Thursday 11 April 2024

Assessable Prospecting Operation Application Decision Briefing and Review of Environmental Factors

Macquarie | APO0001412

Decision Maker	Monique Meyer
Prepared by	Nicole Wallwood
Title	EL 8422 (1992)
Authorised Representative	[redacted]
Project name	Macquarie
Activity type	Non-Complying Exploration Activity

Issue

[redacted] has sought an activity approval in respect of Macquarie, within EL 8422 (1992), at 85km NNE of Nyngan.

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

APO0001412 seeking approval under EL 8422 (granted 17/2/2016, expiry 17/2/2025) to undertake the Macquarie project involving 3x rotary mud drillholes with diamond tails to approx 180m depth) with above ground sumps.

Current security held and required for EL 8422 (1992) is $10,000.

This application forms part of the Macquarie exploration program.

Rehabilitation activities outstanding on the title include:

1. APO0001413 – for 2x diamond drillholes, approved 5 October 2023

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 Macquarie* 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 Macquarie is approved.

Refer to RCE Record RCE0001749

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 Macquarie* 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, Nicole Wallwood, 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 Macquarie 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. The nearest sensitive receptor located 230 away from proposed drilling is the Mole HS. 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	Air quality is not anticipated to be of concern with the drilling methods proposed. Drilling will not occur within 200m 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	Short term
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	Air Impacts: Greenhouse or ozone impacts.		
Potential impacts	Air impacts from the proposed program are negligible. The nearest sensitive receptor located 230 away from proposed drilling is the Mole HS. 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	Air quality is not anticipated to be of concern with the drilling methods proposed. Drilling will not occur within 200m 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	Medium term atmospheric residence.		
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	Air Impacts: Additional impacts on areas with degraded air quality.		
Potential impacts	Air impacts from the proposed program are negligible. The nearest sensitive receptor located 230 away from proposed drilling is the Mole HS. 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	Air quality is not anticipated to be of concern with the drilling methods proposed. Drilling will not occur within 200m 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	Short term		
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	Water Impacts: Impacts from the use of surface or groundwater.		
Potential impacts	Groundwater: Groundwater encountered during drilling will be managed and contained by the drilling methods to ensure that water is contained in the same strata and not cross to different water bearing strata. The Company have drilled several holes in this area and have not encountered any difficulties with water. There is a known water bore within the proposed drilling area GW004347, drilled to 243.80m recording salinity of 501-1000ppm but no record of water depth on file. Another monitoring bore E of proposed drilling area is GW801144, drilled to 12m with an unconsolidated sand layer at 9.5-11.5m recording water. Standing water level averaging out to 5m below existing ground level. Surface water: The nearest watercourse is the Macquarie River, located 165m from the eastern boundary of the proposed drilling area at its nearest point, however actual collar locations are more likely to be drilled 1,200m west of the river. There are several drainages within the proposed drilling area. Proposed collars will not be progressed if they occur within 40m of any existing drainages. The drilling area is also within Floodplain wetlands. The Macquarie Marshes Nature Reserve occurs approximately 200m east of the proposed drilling area. In times of high rainfall, this area can extend into the proposed drilling area. Should there be elevated water levels this drilling will not be undertaken until water subsides.		
Proposed management controls	The program is not expected to have an impact on surface water. There are several drainages within the proposed drilling area. Proposed collars will not be progressed if they occur within 40m of any existing drainages. Specific access to sites will be undertaken in close consultation with the landholder who knows the ground conditions the best. Drilling will not be undertaken during extreme weather events. Should there be elevated water levels this drilling will not be undertaken until water subsides. Groundwater is not expected to cause concern as drilling methods ensure that water is contained in the same strata and does not cross to different water bearing strata. All proposed activities will be completed in dry season as the approval area is within the Macquarie Marshes Wetland. Should there be elevated water levels this drilling will not be undertaken until water subsides. Specific access to sites will be undertaken in close consultation with the landholder who knows the ground conditions the best. Drilling is not expected to impact the 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. Salinity of groundwater will be considered, however with the proposed drilling methods groundwater will remain in the ground and any drilling waters will be contained in above ground sumps and not affect the surrounding surface. Given the area and groundwater anticipated close to surface, rehabilitation will entail cementing from the base of the hole to 1m from surface to ensure water does not cross into different strata. The top of the hole will be backfilled with surface soil and topsoil. Drilling contractors will use above ground sumps and so no excavations are required.		
Duration	Short term		
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?	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	Water Impacts: Impacts from storage of water		
Potential impacts	Groundwater: Groundwater encountered during drilling will be managed and contained by the drilling methods to ensure that water is contained in the same strata and not cross to different water bearing strata. The Company have drilled several holes in this area and have not encountered any difficulties with water. There is a known water bore within the proposed drilling area GW004347, drilled to 243.80m recording salinity of 501-1000ppm but no record of water depth on file. Another monitoring bore E of proposed drilling area is GW801144, drilled to 12m with an unconsolidated sand layer at 9.5-11.5m recording water. Standing water level averaging out to 5m below existing ground level. Surface water: The nearest watercourse is the Macquarie River, located 165m from the eastern boundary of the proposed drilling area at its nearest point, however actual collar locations are more likely to be drilled 1,200m west of the river. There are several drainages within the proposed drilling area. Proposed collars will not be progressed if they occur within 40m of any existing drainages. The drilling area is also within Floodplain wetlands. The Macquarie Marshes Nature Reserve occurs approximately 200m east of the proposed drilling area. In times of high rainfall, this area can extend into the proposed drilling area. Should there be elevated water levels this drilling will not be undertaken until water subsides.		

