Tuesday 16 April 2024

Assessable Prospecting Operation Application Decision Briefing and Review of Environmental Factors

Longstowe | APO0001691

Decision Maker	Monique Meyer
Prepared by	Jenifa Richards
Title	EL 9622 (1992)
Authorised Representative	[redacted]
Project name	Longstowe
Activity type	Non-Complying Exploration Activity

Issue

[redacted] has sought an activity approval in respect of Longstowe, within EL 9622 (1992), at approximately 500m west of The Willows, NSW.

Pursuant to section 2.8 of *State Environmental Planning Policy (Resources and Energy) 2021*, development for the purposes of exploration (i.e. prospecting) may be carried out without development consent.

An authority issued under the *Mining Act 1992* is subject to a 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 under the *Mining Act 1992*, a duty is imposed on determining authorities under Part 5 of the *Environmental Planning and Assessment Act 1979* to:

- examine and take into account to the fullest extent possible all matters affecting or likely to affect the environmental by reason 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 is the determining authority for all exploration activities subject to environmental assessment under Part 5 of the *Environmental Planning and Assessment Act 1979*.

The Decision Maker, under delegation from the Minister, is required to determine whether:

- the proposed activity is not likely to have a significant impact on the environment and is not likely to significantly affect threatened species, populations or ecological communities (or their habitats) or impact biodiversity values and can be approved,
- the proposed activity is likely to have a significant impact on the environment and therefore an Environmental Impact Statement (EIS) is required,

- the proposed activity will be carried out in a declared area of outstanding biodiversity value and is likely to significantly affect threatened species, populations or ecological communities, or their habitats or impact biodiversity values, meaning a Species Impact Statement (SIS) and/or Biodiversity Development and Assessment Report (BDAR) is required, or
- there is insufficient information to make a decision.

Background

This exploration activity approval is being sought under EL 9622 (granted 05 Dec 2023 & expires 05 Dec 2029) to undertake assessable prospecting operations.

The current security deposit held for EL 9622 is $10,000.

There are no other activity applications granted for this title.

Proposed exploration activity

The proposed exploration activity (including details of the site, the existing environment, impact thresholds and impact management) are described in *APPLICATION TO UNDERTAKE ASSESSABLE PROSPECTING OPERATIONS Longstowe* report and the information provided in support of the application.

The objective of the proposed exploration activity is to carry out works on, or to remove samples from, land for the purpose of testing the resource quality and/or quantity of the land. This is consistent with the objects of the *Mining Act 1992*, including to facilitate the discovery and development of resources in NSW.

No alternatives options to the proposed activity were considered.

Security

The application triggered a review of the assessed deposit to secure funding for the fulfilment of obligations if Longstowe is approved.

Refer to RCE Record RCE0001774

Assessment of Impacts (Non-complying exploration activity)

An assessment of the significance of environmental impacts associated with the proposed activity was undertaken in accordance with the Department of Planning and Environment's "*Guidelines for Division 5.1 assessments*". The results of this assessment are documented in the attached Review of Environmental Factors document.

The assessment has determined that the activity is not likely to significantly affect the

environment, including threatened species or ecological communities (or their habitats), or

declared areas of outstanding biodiversity value/critical habitat.

Additional terms (if approved)

No additional terms are required.

Summary

Based on the information provided in the *APPLICATION TO UNDERTAKE ASSESSABLE PROSPECTING OPERATIONS Longstowe* report, and the Review of Environmental Factors document, the proposed activity has been assessed as is not likely to have a significant impact on the environment and therefore an EIS is not required.

The application has been assessed and the recommendation is to Approve the activity.

Certification

I, Jenifa Richards, certify that I have reviewed and endorsed the contents of the attached Review of Environmental Factors document and, to the best of my knowledge, it is in accordance with the *Environmental Planning and Assessment Act 1979,* the Environmental Planning and Assessment Regulation 2021 and the Guidelines approved under clause 170 of the EP&A Regulation, and the information it contains is neither false nor misleading.

Recommendation

The Decision Maker, under delegation from the Minister:

- Assesses the environmental impact of Longstowe and determines that the activity is is not likely to have a significant impact on the environment and therefore an EIS is not required under Part 5 of the *Environmental Planning and Assessment Act 1979*.
- Approve the activity pursuant to the *Mining Act 1992*.

Review of Environmental Factors document

Criteria	Air Impacts: Air quality impacts (including impacts on nearby sensitive receptors).		
Potential impacts	Air impacts from the proposed program are negligible. Longstowe_01 is 550m northwest of Longstowe Homestead, Longstowe_02 is 1.3km south, and Longstowe_03 is 2.3km north. Drilling will not occur within 500m of houses. As mud rotary and diamond drilling does not produce significant dust the impact to the receptor is predicted to be negligible. All vehicles will be in good working order and not releasing excess exhaust fumes. No new tracks are being created.		
Proposed management controls	Drilling will not occur within 500m of sensitive receptors. Vehicles will travel slowly along all farm tracks to minimise travelling dust. Vehicles will be well maintained to minimise excessive exhaust fumes. Landholder consultation throughout the whole program to ensure best and appropriate practices are being maintained.		
Duration	21		
Application ranking	Positive		
What is the confidence in predicting impacts?	High	**Are further studies required on impacts or mitigation?**	No

How resilient is the environment to cope with impacts?	High Resilience	**What is the level of public concern?**	Low
Can the impacts be reversed?	Yes	**Ranking of potential significance**	
Can the impacts be mitigated?	Fully	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	Yes		
Criteria	Air Impacts: Greenhouse or ozone impacts.		
Potential impacts	Air impacts from the proposed program are negligible. Longstowe_01 is 550m northwest of Longstowe Homestead, Longstowe_02 is 1.3km south, and Longstowe_03 is 2.3km north. Drilling will not occur within 500m of houses. As mud rotary and diamond drilling does not produce significant dust the impact to the receptor is predicted to be negligible. All vehicles will be in good working order and not releasing excess exhaust fumes. No new tracks are being created.		
Proposed management controls	Drilling will not occur within 500m of sensitive receptors. Vehicles will travel slowly along all farm tracks to minimise travelling dust. Vehicles will be well maintained to minimise excessive exhaust fumes. Landholder consultation throughout the whole program to ensure best and appropriate practices are being maintained.		
Duration	21		
Application ranking	Positive		
What is the confidence in predicting impacts?	High	**Are further studies required on impacts or mitigation?**	No
How resilient is the environment to cope with impacts?	High Resilience	**What is the level of public concern?**	Low
Can the impacts be reversed?	Yes	**Ranking of potential significance**	Low
Can the impacts be mitigated?	Fully	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	Yes		
Criteria	Air Impacts: Additional impacts on areas with degraded air quality.		
Potential impacts	Air impacts from the proposed program are negligible. Longstowe_01 is 550m northwest of Longstowe Homestead, Longstowe_02 is 1.3km south, and Longstowe_03 is 2.3km north. Drilling will not occur within 500m of houses. As mud rotary and diamond drilling does not produce significant dust the impact to the receptor is predicted to be negligible. All vehicles will be in good working order and not releasing excess exhaust fumes. No new tracks are being created.		
Proposed management controls	Drilling will not occur within 500m of sensitive receptors. Vehicles will travel slowly along all farm tracks to minimise travelling dust. Vehicles will be well maintained to minimise excessive exhaust fumes. Landholder consultation throughout the whole program to ensure best and appropriate practices are being maintained. TOPOGRAPHY is fairly flat landscape - reduces changes of trapping air of lower quality.		
Duration	21		
Application ranking	Positive		
What is the confidence in predicting impacts?	High	**Are further studies required on impacts or mitigation?**	No
How resilient is the environment to cope with impacts?	High Resilience	**What is the level of public concern?**	Low
Can the impacts be reversed?	Yes	**Ranking of potential significance**	Low
Can the impacts be mitigated?	Fully	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	Yes		
Criteria	Water Impacts: Impacts from the use of surface or groundwater.		

Potential impacts	The program is not expected to impact groundwater. Suitable drilling methods will be utilised to ensure that water is contained in the same strata and not cross to different water bearing strata. The program is not expected to have an impact on surface water. The nearest watercourse is Wambuul/Macquarie River located 2km east of the approval area. Drilling is not expected to impact is Wambuul/Macquarie River as the method of drilling will ensure that all ground water remains in the ground, and there will be no ancillary water stored on site. All proposed activities will be completed in dry season as the approval area is within the Macquarie Marshes Wetland.		
Proposed management controls	Drilling will not be undertaken during extreme weather events and so surface water will not be affected. Groundwater is not expected to cause concern as areas close by have been drilled previously with no concerns. AIS Response: Anticipated that water will be generally available from landholder dams as agreed with the landholder.		
Duration	21		
Application ranking	Positive		
What is the confidence in predicting impacts?	N/A	**Are further studies required on impacts or mitigation?**	No
How resilient is the environment to cope with impacts?	Medium Resilience	**What is the level of public concern?**	Low
Can the impacts be reversed?	Uncertain	**Ranking of potential significance**	Low
Can the impacts be mitigated?	Partly	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	Yes		
Criteria	Water Impacts: Impacts from storage of water		
Potential impacts	The program is not expected to impact groundwater. Suitable drilling methods will be utilised to ensure that water is contained in the same strata and not cross to different water bearing strata. The program is not expected to have an impact on surface water. The nearest watercourse is Wambuul/Macquarie River located 2km east of the approval area. Drilling is not expected to impact is Wambuul/Macquarie River as the method of drilling will ensure that all ground water remains in the ground, and there will be no ancillary water stored on site. All proposed activities will be completed in dry season as the approval area is within the Macquarie Marshes Wetland.		
Proposed management controls	Drilling will not be undertaken during extreme weather events and so surface water will not be affected. Groundwater is not expected to cause concern as areas close by have been drilled previously with no concerns. Water required for drilling will be stored in above ground tanks. No ancillary water required.		
Duration	21		
Application ranking	Positive		
What is the confidence in predicting impacts?	High	**Are further studies required on impacts or mitigation?**	No
How resilient is the environment to cope with impacts?	Medium Resilience	**What is the level of public concern?**	Low
Can the impacts be reversed?	Uncertain	**Ranking of potential significance**	Low
Can the impacts be mitigated?	Partly	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	Yes		
Criteria	Water Impacts: Impacts from changes to natural water bodies, wetlands or runoff patterns.		
Potential impacts	The program is not expected to impact groundwater. Suitable drilling methods will be utilised to ensure that water is contained in the same strata and not cross to different water bearing strata. The program is not expected to have an impact on surface water. The nearest watercourse is Wambuul/Macquarie River located 2km east of the approval area. Drilling is not expected to impact is Wambuul/Macquarie River as the method of drilling will ensure that all ground water remains in the ground, and there will be no ancillary water stored on site. All proposed activities will be completed in dry season as the approval area is within the Macquarie Marshes Wetland.		

