

FRM-208-A-Assessment Procedure Checklist

This checklist steps the Assessment Officer and Decision Maker through the *PRC-208 Assessment of Exploration Activities*. This checklist is to be completed in conjunction with the Part 5 Assessment.

Step 1 – Assessment Officer: Assessment of Assessable Prospecting Operations

ACES Reference:

Undertake a detailed review of the ESF4 Application Form and all associated documents

Review the entire Form ESF4 and ensure all relevant sections have been completed and all relevant documents have been submitted to facilitate the Part 5 Assessment. Follow *PRC-208 Assessment of Exploration Activities* if further information is required.

List Documents Reviewed:

COMPLETE

Add any relevant comments

General Assessment for all Exploration Activities

Review ACES for current/ongoing non-compliance matters. Date of ACES search:

Evaluation Date

COMPLETE

Add any relevant comments re. the ACES search (ie screen shot)

Is the Applicant the subject of an **Alleged Non Compliance** and are the risks assessed as being medium or high?

If yes, follow **Sections 2.1 / 3.1** of PRC-208

Yes

No

N/A

I have reviewed the following and taken these factors into account in my assessment:

- The activity holds a valid exploration authority over the land where the activity is proposed;
- The proposed activities are consistent with exploration authority conditions and fits within the definition of prospecting in the *Mining Act 1992*; and
- The application adequately describes the activity and address the content requirements set out in Application Form ESF4 and Guidelines ESG5 and ESG2.

Yes

No

N/A

For an **exempted area**, has an Exempted Area Consent from the Minister been provided with the Application?

Yes

No

If "No" then cease processing and refer to Section 2.3 / 3.4 of PRC-208

N/A

Exempted Area Consent - Review any conditions provided by the agency or public body controlling the exempted area and make reference to these conditions/letter of approval in the department's activity approval letter

Yes

No

N/A

For activities proposed within an **State Conservation Area**, ensure that:

- The consent of the Minister administering the *Mining Act 1992* has been granted for exploration in an exempted area (Section 30 of the *Mining Act 1992*) – refer **Step 2.3 / 3.4 of PRC-208**.
- The approval of the Minister administering the NPW Act has been granted for exploration in a SCA (Section 47J(7) of the NPW Act). Review any conditions provided by the Division of Biodiversity & Conservation and make reference to these conditions/letter of approval in the activity approval letter

Yes

No

If "No" then cease processing and refer to Section 2.4 / 3.5 of PRC-208

N/A

For activities proposed within a **WaterNSW declared drinking water catchment area**, ensure that:

- The consent of the Minister administering the *Mining Act 1992* has been granted for exploration in any exempted area – where relevant (Section 30 of the *Mining Act 1992*) – refer **Step 2.4 / 3.4** of PRC-208.
- The approval of WaterNSW has been granted (Clause 9 of the *Water NSW Regulation 2013*). Review any conditions provided by WaterNSW and make reference to these conditions/letter of approval in the activity approval letter.

Yes

No

If no cease processing and refer to Section 2.5 / 3.6 of PRC-208

N/A

Assessment for Modification of Approved Exploration Activities only

<ul style="list-style-type: none"> The modification is consistent with the existing approval and has environmental impacts consistent with those already assessed and approved; and The Part 5 environmental assessment for the existing approved activities has been completed and satisfactorily assesses the impacts of the proposed modification. <p>The Part 5 Tables in this Exploration Activity Assessment Workbook do not need to be completed for modifications of approved exploration activities.</p>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Assessment for Complying Exploration Activities only			
<ul style="list-style-type: none"> The Application complies with the Location Restrictions AND Impact Thresholds & Criteria for a CEA; and The Part 5 environmental assessment has been completed and satisfactorily assesses the impacts of the activity. 	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Assessment for Non-Complying Exploration Activities only			
Any AIS lodged with the Application has been referred to DPI and the comments received from DPI have been incorporated into the Part 5 Assessment and determination.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Any relevant advice received from other referral agencies (eg. EPA, DPI-Water, DPI, Biodiversity & Conservation, etc) has been and incorporated into the Part 5 Assessment and determination.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
I have completed a Part 5 environmental assessment which satisfactorily assesses the impacts of the activity	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
I have conducted an Assessment of Significance (on threatened species, or ecological communities, or their habitats) in accordance with sections 1.7 and 5.5 of the Planning Act	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
I have had regard to the declared areas of outstanding biodiversity value / critical habitat in accordance with section 5.5 of the Planning Act, and, had regard to the factors listed in clause 228(2) of the Planning Regulation	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Assessment for all Exploration Activities (excluding modifications)			
Are the rehabilitation methods, timing and outcomes suitable?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Any relevant advice received from other referral agencies (eg. EPA, DPI-Water, DPI, Biodiversity and Conservation, etc) has been and incorporated into the Part 5 Assessment and determination.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
The advice of other internal units (including MEG) has been incorporated into the Assessment and Recommendation Briefing to the Decision Maker	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
New Titles - ensure that compliance with the <i>Exploration Code of Practice: Environmental Management</i> is included as a term of any activity approval.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
New Titles - ensure that compliance with the <i>Exploration Code of Practice: Produced Water Management Storage & Transfer</i> is included as a term of any activity approval where: <ul style="list-style-type: none"> Petroleum exploration requires the management of produced water, or Exploration requires produced water to be stored on site (excluding temporary containment in drilling sumps/above ground tanks. 	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Any public/community submissions received by RR regarding an exploration activity application have been reviewed and addressed within the Part 5 Assessment	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
Completion of Assessment			
I have assessed the significance of the potential impact of approval or refusal (taking all relevant environmental, social, economic and political considerations into account).	<input type="checkbox"/> COMPLETE	<input type="checkbox"/> N/A	
If the activity is potentially high risk, ensure an Assessment Report is completed using FRM-208-2 Assessment Report - High Risk Exploration Activity	<input type="checkbox"/> COMPLETE	<input type="checkbox"/> N/A	
Detailed assessment completed by:		Date	Evaluation Date
Step 2 – Assessment Officer: Security Review			

Is a review of security is required for the authority? <i>(A review of security is required UNLESS the application is a CEA where the rehabilitation liability (for the CEA and any outstanding rehabilitation liabilities) will not exceed \$10,000).</i>	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Current security held:	\$		
RCE amount supplied by Authority Holder for Authority (including the new activity):	\$		
Total security estimate for the Authority (by Assessment Officer):	\$		
Security change (increase or decrease or no change)	\$		
Prepare Notice to Titles (MEG) <i>even if there is no change in Security</i> (s.261BC of the <i>Mining Act 1992</i> requires notification to the decision-maker whenever an assessment of the security deposit is undertaken)	<input type="checkbox"/> Yes	<input type="checkbox"/> N/A	
Security assessment completed and included in the <i>Assessment and Recommendation to the Decision Maker</i> by:		Date	Evaluation Date
Step 3: Decision Maker: Review, Procedural Fairness and Determination			
Review all documents relating to the assessment of the activity and the security deposit	<input type="checkbox"/> COMPLETE	<input type="checkbox"/> N/A	
Review Part 5 Assessment, Assessment and Recommendation Brief and Assessment Report (if the project was high risk)	<input type="checkbox"/> COMPLETE	<input type="checkbox"/> N/A	
Approve the Procedural Fairness Letter (Approval PF or Rejection PF Letter) – If PF letter is required	<input type="checkbox"/> COMPLETE	<input type="checkbox"/> N/A	
Examine and take into account to the fullest extent possible all matters affecting or likely to affect the environment by reason of that activity. Determine whether the activity is likely/not-likely to significantly affect the environment (including declared areas of outstanding biodiversity value/critical habitat) or threatened species, or ecological communities, or their habitats (refer to Part 5 of the Planning Act)	<input type="checkbox"/> COMPLETE	<input type="checkbox"/> N/A	
Schedule 1B, Part 2, Cl 3 – Protection of the Environment (Mining Act 1992) considerations taken into account prior to approving an activity and imposing or varying a condition of an authorization. Confirm that the Part 5 Assessment has been undertaken and any necessary “terms” will be placed on the Activity Approval to conserve and protect the environment.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Send the Procedural Fairness Letter to the Applicant	<input type="checkbox"/> COMPLETE	<input type="checkbox"/> N/A	
Actions Following Procedural Fairness Period			
Comments from Authority holder received within 10 Business Days?	<input type="checkbox"/> COMPLETE	<input type="checkbox"/> N/A	
Modify Assessment and Recommendation Brief and Response Letter (Approval or Refusal) as required	<input type="checkbox"/> COMPLETE	<input type="checkbox"/> N/A	
Re-conduct Part 5 Determination if the proposed impacts of the Activity have been modified in any way	<input type="checkbox"/> COMPLETE	<input type="checkbox"/> N/A	
Review and approve the Assessment and Recommendation Brief	<input type="checkbox"/> COMPLETE	<input type="checkbox"/> N/A	
For Activity Refusal			
Ensure that a Procedural Fairness Letter has been sent and comments from the Authority Holder have been considered. Ensure that there is a valid reason for refusal e.g. (a) The proposed activities do not fit within the definition of “prospecting operations” (b) Resources Regulator has requested additional information and this has not been provided by the Applicant within the specified timeframe.	<input type="checkbox"/> COMPLETE	<input type="checkbox"/> N/A	

Review, sign and send Refusal Letter . <i>Electronic (Email) and/or Hardcopy</i> Ensure Letter uploaded as rendition to CM9/ACES	<input type="checkbox"/> COMPLETE	<input type="checkbox"/> N/A	
Update ACES	<input type="checkbox"/> COMPLETE	<input type="checkbox"/> N/A	
For Activity Approval			
Review, sign and send Approval Letter/Notification to Authority Holder <i>Electronic (Email) and/or Hardcopy</i> Ensure Letter uploaded as rendition to CM9/ACES	<input type="checkbox"/> COMPLETE	<input type="checkbox"/> N/A	
Review and approve the Notice to Titles (MEG) <i>(always required when there has been an assessment of the security deposit amount - even if there only if there is no change to security)</i>	<input type="checkbox"/> COMPLETE	<input type="checkbox"/> N/A	
Email Notice to Titles (MEG) AND include copy of Activity Approval Letter <i>(always required when there has been an assessment of the security deposit amount - even if there only if there is no change to security)</i>	<input type="checkbox"/> COMPLETE	<input type="checkbox"/> N/A	
Update ACES/EAMS	<input type="checkbox"/> COMPLETE	<input type="checkbox"/> N/A	
Review, Procedural Fairness and Determination completed. Decision Maker:			Date Date#
Finalise all documents, upload to ACES	<input type="checkbox"/> COMPLETE		
Update ACES	<input type="checkbox"/> COMPLETE		Date Date#

NOTE FOR USERS: Refer to Guidance Notes for assistance in completing the Assessment Tables. [This help text will not print].



**Regional
NSW**

Part 5 Determination, Environmental Planning and Assessment Act 1979

Assessment:

Prepared by:	[Redacted]
Position:	[Redacted]
Inspection Date:	NA
Evaluation Date:	Evaluation Date
Determining Manager	[Redacted]

Proposed Activity:

Title:	PEL1
Proponent:	Santos QNT Pty Ltd
Project Name:	Kahlua Pilot Reactivation
Activity:	The site contains existing coal seam gas exploration infrastructure including four exploration wells (Kahlua (K) 2, K3, K4 and K5), access tracks, water storage and gas flaring infrastructure. The purpose of the proposed activity is to continue exploration and appraisal activities at the site utilising the existing coal seam gas exploration infrastructure. It includes some minor additional civil and construction works including installation of buried gas and water gathering and power cables, upgrade of the gas flare, establishment of central power generation infrastructure and 65 kilolitre diesel storage, followed by workovers and completions, and appraisal activities.
Location:	PEL1 - activity to be undertaken within Lot 6 DP586978 in Marys Mount about 20 kilometres west of Gunnedah, NSW.
EIA document(s):	

Select whether the proposed activity is a Complying Exploration Activity (CEA) or Non-CEA:	Non-CEA (Petroleum)	Physical Impacts	
		Activity	Cumulative
		Vegetation Clearing (m ²)	minor
		Surface Disturbance (m ²)	20300
		Excavations (m ³)	2000
		Groundwater Extractions (ML)	18
		Expected Duration of Activity	2 years

Summary of Environmental Impact Evaluation	Unlikely to significantly affect the environment
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Is an EIS Required?	NO
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Person responsible for deciding if an EIS is required:

Name: [Redacted]

Signature: Approved via ACES ASMT0028041

Title: [Redacted]

Date: 15-Mar-23

6. Impacts from changes to flooding or tidal regimes	<p>Negligible and only localised changes to drainage flow/flooding regimes.</p> <p>Surface runoff can be sediment laden.</p>	<p>Activities must comply with CEA Location Restrictions, Impact Thresholds and Criteria, including:</p> <ul style="list-style-type: none"> a. Activities to avoid environmentally sensitive land, including interconnector areas, waterfront land, slopes steeper than 18 degrees, wetlands, etc. b. Limits to vegetation clearing, surface disturbance and excavations. <p>Activities must comply with the conditions. For new MER sites activities must also comply with the Exploration Code of Practice: Environmental Management to minimise impacts on flooding or tidal regimes including:</p> <ul style="list-style-type: none"> a. Activities must implement all measures to prevent causing any adverse impacts on water quality or quantity. b. All sediment and erosion controls (including drainage from road/access tracks) to be managed in accordance with Blue Book. c. Existing access tracks to be used/upgrade wherever possible. <p>All management and storage of produced water must comply with the title conditions. For new MER sites activities must also comply with the Exploration Code of Practice: Produced Water Management, Storage and Transfer.</p>	Short term	HIGH	NA	NA	NA	NA	NA	NA	NA	LOW			
7. Impacts from changes in surface or groundwater quality and quantity	<p>Water used for exploration not available for ecological, stock, domestic or irrigation purposes.</p> <p>Surface runoff can be sediment laden from areas where vegetation has been removed.</p> <p>Generally minimal surface water use (must be treated or use of farm dams through landholder agreements).</p> <p>No use of groundwater but potential loss through produced water in drilling / deep excavation operations.</p> <p>Interconnection, cross contamination and/or despoilation of groundwater systems in drilling operations.</p> <p>Groundwater despoilation effects on surface water.</p> <p>Mobilisation of pollutants (such as hydrocarbons) in surface water or aquifers.</p> <p>Foot access tracks can cause stream bank erosion from vehicle wash.</p> <p>Inappropriate disposal of drilling wastes / overflow from drilling sumps.</p>	<p>Activities must comply with CEA Location Restrictions, Impact Thresholds and Criteria, including:</p> <ul style="list-style-type: none"> a. Activities to avoid environmentally sensitive land, including waterfront land, wetlands, stream water settlement protection areas, etc. b. Limits to vegetation clearing, surface disturbance and excavations. c. Cumulative maximum extraction of groundwater from all exploration activities within the site not to exceed 2M/year. <p>Activities must comply with the conditions. For new MER sites activities must also comply with the Exploration Code of Practice: Environmental Management including:</p> <ul style="list-style-type: none"> a. Activities must implement all measures to prevent causing any adverse impacts on water quality or quantity. b. Activities must minimise cross contamination of aquifers or groundwater sources. c. Activities must minimise any despoilation of aquifers or groundwater sources. d. Coal and petroleum title holders must prepare and implement and Groundwater Monitoring & Modelling Plan in consultation with NSW Office of Water. e. All sediment and erosion controls to be in accordance with Blue Book to minimise off-site impacts. <p>Reservoirs to be constructed, operated and decommissioned in accordance with the conditions, Department Guidelines and Codes of Practice to protect groundwater/quality.</p> <p>All management and storage of produced water must comply with the title conditions. For new MER sites activities must also comply with the Exploration Code of Practice: Produced Water Management, Storage and Transfer.</p> <p>All disturbed areas to be rehabilitated in accordance with the conditions. In addition the Exploration Code of Practice: Rehabilitation applies to new MER sites. Rehabilitation must occur as soon as practicable after completion of activity (including seeding of any biomass).</p>	Short term	HIGH	HIGH RESILIENCE	YES	Fully	YES		NO	LOW				
8. Any other impacts on water or from the use or storage of water													Summary of Water Impacts	LOW	NA
Soil and stability impacts															
9. Degradation of soil quality (including contamination, salinisation or acidification)	<p>Soil erosion and sediment water runoff from disturbed areas / areas where vegetation has been removed.</p> <p>Mobilisation of pollutants (such as hydrocarbons) in soils.</p> <p>Inappropriate disposal of drilling wastes / overflow from drilling sumps.</p> <p>Exposure of acid sulfate soils.</p> <p>Soil compaction from construction operations.</p>	<p>Activities must comply with CEA Location Restrictions, Impact Thresholds and Criteria, including:</p> <ul style="list-style-type: none"> a. Activities to avoid environmentally sensitive land, including interconnector areas, acid sulfate soils, waterfront land, slopes steeper than 18 degrees, wetlands, etc. b. Limits to vegetation clearing, surface disturbance and excavations. <p>Activities must comply with the conditions. For new MER sites activities must also comply with the Exploration Code of Practice: Environmental Management to minimise soil and stability impacts including:</p> <ul style="list-style-type: none"> a. Minimising vegetation clearing and surface disturbance. b. Prevent causing any land degradation or pollution/contamination of land or water. c. All sediment and erosion controls (including drainage from road/access tracks) to be managed in accordance with Blue Book. d. Existing access tracks to be used/upgrade wherever possible. e. Controls on sumps and management of chemicals to significantly reduce risk to soils. <p>Management and storage of produced water must comply with the title conditions. For new MER sites activities must also comply with the Exploration Code of Practice: Produced Water Management, Storage and Transfer.</p> <p>All disturbed areas to be rehabilitated in accordance with the conditions. In addition the Exploration Code of Practice: Rehabilitation applies to new MER sites. Rehabilitation to occur as soon as practicable after completion of activity (including seeding of any biomass).</p>	Short term	HIGH	HIGH RESILIENCE	YES	Fully	YES		NO	LOW				
10. Loss of soil from wind or water erosion	<p>Increased risk of erosion where vegetation has been removed.</p> <p>Potential erosion of disturbed areas.</p>	<p>Activities must comply with CEA Location Restrictions, Impact Thresholds and Criteria, including:</p> <ul style="list-style-type: none"> a. Activities to avoid environmentally sensitive land, including interconnector areas, acid sulfate soils, waterfront land, slopes steeper than 18 degrees, wetlands, etc. b. Limits to vegetation clearing, surface disturbance and excavations. <p>Activities must comply with the conditions. For new MER sites activities must also comply with the Exploration Code of Practice: Environmental Management to minimise potential impacts including:</p> <ul style="list-style-type: none"> a. Minimising vegetation clearing and surface disturbance. b. Prevent causing any land degradation or pollution/contamination of land or water. c. All sediment and erosion controls (including drainage from road/access tracks) to be managed in accordance with Blue Book. d. Existing access tracks to be used/upgrade wherever possible. <p>All disturbed areas to be rehabilitated in accordance with the conditions. In addition the Exploration Code of Practice: Rehabilitation applies to new MER sites. Rehabilitation to occur as soon as practicable after completion of activity (including seeding of any biomass).</p>	Short term	HIGH	HIGH RESILIENCE	YES	Fully	YES		NO	LOW				
11. Loss of structural integrity of the soil	<p>Soil compaction from access traffic, use of plant and machinery.</p> <p>Soil erosion from disturbed areas / areas where vegetation has been removed.</p> <p>Mobilisation of pollutants (such as hydrocarbons) in soils.</p>	<p>Activities must comply with CEA Location Restrictions, Impact Thresholds and Criteria, including:</p> <ul style="list-style-type: none"> a. Activities to avoid environmentally sensitive land, including interconnector areas, acid sulfate soils, waterfront land, slopes steeper than 18 degrees, wetlands, etc. b. Limits to vegetation clearing, surface disturbance and excavations. <p>Activities must comply with the conditions. For new MER sites activities must also comply with the Exploration Code of Practice: Environmental Management to minimise potential impacts including:</p> <ul style="list-style-type: none"> a. Minimising vegetation clearing and surface disturbance. b. Prevent causing any land degradation or pollution/contamination of land or water. c. All sediment and erosion controls (including drainage from road/access tracks) to be managed in accordance with Blue Book. d. Existing access tracks to be used/upgrade wherever possible. e. Controls on sumps and management of chemicals to significantly reduce risk to soils. <p>All disturbed areas to be rehabilitated in accordance with the conditions. In addition the Exploration Code of Practice: Rehabilitation applies to new MER sites. Rehabilitation to occur as soon as practicable after completion of activity (including seeding of any biomass). Other types of any access tracks which need to be rehabilitated can remediate compaction impacts.</p> <p>Impact generally limited due to low traffic numbers and short term nature of exploration.</p>	Short term	HIGH	HIGH RESILIENCE	YES	Fully	YES		NO	LOW				