Proposed management controls	The program is not expected to have an impact on surface water. There are several drainages within the proposed drilling area. Proposed collars will not be progressed if they occur within 40m of any existing drainages. Specific access to sites will be undertaken in close consultation with the landholder who knows the ground conditions the best. Drilling will not be undertaken during extreme weather events. Should there be elevated water levels this drilling will not be undertaken until water subsides. Groundwater is not expected to cause concern as drilling methods ensure that water is contained in the same strata and does not cross to different water bearing strata. All proposed activities will be completed in dry season as the approval area is within the Macquarie Marshes Wetland. Should there be elevated water levels this drilling will not be undertaken until water subsides. Specific access to sites will be undertaken in close consultation with the landholder who knows the ground conditions the best. Drilling is not expected to impact the 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. Salinity of groundwater will be considered, however with the proposed drilling methods groundwater will remain in the ground and any drilling waters will be contained in above ground sumps and not affect the surrounding surface. Given the area and groundwater anticipated close to surface, rehabilitation will entail cementing from the base of the hole to 1m from surface to ensure water does not cross into different strata. The top of the hole will be backfilled with surface soil and topsoil. Drilling contractors will use above ground sumps and so no excavations are required.		
Duration	Short term		
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?	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	Water Impacts: Impacts from changes to natural water bodies, wetlands or runoff patterns.		
Potential impacts	The nearest watercourse is the Macquarie River, located 165m from the eastern boundary of the proposed drilling area at its nearest point, however actual collar locations are more likely to be drilled 1,200m west of the river. There are several drainages within the proposed drilling area. Proposed collars will not be progressed if they occur within 40m of any existing drainages. The drilling area is also within Floodplain wetlands. The Macquarie Marshes Nature Reserve occurs approximately 200m east of the proposed drilling area. In times of high rainfall, this area can extend into the proposed drilling area. Should there be elevated water levels this drilling will not be undertaken until water subsides.		
Proposed management controls	The program is not expected to have an impact on surface water. There are several drainages within the proposed drilling area. Proposed collars will not be progressed if they occur within 40m of any existing drainages. Specific access to sites will be undertaken in close consultation with the landholder who knows the ground conditions the best. Drilling will not be undertaken during extreme weather events. Should there be elevated water levels this drilling will not be undertaken until water subsides. Groundwater is not expected to cause concern as drilling methods ensure that water is contained in the same strata and does not cross to different water bearing strata. All proposed activities will be completed in dry season as the approval area is within the Macquarie Marshes Wetland. Should there be elevated water levels this drilling will not be undertaken until water subsides. Specific access to sites will be undertaken in close consultation with the landholder who knows the ground conditions the best.		
Duration	Short term		
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?	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	Water Impacts: Impacts from aquifer interference, including changes to inter-aquifer connectivity.		
Potential impacts	Groundwater encountered during drilling will be managed and contained by the drilling methods to ensure that water is contained in the same strata and not cross to different water bearing strata. The Company have drilled several holes in this area and have not encountered any difficulties with water. There is a known water bore within the proposed drilling area GW004347, drilled to 243.80m recording salinity of 501-1000ppm but no record of water depth on file. Another monitoring bore E of proposed drilling area is GW801144, drilled to 12m with an unconsolidated sand layer at 9.5-11.5m recording water. Standing water level averaging out to 5m below existing ground level.		
Proposed management controls	Drilling is not expected to impact the 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. Salinity of groundwater will be considered, however with the proposed drilling methods groundwater will remain in the ground and any drilling waters will be contained in above ground sumps and not affect the surrounding surface. Given the area and groundwater anticipated close to surface, rehabilitation will entail cementing from the base of the hole to 1m from surface to ensure water does not cross into different strata. The top of the hole will be backfilled with surface soil and topsoil. Drilling contractors will use above ground sumps and so no excavations are required.		
Duration	Short term		
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?	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	Water Impacts: Impacts from changes to flooding or tidal regimes.		