Proposed management controls	Drilling will not be undertaken during extreme weather events and so surface water will not be affected. Groundwater is not expected to cause concern as areas close by have been drilled previously with no concerns. Nationally Important Wetland 10km to East of drilling area. Pre-referral meeting held with Commonwealth DCCEEW on Thursday 28 March 11.00 – ~12.00 (AEST). Outcome was that a self-assessment was to be completed by Australian Consolidated Gold Holdings (ACGH). ACGH completed a self-assessment with the outcome confirming that there will not be a significant impact to the Wetlands and Macquarie Marshes, sufficient mitigating protocols are in place to ensure management of identified risks and sensitivities. Drilling fluids managed in above ground tanks and water trucks. Nearest named waterway is 2km to the East (Maquarie River) Swampland areas to be avoided.		
Duration	21		
Application ranking	Positive		
What is the confidence in predicting impacts?	High	**Are further studies required on impacts or mitigation?**	No
How resilient is the environment to cope with impacts?	Medium Resilience	**What is the level of public concern?**	Low
Can the impacts be reversed?	Uncertain	**Ranking of potential significance**	Low
Can the impacts be mitigated?	Partly	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	Yes		
Criteria	Water Impacts: Impacts from aquifer interference, including changes to inter-aquifer connectivity.		
Potential impacts	The program is not expected to impact groundwater. Suitable drilling methods will be utilised to ensure that water is contained in the same strata and not cross to different water bearing strata. The program is not expected to have an impact on surface water. The nearest watercourse is Wambuul/Macquarie River located 2km east of the approval area. Drilling is not expected to impact is Wambuul/Macquarie River as the method of drilling will ensure that all ground water remains in the ground, and there will be no ancillary water stored on site. All proposed activities will be completed in dry season as the approval area is within the Macquarie Marshes Wetland.		
Proposed management controls	Drilling will not be undertaken during extreme weather events and so surface water will not be affected. Groundwater is not expected to cause concern as areas close by have been drilled previously with no concerns. Nationally Important Wetland 10km to East of drilling area. Pre-referral meeting held with Commonwealth DCCEEW on Thursday 28 March 11.00 – ~12.00 (AEST). Outcome was that a self-assessment was to be completed by Australian Consolidated Gold Holdings (ACGH). ACGH completed a self-assessment with the outcome confirming that there will not be a significant impact to the Wetlands and Macquarie Marshes, sufficient mitigating protocols are in place to ensure management of identified risks and sensitivities. Drilling fluids managed in above ground tanks and water trucks. Rehabilitation of drill hole will cement from at least 18m below surface to 1m below surface to prevent water crossing strata.		
Duration	21		
Application ranking	Positive		
What is the confidence in predicting impacts?	High	**Are further studies required on impacts or mitigation?**	No
How resilient is the environment to cope with impacts?	Medium Resilience	**What is the level of public concern?**	Low
Can the impacts be reversed?	Uncertain	**Ranking of potential significance**	Low
Can the impacts be mitigated?	Partly	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	Yes		
Criteria	Water Impacts: Impacts from changes to flooding or tidal regimes.		

Potential impacts	The program is not expected to impact groundwater. Suitable drilling methods will be utilised to ensure that water is contained in the same strata and not cross to different water bearing strata. The program is not expected to have an impact on surface water. The nearest watercourse is Wambuul/Macquarie River located 2km east of the approval area. Drilling is not expected to impact is Wambuul/Macquarie River as the method of drilling will ensure that all ground water remains in the ground, and there will be no ancillary water stored on site. All proposed activities will be completed in dry season as the approval area is within the Macquarie Marshes Wetland.		
Proposed management controls	Drilling will not be undertaken during extreme weather events and so surface water will not be affected. Groundwater is not expected to cause concern as areas close by have been drilled previously with no concerns. Sensitive swampland will be avoided. Drilling not carried out in times of flooding.		
Duration	21		
Application ranking	Positive		
What is the confidence in predicting impacts?	High	**Are further studies required on impacts or mitigation?**	No
How resilient is the environment to cope with impacts?	Medium Resilience	**What is the level of public concern?**	Low
Can the impacts be reversed?	Uncertain	**Ranking of potential significance**	Low
Can the impacts be mitigated?	Partly	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	Yes		
Criteria	Water Impacts: Impacts from changes in surface or groundwater quality and quantity.		
Potential impacts	The program is not expected to impact groundwater. Suitable drilling methods will be utilised to ensure that water is contained in the same strata and not cross to different water bearing strata. The program is not expected to have an impact on surface water. The nearest watercourse is Wambuul/Macquarie River located 2km east of the approval area. Drilling is not expected to impact is Wambuul/Macquarie River as the method of drilling will ensure that all ground water remains in the ground, and there will be no ancillary water stored on site. All proposed activities will be completed in dry season as the approval area is within the Macquarie Marshes Wetland.		
Proposed management controls	Drilling will not be undertaken during extreme weather events and so surface water will not be affected. Groundwater is not expected to cause concern as areas close by have been drilled previously with no concerns. Water not being taken from natural water sources. SW - Nearest is 2km away - No ancillary water stored on site - Sensitive swampland will be avoided - Drilling in dry season, not during wet conditions - approval area includes Macquarie Marshes Wetland under the Warren Local Environmental Plan 2012, exempt development. GW - drilling methods used to ensure water retained in same strata and does not cross into water bearing strata - One borehole in area, not anticipated to be impacted, managed with drill methods.		
Duration	21		
Application ranking	Positive		
What is the confidence in predicting impacts?	High	**Are further studies required on impacts or mitigation?**	No
How resilient is the environment to cope with impacts?	Medium Resilience	**What is the level of public concern?**	Low
Can the impacts be reversed?	Uncertain	**Ranking of potential significance**	Low
Can the impacts be mitigated?	Partly	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	Yes		
Criteria	Soil & Stability Impacts: Degradation of soil quality (including contamination, salinisation or acidification).		
Potential impacts	The effects of this small drilling program within the area will not cause soil erosion. There is no acid sulphate soil in this area. Existing tracks will be utilised where possible. This area has vegetation nearby which will mitigate wind erosion issues.		

Proposed management controls	There will be no vegetation clearing for this drill program. Minor clearing of grass may be required to make sites safe, should this be necessary care will be taken to ensure to leave root stock to enable existing vegetation regrowth. Minimal surface disturbance to ensure minimal impact to the soil. Utilising existing tracks where possible, should soil compaction require scarification then the landholder will manage and ensure all ground is returned to existing state. Salinity considered but water staying in ground		
Duration	21		
Application ranking	Positive		
What is the confidence in predicting impacts?	High	**Are further studies required on impacts or mitigation?**	No
How resilient is the environment to cope with impacts?	High Resilience	**What is the level of public concern?**	Low
Can the impacts be reversed?	Yes	**Ranking of potential significance**	Low
Can the impacts be mitigated?	Partly	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	Yes		
Criteria	Soil & Stability Impacts: Impacts on land with high agricultural capability.		
Potential impacts	The effects of this small drilling program within the area will not cause soil erosion. There is no acid sulphate soil in this area. Existing tracks will be utilised where possible. This area has vegetation nearby which will mitigate wind erosion issues.		
Proposed management controls	There will be no vegetation clearing for this drill program. Minor clearing of grass may be required to make sites safe, should this be necessary care will be taken to ensure to leave root stock to enable existing vegetation regrowth. Minimal surface disturbance to ensure minimal impact to the soil. Utilising existing tracks where possible, should soil compaction require scarification then the landholder will manage and ensure all ground is returned to existing state. Land and soil capability 4 & 5 - to be treated as sensitive agricultural area. Currently used for agriculture. Consultation with landholder. Land is not classed as high agricultural capability.		
Duration	21		
Application ranking	Positive		
What is the confidence in predicting impacts?	High	**Are further studies required on impacts or mitigation?**	No
How resilient is the environment to cope with impacts?	High Resilience	**What is the level of public concern?**	Low
Can the impacts be reversed?	Yes	**Ranking of potential significance**	Low
Can the impacts be mitigated?	Fully	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	Yes		
Criteria	Soil & Stability Impacts: Loss of soil from wind or water erosion.		
Potential impacts	The effects of this small drilling program within the area will not cause soil erosion. There is no acid sulphate soil in this area. Existing tracks will be utilised where possible. This area has vegetation nearby which will mitigate wind erosion issues.		
Proposed management controls	There will be no vegetation clearing for this drill program. Minor clearing of grass may be required to make sites safe, should this be necessary care will be taken to ensure to leave root stock to enable existing vegetation regrowth. Minimal surface disturbance to ensure minimal impact to the soil. Utilising existing tracks where possible, should soil compaction require scarification then the landholder will manage and ensure all ground is returned to existing state. Wind erosion assessed in consultation with landholder. Topography is reasonably flat.		
Duration	21		
Application ranking	Positive		