<p>4. Increased land instability with high risks from land slides or subsidence.</p>	<p>Minimal potential impacts. Soil erosion from disturbed areas / areas where vegetation has been removed.</p>	<p>Activities must comply with CEA Location Restrictions, Impact Thresholds and Criteria, including: a. Activities to avoid environmentally sensitive land, including hydrocarbon areas, soil surface soils, waterlogged land, slopes steeper than 18 degrees, wetlands, etc. b. Limits to vegetation clearing, surface disturbance and excavations. c. Groundwater removal on slopes greater than 10° only permitted when associated with access track upgrades and must satisfy requirements of Blue Book. Activities must comply with the conditions. For new MER sites activities must also comply with the Exploration Code of Practice: Environmental Management. To minimise soil and stability impacts including: a. Minimising vegetation clearing and surface disturbance. b. Prevent causing any land degradation or pollution/concentration of land or water. c. All sediment and erosion controls (including drainage from road/access tracks) to be managed in accordance with Blue Book (includes controls to manage instability risks). d. Existing access tracks to be used/ upgraded wherever possible. e. Controls on storage and management of chemicals to significantly reduce risk to soils. All disturbed areas to be rehabilitated in accordance with the conditions. In addition, the Exploration Code of Practice: Rehabilitation applies to new MER sites. Rehabilitation to occur as soon as practicable after completion of activity (including seeding of any herbivores).</p>	<p>Short term</p>	<p>HIGH</p>	<p>HIGH RESILIENCE</p>	<p>YES</p>	<p>Fully</p>	<p>YES</p>	<p>NO</p>	<p>LOW</p>	<p>Summary of Soil and Stability Impacts L001 NA</p>
<p>5. Any reduced seismicity or ground movements associated with fracture stimulation or injection or subsidence of groundwater.</p>	<p>NA as petroleum (including CSG) exploration is not a CEA</p>	<p>NA</p>	<p>NA</p>	<p>NA</p>	<p>NA</p>	<p>NA</p>	<p>NA</p>	<p>NA</p>	<p>NA</p>	<p>LOW</p>	<p>Summary of Soil and Stability Impacts L001 NA</p>
<p>6. Any other impacts on soils.</p>	<p>NA</p>	<p>NA</p>	<p>NA</p>	<p>NA</p>	<p>NA</p>	<p>NA</p>	<p>NA</p>	<p>NA</p>	<p>NA</p>	<p>LOW</p>	<p>Summary of Soil and Stability Impacts L001 NA</p>
<p>6b) Noise and vibration impacts</p>	<p>None from vehicles, plant and machinery results in unacceptable impacts on nearby sensitive receptors, such as residences, educational establishments, medical facilities, places of worship, animal boarding/training establishments, intensive livestock agriculture, etc. Drilling activities can have localized vibration impacts. Drilling unlikely to cause vibration impacts. Trucks have vibration and overpressure impacts which may impact vibration sensitive sites. Vibratory machinery has vibration impacts which may impact vibration sensitive sites.</p>	<p>Activities must comply with CEA Location Restrictions, Impact Thresholds and Criteria, including: a. Activities to avoid environmentally sensitive land, including community land and CCAs. b. Limits to size and scale of vegetation clearing, surface disturbance and excavations. Activities must comply with the conditions. For new MER sites activities must also comply with the Exploration Code of Practice: Environmental Management. To minimise potential impacts including: a. Implementing all practicable measures to ensure noise levels meet acceptable criteria for sensitive receptors. b. Auditing potentially affected landholders at least 24hrs prior to commencing operations. c. Compliance with relevant Construction Noise Guidelines under EPA and/or local council agreements. d. Ground vibration thresholds limited to 5 mm/s (peak particle velocity) at any residence/sensitive receptor. e. Ground vibration thresholds limited to 3 mm/s for any item of Aboriginal / European heritage significance or off the greater than 4m in height. f. Vibrating machinery not to be used within 200m of sensitive receptors, heritage of Aboriginal / European heritage significance or any off the greater than 4m in height. Impacts limited to immediate vicinity of exploration activity.</p>	<p>Short term</p>	<p>HIGH</p>	<p>HIGH RESILIENCE</p>	<p>YES</p>	<p>Fully</p>	<p>YES</p>	<p>NO</p>	<p>LOW</p>	<p>Summary of noise and vibration impacts L001 NA</p>
<p>7. Results in increased noise or vibration</p>	<p>None from vehicles, plant and machinery results in unacceptable impacts on nearby sensitive receptors, such as residences, educational establishments, medical facilities, places of worship, animal boarding/training establishments, intensive livestock agriculture, etc. Drilling activities can have localized vibration impacts. Drilling unlikely to cause vibration impacts. Trucks have vibration and overpressure impacts which may impact vibration sensitive sites. Vibratory machinery has vibration impacts which may impact vibration sensitive sites.</p>	<p>Activities must comply with CEA Location Restrictions, Impact Thresholds and Criteria, including: a. Activities to avoid environmentally sensitive land, including community land and CCAs. b. Limits to size and scale of vegetation clearing, surface disturbance and excavations. Activities must comply with the conditions. For new MER sites activities must also comply with the Exploration Code of Practice: Environmental Management. To minimise potential impacts including: a. Implementing all practicable measures to ensure noise levels meet acceptable criteria for sensitive receptors. b. Auditing potentially affected landholders at least 24hrs prior to commencing operations. c. Compliance with relevant Construction Noise Guidelines under EPA and/or local council agreements. d. Ground vibration thresholds limited to 5 mm/s (peak particle velocity) at any residence/sensitive receptor. e. Ground vibration thresholds limited to 3 mm/s for any item of Aboriginal / European heritage significance or off the greater than 4m in height. f. Vibrating machinery not to be used within 200m of sensitive receptors, heritage of Aboriginal / European heritage significance or any off the greater than 4m in height. Impacts limited to immediate vicinity of exploration activity.</p>	<p>Short term</p>	<p>HIGH</p>	<p>HIGH RESILIENCE</p>	<p>YES</p>	<p>Fully</p>	<p>YES</p>	<p>NO</p>	<p>LOW</p>	<p>Summary of noise and vibration impacts L001 NA</p>
<p>8. Affects sensitive receptors</p>	<p>None from vehicles, plant and machinery results in unacceptable impacts on nearby sensitive receptors, such as residences, educational establishments, medical facilities, places of worship, animal boarding/training establishments, intensive livestock agriculture, etc. Drilling activities can have localized vibration impacts. Drilling unlikely to cause vibration impacts. Trucks have vibration and overpressure impacts which may impact vibration sensitive sites. Vibratory machinery has vibration impacts which may impact vibration sensitive sites.</p>	<p>Activities must comply with CEA Location Restrictions, Impact Thresholds and Criteria, including: a. Activities to avoid environmentally sensitive land, including community land and CCAs. b. Limits to size and scale of vegetation clearing, surface disturbance and excavations. Activities must comply with the conditions. For new MER sites activities must also comply with the Exploration Code of Practice: Environmental Management. To minimise potential impacts including: a. Implementing all practicable measures to ensure noise levels meet acceptable criteria for sensitive receptors. b. Auditing potentially affected landholders at least 24hrs prior to commencing operations. c. Compliance with relevant Construction Noise Guidelines under EPA and/or local council agreements. d. Ground vibration thresholds limited to 5 mm/s (peak particle velocity) at any residence/sensitive receptor. e. Ground vibration thresholds limited to 3 mm/s for any item of Aboriginal / European heritage significance or off the greater than 4m in height. f. Vibrating machinery not to be used within 200m of sensitive receptors, heritage of Aboriginal / European heritage significance or any off the greater than 4m in height. Impacts limited to immediate vicinity of exploration activity.</p>	<p>Short term</p>	<p>HIGH</p>	<p>HIGH RESILIENCE</p>	<p>YES</p>	<p>Fully</p>	<p>YES</p>	<p>NO</p>	<p>LOW</p>	<p>Summary of noise and vibration impacts L001 NA</p>
<p>9. Any other impacts from noise, blasting or vibration</p>	<p>NA</p>	<p>NA</p>	<p>NA</p>	<p>NA</p>	<p>NA</p>	<p>NA</p>	<p>NA</p>	<p>NA</p>	<p>NA</p>	<p>LOW</p>	<p>Summary of noise and vibration impacts L001 NA</p>
<p>10) Any other physical or pollution impacts</p>	<p>Activities along the coastline / foreshore have the potential to exacerbate coastal erosion (using sea level rise and increased storm activity under projected climate change conditions could result in increased erosion along the coastline / foreshore).</p>	<p>Activities must comply with CEA Location Restrictions, Impact Thresholds and Criteria, including: a. Activities to avoid environmentally sensitive land, including hydrocarbon areas, waterlogged land, marine beds, aquatic reserves, wetlands, etc. b. Limits to vegetation clearing, surface disturbance and excavations. Activities must comply with the conditions. For new MER sites activities must also comply with the Exploration Code of Practice: Environmental Management. To minimise potential impacts including: a. Activities must implement all measures to prevent causing any adverse impacts on water quality or quantity. b. All sediment and erosion controls (including drainage from road/access tracks) to be managed in accordance with Blue Book. CO2 emissions from activities are extremely limited and inconsequential in context of global emissions and impact. Restrictions on use of ozone depleting substances in NSW also limits ozone depletion. All disturbed areas to be rehabilitated in accordance with the conditions. In addition, the Exploration Code of Practice: Rehabilitation applies to new MER sites. Rehabilitation to occur as soon as practicable after completion of activity (including seeding of any herbivores to increase any fugitive emissions).</p>	<p>Short term</p>	<p>HIGH</p>	<p>HIGH RESILIENCE</p>	<p>YES</p>	<p>Fully</p>	<p>YES</p>	<p>NO</p>	<p>LOW</p>	<p>Summary of noise and vibration impacts L001 NA</p>
<p>11. Affects coastal processes and coastal hazards, including those under projected climate change conditions.</p>	<p>Use of pesticides, herbicides, fertilisers or other chemicals have the potential to build up residues in the environment, including in soils and water. Inappropriate disposal of drilling wastes / overflow from drilling swamps.</p>	<p>Activities must comply with CEA Location Restrictions, Impact Thresholds and Criteria, including: a. Activities to avoid environmentally sensitive land, including hydrocarbon areas, waterlogged land, marine beds, aquatic reserves, wetlands, etc. b. Limits to vegetation clearing, surface disturbance and excavations. Activities must comply with the conditions. For new MER sites activities must also comply with the Exploration Code of Practice: Environmental Management. To minimise potential impacts including: a. Preventing contamination of the environment by the release of chemicals, fuels, other potential pollutants. b. Preventing any land degradation or pollution/concentration of land or water. c. Controls on storage and management of chemicals to significantly reduce risk to environment. d. Use of pesticides, herbicides, fertilisers or other chemicals must comply with legislative requirements. e. Wastewater (including any drilling by-products) to be collected, segregated and disposed of safely. Management and storage of produced water must comply with the conditions. In addition the Exploration Code of Practice: Produced Water Management, Storage and Transfer applies to new MER sites. All disturbed areas to be rehabilitated in accordance with the conditions. In addition, the Exploration Code of Practice: Rehabilitation applies to new MER sites. Rehabilitation to occur as soon as practicable after completion of activity.</p>	<p>Short term</p>	<p>HIGH</p>	<p>HIGH RESILIENCE</p>	<p>YES</p>	<p>Fully</p>	<p>YES</p>	<p>NO</p>	<p>LOW</p>	<p>Summary of noise and vibration impacts L001 NA</p>
<p>12. Results in impacts associated with the use, generation, storage or transport of hazardous substances or chemicals.</p>	<p>Use of pesticides, herbicides, fertilisers or other chemicals have the potential to build up residues in the environment, including in soils and water. Inappropriate disposal of drilling wastes / overflow from drilling swamps.</p>	<p>Activities must comply with CEA Location Restrictions, Impact Thresholds and Criteria, including: a. Activities to avoid environmentally sensitive land, including hydrocarbon areas, waterlogged land, marine beds, aquatic reserves, wetlands, etc. b. Limits to vegetation clearing, surface disturbance and excavations. Activities must comply with the conditions. For new MER sites activities must also comply with the Exploration Code of Practice: Environmental Management. To minimise potential impacts including: a. Preventing contamination of the environment by the release of chemicals, fuels, other potential pollutants. b. Preventing any land degradation or pollution/concentration of land or water. c. Controls on storage and management of chemicals to significantly reduce risk to environment. d. Use of pesticides, herbicides, fertilisers or other chemicals must comply with legislative requirements. e. Wastewater (including any drilling by-products) to be collected, segregated and disposed of safely. Management and storage of produced water must comply with the conditions. In addition the Exploration Code of Practice: Produced Water Management, Storage and Transfer applies to new MER sites. All disturbed areas to be rehabilitated in accordance with the conditions. In addition, the Exploration Code of Practice: Rehabilitation applies to new MER sites. Rehabilitation to occur as soon as practicable after completion of activity.</p>	<p>Short term</p>	<p>HIGH</p>	<p>HIGH RESILIENCE</p>	<p>YES</p>	<p>Fully</p>	<p>YES</p>	<p>NO</p>	<p>LOW</p>	<p>Summary of noise and vibration impacts L001 NA</p>

<p>13. results in impacts to the environment resulting from the generation or disposal of wastes.</p>	<p>Mobilisation of pollutants (such as hydrocarbons) in soils, air or waters. Inappropriate disposal of drilling wastes / overflow from drilling skips. Fugitive emissions of gases or vapour from drilling operations or the operation of farms. Use of pesticides, herbicides, fertilisers or other chemicals have the potential to build up residues in the environment, including in soils and water.</p>	<p>Activities must comply with CEA Location Restrictions, Impact Thresholds and Criteria, including: a. Activities to avoid environmentally sensitive land, community land, CDA, etc. b. Limits to vegetation clearing, surface disturbance and excavation. Activities must comply with the conditions. For new MER activities must also comply with the Exploration Code of Practice Environmental Management to minimise potential impacts including: i. Preventing contamination of the environment by the release of chemicals, fuels, other potential pollutants. ii. Preventing any land degradation or pollution/contamination of land or water. iii. Controls on storage and management of chemicals to significantly reduce risk to environment. iv. Use of pesticides, herbicides, fertilisers or other chemicals must comply with legislative requirements. v. Wastes (including any drilling by-products) to be collected, segregated and disposed of lawfully. Management and storage of produced water must comply with the title conditions. For new MER this activities must also comply with the Exploration Code of Practice Produced Water Management, Storage and Transfer. All disturbed areas to be rehabilitated in accordance with the conditions. In addition the Exploration Code of Practice Rehabilitation applies to new MER sites. Rehabilitation to occur as soon as practicable after completion of activity.</p>	<p>Short term</p>	<p>HIGH</p>	<p>HIGH RESILIENCE</p>	<p>YES</p>	<p>Fully</p>	<p>YES</p>	<p>NO</p>	<p>LOW</p>	<p>Summary of other physical and pollution impacts</p>	
<p>14. Location sensitive because of physical factors</p>											<p>LOW</p>	<p>NA</p>
<p>14. coastline sensitive because of physical factors</p>	<p>Negligible and only localised impacts on unique landscapes. Mobilisation of pollutants in soils, surface water or aquifers. Short term noise, air quality and visual impacts. Fugitive emissions from plant and machinery fugitive emissions of gases or vapour from drilling operations and the operation of farms. Soil erosion and sediment laden runoff from disturbed areas, that could lead to soil or water contamination or land degradation. Exposure of acid sulfate soils. Spread of weeds, pest animals and animal/plant diseases. Damage to structures and sensitive features, such as unique landscapes. Activities along the coastline / roadways have the potential to exacerbate coastal erosion (rising sea levels and increased storm activity under projected climate change conditions could result in increased erosion along the coastline / roadways).</p>	<p>Activities must comply with CEA Location Restrictions, Impact Thresholds and Criteria, including: a. Activities to avoid environmentally sensitive land, community land, CDA, etc. b. Limits to vegetation clearing, surface disturbance and excavation. Impact limited to activity site and subject to compensation and landholder access arrangements. Activities must comply with the conditions. For new MER this activities must also comply with the Exploration Code of Practice Environmental Management to minimise potential impacts on the environment. All disturbed areas to be rehabilitated in accordance with the conditions. In addition the Exploration Code of Practice Rehabilitation applies to new MER sites. Rehabilitation to occur as soon as practicable after completion of activity (including seeding of any boreholes).</p>	<p>Short term</p>	<p>HIGH</p>	<p>HIGH RESILIENCE</p>	<p>YES</p>	<p>Fully</p>	<p>YES</p>	<p>NO</p>	<p>LOW</p>		
<p>15. land with high agricultural capability</p>	<p>Areas used for exploration activities, access tracks, etc not available for agricultural production. Temporary loss of use of land. Mobilisation of pollutants (such as hydrocarbons) in soils, air or waters. Inappropriate disposal of drilling wastes / overflow from drilling skips. Use of pesticides, herbicides, fertilisers or other chemicals have the potential to build up residues in the environment, including in soils and water. Short term noise, air quality and visual impacts. Soil erosion and sediment laden runoff from disturbed areas, that could lead to soil or water contamination or land degradation. Exposure of acid sulfate soils. Spread of weeds, pest animals and animal/plant diseases. Disruption to agricultural / livestock operations.</p>	<p>Activities must comply with CEA Location Restrictions, Impact Thresholds and Criteria, including: a. Activities to avoid environmentally sensitive land, community land, CDA, etc. b. Limits to vegetation clearing, surface disturbance and excavation. c. Cumulative maximum extraction of groundwater from all exploration activities within the title not to exceed 200,000m³. Activities must comply with the conditions. For new MER this activities must also comply with the Exploration Code of Practice Environmental Management to minimise potential impacts on the environment (including livestock production, control of weeds, pest animals, diseases, etc). Use of above-ground sumps required on BSA. Impacts limited to activity site and subject to compensation and landholder access arrangements. All disturbed areas to be rehabilitated in accordance with the conditions. In addition the Exploration Code of Practice Rehabilitation applies to new MER sites. Rehabilitation to occur as soon as practicable after completion of activity (including seeding of any boreholes).</p>	<p>Short term</p>	<p>HIGH</p>	<p>HIGH RESILIENCE</p>	<p>YES</p>	<p>Fully</p>	<p>YES</p>	<p>NO</p>	<p>LOW</p>		
<p>16. natural water bodies, riparian zones, wetlands, drinking water catchments or flood prone areas.</p>	<p>Negligible and only localised changes to drainage flow/holding regimes. Water used for exploration not available for ecological, stock, domestic or irrigation purposes. Surface runoff can be sediment laden from areas where vegetation has been removed. Generally minimal surface water use (must be licensed or use of farm dams through landholder agreements). No use of groundwater but potential loss through produced water in drilling / deep excavation operations. Interception, cross contamination and/or depressurisation of groundwater systems in drilling operations. Groundwater depressurisation effects on surface water. Mobilisation of pollutants (such as hydrocarbons) in surface water or aquifers. Fert areas create can cause stream bank erosion from vehicle wash. Inappropriate disposal of drilling wastes / overflow from drilling skips.</p>	<p>Activities must comply with CEA Location Restrictions, Impact Thresholds and Criteria, including: a. Activities to avoid environmentally sensitive land, community land, CDA, etc. b. Limits to vegetation clearing, surface disturbance and excavation. c. Cumulative maximum extraction of groundwater from all exploration activities within the title not to exceed 200,000m³. Activities must comply with the conditions. For new MER this activities must also comply with the Exploration Code of Practice Environmental Management including: i. Activities must implement all measures to prevent causing any adverse impacts on water quality or quantity. ii. All sediment and erosion control (including drainage from road/concrete tracks) to be managed in accordance with Blue Book. All management and storage of produced water must comply with the title conditions. In addition the Exploration Code of Practice Produced Water Management, Storage and Transfer applies to new MER sites. All disturbed areas to be rehabilitated in accordance with the conditions. In addition the Exploration Code of Practice Rehabilitation applies to new MER sites. Rehabilitation to occur as soon as practicable after completion of activity.</p>	<p>Short term</p>	<p>HIGH</p>	<p>HIGH RESILIENCE</p>	<p>YES</p>	<p>Fully</p>	<p>YES</p>	<p>NO</p>	<p>LOW</p>		
<p>17. groundwater recharge areas or areas with high water table.</p>	<p>Minimal impact on recharge and safety. No use of groundwater but potential loss through produced water in drilling / deep excavation operations. Interception, cross contamination and/or depressurisation of groundwater systems in drilling operations. Groundwater depressurisation effects on surface water. Mobilisation of pollutants (such as hydrocarbons) in surface water or aquifers. Inappropriate disposal of drilling wastes / overflow from drilling skips. Vegetation clearance in recharge areas can increase salinity. Acid drainage due to exposure of acid sulfate soils.</p>	<p>Activities must comply with CEA Location Restrictions, Impact Thresholds and Criteria, including: a. Activities to avoid environmentally sensitive land, community land, CDA, etc. b. Limits to vegetation clearing, surface disturbance and excavation. c. Cumulative maximum extraction of groundwater from all exploration activities within the title not to exceed 200,000m³. Activities must comply with the conditions. For new MER this activities must also comply with the Exploration Code of Practice Environmental Management including: i. Activities must implement all measures to prevent causing any adverse impacts on water quality or quantity. ii. All sediment and erosion control (including drainage from road/concrete tracks) to be managed in accordance with Blue Book. All management and storage of produced water must comply with the title conditions. In addition the Exploration Code of Practice Produced Water Management, Storage and Transfer applies to new MER sites. Boreholes to be constructed, operated and decommissioned in accordance with the conditions, Departmental Guidelines and Codes of Practice to protect groundwater/aquifers. DRH holes to be cased where aquifers interpreted (potential impact on recharge and safety).</p>	<p>Short term</p>	<p>HIGH</p>	<p>HIGH RESILIENCE</p>	<p>YES</p>	<p>Fully</p>	<p>YES</p>	<p>NO</p>	<p>LOW</p>		

<p>6. erosion prone areas, areas with slopes of greater than 18 degrees</p>	<p>Minimal potential impacts. Soil erosion and sediment laden runoff from disturbed areas / areas where vegetation has been removed Mobilisation of pollutants (such as hydrocarbons) in soils Rillbed / riparian zone disturbance from use of poorly constructed or maintained river crossings.</p>	<p>Activities must comply with CEA Location Restrictions, Impact Thresholds and Criteria, including: a. Activities to avoid conservation areas, drinking water catchments, environmentally sensitive land (including slopes greater than 18 degrees, wetlands, waterfront land, riparian zones), acid sulfate soils, Aboriginal/European heritage protection areas, CCs, community land, etc. b. Limits to vegetation clearing, surface disturbance and excavations. c. Groundcover removal on slopes greater than 18° only permitted when associated with access track upgrades and must satisfy requirements of Blue Book. Activities must comply with the conditions. For new MER sites activities must also comply with the Exploration Code of Practice: Environmental Management' to minimise soil and stability impacts including: a. Minimising vegetation clearing and surface disturbance. b. Prevent causing any land degradation or pollution/contamination of land or water. c. All sediment and erosion controls (including drainage from road/access tracks) to be managed in accordance with Blue Book (includes controls to manage instability risks). d. Existing access tracks to be used/upgrade wherever possible. All disturbed areas to be rehabilitated in accordance with the conditions. In addition the Exploration Code of Practice: Rehabilitation' applies to new MER sites. Rehabilitation to occur as soon as practicable after completion of activity.</p>	<p>Short term</p>	<p>HIGH</p>	<p>HIGH RESILIENCE</p>	<p>YES</p>	<p>Fully</p>	<p>YES</p>	<p>NO</p>	<p>LOW</p>
<p>6. subsidence or slip areas</p>	<p>No potential for subsidence impacts from CEAs Soil erosion from disturbed areas / areas where vegetation has been removed may increase risk of slips Drilling operations unlikely to contribute to slips</p>	<p>Activities must comply with CEA Location Restrictions, Impact Thresholds and Criteria, including: a. Activities to avoid conservation areas, drinking water catchments, environmentally sensitive land (including slopes greater than 18 degrees, wetlands, waterfront land, riparian zones), acid sulfate soils, Aboriginal/European heritage protection areas, CCs, community land, etc. b. Limits to vegetation clearing, surface disturbance and excavations. c. Groundcover removal on slopes greater than 18° only permitted when associated with access track upgrades and must satisfy requirements of Blue Book. Activities must comply with the conditions. For new MER sites activities must also comply with the Exploration Code of Practice: Environmental Management' to minimise soil and stability impacts including: a. Minimising vegetation clearing and surface disturbance. b. Prevent causing any land degradation or pollution/contamination of land or water. c. All sediment and erosion controls (including drainage from road/access tracks) to be managed in accordance with Blue Book (includes controls to manage instability risks). d. Existing access tracks to be used/upgrade wherever possible. Disturbed areas to be rehabilitated in accordance with the conditions. In addition the Exploration Code of Practice: Rehabilitation' applies to new MER sites. Rehabilitation to occur as soon as practicable after completion, including for/soil sealing.</p>	<p>Short term</p>	<p>HIGH</p>	<p>HIGH RESILIENCE</p>	<p>YES</p>	<p>Fully</p>	<p>YES</p>	<p>NO</p>	<p>LOW</p>
<p>7. areas with acid sulphate, sodic or highly permeable soils</p>	<p>Vegetation removal unlikely to exacerbate acid sulfate or sodicity issues. CEA excavation activities excluded from potential or actual acid sulfate soils. Drilling activities unlikely to exacerbate acid sulfate or sodicity issues. Soil erosion and sediment laden runoff from disturbed areas / areas where vegetation has been removed</p>	<p>Activities must comply with CEA Location Restrictions, Impact Thresholds and Criteria, including: a. Activities to avoid conservation areas, drinking water catchments, environmentally sensitive land (including slopes greater than 18 degrees, wetlands, waterfront land, riparian zones), acid sulfate soils, Aboriginal/European heritage protection areas, CCs, community land, etc. b. Limits to vegetation clearing, surface disturbance and excavations. Activities must comply with the conditions. For new MER sites activities must also comply with the Exploration Code of Practice: Environmental Management' to minimise potential impacts including: a. Minimising vegetation clearing and surface disturbance. b. Prevent causing any land degradation or pollution/contamination of land or water. c. All sediment and erosion controls (including drainage from road/access tracks) to be managed in accordance with Blue Book. d. Existing access tracks to be used/upgrade wherever possible. e. Controls on surps and management of chemicals to significantly reduce risk to soils. All disturbed areas to be rehabilitated in accordance with the conditions. In addition the Exploration Code of Practice: Rehabilitation' applies to new MER sites. Rehabilitation to occur as soon as practicable after completion of activity (including sealing of any boreholes). Impacts generally limited due to low traffic numbers and short term nature of exploration.</p>	<p>Short term</p>	<p>HIGH</p>	<p>HIGH RESILIENCE</p>	<p>YES</p>	<p>Fully</p>	<p>YES</p>	<p>NO</p>	<p>LOW</p>
<p>8. areas with salinity or potential salinity problems</p>	<p>Activities unlikely to exacerbate salinity problems. Vegetation removal may reduce vegetation drawdown of water table. Spills of saline produced water. Vegetation removal unlikely to exacerbate acid sulfate or sodicity issues. CEA excavation activities excluded from potential or actual acid sulfate soils. Soil erosion and sediment laden runoff from disturbed areas / areas where vegetation has been removed</p>	<p>Activities must comply with CEA Location Restrictions, Impact Thresholds and Criteria, including: a. Activities to avoid conservation areas, drinking water catchments, environmentally sensitive land (including slopes greater than 18 degrees, wetlands, waterfront land, riparian zones), acid sulfate soils, Aboriginal/European heritage protection areas, CCs, community land, etc. b. Limits to vegetation clearing, surface disturbance and excavations. Activities must comply with the conditions. For new MER sites activities must also comply with the Exploration Code of Practice: Environmental Management' to minimise potential impacts including: a. Minimising vegetation clearing and surface disturbance. b. Prevent causing any land degradation or pollution/contamination of land or water. c. All sediment and erosion controls (including drainage from road/access tracks) to be managed in accordance with Blue Book. d. Controls on surps and management of chemicals to significantly reduce risk to soils. All disturbed areas to be rehabilitated in accordance with the conditions. In addition the Exploration Code of Practice: Rehabilitation' applies to new MER sites. Rehabilitation to occur as soon as practicable after completion of activity (including sealing of any boreholes). Impacts generally limited due to low traffic numbers and short term nature of exploration.</p>	<p>Short term</p>	<p>HIGH</p>	<p>HIGH RESILIENCE</p>	<p>YES</p>	<p>Fully</p>	<p>YES</p>	<p>NO</p>	<p>LOW</p>
<p>9. areas with degraded air quality</p>	<p>Potential for temperature inversions in winter to trap dust and air particulates. Wind erosion possible from exposed soils, but limited surface disturbance associated with CEAs Particulate emissions from vehicles and machinery. Dust generation from operating machinery, vehicles travelling over tracks, etc.</p>	<p>Activities must comply with CEA Location Restrictions, Impact Thresholds and Criteria. Activities must comply with the conditions and (for new sites) the Exploration Code of Practice: Environmental Management' including: a. Activities must comply with cumulative AQ criteria. b. Emissions from the activities should not result in cumulative PM10 levels exceeding 50µg/m³ (24h) or 35 µg/m³ (annual average) at any occupied residence. c. Emissions from the activities should not result in cumulative PM2.5 emissions exceeding 25 µg/m³ (24h) or 8 µg/m³ (annual average) at any occupied residence. d. Vehicle speeds limited to 10km/h on dust. e. Roads watered during high traffic periods. f. Surface disturbance managed in accordance with Blue Book. Impacts of any drilling limited to immediate vicinity of drilling due to controls set out in the conditions. For new MER sites impacts are limited by compliance with Exploration Code of Practice: Environmental Management' (impacts negligible due to nature of drilling activities). All disturbed areas to be rehabilitated in accordance with the conditions. In addition the Exploration Code of Practice: Rehabilitation' applies to new MER sites. Rehabilitation to occur as soon as practicable after completion of activity (including sealing of any boreholes).</p>	<p>Short term</p>	<p>HIGH</p>	<p>HIGH RESILIENCE</p>	<p>YES</p>	<p>Partly</p>	<p>YES</p>	<p>NO</p>	<p>LOW</p>

