

Should project approval be granted, the proponent will need to make a separate application to EPA for a variation to the existing Environment Protection Licence No. 12840. Additional information is available through EPA's *Guide to Licensing* document.

General information on licence requirements can also be obtained from EPA's Environment Line on 131 555 during office hours, or can be found at the EPA web site at:
<http://www.epa.nsw.gov.au/licensing/>

3 The Proposal and Premises

The objectives of the proposal should be clearly stated and refer to:

- The size and type of the operation;
- The nature of the processes and the products, by-products and wastes produced;
- The types and quantities of any chemicals to be used and stored onsite;
- Proposed operational hours, including any heavy vehicle movements;
- Proposed maximum and average annual production rates that will occur at the premises; and
- Proposed staging and timing of the proposal.

The EIS will need to fully identify all the processes and activities intended for the site over the life of the development. This will include details of:

- The location of the proposed facility and details of the surrounding environment;
- Appropriate land use zoning;
- Maps/diagrams showing topography, the location of residences and properties likely to be affected and other industrial developments, conservation areas, wetlands, etc. in the locality that may be affected by the facility;
- All equipment proposed for use at the site;
- All chemicals, including fuel, used on the site and proposed methods for their transportation, storage, use and emergency management; and
- Methods to mitigate any expected environmental impacts of the development.

4 Air Issues

4.1 Air quality

The EIS must include an air quality impact assessment (AQIA) in accordance with the Approved Methods for the Modelling and Assessment of Air Pollutants in NSW, including, as a minimum the following components:

Assessment Objective

1. Demonstrate the proposed project will incorporate and apply best management practice emission controls; and
2. Demonstrate that the project will not cause violation of the project adopted air quality impact assessment criteria at any residential dwelling or other sensitive receptor.

Assessment Criteria

- Define applicable assessment criteria for the proposed development referencing the Approved Methods for the Modelling and Assessment of Air Pollutants in NSW, including appendices and updates
- 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 (2010).

Existing Environment

- Provide a detailed description of the existing environment within the assessment domain, including:
 - geophysical form and land-uses;
 - location of all sensitive receptors;
 - existing air quality; and
 - local and regional prevailing meteorology.
- Justify all data used in the assessment, specifically including analysis of inter-annual trends (preferably five consecutive years of data), availability of monitoring data, and local topographical features.
- Meteorological modelling must be verified against monitored data. Verification should involve comparative analysis of wind speed, wind direction and temperature, at a minimum.
- A review of all existing, recently approved and planned developments likely to contribute to cumulative air quality impacts must be completed.

Emissions Inventory

- Provide a detailed description of the project and identify the key stages with regards to the potential for air emissions and impacts on the surrounding environment.
- Identify all sources of air emissions, including mechanically generated, combustion and transport related emissions likely to be associated with the proposed development.
- Estimate emissions of TSP, PM₁₀, PM_{2.5}, NO_x, (tonnes per year), at a minimum, for all identified sources during each key development stage. The emissions inventory should:
 - utilise USEPA (1995) (and updates) emission estimation techniques, direct measurement or other method approved in writing by EPA;
 - calculate uncontrolled emissions (with no particulate matter controls in place); and
 - calculate controlled emissions (with proposed particulate matter controls in place).

- The emissions inventory must be explicitly coupled with the project description.
- Provide a detailed summary and justification of all parameters adopted within all emission estimation calculations, including site specific measurements, proponent recommended values or published literature.
- Document, including quantification and justification, all air quality emission control techniques/practices proposed for implementation during the project. As a minimum, consideration must be given to source control techniques, emission control through mine planning and reactive/predictive management techniques.
- Blasting emission estimation should provide specific details on likely activities, including the frequency of blasts, area per blast, amount and type of explosives used and blasting hours.

Best Practice Determination

- Based on the TSP, PM₁₀ and PM_{2.5} emissions inventories calculated for the proposed development, undertake a site-specific best practice determination, in accordance with the document Coal Mine Particulate Matter Control Best Practice – Site specific determination guideline.
- Demonstrate that the proposed control techniques/practices are consistent with best management practice.
- Detail all sources possible sources of air pollution and activities/processes with the potential to cause air pollutants, including odours and fugitive dust emissions and odours; and
- Describe in detail the measures proposed to mitigate the impacts and quantify the extent to which the mitigation measures are likely to be effective in achieving the relevant environmental outcomes.

Dispersion Modelling and Interpretation of Results

- Atmospheric dispersion modelling should be undertaken in accordance with the Approved Methods for the Modelling and Assessment of Air Pollutants in NSW, including appendices and updates.
- Modelling must implement fit for purpose modelling techniques that:
 - have regard for the most up to date and scientifically accepted dispersion modelling techniques;
 - contextualise all assumptions based on current scientific understanding and available data; and
 - include a thorough validation of adopted methods and model performance.
- Use an appropriate atmospheric dispersion model to predict, at a minimum, incremental ground level concentrations/levels of the following:
 - 24-hour and annual average PM₁₀ concentrations;
 - 24-hour and annual average PM_{2.5} concentrations; and
 - 1-hour and annual average NO₂ concentrations. NO₂ concentrations should be assessed using a well justified approach for the transformation of NO_x to NO₂.
- Ground level concentrations of pollutants should be presented for surrounding privately-owned properties, mine-owned properties and other sensitive receptors (as applicable).
- Undertake a cumulative assessment of predicted impacts. The contribution of all identified existing and recently approved developments should be accounted for in the cumulative assessment.
- Cumulative 24-hour PM₁₀ and PM_{2.5} concentrations must be assessed in accordance with the Approved Methods for the Modelling and Assessment of Air Pollutants in NSW, including appendices and updates, and/or a suitably justified probabilistic methodology.

- Cumulative annual average PM₁₀, PM_{2.5}, and NO₂ should be assessed using a sufficiently justified background concentration(s);
- Results of dispersion modelling should be presented as follows:
 - isopleth plots showing the geographic extent of maximum pollutant concentrations (incremental and cumulative);
 - tables presenting the maximum predicted pollutant concentrations (increment and cumulative) and the frequency of any predicted exceedances at each surrounding privately-owned properties, mine-owned properties and other sensitive receptors (as applicable); and
 - time series and frequency distribution plots of pollutant concentrations at each private receptor location at which an exceedance is predicted to occur. Where no exceedances are predicted, the analysis must be performed for the most impacted off site sensitive receptor.

Air Quality Emission Control Measures

- Provide a detailed discussion of all proposed air quality emission control measures, including details of a reactive/predictive management system. The information provided must include:
 - explicit linkage of proposed emission controls to the site specific best practice determination assessment
 - timeframe for implementation of all identified emission controls;
 - key performance indicators for emission controls;
 - monitoring methods (location, frequency, duration);
 - response mechanisms;
 - responsibilities for demonstrating and reporting achievement of KPIs;
 - record keeping and complaints response register; and
 - compliance reporting.

Air Quality Impact Assessment (Blasting)

- The AQIA must also be undertaken to determine the potential impacts of blasting activities. This must include assessment and modelling to determine the level of potential impacts (dust, gases and offensive odour) and how these potential impacts would be mitigated.

5 Noise and Vibration

The following matters should be addressed in relation to noise and vibration impacts associated with the proposal. This includes identification of the hours of operations, assessment of all activities where proposed, and impacts on sensitive receivers associated with the proposed hours of operation. The following matters should be addressed as part of the EIS.

Operational Noise

- Operational noise from all industrial activities (including private haul roads) to be undertaken on the premises should be assessed using the EPA's "A Guide to the Noise Policy for Industry". (EPA October 2017)

General

- 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).

- Blast impacts should be demonstrated to can comply 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).

Road

- 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 (DECCW, 2011).
- Noise from new or upgraded public roads should be assessed using the NSW Road Noise Policy (DECCW, 2011).

Monitoring

- Detail monitoring that will be conducted to assess the impacts of the proposal.

6 Water and Soils

6.1 Water Quality

Describe Proposal

- Describe the proposal including position of any intakes and discharges, volumes, water quality and frequency of all water discharges.
- Demonstrate that all practical options to avoid discharges have been implemented and environmental impact minimised where discharge is necessary.
- Where relevant 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.
- Describe how all mine water storage dams, creek diversions, erosion and sediment control structures and other treatment systems will be constructed and managed to ensure that water discharges from these water management systems comply with the requirements of the *Protection of the Environment Operations Act 1997* and the *Protection of the Environment Operations (Hunter River Salinity Trading Scheme) Regulation 2002*.

Background Conditions

- Describe existing surface and groundwater quality. An assessment needs to be undertaken for any water resource likely to be affected by the proposal. Issues to be discussed should include but are not limited to:
 - a description of any impacts from existing industry or activities on water quality
 - a description of the condition of the local catchment e.g. erosion, soils, vegetation cover, etc.
 - an outline of baseline groundwater information, including, for example, depth to water table, flow direction and gradient, groundwater quality, reliance on groundwater by surrounding users and by the environment
 - historic river flow data
- State the Water Quality Objectives for the receiving waters relevant to the proposal. These refer to the community's agreed environmental values and human uses endorsed by the NSW Government as goals for ambient waters (<http://www.environment.nsw.gov.au/ieo/index.htm>). Where groundwater may be impacted the assessment should identify appropriate groundwater environmental values.

- State the indicators and associated trigger values or criteria for the identified environmental values. This information should be based on the ANZECC (2000) Guidelines for Fresh and Marine Water Quality as a minimum.
- State any locally specific objectives, criteria or targets which have been endorsed by the NSW Government.

Impact Assessment

- Describe the nature and degree of impact that any proposed discharges will have on the receiving environment, both surface water and groundwater.
- Detail contractual and other arrangements that will be put in place to prevent pollution from haul roads and unsealed roads, particularly rights of carriageways not owned by the proponent.
- Assess impacts against the relevant ambient water quality outcomes. Demonstrate how the proposal will be designed and operated to:
 - protect the Water Quality Objectives for receiving waters where they are currently being achieved; and
 - contribute towards achievement of the Water Quality Objectives over time where they are not currently being achieved.
- Where a discharge is proposed that includes a mixing zone, the proposal should demonstrate how wastewater discharged to waterways will ensure the ANZECC (2000) water quality criteria for relevant chemical and non-chemical parameters are met at the edge of the initial mixing zone of the discharge, and that any impacts in the initial mixing zone are demonstrated to be reversible.
- Propose water quality limits for any discharge(s) that adequately protects the receiving environment.
- Assess impacts on groundwater and groundwater dependent ecosystems.
- Describe how stormwater will be managed both during and after construction.
- Assess the potential for acid forming materials to generate acid mine drainage.

Monitoring

- Describe how predicted impacts will be monitored and assessed over time.

6.2 Soil

The EIS should include:

- An assessment of potential impacts on soil and land resources should be undertaken, being guided by Soil and Landscape Issues in Environmental Impact Assessment (DLWC 2000). The nature and extent of any significant impacts should be identified. Particular attention should be given to:
 - Soil erosion and sediment transport - in accordance with Managing urban stormwater: soils and construction, vol. 1 (Landcom 2004) and vol. 2 (A. Installation of services; B Waste landfills; C. Unsealed roads; D. Main Roads; E. Mines and quarries) (DECC 2008).
 - Mass movement (landslides) – in accordance with Landslide risk management guidelines presented in Australian Geomechanics Society (2007).
 - Urban and regional salinity – guidance given in the Local Government Salinity Initiative booklets which includes Site Investigations for Urban Salinity (DLWC, 2002).
- A description of the mitigation and management options that will be used to prevent, control, abate or minimise identified soil and land resource impacts associated with the project. This should include an assessment of the effectiveness and reliability of the measures and any residual impacts after these measures are implemented.