What is the confidence in predicting impacts?	High	**Are further studies required on impacts or mitigation?**	No
How resilient is the environment to cope with impacts?	Medium Resilience	**What is the level of public concern?**	Low
Can the impacts be reversed?	Uncertain	**Ranking of potential significance**	Low
Can the impacts be mitigated?	Partly	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	Yes		
Criteria	Soil & Stability Impacts: Loss of structural integrity of the soil.		
Potential impacts	The effects of this small drilling program within the area will not cause soil erosion. There is no acid sulphate soil in this area. Existing tracks will be utilised where possible. This area has vegetation nearby which will mitigate wind erosion issues.		
Proposed management controls	There will be no vegetation clearing for this drill program. Minor clearing of grass may be required to make sites safe, should this be necessary care will be taken to ensure to leave root stock to enable existing vegetation regrowth. Minimal surface disturbance to ensure minimal impact to the soil. Utilising existing tracks where possible, should soil compaction require scarification then the landholder will manage and ensure all ground is returned to existing state.		
Duration	21		
Application ranking	Positive		
What is the confidence in predicting impacts?	High	**Are further studies required on impacts or mitigation?**	No
How resilient is the environment to cope with impacts?	Medium Resilience	**What is the level of public concern?**	Low
Can the impacts be reversed?	Uncertain	**Ranking of potential significance**	Low
Can the impacts be mitigated?	Partly	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	Yes		
Criteria	Soil & Stability Impacts: Increased land instability with high risks from land slides or subsidence.		
Potential impacts	The effects of this small drilling program within the area will not cause soil erosion. There is no acid sulphate soil in this area. Existing tracks will be utilised where possible. This area has vegetation nearby which will mitigate wind erosion issues.		
Proposed management controls	There will be no vegetation clearing for this drill program. Minor clearing of grass may be required to make sites safe, should this be necessary care will be taken to ensure to leave root stock to enable existing vegetation regrowth. Minimal surface disturbance to ensure minimal impact to the soil. Utilising existing tracks where possible, should soil compaction require scarification then the landholder will manage and ensure all ground is returned to existing state. Drilling areas are relatively flat topography		
Duration	21		
Application ranking	Positive		
What is the confidence in predicting impacts?	High	**Are further studies required on impacts or mitigation?**	No
How resilient is the environment to cope with impacts?	High Resilience	**What is the level of public concern?**	Low
Can the impacts be reversed?	Yes	**Ranking of potential significance**	Low
Can the impacts be mitigated?	Fully	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	Yes		
Criteria	Noise & Vibration Impacts: Results in increased noise or vibration.		

Potential impacts	Longstowe homestead is more than 500m away from proposed drilling. Drilling will be undertaken in daylight hours only and not within 500m of receptors. Mud rotary and diamond drilling method selected has relatively low noise outputs compared to other drilling methods.		
Proposed management controls	Drilling will not occur within 500m of sensitive receptors. Drilling works will be undertaken in daylight hours only.		
Duration	21		
Application ranking	Negligible		
What is the confidence in predicting impacts?	High	**Are further studies required on impacts or mitigation?**	No
How resilient is the environment to cope with impacts?	High Resilience	**What is the level of public concern?**	Low
Can the impacts be reversed?	Uncertain	**Ranking of potential significance**	Low
Can the impacts be mitigated?	Partly	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	Yes		
Criteria	Noise & Vibration Impacts: Affects sensitive receptors.		
Potential impacts	Longstowe homestead is more than 500m away from proposed drilling. Drilling will be undertaken in daylight hours only and not within 500m of receptors. Mud rotary and diamond drilling method selected has relatively low noise outputs compared to other drilling methods.		
Proposed management controls	Drilling will not occur within 500m of sensitive receptors. Drilling works will be undertaken in daylight hours only. Given the distance from the drill rig and relatively low noise output of the drilling method, the activity is not expected to impact sensitive receptors.		
Duration	21		
Application ranking	Negligible		
What is the confidence in predicting impacts?	High	**Are further studies required on impacts or mitigation?**	No
How resilient is the environment to cope with impacts?	High Resilience	**What is the level of public concern?**	Low
Can the impacts be reversed?	Uncertain	**Ranking of potential significance**	Low
Can the impacts be mitigated?	Partly	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	Yes		
Criteria	Coastal Location & Processes: Affects coastal processes and coastal hazards, including those under projected climate change conditions.		
Potential impacts	n/a		
Proposed management controls	n/a		
Duration	21		
Application ranking	Positive		
What is the confidence in predicting impacts?	High	**Are further studies required on impacts or mitigation?**	No
How resilient is the environment to cope with impacts?	N/A	**What is the level of public concern?**	Low
Can the impacts be reversed?	N/A	**Ranking of potential significance**	Low
Can the impacts be mitigated?	N/A	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	Yes		
Criteria	Hazardous substances or chemicals: Impacts associated with the use, generation, storage or transport of hazardous substances or chemicals.		

Potential impacts	Diesel fuel is the only anticipated hydrocarbon to be used on site. It will be transported to site in a dedicated diesel tank mounted on an auxiliary drill vehicle. A spill kit will always be on site and minor spills will be cleaned up and waste material removed from site and disposed of at the nearest appropriately licensed waste facility.		
Proposed management controls	Maintain regular checks of all fuel and lubricants, provide bunded areas where required. A spill kit will be at the site at all times.		
Duration	21		
Application ranking	Negligible		
What is the confidence in predicting impacts?	High	**Are further studies required on impacts or mitigation?**	No
How resilient is the environment to cope with impacts?	Medium Resilience	**What is the level of public concern?**	Low
Can the impacts be reversed?	Uncertain	**Ranking of potential significance**	Low
Can the impacts be mitigated?	Partly	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	Yes		
Criteria	Wastes & Emissions: Impacts to the environment resulting from the generation or disposal of wastes.		
Potential impacts	There should be minimal impact to the environment from the proposed short drilling program. Fuels maintained in appropriately bunded storage tanks. There will be no disposal of drilling waste at site – all waste removed from site and disposed of at appropriately licenced waste facility.		
Proposed management controls	Clean up any minor spills immediately and dispose of any contaminated materials to an appropriately managed licenced facility. Once drilling is complete, any minor spoil, rubbish and all materials will be removed from site.		
Duration	21		
Application ranking	Negligible		
What is the confidence in predicting impacts?	High	**Are further studies required on impacts or mitigation?**	No
How resilient is the environment to cope with impacts?	High Resilience	**What is the level of public concern?**	Low
Can the impacts be reversed?	Yes	**Ranking of potential significance**	Low
Can the impacts be mitigated?	Fully	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	Yes		
Criteria	Wastes & Emissions: Impacts on drinking water catchments, wetlands, natural water bodies, riparian zones or flood prone areas.		
Potential impacts	There will be no impact to the Macquarie Marshes Wetlands during this proposed short drilling program. Drilling to be conducted in the dry season.		
Proposed management controls	Clean up any minor spills immediately and dispose of any contaminated materials to an appropriately managed licenced facility. There are areas of swampland which are sensitive and will be avoided, in addition, work will be conducted in the dry season and not during wet conditions. The nearest named waterway is Wambuul/Macquarie River located 2km east of the approval area. No impact is expected as the drilling method will ensure that all ground water remains in the ground, and there will be no ancillary water stored on site.		
Duration	21		
Application ranking	Negligible		
What is the confidence in predicting impacts?	High	**Are further studies required on impacts or mitigation?**	No
How resilient is the environment to cope with impacts?	High Resilience	**What is the level of public concern?**	Low

Can the impacts be reversed?	Yes	**Ranking of potential significance**	Low
Can the impacts be mitigated?	Fully	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	Yes		
Criteria	Wastes & Emissions: Impacts on groundwater recharge areas or areas with high water table.		
Potential impacts	There will be no impact to the Macquarie Marshes Wetlands during this proposed short drilling program. Drilling to be conducted in the dry season.		
Proposed management controls	Clean up any minor spills immediately and dispose of any contaminated materials to an appropriately managed licenced facility. Suitable drilling methods will be utilised to ensure that water is contained in the same strata and not cross to different water bearing strata. Salinity of groundwater will be considered, however with the proposed drilling methods groundwater will remain in the ground.		
Duration	21		
Application ranking	Negligible		
What is the confidence in predicting impacts?	High	**Are further studies required on impacts or mitigation?**	No
How resilient is the environment to cope with impacts?	High Resilience	**What is the level of public concern?**	Low
Can the impacts be reversed?	Uncertain	**Ranking of potential significance**	Low
Can the impacts be mitigated?	Fully	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	Yes		
Criteria	Wastes and Emissions: Impacts on coastlines or dunes, alpine areas, karst features or other unique landforms.		
Potential impacts	N/A		
Proposed management controls	N/A		
Duration	N/A		
Application ranking	N/A		
What is the confidence in predicting impacts?	N/A	**Are further studies required on impacts or mitigation?**	N/A
How resilient is the environment to cope with impacts?	N/A	**What is the level of public concern?**	N/A
Can the impacts be reversed?	N/A	**Ranking of potential significance**	N/A
Can the impacts be mitigated?	N/A	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	N/A		
Criteria	Wastes & Emissions: Impacts on erosion prone areas, areas with slopes of greater than 18 degrees.		
Potential impacts	N/A		
Proposed management controls	N/A		
Duration	N/A		
Application ranking	N/A		
What is the confidence in predicting impacts?	N/A	**Are further studies required on impacts or mitigation?**	N/A
How resilient is the environment to cope with impacts?	N/A	**What is the level of public concern?**	N/A
Can the impacts be reversed?	N/A	**Ranking of potential significance**	N/A
Can the impacts be mitigated?	N/A	**Justification for ranking**	