Potential impacts	The nearest watercourse is the Macquarie River, located 165m from the eastern boundary of the proposed drilling area at its nearest point, however actual collar locations are more likely to be drilled 1,200m west of the river. There are several drainages within the proposed drilling area. Proposed collars will not be progressed if they occur within 40m of any existing drainages. The drilling area is also within Floodplain wetlands. The Macquarie Marshes Nature Reserve occurs approximately 200m east of the proposed drilling area. In times of high rainfall, this area can extend into the proposed drilling area. Should there be elevated water levels this drilling will not be undertaken until water subsides.		
Proposed management controls	The program is not expected to have an impact on surface water. There are several drainages within the proposed drilling area. Proposed collars will not be progressed if they occur within 40m of any existing drainages. Specific access to sites will be undertaken in close consultation with the landholder who knows the ground conditions the best. Drilling will not be undertaken during extreme weather events. Should there be elevated water levels this drilling will not be undertaken until water subsides. Groundwater is not expected to cause concern as drilling methods ensure that water is contained in the same strata and does not cross to different water bearing strata. All proposed activities will be completed in dry season as the approval area is within the Macquarie Marshes Wetland. Should there be elevated water levels this drilling will not be undertaken until water subsides. Specific access to sites will be undertaken in close consultation with the landholder who knows the ground conditions the best.		
Duration	Short term		
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?	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	Water Impacts: Impacts from changes in surface or groundwater quality and quantity.		
Potential impacts	Groundwater: Groundwater encountered during drilling will be managed and contained by the drilling methods to ensure that water is contained in the same strata and not cross to different water bearing strata. The Company have drilled several holes in this area and have not encountered any difficulties with water. There is a known water bore within the proposed drilling area GW004347, drilled to 243.80m recording salinity of 501-1000ppm but no record of water depth on file. Another monitoring bore E of proposed drilling area is GW801144, drilled to 12m with an unconsolidated sand layer at 9.5-11.5m recording water. Standing water level averaging out to 5m below existing ground level. Surface water: The nearest watercourse is the Macquarie River, located 165m from the eastern boundary of the proposed drilling area at its nearest point, however actual collar locations are more likely to be drilled 1,200m west of the river. There are several drainages within the proposed drilling area. Proposed collars will not be progressed if they occur within 40m of any existing drainages. The drilling area is also within Floodplain wetlands. The Macquarie Marshes Nature Reserve occurs approximately 200m east of the proposed drilling area. In times of high rainfall, this area can extend into the proposed drilling area. Should there be elevated water levels this drilling will not be undertaken until water subsides.		
Proposed management controls	The program is not expected to have an impact on surface water. There are several drainages within the proposed drilling area. Proposed collars will not be progressed if they occur within 40m of any existing drainages. Specific access to sites will be undertaken in close consultation with the landholder who knows the ground conditions the best. Drilling will not be undertaken during extreme weather events. Should there be elevated water levels this drilling will not be undertaken until water subsides. Groundwater is not expected to cause concern as drilling methods ensure that water is contained in the same strata and does not cross to different water bearing strata. All proposed activities will be completed in dry season as the approval area is within the Macquarie Marshes Wetland. Should there be elevated water levels this drilling will not be undertaken until water subsides. Specific access to sites will be undertaken in close consultation with the landholder who knows the ground conditions the best. Drilling is not expected to impact the 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. Salinity of groundwater will be considered, however with the proposed drilling methods groundwater will remain in the ground and any drilling waters will be contained in above ground sumps and not affect the surrounding surface. Given the area and groundwater anticipated close to surface, rehabilitation will entail cementing from the base of the hole to 1m from surface to ensure water does not cross into different strata. The top of the hole will be backfilled with surface soil and topsoil. Drilling contractors will use above ground sumps and so no excavations are required.		
Duration	Short term		
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?	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	Soil & Stability Impacts: Degradation of soil quality (including contamination, salinisation or acidification).		