7 Waste

The EIS should:

- Identify all wastes to be generated by all aspects of the project and identify procedures for the handling and management of all wastes produced. The handling of rejects, tailings, overburden material and tyres are important aspects for consideration;
- Identify, characterise and classify all waste (including liquid waste) that will be generated onsite through excavation, demolition or construction activities, including proposed quantities of the waste;
- Include a detailed plan for the classification of waste material generated onsite (including liquid waste), including the sampling locations and sampling regime that will be employed to classify the waste in accordance with the Waste Classification Guidelines (EPA, 2014), particularly with regards to the identification of contamination hotspots;
- Demonstrate how waste will be managed in accordance with the waste hierarchy, established under the *Waste Avoidance and Resource Recovery Act 2001*, which aims to ensure that resource management options are considered against the following priorities:
 - (i) avoidance including action to reduce the amount of waste generated by households, industry and all levels of government;
 - (ii) resource recovery including reuse, recycling, reprocessing and energy recovery, consistent with the most efficient use of the recovered resources; and
 - (iii) disposal including management of all disposal options in the most environmentally responsible manner.
- Identify, characterise and classify all waste (including liquid waste) that is proposed to be removed to an offsite location for either recycling, reprocessing or disposal. Each waste stream should be quantified and an appropriate management option identified for each stream;
- Identify, characterise and classify all waste (including liquid waste) that is proposed to be disposed of onsite. The disposal location and type of waste for each stream should be described, including information on the waste disposal infrastructure proposed to be constructed to contain that waste (i.e. monocell construction and specifications, tyre disposal pits, etc.). The disposal method should include an assessment of the risks to the surrounding environment (groundwater, air, surface water, etc.) or a justification that there is no risk;
- Provide details of how waste will be handled and managed during transport to a lawful facility. If the waste possesses hazardous characteristics, the proponent must provide details of how the waste will be treated or immobilised to render it suitable for transport and disposal;
- Where appropriate given the nature of the proposal, provide details of how stockpiles of waste will be located and managed onsite to minimise pollution, including:
 - labelling of stockpiles for identification, ensuring that all waste is clearly identified and stockpiled separately from other types of material (especially the separation of any contaminated and non-contaminated waste);
 - proposed height limits for all waste to reduce the potential for dust and odour;
 - procedures for minimising the movement of waste around the site and double handling; and
 - measures to be implemented to minimise erosion, leachate and sediment mobilisation.
- Provide details of how any leachate will be:
 - kept separate from stormwater runoff;
 - treated (if applicable); and
 - any proposed transport and disposal of leachate off-site.

- Provide details of waste rock emplacement areas with particular attention to:
 - quantity of waste rock likely to be generated;
 - geochemical assessment of the waste rock;
 - proposed strategies for the handling, reuse/recycling and disposal of waste rock, considering the outcomes of the geochemical assessment; and
 - designation of transport routes for the transport of waste rock.
- Identify the management and disposal methods for coal washery rejects (including tailings generated at the mine site), including:
 - quantity of coal washery rejects to be generated;
 - proposed strategies for the handling, storage, reuse/recycling and disposal of coal washery rejects; and
 - details of actions to prevent potential impacts to groundwater, surface water or any other environmental aspect which may occur as a result of the management technique utilise
- Assess Environment Protection Licensing requirements for all waste activities associated with the proposal.

8 Dangerous Goods, Chemical storage and Bunding

- The EIS must outline all details regarding the transport, handling, storage and use of dangerous goods, chemicals and products, including fuel, both on site and with ancillary activities and describe the measures proposed to minimise the potential for leakage or the migration of pollutants into the soil/waters or from the site.
- The EIS should identify any fuel or chemical storage areas proposed for the site.
- The EIS should consider compliance with the following legislation, standards and guidelines where relevant:
 - Australian Standard AS1692:1989 Tanks for Flammable and combustible liquids;
 - The DECC's "Bunding and Spill Management" Technical Guideline (November 1997)
 - Australian Standard AS 1940:2004 The Storage and Handling of Flammable and Combustible Liquids
 - Australia Standard AS 4452-1997: The Storage and Handling of Toxic Substances;
 - Australian/New Zealand Standard AS/NZS 4452:1997: The Storage and Handling of Mixed Classes of Dangerous Goods in Packages and Intermediate Bulk Containers; and
 - Road and Rail Transport (Dangerous Goods) Act 1997

9 Monitoring Programs

The EIS should include a detailed assessment of any noise, air quality, weather, water or waste monitoring required during the remediation of the site to ensure that the works achieve a satisfactory level of environmental performance. The evaluation should include a detailed description of the monitoring locations, sample analysis methods and the level of reporting proposed.

ATTACHMENT B**Guidance Material**

Title	Web address
<u>Relevant Legislation</u>	
<i>Environmentally Hazardous Chemicals Act 1985</i>	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+14+1985+cd+0+N
<i>Environmental Planning and Assessment Act 1979</i>	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+203+1979+cd+0+N
<i>Protection of the Environment Operations Act 1997</i>	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+156+1997+cd+0+N
<i>Water Management Act 2000</i>	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+92+2000+cd+0+N
<i>Contaminated Land Management Act 1997</i>	http://www.legislation.nsw.gov.au/#/view/act/1997/140
<u>Licensing</u>	
Guide to Licensing	www.environment.nsw.gov.au/licensing/licenceguide.htm
<u>Air Issues</u>	
Air Quality	
Approved methods for the Modelling and Assessment of Air Pollutants in NSW (2016)	http://www.epa.nsw.gov.au/resources/epa/approved-methods-for-modelling-and-assessment-of-air-pollutants-in-NSW-160666.pdf
Approved methods for the Sampling and Analysis of Air Pollutants in NSW (2016)	http://www.epa.nsw.gov.au/resources/air/07001amsaap.pdf
Coal Mine Particulate Matter Control Best Practice – Site specific determination guide	www.epa.nsw.gov.au/resources/air/20110813coalmineparticulate.pdf
POEO (Clean Air) Regulation 2010	http://www.legislation.nsw.gov.au/maintop/view/inforce/subordleg+428+2010+cd+0+N
<u>Noise and Vibration</u>	
Interim Construction Noise Guideline (DECC, 2009)	http://www.environment.nsw.gov.au/noise/constructnoise.htm
Assessing Vibration: a technical guideline (DEC, 2006)	http://www.environment.nsw.gov.au/noise/vibrationguide.htm
Australian and New Zealand Environment Council – Technical basis for guidelines to minimise annoyance due to blasting overpressure and ground vibration (ANZEC, 1990)	http://www.environment.nsw.gov.au/noise/blasting.htm
NSW Industrial Noise Policy, Noise Policy for Industry (2017), Implementation and Transitional arrangements for the Noise Policy for Industry (2017).	http://www.epa.nsw.gov.au/resources/noise/ind_noise.pdf https://www.epa.nsw.gov.au/publications/noise/17p0524-noise-policy-for-industry https://www.epa.nsw.gov.au/publications/noise/17p0293-implement-transition-arrange-noise-pol-industry
NSW Road Noise Policy (DECCW, 2011)	http://www.epa.nsw.gov.au/resources/noise/2011236nswroadnoisepolicy.pdf

<u>Waste</u>	
Waste Classification Guidelines (EPA, 2014)	http://www.epa.nsw.gov.au/wasteregulation/classify-guidelines.htm
Resource recovery exemptions	http://www.epa.nsw.gov.au/wasteregulation/recovery-exemptions.htm
Resource recovery orders and exemptions	http://www.epa.nsw.gov.au/wasteregulation/orders-exemptions.htm
NSW Waste Avoidance and Resource Recovery Strategy 2014-2021	http://www.epa.nsw.gov.au/wastestrategy/warr.htm
<u>Contaminated Sites Assessment and Remediation</u>	
Contaminated Land – EPA website	https://www.epa.nsw.gov.au/your-environment/contaminated-land
Managing land contamination: Planning Guidelines – SEPP 55 Remediation of Land	http://www.epa.nsw.gov.au/clm/planning.htm
Guidelines for Consultants Reporting on Contaminated Sites (EPA, 2000)	http://www.epa.nsw.gov.au/resources/clm/20110650consultantsglides.pdf
Guidelines for the NSW Site Auditor Scheme - 2nd edition (DEC, 2006)	http://www.epa.nsw.gov.au/resources/clm/auditorglines06121.pdf
Sampling Design Guidelines (EPA, 1995)	http://www.epa.nsw.gov.au/resources/clm/95059samppgdline.pdf
National Environment Protection (Assessment of Site Contamination) Measure 1999 (or update)	http://www.scew.gov.au/nepms/assessment-site-contamination
<u>Water and Soils</u>	
Soils – general	
Soil and Landscape Issues in Environmental Impact Assessment (DLWC 2000)	http://www.dnr.nsw.gov.au/care/soil/soil_pubs/pdfs/tech_rep_34_new.pdf
Managing urban stormwater: soils and construction, vol. 1 (Landcom 2004) and vol. 2 (A. Installation of services; B Waste landfills; C. Unsealed roads; D. Main Roads; E. Mines and quarries) (DECC 2008)	Vol 1 - Available for purchase at http://www.landcom.com.au/whats-new/publications-reports/the-blue-book.aspx Vol 2 - http://www.environment.nsw.gov.au/stormwater/publications.htm
Landslide risk management guidelines	http://www.australiangeomechanics.org/resources/downloads/
Site Investigations for Urban Salinity (DLWC, 2002)	http://www.environment.nsw.gov.au/resources/salinity/booklet3siteinvestigationsforurbansalinity.pdf
Local Government Salinity Initiative Booklets	http://www.environment.nsw.gov.au/salinity/solutions/urban.htm
Water	
Water Quality Objectives	http://www.environment.nsw.gov.au/leo/index.htm
ANZECC (2000) Guidelines for Fresh and Marine Water Quality	http://www.mincos.gov.au/publications/australian_and_new_zealand_guidelines_for_fresh_and_marine_water_quality
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
Water Pollution and Treatment (EPA)	http://www.environment.nsw.gov.au/water/polltreatment.htm

<i>Protection of the Environment Operations (Hunter River Salinity Trading Scheme) Regulation 2002</i>	www.legislation.nsw.gov.au/#/view/regulation/2002/856/full
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File No: SF18/40017
Ref No: DOC18/320036

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

Email: jack.murphy@planning.nsw.gov.au

Dear Mr Murphy

Secretary's Environmental Assessment Requirements (SEARs) for Glendell Continued Operations Project – Open cut coal mine, 666 Hebden Road, Ravensworth (SSD 9349)

I refer to your correspondence received on 17 May 2018 requesting advice on SEARs from the Heritage Council of NSW in relation to a proposed extension of mining at Glendell into a new mining area immediately north of the existing operation known as the Glendell Continued Operations Project.

It is noted that the major components of the proposal include: the realignment of a section of Hebden Road; the diversion of Yorks Creek; the relocation of Ravensworth Homestead; the demolition/relocation of the existing Glendell Mine Infrastructure Area (MIA) and construction of a new MIA or utilisation and augmentation of the existing MIA at Liddell or the Mount Owen Mine MIA.

It is noted that no State Heritage Register (SHR) items, under the *Heritage Act 1977*, are present within the proposed project area; however, there is a local heritage item, Ravensworth Homestead, listed as item I41 on the Singleton Local Environmental Plan (SLEP) 2013).

It is noted that Ravensworth Homestead was one of 19 places identified as a very early Homestead in a Heritage Council comparative study of Homestead Estates in the Hunter Valley (2013) and the Heritage Council NSW has recommended it for nomination on the State Heritage Register (SHR). The advice provided below is on the basis that this place is of State significance.

The accompanying report prepared by Umwelt, *Glendell Continued Operations Project, Preliminary Environmental Assessment* (PEA), outlining the background, the proposal, the planning context and key Environmental and Social issues to be assessed, dated May 2018, has been reviewed and following comments provided:

- The proposed relocation of state significant heritage items is not considered appropriate. The current context and setting of a heritage item, like Ravensworth Homestead, are significant values that contribute to the heritage significance of an item and their loss from a relocation is a major impact on its heritage values.