<p>10. area with degraded or contaminated soil</p>	<p>Activity unlikely to result in any change to existing contaminated soils or migration of contaminants. Soil erosion and sediment laden runoff from disturbed areas / areas where vegetation has been removed Mobilisation of pollutants (such as hydrocarbons) in soils Inappropriate disposal of drilling wastes / overflow from drilling sumps Exposure of acid sulfate soils Soil compaction from construction / operations Vegetation removal unlikely to have any impact on contaminated soils</p>	<p>Activities must comply with CEA Location Restrictions, Impact Thresholds and Criteria, including: A. Activities to avoid conservation areas, drinking water catchments, environmentally sensitive land (including critical habitat, wetlands, waterford land, riparian zones, acid sulfate soils, Aboriginal/European heritage protection areas, CCs, community land, etc.) B. Limits to vegetation clearing, surface disturbance and excavation. Activities must comply with the conditions. For new MER sites activities must also comply with the Exploration Code of Practice: Environmental Management including: a. Minimising vegetation clearing and surface disturbance b. Prevent causing any land degradation or pollution/contamination of land or water c. All sediment and erosion controls (including drainage from roadworks tracks) to be managed in accordance with Blue Book d. Controls on storage and management of chemicals to significantly reduce risk to soils All disturbed areas to be rehabilitated in accordance with the conditions. In addition the Exploration Code of Practice: Rehabilitation applies to new MER sites. Rehabilitation to occur as soon as practicable after completion of activity (including sealing of any boreholes) Impacts generally limited due to short term nature of exploration. Activity unlikely to exacerbate any existing contamination.</p>	<p>Short term</p>	<p>HIGH</p>	<p>HIGH RESILIENCE</p>	<p>YES</p>	<p>Fully</p>	<p>YES</p>	<p>NO</p>	<p>LOW</p>	<p>Summary of sensitive location because of physical factors</p>	
<p>11. area with degraded or contaminated water (ground or surface)</p>	<p>Activities unlikely to have any additional impacts on areas with existing degraded or contaminated water (ground or surface). Boreholes to be sealed when aquifer is exhausted. Surface runoff can be sediment laden from areas where vegetation has been removed Infiltration, cross contamination and/or desaturation of groundwater systems in drilling operations. Groundwater desaturation effects on surface water Mobilisation of pollutants (such as hydrocarbons) in surface water or aquifers Inappropriate disposal of drilling wastes / overflow from drilling sumps Excavations excluded from acid sulfate soils</p>	<p>Activities must comply with CEA Location Restrictions, Impact Thresholds and Criteria, including: A. Activities to avoid conservation areas, drinking water catchments, environmentally sensitive land (including critical habitat, wetlands, waterford land, riparian zones, acid sulfate soils, Aboriginal/European heritage protection areas, CCs, community land, etc.) B. Limits to vegetation clearing, surface disturbance and excavation. C. Cumulative maximum extraction of groundwater from all exploration activities with the site not to exceed 5M litres Activities must comply with the conditions. For new MER sites activities must also comply with the Exploration Code of Practice: Environmental Management including: a. Activities must implement all measures to prevent causing any adverse impacts on water quality or quantity b. Activities must minimise cross connection of aquifers or groundwater sources c. No activities must minimise any desaturation of aquifers or groundwater sources d. Control and protection of boreholes must progress and implement and Groundwater Monitoring & Modelling Plan in consultation with NSW Office of Water e. All sediment and erosion controls to be in accordance with Blue Book to minimise off-site impacts Boreholes to be constructed, operated and decommissioned in accordance with relevant conditions, Departmental Guidelines and Codes of Practice to protect groundwater/aquifers All management and storage of produced water must comply with the conditions. For new MER sites activities must also comply with the Exploration Code of Practice: Produced Water Management, Storage and Transfer All disturbed areas to be rehabilitated in accordance with the conditions. In addition the START Exploration Code of Practice: Rehabilitation applies to new MER sites. Rehabilitation to occur as soon as practicable after completion of activity (including sealing of any boreholes) Activities unlikely to exacerbate any existing surface or groundwater contamination.</p>	<p>Short term</p>	<p>HIGH</p>	<p>HIGH RESILIENCE</p>	<p>YES</p>	<p>Fully</p>	<p>YES</p>	<p>NO</p>	<p>LOW</p>	<p>Summary of sensitive location because of physical factors</p>	
<p>12. any other factors</p>												<p>Summary of sensitive location because of physical factors</p>
<p>2. BIOLOGICAL IMPACTS</p>												<p>Summary of sensitive location because of physical factors</p>
<p>10. Fauna impacts: If a Species Impact Statement will be required if the activity is likely to significantly affect critical habitats, threatened species, populations or ecological communities or their habitats</p>												<p>Summary of sensitive location because of physical factors</p>
<p>1. any clearing or modification of vegetation (including habitat for species of conservation significance)</p>	<p>Vegetation removal can increase available foraging/roosting/breeding habitat for species and disperse species from regular places of residence. Access used for exploration activities, access tracks, etc not available for fauna habitat. Mobilisation of pollutants (such as hydrocarbons) in soils, air or waters can potentially impact fauna Drilling sumps can be a hazard for fauna Use of pesticides, herbicides, fertilisers or other chemicals have the potential to build up residues in the environment, including in soils and water Short term noise and air quality impacts Soil erosion and sediment laden runoff from disturbed areas, that could lead to soil or water contamination or land degradation Exposure of acid sulfate soils Spread of weeds, pest animals and animal/disease diseases</p>	<p>Activities must comply with CEA Location Restrictions, Impact Thresholds and Criteria, including: A. Activities to avoid conservation areas, drinking water catchments, environmentally sensitive land (including critical habitat, wetlands, waterford land, riparian zones, acid sulfate soils, Aboriginal/European heritage protection areas, CCs, community land, etc.) B. Limits to vegetation clearing, surface disturbance and excavation. C. No significant impact on any threatened species, or their habitats D. No significant impact on any threatened population, or their habitats E. No significant impact on any threatened ecological community, or their habitats F. No removal of vegetation in waterford land Activities must comply with the conditions. For new MER sites activities must also comply with the Exploration Code of Practice: Environmental Management including: a. Minimise extent of vegetation clearing and surface disturbance to as low as practicable b. Prevent adverse impacts to fauna caused by vegetation clearing, including relocation of resident fauna All disturbed areas to be rehabilitated in accordance with the conditions. In addition the Exploration Code of Practice: Rehabilitation applies to new MER sites. Rehabilitation to occur as soon as practicable after completion of activity</p>	<p>Short term</p>	<p>HIGH</p>	<p>HIGH RESILIENCE</p>	<p>YES</p>	<p>Fully</p>	<p>YES</p>	<p>NO</p>	<p>LOW</p>	<p>Summary of sensitive location because of physical factors</p>	
<p>2. any significant effect on threatened fauna species, populations, or their habitats or critical habitat, or an endangered ecological community or its habitat (the threatened species assessment of significance)</p>	<p>No impacts. CEA impact thresholds apply. An activity cannot be a CEA if it has a significant effect on threatened fauna species, populations, or their habitats or critical habitat, or an endangered ecological community or its habitat.</p>	<p>NA</p>	<p>NA</p>	<p>NA</p>	<p>NA</p>	<p>NA</p>	<p>NA</p>	<p>NA</p>	<p>NA</p>	<p>NO</p>	<p>LOW</p>	<p>Summary of sensitive location because of physical factors</p>
<p>3. any potential to exchange, disperse or disturb fauna (including fauna of conservation significance) or create a barrier to their movement</p>	<p>Vegetation removal can increase available foraging/roosting/breeding habitat for species and disperse species from regular places of residence. Access tracks can act as a barrier to movement of small fauna species. Fauna crossing access tracks may be killed or injured if hit by vehicles. Vegetation removal can remove connective corridors used for wildlife movement. Access used for exploration activities, access tracks, etc not available for fauna habitat. Mobilisation of pollutants (such as hydrocarbons) in soils, air or waters can potentially impact fauna Drilling sumps can be a hazard for fauna Use of pesticides, herbicides, fertilisers or other chemicals have the potential to build up residues in the environment, including in soils and water Short term noise and air quality impacts Soil erosion and sediment laden runoff from disturbed areas, that could lead to soil or water contamination or land degradation Spread of weeds, pest animals and animal/disease diseases</p>	<p>Activities must comply with CEA Location Restrictions, Impact Thresholds and Criteria, including: A. Activities to avoid conservation areas, drinking water catchments, environmentally sensitive land (including critical habitat, wetlands, waterford land, riparian zones, acid sulfate soils, Aboriginal/European heritage protection areas, CCs, community land, etc.) B. Limits to vegetation clearing, surface disturbance and excavation. C. No significant impact on any threatened species, or their habitats D. No significant impact on any threatened population, or their habitats E. No significant impact on any threatened ecological community, or their habitats F. No removal of vegetation in waterford land Activities must comply with the conditions. For new MER sites activities must also comply with the Exploration Code of Practice: Environmental Management including: a. Minimise extent of vegetation clearing and surface disturbance to as low as practicable b. Prevent adverse impacts to fauna caused by vegetation clearing, including relocation of resident fauna All disturbed areas to be rehabilitated in accordance with the conditions. In addition the Exploration Code of Practice: Rehabilitation applies to new MER sites. Rehabilitation to occur as soon as practicable after completion of activity</p>	<p>Short term</p>	<p>HIGH</p>	<p>HIGH RESILIENCE</p>	<p>YES</p>	<p>Fully</p>	<p>YES</p>	<p>NO</p>	<p>LOW</p>	<p>Summary of sensitive location because of physical factors</p>	
<p>4. any other impacts on fauna</p>												<p>Summary of sensitive location because of physical factors</p>
<p>10. Fauna impacts: If a Species Impact Statement will be required if the activity is likely to significantly affect critical habitats, threatened species, populations or ecological communities or their habitats</p>												<p>Summary of sensitive location because of physical factors</p>
<p>1. any clearing or modification of vegetation (including vegetation of conservation significance)</p>	<p>Vegetation removal can increase available foraging/roosting/breeding habitat for species and disperse species from regular places of residence. Access cleared for exploration activities, access tracks, etc not available for fauna habitat. Mobilisation of pollutants (such as hydrocarbons) in soils, air or waters can potentially impact fauna Use of pesticides, herbicides, fertilisers or other chemicals have the potential to build up residues in the environment, including in soils and water Soil erosion and sediment laden runoff from disturbed areas, that could lead to soil or water contamination or land degradation Spread of weeds, pest animals and animal/disease diseases</p>	<p>Activities must comply with CEA Location Restrictions, Impact Thresholds and Criteria, including: A. Activities to avoid conservation areas, drinking water catchments, environmentally sensitive land (including critical habitat, wetlands, waterford land, riparian zones, acid sulfate soils, Aboriginal/European heritage protection areas, CCs, community land, etc.) B. Limits to vegetation clearing, surface disturbance and excavation. C. No significant impact on any threatened species, or their habitats D. No significant impact on any threatened population, or their habitats E. No significant impact on any threatened ecological community, or their habitats F. No removal of vegetation in waterford land Activities must comply with the conditions. For new MER sites activities must also comply with the Exploration Code of Practice: Environmental Management including: a. Minimise extent of vegetation clearing and surface disturbance to as low as practicable b. Prevent adverse impacts to fauna caused by vegetation clearing, including relocation of resident fauna All disturbed areas to be rehabilitated in accordance with the conditions. In addition the Exploration Code of Practice: Rehabilitation applies to new MER sites. Rehabilitation to occur as soon as practicable after completion of activity</p>	<p>Short term</p>	<p>HIGH</p>	<p>HIGH RESILIENCE</p>	<p>YES</p>	<p>Fully</p>	<p>YES</p>	<p>NO</p>	<p>LOW</p>	<p>Summary of sensitive location because of physical factors</p>	
<p>2. any significant effect on threatened fauna species, populations, or their habitats or critical habitat, or an endangered ecological community or its habitat (the threatened species assessment of significance)</p>	<p>No impacts. CEA impact thresholds apply. An activity cannot be a CEA if it has a significant effect on threatened fauna species, populations, or their habitats or critical habitat, or an endangered ecological community or its habitat.</p>	<p>NA</p>	<p>NA</p>	<p>NA</p>	<p>NA</p>	<p>NA</p>	<p>NA</p>	<p>NA</p>	<p>NA</p>	<p>NO</p>	<p>LOW</p>	<p>Summary of sensitive location because of physical factors</p>
<p>3. any other impacts on fauna</p>												<p>Summary of sensitive location because of physical factors</p>
<p>10. Ecological and Biodiversity impacts: If a Species Impact Statement will be required if the activity is likely to significantly affect critical habitats, threatened species, populations or ecological communities or their habitats</p>												<p>Summary of sensitive location because of physical factors</p>

<p>1. any threat to the biological diversity or ecological integrity of species or communities.</p>	<p>Vegetation removal can decrease available foraging/sheltering/breeding habitat for species and displace species from regular place of residence.</p> <p>Areas used for exploration activities, access tracks, etc not available for flora / fauna habitat</p> <p>Modification of pollutants (such as hydrocarbons) in soils, air or waters can potentially impact fauna / flora</p> <p>Drilling pumps can be a hazard for fauna</p> <p>Use of pesticides, herbicides, herbicides or other chemicals have the potential to build up residues in the environment, including in soils and water.</p> <p>Soil erosion and sediment laden runoff from disturbed areas, that could lead to soil or water contamination or land degradation.</p> <p>Exposure of acid sulfate soils.</p> <p>Spread of weeds, pest animals and animal/plant diseases.</p> <p>Fauna crossing access tracks may be killed or injured if hit by vehicles.</p> <p>Surface disturbance may result in removal of/damage to seed stock.</p>	<p>Activities must comply with CEA Location Restrictions, Impact Thresholds and Criteria, including:</p> <p>A. Activities to avoid conservation areas, drinking water catchments, environmentally sensitive land (including critical habitat, wetlands, waterfront land, riparian zones, acid sulfate soils, Aboriginal/European Heritage protection areas, CCs, community land, etc).</p> <p>B. Limits to vegetation clearing, surface disturbance and excavations.</p> <p>C. No significant impact on any threatened species, any threatened population or any threatened ecological community, or their habitat.</p> <p>D. No removal of vegetation in waterfront land.</p> <p>Activities must comply with the conditions. For new MER sites activities must also comply with the Exploration Code of Practice: Environmental Management including:</p> <p>A. Minimum extent of vegetation clearing and surface disturbance to as low as practicable.</p> <p>B. Prevent adverse impacts to fauna caused by vegetation clearing, including relocation of resident fauna.</p> <p>C. Setbacks from steep slopes/creeks to limit impact of shovels on cave dwelling fauna.</p> <p>Noise impacts / disruption to fauna are temporary. Vehicle movements are limited and unlikely to have significant long-term impacts.</p> <p>All disturbed areas to be rehabilitated in accordance with the conditions. In addition the Exploration Code of Practice: Rehabilitation applies to new MER sites. Rehabilitation to occur as soon as practicable after completion of activity (including seeding if any boronates).</p>	<p>Short term</p>	<p>HGH</p>	<p>HGH RESILIENCE</p>	<p>YES</p>	<p>Partly</p>	<p>YES</p>	<p>NO</p>	<p>LOW</p>			
<p>2. creates a biosecurity risk or introduces genetically modified organisms into an area. Includes impacts from the introduction of:</p> <p>a. animal pests,</p> <p>b. plant pests and diseases,</p> <p>c. animal diseases,</p> <p>d. noxious weeds, or</p> <p>e. genetically modified organisms.</p>	<p>Modification of pollutants (such as hydrocarbons) in soils, air or waters can potentially impact fauna / flora</p> <p>Use of pesticides, herbicides, herbicides or other chemicals have the potential to build up residues in the environment, including in soils and water.</p> <p>Spread of weeds, pest animals and animal/plant diseases.</p> <p>Surface disturbance may result in removal of/damage to seed stock.</p> <p>Weed growth in disturbed areas.</p>	<p>Activities must comply with CEA Location Restrictions, Impact Thresholds and Criteria, including:</p> <p>A. Activities to avoid conservation areas, drinking water catchments, environmentally sensitive land (including critical habitat, wetlands, waterfront land, riparian zones, acid sulfate soils, CCs, community land, etc).</p> <p>B. Limits to vegetation clearing, surface disturbance and excavations.</p> <p>C. No significant impact on any threatened species, any threatened population or any threatened ecological community, or their habitat.</p> <p>D. No removal of vegetation in waterfront land.</p> <p>Activities must comply with the conditions. For new MER sites activities must also comply with the Exploration Code of Practice: Environmental Management including:</p> <p>A. Minimum extent of vegetation clearing and surface disturbance to as low as practicable.</p> <p>B. Prevent adverse impacts to fauna caused by vegetation clearing, including relocation of resident fauna.</p> <p>C. Requirement to prevent introduction and spread of weeds, pest animals & animal and plant diseases (required to implement "come clean, go clean" protocols).</p> <p>All disturbed areas to be rehabilitated in accordance with the conditions. In addition the Exploration Code of Practice: Rehabilitation applies to new MER sites. Rehabilitation to occur as soon as practicable after completion of activity (includes weed growth management).</p> <p>Legislative requirement for landholder access arrangements.</p>	<p>Short term</p>	<p>HGH</p>	<p>HGH RESILIENCE</p>	<p>YES</p>	<p>Fully</p>	<p>YES</p>	<p>NO</p>	<p>LOW</p>			
<p>3. high biofire risk impacts.</p>	<p>Fuel and machinery comprises a potential ignition source.</p>	<p>Activities must comply with CEA Location Restrictions, Impact Thresholds and Criteria, including:</p> <p>A. Activities to avoid conservation areas, drinking water catchments, environmentally sensitive land (including critical habitat, wetlands, waterfront land, riparian zones, acid sulfate soils, CCs, community land, etc).</p> <p>B. Limits to vegetation clearing, surface disturbance and excavations.</p> <p>Activities must comply with the conditions. For new MER sites activities must also comply with the Exploration Code of Practice: Environmental Management including undertaking a risk assessment and implementing suitable controls to manage risks (e.g. implementation of controls on activities during Extreme or Catastrophic Fire Conditions will largely negate risk).</p> <p>Activities must comply with WHS legislative requirements.</p> <p>Any existing/proposed access tracks can be used as firebreaks in event of fire.</p>	<p>Short term</p>	<p>HGH</p>	<p>HGH RESILIENCE</p>	<p>YES</p>	<p>Fully</p>	<p>YES</p>	<p>NO</p>	<p>LOW</p>			
<p>4. any other impacts</p>											<p>Summary of ecological impacts</p>	<p>LOW</p>	<p>NA</p>
<p>5. Location sensitive because of biological factors</p>											<p>Summary of ecological impacts</p>	<p>LOW</p>	<p>NA</p>
<p>1. soils and sea-grass beds, wetland communities (coastal, peatlands or inland), native forests, urban bushland, and sand and semi arid communities.</p>	<p>Potential impacts limited due to CEA Location Restrictions (CEAs not permitted in soaks, sea-grass beds, wetland communities, etc). Negligible and very localized impacts.</p> <p>Modification of pollutants in soils, surface water or aquifers.</p> <p>Short term noise, air quality and visual impacts.</p> <p>Potential emissions from plant and machinery: fugitive emissions of gases or vapour from drilling operations and the operation of farms.</p> <p>Soil erosion and sediment laden runoff from disturbed areas, that could lead to soil or water contamination or land degradation.</p> <p>Use of pesticides, herbicides, herbicides or other chemicals have the potential to build up residues in the environment, including in soils and water.</p> <p>Exposure of acid sulfate soils.</p> <p>Spread of weeds, pest animals and animal/plant diseases.</p> <p>Damage to sensitive features, such as unique biotopes.</p> <p>Vegetation removal may remove/hamper some native vegetation.</p>	<p>Activities must comply with CEA Location Restrictions, Impact Thresholds and Criteria, including:</p> <p>A. Activities to avoid conservation areas, drinking water catchments, environmentally sensitive land (including critical habitat, wetlands, waterfront land, riparian zones, acid sulfate soils, steep slopes, Aboriginal/European heritage protection areas, CCs, community land, etc).</p> <p>B. Limits to vegetation clearing, surface disturbance and excavations.</p> <p>C. No significant impact on any threatened species, threatened population, threatened ecological community, or their habitat.</p> <p>D. No removal of vegetation in waterfront land.</p> <p>Activities must comply with the conditions. For new MER sites activities must also comply with the Exploration Code of Practice: Environmental Management to minimise potential impacts on all aspects of the environment (including water, land, air).</p> <p>All disturbed areas to be rehabilitated in accordance with the conditions. In addition the Exploration Code of Practice: Rehabilitation applies to new MER sites. Rehabilitation to occur as soon as practicable after completion of activity (including seeding if any boronates).</p>	<p>Short term</p>	<p>HGH</p>	<p>HGH RESILIENCE</p>	<p>YES</p>	<p>Fully</p>	<p>NO</p>	<p>NO</p>	<p>LOW</p>			
<p>2. critical habitats or the habitats of threatened fauna or flora species, populations or ecological communities.</p>	<p>Potential impacts limited due to CEA impact threshold restrictions. CEAs are not permitted to have any impact on critical habitat. CEAs are not permitted to have a significant impact on threatened fauna or flora species, populations or ecological communities. (Also refer to flora and fauna impact tables).</p>	<p>NA</p>	<p>NA</p>	<p>NA</p>	<p>NA</p>	<p>NA</p>	<p>NA</p>	<p>NA</p>	<p>NA</p>	<p>LOW</p>			
<p>3. habitat of species listed under international agreements.</p>	<p>Potential impacts limited due to CEA impact threshold restrictions. CEAs are not permitted to have any impact on critical habitat. CEAs are not permitted to have a significant impact on threatened fauna or flora species, populations or ecological communities. (Also refer to flora and fauna impact tables).</p>	<p>NA</p>	<p>NA</p>	<p>NA</p>	<p>NA</p>	<p>NA</p>	<p>NA</p>	<p>NA</p>	<p>NA</p>	<p>LOW</p>			
<p>4. wildlife corridors and remnant vegetation.</p>	<p>Vegetation removal and activities can temporarily impact wildlife corridors and remnant vegetation.</p> <p>Areas cleared for exploration activities, access tracks, etc not available for flora habitat</p> <p>Use of pesticides, herbicides, herbicides or other chemicals have the potential to build up residues in the environment, including in soils and water.</p> <p>Soil erosion and sediment laden runoff from disturbed areas, that could lead to soil or water contamination or land degradation.</p> <p>Spread of weeds, pest animals and animal/plant diseases.</p> <p>Removal of vegetation, barriers created by access tracks, etc can interrupt movement of fauna species.</p>	<p>Activities must comply with CEA Location Restrictions, Impact Thresholds and Criteria, including:</p> <p>A. Activities to avoid conservation areas, drinking water catchments, environmentally sensitive land (including critical habitat, wetlands, waterfront land, riparian zones, acid sulfate soils, steep slopes, Aboriginal/European heritage protection areas, CCs, community land, etc).</p> <p>B. Limits to vegetation clearing, surface disturbance and excavations.</p> <p>C. No significant impact on any threatened species, threatened populations, threatened ecological community, or their habitat.</p> <p>D. No removal of vegetation in waterfront land.</p> <p>Activities must comply with the conditions. For new MER sites activities must also comply with the Exploration Code of Practice: Environmental Management including:</p> <p>A. Minimum extent of vegetation clearing and surface disturbance to as low as practicable.</p> <p>B. Prevent adverse impacts to fauna caused by vegetation clearing, including relocation of resident fauna.</p> <p>C. Access track widths unlikely to pose significant barrier to fauna.</p> <p>All disturbed areas to be rehabilitated in accordance with the conditions. In addition the Exploration Code of Practice: Rehabilitation applies to new MER sites. Rehabilitation to occur as soon as practicable after completion of activity (including seeding if any boronates).</p>	<p>Short term</p>	<p>HGH</p>	<p>HGH RESILIENCE</p>	<p>YES</p>	<p>Fully</p>	<p>YES</p>	<p>NO</p>	<p>LOW</p>			