Do the operations comply with standards, plans, policies?	N/A		
Criteria	Wastes & Emissions: Impacts on subsidence or slip areas.		
Potential impacts	There will be no impact to the Macquarie Marshes Wetlands during this proposed short drilling program. Drilling to be conducted in the dry season.		
Proposed management controls	Clean up any minor spills immediately and dispose of any contaminated materials to an appropriately managed licenced facility. Area of drilling is relatively flat. All disturbed areas to be rehabilitated in accordance with title conditions (Exploration Code of Practice: Rehabilitation). Rehabilitation to occur as soon as practicable after completion of activity.		
Duration	21		
Application ranking	Negligible		
What is the confidence in predicting impacts?	High	**Are further studies required on impacts or mitigation?**	No
How resilient is the environment to cope with impacts?	N/A	**What is the level of public concern?**	Low
Can the impacts be reversed?	N/A	**Ranking of potential significance**	Low
Can the impacts be mitigated?	N/A	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	Yes		
Criteria	Wastes & Emissions: Impacts on areas with acid sulphate, sodic or highly permeable soils.		
Potential impacts	There are no acid sulfate soils within this area.		
Proposed management controls	Salinity of groundwater will be considered, however with the proposed drilling methods groundwater will remain in the ground. The proposed drilling areas cover soil types 4 and 5 from the Land and Soil Capability Classification. No ancillary water stored on site. Drilling in dry season only. No drilling in times of flooding.		
Duration	21		
Application ranking			
What is the confidence in predicting impacts?	High	**Are further studies required on impacts or mitigation?**	No
How resilient is the environment to cope with impacts?	High Resilience	**What is the level of public concern?**	Low
Can the impacts be reversed?	Uncertain	**Ranking of potential significance**	Low
Can the impacts be mitigated?	Partly	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	Yes		
Criteria	Wastes & Emissions: Impacts on areas with salinity or potential salinity problems.		
Potential impacts	There will be no impact to the Macquarie Marshes Wetlands during this proposed short drilling program. Drilling to be conducted in the dry season.		
Proposed management controls	Clean up any minor spills immediately and dispose of any contaminated materials to an appropriately managed licenced facility. Salinity of groundwater will be considered, however with the proposed drilling methods groundwater will remain in the ground.		
Duration	21		
Application ranking	Negligible		
What is the confidence in predicting impacts?	High	**Are further studies required on impacts or mitigation?**	No
How resilient is the environment to cope with impacts?	Medium Resilience	**What is the level of public concern?**	Low

Can the impacts be reversed?	Uncertain	**Ranking of potential significance**	Low
Can the impacts be mitigated?	Partly	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	Yes		
Criteria	Wastes & Emissions: Impacts on areas with degraded or contaminated land.		
Potential impacts	There will be no impact to the Macquarie Marshes Wetlands during this proposed short drilling program. Drilling to be conducted in the dry season.		
Proposed management controls	Clean up any minor spills immediately and dispose of any contaminated materials to an appropriately managed licenced facility.		
Duration	21		
Application ranking	Negligible		
What is the confidence in predicting impacts?	High	**Are further studies required on impacts or mitigation?**	No
How resilient is the environment to cope with impacts?	Medium Resilience	**What is the level of public concern?**	Low
Can the impacts be reversed?	Uncertain	**Ranking of potential significance**	Low
Can the impacts be mitigated?	Partly	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	Yes		
Criteria	Wastes & Emissions: Impacts on areas with degraded or contaminated water (ground or surface).		
Potential impacts	There will be no impact to the Macquarie Marshes Wetlands during this proposed short drilling program. Drilling to be conducted in the dry season.		
Proposed management controls	Clean up any minor spills immediately and dispose of any contaminated materials to an appropriately managed licenced facility. Encountered groundwater to be contained. Above ground sumps for drilling liquids.		
Duration	21		
Application ranking	Negligible		
What is the confidence in predicting impacts?	High	**Are further studies required on impacts or mitigation?**	No
How resilient is the environment to cope with impacts?	Medium Resilience	**What is the level of public concern?**	Low
Can the impacts be reversed?	N/A	**Ranking of potential significance**	Low
Can the impacts be mitigated?	N/A	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	Yes		
Criteria	Vegetation: Any clearing or modification of vegetation (including impacts on wildlife corridors, remnant vegetation & habitat for species of conservation significance).		
Potential impacts	There will be no vegetation clearing for the proposed drilling. There is one endangered (NSW E1) species, Australian Bustard, recorded within the proposed drilling area on BioNet.		
Proposed management controls	n/a No vegetation clearance proposed. Location of drill hole will be moved to avoid vegetation. If grass required to be cleared, will be done in a manner that leaves root stock in place.		
Duration	21		
Application ranking	Positive		
What is the confidence in predicting impacts?	High	**Are further studies required on impacts or mitigation?**	No

How resilient is the environment to cope with impacts?	High Resilience	**What is the level of public concern?**	Low
Can the impacts be reversed?	Uncertain	**Ranking of potential significance**	Low
Can the impacts be mitigated?	Fully	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	Yes		
Criteria	Threatened Fauna Species: Any adverse effect on the life cycle of any threatened species such that a viable local population of the species is likely to be placed at risk of extinction.		
Potential impacts	There are no threatened fauna or flora recorded in this area		
Proposed management controls	n/a		
Duration	21		
Application ranking	Positive		
What is the confidence in predicting impacts?	High	**Are further studies required on impacts or mitigation?**	No
How resilient is the environment to cope with impacts?	High Resilience	**What is the level of public concern?**	Low
Can the impacts be reversed?	N/A	**Ranking of potential significance**	Low
Can the impacts be mitigated?	N/A	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	Yes		
Criteria	Threatened Flora Species: Any adverse effect on the life cycle of any threatened species such that a viable local population of the species is likely to be placed at risk of extinction.		
Potential impacts	There are no threatened fauna or flora recorded in this area		
Proposed management controls	n/a		
Duration	21		
Application ranking	Positive		
What is the confidence in predicting impacts?	High	**Are further studies required on impacts or mitigation?**	No
How resilient is the environment to cope with impacts?	High Resilience	**What is the level of public concern?**	Low
Can the impacts be reversed?	N/A	**Ranking of potential significance**	Low
Can the impacts be mitigated?	N/A	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	Yes		
Criteria	Areas of outstanding biodiversity value/Critical habitat: This includes: a. declared areas of outstanding biodiversity value under the Biodiversity Conservation Act 2016 b. areas declared critical habitat under the Fisheries Management Act 1994.		
Potential impacts	There are no areas of critical habitat/area of outstanding biodiversity within the approval area.		
Proposed management controls	n/a		
Duration	21		
Application ranking	N/A		
What is the confidence in predicting impacts?	High	**Are further studies required on impacts or mitigation?**	No
How resilient is the environment to cope with impacts?	N/A	**What is the level of public concern?**	Low
Can the impacts be reversed?	N/A	**Ranking of potential significance**	Low
Can the impacts be mitigated?	N/A	**Justification for ranking**	

Do the operations comply with standards, plans, policies?	Yes		
Criteria	Endangered ecological community or critically endangered ecological community: Whether the activity: is likely to have an adverse effect on the extent of the ecological community such that its local occurrence is likely to be placed at risk of extinction, or is likely to substantially and adversely modify the composition of the ecological community such that its local occurrence is likely to be placed at risk of extinction.		
Potential impacts	There are no endangered communities listed in the proposed drilling area Soil erosion and sediment laden runoff from disturbed areas, that could lead to soil or water contamination or land degradation. Vegetation removal and activities can temporarily impact ecological communities. Areas cleared for exploration activities, access tracks, etc not available for flora / fauna habitat.		
Proposed management controls	n/a No vegetation clearing to occur. Land is relatively flat. Drilling to only occur in dry conditions. Short term duration of activity. All disturbed areas to be rehabilitated in accordance with title conditions (Exploration Code of Practice: Rehabilitation). Rehabilitation to occur as soon as practicable after completion of activity.		
Duration	21		
Application ranking	Positive		
What is the confidence in predicting impacts?	High	**Are further studies required on impacts or mitigation?**	No
How resilient is the environment to cope with impacts?	High Resilience	**What is the level of public concern?**	Low
Can the impacts be reversed?	N/A	**Ranking of potential significance**	Low
Can the impacts be mitigated?	N/A	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	Yes		
Criteria	Habitat of a threatened species or ecological community		
Potential impacts	There are no threatened species or communities recorded within the proposed drilling area		
Proposed management controls	n/a		
Duration	21		
Application ranking	Positive		
What is the confidence in predicting impacts?	High	**Are further studies required on impacts or mitigation?**	No
How resilient is the environment to cope with impacts?	High Resilience	**What is the level of public concern?**	Low
Can the impacts be reversed?	Yes	**Ranking of potential significance**	Low
Can the impacts be mitigated?	Fully	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	Yes		
Criteria	Habitat of protected aquatic species or those with conservation status.		
Potential impacts	There are no threatened species or communities recorded within the proposed drilling area		
Proposed management controls	n/a		
Duration	21		
Application ranking	Positive		
What is the confidence in predicting impacts?	High	**Are further studies required on impacts or mitigation?**	No
How resilient is the environment to cope with impacts?	High Resilience	**What is the level of public concern?**	Low