- The proposed relocation has the potential to result in catastrophic damage to the significant fabric of Ravensworth Homestead.
- Adaptive reuse of heritage items of buildings from the 1820s presents challenges and a new use can impact on the heritage values.
- A homestead of the era is likely to have a significant garden with early plantings and archaeology that will be lost as a result of the open cut mining activities.

Based on the above issues, it is recommended that the following SEARS be included:

1. The Environmental Impact Statement (EIS) must include a comprehensive Statement of Heritage Impacts which details all possible opportunities to keep Ravensworth Homestead in its original location.
2. The EIS must include a heritage assessment of current context and setting of Ravensworth Homestead, and identify any significant values that contribute to the heritage significance of an item whether their loss from a relocation would be a major impact on its heritage values.
3. However, if it can be demonstrated satisfactorily that relocation of the Ravensworth Homestead is the only option to ensure its preservation, the EIS must include a detailed work statement on how this relocation would be done, an analysis of where the homestead would be relocated to, timelines for relocation, a heritage significance assessment of the item in its new location and a detailed structural analysis which outlines whether the homestead is able to be relocated and what method of relocation would be best to ensure the homesteads survival during this process.
4. The EIS must outline proposed adaptive reuse ideas for the new homestead and outline whether there are any impacts from these new uses on the homestead fabric or significance.
5. The EIS must contain a heritage assessment of the existing garden and landscape immediately surrounding Ravensworth Homestead. If the EIS finds the existing garden is significant, a measured survey and recording of the garden and its features should be prepared by a suitably qualified landscape heritage consultant.
6. If significant garden features or planting are found the EIS must detail how they will be relocated or replicated at a new site.
7. The Applicant must undertake a comprehensive historical archaeological assessment prepared by a suitably qualified historical archaeologist in accordance with the Heritage Division, Office of Environment and Heritage Guidelines *Assessing Significance for Historical Archaeological Sites and 'Relics'* 2009. This assessment should identify what relics, if any, are likely to be present, assess their significance and consider the impacts from the proposal on this potential resource. Where harm is likely to occur, it is recommended that the significance of the relics be considered in determining an appropriate mitigation strategy. If harm cannot be avoided in whole or part, an appropriate Research Design and Excavation Methodology should also be prepared to guide any proposed excavations.

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

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

- **Heritage Council of NSW. Archaeological Assessments Guidelines 1996.**

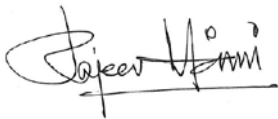
Which are located in Appendix 8.7 of Heritage Council of NSW, Local Government Guidelines March 2002

<http://www.environment.nsw.gov.au/resources/heritagebranch/heritage/localgovernment/heritageguidelines.pdf>

- **Heritage Council of NSW. Assessing significance for historical archaeological sites and relics 2009.**
<http://www.environment.nsw.gov.au/resources/heritagebranch/heritage/ArchSignificance.pdf>
- **Heritage Council of NSW. Criteria for the Assessment of Excavation Directors. Updated 2011.**
<http://www.environment.nsw.gov.au/resources/heritagebranch/heritage/excavationdirectors.pdf>

If you have any questions regarding the Glendell Continued Operations Project, please contact James Quoye, Senior Heritage Assessment Officer, at the Heritage Division, Office of Environment and Heritage on (02) 9873 8612 or james.quoye@environment.nsw.gov.au.

Yours sincerely



Rajeev Maini
Acting Director, Heritage Operations
Heritage Division
Office of Environment and Heritage
AS A DELEGATE OF NSW HERITAGE COUNCIL
31 May 2018

From: Chris Barker
To: [Jack Murphy](#)
Subject: DPE request for SEARs - Glendell Continued Operations Project - SSD 9349
Date: Tuesday, 22 May 2018 11:07:43 AM

Hi Jack,

Our environmental and development planning teams have no comments.

Thank you

Chris Barker

Team Leader Development Planning and Relations | Hunter Water Corporation
36 Honeysuckle Drive Newcastle NSW 2300 | PO BOX 5171 HRMC NSW 2310
T 02 4979 9564 | Twitter: [@hunterwater](#)
chris.barker@hunterwater.com.au | hunterwater.com.au
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31 May 2018

Mr Jack Murphy
Environmental Assessment Officer
Resource Assessments - Planning Services
GPO Box 39
SYDNEY NSW 2001

Dear Mr Murphy

GLENDELL CONTINUED OPERATIONS PROJECT – OPEN CUT COAL MINE – SSD 9349 - SECRETARY'S ENVIRONMENTAL ASSESSMENT REQUIREMENTS (SEARs)

I refer to your email of 17 May 2018 requesting input into the SEARs for the Glendell Continued Operations Project (the Project) located in the Singleton Local Government Area.

The proposed development seeks to extend the footprint of the current Glendell open cut coal mine by approximately 1050 hectares to the north, and extend the life of the current approval by 20 years until 2044. The production rate would eventually increase at Glendell pit from the currently approved maximum of 4.5 Mtpa to 10 Mtpa ROM coal, as two neighbouring pits reach their end of life. The current practice of transporting the ROM coal to the Mount Owen CHPP for washing will continue, and the annual limit of 17 Mtpa at the CHPP will be maintained. However the Project will require an extension of life for the Mount Owen CHPP for 14 years beyond the current approval until 2045. The Project includes other changes such as relocation of the mining infrastructure area, and realignment of roads and pipelines.

It is noted that the proponent has developed a comprehensive Stakeholder Engagement Strategy in line with the Department of Planning and Environment's Social Impact Assessment Guidelines. The Preliminary Environmental Assessment (PEA) also identified as key issues for inclusion in the Environmental Impact Assessment (EIS) environmental aspects that are most likely to impact on human health, including air quality, noise, surface water and groundwater, and social impacts.

Hunter New England Population Health (HNEPH) has reviewed the PEA and provides the following points to be further considered in the EIS.

Stakeholder Consultation

It is recommended that the proponent seeks additional specialist advice in relation to ensuring robust community engagement and stakeholder consultation processes.

Human Health Risk Assessment

It is noted in the PEA that public safety and health risks have been identified as "other issues" without specialist reports. It is recommended that the EIS include the requirement of a human health risk assessment that considers the potential adverse effects from human exposure to acute and cumulative project related environmental hazards, in line with Point 9 in Section 4 – General

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

Mr Jack Murphy
31 May 2018

Standard SEARs in the Planning and Environment document *Critical State Significant Infrastructure Standard Secretary's Environmental Assessment Requirements (SEARs)* (December 2015). The assessment should be conducted in accordance with the enHealth document *Environmental Health Risk Assessment: Guidelines for assessing human health risk from environmental hazards* (2012) and be submitted as part of the EIS.

The assessment should include, but not be limited to:

- Assessment of the human exposure risks to acute and cumulative impact of noise,
- Air quality - particulates and cumulative impact of particulates with reference to the new standards for PM10 and PM2.5 published in 2016 and the proposed standards from 2025 which will prevail during the life of this Project (<http://www.nepc.gov.au/resource/variation-ambient-air-quality-nepm-%E2%80%9393-particles-standards>);
- The risk of contamination of stormwater and drinking water including ground water, surface water and rain water tanks.

When assessing health risks, both incremental changes in exposure from existing background pollutant levels and the cumulative impacts of specific and existing pollutant levels should be addressed at the location of receptors. Exposure should be assessed at the location of the most affected receptors and also for the other sensitive receptors which may include childcare centres, hospitals and aged care facilities. Consideration should also be given to the size of the population exposed to environmental hazards.

Potable Water Supply

The PEA for the Project does not mention a potable water supply for the facilities and employees at Glendell open cut coal mine. It is expected that there is no town water supply to the site and 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>

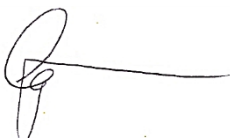
Businesses or facilities that supply drinking water from an independent water supply (i.e. not town water) need to follow the *NSW Health Private Water Supply Guidelines* (2014). The *Public Health Act 2010* and the *Public Health Regulation 2012* require drinking water suppliers, including private water 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 require any additional information in relation to the above, please contact Ms Carolyn Herlihy, Environmental Health Officer on 4924 6477.

Yours sincerely



Dr Craig Dalton
Acting Service Director - Health Protection



DOC18/318104-6
SSD 18_9349

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

Dear Jack

Input into Secretary's Environmental Assessment Requirements – Proposed Glendell Continued Operations Project – 666 Hebden Road, Ravensworth (SSD 18_9349)

I refer to your e-mail dated 5 June 2018 in which the Department of Planning and Environment (DP&E) sought clarification from the Office of Environment and Heritage (OEH) on whether the Upper Hunter Strategic Assessment (UHSA) was an appropriate biodiversity assessment option to include in the Secretary's Environmental Assessment Requirements (SEARs) for the proposal to extend the mine life of the Glendell open cut coal mine.

OEH has considered this request and provides new SEARs (**Attachment A**) that replace the previous SEARs dated 30 May 2018. There are no project-specific SEARs provided for this project (**Attachment B**).

The proponent will need to ensure that the BDAR is fully consistent with the requirements of the BAM. Details of guidance documents to assist with this process are provided in **Attachment C**.

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

If you have any further questions in relation to this matter, please contact Robert Gibson, Regional Biodiversity Conservation Officer, on 02 4927 3154.

Yours sincerely

A handwritten signature in dark ink, appearing to be 'SC', with a long horizontal stroke extending to the right.

STEVEN COX

**Senior Team Leader - Planning
Hunter Central Coast Branch
Regional Operations Division**

Enclosure: Attachments A, B, C

5 June 2018

Attachment A – Standard environmental assessment requirements

<p>Biodiversity</p> <ol style="list-style-type: none"> 1. Biodiversity impacts related to the proposed development (SSD 18_9349) are to be assessed in accordance with the Biodiversity Assessment Method (BAM) and documented in a Biodiversity Development Assessment Report (BDAR), or, subject to agreement with OEH and the consent authority, under the Upper Hunter Strategic Assessment (UHSA). 2. If assessed under BAM, the BDAR must include information in the form detailed in the <i>Biodiversity Conservation Act 2016</i> (s6.12), <i>Biodiversity Conservation Regulation 2017</i> (s6.8) and Biodiversity Assessment Method. 3. If assessed under BAM, 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. 4. If assessed under BAM, the BDAR must include details of the measures proposed to address the offset obligation as follows; <ul style="list-style-type: none"> • 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. <p>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.</p> 5. If assessed under BAM, 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 <i>Biodiversity Conservation Act 2016</i>.
<p>Aboriginal cultural heritage</p> <ol style="list-style-type: none"> 6. The Environmental Impact Assessment (EIS) must identify and describe the Aboriginal cultural heritage values that exist across the whole area that will be affected by the development and document these in the Aboriginal Cultural Heritage Assessment Report (ACHAR). This may include the need for surface survey and test excavation. The identification of cultural heritage values should be guided by the Guide to investigating, assessing and reporting on Aboriginal Cultural Heritage in NSW (DECCW, 2011) and consultation with OEH regional branch officers. 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.