<p>6. Habitat of protected aquatic species or those with conservation status.</p>	<p>Activity unlikely to have any impact on aquatic ecosystems due to CEA location restrictions. (Also refer to flora and fauna impact tables)</p> <p>Negligible and only localized changes to drainage flow/flowing regime.</p> <p>Water used for exploration not available for ecological purposes.</p> <p>Surface runoff can be sediment laden from areas where vegetation has been removed.</p> <p>Generally minimal surface water use (must be licensed or use of farm dams through landholder agreements).</p> <p>No use of groundwater but potential loss through produced water in drilling / deep excavation operations.</p> <p>Interception, cross contamination and/or depressurization of groundwater systems in drilling operations. Groundwater depressurization effects on surface water.</p> <p>Mobilisation of pollutants (such as hydrocarbons) in surface water or aquifers.</p> <p>Foot access creeks can cause stream bank erosion from vehicle wash.</p> <p>Inappropriate disposal of drilling wastes / overflow from drilling sumps.</p>	<p>Activities must comply with CEA Location Restrictions, Impact Thresholds and Criteria, including:</p> <p>A. Activities to avoid conservation areas (including aquatic reserves and marine parks), drinking water catchments, environmentally sensitive land (including wetlands, waterfront land, riparian zones, acid sulfate soils, Aboriginal/European heritage protection areas, CCAs, community land, etc).</p> <p>B. Limits to vegetation clearing, surface disturbance and excavations.</p> <p>C. Cumulative maximum extraction of groundwater from all exploration activities within the title not to exceed 3M/year.</p> <p>Activities must comply with the conditions. For new MER titles activities must also comply with the Exploration Code of Practice: Environmental Management including:</p> <p>A. Activities must implement all measures to prevent causing any adverse impacts on water quality or quantity.</p> <p>B. All sediment and erosion controls (including drainage from roads/access tracks) to be managed in accordance with Blue Book.</p> <p>C. No significant impact on any threatened species, threatened populations, threatened ecological communities, or their habitats.</p> <p>D. No removal of vegetation in waterfront land.</p> <p>All disturbed areas to be rehabilitated in accordance with the conditions. In addition the Exploration Code of Practice: Rehabilitation applies to new MER titles. Rehabilitation to occur as soon as practicable after completion of activity.</p>	<p>Short term</p>	<p>HIGH</p>	<p>HIGH RESILIENCE</p>	<p>YES</p>	<p>Fully</p>	<p>NO</p>			<p>NO</p>	<p>LOW</p>	
<p>6. Fishing grounds and commercial fish breeding or nursery areas.</p>	<p>Activities unlikely to have any impact on fishing grounds, commercial fish breeding or nursery areas due to CEA location restrictions.</p> <p>Negligible and only localized changes to drainage flow/flowing regime.</p> <p>Surface runoff can be sediment laden from areas where vegetation has been removed.</p> <p>Generally minimal surface water use (must be licensed or use of farm dams through landholder agreements).</p> <p>Interception, cross contamination and/or depressurization of groundwater systems in drilling operations. Groundwater depressurization effects on surface water.</p> <p>Mobilisation of pollutants (such as hydrocarbons) in surface water or aquifers.</p> <p>Foot access creeks can cause stream bank erosion from vehicle wash.</p> <p>Inappropriate disposal of drilling wastes / overflow from drilling sumps.</p>	<p>Activities must comply with CEA Location Restrictions, Impact Thresholds and Criteria, including:</p> <p>A. Activities to avoid conservation areas (including aquatic reserves and marine parks), drinking water catchments, environmentally sensitive land (including wetlands, waterfront land, riparian zones), acid sulfate soils, community land, etc.</p> <p>B. Limits to vegetation clearing, surface disturbance and excavations.</p> <p>C. Cumulative maximum extraction of groundwater from all exploration activities within the title not to exceed 3M/year.</p> <p>Activities must comply with the conditions. For new MER titles activities must also comply with the Exploration Code of Practice: Environmental Management including:</p> <p>A. Activities must implement all measures to prevent causing any adverse impacts on water quality or quantity.</p> <p>B. All sediment and erosion controls (including drainage from roads/access tracks) to be managed in accordance with Blue Book.</p> <p>C. No significant impact on any threatened species, threatened populations, threatened ecological communities, or their habitats.</p> <p>D. No removal of vegetation in waterfront land.</p> <p>All disturbed areas to be rehabilitated in accordance with the conditions. In addition the Exploration Code of Practice: Rehabilitation applies to new MER titles. Rehabilitation to occur as soon as practicable after completion of activity.</p>	<p>Short term</p>	<p>HIGH</p>	<p>HIGH RESILIENCE</p>	<p>YES</p>	<p>Fully</p>	<p>YES</p>			<p>NO</p>	<p>LOW</p>	
<p>7. bushfire prone areas.</p>	<p>Heat and machinery may be an ignition source.</p>	<p>Activities must comply with CEA Location Restrictions, Impact Thresholds and Criteria, including:</p> <p>A. Activities to avoid conservation areas (including aquatic reserves and marine parks), drinking water catchments, environmentally sensitive land (including wetlands, waterfront land, riparian zones), acid sulfate soils, CCAs, community land, etc.</p> <p>B. Limits to vegetation clearing, surface disturbance and excavations.</p> <p>Activities must comply with the conditions. For new MER titles activities must also comply with the Exploration Code of Practice: Environmental Management including undertaking a risk assessment and implementing suitable controls to manage risks (e.g. implementation of controls on activities during Extreme or Catastrophic Fire Conditions will largely negate risk).</p> <p>Activities must comply with WHS legislative requirements.</p> <p>Any existing/proposed access tracks can be used as firebreaks in event of fire.</p>	<p>Short term</p>	<p>HIGH</p>	<p>HIGH RESILIENCE</p>	<p>YES</p>	<p>Fully</p>	<p>YES</p>			<p>NO</p>	<p>LOW</p>	
<p>8. any other sensitive areas.</p>											<p>Summary of sensitive location because of ecological impacts</p>	<p>LOW</p>	<p>NA</p>

3. RESOURCE USE IMPACTS

<p>3a) Community Resources</p>													
<p>1. any degradation of infrastructure or significant increase in the demand for services and infrastructure resources.</p>	<p>Limited potential for any significant increase in demand for resources.</p> <p>Negligible potential for degradation of infrastructure, such as roads and bridges.</p>	<p>Negligible impacts likely.</p> <p>Activities must comply with CEA Location Restrictions, Impact Thresholds and Criteria, including:</p> <p>A. Activities to avoid conservation areas (including aquatic reserves and marine parks), drinking water catchments, environmentally sensitive land (including critical habitat, wetlands, waterfront land, riparian zones), acid sulfate soils, Aboriginal/European heritage areas, CCAs, community land, etc.</p> <p>B. Limits to vegetation clearing, surface disturbance and excavations.</p> <p>C. No significant impact on any threatened species, any threatened population or any threatened ecological community, or their habitats.</p> <p>D. Cumulative maximum extraction of groundwater from all exploration activities within the title not to exceed 3M/year.</p> <p>Activities must comply with the conditions. For new MER titles activities must also comply with the Exploration Code of Practice: Environmental Management including protection of all elements of the environment, culture and heritage.</p> <p>All disturbed areas to be rehabilitated in accordance with the conditions. In addition the Exploration Code of Practice: Rehabilitation applies to new MER titles. Rehabilitation to occur as soon as practicable after completion of activity (includes weed growth management).</p> <p>Legislative requirement for landholder access arrangements and compensation.</p>	<p>Short term</p>	<p>HIGH</p>	<p>HIGH RESILIENCE</p>	<p>YES</p>	<p>Fully</p>	<p>YES</p>			<p>NO</p>	<p>LOW</p>	
<p>2. any significant resource recycling or reuse schemes to reduce resource usage.</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>	<p>LOW</p>	
<p>3. any diversion of resources to the detriment of other communities or natural systems.</p>	<p>Limited potential for any significant diversion of resources to the detriment of other communities or natural systems.</p> <p>Negligible impacts and only localized changes.</p> <p>Areas used for exploration activities, temporarily removed from natural systems and / community use.</p>	<p>Negligible impacts likely.</p> <p>Activities must comply with CEA Location Restrictions, Impact Thresholds and Criteria, including:</p> <p>A. Activities to avoid conservation areas (including aquatic reserves and marine parks), drinking water catchments, environmentally sensitive land (including critical habitat, wetlands, waterfront land, riparian zones), acid sulfate soils, Aboriginal/European heritage areas, CCAs, community land, etc.</p> <p>B. Limits to vegetation clearing, surface disturbance and excavations.</p> <p>C. No significant impact on any threatened species, any threatened population or any threatened ecological community, or their habitats.</p> <p>D. Cumulative maximum extraction of groundwater from all exploration activities within the title not to exceed 3M/year.</p> <p>Activities must comply with the conditions. For new MER titles activities must also comply with the Exploration Code of Practice: Environmental Management including protection of all elements of the environment, culture and heritage.</p> <p>All disturbed areas to be rehabilitated in accordance with the conditions. In addition the Exploration Code of Practice: Rehabilitation applies to new MER titles. Rehabilitation to occur as soon as practicable after completion of activity (includes weed growth management).</p> <p>Legislative requirement for landholder access arrangements and compensation.</p>	<p>Short term</p>	<p>NA</p>	<p>NA</p>	<p>NA</p>	<p>NA</p>	<p>NA</p>	<p>NA</p>	<p>NA</p>	<p>NA</p>	<p>LOW</p>	
<p>4. any other impacts.</p>											<p>Summary of community resource impacts</p>	<p>LOW</p>	<p>NA</p>
<p>3b) Natural Resources</p>													

1. any disruption, depletion or destruction of natural resources.	<p>Unlikely potential for any significant diversion of resources to the detriment of other communities or natural systems.</p> <p>Negligible impacts and only localized changes.</p> <p>Areas used for exploration activities, temporarily removed as a natural resource.</p> <p>Vegetation removal may remove potential timber resources.</p> <p>No significant impacts on other natural resources other than positive in terms of increased knowledge of biological resources.</p>	<p>Negligible impacts likely.</p> <p>Activities must comply with CEA Location Restrictions, Impact Thresholds and Criteria, including:</p> <p>i. Activities to avoid conservation areas, drinking water catchments, environmentally sensitive land (including critical habitat, wetlands, waterfront land, riparian zones), acid sulfate soils, Aboriginal/European Heritage areas, CCAs, community land, etc.</p> <p>ii. Limits to vegetation clearing, surface disturbance and excavations.</p> <p>iii. No significant impact on any threatened species, any threatened population or any threatened ecological community, or their habitats.</p> <p>iv. Cumulative maximum extraction of groundwater from all exploration activities within the title not to exceed 3M/year.</p> <p>Activities must comply with the conditions. For new MER titles activities must also comply with the Exploration Code of Practice: Environmental Management - including protection of all elements of the environment (water, land, soil, air), culture and heritage.</p> <p>All disturbed areas to be rehabilitated in accordance with the conditions. In addition the Exploration Code of Practice: Rehabilitation applies to new MER titles. Rehabilitation to occur as soon as practicable after completion of activity.</p> <p>Legislative requirement for landholder access arrangements and compensation limit any potential impacts.</p>	NA													
2. any disruption of existing activities (or reduction of options for future activities).	<p>Unlikely potential for any significant disruption of existing activities (or reduction of future activities).</p> <p>Negligible impacts and only localized changes.</p> <p>Areas used for exploration activities, temporarily removed as a natural resource but no long term impacts on future availability of energy, agricultural lands or water resources.</p> <p>Vegetation removal may remove potential timber resources.</p>	<p>Negligible impacts likely.</p> <p>Activities must comply with CEA Location Restrictions, Impact Thresholds and Criteria, including:</p> <p>i. Activities to avoid conservation areas, drinking water catchments, environmentally sensitive land (including critical habitat, wetlands, waterfront land, riparian zones), acid sulfate soils, Aboriginal/European Heritage areas, CCAs, community land, etc.</p> <p>ii. Limits to vegetation clearing, surface disturbance and excavations.</p> <p>iii. No significant impact on any threatened species, any threatened population or any threatened ecological community, or their habitats.</p> <p>iv. Cumulative maximum extraction of groundwater from all exploration activities within the title not to exceed 3M/year.</p> <p>Activities must comply with the conditions. For new MER titles activities must also comply with the Exploration Code of Practice: Environmental Management - including protection of all elements of the environment (water, land, soil, air), culture and heritage.</p> <p>All disturbed areas to be rehabilitated in accordance with the conditions. In addition the Exploration Code of Practice: Rehabilitation applies to new MER titles. Rehabilitation to occur as soon as practicable after completion of activity.</p> <p>Legislative requirement for landholder access arrangements and compensation limit any potential impacts.</p>	Short term													
3. any use which results in the degradation of any area reserved for conservation purposes.	CEA activity not permitted in areas reserved for conservation purposes.		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NO	LOW		
4. any other impacts.																
13. Location sensitive because of conservation factors													Summary of Natural Resource Impacts	LOW	NA	
1. national parks and other areas reserved or dedicated under the National Parks and Wildlife Act 1974	Activity not permitted in area.		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NO	LOW		
2. land reserved or dedicated within the meaning of the Crown Lands Act 1989 for preservation of other environmental protection purposes.	Activity not permitted in area.		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NO	LOW		
3. World Heritage areas.	Activity not permitted in area.		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NO	LOW		
4. environmental protection zones in environmental planning instrument or lands protected under SEPP 14 Coastal Wetlands or SEPP 26 - Linear Features.	Activity not permitted in area.		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NO	LOW		
5. land identified as wilderness under the Wilderness Act 1987 or declared as wilderness under the NPW Act.	Activity not permitted in area.		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NO	LOW		
6. aquatic reserves reserved or dedicated under the Fisheries Management Act 1994.	Activity not permitted in area.		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NO	LOW		
7. wetland areas dedicated under the Ramsar Wetlands Convention.	Activity not permitted in area.		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NO	LOW		
8. heritage items identified on the Register of the National Estate, under the NSW Heritage Act or an environmental planning instrument.	Activity not permitted in area.		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NO	LOW		
9. community land under the Local Government Act (for which a plan of management has been prepared).	Activity not permitted in area.		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NO	LOW		
10. land subject to a 'conservation agreement' under the NPW Act.	Activity not permitted in area.		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NO	LOW		
11. any other factors.																
14. Social factors													4. COMMUNITY IMPACTS	Summary of Location Sensitive because of Conservation Factors	LOW	NA
1. any impacts which result in a change in the demographic structure of the community.	Unlikely potential for any significant change in the demographic structure of the community. <p>Negligible impacts and only localized changes.</p>	Negligible impacts likely due to low personnel numbers and temporary nature of exploration.	Short term													
2. any environmental impact that may cause substantial change or disruption to the community.	Environmental impacts from activities not of a nature to cause any significant or long term change or disruption to community. <p>Areas used for exploration activities, temporarily removed from natural systems and / community use.</p> <p>Short term noise, air quality and visual impacts.</p>	<p>Activities must comply with CEA Location Restrictions, Impact Thresholds and Criteria, including:</p> <p>i. Activities to avoid conservation areas, drinking water catchments, environmentally sensitive land (including critical habitat, wetlands, waterfront land, riparian zones), acid sulfate soils, steep slopes, Aboriginal/European heritage protection areas, CCAs, community land, etc.</p> <p>ii. Limits to vegetation clearing, surface disturbance and excavations.</p> <p>iii. No significant impact on any threatened species, threatened population, threatened ecological community, or their habitats.</p> <p>iv. No removal of vegetation in waterfront land.</p> <p>Activities must comply with the conditions. For new MER titles activities must also comply with the Exploration Code of Practice: Environmental Management - to minimise potential impacts on all aspects of the environment (including water, land, air).</p> <p>All disturbed areas to be rehabilitated in accordance with the conditions. In addition the Exploration Code of Practice: Rehabilitation applies to new MER titles. Rehabilitation to occur as soon as practicable after completion of activity (including sealing of any boreholes).</p>	Short term													
3. any impacts which result in some individuals or communities being significantly disadvantaged.	Impacts from activities not of a nature to cause any significant or long term change or disruption to community. <p>Unlikely potential for significant impact on individuals or communities - short term impacts only.</p> <p>Areas used for exploration activities, temporarily removed from natural systems and / community use.</p> <p>Short term noise, air quality and visual impacts.</p>	<p>Activities must comply with CEA Location Restrictions, Impact Thresholds and Criteria, including:</p> <p>i. Activities to avoid conservation areas, drinking water catchments, environmentally sensitive land (including critical habitat, wetlands, waterfront land, riparian zones), acid sulfate soils, Aboriginal/European Heritage areas, CCAs, community land, etc.</p> <p>ii. Limits to vegetation clearing, surface disturbance and excavations.</p> <p>iii. No significant impact on any threatened species, threatened population or threatened ecological community, or their habitats.</p> <p>iv. Cumulative maximum extraction of groundwater from all exploration activities within the title not to exceed 3M/year.</p> <p>Activities must comply with the conditions. For new MER titles activities must also comply with the Exploration Code of Practice: Environmental Management - including protection of all elements of the environment (water, land, soil, air), culture and heritage.</p> <p>All disturbed areas to be rehabilitated in accordance with the conditions. In addition the Exploration Code of Practice: Rehabilitation applies to new MER titles. Rehabilitation to occur as soon as practicable after completion of activity.</p> <p>Legislative requirement for landholder access arrangements and compensation limit any potential impacts.</p> <p>Compensation under Mining Act available to mitigate compensation. Activities must comply with WHS legislative requirements.</p>	Short term													
				HIGH	HIGH RESILIENCE	YES	Fully	YES					NO	LOW		
				HIGH	HIGH RESILIENCE	YES	Partly	YES					NO	LOW		
				HIGH	HIGH RESILIENCE	YES	Fully	YES					NO	LOW		

<p>4. any impacts on the health, safety, privacy or welfare of individuals or communities.</p>	<p>Activities not of a nature to cause any significant or long term health, safety, privacy or welfare impacts. Limited potential to significantly impact on individuals or communities - short term impacts only. Short term noise, air quality and visual impacts.</p>	<p>Activities must comply with CEA restrictions/conditions, including: a. Activities to avoid conservation areas, drinking water catchments, environmentally sensitive land (including critical habitat, wetlands, waterfront land, riparian zones, acid sulfate soils, Aboriginal/European heritage areas, CCs, community land, etc.) b. Limits to vegetation clearing, surface disturbance and excavations. c. No significant impact on any threatened species, threatened population or threatened ecological community, or their habitats. d. Cumulative maximum extraction of groundwater from all exploration activities within the title not to exceed 500,000m³/year. Activities must comply with the conditions. For new MER title activities must also comply with the Exploration Code of Practice: Environmental Management - including protection of all elements of the environment (water, land, air), culture and heritage. All disturbed areas to be rehabilitated in accordance with the conditions. In addition the Exploration Code of Practice: Rehabilitation applies to new MER titles. Rehabilitation to occur as soon as practicable after completion of activity (including seeding of any boreholes). Legislative requirement for landholder access arrangements and compensation limit any potential impacts. Compensation under Mining Act available to mitigate compensation. Activities must comply with WH&S legislative requirements.</p>	<p>Short term</p>		<p>HGH</p>	<p>NA</p>	<p>NA</p>	<p>Fully</p>	<p>YES</p>			<p>NO</p>	<p>LOW</p>	
<p>5. any impacts that result in a change in the level of demand for community resources (eg community facilities, community services and labour force).</p>	<p>Negligible potential to significantly change level of demand for community resources - short term impacts only. Minimal increase in demand for accommodation, food, mechanical and fuel supplies, etc. Not large enough to warrant significant changes in supply.</p>	<p>Negligible impacts likely due to low personnel numbers and temporary nature of exploration. Generally positive for suppliers of services and goods utilized.</p>	<p>Short term</p>		<p>HGH</p>	<p>HGH RESILIENCE</p>	<p>YES</p>	<p>Partly</p>	<p>YES</p>			<p>NO</p>	<p>LOW</p>	
<p>Summary of Social Factors</p>												<p>LOW</p>	<p>NA</p>	
<p>5. Economic factors (including impacts on employment, industry and property values)</p>														
<p>1. any impacts which may affect economic activity, production or profitability, including a decrease to net economic welfare.</p>	<p>No significant impacts predicted. Minimal increase in demand for accommodation, food, mechanical and fuel supplies, etc. Not large enough to warrant significant changes in supply.</p>	<p>Negligible impacts likely due to low personnel numbers and temporary nature of exploration. Generally positive for suppliers of services and goods utilized.</p>	<p>Short term</p>		<p>HGH</p>	<p>HGH RESILIENCE</p>	<p>YES</p>	<p>Fully</p>	<p>YES</p>			<p>NO</p>	<p>LOW</p>	
<p>2. any impacts that result in a decrease in the economic stability of the community.</p>	<p>Activities not of a scale to warrant changes in supply side. Temporary increase in demand will result in increased income for some suppliers.</p>	<p>Negligible impacts likely due to low personnel numbers and temporary nature of exploration. Generally positive for suppliers of services and goods utilized.</p>	<p>Short term</p>		<p>HGH</p>	<p>HGH RESILIENCE</p>	<p>YES</p>	<p>Partly</p>	<p>YES</p>			<p>NO</p>	<p>LOW</p>	
<p>3. any impacts which result in a change to the public sector revenue or expenditure base.</p>	<p>Rehabilitation security bond covers any future public liability for rehabilitation. Investment in exploration may lead to significant mining investment. Limited long term negative economic impacts from exploration.</p>	<p>Small increase in public revenue associated with exploration, including taxes from wages.</p>	<p>Short term</p>		<p>HGH</p>	<p>HGH RESILIENCE</p>	<p>YES</p>	<p>No</p>	<p>NA</p>			<p>NO</p>	<p>LOW</p>	
<p>Summary of Economic Factors</p>												<p>LOW</p>	<p>NA</p>	
<p>6. Heritage, aesthetic, cultural impacts</p>														
<p>1. any impacts on a locality, place, landscape, building or archaeological relic of heritage significance.</p>	<p>Damage to structures and sensitive features. Limited potential to significantly impact on locality, places, landscapes or buildings. Short term noise, air quality and visual impacts. Potential for temporary impact on aesthetics of a locality.</p>	<p>Activities must comply with CEA Location Restrictions, Impact Thresholds and Criteria, including: a. Activities to avoid conservation areas, drinking water catchments, environmentally sensitive land (including critical habitat, wetlands, waterfront land, riparian zones, acid sulfate soils, steep slopes, Aboriginal/European heritage protection areas, CCs, community land, etc.) b. Limits to vegetation clearing, surface disturbance and excavations. c. No significant impact on any threatened species, threatened population, threatened ecological community, or their habitats. d. No removal of vegetation in waterfront land. Activities must comply with the conditions. For new MER title activities must also comply with the Exploration Code of Practice: Environmental Management - to minimise potential impacts on all aspects of the environment (including water, land, air), culture and heritage (Aboriginal and Non-Indigenous heritage). All disturbed areas to be rehabilitated in accordance with the conditions. In addition the Exploration Code of Practice: Rehabilitation applies to new MER titles. Rehabilitation to occur as soon as practicable after completion of activity (including seeding of any boreholes).</p>	<p>Short term</p>		<p>HGH</p>	<p>NA</p>	<p>YES</p>	<p>Partly</p>	<p>YES</p>			<p>NO</p>	<p>LOW</p>	
<p>2. any impacts on the visual or scenic landscape.</p>	<p>Limited potential to significantly impact on visual or scenic landscape. Short term noise, air quality and visual impacts. Potential for temporary impact on aesthetics of a locality. Lighting during night time operations and use of access tracks by vehicles at night may affect local amenity.</p>	<p>Activities must comply with CEA Location Restrictions, Impact Thresholds and Criteria, including: a. Activities to avoid conservation areas, drinking water catchments, environmentally sensitive land (including critical habitat, wetlands, waterfront land, riparian zones, acid sulfate soils, steep slopes, Aboriginal/European heritage protection areas, CCs, community land, etc.) b. Limits to vegetation clearing, surface disturbance and excavations. c. No significant impact on any threatened species, threatened population, threatened ecological community, or their habitats. d. No removal of vegetation in waterfront land. Activities must comply with the conditions. For new MER title activities must also comply with the Exploration Code of Practice: Environmental Management - to minimise potential impacts on all aspects of the environment (including water, land, air), culture and heritage (Aboriginal and Non-Indigenous heritage). All disturbed areas to be rehabilitated in accordance with the conditions. In addition the Exploration Code of Practice: Rehabilitation applies to new MER titles. Rehabilitation to occur as soon as practicable after completion of activity (including seeding of any boreholes).</p>	<p>Short term</p>		<p>HGH</p>	<p>HGH RESILIENCE</p>	<p>NA</p>	<p>Fully</p>	<p>YES</p>			<p>NO</p>	<p>LOW</p>	
<p>3. any disturbance of the ground surface or any culturally modified trees (e.g. a scar tree).</p>	<p>Potential impacts limited due to CEA impact threshold restrictions. CEAs are not permitted to have any impact on Aboriginal objects or places. Short term ground disturbance. Potential for temporary impact on aesthetics of a locality.</p>	<p>Activities must comply with CEA Location Restrictions, Impact Thresholds and Criteria, including: a. Activities to avoid conservation areas, drinking water catchments, environmentally sensitive land (including critical habitat, wetlands, waterfront land, riparian zones, acid sulfate soils, steep slopes, Aboriginal/European heritage protection areas, CCs, community land, etc.) b. Limits to vegetation clearing, surface disturbance and excavations. c. No significant impact on any threatened species, threatened population, threatened ecological community, or their habitats. d. No removal of vegetation in waterfront land. Activities must comply with the conditions. For new MER title activities must also comply with the Exploration Code of Practice: Environmental Management - to minimise potential impacts on all aspects of the environment (including water, land, air), culture and heritage (Aboriginal and Non-Indigenous heritage). All disturbed areas to be rehabilitated in accordance with the conditions. In addition the Exploration Code of Practice: Rehabilitation applies to new MER titles. Rehabilitation to occur as soon as practicable after completion of activity (including seeding of any boreholes).</p>	<p>Short term</p>		<p>HGH</p>	<p>HGH RESILIENCE</p>	<p>YES</p>	<p>Fully</p>	<p>YES</p>			<p>NO</p>	<p>LOW</p>	
<p>4. any impacts on known Aboriginal objects or Aboriginal places.</p>	<p>Potential impacts limited due to CEA impact threshold restrictions. CEAs are not permitted to have any impact on Aboriginal objects or places.</p>	<p>NA</p>	<p>NA</p>		<p>NA</p>	<p>NA</p>	<p>NA</p>	<p>NA</p>	<p>NA</p>	<p>NA</p>	<p>NA</p>	<p>NA</p>	<p>LOW</p>	