Can the impacts be reversed?	Yes	**Ranking of potential significance**	Low
Can the impacts be mitigated?	Fully	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	Yes		
Criteria	Key Threatening Processes: As outlined in Schedule 4 of Biodiversity Conservation Act 2016. Includes: a. alteration, removal, clearly or degradation of habitat and native vegetation b. loss of hollow bearing trees c. removal of dead wood and dead trees d. invasion and establishment of exotic species.		
Potential impacts	There are no threatened species recorded in this location. The small drilling program does not require vegetation clearance. Minor areas of disturbance will be rehabilitated within a couple of months and so minimal impact is envisaged.		
Proposed management controls	Drill site locations are determined based on area of least impact to the environment. Rehabilitation will be undertaken as soon as is reasonably practicable but within the timeframe of this drilling approval application. All disturbed areas to be rehabilitated in accordance with title conditions (Exploration Code of Practice: Rehabilitation). Rehabilitation to occur as soon as practicable after completion of activity.		
Duration	21		
Application ranking	Negligible		
What is the confidence in predicting impacts?	High	**Are further studies required on impacts or mitigation?**	No
How resilient is the environment to cope with impacts?	High Resilience	**What is the level of public concern?**	Low
Can the impacts be reversed?	Yes	**Ranking of potential significance**	Low
Can the impacts be mitigated?	Fully	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	Yes		
Criteria	Barriers to movement of fauna: Any potential to endanger, displace or disturb fauna (including fauna of conservation significance) or create a barrier to their movement.		
Potential impacts	There are no threatened species recorded in this location. The small drilling program does not require vegetation clearance. Minor areas of disturbance will be rehabilitated within a couple of months and so minimal impact is envisaged.		
Proposed management controls	Drill site locations are determined based on area of least impact to the environment. Rehabilitation will be undertaken as soon as is reasonably practicable but within the timeframe of this drilling approval application. All disturbed areas to be rehabilitated in accordance with title conditions (Exploration Code of Practice: Rehabilitation). Rehabilitation to occur as soon as practicable after completion of activity.		
Duration	21		
Application ranking	Negligible		
What is the confidence in predicting impacts?	High	**Are further studies required on impacts or mitigation?**	No
How resilient is the environment to cope with impacts?	High Resilience	**What is the level of public concern?**	Low
Can the impacts be reversed?	Yes	**Ranking of potential significance**	Low
Can the impacts be mitigated?	Fully	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	Yes		
Criteria	Ecological & Biosecurity Impacts: Any threat to the biological diversity or ecological integrity of an ecological community.		
Potential impacts	No impact envisaged		
Proposed management controls	n/a AIS - all vehicles will undergo weed and seed cleaning prior to property entry to minimise impacts. The location of any weed populations on the property will be confirmed with the landholder prior to the commencement of the program, and these areas will be avoided to prevent any spread.		

Duration	21		
Application ranking	Negligible		
What is the confidence in predicting impacts?	High	**Are further studies required on impacts or mitigation?**	No
How resilient is the environment to cope with impacts?	High Resilience	**What is the level of public concern?**	Low
Can the impacts be reversed?	Yes	**Ranking of potential significance**	Low
Can the impacts be mitigated?	Fully	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	Yes		
Criteria	Ecological & Biosecurity Impacts: Creates a biosecurity risk or introduces genetically modified organisms into an area. Includes impacts from the introduction of: a. mobilisation of pollutants b. animal pests, c. plant pests and diseases, d. animal diseases, e. noxious weeds, or f. genetically modified organisms.		
Potential impacts	No impact envisaged		
Proposed management controls	n/a AIS - all vehicles will undergo weed and seed cleaning prior to property entry to minimise impacts. The location of any weed populations on the property will be confirmed with the landholder prior to the commencement of the program, and these areas will be avoided to prevent any spread.		
Duration	21		
Application ranking	Negligible		
What is the confidence in predicting impacts?	High	**Are further studies required on impacts or mitigation?**	No
How resilient is the environment to cope with impacts?	High Resilience	**What is the level of public concern?**	Low
Can the impacts be reversed?	Yes	**Ranking of potential significance**	Low
Can the impacts be mitigated?	Fully	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	Yes		
Criteria	Ecological & Biosecurity Impacts: Likely to cause a significant bushfire risk.		
Potential impacts	No impact envisaged		
Proposed management controls	n/a AIS - Bushfire - chances of a bushfire are considered minimal but will be mitigated through a policy of no open fires allowed at active sites and RFS sites will be monitored and works undertaken according to fire risk ratings. Locations have minimal vegetation on ground.		
Duration	21		
Application ranking	Negligible		
What is the confidence in predicting impacts?	High	**Are further studies required on impacts or mitigation?**	No
How resilient is the environment to cope with impacts?	High Resilience	**What is the level of public concern?**	Low
Can the impacts be reversed?	Yes	**Ranking of potential significance**	Low
Can the impacts be mitigated?	Partly	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	Yes		
Criteria	Community Resources: Any degradation of infrastructure or significant increase in the demand for services and infrastructure resources.		
Potential impacts	There will be no impact to the demand or use of local services and resources for this drill program		
Proposed management controls			

Duration	21		
Application ranking	Positive		
What is the confidence in predicting impacts?	High	**Are further studies required on impacts or mitigation?**	No
How resilient is the environment to cope with impacts?	High Resilience	**What is the level of public concern?**	Low
Can the impacts be reversed?	N/A	**Ranking of potential significance**	Low
Can the impacts be mitigated?	N/A	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	Yes		
Criteria	Community Resources: Any diversion of resources to the detriment of other communities or natural systems.		
Potential impacts	No diversion of resources required		
Proposed management controls	Work will be undertaken in the dry season and not during extreme weather events.		
Duration	21		
Application ranking			
What is the confidence in predicting impacts?	N/A	**Are further studies required on impacts or mitigation?**	No
How resilient is the environment to cope with impacts?	High Resilience	**What is the level of public concern?**	Low
Can the impacts be reversed?	N/A	**Ranking of potential significance**	Low
Can the impacts be mitigated?	N/A	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	Yes		
Criteria	Natural Resources: Any disruption, depletion or destruction of natural resources.		
Potential impacts	The proposed drilling program is not anticipated to disrupt, deplete, or destroy any natural resources		
Proposed management controls	Work will be undertaken in the dry season and not during extreme weather events. No vegetation clearing. Minor disturbance, root stock left.		
Duration	21		
Application ranking	Negligible		
What is the confidence in predicting impacts?	High	**Are further studies required on impacts or mitigation?**	No
How resilient is the environment to cope with impacts?	High Resilience	**What is the level of public concern?**	Low
Can the impacts be reversed?	Yes	**Ranking of potential significance**	Low
Can the impacts be mitigated?	Fully	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	Yes		
Criteria	Natural Resources: Any disruption of existing activities which rely on natural resources, including forestry, farming or extractive industries (or reduction of options for future activities).		
Potential impacts	The proposed program will be undertaken at a time appropriate to landholders and so will not disrupt any existing activities. The drill holes are to be collared in paddocks which are used for grazing purposes		
Proposed management controls	Work will be undertaken in the dry season and not during extreme weather events. AIS supplied. Timing of activity in close consultation with landholder to ensure land use activitites not disturbed. Rehabilitation techniques proposed have been developed in discussion with the landholder, and form part of the current landholder agreement.		
Duration	21		
Application ranking	Negligible		

What is the confidence in predicting impacts?	High	**Are further studies required on impacts or mitigation?**	No
How resilient is the environment to cope with impacts?	High Resilience	**What is the level of public concern?**	Low
Can the impacts be reversed?	Yes	**Ranking of potential significance**	Low
Can the impacts be mitigated?	Fully	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	Yes		
Criteria	Natural Resources: Any use which results in the degradation of any area reserved for conservation purposes.		
Potential impacts	The Macquarie Marshes Wetlands are identified in the Warren Local Environmental Plan 2012. The low impact nature of the drilling and small footprint will not result in the degradation of the Wetlands. Mineral exploration drilling is not declared as designated development in the Warren LEP.		
Proposed management controls	Work will be undertaken in the dry season and not during extreme weather events. Drilling occuring in area outside the Macquarie Marshes Nature Reserve. A self-assessment document has been completed, with the outcome confirming that there will not be a significant impact to the Wetlands and Macquarie Marshes, sufficient mitigating protocols are in place to ensure management of identified risks and sensitivities. As per advice applicant received from Commonwealth DCCEEW.		
Duration	21		
Application ranking	Negligible		
What is the confidence in predicting impacts?	High	**Are further studies required on impacts or mitigation?**	No
How resilient is the environment to cope with impacts?	High Resilience	**What is the level of public concern?**	Low
Can the impacts be reversed?	Yes	**Ranking of potential significance**	Low
Can the impacts be mitigated?	Fully	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	Yes		
Criteria	Sensitive Land Impacts: Impacts on National parks and other areas reserved or dedicated or acquired under the National Parks and Wildlife Act 1974.		
Potential impacts	N/A		
Proposed management controls	N/A		
Duration	N/A		
Application ranking	N/A		
What is the confidence in predicting impacts?	N/A	**Are further studies required on impacts or mitigation?**	N/A
How resilient is the environment to cope with impacts?	N/A	**What is the level of public concern?**	N/A
Can the impacts be reversed?	N/A	**Ranking of potential significance**	N/A
Can the impacts be mitigated?	N/A	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	N/A		