<p>11. The EIS must describe background conditions for any water resource likely to be affected by the development, including:</p> <ul style="list-style-type: none"> 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.
<p>12. The EIS must assess the impacts of the development on water quality, including:</p> <ul style="list-style-type: none"> a. The nature and degree of impact on receiving waters for both surface and groundwater, demonstrating how the development protects the Water Quality Objectives where they are currently being achieved, and contributes towards achievement of the Water Quality Objectives over time where they are currently not being achieved. This should include an assessment of the mitigating effects of proposed stormwater and wastewater management during and after construction. b. Identification of proposed monitoring of water quality.
<p>13. The EIS must assess the impact of the development on hydrology, including:</p> <ul style="list-style-type: none"> a. Water balance including quantity, quality and source. b. Effects to downstream rivers, wetlands, estuaries, marine waters and floodplain areas. c. Effects to downstream water-dependent fauna and flora including groundwater dependent ecosystems. d. Impacts to natural processes and functions within rivers, wetlands, estuaries and floodplains that affect river system and landscape health such as nutrient flow, aquatic connectivity and access to habitat for spawning and refuge (e.g. river benches). e. Changes to environmental water availability, both regulated/licensed and unregulated/rules-based sources of such water. f. Mitigating effects of proposed stormwater and wastewater management during and after construction on hydrological attributes such as volumes, flow rates, management methods and re-use options. g. Identification of proposed monitoring of hydrological attributes.
<p>Flooding and coastal erosion</p>
<p>14. The EIS must map the following features relevant to flooding as described in the Floodplain Development Manual 2005 (NSW Government 2005) including:</p> <ul style="list-style-type: none"> a. Flood prone land. b. Flood planning area, the area below the flood planning level. c. Hydraulic categorisation (floodways and flood storage areas).
<p>15. The EIS must describe flood assessment and modelling undertaken in determining the design flood levels for events, including a minimum of the 1 in 10 year, 1 in 100 year flood levels and the probable maximum flood, or an equivalent extreme event.</p>

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

17. Modelling in the EIS must consider and document:

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

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

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

Attachment B – Project specific environmental assessment requirements

Biodiversity - nil
Aboriginal cultural heritage - nil
Historic heritage - nil
Water and soils - nil
Flooding and coastal erosion - nil

Attachment C – Guidance material

Title	Web address
Relevant legislation	
<i>Biodiversity Conservation Act 2016</i>	https://www.legislation.nsw.gov.au/#/view/act/2016/63/full
<i>Coastal Management Act 2016</i>	https://www.legislation.nsw.gov.au/#/view/act/2016/20/full
<i>Commonwealth Environment Protection and Biodiversity Conservation Act 1999</i>	http://www.austlii.edu.au/au/legis/cth/consol_act/epabca1999588/
<i>Environmental Planning and Assessment Act 1979</i>	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+203+1979+cd+0+N
<i>Fisheries Management Act 1994</i>	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+38+1994+cd+0+N
<i>Marine Parks Act 1997</i>	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+64+1997+cd+0+N
<i>National Parks and Wildlife Act 1974</i>	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+80+1974+cd+0+N
<i>Protection of the Environment Operations Act 1997</i>	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+156+1997+cd+0+N
<i>Water Management Act 2000</i>	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+92+2000+cd+0+N
<i>Wilderness Act 1987</i>	http://www.legislation.nsw.gov.au/viewtop/inforce/act+196+1987+FIRST+0+N
Biodiversity	
Biodiversity Assessment Method (OEH, 2017)	http://www.environment.nsw.gov.au/resources/bcact/biodiversity-assessment-method-170206.pdf
<u>Biodiversity Certification Assessment Methodology</u>	http://www.environment.nsw.gov.au/resources/biocertification/110170biocertassessmeth.pdf
<u>Biobanking Assessment Methodology 2014</u>	http://www.environment.nsw.gov.au/resources/biobanking/140661BBAM.pdf
Guidance and Criteria to assist a decision maker to determine a serious and irreversible impact (OEH, 2017)	http://www.environment.nsw.gov.au/resources/bcact/guidance-decision-makers-determine-serious-irreversible-impact-170204.pdf
NSW Guide to Surveying Threatened Plant	http://www.environment.nsw.gov.au/resources/threatenedspecies/160129-threatened-plants-survey-guide.pdf
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/developmentadjoiningdecc.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

Title	Web address
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
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
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

Title	Web address
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 Ref: DOC18/341699

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

By email: jack.murphy@planning.nsw.gov.au

Glendell Mine
Glendell Continued Operations Project (SSD – 9349)

Dear Jack

I refer to the Department's email dated 17 May 2018 inviting the Resources Regulator to provide Secretary's Environmental Assessment Requirements (SEARs) for Project Glendell Continued Operations Project (SSD-9349).

The project will involve the:

- Diversion of Yorks Creek.
- Relocation of Hebden Road.
- Construction of a Mining Infrastructure Area.
- Construction of a heavy vehicle access road.
- Relocation of a water transfer pipeline between Mt Owen and Ravensworth Operations.
- Potential use of Liddell voids for tailings disposal.
- Rehabilitation of areas disturbed by mining activity.

The Resources Regulator has reviewed the SEE in the context of both mine safety and mine rehabilitation and recommends that:

- a) The standard mining development rehabilitation SEARs, provided in the **Advice Response** section, be applied to this project.
- b) The following SEARs be applied due to the identification of potential risk(s) as noted in the Project Details & Assessment section above:

Where a creek diversion is proposed:

- (i) a geotechnical assessment of the proposed location of the diversion to identify risks with regard to stability during construction and for long term (post mining);
- (ii) a detailed design that identifies and demonstrates how the risks identified above would be managed to meet objectives for the ecological function of the diversion, integration with surrounding land uses, as well as final

landuse, and for water quality with consideration given to the water source and volume and flow velocity.

- (iii) an assessment of constraints and opportunities with regard to soils salvaged during channel decommissioning and final land uses.

These non-standard SEARs are in addition to the standard SEARs and are also included in the Advice Response section.

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

Yours sincerely

A handwritten signature in dark ink, appearing to be 'Matthew Newton', with a long horizontal stroke extending to the right.

Matthew Newton
Director Compliance Operations
NSW Resources Regulator

29 May 2018

ADVICE RESPONSE

Mining Development Rehabilitation Standard SEARs

Post-mining land use

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

Rehabilitation objectives and domains

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

Rehabilitation Methodology

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

Conceptual Final Landform Design

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

Monitoring and Research

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

Post-closure maintenance

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

Barriers or limitations to effective rehabilitation

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

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

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

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

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)



NSW RURAL FIRE SERVICE



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

Your reference: SSD 9340
Our reference: D18/5644
DA18052113160AB

Attention: Mr Jack Murphy

1 June 2018

Dear Mr Murphy

Agency Comment: Request for SEARs (SSD 9340) - Glendell Continued Operations Project - Open Cut Coal Mine - 666 Hebden Road, Ravensworth

I refer to your correspondence dated 17 May 2018 seeking comments from the NSW Rural Fire Service (NSW RFS) with respect to the above State Significant Development (SSD) application.

The NSW RFS understands the SSD application seek approvals the following development activities:

- *Extension of the open cut coal mining void to the north of the current operations;*
- *Relocation of Ravensworth homestead;*
- *Realignment of Hebden Road;*
- *Diversion of Yorks Creek;*
- *Relocation of the mining infrastructure area;*
- *Relocation of existing water transfer pipeline.*

The NSW RFS is the primary response agency for either bush/grass or structural fires impacting on the development and associated infrastructure.

The NSW RFS has reviewed the Preliminary Environment Assessment report provided with the SSD referral and provides the following comment:

The EA shall include the following information:

- › identification of bush fire prone land within 140 metres of the proposed development;
- › the aims and objectives of 'Planning for Bushfire Protection 2006';

- › identification of potential ignition sources during construction and operation of the development (including spontaneous ignition sources);
- › storage of fuels and other hazardous materials including any explosives for blasting;
- › stockpiling of mulched vegetation;
- › proposed bushfire protection measures for the development, including vegetation management and fire suppression capabilities;
- › operational access for fire fighting appliances to the site; and
- › emergency and evacuation planning.

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

Yours Sincerely



John Ball
Manager - Customer Service Centre Coffs Harbour

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



23 May 2018

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

Attention: Jack Murphy

**SEARS 9349 – GLENDELL CONTINUED OPERATIONS PROJECT – OPEN CUT COAL MINE, 666
Hebden Road.**

Reference is made to Department of Planning and Environment's email dated 17 May 2018, requesting Roads and Maritime Services' (Roads and Maritime) requirements under Schedule 2 of the *Environmental Planning and Assessment Regulation 2000* for the Environmental Impact Statement (EIS) for the proposed Glendell Continued Operations Project – Open cut coal mine at 666 Hebden Road, Ravensworth.

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

Roads and Maritime have reviewed Preliminary Environmental Assessment, prepared by Umwelt(Australia) Pty Limited, and dated May 2018, and provides the following comments:

Roads and Maritime understands the development to be for the extension of the life of coal mining operations at Glendell to approximately 2044 this proposed extension would extract an additional 140 million tonnes (Mt), approximately, of run-of-mine (ROM) coal.

Roads and Maritime response & requirements

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

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

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

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

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

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

Yours sincerely



Peter Marler
 Manager Land Use Assessment
 Hunter Region



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

Dear Mr Murphy

Glendell Continued Operations Project – Open cut coal mine

I refer to your email dated 17 May 2018 inviting comment in relation to the requirements of the Secretary of the Department of Planning and Environment for the preparation of an Environmental Impact Statement for the Glendell Continued Operation Project. Subsidence Advisory NSW (SA NSW) understands the project involves the extension of the existing open cut mining operations until approximately 2044.

The project involves the realignment and relocation of infrastructure directly associated with the mine extension. As the proposed project and open cut mine is located within the Patrick Plains Mine Subsidence District, it should be noted development applications for infrastructure relocation will require SA NSW approval prior to construction.

If you would like to discuss this further, please don't hesitate to contact me by email at matthew.montgomery@finance.nsw.gov.au or by phone on 0425 275 564.

Yours sincerely

Matthew Montgomery
Infrastructure Manager, Subsidence Advisory NSW

31st May 2018

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

Dear Mr Murphy

**Request for SEARs – Glendell Continued Operations Project
Open cut coal mine (SSD 9349)**

Thank you for your correspondence dated 17 May 2018 requesting Transport for NSW (TfNSW) provide input to the Secretary's Environmental Assessment Requirements (SEARs) for the subject proposed development.

TfNSW has reviewed the documentation and provides the following comment for inclusion in the SEARs:

- An assessment of the likely transport impacts of the development on the capacity, safety and efficiency of the rail network and the local State road network.

The transport assessment should address the relevant planning provisions, goals and strategic planning objectives in the following:

- Future Transport 2056 and supporting documents
- Draft NSW Freight and Ports Plans
- Guide to Traffic Generating Developments (RMS)
- Austroads Guide to Traffic Management Part 12: Traffic Impacts of Development.

If you have any further questions, Mr Lee Farrell, Transport Planner, Land Use Planning and Development, would be pleased to take your call on (02) 8265 9943. I hope this has been of assistance.

Yours sincerely



31/5/2018

Mark Ozinga
Principal Manager, Land Use Planning and Development
Freight, Strategy and Planning

CD18/04704

ATTACHMENT 3

SOCIAL IMPACT ASSESSMENT COMMENTS

Department's Review of the Social Impact Assessment (SIA) Scoping Report and Recommendations for the EIS SIA

Context and Approach

This review considers the SIA Scoping Report prepared for the Glendell Continued Operations Project (Umwelt, May 2018) prepared in accordance with the Department's new *Social impact assessment guideline for State significant mining, petroleum production and extractive industry development* (SIA guideline). The SIA Scoping Report is provided as Appendix A of the project's Preliminary Environmental Assessment.

This review evaluates the Scoping Report's consistency with the principles and methodology set out in the SIA guideline, against the following review questions in Appendix D:

- **Q1-2** which address the application of principles and team qualifications;
- **Q8-11** which outline requirements for defining and describing the area of social influence; and
- **Q12-14** which outline requirements for identification and description of social impacts and benefits.