6. Effects areas where the landscape features indicate the likely presence of Aboriginal objects.	<p>Potential impacts limited due to CEA impact threshold restrictions.</p> <p>CEAs are not permitted to have any impact on Aboriginal objects or places.</p>	<p>Activities must comply with CEA Location Restrictions, Impact Thresholds and Criteria, including:</p> <p>a. Activities to avoid conservation areas, drinking water catchments, environmentally sensitive land (including critical habitat, wetlands, waterfront land, riparian zones, acid sulfate soils, steep slopes, Aboriginal/European heritage protection areas, CCAs, community land, etc.);</p> <p>b. Limits to vegetation clearing, surface disturbance and excavations;</p> <p>c. No significant impact on any threatened species, threatened population, threatened ecological community, or their habitats;</p> <p>d. No removal of vegetation in waterfront land.</p> <p>Activities must comply with the conditions. For new MER sites activities must also comply with the Exploration Code of Practice: Environmental Management. To minimise potential impacts on all aspects of the environment (including water, land, air), culture and heritage (Aboriginal and Non-Indigenous heritage)</p> <p>All disturbed areas to be rehabilitated in accordance with the conditions. In addition the Exploration Code of Practice: Rehabilitation applies to new MER sites. Rehabilitation to occur as soon as practicable after completion of activity (including sealing of any boreholes).</p>	Short term	HIGH	HIGH RESILIENCE	YES	Fully	YES		NO	LOW		
6. Effects areas subject to native title claims, indigenous land use agreements or joint management arrangements.	<p>Condition of exploration (where/wholly prohibits exploration on any land or waters on which Native Title has not been extinguished, unless the prior consent of the Minister has been obtained).</p> <p>Potential impacts limited due to CEA location restriction, impact threshold limits and management controls.</p> <p>CEAs are not permitted to have any impact on Aboriginal objects or places.</p>	<p>Condition of exploration (where/wholly prohibits exploration on any land or waters on which Native Title has not been extinguished, unless the prior consent of the Minister has been obtained).</p> <p>Potential impacts limited due to CEA location restriction, impact threshold limits and management controls.</p> <p>CEAs are not permitted to have any impact on Aboriginal objects or places.</p>	Short term	HIGH	HIGH RESILIENCE	YES	Fully	YES		NO	LOW		
7. Any other heritage, aesthetic or cultural impacts.													
CE Land use impacts										Summary of heritage, aesthetic, cultural impacts		LOW	NA
6. Any major changes in land use, including confinement of other beneficial land uses.	<p>Limited potential for any major changes in land use due to short term and temporary nature of exploration.</p> <p>Negligible impacts and limited to immediate vicinity of site.</p> <p>Access used for exploration activities, temporarily removed from existing land uses but no long term impacts.</p> <p>Vegetation removal may remove potential timber resources.</p>	<p>Minimal impacts likely and limited to immediate site of the activity.</p> <p>Activities must comply with CEA Location Restrictions, Impact Thresholds and Criteria, including:</p> <p>a. Activities to avoid conservation areas, drinking water catchments, environmentally sensitive land (including critical habitat, wetlands, waterfront land, riparian zones, acid sulfate soils, Aboriginal/European heritage areas, CCAs, community land, etc.);</p> <p>b. Limits to vegetation clearing, surface disturbance and excavations;</p> <p>c. No significant impact on any threatened species, any threatened population or any threatened ecological community, or their habitats.</p> <p>Activities must comply with the conditions. For new MER sites activities must also comply with the Exploration Code of Practice: Environmental Management including protection of all elements of the environment (water, land, air), culture and heritage.</p> <p>All disturbed areas to be rehabilitated in accordance with the conditions. In addition the Exploration Code of Practice: Rehabilitation applies to new MER sites. Rehabilitation to occur as soon as practicable after completion of activity.</p> <p>Legislative requirement for landholder access arrangements and compensation limit any potential impacts.</p>	Short term	HIGH	HIGH RESILIENCE	YES	No	YES		NO	LOW		
6. Any property value impacts with land use implications.	<p>CEA location restrictions, impact thresholds and management controls will limit potential impacts.</p> <p>Magnitude of permitted vegetation clearing and disturbance unlikely to result in decline of property values.</p> <p>Limited potential to significantly impact on visual or scenic landscapes.</p> <p>Short term noise, air quality and visual impacts.</p> <p>Potential for temporary impact on aesthetics of a locality.</p> <p>Activities should not result in decline of property values over the long term.</p>	<p>Minimal impacts likely and limited to immediate site of the activity.</p> <p>Activities must comply with CEA Location Restrictions, Impact Thresholds and Criteria, including:</p> <p>a. Activities to avoid conservation areas, drinking water catchments, environmentally sensitive land (including critical habitat, wetlands, waterfront land, riparian zones, acid sulfate soils, Aboriginal/European heritage areas, CCAs, community land, etc.);</p> <p>b. Limits to vegetation clearing, surface disturbance and excavations;</p> <p>c. No significant impact on any threatened species, any threatened population or any threatened ecological community, or their habitats.</p> <p>Impacts are compensable under relevant legislation, including Mining Act 1992 and Petroleum (Driftless) Act 1993.</p> <p>Access tracks may increase value of property through improved access.</p> <p>Subject to landholder agreement and any compensation.</p> <p>All disturbed areas to be rehabilitated in accordance with the conditions. In addition the Exploration Code of Practice: Rehabilitation applies to new MER sites. Rehabilitation to occur as soon as practicable after completion of activity (including sealing of any boreholes).</p>	Short term - until land is rehabilitated	HIGH	HIGH RESILIENCE	UNCERTAIN	Fully	YES		NO	LOW		
CE Land use impacts										Summary of land use impacts		LOW	NA
CE Transportation impacts (during construction and operations)													
6. Substantial impacts on existing transportation systems.	Short term additional traffic, during exploration activity, primarily during set-up/construction stage.	Short term additional traffic, during exploration activity, primarily during set-up/construction stage.	Short term	HIGH	HIGH RESILIENCE	YES	Fully	YES		NO	LOW		
6. Impacts associated with direct or indirect additional traffic.	Short term additional traffic, during exploration activity, primarily during set-up/construction stage.	Short term additional traffic, during exploration activity, primarily during set-up/construction stage.	Short term	HIGH	HIGH RESILIENCE	YES	Fully	YES		NO	LOW		
CE Land use impacts										Summary of transportation impacts		LOW	NA
CE Location sensitive because of community factors													
6. Aboriginal communities or areas subject to land rights claims.	<p>Condition of exploration (where/wholly prohibits exploration on any land or waters on which Native Title has not been extinguished, unless the prior consent of the Minister has been obtained).</p> <p>Potential impacts limited due to CEA location restriction, impact threshold limits and management controls.</p> <p>CEAs are not permitted to have any impact on Aboriginal objects or places.</p>	<p>Condition of exploration (where/wholly prohibits exploration on any land or waters on which Native Title has not been extinguished, unless the prior consent of the Minister has been obtained).</p> <p>Potential impacts limited due to CEA location restriction, impact threshold limits and management controls.</p> <p>CEAs are not permitted to have any impact on Aboriginal objects or places.</p>	Short term	HIGH	HIGH RESILIENCE	YES	Fully	YES		NO	LOW		
6. Communities with strong sense of identity.	<p>Community duty to include members who have concerns about possible future mining following any exploration program.</p> <p>Short term and temporary impacts only.</p>	<p>Short term impacts on the community and predominantly limited to immediate site.</p> <p>Subject to landholder agreement and any compensation.</p> <p>Potential impacts limited due to CEA location restriction, impact threshold limits and management controls.</p> <p>All disturbed areas to be rehabilitated in accordance with the conditions. In addition the Exploration Code of Practice: Rehabilitation applies to new MER sites. Rehabilitation to occur as soon as practicable after completion of activity.</p>	Short term	MEDIUM	HIGH RESILIENCE	YES	Partly	YES		NO	LOW		
6. Geographical communities.	No negative impacts predicted.	<p>Short term impacts on the community and predominantly limited to immediate site.</p> <p>Subject to landholder agreement and any compensation.</p> <p>Potential impacts limited due to CEA location restriction, impact threshold limits and management controls.</p> <p>All disturbed areas to be rehabilitated in accordance with the conditions. In addition the Exploration Code of Practice: Rehabilitation applies to new MER sites. Rehabilitation to occur as soon as practicable after completion of activity.</p>	Short term	HIGH	HIGH RESILIENCE	YES	Fully	YES		NO	LOW		

<p>4. areas with degraded amenity from noise, traffic congestion or odour.</p>	<p>Potential for temperature inversions to result in fog, dust and air particulates. Particulate emissions and noise from vehicles and machinery. Dust generation and noise from operating machinery, vehicles travelling over tracks, etc. Short term additional traffic during exploration activity, primarily during self-construction stage. Cumulative impacts must remain within acceptable CEA criteria.</p>	<p>Short term impacts predominantly limited to immediate site. Subject to landholder agreement and any compensation. Potential cumulative impacts limited due to CEA location restriction, impact threshold limits and management controls. Activities must comply with the conditions. For new MER sites activities must also comply with the Exploration Code of Practice: Environmental Management including cumulative noise and air quality criteria. All disturbed areas to be rehabilitated in accordance with the conditions. In addition the Exploration Code of Practice: Rehabilitation applies to new MER sites. Rehabilitation to occur as soon as practicable after completion of activity (including sealing of any boreholes).</p>	<p>Short term.</p>	<p>HIGH</p>	<p>HIGH RESILIENCE</p>	<p>YES</p>	<p>Fully</p>	<p>YES</p>		<p>NO</p>	<p>LOW</p>	
<p>5. areas or items of high anthropological, archaeological, architectural, cultural, heritage, historical, recreational or scientific value.</p>	<p>CEA restrictions ensure activity must not harm Aboriginal or European heritage. Short term and temporary impacts only.</p>	<p>Activities must comply with CEA Location Restrictions, Impact Thresholds and Criteria, including: a. Activities to avoid conservation areas, drinking water catchments, environmentally sensitive land (including critical habitat, wetlands, waterfront land, riparian zones), acid sulfate soils, steep slopes, Aboriginal-European heritage protection areas, COCs, community land, etc. b. Limits to vegetation clearing, surface disturbance and excavations. c. No significant impact on any threatened species, threatened population, threatened ecological community, or their habitats. d. No removal of vegetation in waterfront land. Activities must comply with the conditions. For new MER sites activities must also comply with the Exploration Code of Practice: Environmental Management to minimise potential impacts on all aspects of the environment (including water, land, air), culture and heritage (Aboriginal and non-Indigenous heritage). All disturbed areas to be rehabilitated in accordance with the conditions. In addition the Exploration Code of Practice: Rehabilitation applies to new MER sites. Rehabilitation to occur as soon as practicable after completion of activity (including sealing of any boreholes).</p>	<p>NA</p>	<p>HIGH</p>	<p>NA</p>	<p>NA</p>	<p>Fully</p>	<p>YES</p>		<p>NO</p>	<p>LOW</p>	
<p>6. areas or items of high aesthetic or scenic value.</p>	<p>Limited potential to significantly impact on aesthetic or scenic value. Short term noise, air quality and visual impacts. Potential for temporary impact on aesthetics of a locality. Lighting during night time operations and use of access tracks by vehicles at night may affect local amenity. Exploration activities, including any removal of vegetation and access track locations, may impact on visual amenity.</p>	<p>Short term impacts predominantly limited to immediate site. Activities must comply with CEA Location Restrictions, Impact Thresholds and Criteria, including: a. Activities to avoid conservation areas, drinking water catchments, environmentally sensitive land (including critical habitat, wetlands, waterfront land, riparian zones), acid sulfate soils, steep slopes, Aboriginal-European heritage protection areas, COCs, community land, etc. b. Limits to vegetation clearing, surface disturbance and excavations. c. No significant impact on any threatened species, threatened population, threatened ecological community, or their habitats. d. No removal of vegetation in waterfront land. Activities must comply with the conditions. For new MER sites activities must also comply with the Exploration Code of Practice: Environmental Management to minimise potential impacts on all aspects of the environment (including water, land, air), culture and heritage (Aboriginal and non-Indigenous heritage). All disturbed areas to be rehabilitated in accordance with the conditions. In addition the Exploration Code of Practice: Rehabilitation applies to new MER sites. Rehabilitation to occur as soon as practicable after completion of activity (including sealing of any boreholes).</p>	<p>Short term.</p>	<p>HIGH</p>	<p>HIGH RESILIENCE</p>	<p>YES</p>	<p>Partly</p>	<p>YES</p>		<p>NO</p>	<p>LOW</p>	
<p>7. any other factors.</p>									<p>Summary of location sensitive because of community factors</p>	<p>LOW</p>	<p>NA</p>	

Ranking
LOW
MEDIUM
HIGH

NOTE FOR USERS: Fill out all blank fields. Fields with blue text require checking / selection from the drop-down list.
Where a potential impact exists, all fields must be completed.
Where there is no potential impact, put "N/A" in first field and leave the rest of the fields in that row blank.
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PART 5: ANALYSIS OF THE EXTENT AND NATURE OF THE IMPACTS DURING CONSTRUCTION AND OPERATION

Characteristics of potential impacts (adverse & beneficial)	Type of potential impacts	EVALUATION CRITERIA Considering the extent and nature of the impacts on the environment, the potential significance of each impact should be ranked using selections from the drop-down lists.									Ranking of potential significance	Justification of Ranking
		Size, scope & intensity	Duration	What is the confidence in predicting impacts?	How resilient is the environment to cope with impacts?	Can the impacts be reversed?	Can the impacts be mitigated?	Do the operations comply with standards, plans, policies?	What is the level of public concern?	Are further studies required on impacts or mitigation?		
1. PHYSICAL OR POLLUTION IMPACTS												
(a) Air impacts												
1. air quality impacts (including impacts on nearby sensitive receptors).	Particulates and emissions from vehicle exhausts, plant and machinery. Wind erosion and dust from disturbed soils during construction and operations. Dust from vehicles travelling over tracks. Dust generation from operating plant and machinery.	Activities must comply with title conditions. For new IMER titles activities must also comply with the <i>Exploration Code of Practice: Environmental Management</i> . Impacts of any drilling limited to immediate vicinity of drilling. Drilling activities must comply with title conditions. For new IMER titles, drilling activities must also comply with the <i>Exploration Code of Practice: Environmental Management</i> (impacts negligible due to nature of drilling activities). All disturbed areas to be rehabilitated in accordance with title conditions. In addition, the <i>Exploration Code of Practice: Rehabilitation</i> applies to new IMER titles. Rehabilitation to occur as soon as practicable after completion of activity (including sealing of any boreholes).		HIGH	HIGH RESILIENCE	YES	Fully	YES	LOW	NO	LOW	EPA reviewed emissions from proposed onsite diesel generators. No issues identified.
2. greenhouse or ozone impacts.	Emissions from combustion of fuel associated with vehicles, plant and machinery during construction, operations and rehabilitation. Fugitive methane emissions from intercepted seams. Fugitive emissions of gases or vapour from drilling operations and the operation of flares.	CO2 emissions from activities are extremely limited and inconsequential in context of global emissions and impact. Restrictions on use of ozone depleting substances in NSW also limits ozone depletion. All disturbed areas to be rehabilitated in accordance with title conditions. In addition, the <i>Exploration Code of Practice: Rehabilitation</i> applies to new IMER titles. Rehabilitation to occur as soon as practicable after completion of activity (including sealing of any boreholes).		HIGH	HIGH RESILIENCE	YES	Partly	YES	MEDIUM	NO	LOW	EPA reviewed emissions from proposed onsite diesel generators. No issues identified.
3. any other air impacts.												
Summary of Air Impacts											LOW	NA
(b) Water impacts												
1. impacts from the use of surface or groundwater (including use of fracture stimulation injection water).	Water used for exploration not available for ecological, stock, domestic or irrigation purposes. Surface runoff can be sediment laden. Generally minimal surface water use (must be licensed or use of farm dams through landholder agreements). No use of groundwater but potential loss through produced water in drilling / deep excavation operations. Interception, cross contamination and/or depressurisation of groundwater systems in drilling operations. Groundwater depressurisation effects on surface water. Mobilisation of pollutants (such as hydrocarbons) in surface water or aquifers.	Activities must comply with title conditions. For new IMER titles activities must comply with the <i>Exploration Code of Practice: Environmental Management</i> including: a. Activities must implement all measures to prevent causing any adverse impacts on water quality or quantity. b. Activities must not cause adverse impacts to livestock (including any adverse impacts on surface water supplies used by livestock). Water used for access track watering must be obtained from licensed source or farm dams (with consent of owner). Boreholes to be constructed, operated and decommissioned in accordance with authority/title conditions, Departmental Guidelines and Codes of Practice to protect groundwater/aquifers.		HIGH	MEDIUM RESILIENCE	UNCERTAIN	Partly	YES	HIGH	NO	LOW	Application referred to NRAR. No response received. Wells are existing and the impacts on groundwater have been previously assessed. Application is to restart suspended wells. No new wells are planned as part of this application. Groundwater study completed by AGE (see comments below)
2. impacts from storage of water	Negligible and only localised impacts from storage of water. Water used for exploration not available for ecological, stock, domestic or irrigation purposes. Surface runoff can be sediment laden. Generally minimal surface water use (must be licensed or use of farm dams through landholder agreements). No use of groundwater but potential loss through produced water in drilling / deep excavation operations.	Activities must comply with the title conditions. For new IMER titles activities must also comply with the <i>Exploration Code of Practice: Environmental Management</i> including: a. Activities must implement all measures to prevent causing any adverse impacts on water quality or quantity. b. Activities must not cause adverse impacts to livestock (including any adverse impacts on surface water supplies used by livestock). All management and storage of produced water must comply with the title conditions. In addition, the <i>Exploration Code of Practice: Produced Water Management, Storage and Transfer</i> may apply to the management of produced water for new IMER titles. Any impacts subject to compensation and landholder access arrangements (e.g. any impacts on land use from storage or water).		HIGH	MEDIUM RESILIENCE	YES	Fully	YES	HIGH	NO	LOW	Produced water is to be captured in onsite tanks. Periodically the water would be trucked to Santos Leewood water treatment facility in PAL2.