Criteria	Sensitive Land Impacts: Land subject to a 'conservation agreement' under the National Parks and Wildlife Act 1974 and/or the Biodiversity Conservation Act 2016. This includes: a. Biobanking agreement (established under the now repealed Threatened Species Conservation Act 1995) or a Biodiversity Stewardship agreement established under the Biodiversity Conservation Act 2016. b. Wildlife Refuge agreement established under the Biodiversity Conservation Act 2016. c. Existing conservation agreements that continue to have effect even where legislation has been repealed: Trust agreements under the now repealed Nature Conservation Trust Act 2001 Property vegetation plans made under the now-repealed Native Vegetation Act 2003 Registered property agreements under the repealed Native Vegetation Conservation Act 1997		
Potential impacts	N/A		
Proposed management controls	N/A		
Duration	N/A		
Application ranking	N/A		
What is the confidence in predicting impacts?	N/A	**Are further studies required on impacts or mitigation?**	N/A
How resilient is the environment to cope with impacts?	N/A	**What is the level of public concern?**	N/A
Can the impacts be reversed?	N/A	**Ranking of potential significance**	N/A
Can the impacts be mitigated?	N/A	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	N/A		
Criteria	Sensitive Land Impacts: Impacts on aquatic reserves or marine parks declared under the Marine Estate Management Act 2014. Impacts on Coastal Zone as defined in the Coastal Management Act 2016.		
Potential impacts	N/A		
Proposed management controls	N/A		
Duration	N/A		
Application ranking	N/A		
What is the confidence in predicting impacts?	N/A	**Are further studies required on impacts or mitigation?**	N/A
How resilient is the environment to cope with impacts?	N/A	**What is the level of public concern?**	N/A
Can the impacts be reversed?	N/A	**Ranking of potential significance**	N/A
Can the impacts be mitigated?	N/A	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	N/A		
Criteria	Sensitive Land Impacts: Fishing grounds and commercial fish breeding or nursery areas.		
Potential impacts	The Macquarie Marshes Wetlands are identified in the Warren Local Environmental Plan 2012. The low impact nature of the drilling and small footprint will not result in the degradation of the Wetlands. Mineral exploration drilling is not declared as designated development in the Warren LEP.		
Proposed management controls	Work will be undertaken in the dry season and not during extreme weather events. Work being undertaken to the West of the Macquarie Marshes Nature Reserve. Surface water sources, and swampy areas have been excluded from drilling area.		
Duration	21		
Application ranking	Negligible		
What is the confidence in predicting impacts?	High	**Are further studies required on impacts or mitigation?**	No
How resilient is the environment to cope with impacts?	High Resilience	**What is the level of public concern?**	Low
Can the impacts be reversed?	Yes	**Ranking of potential significance**	Low
Can the impacts be mitigated?	Fully	**Justification for ranking**	

Do the operations comply with standards, plans, policies?	Yes		
Criteria	Sensitive Land Impacts: Impacts on other sensitive lands including: a. Land within a state forest set aside under the Forestry Act 2012 for conservation values. This includes flora reserves and special management (and other) zones. b. Drinking water catchment protection areas - land declared to be a 'controlled area' or a 'special area' under the Water NSW Act 2014, or a 'special area' under the Water Management Act 2000 or Hunter Water Act 1991. c. Waterfront land as defined under the Water Management Act 2000.		
Potential impacts	The Macquarie Marshes Wetlands are identified in the Warren Local Environmental Plan 2012. The low impact nature of the drilling and small footprint will not result in the degradation of the Wetlands. Mineral exploration drilling is not declared as designated development in the Warren LEP.		
Proposed management controls	Work will be undertaken in the dry season and not during extreme weather events. Drilling not occuring on any of the criteria areas.		
Duration	21		
Application ranking	Negligible		
What is the confidence in predicting impacts?	High	**Are further studies required on impacts or mitigation?**	No
How resilient is the environment to cope with impacts?	High Resilience	**What is the level of public concern?**	Low
Can the impacts be reversed?	Yes	**Ranking of potential significance**	Low
Can the impacts be mitigated?	Fully	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	Yes		
Criteria	Sensitive Land Impacts: Impacts on land reserved or dedicated within the meaning of the Crown Lands Act 1989/Crown Lands Management Act 2016 for preservation of the environment or other environmental protection purposes.		
Potential impacts	N/A		
Proposed management controls	N/A		
Duration	N/A		
Application ranking	N/A		
What is the confidence in predicting impacts?	N/A	**Are further studies required on impacts or mitigation?**	N/A
How resilient is the environment to cope with impacts?	N/A	**What is the level of public concern?**	N/A
Can the impacts be reversed?	N/A	**Ranking of potential significance**	N/A
Can the impacts be mitigated?	N/A	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	N/A		
Criteria	Sensitive Land Impacts: Impacts on land identified as wilderness or declared a wilderness area under the Wilderness Act 1987.		
Potential impacts	N/A		
Proposed management controls	N/A		
Duration	N/A		
Application ranking	N/A		
What is the confidence in predicting impacts?	N/A	**Are further studies required on impacts or mitigation?**	N/A
How resilient is the environment to cope with impacts?	N/A	**What is the level of public concern?**	N/A
Can the impacts be reversed?	N/A	**Ranking of potential significance**	N/A
Can the impacts be mitigated?	N/A	**Justification for ranking**	

Do the operations comply with standards, plans, policies?	N/A		
Criteria	Sensitive Lands: Impacts on wetlands of international significance designated under the Ramsar Convention on Wetlands and those designated as a nationally important wetland in the Directory of Important Wetlands of Australia.		
Potential impacts	N/A		
Proposed management controls	N/A		
Duration	N/A		
Application ranking	N/A		
What is the confidence in predicting impacts?	N/A	**Are further studies required on impacts or mitigation?**	N/A
How resilient is the environment to cope with impacts?	N/A	**What is the level of public concern?**	Low
Can the impacts be reversed?	N/A	**Ranking of potential significance**	N/A
Can the impacts be mitigated?	Fully	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	N/A		
Criteria	Sensitive Land Impacts: Impacts on land identified in an environmental planning instrument as being of biodiversity / conservation significance or zoned for environmental conservation, protection and/or management. Includes Coastal Wetlands and Littoral rainforests under State Environmental Planning Policy (Resilience and Hazards) 2021.		
Potential impacts	N/A		
Proposed management controls	N/A		
Duration	N/A		
Application ranking	N/A		
What is the confidence in predicting impacts?	N/A	**Are further studies required on impacts or mitigation?**	N/A
How resilient is the environment to cope with impacts?	N/A	**What is the level of public concern?**	N/A
Can the impacts be reversed?	N/A	**Ranking of potential significance**	N/A
Can the impacts be mitigated?	N/A	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	N/A		
Criteria	Sensitive Land Impacts: Impacts on Aboriginal heritage protection areas: a. Aboriginal places and objects under the National Parks and Wildlife Act 1974 b. Areas of Aboriginal cultural significance identified in an environmental planning instrument.		
Potential impacts	N/A		
Proposed management controls	N/A		
Duration	N/A		
Application ranking	N/A		
What is the confidence in predicting impacts?	N/A	**Are further studies required on impacts or mitigation?**	N/A
How resilient is the environment to cope with impacts?	N/A	**What is the level of public concern?**	N/A
Can the impacts be reversed?	N/A	**Ranking of potential significance**	N/A
Can the impacts be mitigated?	N/A	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	N/A		

Criteria	Sensitive Land Impacts: Impacts on heritage protection areas (historic or natural): a. Nationally and internationally recognised heritage sites or areas (World Heritage List, National Heritage List of Commonwealth Heritage List) b. Items listed on State Heritage c. Heritage items and conservation areas identified in an environmental planning instrument		
Potential impacts	N/A		
Proposed management controls	N/A		
Duration	N/A		
Application ranking	N/A		
What is the confidence in predicting impacts?	N/A	**Are further studies required on impacts or mitigation?**	N/A
How resilient is the environment to cope with impacts?	N/A	**What is the level of public concern?**	N/A
Can the impacts be reversed?	N/A	**Ranking of potential significance**	N/A
Can the impacts be mitigated?	N/A	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	N/A		
Criteria	Sensitive Land Impacts: Impacts on community land classified under the Local Government Act 1993 (for which a plan of management has been prepared).		
Potential impacts	N/A		
Proposed management controls	N/A		
Duration	N/A		
Application ranking	N/A		
What is the confidence in predicting impacts?	N/A	**Are further studies required on impacts or mitigation?**	N/A
How resilient is the environment to cope with impacts?	N/A	**What is the level of public concern?**	N/A
Can the impacts be reversed?	N/A	**Ranking of potential significance**	N/A
Can the impacts be mitigated?	N/A	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	N/A		
Criteria	Sensitive Land Impacts: Impacts on bushfire prone areas.		
Potential impacts	The Macquarie Marshes Wetlands are identified in the Warren Local Environmental Plan 2012. The low impact nature of the drilling and small footprint will not result in the degradation of the Wetlands. Mineral exploration drilling is not declared as designated development in the Warren LEP.		
Proposed management controls	Work will be undertaken in the dry season and not during extreme weather events. Bushfire - chances of a bushfire are considered minimal but will be mitigated through a policy of no open fires allowed at active sites and RFS sites will be monitored and works undertaken according to fire risk ratings.		
Duration	21		
Application ranking	Negligible		
What is the confidence in predicting impacts?	High	**Are further studies required on impacts or mitigation?**	No
How resilient is the environment to cope with impacts?	High Resilience	**What is the level of public concern?**	Low
Can the impacts be reversed?	Yes	**Ranking of potential significance**	Low
Can the impacts be mitigated?	Partly	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	Yes		