This review is limited to desktop study only, and the Department has not independently sought the views of potentially affected people and groups. Generally, the Department is satisfied with the findings of the Scoping Report. The below comments are provided to assist with the preparation of the EIS for the Glendell Continuation Operations Project.

Review Comments

Section of guideline	Comments
Q1: SIA principles	<p>The Scoping Report states that it has been undertaken in accordance with the SIA guideline, although it does not specifically address how the principles have been applied in the Scoping Report or how they will be applied in the SIA for the EIS.</p> <p>The Scoping Report appears to be impartial in its tone and unbiased in its approach, following ethical standards. Consistent with its tone and approach, the analysis also appears to be rigorous and transparent, describing in some detail and in plain English its methods (Section 2). By adopting the scoping methodology outlined in the guideline and analysing the relative importance of a wide range of issues, the report appears to focus on the material social impacts identified to date based on community engagement feedback (Section 2.4). The scoping methodology also encourages a precautionary approach to the analysis.</p> <p>The discussion of community and stakeholder identification (Section 2.3) and engagement methods and findings demonstrates inclusivity through efforts made to ensure a diversity of views has been sought from residents, businesses and employees through a range of methods, including surveys, discussions and community feedback.</p> <p>It notes that new issues and information gained through community engagement will be examined and strategies adapted – demonstrating an adaptive approach.</p>

	<p>There is less discussion of distributive equity and a life-cycle focus. At the scoping stage it is understandably too early to demonstrate action-oriented outcomes and integrated reporting, or full compliance with a life-cycle approach and proportionate focus. These should be included in the SIA for the EIS. Use of integrated information could also extend to incorporation of findings from other studies of coal mines in the area to ensure previous research and cumulative impacts are fully understood and properly integrated in the EIS.</p> <p><u>Recommendation</u></p> <p>➤ <i>The SIA for the EIS should ensure that all principles in the guideline are addressed, particularly with reference to distributive equity, action-oriented outcomes, a life-cycle approach, a material and proportionate focus, and integrated assessment, including evidence and information from other projects in the area which could impact on the identified stakeholders.</i></p>
Q2: Authorship requirements	<p>The Scoping Report notes (Section 2.1) that it has been led and conducted by a qualified and experienced social team, but (apart from naming the reviewer) does not state explicitly who they are, their qualifications and experience, or their professional affiliations.</p> <p>This could leave readers who are unfamiliar with the consultancy firm to question the qualifications or skills of the team, and could affect the degree to which they can rely upon the research that underpins the assessment.</p> <p><u>Recommendation</u></p> <p>➤ <i>The SIA for the EIS should specify the names, qualifications, and experience of those involved in preparing the report.</i></p>
Q8-11: Area of influence	<p>The Scoping Report describes at length (Section 2.3) the efforts made to identify different social groups that may be affected by the project, and different ways they have been and will continue to be consulted and engaged with during the SIA. It is unclear if this includes 'all the different social groups' but it appears to cover the most relevant for the project. The report also states that it will include additional stakeholders in future consultations for the EIS phase.</p> <p>While protecting privacy, it would also be helpful to understand pathways of impacts, including a map or figure showing the geographical locations of stakeholders with reference to the project.</p> <p>Understanding where stakeholders have elected to not respond to requests for feedback would increase transparency and may highlight some issues with consultation fatigue or other factors influencing feedback.</p> <p>Rather than adopting the specific format of the guideline's review questions 9 & 10 (built and natural features, current and expected social trends and social change processes etc), the Scoping Report includes considerable background information on the region and its history. This section appears to be very detailed and could have been more directly related to the project to narrow the scope. It sensibly takes a broad geographical scope to cover potential social impacts across the region, including economic linkages. It also notes that information in the area of influence will be updated in the SIA for the EIS (Section 3.1).</p> <p>The historical context and governance sections are certainly detailed - perhaps more so than necessary. There is less relevant information in</p>

	<p>this section about how the history of the existing mine/complex, and mining in the area more generally has affected the lives in surrounding communities, and about social trends, social change and change processes in the locality and surrounding areas. Some of this information could be pulled together from the Community Capitals section, and supplemented by information from a range of other sources, including Council reports, social histories, media analysis and community engagement and feedback.</p> <p>Including baseline information about the role of the mine/complex in social change and influence could assist with demonstrating impartiality. Should there be no information to imply social impacts have occurred, this should be noted to provide evidence of investigative rigour.</p> <p>The Community Capitals approach (Section 3.4) aims to include key social data variables in the description of the locality. Views expressed by stakeholders during early discussions are incorporated through quotes from community engagement. This is commended as it adds an authentic 'local voice'. The analysis also attempts to include a range of perspectives reflecting variations within the localities.</p> <p>It would have also been useful to include information on community values gained from other studies and reports, such as through Council community planning reports and local media to support an understanding of important and valued features of the area and perspectives on change.</p> <p>Page 19 states that the study area includes communities in closet proximity to the project, but the Capitals analysis in Table 3.2 only includes LGA and NSW level data. Analysis of more granular data may provide a better understanding of these local demographic and social issues which can sometimes be obscured when reporting on the larger towns of Singleton and Muswellbrook.</p> <p>Table 3.2 also raises some questions about choice of indicators:</p> <ul style="list-style-type: none"> • Why use the Social Health Atlas (2011-12 data), when NSW Health Statistics are considerable more recent (2016)? • Are there other relevant sources of data on the health impacts of mining that should be included? • On what basis have these indicators been selected? i.e. how do we know these are the most relevant health (or other social) indicators? <p>Reporting on indicator values from the Social Health Atlas without further analysis overlooks some critical aspects of value ranges. For several indicators (rates of respiratory disease, psychological distress, rates of at-home care, for example), the values fall into the highest (i.e. worst outcome) quintile and in some cases are amongst the worst in NSW. This is not evident from the indicator values and leads to potentially misleading statements (p. 22) such as the rates of respiratory disease are only slightly higher in Singleton than in comparison areas – when they are in fact in the highest quintile. Allied health care instances at home for Singleton (p. 23) are amongst the highest in NSW. Hospital admissions are also relatively high against NSW averages.</p> <p>Community issues identified through local media analysis appear to focus mainly on Glencore media releases. There may be further opportunities to explore community values and key issues important to residents from media other than mine-oriented coverage. As noted above, there may be other studies and reports that could be useful in setting out the community history and social impacts being experienced to date.</p> <p>Overall, the Scoping Report appears to have reviewed relevant data sources, but the SIA for the EIS should also draw on reports and studies from previous/similar mining proposals.</p>
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	<p><u>Recommendations</u></p> <p><i>The SIA for the EIS should:</i></p> <ul style="list-style-type: none"> ➤ <i>Include community values identified in other reports such as Council planning studies and media reports;</i> ➤ <i>Incorporate more up to date health statistics and ensure statements and conclusions accurately reflect variations in values and between areas.</i> ➤ <i>Incorporate evidence from other relevant studies of mining impacts in the region.</i>
<p>Q12-14: Identifying social impacts</p>	<p>The Scoping Report does a relatively good job of identifying the range of positive and negative social impacts of the proposal. The focus on potential impacts on Ravensworth Homestead is particularly detailed. Evidence for the identification of these issues appears to derive primarily from the community engagement outcomes. Missing from the report at this stage is information about Aboriginal cultural heritage impacts and health implications of ongoing mining. This information should be cross-referenced in the SIA for the EIS.</p> <p>The Report aims to categorise the impacts in terms of the social impact categories on p. 5 of the guideline. Graphs showing relative levels of concern provide a comparative basis for determining the significance and materiality of identified impacts using qualitative and quantitative evidence.</p> <p>Table 4.1 attempts to reconcile identified impacts with social impact categories. This is a complex task that requires careful consideration, as individual impacts can fall into multiple categories. A deeper analysis of social impacts may show further overlaps – e.g. it is expected that dust and air quality issues would affect ‘way of life’, aspects of ‘community’, and ‘fears and aspirations’, as well as the identified categories of ‘health and wellbeing’ and ‘surroundings’. Dust and air quality should also link to ‘health impacts’. Noise can affect ‘way of life’, ‘health and wellbeing’ and ‘personal and property rights’. These interrelationships need to be fully outlined and considered in the SIA for the EIS.</p> <p>There is also little discussion at this stage of differing views across stakeholder groups or categories. For example, which are the key impact concerns from stakeholders living nearest the mine/complex, and which impacts are the greatest concerns for those living elsewhere? Analysis of noise, for example, should reflect proximity and location of stakeholders in relation to the mine/complex. This disaggregation should be undertaken in the SIA for the EIS.</p> <p>For the EIS, it will also be critical to understand project impacts in greater detail than the issues shown in Figure 4.1. Efforts should be made to investigate and explain in further detail how the stated impacts directly and indirectly affect:</p> <ul style="list-style-type: none"> • the lives of community stakeholders (e.g. their way of life, values, fears and aspirations etc); • the meaning or significance of identified issues; and • variation in views, needs, or potential impacts across different stakeholder categories, particularly those who are vulnerable or likely to be adversely impacted by the project, and across time frames and generations. <p>Re-analysing feedback in Figures 4.2 and 4.3 and expressing findings in terms of social impact categories rather than technical mine-related</p>

	<p>issues would assist in integrating and understanding current and predicted social impacts.</p> <p>Some inconsistencies are also noted between the issues of greatest significance in Figures 4.2 and 4.3 and those discussed in greater detail in Sections 4.2 and 4.3. Land Management appears to be of lesser concern than Health and Wellbeing impacts, yet the latter are not discussed and analysed. These adverse impacts and high-level community concerns need to be addressed directly in the SIA for the EIS.</p> <p>In the analysis of issues, the SIA for the EIS should also include evidence to substantiate or question the identified issues and perceptions. Comments about feared depreciation (or increases) in property values should be supported by data. Statements from community members about experiences in dealing with Glendell staff should be analysed to determine why some issues or stakeholders appear to receive different responses or treatment to others, and whether there are opportunities to improve performance through mitigation measures, if this project is approved. Health data and evidence should be analysed and included in the SIA for the EIS.</p> <p>Statements about the possible future relocation of Ravensworth Homestead imply that this option is likely to proceed. Other options do not appear to have been given equal consideration.</p> <p>Cumulative social impacts should be considered in more detail in the SIA for the EIS. Again, incorporating some of the information from other studies and feedback describing how impacts overlap or compound to affect daily life, activities and values (from the point of view of affected residents, employees and business stakeholders) would provide a deeper understanding of their experiences.</p> <p><u>Recommendations</u></p> <p><i>The SIA for the EIS should:</i></p> <ul style="list-style-type: none"> ➤ <i>Disaggregate and analyse social impacts and benefits by social impact category and according to key stakeholder groups and significance for affected stakeholders.</i> ➤ <i>Use evidence from a range of sources, including from other relevant studies of mining impacts in the region, to substantiate or challenge issues and concerns.</i> ➤ <i>Demonstrate that alternative scenarios for Ravensworth Homestead have been considered and analysed.</i> ➤ <i>Include information on any cultural heritage impacts and health impacts given the poor health indicator scores identified in the Capitals Analysis (Table 3.2).</i> ➤ <i>Consider cumulative impacts from multiple projects or occurring in single locations and across time-frames to understand the full extent of expected impacts.</i>
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ATTACHMENT 4

COMMONWEALTH DEPARTMENT OF THE 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

Glendell Continued Operations Project (EPBC 2019/8409) (SSD 9349)

Introduction

On 10 July 2019, a delegate of the Federal Minister for the Environment determined that the Glendell Continued Operations Project is a controlled action under section 75 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The EPBC Act controlling provisions for the proposed action are:

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

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

Matters of National Environmental Significance

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

- Central Hunter Valley Eucalypt Forest and Woodland ecological community – critically endangered
- Regent Honeyeater (*Anthochaera Phrygia*) – critically endangered
- Swift Parrot (*Lathamus discolor*) – critically endangered
- The Green and Golden Bell Frog (*Litoria aurea*) – vulnerable
- Spotted-tailed Quoll (*Dasyurus maculatus maculatus*) – endangered
- Large-eared Pied Bat (*Chalinolobus dwyeri*) – vulnerable
- Koala (*Phascolarctos cinereus*) (combined populations of Qld, NSW and the ACT) – vulnerable
- New Holland Mouse (*Pseudomys novaehollandiae*) – vulnerable
- Grey-headed Flying-fox (*Pteropus poliocephalus*) – vulnerable
- Trailing Woodruff (*Asperula asthenes*) – vulnerable
- The proposed action is likely to have significant impacts on groundwater and surface water resources and quality.