3. Impacts from changes to natural water bodies, wetlands or runoff patterns.	<p>Negligible and only localised changes to surface flows.</p> <p>Surface runoff can be sediment laden.</p> <p>Generally minimal surface water use (must be licensed or use of farm dams through landholder agreements).</p> <p>Interception, cross contamination and/or depressurisation of groundwater systems in drilling operations. Groundwater depressurisation effects on surface water.</p>	<p>Activities must comply with title conditions. For new IMER titles activities must also comply with the <i>Exploration Code of Practice: Environmental Management</i> including:</p> <p>a. Activities must implement all measures to prevent causing any adverse impacts on water quality or quantity.</p> <p>b. All sediment and erosion controls (including drainage from roads/access tracks) to be managed in accordance with Blue Book.</p> <p>c. Existing access tracks to be used/upgraded wherever possible.</p> <p>All management and storage of produced water must comply with the title conditions. In addition, the <i>Exploration Code of Practice: Produced Water Management, Storage and Transfer</i> may apply to the management of produced water for new IMER titles.</p>		N/A								
4. Impacts from aquifer interference, including changes to inter-aquifer connectivity.	<p>No use of groundwater but potential loss through produced water in drilling / deep excavation operations.</p> <p>Interception, cross contamination and/or depressurisation of groundwater systems in drilling operations. Groundwater depressurisation effects on surface water.</p> <p>Mobilisation of pollutants (such as hydrocarbons) in surface water or aquifers.</p>	<p>Activities must comply with title conditions. For new IMER titles activities must also comply with the <i>Exploration Code of Practice: Environmental Management</i> including:</p> <p>a. Activities must implement all measures to prevent causing any adverse impacts on water quality or quantity.</p> <p>b. Activities must minimise cross connection of aquifers or groundwater sources.</p> <p>c. Activities must minimise any depressurisation of aquifers or groundwater sources.</p> <p>d. Coal and petroleum title holders must prepare and implement a Groundwater Monitoring & Modelling Plan in consultation with NSW Office of Water.</p> <p>Boreholes to be constructed, operated and decommissioned in accordance with authority/title conditions, Departmental Guidelines and Codes of Practice to protect groundwater/aquifers.</p>		HIGH	LOW RESILIENCE	YES	Fully	YES	HIGH	NO	LOW	<p>Groundwater study prepared by Australian Groundwater & Environmental Consultants (Appendix E of REF). Study concluded: Consistent with the temporary nature and depth of the extraction and the relatively minor volumes to be extracted impacts are expected to be negligible.</p> <p>Predicted drawdown impacts do not extend beyond the Coogal sub-group of the Black Jack Group (i.e. around 300 m below ground at the Project site). As such no impacts on water levels and/or water quality at sensitive receptors including existing water supply bores which target shallower units and surficial GDEs and IDEs are predicted.</p> <p>Due to the temporary nature of the proposed extraction and minor nature of the predicted impact no water level or water quality triggers have been identified at this stage.</p>
5. Impacts from any hydraulic fracturing (well stimulation), including through gas and fluid migration.	<p>No use of groundwater but potential loss through produced water in drilling / deep excavation operations.</p> <p>Interception, cross contamination and/or depressurisation of groundwater systems in drilling operations. Groundwater depressurisation effects on surface water.</p> <p>Mobilisation of pollutants (such as hydrocarbons) in surface water or aquifers.</p>			N/A				N/A				No hydraulic fracturing is proposed.
6. Impacts from changes to flooding or tidal regimes.	<p>Negligible and only localised changes to drainage flows/flooding regime.</p> <p>Surface runoff can be sediment laden.</p>	<p>Activities must comply with title conditions. For new IMER titles activities must also comply with the <i>Exploration Code of Practice: Environmental Management</i> to minimise impacts on flooding or tidal regimes including:</p> <p>a. Activities must implement all measures to prevent causing any adverse impacts on water quality or quantity.</p> <p>b. All sediment and erosion controls (including drainage from roads/access tracks) to be managed in accordance with Blue Book.</p> <p>c. Existing access tracks to be used/upgraded wherever possible.</p> <p>All management and storage of produced water must comply with the title conditions. In addition, the <i>Exploration Code of Practice: Produced Water Management, Storage and Transfer</i> may apply to the management of produced water for new IMER titles.</p>		N/A				N/A				

7. Impacts from changes in surface or groundwater quality and quantity.	<p>Water used for exploration not available for ecological, stock, domestic or irrigation purposes.</p> <p>Surface runoff can be sediment laden from areas where vegetation has been removed.</p> <p>Generally minimal surface water use (must be licensed or use of farm dams through landholder agreements).</p> <p>No use of groundwater but potential loss through produced water in drilling / deep excavation operations.</p> <p>Interception, cross contamination and/or depressurisation of groundwater systems in drilling operations. Groundwater depressurisation effects on surface water.</p> <p>Mobilisation of pollutants (such as hydrocarbons) in surface water or aquifers.</p> <p>Ford across creeks can cause stream bank erosion from vehicle wash.</p> <p>Inappropriate disposal of drilling wastes / overflow from drilling sumps.</p>	<p>Activities must comply with title conditions. For new IMER titles activities must also comply with the <i>Exploration Code of Practice: Environmental Management</i> including:</p> <p>a. Activities must implement all measures to prevent causing any adverse impacts on water quality or quantity.</p> <p>b. Activities must minimise cross connection of aquifers or groundwater sources.</p> <p>c. Activities must minimise any depressurisation of aquifers or groundwater sources.</p> <p>d. Coal and petroleum title holders must prepare and implement a Groundwater Monitoring & Modelling Plan in consultation with NSW Office of Water.</p> <p>e. All sediment and erosion controls to be in accordance with Blue Book to minimise off-site impacts.</p>		HIGH	LOW RESILIENCE	NO	Partly	YES	HIGH	NO	LOW	Groundwater study undertaken. Impacts expected to be negligible.
8. any other impacts on water or from the use or storage of water.								N/A				
Summary of Water Impacts										LOW	NA	
(c) Soil and stability impacts												
1. degradation of soil quality (including contamination, salinisation or acidification).	<p>Soil erosion and sediment laden runoff from disturbed areas / areas where vegetation has been removed.</p> <p>Mobilisation of pollutants (such as hydrocarbons) in soils.</p> <p>Inappropriate disposal of drilling wastes / overflow from drilling sumps.</p> <p>Exposure of acid sulfate soils.</p> <p>Soil compaction from construction/operations.</p>	<p>Activities must comply with title conditions. For new IMER titles activities must also comply with the <i>Exploration Code of Practice: Environmental Management</i> to minimise soil and stability impacts including:</p> <p>a. Minimising vegetation clearing and surface disturbance.</p> <p>b. Prevent causing any land degradation or pollution/contamination of land or water.</p> <p>c. All sediment and erosion controls (including drainage from roads/access tracks) to be managed in accordance with Blue Book.</p> <p>d. Existing access tracks to be used/upgraded wherever possible.</p> <p>e. Controls on sumps and management of chemicals to significantly reduce risk to soils.</p> <p>All management and storage of produced water must comply with the title conditions. In addition, the <i>Exploration Code of Practice: Produced Water Management, Storage and Transfer</i> may apply to the management of produced water for new IMER titles.</p> <p>All disturbed areas to be rehabilitated in accordance with title conditions. In addition the <i>Exploration Code of Practice: Rehabilitation</i> applies to new IMER titles. Rehabilitation to occur soon as practicable after completion of activity (including sealing of any boreholes).</p>		HIGH	HIGH RESILIENCE	YES	Fully	YES	MEDIUM	NO	LOW	Surface disturbance is limited to trenching for water and gas lines. Land degradation unlikely. Produced water to be stored in tanks and transferred to Leewood periodically.
2. loss of soil from wind or water erosion.	<p>Increased risk of erosion where vegetation has been removed.</p> <p>Potential erosion of disturbed areas.</p>	<p>Activities must comply with title conditions. For new IMER titles activities must also comply with the <i>Exploration Code of Practice: Environmental Management</i> to minimise potential impacts including:</p> <p>a. Minimising vegetation clearing and surface disturbance.</p> <p>b. Prevent causing any land degradation or pollution/contamination of land or water.</p> <p>c. All sediment and erosion controls (including drainage from roads/access tracks) to be managed in accordance with Blue Book.</p> <p>d. Existing access tracks to be used/upgraded wherever possible.</p> <p>All disturbed areas to be rehabilitated in accordance with title conditions. In addition, the <i>Exploration Code of Practice: Rehabilitation</i> applies to new IMER titles. Rehabilitation to occur as soon as practicable after completion of activity (including sealing of any boreholes).</p>		HIGH	HIGH RESILIENCE	YES	Fully	YES	LOW	NO	LOW	

3. loss of structural integrity of the soil.	<p>Soil compaction from access traffic, use of plant and machinery.</p> <p>Soil erosion from disturbed areas / areas where vegetation has been removed.</p> <p>Mobilisation of pollutants (such as hydrocarbons) in soils.</p>	<p>Activities must comply with title conditions. For new IMER titles activities must also comply with the <i>Exploration Code of Practice: Environmental Management</i> to minimise potential impacts including:</p> <ul style="list-style-type: none"> a. Minimising vegetation clearing and surface disturbance. b. Prevent causing any land degradation or pollution/contamination of land or water. b. All sediment and erosion controls (including drainage from roads/access tracks) to be managed in accordance with Blue Book. c. Existing access tracks to be used/upgraded wherever possible. d. Controls on sumps and management of chemicals to significantly reduce risk to soils. <p>All disturbed areas to be rehabilitated in accordance with title conditions. In addition the <i>Exploration Code of Practice: Rehabilitation</i> applies to new IMER titles. Rehabilitation to occur soon as practicable after completion of activity (including sealing of any boreholes). Deep ripping of any access tracks which need to be rehabilitated can remediate compaction impacts.</p> <p>Impact generally limited due to low traffic numbers and short term nature of exploration.</p>		HIGH	HIGH RESILIENCE	YES	Fully	YES	LOW	NO	LOW	
4. increased land instability with high risks from land slides or subsidence.	<p>Minimal potential impacts.</p> <p>Soil erosion from disturbed areas / areas where vegetation has been removed.</p>	<p>Activities must comply with title conditions. For new IMER titles activities must also comply with the <i>Exploration Code of Practice: Environmental Management</i> to minimise soil and stability impacts including:</p> <ul style="list-style-type: none"> a. Minimising vegetation clearing and surface disturbance. b. Prevent causing any land degradation or pollution/contamination of land or water. c. All sediment and erosion controls (including drainage from roads/access tracks) to be managed in accordance with Blue Book (includes controls to manage instability risks). d. Existing access tracks to be used/upgraded wherever possible. e. Controls on sumps and management of chemicals to significantly reduce risk to soils. <p>All disturbed areas to be rehabilitated in accordance with title conditions. In addition, the <i>Exploration Code of Practice: Rehabilitation</i> applies to new IMER titles. Rehabilitation to occur soon as practicable after completion of activity (including sealing of any boreholes).</p>		N/A	N/A			N/A				
5. any induced seismicity or ground movements associated with fracture stimulation or injection or extraction of groundwater.		<p>Boreholes to be constructed, operated and decommissioned in accordance with authority/title conditions, Departmental Guidelines and Codes of Practice to protect groundwater/aquifers.</p> <p>All management and storage of produced water must comply with the title conditions. In addition, the <i>Exploration Code of Practice: Produced Water Management, Storage and Transfer</i> may apply to the management of produced water for new IMER titles.</p> <p>All disturbed areas to be rehabilitated in accordance with title conditions. In addition, the <i>Exploration Code of Practice: Rehabilitation</i> applies to new IMER titles. Rehabilitation to occur as soon as practicable after completion of activity (including sealing of any boreholes).</p>		N/A				N/A				
6. any other impacts on soils.												
Summary of Soil and Stability Impacts										LOW	NA	
(d) Noise and vibration impacts												

1. results in increased noise or vibration.	<p>Noise from vehicles, plant and machinery results in unacceptable impacts on nearby sensitive receivers, such as residences, educational establishments, medical facilities, places of worship, animal boarding/training establishments, intensive livestock agriculture, etc.</p> <p>Percussion drilling can have localised vibration impacts.</p> <p>Drilling unlikely to cause vibration impacts .</p> <p>Shots have vibration and overpressure impacts which may impact vibration sensitive sites.</p> <p>Vibrois machinery has vibration impacts which may impact vibration sensitive sites.</p>	<p>Activities must comply with title conditions. For new IMER titles activities must comply with the <i>Exploration Code of Practice: Environmental Management</i> to minimise potential impacts including:</p> <p>a. Implementing all practicable measures to ensure noise levels meet acceptable criteria for sensitive receivers.</p> <p>b. Notifying potentially affected landholders at least 24hrs prior to detonating explosives.</p> <p>c. Compliance with Interim Construction Noise Guidelines and/or EPL and/or landholder agreements.</p> <p>d. Ground vibration thresholds limited to 5 mm/s (peak particle velocity) at any residence/sensitive receiver.</p> <p>e. Ground vibration thresholds limited to 3 mm/s for any item of Aboriginal / European heritage significance or cliff line greater than 4m in height.</p> <p>f. Vibrating machinery not to be used within 200m of sensitive receivers, item/place of Aboriginal / European heritage significance or any cliff line greater than 4m in height.</p> <p>Impacts limited to immediate vicinity of exploration activity.</p>		HIGH	HIGH RESILIENCE	YES	Fully	YES	MEDIUM	NO	LOW	<p>Noise study completed by GHD. Concluded that given the limited duration and intensity of the predicted noise impacts and the measures proposed in section 4.2.3 of the REF, it is considered that potential noise impacts would be low.</p> <p>Construction noise impacts have been assessed against the construction noise limits and exceedances are predicted where workover activities and trenching are to be undertaken outside of recommended standard hours.</p> <p>Mitigation and management measures are recommended where feasible and reasonable in respect of activities that were predicted to result in noise levels greater than the noise limit.</p> <p>Potential noise impacts from the proposed activity during the operational phase has been assessed against the operational noise criteria presented in Section 2.4. Noise levels from the K2 well head power unit, drive motors, water truck movements and pilot flare are predicted to comply with the noise criteria.</p>
2. affects sensitive receptors.	<p>Noise from vehicles, plant and machinery results in unacceptable impacts on nearby sensitive receivers, such as residences, educational establishments, medical facilities, places of worship, animal boarding/training establishments, intensive livestock agriculture, etc.</p> <p>Percussion drilling can have localised vibration impacts.</p> <p>Drilling unlikely to cause vibration impacts .</p> <p>Shots have vibration and overpressure impacts which may impact vibration sensitive sites.</p> <p>Vibrois machinery has vibration impacts which may impact vibration sensitive sites.</p>	<p>Activities must comply with title conditions. For new IMER titles activities must also comply with the <i>Exploration Code of Practice: Environmental Management</i> to minimise potential impacts including:</p> <p>a. Implementing all practicable measures to ensure noise levels meet acceptable criteria for sensitive receivers.</p> <p>b. Notifying potentially affected landholders at least 24hrs prior to detonating explosives.</p> <p>c. Compliance with Interim Construction Noise Guidelines and/or EPL and/or landholder agreements.</p> <p>d. Ground vibration thresholds limited to 5 mm/s (peak particle velocity) at any residence/sensitive receiver.</p> <p>e. Ground vibration thresholds limited to 3 mm/s for any item of Aboriginal / European heritage significance or cliff line greater than 4m in height.</p> <p>f. Vibrating machinery not to be used within 200m of sensitive receivers, item/place of Aboriginal / European heritage significance or any cliff line greater than 4m in height.</p> <p>Impacts limited to immediate vicinity of exploration activity.</p>		HIGH	HIGH RESILIENCE	YES	Fully	YES	MEDIUM	NO	LOW	See comments above
3. any other impacts from noise, blasting or vibration.												
Summary of noise and vibration Impacts										LOW	NA	
(e) Any other physical or pollution impacts												
1. affects coastal processes and coastal hazards, including those under projected climate change conditions.	<p>Activities along the coastline / floodways have the potential to exacerbate coastal erosion (rising sea levels and increased storm activity under projected climate change conditions could result in increased erosion along the coastline / floodways).</p>	<p>Activities must comply with title conditions. For new IMER titles activities must also comply with the <i>Exploration Code of Practice: Environmental Management</i> to minimise potential impacts including:</p> <p>a. Activities must implement all measures to prevent causing any adverse impacts on water quality or quantity.</p> <p>b. All sediment and erosion controls (including drainage from roads/access tracks) to be managed in accordance with Blue Book.</p> <p>CO2 emissions from activities are extremely limited and inconsequential in context of global emissions and impact.</p> <p>Restrictions on use of ozone depleting substances in NSW also limits ozone depletion.</p> <p>All disturbed areas to be rehabilitated in accordance with title conditions. In addition, the <i>Exploration Code of Practice: Rehabilitation</i> applies to new IMER titles. Rehabilitation to occur as soon as practicable after completion of activity (including sealing of any boreholes to minimise any fugitive emissions).</p>		N/A								

<p>2. results in impacts associated with the use, generation, storage or transport of hazardous substances or chemicals.</p>	<p>Mobilisation of pollutants (such as hydrocarbons) in soils or waters.</p> <p>Inappropriate disposal of drilling wastes / overflow from drilling sumps.</p> <p>Use of pesticides, herbicides, fertilisers or other chemicals have the potential to build up residues in the environment, including in soils and water.</p>	<p>Activities must comply with title conditions. For new IMER titles activities must also comply with the <i>Exploration Code of Practice: Environmental Management</i> to minimise potential impacts including:</p> <p>a. Preventing contamination of the environment by the release of chemicals, fuels, other potential pollutants.</p> <p>b. Preventing any land degradation or pollution/contamination of land or water.</p> <p>c. Controls on sumps and management of chemicals to significantly reduce risk to environment.</p> <p>d. Use of pesticides, herbicides, fertilisers or other chemicals must comply with legislative requirements.</p> <p>e. Wastes+A34 (including any drilling by-products) to be collected, segregated and disposed of lawfully.</p> <p>All management and storage of produced water must comply with the title conditions. In addition, the <i>Exploration Code of Practice: Produced Water Management, Storage and Transfer</i> may apply to the management of produced water for new IMER titles.</p> <p>All disturbed areas to be rehabilitated in accordance with title conditions. In addition, the <i>Exploration Code of Practice: Rehabilitation</i> applies to new IMER titles. Rehabilitation to occur as soon as practicable after completion of activity.</p>		HIGH	MEDIUM RESILIENCE	YES	Fully	YES	MEDIUM	NO	LOW	<p>Storage of produced water will be contained in onsite storage tanks and trucked to Leewood periodically. REF states storage and treatment of produced water will be in accordance with the code of practice.</p> <p>The activity also involves the storage of 65 kilolitres of diesel fuel for the diesel generators. The risk of a loss of containment of diesel would be inherently low as the diesel fuel storage would be suitably designed to Australian standards and bonded to contain spills</p>
<p>3. results in impacts to the environment resulting from the generation or disposal of wastes.</p>	<p>Mobilisation of pollutants (such as hydrocarbons) in soils, air or waters.</p> <p>Inappropriate disposal of drilling wastes / overflow from drilling sumps.</p> <p>Fugitive emissions of gases or vapour from drilling operations or the operation of flares.</p> <p>Use of pesticides, herbicides, fertilisers or other chemicals have the potential to build up residues in the environment, including in soils and water.</p>	<p>Activities must comply with title conditions. For new IMER titles activities must also comply with the <i>Exploration Code of Practice: Environmental Management</i> to minimise potential impacts including:</p> <p>a. Preventing contamination of the environment by the release of chemicals, fuels, other potential pollutants.</p> <p>b. Preventing any land degradation or pollution/contamination of land or water.</p> <p>c. Controls on sumps and management of chemicals to significantly reduce risk to environment.</p> <p>d. Use of pesticides, herbicides, fertilisers or other chemicals must comply with legislative requirements.</p> <p>e. Wastes (including any drilling by-products) to be collected, segregated and disposed of lawfully.</p> <p>All management and storage of produced water must comply with the title conditions. In addition, the <i>Exploration Code of Practice: Produced Water Management, Storage and Transfer</i> may apply to the management of produced water for new IMER titles.</p> <p>All disturbed areas to be rehabilitated in accordance with title conditions. In addition the <i>Exploration Code of Practice: Rehabilitation</i> applies to new IMER titles. Rehabilitation to occur as soon as practicable after completion of activity.</p>		HIGH	HIGH RESILIENCE	YES	Fully	YES	HIGH	NO	LOW	<p>The predicted volumes of waste that would be generated would be relatively small and it is expected that there would be sufficient capacity at regional waste management facilities. Key wastes include construction waste (small volumes), wastes from workovers and completions (small volumes), produced water (see other comments).</p>
Summary of other physical and pollution impacts											LOW	NA
(f) Location sensitive because of physical factors												
<p>1. coastline and dune fields, alpine areas, deserts, caves or other unique landforms.</p>	<p>Negligible and only localised impacts on unique landforms.</p> <p>Mobilisation of pollutants in soils, surface water or aquifers.</p> <p>Short term noise, air quality and visual impacts.</p> <p>Particulate emissions from plant and machinery; fugitive emissions of gases or vapour from drilling operations and the operation of flares.</p> <p>Soil erosion and sediment laden runoff from disturbed areas, that could lead to soil or water contamination or land degradation.</p> <p>Exposure of acid sulfate soils.</p> <p>Spread of weeds, pest animals and animal/plant diseases.</p> <p>Damage to structures and sensitive features, such as unique landforms.</p> <p>Activities along the coastline / floodways have the potential to exacerbate coastal erosion (rising sea levels and increased storm activity under projected climate change conditions could result in increased erosion along the coastline / floodways).</p>	<p>Impact limited to activity site and subject to compensation and landholder access arrangements.</p> <p>Activities must comply with title conditions. For new IMER titles, activities must also comply with the <i>Exploration Code of Practice: Environmental Management</i> to minimise potential impacts on the environment.</p> <p>All disturbed areas to be rehabilitated in accordance with title conditions. In addition, the <i>Exploration Code of Practice: Rehabilitation</i> applies to new IMER titles. Rehabilitation to occur as soon as practicable after completion of activity (including sealing of any boreholes).</p>		N/A								

2. land with high agricultural capability.	<p>Areas used for exploration activities, access tracks, etc not available for agricultural production.</p> <p>Temporary loss of use of land.</p> <p>Mobilisation of pollutants (such as hydrocarbons) in soils, air or waters.</p> <p>Inappropriate disposal of drilling wastes / overflow from drilling sumps.</p> <p>Use of pesticides, herbicides, fertilisers or other chemicals have the potential to build up residues in the environment, including in soils and water.</p> <p>Short term noise, air quality and visual impacts.</p> <p>Soil erosion and sediment laden runoff from disturbed areas, that could lead to soil or water contamination or land degradation.</p> <p>Exposure of acid sulfate soils.</p> <p>Spread of weeds, pest animals and animal/plant diseases.</p> <p>Disruption to agricultural / livestock operations.</p>	<p>Activities must comply with title conditions. For new IMER titles activities must also comply with the <i>Exploration Code of Practice: Environmental Management</i> to minimise potential impacts on the environment (including livestock protection, control of weeds, pest animals, diseases, etc). Use of above-ground sumps required on BSAL.</p> <p>Impacts limited to activity site and subject to compensation and landholder access arrangements.</p> <p>All disturbed areas to be rehabilitated in accordance with title conditions. In addition, the <i>Exploration Code of Practice: Rehabilitation</i> applies to new IMER titles. Rehabilitation to occur as soon as practicable after completion of activity (including sealing of any boreholes).</p>		HIGH	MEDIUM RESILIENCE	YES	Fully	YES	MEDIUM	NO	LOW	Application was referred to DPI - Ag for comment. Response advised no significant issues with proposed activity.
3. natural water bodies, riparian zones, wetlands, drinking water catchments or flood prone areas.	<p>Negligible and only localised changes to drainage flows/flooding regime.</p> <p>Water used for exploration not available for ecological, stock, domestic or irrigation purposes.</p> <p>Surface runoff can be sediment laden from areas where vegetation has been removed.</p> <p>Generally minimal surface water use (must be licensed or use of farm dams through landholder agreements).</p> <p>No use of groundwater but potential loss through produced water in drilling / deep excavation operations.</p> <p>Interception, cross contamination and/or depressurisation of groundwater systems in drilling operations. Groundwater depressurisation effects on surface water.</p> <p>Mobilisation of pollutants (such as hydrocarbons) in surface water or aquifers.</p> <p>Ford across creeks can cause stream bank erosion from vehicle wash.</p> <p>Inappropriate disposal of drilling wastes / overflow from drilling sumps.</p>	<p>Activities must comply with title conditions. For new IMER titles activities must also comply with the <i>Exploration Code of Practice: Environmental Management</i> including:</p> <p>a. Activities must implement all measures to prevent causing any adverse impacts on water quality or quantity.</p> <p>b. All sediment and erosion controls (including drainage from roads/access tracks) to be managed in accordance with Blue Book.</p> <p>All management and storage of produced water must comply with the title conditions. In addition, the <i>Exploration Code of Practice: Produced Water Management, Storage and Transfer</i> may apply to the management of produced water for new IMER titles.</p> <p>All disturbed areas to be rehabilitated in accordance with title conditions. In addition, the <i>Exploration Code of Practice: Rehabilitation</i> applies to new IMER titles. Rehabilitation to occur as soon as practicable after completion of activity.</p>		N/A								
4. groundwater recharge areas or areas with high water table.	<p>Minimal impact on recharge and salinity.</p> <p>No use of groundwater but potential loss through produced water in drilling / deep excavation operations.</p> <p>Interception, cross contamination and/or depressurisation of groundwater systems in drilling operations. Groundwater depressurisation effects on surface water.</p> <p>Mobilisation of pollutants (such as hydrocarbons) in surface water or aquifers.</p> <p>Inappropriate disposal of drilling wastes / overflow from drilling sumps.</p> <p>Vegetation clearance in recharge areas can increase salinity.</p> <p>Acid drainage due to exposure of acid sulfate soils.</p>	<p>Activities must comply with title conditions. For new IMER titles activities must also comply with the <i>Exploration Code of Practice: Environmental Management</i> including:</p> <p>a. Activities must implement all measures to prevent causing any adverse impacts on water quality or quantity.</p> <p>All management and storage of produced water must comply with the title conditions. In addition, the <i>Exploration Code of Practice: Produced Water Management, Storage and Transfer</i> may apply to the management of produced water for new IMER titles.</p> <p>Boreholes to be constructed, operated and decommissioned in accordance with authority/title conditions, Departmental Guidelines and Codes of Practice to protect groundwater/aquifers. Drill holes to be cased where aquifers intercepted (minimal impact on recharge and salinity).</p>		HIGH	MEDIUM RESILIENCE	UNCERTAIN	Fully	YES	HIGH	NO	LOW	Predicted drawdown impacts do not extend beyond the Coogal sub-group of the Black Jack Group (i.e. around 300 m below ground at the Project site). As such no impacts on water levels and/or water quality at sensitive receptors including existing water supply bores which target shallower units and surficial GDEs and IDEs are predicted.