Criteria	Social Impacts: Any impacts which result in a change in the demographic structure of the community, including changes to workforce or industry structure of the area/region. Including change in demand for community resources (eg community facilities, community services and labour force).		
Potential impacts	The proposed program is small and will not affect the demographics of the local communities		
Proposed management controls	Exploration has been undertaken in this area by previous explorers for many years. Community consultation has been initiated with affected landholders and the community. A regular flow of information will be provided, and any concerns will be addressed immediately. No issues have been raised to date.		
Duration	21		
Application ranking	Negligible		
What is the confidence in predicting impacts?	High	**Are further studies required on impacts or mitigation?**	No
How resilient is the environment to cope with impacts?	N/A	**What is the level of public concern?**	Low
Can the impacts be reversed?	Yes	**Ranking of potential significance**	Low
Can the impacts be mitigated?	Fully	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	Yes		
Criteria	Social Impacts: Any environmental impact that may cause substantial change or disruption to the community (including loss of facilities or loss of community identity).		
Potential impacts	There will be no impact or change to the community following the proposed drilling program		
Proposed management controls	Exploration has been undertaken in this area by previous explorers for many years. Community consultation has been initiated with affected landholders and the community. A regular flow of information will be provided, and any concerns will be addressed immediately. No issues have been raised to date.		
Duration	21		
Application ranking	Negligible		
What is the confidence in predicting impacts?	High	**Are further studies required on impacts or mitigation?**	No
How resilient is the environment to cope with impacts?	High Resilience	**What is the level of public concern?**	Low
Can the impacts be reversed?	Yes	**Ranking of potential significance**	Low
Can the impacts be mitigated?	Fully	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	Yes		
Criteria	Social Impacts: Any impacts which result in some individuals or communities being significantly disadvantaged (e.g. change to community facilities, services or labour force).		
Potential impacts	The small program will not disadvantage the community or individuals in the area		
Proposed management controls	Exploration has been undertaken in this area by previous explorers for many years. Community consultation has been initiated with affected landholders and the community. A regular flow of information will be provided, and any concerns will be addressed immediately. No issues have been raised to date.		
Duration	21		
Application ranking	Negligible		
What is the confidence in predicting impacts?	High	**Are further studies required on impacts or mitigation?**	No
How resilient is the environment to cope with impacts?	High Resilience	**What is the level of public concern?**	Low
Can the impacts be reversed?	Yes	**Ranking of potential significance**	Low
Can the impacts be mitigated?	Fully	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	Yes		
Criteria	Social Impacts: Any impacts on the health, safety, privacy or welfare of individuals or communities caused by factors such as pollution, odour, noise, vibration, lighting, visual impacts, etc).		

Potential impacts	The impacts are minimal and not within proximity to sensitive receptors or communities		
Proposed management controls	Exploration has been undertaken in this area by previous explorers for many years. Community consultation has been initiated with affected landholders and the community. A regular flow of information will be provided, and any concerns will be addressed immediately. No issues have been raised to date.		
Duration	21		
Application ranking	Negligible		
What is the confidence in predicting impacts?	High	**Are further studies required on impacts or mitigation?**	No
How resilient is the environment to cope with impacts?	High Resilience	**What is the level of public concern?**	Low
Can the impacts be reversed?	Yes	**Ranking of potential significance**	Low
Can the impacts be mitigated?	Fully	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	Yes		
Criteria	Social Impacts: Effect on a locality, place or building having aesthetic, anthropological, archaeological, architectural, cultural, historical, scientific or social significance or other special value for present or future generations?		
Potential impacts	There will be no detrimental effect on the aesthetics, or any other special value		
Proposed management controls	Exploration has been undertaken in this area by previous explorers for many years. Community consultation has been initiated with affected landholders and the community. A regular flow of information will be provided, and any concerns will be addressed immediately. No issues have been raised to date.		
Duration	21		
Application ranking	Negligible		
What is the confidence in predicting impacts?	High	**Are further studies required on impacts or mitigation?**	No
How resilient is the environment to cope with impacts?	High Resilience	**What is the level of public concern?**	Low
Can the impacts be reversed?	Yes	**Ranking of potential significance**	Low
Can the impacts be mitigated?	Fully	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	Yes		
Criteria	Social Impacts: Impacts on communities with strong sense of identity.		
Potential impacts	There will be no impact or change to the community following the proposed drilling program		
Proposed management controls	Exploration has been undertaken in this area by previous explorers for many years. Community consultation has been initiated with affected landholders and the community. A regular flow of information will be provided, and any concerns will be addressed immediately. No issues have been raised to date.		
Duration	21		
Application ranking	Negligible		
What is the confidence in predicting impacts?	High	**Are further studies required on impacts or mitigation?**	No
How resilient is the environment to cope with impacts?	High Resilience	**What is the level of public concern?**	Low
Can the impacts be reversed?	Yes	**Ranking of potential significance**	Low
Can the impacts be mitigated?	Fully	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	Yes		
Criteria	Social Impacts: Impacts on disadvantaged communities.		
Potential impacts	There will be no impact or change to the community following the proposed drilling program		
Proposed management controls	Exploration has been undertaken in this area by previous explorers for many years. Community consultation has been initiated with affected landholders and the community. A regular flow of information will be provided, and any concerns will be addressed immediately. No issues have been raised to date.		

Duration	21		
Application ranking	Negligible		
What is the confidence in predicting impacts?	High	**Are further studies required on impacts or mitigation?**	No
How resilient is the environment to cope with impacts?	High Resilience	**What is the level of public concern?**	Low
Can the impacts be reversed?	Yes	**Ranking of potential significance**	Low
Can the impacts be mitigated?	Fully	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	Yes		
Criteria	Economic Impacts: Any impacts which may affect economic activity (positive or negative), including a decrease to net economic welfare.		
Potential impacts	n/a		
Proposed management controls	n/a		
Duration	21		
Application ranking			
What is the confidence in predicting impacts?	High	**Are further studies required on impacts or mitigation?**	No
How resilient is the environment to cope with impacts?	N/A	**What is the level of public concern?**	Low
Can the impacts be reversed?	Yes	**Ranking of potential significance**	Low
Can the impacts be mitigated?	Fully	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	Yes		
Criteria	Economic Impacts: Any impacts that result in a decrease in the economic stability of the community.		
Potential impacts	n/a		
Proposed management controls	n/a		
Duration	21		
Application ranking			
What is the confidence in predicting impacts?	High	**Are further studies required on impacts or mitigation?**	No
How resilient is the environment to cope with impacts?	High Resilience	**What is the level of public concern?**	Low
Can the impacts be reversed?	Yes	**Ranking of potential significance**	Low
Can the impacts be mitigated?	Fully	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	Yes		
Criteria	Economic Impacts: Any impacts which result in a change to the public sector revenue or expenditure base.		
Potential impacts	n/a		
Proposed management controls	n/a		
Duration	21		
Application ranking			
What is the confidence in predicting impacts?	High	**Are further studies required on impacts or mitigation?**	No
How resilient is the environment to cope with impacts?	High Resilience	**What is the level of public concern?**	Low

Can the impacts be reversed?	Yes	**Ranking of potential significance**	Low
Can the impacts be mitigated?	Fully	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	Yes		
Criteria	Heritage Impacts: Any impacts on a locality, place, landscape, building or archaeological relic of heritage significance.		
Potential impacts	There are no listed heritage items, places or areas in this proposed drilling area		
Proposed management controls	n/a		
Duration	21		
Application ranking	Positive		
What is the confidence in predicting impacts?	High	**Are further studies required on impacts or mitigation?**	No
How resilient is the environment to cope with impacts?	High Resilience	**What is the level of public concern?**	Low
Can the impacts be reversed?	Yes	**Ranking of potential significance**	Low
Can the impacts be mitigated?	Fully	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	Yes		
Criteria	Aesthetic Impacts: Any impacts on the visual or scenic landscape, including lighting, venting or flaring of gas.		
Potential impacts	The proposed drilling is more than 500m away from nearest residence and will likely not be visible at all. No night works so no lights.		
Proposed management controls	No drilling within 500m of houses. OPERATION 12 hour shifts during daylight hours.		
Duration	21		
Application ranking	Negligible		
What is the confidence in predicting impacts?	High	**Are further studies required on impacts or mitigation?**	No
How resilient is the environment to cope with impacts?	N/A	**What is the level of public concern?**	Low
Can the impacts be reversed?	Yes	**Ranking of potential significance**	Low
Can the impacts be mitigated?	Fully	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	Yes		
Criteria	Aesthetic Impacts: Areas or items of high aesthetic or scenic value.		
Potential impacts	The proposed drilling is more than 500m away from nearest residence and will likely not be visible at all. No night works so no lights.		
Proposed management controls	No drilling within 500m of houses. Operation hours are in daylight hours.		
Duration	21		
Application ranking	Negligible		
What is the confidence in predicting impacts?	High	**Are further studies required on impacts or mitigation?**	No
How resilient is the environment to cope with impacts?	N/A	**What is the level of public concern?**	Low
Can the impacts be reversed?	Yes	**Ranking of potential significance**	Low
Can the impacts be mitigated?	Fully	**Justification for ranking**	

Do the operations comply with standards, plans, policies?	Yes		
Criteria	Cultural Impacts: Any disturbance of the ground surface or any culturally modified trees (e.g. a scar tree).		
Potential impacts	The proposed drilling program is not anticipated to disturb or destroy any Aboriginal heritage		
Proposed management controls	Should any Aboriginal sites be discovered staff will inform management teams who will record the information on the AHIMS Mobile APP (which is Heritage NSW preferred method of recording). This site would then be avoided by placing a 30m buffer around it. Any concerns regarding new sites and working in the area will be raised directly with Heritage NSW on 02 9873 8500.		
Duration	21		
Application ranking	Positive		
What is the confidence in predicting impacts?	High	**Are further studies required on impacts or mitigation?**	No
How resilient is the environment to cope with impacts?	High Resilience	**What is the level of public concern?**	Low
Can the impacts be reversed?	Yes	**Ranking of potential significance**	Low
Can the impacts be mitigated?	Fully	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	Yes		
Criteria	Cultural Impacts: Any impacts on known Aboriginal objects or Aboriginal places.		
Potential impacts	There are no known Aboriginal Sites noted on the AHIMS search located within the approval area.		
Proposed management controls	Should any Aboriginal sites be discovered staff will inform management teams who will record the information on the AHIMS Mobile APP (which is Heritage NSW preferred method of recording). This site would then be avoided by placing a 30m buffer around it. Any concerns regarding new sites and working in the area will be raised directly with Heritage NSW on 02 9873 8500.		
Duration	21		
Application ranking	Positive		
What is the confidence in predicting impacts?	High	**Are further studies required on impacts or mitigation?**	No
How resilient is the environment to cope with impacts?	High Resilience	**What is the level of public concern?**	Low
Can the impacts be reversed?	Yes	**Ranking of potential significance**	Low
Can the impacts be mitigated?	Fully	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	Yes		
Criteria	Cultural Impacts: Affects areas where the landscape features indicate the likely presence of Aboriginal objects.		
Potential impacts	There are no landscape features as listed above.		
Proposed management controls	Should any Aboriginal sites be discovered staff will inform management teams who will record the information on the AHIMS Mobile APP (which is Heritage NSW preferred method of recording). This site would then be avoided by placing a 30m buffer around it. Any concerns regarding new sites and working in the area will be raised directly with Heritage NSW on 02 9873 8500.		
Duration	21		
Application ranking	Positive		
What is the confidence in predicting impacts?	High	**Are further studies required on impacts or mitigation?**	No
How resilient is the environment to cope with impacts?	High Resilience	**What is the level of public concern?**	Low
Can the impacts be reversed?	Uncertain	**Ranking of potential significance**	Low
Can the impacts be mitigated?	Partly	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	Yes		