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

Based on the referral documentation, it was determined that significant impacts are unlikely for Red Goshawk (*Erythrotriorchis radiatus*), Australian Painted Snipe (*Rostratula australis*), Greater Glider (*Petauroides volans*) and Brush-tailed Rock-wallaby (*Petrogale penicillata*). If the assessment process identifies any new or increased impacts on these species compared to the impacts described in the referral, such impacts must be addressed in the EIS.

Key Issues

Key significant impacts associated with proposed action on MNES are associated with:

- the removal of native vegetation, particularly the Central Hunter Valley Eucalypt Forest and Woodland ecological community, and habitat for the Swift Parrot, Regent Honeyeater, Spotted-tailed Quoll, Koala, Grey-headed Flying-fox, New Holland Mouse, Large-eared Pied Bat and the Green and Golden Bell Frog. These impacts must be appropriately offset for EPBC Act purposes.
- groundwater (both alluvium associated with watercourses and deeper hard rock aquifers) and surface water resources and quality, including:
 - groundwater drawdown/depressurisation
 - groundwater-surface water connectivity
 - potential cumulative impacts and interaction with impacts from neighbouring projects
 - potential long term impacts of mine void, including groundwater losses to evaporation.

General Assessment Requirements

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

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

1. Survey results, including details of the scope, timing and methodology for studies or surveys used and how they are consistent with (or justification for divergence from) published Commonwealth guidelines and policy statements. For ecological communities, this includes any condition thresholds provided in the listing advice or approved conservation advice.
2. A description and quantification of habitat in the study area (including suitable breeding habitat, suitable foraging habitat, important populations and habitat critical for survival), with consideration of, and reference to, any relevant Commonwealth guidelines and policy statements including listing advices, conservation advices and recovery plans, threat abatement plans.
3. Maps displaying the above information (specific to EPBC matters) overlaid with the proposed action. It is acceptable, where possible, to use the mapping and assessment of Plant Community Types (PCTs) and the species surveys prescribed by the BAM as the basis for identifying EPBC Act-listed species and communities. The EIS must clearly identify which PCTs are considered to align with habitat for the relevant EPBC Act-listed species or community, and provide individual maps for each species or community.
4. 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.
5. Information on proposed avoidance and mitigation measures to deal with the impacts of the action, and a description of the predicted effectiveness and outcomes that the avoidance and mitigation measures will achieve.
6. Quantification of the offset liability for each species and community significantly impacted, and information on the proposed offset strategy, including discussion of the conservation benefit for each species and community, how offsets will be secured, and the timing of protection. It is a requirement that offsets directly contribute to the ongoing viability of the specific protected matter impacted by a proposed action i.e. 'like-for-like'.

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



Mr Patrick Wilkes
Director of Finance
Glendell Tenements Pty. Limited
Private Mail Bag 8
SINGLETON NSW 2330

Dear Mr Wilkes

Decision on referral

Glendell Mine Continued Operations Project, Ravensworth, NSW (2019/8409)

Thank you for submitting a referral under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). This is to advise you of my decision about the referral of the proposed action, to extend the current open cut mine operations at Glendell Mine site to access and recover an additional 135 million tonnes of run-of-mine coal.

As a delegate of the Minister for the Environment, I have decided under section 75 of the EPBC Act that the proposed action is a controlled action and, as such, it requires assessment and a decision about whether approval for it should be given under the EPBC Act.

The information that I have considered indicates that the proposed action is likely to have a significant impact on the following matters protected by the EPBC Act:

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

Based on the information available in the referral, the proposed action is likely to have a significant impact on the following matters of national environmental significance, but not limited to:

- Central Hunter Valley Eucalypt Forest and Woodland ecological community identified as Critically Endangered under the EPBC Act. The proposed action involves clearing of 166 ha of this critically endangered ecological community.
- Regent Honeyeater (*Anthochaera phrygia*) identified as Critically Endangered under the EPBC Act. The proposed action involves the clearing of approximately 166 ha of vegetation that potentially provides foraging habitat for this species.
- Swift Parrot (*Lathamus discolor*) identified as Critically Endangered under the EPBC Act. The proposed action involves the clearing of approximately 166 ha of vegetation that potentially provides foraging habitat for this species.
- Green and Golden Bell Frog (*Litoria aurea*) identified as Vulnerable under the EPBC Act. The proposed action will remove or degrade suitable aquatic or ephemeral habitat where the Green and Golden Bell Frog has been recorded.

- Spotted-tailed Quoll, Spot-tailed Quoll, Tiger Quoll (*Dasyurus maculatus maculatus* (SE mainland population)) identified as Endangered under the EPBC Act. The proposed action involves the clearing of approximately 247 ha of vegetation that potentially provides foraging or dispersal habitat for this species.
- Koala (*Phascolarctos cinereus*) (combined populations of Qld, NSW and the ACT) identified as Vulnerable under the EPBC Act. The proposed action involves the clearing of approximately 156 ha of vegetation that potentially provides foraging habitat for this species.
- The proposed action is likely to have significant impacts on the value of groundwater and surface water resources from changes to hydrological characteristics and water quality.

In addition without further detailed assessment of potential impacts, the Department considers that there is a real chance or possibility that project activities will significantly impact on the following:

- Large-eared Pied Bat (*Chalinolobus dwyeri*) identified as Vulnerable under the EPBC Act.
- New Holland Mouse (*Pseudomys novaehollandiae*) identified as Vulnerable under the EPBC Act.
- Grey-headed Flying-fox (*Pteropus poliocephalus*) identified as Vulnerable under the EPBC Act
- Trailing Woodruff (*Asperula asthenes*) identified as Vulnerable under the EPBC Act.

Please note that this decision only relates to the potential for significant impacts on matters protected by the Australian Government under Chapter 2 of the EPBC Act.

Please note that this may not be a complete list and additional impacts may be identified during preparation of the environmental impact statement. In this regard, the Department considers it the responsibility of the proponent 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.

I have also decided that the project will need to be assessed by an accredited assessment process, under Part 4, Division 4.7 of the NSW *Environmental Planning and Assessment Act 1979*.

A copy of the document recording these decisions is enclosed.

Each assessment approach requires different levels of information and involves different steps. All levels of assessment include a public consultation phase, *in which any third parties can comment on the proposed action*.

Indigenous communities may also need to be consulted during the assessment process. For more information on how and when indigenous engagement should occur during environmental assessments, please refer to the indigenous engagement guidelines at <http://www.environment.gov.au/epbc/publications/engage-early>.

Please note, under subsection 520(4A) of the EPBC Act and the *Environment Protection and Biodiversity Conservation Regulations 2000*, your assessment is subject to cost recovery. Please find attached a copy of the fee schedule for your proposal. As NSW will undertake the assessment, Stages 1 and 2 fees will not be charged. Fees will be payable prior to each stage of the assessment proceeding. Further details on cost recovery are available on the Department's website at: <http://www.environment.gov.au/epbc/cost-recovery>.

If you disagree with the fee schedule provided, you may apply under section 514Y of the EPBC Act for reconsideration of the method used to work out the fee. The application for reconsideration must be made within 30 business days of the date of this letter and can only be made once for a fee. Further details regarding the reconsideration process can be found on the Department's website at: <http://www.environment.gov.au/protection/environment-assessments/assessment-and-approval-process/refer-proposed-action>.

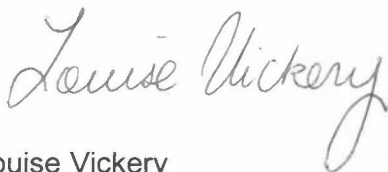
Details on the assessment process for the project and the responsibilities of the proponent are set out in the enclosed fact sheet. Further information is available from the Department's website at <http://www.environment.gov.au/epbc/publications/factsheet-environment-assessment-process>.

Please also note that once a proposal to take an action has been referred under the EPBC Act, it is an offence under section 74AA to take the action while the decision making process is on-going (unless that action is specifically excluded from the referral or other exemptions apply). Persons convicted of an offence under this provision of the EPBC Act may be liable for a penalty of up to 500 penalty units. The EPBC Act is available on line at: <http://www.environment.gov.au/epbc/about/index.html>

The Department has recently published an *Environmental Impact Assessment Client Service Charter* (the Charter) which outlines the Department's commitments when undertaking environmental impact assessments under the EPBC Act. A copy of the Charter can be found at: <http://www.environment.gov.au/epbc/publications/index.html>.

If you have any questions about the referral process or this decision, please contact the project manager, Andy Huxham, by email to andy.huxham@environment.gov.au, or telephone 02 6275 9444 and quote the EPBC reference number shown at the beginning of this letter.

Yours sincerely



Louise Vickery
Assistant Secretary
Assessments and Waste Branch

10 July 2019



**Notification of
REFERRAL DECISION AND DESIGNATED PROPONENT – controlled action
DECISION ON ASSESSMENT APPROACH**

Glendell Mine Continued Operations Project, Ravensworth, NSW (2019/8409)

This decision is made under section 75 and section 87 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

proposed action	To extend the current open cut mine operations at Glendell Mine site to access and recover an additional 135 million tonnes of run-of-mine coal.
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[See EPBC Act referral 2019/8409]

decision on proposed action	The proposed action is a controlled action. The project will require assessment and approval under the EPBC Act before it can proceed.
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relevant controlling provisions	<ul style="list-style-type: none">• Listed threatened species and communities (sections 18 & 18A)• A water resource, in relation to coal seam gas development and large coal mining development (section 24D & 24E)
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designated proponent	Glendell Tenements Pty. Limited ACN: 056693175
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assessment approach	The project will be assessed by an accredited assessment process under Part 4, Division 4.7 of the <i>NSW Environmental Planning and Assessment Act 1979</i> .
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Decision-maker

Name and position	Louise Vickery Assistant Secretary Assessments and Waste Branch
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Signature

date of decision

10 July 2019



Australian Government

Department of the Environment and Energy

EPBC Act Cost Recovery - Fee Schedule

EPBC No: 2019-8409

Project title: Glendell Mine Continued Operations Project, Ravensworth NSW

Assessment method: Bilateral Agreement / Accredited Assessment Process

Fee Schedule

STAGE FEES	Base fee	PART A Complexity costs (A-L, P)	PART B Complexity costs (MNO)	Total
Stage 1	\$3,961	\$6,147	\$0	\$10,108
Stage 2	\$3,655	\$9,733	\$0	\$13,388
Stage 3	\$2,175	\$10,246	\$28,456 (Estimate)	\$40,877 (Estimate)
Stage 4	\$8,355	\$25,102	\$28,456 (Estimate)	\$61,914 (Estimate)
TOTAL PROJECT COST	\$18,146	\$51,230	\$56,913 (Estimate)	\$126,289 (Estimate)

Notes:

- For assessments by environmental impact statement - If standard guidelines are used under Section 101A(2)(a) of the EPBC Act, the Stage 1 fee will not be applicable.
- For assessments by public environmental report - If standard guidelines are used under Section 96B of the EPBC Act, the Stage 1 fee will not be applicable.
- If no further information is requested under section 95A of the EPBC Act, the Stage 1 and 2 fees will not be applicable.
- The Department advises applicants of the maximum liability for Part B complexity fees at the time of the assessment approach decision, based on the information provided in the referral documentation. Applicants have the opportunity to reduce the Part B complexity fees during the assessment process by improving the quality of information provided to the Department during Stage 2 of the assessment. These Part B complexity fees are confirmed when all the assessment documentation is provided in Stage 2, and are not payable until Stages 3 and 4 of the assessment.