<p>5. erosion prone areas, areas with slopes of greater than 18 degrees.</p>	<p>Minimal potential impacts.</p> <p>Soil erosion and sediment laden runoff from disturbed areas / areas where vegetation has been removed.</p> <p>Mobilisation of pollutants (such as hydrocarbons) in soils.</p> <p>Riverbed / riparian zone disturbance from use of poorly constructed or maintained river crossings.</p>	<p>Activities must comply with title conditions. For new IMER titles activities must also comply with the <i>Exploration Code of Practice: Environmental Management</i> to minimise soil and stability impacts including:</p> <ul style="list-style-type: none"> a. Minimising vegetation clearing and surface disturbance. b. Prevent causing any land degradation or pollution/contamination of land or water. c. All sediment and erosion controls (including drainage from roads/access tracks) to be managed in accordance with Blue Book (includes controls to manage instability risks). d. Existing access tracks to be used/upgraded wherever possible. <p>All disturbed areas to be rehabilitated in accordance with title conditions. In addition, the <i>Exploration Code of Practice: Rehabilitation</i> applies to new IMER titles. Rehabilitation to occur as soon as practicable after completion of activity.</p>		N/A									
<p>6. subsidence or slip areas.</p>	<p>Soil erosion from disturbed areas / areas where vegetation has been removed may increase risk of slips.</p> <p>Drilling operations unlikely to contribute to slips.</p>	<p>Activities must comply with title conditions. For new IMER titles activities must also comply with the <i>Exploration Code of Practice: Environmental Management</i> to minimise soil and stability impacts including:</p> <ul style="list-style-type: none"> a. Minimising vegetation clearing and surface disturbance. b. Prevent causing any land degradation or pollution/contamination of land or water. c. All sediment and erosion controls (including drainage from roads/access tracks) to be managed in accordance with Blue Book (includes controls to manage instability risks). d. Existing access tracks to be used/upgraded wherever possible. <p>Disturbed areas to be rehabilitated in accordance with title conditions. In addition, the <i>Exploration Code of Practice: Rehabilitation</i> applies to new IMER titles. Rehabilitation to occur as soon as practicable after completion, including borehole sealing.</p>		N/A									
<p>7. areas with acid sulphate, sodic or highly permeable soils.</p>	<p>Vegetation removal unlikely to exacerbate acid sulfate or sodicity issues.</p> <p>Drilling activities unlikely to exacerbate acid sulfate or sodicity issues.</p> <p>Soil erosion and sediment laden runoff from disturbed areas / areas where vegetation has been removed.</p>	<p>Activities must comply with title conditions. For new IMER titles, activities must also comply with the <i>Exploration Code of Practice: Environmental Management</i> to minimise potential impacts including:</p> <ul style="list-style-type: none"> a. Minimising vegetation clearing and surface disturbance. b. Prevent causing any land degradation or pollution/contamination of land or water. c. All sediment and erosion controls (including drainage from roads/access tracks) to be managed in accordance with Blue Book. d. Existing access tracks to be used/upgraded wherever possible. e. Controls on sumps and management of chemicals to significantly reduce risk to soils. <p>All disturbed areas to be rehabilitated in accordance with title conditions. In addition, the <i>Exploration Code of Practice: Rehabilitation</i> applies to new IMER titles. Rehabilitation to occur as soon as practicable after completion of activity.</p> <p>Impacts generally limited due to low traffic numbers and short term nature of exploration.</p>		N/A									
<p>8. areas with salinity or potential salinity problems.</p>	<p>Activities unlikely to exacerbate salinity problems.</p> <p>Vegetation removal may reduce vegetation drawdown of water table.</p> <p>Spills of saline produced water.</p> <p>Vegetation removal unlikely to exacerbate acid sulfate or sodicity issues.</p> <p>Soil erosion and sediment laden runoff from disturbed areas / areas where vegetation has been removed.</p>	<p>Activities must comply with title conditions. For new IMER titles, activities must also comply with the <i>Exploration Code of Practice: Environmental Management</i> to minimise potential impacts including:</p> <ul style="list-style-type: none"> a. Minimising vegetation clearing and surface disturbance. b. Prevent causing any land degradation or pollution/contamination of land or water. c. All sediment and erosion controls (including drainage from roads/access tracks) to be managed in accordance with Blue Book. d. Controls on sumps and management of chemicals to significantly reduce risk to soils. <p>All disturbed areas to be rehabilitated in accordance with title conditions. In addition, the <i>Exploration Code of Practice: Rehabilitation</i> applies to new IMER titles. Rehabilitation to occur as soon as practicable after completion of activity.</p> <p>Impacts generally limited due to low traffic numbers and short term nature of exploration.</p>		N/A									

9. areas with degraded air quality.	<p>Potential for temperature inversions in winter to trap dust and air particulates.</p> <p>Wind erosion possible from exposed soils.</p> <p>Particulate emissions from vehicles and machinery.</p> <p>Dust generation from operating machinery, vehicles travelling over tracks, etc.</p>	<p>Activities must comply with title conditions. For new IMER titles activities must also comply with the <i>Exploration Code of Practice: Environmental Management</i> including:</p> <p>a. Activities must comply with cumulative AQ criteria.</p> <p>b. Emissions from the activities should not result in cumulative PM10 levels exceeding 50ug/m3 (24hr) or 30 ug/m3 (annual average) at any occupied residence.</p> <p>c. Emissions from the activities should not result in cumulative PM2.5 emissions exceeding 25 ug/m3 (24hr) or 8 ug/m3 (annual average) at any occupied residence.</p> <p>d. Vehicle speeds limited to minimise dust.</p> <p>e. Roads watered during high traffic periods.</p> <p>f. Surface disturbance managed in accordance with Blue Book.</p> <p>Impacts of any drilling limited to immediate vicinity of drilling due to controls set out in title conditions and (for new IMER titles) the <i>Exploration Code of Practice: Environmental Management</i> (impacts negligible due to nature of drilling activities).</p> <p>All disturbed areas to be rehabilitated in accordance with title conditions. In addition, the <i>Exploration Code of Practice: Rehabilitation</i> applies to new IMER titles. Rehabilitation to occur as soon as practicable after completion of activity (including sealing of any boreholes).</p>		N/A									
10. areas with degraded or contaminated soil.	<p>Activity unlikely to result in any change to existing contaminated soils or migration of contaminants.</p> <p>Soil erosion and sediment laden runoff from disturbed areas / areas where vegetation has been removed.</p> <p>Mobilisation of pollutants (such as hydrocarbons) in soils.</p> <p>Inappropriate disposal of drilling wastes / overflow from drilling sumps.</p> <p>Exposure of acid sulfate soils.</p> <p>Soil compaction from construction / operations.</p> <p>Vegetation removal unlikely to have any impact on contaminated soils.</p>	<p>Activities must comply with title conditions. For new IMER titles, activities must also comply with the <i>Exploration Code of Practice: Environmental Management</i> to minimise potential impacts including:</p> <p>a. Minimising vegetation clearing and surface disturbance.</p> <p>b. Prevent causing any land degradation or pollution/contamination of land or water.</p> <p>c. All sediment and erosion controls (including drainage from roads/access tracks) to be managed in accordance with Blue Book.</p> <p>d. Controls on sumps and management of chemicals to significantly reduce risk to soils.</p> <p>All disturbed areas to be rehabilitated in accordance with title conditions. In addition, the <i>Exploration Code of Practice: Rehabilitation</i> applies to new IMER titles. Rehabilitation to occur as soon as practicable after completion of activity.</p> <p>Impacts generally limited due to short term nature of exploration. Activity unlikely to exacerbate any existing contamination.</p>		N/A									
11. area with degraded or contaminated water (ground or surface).	<p>Activities unlikely to have any additional impacts on areas with existing degraded or contaminated water (ground or surface). Boreholes to be cased when aquifers intercepted.</p> <p>Surface runoff can be sediment laden from areas where vegetation has been removed.</p> <p>Interception, cross contamination and/or depressurisation of groundwater systems in drilling operations. Groundwater depressurisation effects on surface water.</p> <p>Mobilisation of pollutants (such as hydrocarbons) in surface water or aquifers.</p> <p>Inappropriate disposal of drilling wastes / overflow from drilling sumps.</p> <p>Excavations excluded from acid sulfate soils.</p>	<p>Activities must comply with title conditions. For new IMER titles, activities must also comply with the <i>Exploration Code of Practice: Environmental Management</i> including:</p> <p>a. Activities must implement all measures to prevent causing any adverse impacts on water quality or quantity.</p> <p>b. Activities must minimise cross connection of aquifers or groundwater sources.</p> <p>c. Activities must minimise any depressurisation of aquifers or groundwater sources.</p> <p>d. Coal and petroleum title holders must prepare and implement and Groundwater Monitoring & Modelling Plan in consultation with NSW Office of Water.</p> <p>e. All sediment and erosion controls to be in accordance with Blue Book to minimise off-site impacts.</p> <p>Boreholes to be constructed, operated and decommissioned in accordance with authority/title conditions, Departmental Guidelines and Codes of Practice to protect groundwater/aquifers.</p> <p>All management and storage of produced water must comply with the title conditions. In addition, the <i>Exploration Code of Practice: Produced Water Management, Storage and Transfer</i> may apply to the management of produced water for new IMER titles.</p> <p>All disturbed areas to be rehabilitated in accordance with title conditions. In addition, the <i>Exploration Code of Practice: Rehabilitation</i> applied to new IMER titles. Rehabilitation to occur as soon as practicable after completion of activity (including sealing of any boreholes).</p> <p>Activities unlikely to exacerbate any existing surface or groundwater contamination.</p>		N/A									
12. any other factors.													

2. BIOLOGICAL IMPACTS

Summary of sensitive location because of physical factors

LOW

NA

(a) Fauna impacts* [* A Species Impact Statement will be required if the activity is likely to significantly affect critical habitats, threatened species, populations or ecological communities or their habitats].

<p>1. any clearing or modification of vegetation (including habitat for species of conservation significance).</p>	<p>Vegetation removal can decrease available foraging/ sheltering/ breeding habitat for species and displace species from regular place of residence.</p> <p>Areas used for exploration activities, access tracks, etc not available for fauna habitat.</p> <p>Mobilisation of pollutants (such as hydrocarbons) in soils, air or waters can potentially impact fauna.</p> <p>Drilling sumps can be a hazard for fauna.</p> <p>Use of pesticides, herbicides, fertilisers or other chemicals have the potential to build up residues in the environment, including in soils and water.</p> <p>Short term noise and air quality impacts.</p> <p>Soil erosion and sediment laden runoff from disturbed areas, that could lead to soil or water contamination or land degradation.</p> <p>Exposure of acid sulfate soils.</p> <p>Spread of weeds, pest animals and animal/plant diseases.</p>	<p>Activities must comply with title conditions. For new IMER titles, activities must also comply with the <i>Exploration Code of Practice: Environmental Management</i> including:</p> <p>a. Minimise extent of vegetation clearing and surface disturbance to as low as practicable.</p> <p>b. Prevent adverse impacts to fauna caused by vegetation clearing, including relocation of resident fauna.</p> <p>All disturbed areas to be rehabilitated in accordance with title conditions. In addition, the <i>Exploration Code of Practice: Rehabilitation</i> applies to new IMER titles. Rehabilitation to occur as soon as practicable after completion of activity.</p>		N/A									
<p>2. any significant effect on threatened fauna species, populations, or their habitats or critical habitat, or an endangered ecological community or its habitat (the threatened species assessment of significance).</p>	<p>Vegetation removal can harm threatened species or reduce local abundance of species.</p> <p>Areas cleared for exploration activities, access tracks, etc not available for fauna habitat.</p> <p>Mobilisation of pollutants (such as hydrocarbons) in soils, air or waters can potentially impact fauna.</p> <p>Use of pesticides, herbicides, fertilisers or other chemicals have the potential to build up residues in the environment, including in soils and water.</p> <p>Soil erosion and sediment laden runoff from disturbed areas, that could lead to soil or water contamination or land degradation.</p> <p>Spread of weeds, pest animals and animal/plant diseases.</p>	<p>Activities must comply with title conditions. For new IMER titles, activities must also comply with the <i>Exploration Code of Practice: Environmental Management</i> including:</p> <p>a. Minimise extent of vegetation clearing and surface disturbance to as low as practicable.</p> <p>b. Prevent adverse impacts to fauna caused by vegetation clearing, including relocation of resident fauna.</p> <p>All disturbed areas to be rehabilitated in accordance with title conditions. In addition, the <i>Exploration Code of Practice: Rehabilitation</i> applies to new IMER titles. Rehabilitation to occur as soon as practicable after completion of activity.</p>		N/A									
<p>3. any potential to endanger, displace or disturb fauna (including fauna of conservation significance) or create a barrier to their movement.</p>	<p>Vegetation removal can decrease available foraging/ sheltering/ breeding habitat for species and displace species from regular place of residence.</p> <p>Access tracks can act as a barrier to movement of small fauna species. Fauna crossing access tracks may be killed or injured if hit by vehicles.</p> <p>Vegetation removal can remove connective corridors used for wildlife movement.</p> <p>Areas used for exploration activities, access tracks, etc not available for fauna habitat.</p> <p>Mobilisation of pollutants (such as hydrocarbons) in soils, air or waters can potentially impact fauna.</p> <p>Drilling sumps can be a hazard for fauna.</p> <p>Use of pesticides, herbicides, fertilisers or other chemicals have the potential to build up residues in the environment, including in soils and water.</p> <p>Short term noise and air quality impacts.</p> <p>Soil erosion and sediment laden runoff from disturbed areas, that could lead to soil or water contamination or land degradation.</p> <p>Spread of weeds, pest animals and animal/plant diseases.</p>	<p>Activities must comply with title conditions. For new IMER titles, activities must also comply with the <i>Exploration Code of Practice: Environmental Management</i> including:</p> <p>a. Minimise extent of vegetation clearing and surface disturbance to as low as practicable.</p> <p>b. Prevent adverse impacts to fauna caused by vegetation clearing, including relocation of resident fauna.</p> <p>All disturbed areas to be rehabilitated in accordance with title conditions. In addition, the <i>Exploration Code of Practice: Rehabilitation</i> applies to new IMER titles. Rehabilitation to occur as soon as practicable after completion of activity.</p>		N/A									
<p>4. any other impacts on fauna.</p>													
										Summary of fauna impacts	LOW	NA	

(b) Flora impacts* [* A Species Impact Statement will be required if the activity is likely to significantly affect critical habitats, threatened species, populations or ecological communities or their habitats].

1. any clearing or modification of vegetation (including vegetation of conservation significance).	<p>Vegetation removal can harm threatened species or reduce local abundance of species.</p> <p>Areas cleared for exploration activities, access tracks, etc not available for flora habitat.</p> <p>Mobilisation of pollutants (such as hydrocarbons) in soils, air or waters can potentially impact fauna.</p> <p>Use of pesticides, herbicides, fertilisers or other chemicals have the potential to build up residues in the environment, including in soils and water.</p> <p>Soil erosion and sediment laden runoff from disturbed areas, that could lead to soil or water contamination or land degradation.</p> <p>Spread of weeds, pest animals and animal/plant diseases.</p>	<p>Activities must comply with title conditions. For new IMER titles activities must also comply with the <i>Exploration Code of Practice: Environmental Management</i> including:</p> <p>a. Minimise extent of vegetation clearing and surface disturbance to as low as practicable.</p> <p>b. Prevent adverse impacts to fauna caused by vegetation clearing, including relocation of resident fauna.</p> <p>All disturbed areas to be rehabilitated in accordance with title conditions. In addition, the <i>Exploration Code of Practice: Rehabilitation</i> applies to new IMER titles. Rehabilitation to occur as soon as practicable after completion of activity.</p>		HIGH	HIGH RESILIENCE	YES	Fully	YES	LOW	NO	LOW	Vegetation clearance is minimal. Area has been previously disturbed and vegetation clearance involves removal of grass generally adjacent to an existing access track.
2. any significant effect on threatened flora species, populations, or their habitats or critical habitat, or an endangered ecological community or its habitat (the threatened species assessment of significance).	<p>Vegetation removal can harm threatened species or reduce local abundance of species.</p> <p>Areas cleared for exploration activities, access tracks, etc not available for flora habitat.</p> <p>Mobilisation of pollutants (such as hydrocarbons) in soils, air or waters can potentially impact fauna.</p> <p>Use of pesticides, herbicides, fertilisers or other chemicals have the potential to build up residues in the environment, including in soils and water.</p> <p>Soil erosion and sediment laden runoff from disturbed areas, that could lead to soil or water contamination or land degradation.</p> <p>Spread of weeds, pest animals and animal/plant diseases.</p>	<p>Activities must comply with title conditions. For new IMER titles activities must also comply with the <i>Exploration Code of Practice: Environmental Management</i> including:</p> <p>a. Minimise extent of vegetation clearing and surface disturbance to as low as practicable.</p> <p>b. Prevent adverse impacts to fauna caused by vegetation clearing, including relocation of resident fauna.</p> <p>All disturbed areas to be rehabilitated in accordance with title conditions. In addition, the <i>Exploration Code of Practice: Rehabilitation</i> applies to new IMER titles. Rehabilitation to occur as soon as practicable after completion of activity.</p>		N/A								
3. any other impacts on flora.												
Summary of flora impacts											LOW	NA
(c) Ecological and Biosecurity impacts* [A Species Impact Statement will be required if the activity is likely to significantly affect critical habitats, threatened species, populations or ecological communities or their habitats].												
1. any threat to the biological diversity or ecological integrity of species or communities.	<p>Vegetation removal can decrease available foraging/sheltering/ breeding habitat for species and displace species from regular place of residence.</p> <p>Areas used for exploration activities, access tracks, etc not available for flora / fauna habitat.</p> <p>Mobilisation of pollutants (such as hydrocarbons) in soils, air or waters can potentially impact fauna / flora.</p> <p>Drilling sumps can be a hazard for fauna.</p> <p>Use of pesticides, herbicides, fertilisers or other chemicals have the potential to build up residues in the environment, including in soils and water.</p> <p>Soil erosion and sediment laden runoff from disturbed areas, that could lead to soil or water contamination or land degradation.</p> <p>Exposure of acid sulfate soils.</p> <p>Spread of weeds, pest animals and animal/plant diseases.</p> <p>Fauna crossing access tracks may be killed or injured if hit by vehicles.</p> <p>Surface disturbance may result in removal of/damage to seed stock.</p>	<p>Activities must comply with title conditions. For new IMER titles activities must also comply with the <i>Exploration Code of Practice: Environmental Management</i> including:</p> <p>a. Minimise extent of vegetation clearing and surface disturbance to as low as practicable.</p> <p>b. Prevent adverse impacts to fauna caused by vegetation clearing, including relocation of resident fauna.</p> <p>c. Setbacks from steep slopes/cliffs to limit impact of shots on cave dwelling fauna.</p> <p>Noise impacts / disruption to fauna are temporary. Vehicle movements are limited and unlikely to have significant injury/mortality impacts.</p> <p>All disturbed areas to be rehabilitated in accordance with title conditions. In addition, the <i>Exploration Code of Practice: Rehabilitation</i> applies to new IMER titles. Rehabilitation to occur as soon as practicable after completion of activity.</p>		HIGH	HIGH RESILIENCE	YES	Fully	YES	LOW	NO	LOW	The wells are existing and the infrastructure is being installed in areas that have been previously subject to disturbance. The REF states: The potential impacts of the proposed activity on biodiversity would be avoided in the first instance through its layout and the avoidance of mature native trees including hollow-bearing trees and koala feed trees in particular. As such, the limited biodiversity values that are present at the site would be maintained meaning the residual impacts would be inherently low.

<p>2. creates a biosecurity risk or introduces genetically modified organisms into an area. Includes impacts from the introduction of:</p> <ul style="list-style-type: none"> a. animal pests, b. plant pests and diseases, c. animal diseases, d. noxious weeds, or e. genetically modified organisms. 	<p>Mobilisation of pollutants (such as hydrocarbons) in soils, air or waters can potentially impact fauna / flora.</p> <p>Use of pesticides, herbicides, fertilisers or other chemicals have the potential to build up residues in the environment, including in soils and water.</p> <p>Spread of weeds, pest animals and animal/plant diseases.</p> <p>Surface disturbance may result in removal of/damage to seed stock.</p> <p>Weed growth in disturbed areas.</p>	<p>Activities must comply with title conditions. For new IMER titles activities must also comply with the <i>Exploration Code of Practice: Environmental Management</i> including:</p> <ul style="list-style-type: none"> a. Minimise extent of vegetation clearing and surface disturbance to as low as practicable. b. Prevent adverse impacts to fauna caused by vegetation clearing, including relocation of resident fauna. c. Requirement to prevent introduction and spread of weeds, pest animals & animal and plant diseases (required to implement "come clean, go clean" protocols). <p>All disturbed areas to be rehabilitated in accordance with title conditions. In addition the <i>Exploration Code of Practice: Rehabilitation</i> applies to new IMER titles. Rehabilitation to occur as soon as practicable after completion of activity (includes weed growth management).</p> <p>Legislative requirement for landholder access arrangements.</p>		N/A									
<p>3. high bushfire risk impacts.</p>	<p>Plant and machinery comprises a potential ignition source.</p>	<p>Activities must comply with title conditions. For new IMER titles activities must also comply with the <i>Exploration Code of Practice: Environmental Management</i> including undertaking a risk assessment and implementing suitable controls to manage risks (e.g. implementation of controls on activities during Extreme or Catastrophic Fire Conditions will largely negate risk).</p> <p>Activities must comply with WHS legislative requirements.</p> <p>Any existing/proposed access tracks can be used as firebreaks in event of fire.</p>		N/A									
<p>6. any other impacts.</p>													
											Summary of ecological impacts	LOW	NA
(d) Location sensitive because of biological factors													
<p>1. corals and sea grass beds, wetland communities (coastal, peatlands or inland), native forests, urban bushland, arid and semi arid communities.</p>	<p>Mobilisation of pollutants in soils, surface water or aquifers.</p> <p>Short term noise, air quality and visual impacts.</p> <p>Particulate emissions from plant and machinery; fugitive emissions of gases or vapour from drilling operations and the operation of flares.</p> <p>Soil erosion and sediment laden runoff from disturbed areas, that could lead to soil or water contamination or land degradation.</p> <p>Use of pesticides, herbicides, fertilisers or other chemicals have the potential to build up residues in the environment, including in soils and water.</p> <p>Exposure of acid sulfate soils.</p> <p>Spread of weeds, pest animals and animal/plant diseases.</p> <p>Damage to sensitive features, such as unique landforms.</p> <p>Vegetation removal may remove/harm some native vegetation.</p>	<p>Activities must comply with title conditions. For new IMER titles activities must also comply with the <i>Exploration Code of Practice: Environmental Management</i> to minimise potential impacts on all aspects of the environment (including water, land, air).</p> <p>All disturbed areas to be rehabilitated in accordance with title conditions. In addition, the <i>Exploration Code of Practice: Rehabilitation</i> applies to new IMER titles. Rehabilitation to occur as soon as practicable after completion of activity (including sealing of any boreholes).</p>		N/A									
<p>2. critical habitats or the habitats of threatened fauna or flora species, populations or ecological communities.</p>	<p>Vegetation removal can harm threatened species or reduce local abundance of species.</p> <p>Areas cleared for exploration activities, access tracks, etc not available for flora habitat.</p> <p>Mobilisation of pollutants (such as hydrocarbons) in soils, air or waters can potentially impact fauna.</p> <p>Use of pesticides, herbicides, fertilisers or other chemicals have the potential to build up residues in the environment, including in soils and water.</p> <p>Soil erosion and sediment laden runoff from disturbed areas, that could lead to soil or water contamination or land degradation.</p> <p>Spread of weeds, pest animals and animal/plant diseases.</p>	<p>Activities must comply with title conditions. For new IMER titles activities must also comply with the <i>Exploration Code of Practice: Environmental Management</i> including:</p> <ul style="list-style-type: none"> a. Minimise extent of vegetation clearing and surface disturbance to as low as practicable. b. Prevent adverse impacts to fauna caused by vegetation clearing, including relocation of resident fauna. c. Setbacks from steep slopes/cliffs to limit impact of shots on cave dwelling fauna. <p>Noise impacts / disruption to fauna are temporary. Vehicle movements are limited and unlikely to have significant injury/mortality impacts.</p> <p>All disturbed areas to be rehabilitated in accordance with title conditions. In addition, the <i>Exploration Code of Practice: Rehabilitation</i> applies to new IMER titles. Rehabilitation to occur as soon as practicable after completion of activity.</p>		N/A									