Potential impacts	There is no acid sulphate soil in this area. Only three drillholes are proposed and this drilling is likely to take approximately one week per hole. Due to the sensitivity of the soil, access will be restricted to only vital personnel and vehicle movement will be restricted where possible. Should compaction occur of the temporary access routes, this will likely be scarified after use by the landholder. Close consultation with the landholder will be maintained throughout this program. Wind erosion will be assessed in consultation with the landholder prior to site access and mitigation measures considered. Earthworks and vegetation clearance is not required for this drilling program. Sites are relatively flat and open. Drill pad areas, affecting approximately 10 x 20m may require minor clearing of grass from the surface, should this be necessary care will be taken to ensure to leave root stock to enable existing vegetation regrowth. DISTURBANCE: 600 square metres		
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	Short term		
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?	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	There is no acid sulphate soil in this area. Only three drillholes are proposed and this drilling is likely to take approximately one week per hole. Due to the sensitivity of the soil, access will be restricted to only vital personnel and vehicle movement will be restricted where possible. Should compaction occur of the temporary access routes, this will likely be scarified after use by the landholder. Close consultation with the landholder will be maintained throughout this program. Wind erosion will be assessed in consultation with the landholder prior to site access and mitigation measures considered. Earthworks and vegetation clearance is not required for this drilling program. Sites are relatively flat and open. Drill pad areas, affecting approximately 10 x 20m may require minor clearing of grass from the surface, should this be necessary care will be taken to ensure to leave root stock to enable existing vegetation regrowth. DISTURBANCE: 600 square metres AIS Level 1 provided. The proposed drilling area covers soil types 4, 5 and 7 from the Land and Soil Capability Classification, which is moderate to extremely severe limitations. Land use agricultural- Communication with Landowner. No issues detected by RR on 11/4/2024.		
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. Due to the sensitivity of the soil, access will be restricted to only vital personnel and vehicle movement will be restricted where possible. Should compaction occur of the temporary access routes, this will likely be scarified after use by the landholder. Close consultation with the landholder will be maintained throughout this program. Wind erosion will be assessed in consultation with the landholder prior to site access and mitigation measures considered. Salinity of groundwater will be considered, however with the proposed drilling methods groundwater will remain in the ground and any drilling waters will be contained in above ground sumps and not affect the surrounding surface. The land is currently utilsed for agricultural grazing purposes. The land use will not be changed during or after the proposed drilling works.		
Duration	Short term		
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?	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	Soil & Stability Impacts: Loss of soil from wind or water erosion.		
Potential impacts	There is no acid sulphate soil in this area. Only three drillholes are proposed and this drilling is likely to take approximately one week per hole. Due to the sensitivity of the soil, access will be restricted to only vital personnel and vehicle movement will be restricted where possible. Should compaction occur of the temporary access routes, this will likely be scarified after use by the landholder. Close consultation with the landholder will be maintained throughout this program. Wind erosion will be assessed in consultation with the landholder prior to site access and mitigation measures considered. Earthworks and vegetation clearance is not required for this drilling program. Sites are relatively flat and open. Drill pad areas, affecting approximately 10 x 20m may require minor clearing of grass from the surface, should this be necessary care will be taken to ensure to leave root stock to enable existing vegetation regrowth. DISTURBANCE: 600 square metres AIS Level 1 provided. The proposed drilling area covers soil types 4, 5 and 7 from the Land and Soil Capability Classification, which is moderate to extremely severe limitations. Land use agricultural- Communication with Landowner. No issues detected by RR on 11/4/2024.		
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. Due to the sensitivity of the soil, access will be restricted to only vital personnel and vehicle movement will be restricted where possible. Should compaction occur of the temporary access routes, this will likely be scarified after use by the landholder. Close consultation with the landholder will be maintained throughout this program. Wind erosion will be assessed in consultation with the landholder prior to site access and mitigation measures considered. Salinity of groundwater will be considered, however with the proposed drilling methods groundwater will remain in the ground and any drilling waters will be contained in above ground sumps and not affect the surrounding surface. The land is currently utilsed for agricultural grazing purposes. The land use will not be changed during or after the proposed drilling works.		
Duration	Short term		
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?	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	Soil & Stability Impacts: Loss of structural integrity of the soil.		