Fee Breakdown

		COMPLEXITY FEE	
Part A Fees	CONTROLLING PROVISIONS		
	A Listed threatened species and ecological communities	High	\$25,615
	B Listed migratory species	None	\$0
	C Wetlands of international importance	None	\$0
	D Environment of the Commonwealth marine area	None	\$0
	E World heritage properties	None	\$0
	F National heritage places	None	\$0
	G Nuclear actions	None	\$0
	H Great Barrier Reef Marine Park	None	\$0
	I Water Resources	High	\$25,615
J Commonwealth Land/Commonwealth Agency/Commonwealth Heritage Places Overseas	None	\$0	
NUMBER OF PROJECT COMPONENTS			
K Number of project components	Low	\$0	
COORDINATION WITH OTHER LEGISLATION			
L Coordination with other legislation	Low	\$0	
Part B Fees: estimate (to be confirmed prior to Stage 3)	ADEQUACY OF INFORMATION AND CLARITY OF PROJECT SCOPE		
	M Site surveys/Knowledge of environment	High	\$34,949
	N Management measures (including mitigation and offsets)	Moderate	\$10,982
	O Project scope	Moderate	\$10,982
Exceptional circumstances	EXCEPTIONAL CIRCUMSTANCES		
	P Exceptional circumstances	False	\$0
TOTAL COMPLEXITY FEES (Estimate)			\$108,143
BASE FEE			\$18,146
TOTAL FEE (Estimate)			\$126,289

LL

Potential fees for contingent and post-approval activities (if required)

The Department will notify you if a contingent activity fee is applicable due to an additional statutory step being required under the *Environment Protection and Biodiversity Conservation Act 1999*.

Post-approval fees

Evaluation of new Action Management Plan (per management plan) (\$2,690)

Contingent Fees

Request additional information for referral or assessment approach decision (\$1,701)

Variation to the proposed action (\$1,353)

Reconsideration of the controlled action or assessment approach decision at the applicant's request (\$6,577)

Request additional information for approval decision (assessment on referral information, preliminary documentation or bilateral/accredited assessment) (\$1,701)

Request additional information for approval decision (assessment by environmental impact statement or public environment report) (\$7,476)

Variation of conditions (\$2,690)

Variation of an action management plan under conditions of approval (\$2,690)

Administrative variation of an action management plan under conditions of approval (\$710)

Transfer of approval to new approval holder (\$1,967)

Extension to approval expiry date (\$2,690)



Australian Government

Department of Sustainability, Environment,
Water, Population and Communities



EPBC ACT—ENVIRONMENT ASSESSMENT PROCESS

This fact sheet gives an overview of the Australian Government's environment assessment processes laid out in the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The EPBC Act is the Australian Government's key piece of environmental legislation. Under the EPBC Act you need approval from the Australian Government environment minister for any proposed action—including projects, developments, activities, or alteration of these things—likely to have a significant impact on a matter protected by the EPBC Act.

What matters are protected by the EPBC Act?

The environment assessment process of the Act protects:

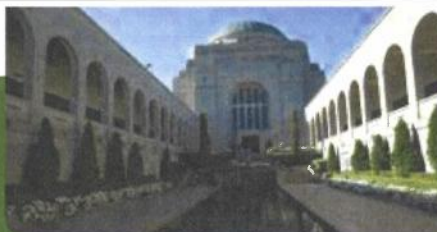
Matters of national environmental significance including:

- world heritage properties
- national heritage places
- wetlands of international importance (often called 'Ramsar' wetlands after the international treaty under which such wetlands are listed)
- nationally threatened species and ecological communities
- migratory species
- Commonwealth marine areas
- the Great Barrier Reef Marine Park
- nuclear actions (including uranium mining)
- a water resource, in relation to coal seam gas development and large coal mining development.

Other matters:

- the environment, where actions proposed are on, or will affect Commonwealth land, and
- the environment, where Commonwealth agencies are proposing to take an action.

There are significant penalties, including fines and imprisonment, for taking such an action without approval. If you intend to take an action that is likely to have a significant impact on a matter protected by the EPBC Act, it is important to make a referral as early as possible in the planning and development stages.



Environment assessment processes

There are two key stages in the environment assessment process required by the EPBC Act:

- *Referral*: How do I know if my proposed action requires approval under the EPBC Act?
- *Assessment/decision whether to approve*: How will the minister consider my action? How is a decision made?

1. Referral

The purpose of the referral stage is to determine whether or not a proposed action requires approval under the EPBC Act.

Step 1: Submitting a referral. Before taking an action that could have a significant impact on a matter protected by the EPBC Act, you must complete a referral form (available at www.environment.gov.au/epbc/assessments/referral-form.html) and submit it to the minister via the department for consideration.

Step 2: The decision process. Following the receipt of a valid referral, the minister has 20 business days to decide whether the proposed action will require assessment and approval under the EPBC Act.

Step 3: Public comment period. As part of the total 20 business days taken for the referral process, there is a 10 business day public comment period. This provides an opportunity for relevant Australian, state and territory government ministers and members of the public to comment on the proposed action.

Step 4: The decision whether an action requires assessment and approval. Within the 20 business day timeframe, the minister will decide whether a proposed action is likely to have a significant impact on one or more matters protected by the EPBC Act. If a significant impact is likely the action will need to be assessed and approved under the EPBC Act before it can proceed. This is called a 'controlled action'.

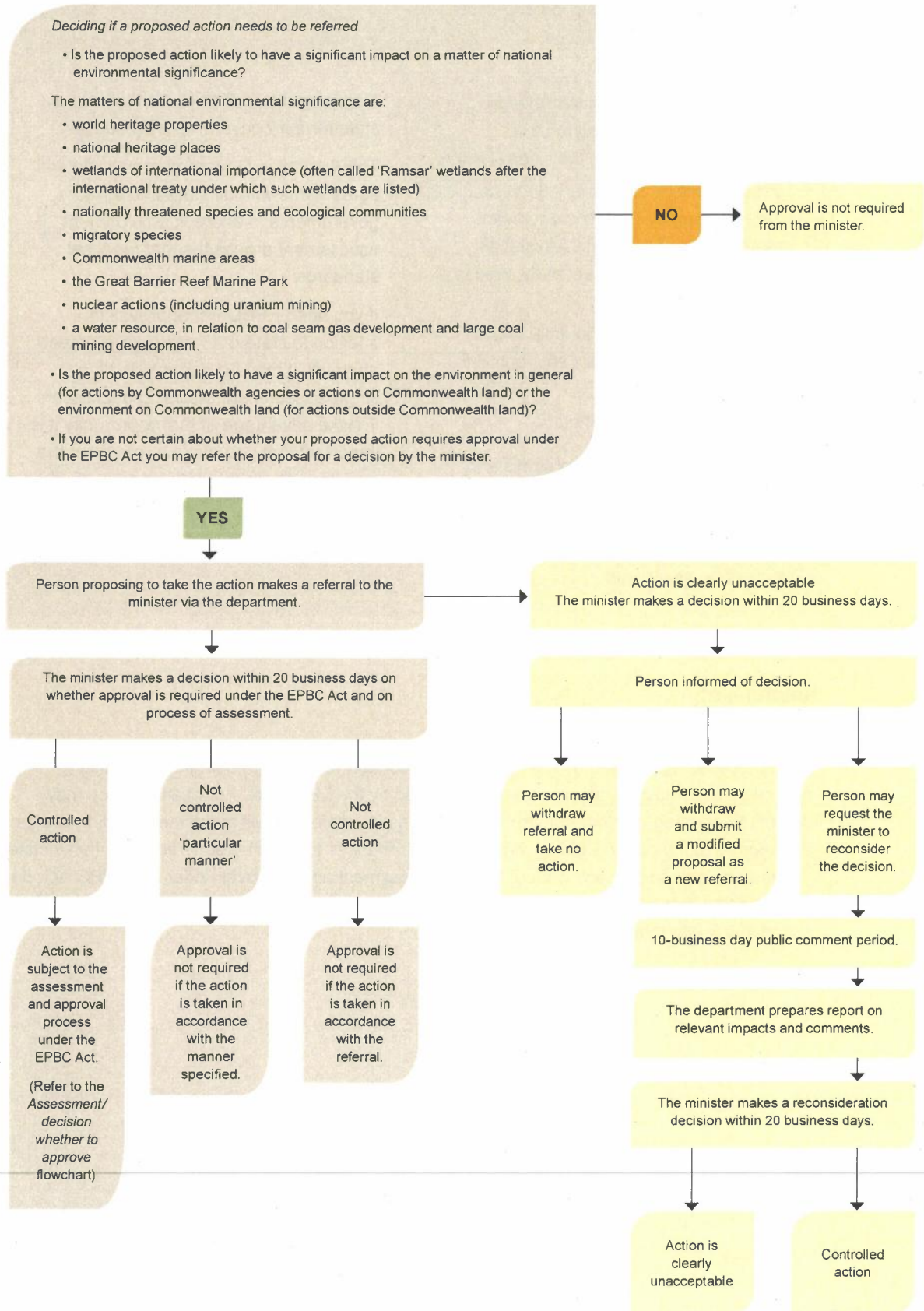
Step 5: How will the proposed action be assessed? Proposed actions can be assessed using different methods, depending on a range of considerations, including the complexity of the proposed action. The minister will let you know which method will be used in assessing your proposed action.

Helpful hint: Providing appropriate documentation

Not every action that involves a matter protected by the EPBC Act will have a significant impact, so it is important that you provide all available information about the proposed action, as well as measures you will be putting in place to reduce adverse impacts on those matters.



EPBC Act environment assessment process—referral



2. Assessment/decision whether to approve

Actions can be assessed using one of the following assessment methods:

- accredited assessment
- assessment on referral information (assessment done solely on the information provided in the referral form)
- assessment on preliminary documentation (referral form and any other relevant material identified by the minister as being necessary to adequately assess a proposed action)
- assessment by environmental impact statement (EIS) or public environment report (PER), and
- assessment by public inquiry.

The EPBC Act sets out the process and timing requirements for each type of assessment. This is summarised in the *EPBC Act Environment Assessment Process* flowchart on next page.

Reducing duplication of Australian and state/territory government processes

The Australian Government has bilateral agreements with all state and territory governments to accredit environment assessment processes that meet set standards.

If you need EPBC Act approval, in addition to state or territory government approval, it may be possible to do a single assessment, avoiding duplication. To take advantage of this opportunity it is important that you make a referral to the minister early in the development of your proposal.