3. habitat of species listed under international agreements.	<p>Vegetation removal can harm species or reduce local abundance of species.</p> <p>Areas cleared for exploration activities, access tracks, etc not available for fauna habitat.</p> <p>Mobilisation of pollutants (such as hydrocarbons) in soils, air or waters can potentially impact fauna.</p> <p>Use of pesticides, herbicides, fertilisers or other chemicals have the potential to build up residues in the environment, including in soils and water habitats.</p> <p>Soil erosion and sediment laden runoff from disturbed areas, that could lead to soil or water contamination or land degradation thereby negatively affecting habitats.</p> <p>Spread of weeds, pest animals and animal/plant diseases.</p>	<p>Activities must comply with title conditions. For new IMER titles activities must also comply with the <i>Exploration Code of Practice: Environmental Management</i> including:</p> <p>a. Minimise extent of vegetation clearing and surface disturbance to as low as practicable.</p> <p>b. Prevent adverse impacts to fauna caused by vegetation clearing, including relocation of resident fauna.</p> <p>All disturbed areas to be rehabilitated in accordance with title conditions. In addition, the <i>Exploration Code of Practice: Rehabilitation</i> applies to new IMER titles. Rehabilitation to occur as soon as practicable after completion of activity.</p>		N/A								
4. wildlife corridors and remnant vegetation.	<p>Vegetation removal and activities can temporarily impact wildlife corridors and remnant vegetation.</p> <p>Areas cleared for exploration activities, access tracks, etc not available for flora habitat.</p> <p>Use of pesticides, herbicides, fertilisers or other chemicals have the potential to build up residues in the environment, including in soils and water.</p> <p>Soil erosion and sediment laden runoff from disturbed areas, that could lead to soil or water contamination or land degradation.</p> <p>Spread of weeds, pest animals and animal/plant diseases.</p> <p>Removal of vegetation, barriers created by access tracks, etc can interrupt movement of fauna species.</p>	<p>Activities must comply with title conditions. For new IMER titles activities must also comply with the <i>Exploration Code of Practice: Environmental Management</i> including:</p> <p>a. Minimise extent of vegetation clearing and surface disturbance to as low as practicable.</p> <p>b. Prevent adverse impacts to fauna caused by vegetation clearing, including relocation of resident fauna.</p> <p>c. Access track widths unlikely to pose significant barrier to fauna.</p> <p>All disturbed areas to be rehabilitated in accordance with title conditions. In addition the <i>Exploration Code of Practice: Rehabilitation</i> applies to new IMER titles. Rehabilitation to occur as soon as practicable after completion of activity.</p>		HIGH	HIGH RESILIENCE	YES	Fully	YES	MEDIUM	NO	LOW	<p>The potential impacts of the proposed activity on biodiversity would be avoided in the first instance through its layout and the avoidance of mature native trees including hollow-bearing trees and koala feed trees in particular.</p> <p>As such, the limited biodiversity values that are present at the site would be maintained meaning the residual impacts would be inherently low. Vegetation that would likely be removed as a result of the proposed activity may include some cropped areas and predominantly exotic groundcover. The removal of this vegetation would have some very limited impact in terms of its potential value as foraging habitat for various fauna species including birds and microbats. Any such loss of habitat value would be only temporary as the areas to be disturbed would be reinstated at the end of construction.</p>
5. habitat of protected aquatic species or those with conservation status.	<p>Negligible and only localised changes to drainage flows/flooding regime.</p> <p>Water used for exploration not available for ecological purposes.</p> <p>Surface runoff can be sediment laden from areas where vegetation has been removed.</p> <p>Generally minimal surface water use (must be licensed or use of farm dams through landholder agreements).</p> <p>No use of groundwater but potential loss through produced water in drilling / deep excavation operations.</p> <p>Interception, cross contamination and/or depressurisation of groundwater systems in drilling operations. Groundwater depressurisation effects on surface water.</p> <p>Mobilisation of pollutants (such as hydrocarbons) in surface water or aquifers.</p> <p>Ford across creeks can cause stream bank erosion from vehicle wash.</p> <p>Inappropriate disposal of drilling wastes / overflow from drilling sumps.</p>	<p>Activities must comply with title conditions. For new IMER titles activities must also comply with the <i>Exploration Code of Practice: Environmental Management</i> including:</p> <p>a. Activities must implement all measures to prevent causing any adverse impacts on water quality or quantity.</p> <p>b. All sediment and erosion controls (including drainage from roads/access tracks) to be managed in accordance with Blue Book.</p> <p>c. No significant impact on any threatened species, threatened populations, threatened ecological communities, or their habitats.</p> <p>d. No removal of vegetation in waterfront land.</p> <p>All disturbed areas to be rehabilitated in accordance with title conditions. In addition, the <i>Exploration Code of Practice: Rehabilitation</i> applies to new IMER titles. Rehabilitation is to occur as soon as practicable after completion of activity.</p>		N/A								
6. fishing grounds and commercial fish breeding or nursery areas.	<p>Negligible and only localised changes to drainage flows/flooding regime.</p> <p>Surface runoff can be sediment laden from areas where vegetation has been removed.</p> <p>Generally minimal surface water use (must be licensed or use of farm dams through landholder agreements).</p> <p>Interception, cross contamination and/or depressurisation of groundwater systems in drilling operations. Groundwater depressurisation effects on surface water.</p> <p>Mobilisation of pollutants (such as hydrocarbons) in surface water or aquifers.</p> <p>Ford across creeks can cause stream bank erosion from vehicle wash.</p> <p>Inappropriate disposal of drilling wastes / overflow from drilling sumps.</p>	<p>Activities must comply with title conditions. For new IMER titles activities must also comply with the <i>Exploration Code of Practice: Environmental Management</i> including:</p> <p>a. Activities must implement all measures to prevent causing any adverse impacts on water quality or quantity.</p> <p>b. All sediment and erosion controls (including drainage from roads/access tracks) to be managed in accordance with Blue Book.</p> <p>c. No significant impact on any threatened species, threatened populations, threatened ecological communities, or their habitats.</p> <p>d. No removal of vegetation in waterfront land.</p> <p>All disturbed areas to be rehabilitated in accordance with title conditions. In addition, the <i>Exploration Code of Practice: Rehabilitation</i> applies to new IMER titles. Rehabilitation to occur as soon as practicable after completion of activity.</p>		N/A								

4. areas with degraded amenity from noise, traffic congestion or odour.	<p>Potential for temperature inversions in winter to trap dust and air particulates.</p> <p>Particulate emissions and noise from vehicles and machinery.</p> <p>Dust generation and noise from operating machinery, vehicles travelling over tracks, etc.</p> <p>Short term additional traffic during exploration activity, primarily during set-up/construction stage.</p>	<p>Short term impacts predominantly limited to immediate site.</p> <p>Subject to landholder agreement and any compensation.</p> <p>Activities must comply with title conditions. For new IMER titles activities must also comply with the <i>Exploration Code of Practice: Environmental Management</i> including cumulative noise and air quality criteria.</p> <p>All disturbed areas to be rehabilitated in accordance with title conditions. In addition, the <i>Exploration Code of Practice: Rehabilitation</i> applies to new IMER titles. Rehabilitation to occur as soon as practicable after completion of activity (including sealing of any boreholes).</p>		N/A									
5. areas or items of high anthropological, archaeological, architectural, cultural, heritage, historical, recreational or scientific value.	<p>Short term and temporary impacts only.</p>	<p>Activities must comply with title conditions. For new IMER titles, activities must also comply with the <i>Exploration Code of Practice: Environmental Management</i> to minimise potential impacts on all aspects of the environment (including water, land, air), culture and heritage (Aboriginal and Non-Indigenous heritage). Aboriginal or European heritage objects/items/areas to be demarcated and avoided.</p> <p>All disturbed areas to be rehabilitated in accordance with title conditions. In addition, the <i>Exploration Code of Practice: Rehabilitation</i> applies to new IMER titles. Rehabilitation to occur as soon as practicable after completion of activity (including sealing of any boreholes).</p>		N/A									
6. areas or items of high aesthetic or scenic value.	<p>Limited potential to significantly impact on aesthetic or scenic value.</p> <p>Short term noise, air quality and visual impacts.</p> <p>Potential for temporary impact on aesthetics of a locality.</p> <p>Lighting during night time operations and use of access tracks by vehicles at night may affect local amenity.</p> <p>Exploration activities, including any removal of vegetation and access track locations, may impact on visual amenity.</p>	<p>Short term impacts predominantly limited to immediate site.</p> <p>Activities must comply with title conditions. For new IMER titles activities must comply with the <i>Exploration Code of Practice: Environmental Management</i> to minimise potential impacts on all aspects of the environment (including water, land, air), culture and heritage (Aboriginal and Non-Indigenous heritage).</p> <p>All disturbed areas to be rehabilitated in accordance with title conditions. In addition the <i>Exploration Code of Practice: Rehabilitation</i> applies to new IMER titles. Rehabilitation to occur as soon as practicable after completion of activity (including sealing of any boreholes).</p>		N/A									
7. any other factors.													
Summary of location sensitive because of community factors											LOW	NA	

Part 7 of Biodiversity Conservation Act 2016 and Section 1.7 of Environmental Planning and Assessment Act 1979
Determining Whether the Activity is Likely to Significantly Affect Threatened Species, or Ecological Communities, or their Habitats

For the purposes of the *Environmental Planning and Assessment Act 1979* and, in particular, in the administration of sections 5.5 and 5.7, the following must be taken into account in deciding whether there is likely to be a significant effect on threatened species, or ecological communities, or their habitats:

a) In the case of a threatened species, is the proposed activity likely to have an adverse effect on the life cycle of a species such that a viable local population of the species is likely to be placed at risk of extinction?	No
b) In the case of an endangered ecological community or critically endangered ecological community, is the proposed activity:	
(i) likely to have an adverse effect on the extent of an ecological community such that its local occurrence is likely to be placed at risk of extinction?	No
(ii) likely to substantially and adversely modify the composition of an ecological community such that its local occurrence is likely to be placed at risk of extinction?	No
c) In relation to the habitat of a threatened species or ecological community:	
(i) is the extent to which habitat is likely to be removed or modified as a result of the proposed activity significant?	No
(ii) is an area of habitat likely to become fragmented or isolated from other areas of habitat as a result of the proposed activity?	No
(iii) is the habitat to be removed, modified, fragmented or isolated important to the long-term survival of the species or ecological community in the locality?	No
d) Is the proposed activity likely to have an adverse effect on any declared area of outstanding biodiversity value/critical habitat (either directly or indirectly)?	No
e) Does the proposed activity constitute or form part of a key threatening process or is likely to increase the impact of, a key threatening process?	No

Part 5 - Evaluation of Likely Significance of Potential Impacts on the Environment

Title:	PEL1
Proponent:	Santos QNT Pty Ltd
Site/Project Name:	Kahlua Pilot Reactivation
Activity:	<p>The site contains existing coal seam gas exploration infrastructure including four exploration wells (Kahlua (K) 2, K3, K4 and K5), access tracks, water storage and gas flaring infrastructure.</p> <p>The purpose of the proposed activity is to continue exploration and appraisal activities at the site utilising the existing coal seam gas exploration infrastructure. It includes some minor additional civil and construction works including installation of buried gas and water gathering and power cables, upgrade of the gas flare, establishment of central power generation infrastructure and 65 kilolitre diesel storage, followed by workovers and completions, and appraisal activities.</p>
Location:	PEL1 - activity to be undertaken within Lot 6 DP586978 in Marys Mount about 20 kilometres west of Gunnedah, NSW.

Potential impacts	Potential significance considering the extent and nature of impacts (including impacts on environmentally sensitive areas)	Justification of Impacts
PHYSICAL & POLLUTION		
a) air impacts	LOW	NA
b) water impacts	LOW	NA
c) soil & stability impacts	LOW	NA
d) noise & vibration impacts	LOW	NA
e) any other physical or pollution impacts	LOW	NA
f) sensitive location because of physical or pollution factors	LOW	NA
BIOLOGICAL		
a) fauna	LOW	NA
b) flora	LOW	NA
c) ecological & biosecurity	LOW	NA
d) sensitive location because of biological factors	LOW	NA
RESOURCE USE		
a) community resources	LOW	NA
b) natural resources	LOW	NA
c) sensitive location because of conservation factors	LOW	NA
COMMUNITY		
a) social impacts	LOW	NA
b) economic impacts	LOW	NA
c) heritage, aesthetic, cultural impacts	LOW	NA
d) land use impacts	LOW	NA
e) transportation impacts	LOW	proposed activity on transportation would be low.
f) sensitive location because of community factors	LOW	NA
ACTIVITY AS A WHOLE	Unlikely to significantly affect the environment	

YES	An Assessment of Significance has been conducted as required by s.1.7 of the <i>Environmental Planning & Assessment Act 1979</i> .	SIS Required?	SIS Not Required
YES	Regard has been paid to Declared Areas of Outstanding Biodiversity Value/Register of Critical Habitat as required by s.1.7 of the <i>Environmental Planning & Assessment Act 1979</i> and Part 7 of the <i>Biodiversity Conservation Act 2016</i> .		

Person responsible for identifying, analysing and evaluating the potential impacts:

Name: Date: Evaluation Date

Position: Signature:

FRM-208-A1: Assessment and Recommendation Briefing for Decision Maker (blue text to be checked / amended accordingly)

To:	[REDACTED]
Brief and letter PREPARED by:	[REDACTED]
Date:	Evaluation Date
Subject:	Part 5 Determination: PEL1, Santos QNT Pty Ltd, Kahlua Pilot Reactivation – Activity Approval; and Security Assessment

Issue:
Authority Holder has sought an activity approval in respect of Kahlua Pilot Reactivation, within [PEL1](#) at Marys Mount near Gunnedah NSW.

An exploration authority issued under the Petroleum Onshore Act 1991 (eg. Exploration Licence or Assessment Lease) is subject to a statutory condition that the authority holder must not carry out an assessable prospecting operation on land over which the authority is granted unless an activity approval has been obtained for the carrying out of the assessable prospecting operation.

As assessable prospecting operations require approval by the Minister pursuant to s.31A or s.36A under the Petroleum Onshore Act 1991, a duty is imposed on determining authorities under Part 5 of the Environmental Planning and Assessment Act 1979 (Planning Act) to:

- consider the environmental impacts of the proposed activity; and
- if the activity is likely to significantly affect the environment, examine and consider an environmental impact statement in respect of the activity.

The Minister for Regional NSW is the determining authority for all exploration activities subject to environmental assessment under Part 5 of the Planning Act under PEL1.

The Manager Environmental Operations, under delegation from the Minister, is required to make a determination:

- first, as to whether this activity is likely to significantly affect the environment. Where there is likely to be a significant effect on the environment, an Environmental Impact Statement (EIS) is required prior to the approval being determined; and
- second, as to whether the application for approval of the prospecting operation should be granted.

Background:

The REF submitted by Santos for the project states:

The proposed activity at the site would involve the following:

– *Minor civil and construction works, including:*

- *installation of buried gathering (gas and water) lines and power cables*
- *upgrade of the existing gas flaring infrastructure at well pad K2*
- *establishment of central power generation infrastructure at well pad K2*
- *establishment of a 65 kilolitre diesel fuel storage at well pad K2.*

– *Workovers and completions of four existing gas exploration wells (K2, K3, K4 and K5).*

– *Appraisal activities including water and gas production from all four wells and gas flaring (K2 only).*

– *Decommissioning and rehabilitation activities.*

The proposed activity is necessary for the continued exploration and appraisal of gas in PEL1.

The site of the proposed activity contains existing and approved coal seam gas exploration infrastructure. As far as reasonably practicable, the proposed activity would be contained to areas that have already been disturbed through the establishment of this infrastructure. As such, the proposed activity may be largely characterised as a brown field activity that would likely result in no additional impacts on the environment at the proposed site.

The four existing gas wells that make up the the Kahlua Pilot have been suspended for about 10 years. The project aims to reactivate the pilot to continue appraisal activities in PEL1.

An activity approval for a seismic survey in PEL1 was approved in late 2022. The Regulator is currently investigating a complaint in relation to the operation of the seismic survey (NCG0005453) but the matter has not yet been determined. The allegation is that Santos failed to provide 21 days notice to the owner or occupier of a property of the seismic survey that was being carried out on public roads. It is considered that the allegation would not preclude determination of the Kahlua Pilot reactivation project.

There is no other compliance history recorded in ACES for PEL1.

Assessment of Security Deposit (Assessed Deposit):

The proposed prospecting operation has triggered an assessment of the security deposit required to secure funding for the fulfilment of obligations under [PEL1](#) in relation to Kahlua Reactivation project, if approved. It was noted that the RCE submitted for PEL1 with the seismic survey application included the reactivation of the Kahlua wells. No further security increase is required.

The Assessed Deposit for PEL1, including fulfilment of obligations in connection with [Kahlua Reactivation project](#) is: **\$2,177,000.00**.

This is the same as the security deposit already held by the Department.

Assessment of Impacts for Non-Complying Exploration Activities:

An assessment of the significance of environmental impacts associated with the proposed activity was undertaken in accordance with the Department of Planning and Infrastructure guideline "*Is an EIS required? Best practice guidelines for Part 5 of the Environmental Planning and Assessment Act 1979*". The results of this assessment are documented in the attached Part 5 Assessment Tables.

- The significance of the Activity is Low. No further mitigation measures are required.

The application was referred to Dept Ag and also EPA.

Based on the information provided in the Application Form (ESF4) & Review of Environmental Factors (REF), and the assessment undertaken in the Part 5 Assessment Tables, the proposed activity has been assessed as **not being likely** to have a significant impact on the environment.

The Kahlua pilot wells (K2, K3, K4 and K5) are existing wells which were drilled in 2010 and have been suspended for approximately 10 years. The site of the four wells includes existing access tracks, gas flaring infrastructure and water management infrastructure. The Kahlua reactivation project proposes to reactivate the wells to undertake gas appraisal activities. The project will involve about 2km of trenching to install new gas gathering and water pipelines and electrical cables. It is also proposed to install central power generation equipment including two diesel generator units at the K2 well pad site.

Santos submitted a comprehensive REF addressing the impacts of the proposed works. Specialist studies were included as appendices to the REF including groundwater, noise and vibration, biodiversity, aboriginal heritage and greenhouse gas. The application and REF were referred to DPI-Ag, EPA and NRAR. No response was received from NRAR. Responses received from DPI-Ag and EPA indicated neither agency had issue with the proposed works, and no objections to approval were raised.

The Regulator has received seven letters from neighbouring landholders in the area that have requested baseline environmental studies be conducted on their properties at the expense of Santos. The REF provided has addressed the impacts of the project as required whether or not those impacts extend to other properties. However, the works are confined to the property where the existing wells are located. Impacts as described in the REF are typically confined to the immediate area. No additional baseline studies are considered to be required. A response is being prepared for the RR ED to send to the landholders concerned.

The application for approval of the Assessable prospecting operation has also been assessed as **being suitable for grant**.

Included with this submission
(provide ACES/CM9 Refs):
(provide screen shot if easier)

RR23/1199	MAAG0015433 - 230112_NSV22-02_PEL1_Kahlua_Application Package_Submission.pdf	13/01/2023 at 8:32 AM	Department
RR23/1183	MAAG0015433 - image002.jpg	13/01/2023 at 8:21 AM	Department
RR23/1185	MAAG0015433 - image001.jpg	13/01/2023 at 8:21 AM	Department
RR23/1187	MAAG0015433 - AREQ0016106 - Application to conduct exploration activities for assessable prospecting opera...	13/01/2023 at 8:21 AM	Department
RR23/1189	MAAG0015433 - Application to conduct exploration activities for assessable prospecting operations on PEL 1 - ...	13/01/2023 at 8:21 AM	Department
RR23/1225	MAAG0015433 - MAAG0015433 - Application to conduct exploration activities for assessable prospecting opera...	13/01/2023 at 10:00 AM	Department
RR23/1184	MAAG0015433 - Mimecast Large File Send Instructions.eml	13/01/2023 at 8:21 AM	Department
RR23/1186	MAAG0015433 - image004.jpg	13/01/2023 at 8:21 AM	Department
RR23/1188	MAAG0015433 - image003.jpg	13/01/2023 at 8:21 AM	Department
RR23/1241	MAAG0015433 - MAAG0015433 - Application to conduct exploration activities for assessable prospecting opera...	13/01/2023 at 10:51 AM	Department
RR23/4967	MAAG0015433 - MAAG0015433 ESF4 Extension of time request.msg	18/01/2023 at 11:42 AM	Department
RR23/6728	MAAG0015433 - default_banner.jpg	23/01/2023 at 9:21 AM	Department
RR23/6729	MAAG0015433 - Re: MAAG0015433 - Application to conduct exploration activities for assessable prospecting o...	23/01/2023 at 9:21 AM	Department
RR23/6724	MAAG0015433 - MAAG0015433 - 230112_NSV22-02_PEL1_Kahlua_Application Package_Submission.pdf.PDF	23/01/2023 at 9:13 AM	Department
RR23/6725	MAAG0015433 - MAAG0015433 - Application to conduct exploration activities for assessable prospecting opera...	23/01/2023 at 9:13 AM	Department
RR23/7510	MAAG0015433 - RE - MAAG0015433 - Application to conduct exploration activities for assessable prospecting o...	24/01/2023 at 9:51 AM	Department
RVF23/700*	MAAG0015433 PEL 1 Kahlua Pilot Reactivation	1/02/2023 at 1:02 PM	Agricultur
HW23/2048	MAAG0015433 - PEL 1_Kahlua_Application Package_Submission	1/02/2023 at 4:32 PM	Agricultur
RR23/11690	MAAG0015433 - MAAG0015433 - Application to conduct exploration activities for assessable prospecting opera...	2/02/2023 at 5:01 PM	Department
RR23/16177	MAAG0015433 - EPA Advice - Application to conduct exploration activities for assessable prospecting opera...	10/02/2023 at 2:31 PM	Department
RR23/16438	MAAG0015433 - image009.png	13/02/2023 at 1:13 PM	Department
RR23/16437	MAAG0015433 - RE - EXT - MAAG0015433 - Application to conduct exploration activities for assessable prospe...	13/02/2023 at 1:13 PM	Department
RR23/17375	MAAG0015433 - MAAG0015433 - Application to conduct exploration activities for assessable prospecting opera...	14/02/2023 at 2:31 PM	Department
RR23/17359	MAAG0015433 - image009.png	14/02/2023 at 4:01 PM	Department
RR23/17360	MAAG0015433 - RE EXT - MAAG0015433 - Application to conduct exploration activities for assessable prospe...	14/02/2023 at 4:01 PM	Department
RR23/17540	MAAG0015433 - MAAG0015433 - PEL 1 - Kahlua Pilot Reactivation Project.msg	15/02/2023 at 11:10 AM	Department
RR23/17541	MAAG0015433 - FIN0940703 - MAAG0015433 - PEL 1 - Kahlua Pilot Reactivation Project.msg	15/02/2023 at 11:10 AM	Department
AREQ0016975	NATURAL RESOURCE & ENVIRONMENTAL MANAGEMENT - Resources Regulator - Email SUSPECTED RECOVER sub...	17/02/2023 at 10:11 AM	Resources
RR23/18672	AREQ0016975 - MAAG0015433 - Application to conduct exploration activities for assessable prospecting opera...	17/02/2023 at 10:11 AM	Department
RR23/18669	AREQ0017198 - RORW - OUT - Letter - EPA Advice - (REF) Santos PEL1 Kahlua Reactivation Project (MAAG001543...	17/02/2023 at 10:01 AM	Department
RR23/24350	MAAG0015433 - image009.png	28/02/2023 at 5:20 PM	Department
RR23/24352	MAAG0015433 - RE - EXT - MAAG0015433 - Application to conduct exploration activities for assessable prospe...	28/02/2023 at 5:20 PM	Department
RR23/24354	MAAG0015433 - Letter on applicable standards C&F Retail as on March 2020 (002).pdf	28/02/2023 at 5:20 PM	Department
RR23/24351	MAAG0015433 - Emissions performance specifications.PNG	28/02/2023 at 5:20 PM	Department
RR23/24353	MAAG0015433 - Fuel rate.pdf	28/02/2023 at 5:20 PM	Department
RR23/24355	MAAG0015433 - Layout.pdf	28/02/2023 at 5:20 PM	Department

Recommendation:

The Manager Environmental Operations, under delegation from the Secretary:

- in accordance with s.106E of the Petroleum (Onshore) Act 1991, assesses the amount of the security deposit required by a security deposit condition for [PEL1](#)
- determines that the assessed deposit for [PEL1](#) is **\$2,177,000**

The Manager Environmental Operations, under delegation from the Minister:

- assesses the environmental impact of the activity and determines that the activity is not likely to significantly affect the environment under Part 5 of the Environmental Planning and Assessment Act 1979; and
- grants the activity approval pursuant to section 31A of the Petroleum Onshore Act 1991

Determination under Part 5 of the Environmental Planning and Assessment Act 1979:

In accordance with s5.5 and s5.7 of the Environmental Planning and Assessment Act 1979 and having examined and taken into account to the fullest extent possible all matters affecting or likely to affect the environment by reason of the [Kahlua Reactivation Project](#), I have determined that the activity is **not likely** to significantly affect the environment or threatened species, or ecological communities or their habitats and an environmental impact statement is **not required**. *(Endorse and date Part 5 Tables on Coversheet)*

Activity Approval:

[Granted](#)

[ASMT0028041 approved 15 March 2023](#)

NAME:

Manager Environmental Operations

Signed under delegation from the Minister for Regional NSW

15-Mar-23