Criteria	Cultural Impacts: Affects areas subject to native title claims, indigenous land use agreements or joint management arrangements.		
Potential impacts	The proposed drilling area is not within an area where native title may exist.		
Proposed management controls	Should any Aboriginal sites be discovered staff will inform management teams who will record the information on the AHIMS Mobile APP (which is Heritage NSW preferred method of recording). This site would then be avoided by placing a 30m buffer around it. Any concerns regarding new sites and working in the area will be raised directly with Heritage NSW on 02 9873 8500.		
Duration	21		
Application ranking	Positive		
What is the confidence in predicting impacts?	High	**Are further studies required on impacts or mitigation?**	No
How resilient is the environment to cope with impacts?	N/A	**What is the level of public concern?**	Low
Can the impacts be reversed?	Uncertain	**Ranking of potential significance**	Low
Can the impacts be mitigated?	Fully	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	Yes		
Criteria	Cultural Impacts: Impacts on Aboriginal communities or areas subject to land rights claims.		
Potential impacts	There are no known Aboriginal Sites noted on the AHIMS search located within the approval area.		
Proposed management controls	Should any Aboriginal sites be discovered staff will inform management teams who will record the information on the AHIMS Mobile APP (which is Heritage NSW preferred method of recording). This site would then be avoided by placing a 30m buffer around it. Any concerns regarding new sites and working in the area will be raised directly with Heritage NSW on 02 9873 8500.		
Duration	21		
Application ranking	Positive		
What is the confidence in predicting impacts?	High	**Are further studies required on impacts or mitigation?**	No
How resilient is the environment to cope with impacts?	N/A	**What is the level of public concern?**	Low
Can the impacts be reversed?	Uncertain	**Ranking of potential significance**	Low
Can the impacts be mitigated?	Partly	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	Yes		
Criteria	Cultural Impacts: Impacts on areas or items of high anthropological, archaeological, architectural, cultural, heritage, historical, recreational or scientific value.		
Potential impacts	The proposed drilling program is not anticipated to disturb or destroy any Aboriginal heritage		
Proposed management controls	Should any Aboriginal sites be discovered staff will inform management teams who will record the information on the AHIMS Mobile APP (which is Heritage NSW preferred method of recording). This site would then be avoided by placing a 30m buffer around it. Any concerns regarding new sites and working in the area will be raised directly with Heritage NSW on 02 9873 8500.		
Duration	21		
Application ranking	Positive		
What is the confidence in predicting impacts?	High	**Are further studies required on impacts or mitigation?**	No
How resilient is the environment to cope with impacts?	High Resilience	**What is the level of public concern?**	Low
Can the impacts be reversed?	Uncertain	**Ranking of potential significance**	Low
Can the impacts be mitigated?	Partly	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	Yes		
Criteria	Land Use Impacts: Any major changes in land use, including curtailment of other beneficial land uses.		

Potential impacts	n/a		
Proposed management controls	n/a		
Duration	21		
Application ranking	Positive		
What is the confidence in predicting impacts?	High	**Are further studies required on impacts or mitigation?**	No
How resilient is the environment to cope with impacts?	N/A	**What is the level of public concern?**	Low
Can the impacts be reversed?	Yes	**Ranking of potential significance**	Low
Can the impacts be mitigated?	Fully	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	Yes		
Criteria	Transportation Impacts: Substantial impacts on existing transportation systems (road, rail, pedestrian) which alter present patterns of circulation or movement.		
Potential impacts	There will be no significant impact on transportation from a small temporary drilling program		
Proposed management controls	n/a		
Duration	21		
Application ranking	Positive		
What is the confidence in predicting impacts?	High	**Are further studies required on impacts or mitigation?**	No
How resilient is the environment to cope with impacts?	N/A	**What is the level of public concern?**	Low
Can the impacts be reversed?	Yes	**Ranking of potential significance**	Low
Can the impacts be mitigated?	Fully	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	Yes		
Criteria	Transportation Impacts: Impacts associated with direct or indirect additional traffic.		
Potential impacts	There will be no significant impact on transportation from a small temporary drilling program		
Proposed management controls	n/a		
Duration	21		
Application ranking	Positive		
What is the confidence in predicting impacts?	High	**Are further studies required on impacts or mitigation?**	No
How resilient is the environment to cope with impacts?	N/A	**What is the level of public concern?**	Low
Can the impacts be reversed?	Yes	**Ranking of potential significance**	Low
Can the impacts be mitigated?	Fully	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	Yes		
Criteria	Consistency with applicable local strategic planning statements, regional strategic plans or district strategic plans.		
Potential impacts	The Macquarie Marshes Wetlands are identified in the Warren Local Environmental Plan 2012. Mineral exploration drilling is not declared as designated development in the Warren LEP. The low impact nature of the drilling and small footprint will not result in the degradation of the Wetlands, one site is within agricultural land, one site is within a road corridor. Map and further information relating to the Macquarie Marshes Wetlands are attached to the APO.		

Proposed management controls	Works occur only during dry season. Limit vehicle movement and stick to tracks where possible. Drive slowly on tracks. Undertake rehabilitation as soon as practicable, most likely as soon as drill rig has moved from site, but otherwise within 3 months of end of drilling. Strong knowledge of the area and good relationships with landholders will ensure rehabilitation methods are undertaken efficiently and effectively. Ensure all staff and contractors maintain high standards of work and care for the environment. All rubbish and equipment removed from site as soon as practicable.		
Duration	21		
Application ranking	Negligible		
What is the confidence in predicting impacts?	High	**Are further studies required on impacts or mitigation?**	No
How resilient is the environment to cope with impacts?	High Resilience	**What is the level of public concern?**	Low
Can the impacts be reversed?	Uncertain	**Ranking of potential significance**	Low
Can the impacts be mitigated?	Partly	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	Yes		
Criteria	Matters of National Environmental Significance: Impacts on MNES under the Commonwealth Environmental Protection and Biodiversity Conservation Act 1999:		
Potential impacts	On the MNES search there are 4 listed Threatened Ecological Communities, 26 listed Threatened species, 9 Listed Migratory Species, and 4 wetlands of international importance. The 4 listed threatened ecological communities show Coolibah – Black Box Woodlands of the Darling Riverine Plains and the Brigalow Belt South Bioregions, Poplar Box Grassy Woodland on Alluvial Plains, Grey Box (Eucalyptus microcarpa) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia, and Weeping Myall Woodlands are Endangered and communities likely to occur in this area. Of the 26 listed threatened species the Curlew Sandpiper, and Plains-Wanderer are critically endangered (the link in the MNES report states the Curlew Sandpiper, and Plains Wanderer species are endangered and not critical for NSW). The Curlew is migratory and if sighted will be reported to the Department for Environment. This species is not known to breed in Australia, therefore will not be at its most vulnerable if it is sighted. The 9 listed migratory species has the Curlew Sandpiper listed as critically endangered – however the link to this species differs stating for NSW this is endangered. Areas of drilling are relatively open, and vegetation is not expected to be impacted, and therefore threatened species should not be impacted. Banrock Station Wetland complex, Riverland, The Coorong, and Lakes Alexandrina and Albert Wetland are over 700km away. The Macquarie Marshes Nature Reserve is located within 10km east of the approval area.		
Proposed management controls	Agricultural properties that have already been cleared were selected for this drilling program to significantly reduce the risk of impacting threatened ecological communities, threatened species, and threatened migratory species. Vegetation is not to be cleared as part of the program therefore not damaging threatened ecological communities and the habitats of threatened species and threatened migratory species. Crews are instructed to not interact with wildlife or vegetation during the drilling activities.		
Duration	21		
Application ranking	Positive		
What is the confidence in predicting impacts?	High	**Are further studies required on impacts or mitigation?**	No
How resilient is the environment to cope with impacts?	Medium Resilience	**What is the level of public concern?**	Low
Can the impacts be reversed?	Yes	**Ranking of potential significance**	Low
Can the impacts be mitigated?	Partly	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	Yes		
Criteria	Cumulative Impacts: Cumulative environmental effects with other existing or likely future activities.		
Potential impacts	n/a		
Proposed management controls	n/a		
Duration	21		
Application ranking	Positive		

What is the confidence in predicting impacts?	High	**Are further studies required on impacts or mitigation?**	No
How resilient is the environment to cope with impacts?	High Resilience	**What is the level of public concern?**	Low
Can the impacts be reversed?	Yes	**Ranking of potential significance**	Low
Can the impacts be mitigated?	Fully	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	Yes		

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