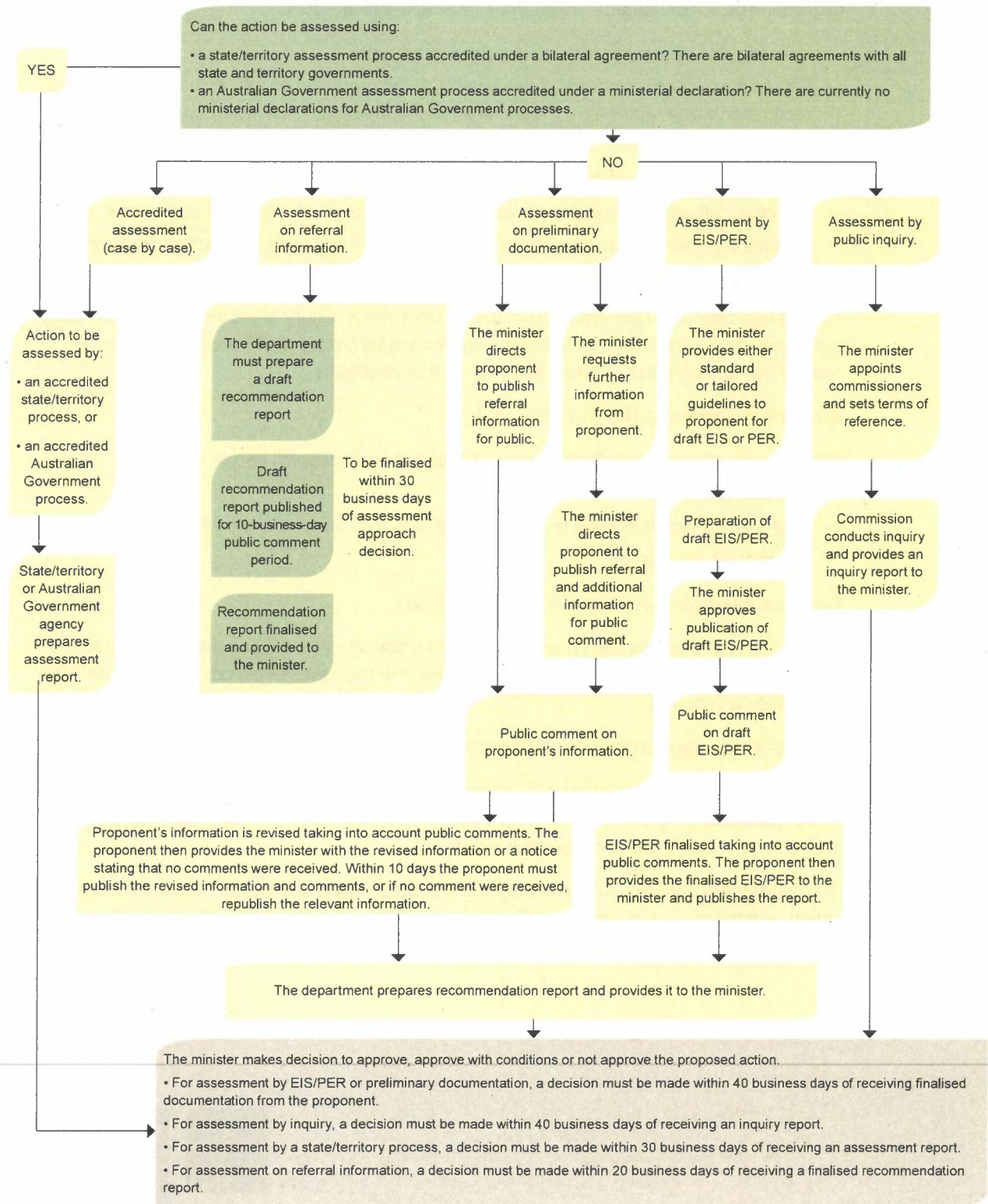
Helpful hint:

Taking measures to avoid significant impacts

In some cases, approval may not be required because you are proposing to put in place measures to avoid impacts on a matter protected by the EPBC Act. For example, you may commit to carrying out your construction activities at a time that will avoid the breeding season of migratory birds, thereby avoiding significant disturbances to a protected species. In these cases, you may be able to proceed without further assessment and approval under the EPBC Act, on the condition that you carry out your proposed action in the manner prescribed (not controlled action 'particular manner').



EPBC Act environment assessment process—assessment/decision whether to approve



Frequently asked questions

What will the minister consider when deciding if a proposed action should be approved?

When deciding if a proposed action should be approved, and what conditions to impose, the minister will consider the impacts of the proposed action on matters protected by the EPBC Act and other economic and social matters. The minister must take into account:

- the principles of ecologically sustainable development
- the results of the assessment of the impacts of the proposed action, including the relevant recommendation report from the secretary of the federal environment department
- referral documentation
- community and stakeholder comments
- any other relevant information available on the impacts of the proposed action, and
- relevant comments from other Australian Government and state and territory government ministers (such as information on social and economic factors).

The minister may also take into account the environmental history of the individual or company proposing to take the action, including the environmental history of the executive officers of companies, and parent companies and their executive officers.

What decisions can the minister make?

Following the assessment of your proposed action, the minister will decide whether to:

- approve your action
- approve your action subject to constraints (that is, place conditions on the action), or
- not approve your action.

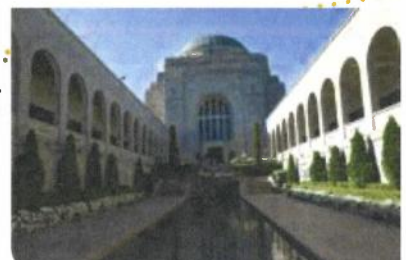
Can I be asked to provide more information?

You can be asked to provide further information so that an informed decision can be made. The timeframe for making the next relevant decision in the assessment process stops until this information is received.

What conditions can be placed on an approval?

The minister may attach conditions to an approval to protect, repair or mitigate damage to a matter protected by the EPBC Act. Conditions can include bonds or other securities, independent environmental auditing and compliance monitoring.

The minister will provide you with a copy of the proposed decision on whether or not to approve an action, and the proposed conditions (if any) to attach to the approval, for comment before making a final decision.



How will I be notified of the minister's decision?

Once the minister has made a final decision you will receive a copy of the approval including conditions attached to the approval (if any), or notice of the refusal. Decisions are published on the *Government Notices Gazette* and on the department's web site.

Other permits

What about state, territory and local government environmental authorisations?

Getting approval under the EPBC Act does not remove the need to seek relevant state and territory and local government authorisations. To reduce delays and provide the opportunity to coordinate assessments, you should consider making an EPBC Act referral no later than when you begin state or territory authorisation processes.

Will I need other Australian Government permits?

If a proposed action is to take place on Commonwealth land or in the Commonwealth marine area, there may be cases where, even though the action is not considered to be significant and does not require approval through the referral process, it may still require a permit under a different section of the EPBC Act.

Separate permits may be required for any actions affecting an individual member of a threatened, marine or migratory species, or a whale or dolphin. If you require a permit, then you should submit a permit application at the same time as submitting a referral. The EPBC Act also regulates activities in Commonwealth protected areas and reserves, or which involve the import and export of wildlife.

If your action is in the Great Barrier Reef Marine Park, you may also require permission under the *Great Barrier Reef Marine Park Act 1975*. A permission under that Act may be required even if significant impact on the environment of the Great Barrier Reef Marine park is not likely. For more information, go to www.gbrmpa.gov.au

Further information about the EPBC Act is available from the department's website at www.environment.gov.au/epbc, by emailing ciu@environment.gov.au, or calling 1800 803 772.

Referral forms are also available from the department's website at: www.environment.gov.au/epbc/assessments/referral-form.html

The *Significant impact guidelines 1.1* provides guidance on whether an action is likely to have a significant impact on a matter protected by the EPBC Act. It is available at: www.environment.gov.au/epbc/publications/nis-guidelines.html

The *Significant impact guidelines 1.2* provides guidance in relation to actions on, or impacting upon, Commonwealth land, and actions by Commonwealth agencies. It is available at www.environment.gov.au/epbc/commonwealth-guidelines.html

For assistance with a referral, email: epbc.referrals@environment.gov.au

Disclaimer

The views and opinions contained in this document are not necessarily those of the Australian Government. The contents of this document have been compiled using a range of source materials and while reasonable care has been taken in its compilation, the Australian Government does not accept responsibility for the accuracy or completeness of the contents of this document and shall not be liable for any loss or damage that may be occasioned directly or indirectly through the use of or reliance on the contents of the document.

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Credits: Great Barrier Reef Marine Park (Great Barrier Reef Marine Park Authority), Australian War Memorial (Steve Wray), Southern right whale (Dave Watts), Riverland Ramsar wetland (Nerida Sloane)



Conditional Gateway Certificate

Glendell Continued Operations Project

Part 4AA, Division 4 Of State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007

Pursuant to clause 17H of State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007, we determine the application made by Glendell Tenements 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:
 - NA
- does not meet the following relevant BSAL criteria:
 - 17H(4)(a) (i),
 - 17H(4)(a) (ii),
 - 17H(4)(a) (iii),
 - 17H(4)(a) (iv),
 - 17H(4)(a) (v),
 - 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
Chairperson

Mr George Gates PSM
Member of the Gateway
Panel

Dr Ian Lavering
Member of the Gateway
Panel

Date certificate issued: 24 July 2019

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

SCHEDULE 1

Site:

The site is located approximately 24 kilometres southeast of the township of Muswellbrook. The Project is present within the Singleton Shire Council Local Government Area, in the Hunter Valley region of New South Wales.

Development description:

The Glendell Continued Operations Project proposes to undertake further open cut mining through the extension of the Glendell Open Cut component of the Mount Owen Mining Complex, and other associated activities within CCL 708, EL 6594, EL 8184 and ML 1629. The Glendell Continued Operations Project will extract an additional 135 million tonnes (Mt) of run-of-mine (ROM) coal and extend the life of the mine from 2024 to 2044.

Applicant: Glendell Tenements Pty Ltd

SCHEDULE 2

Relevant criteria	Consideration	Recommendations
17H4(a)(i)	Relocation of the MIA and re-alignment of Hebden Road will significantly impact on a contiguous area of BSAL	Detailed plans for the stockpiling and reconstitution of this BSAL must be provided. Strong arguments for why the MIA and Hebden Road should be located on this area must be provided
17H4(a)(ii)	Plans to stockpile and reconstitute this area of impacted BSAL may impact on fertility, rooting depth and drainage of reconstituted soil	Detailed procedures for ensuring how the fertility, effective rooting depth and drainage will be re-established in the reconstituted BSAL must be outlined

17H4(a)(iii)	<p>Reconstitution of BSAL may result in increases in micro-relief and subsequent changes of soil drainage in 17H4(a)(iii)</p>	<p>Detailed procedure for the reconstitution of BSAL must be described including the avoidance of any overburden contamination resulting in increased rockiness</p>
17H4(a)(iv)	<p>Only a very limited discussion on local groundwater conditions was presented in the Gateway Application. The Gateway Panel agrees with the basic hydrogeological framework and aquifer characterisations that were provided.</p> <p>A numerical groundwater flow model is required to be developed to estimate the magnitude of environmental impacts that the proposed mine extension will have on local water assets/environment and to predict mine water inflows.</p> <p>All water losses from affected water sources, caused by mining, will require an appropriate water license.</p> <p>More work is also required to establish baseline groundwater conditions. In particular the following is inadequately defined:</p> <ul style="list-style-type: none"> • The interaction between surface and groundwater between Bowmans Ck, and the proposed pit extension; • Hydraulic parameters of model layers; • Groundwater dependent ecosystems (GDE). 	<ol style="list-style-type: none"> 1. Using a calibrated transient 3D model quantify the impacts on nearby water assets (bores/wells and GDEs). <p>This modelling and reporting should:</p> <ul style="list-style-type: none"> • Capture the hydrogeological complexity of the site; • Use temporal input data; • Have distributed input parameters; • Quantify any uncertainties in the groundwater /surface water connection; • Undertake both sensitivity and uncertainty analysis and have the model independently peer reviewed. <ol style="list-style-type: none"> 2. Undertake appropriate studies to establish baseline groundwater conditions, including groundwater dependent ecosystems. 3. Monitor and report actual mine water inflows and develop a strategy for complying with Water Sharing Plan rules.

17H4(a)(v)	Re-alignment of Hebden Road to traverse significant areas of BSAL will significantly fragment agricultural land	Consideration should be given to re-routing the proposed re-alignment of Hebden Road to avoid traversing a contiguous area of BSAL on a permanent basis
17H4(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 reconstitution 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.mppg.nsw.gov.au