Potential impacts	There is no acid sulphate soil in this area. Only three drillholes are proposed and this drilling is likely to take approximately one week per hole. Due to the sensitivity of the soil, access will be restricted to only vital personnel and vehicle movement will be restricted where possible. Should compaction occur of the temporary access routes, this will likely be scarified after use by the landholder. Close consultation with the landholder will be maintained throughout this program. Wind erosion will be assessed in consultation with the landholder prior to site access and mitigation measures considered. Earthworks and vegetation clearance is not required for this drilling program. Sites are relatively flat and open. Drill pad areas, affecting approximately 10 x 20m may require minor clearing of grass from the surface, should this be necessary care will be taken to ensure to leave root stock to enable existing vegetation regrowth. DISTURBANCE: 600 square metres AIS Level 1 provided. The proposed drilling area covers soil types 4, 5 and 7 from the Land and Soil Capability Classification, which is moderate to extremely severe limitations. Land use agricultural- Communication with Landowner. No issues detected by RR on 11/4/2024.		
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. Due to the sensitivity of the soil, access will be restricted to only vital personnel and vehicle movement will be restricted where possible. Should compaction occur of the temporary access routes, this will likely be scarified after use by the landholder. Close consultation with the landholder will be maintained throughout this program. Wind erosion will be assessed in consultation with the landholder prior to site access and mitigation measures considered. Salinity of groundwater will be considered, however with the proposed drilling methods groundwater will remain in the ground and any drilling waters will be contained in above ground sumps and not affect the surrounding surface. The land is currently utilsed for agricultural grazing purposes. The land use will not be changed during or after the proposed drilling works.		
Duration	Short term		
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?	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	Soil & Stability Impacts: Increased land instability with high risks from land slides or subsidence.		
Potential impacts	There is no acid sulphate soil in this area. Only three drillholes are proposed and this drilling is likely to take approximately one week per hole. Due to the sensitivity of the soil, access will be restricted to only vital personnel and vehicle movement will be restricted where possible. Should compaction occur of the temporary access routes, this will likely be scarified after use by the landholder. Close consultation with the landholder will be maintained throughout this program. Wind erosion will be assessed in consultation with the landholder prior to site access and mitigation measures considered. Earthworks and vegetation clearance is not required for this drilling program. Sites are relatively flat and open. Drill pad areas, affecting approximately 10 x 20m may require minor clearing of grass from the surface, should this be necessary care will be taken to ensure to leave root stock to enable existing vegetation regrowth. DISTURBANCE: 600 square metres AIS Level 1 provided. The proposed drilling area covers soil types 4, 5 and 7 from the Land and Soil Capability Classification, which is moderate to extremely severe limitations. Land use agricultural- Communication with Landowner. No issues detected by RR on 11/4/2024.		

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. Due to the sensitivity of the soil, access will be restricted to only vital personnel and vehicle movement will be restricted where possible. Should compaction occur of the temporary access routes, this will likely be scarified after use by the landholder. Close consultation with the landholder will be maintained throughout this program. Wind erosion will be assessed in consultation with the landholder prior to site access and mitigation measures considered. Salinity of groundwater will be considered, however with the proposed drilling methods groundwater will remain in the ground and any drilling waters will be contained in above ground sumps and not affect the surrounding surface. The land is currently utilsed for agricultural grazing purposes. The land use will not be changed during or after the proposed drilling works.		
Duration	Short term		
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?	Partly	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	Yes		
Criteria	Noise & Vibration Impacts: Results in increased noise or vibration.		
Potential impacts	Noise from vehicles, plant and machinery results in unacceptable impacts on nearby sensitive receivers, such as residences, educational establishments, medical facilities, places of worship, animal boarding/training establishments, intensive livestock agriculture, etc. Hours of Operations: 12 hour shifts, 7 days a week. 1 homestead (The Mole) within the proposed drilling location. This homestead is located approx 400m N from one of the tentative locations - Macquarie 4 noted on Map1 Site Plan. Percussion drilling can have localised vibration impacts. Drilling unlikely to cause vibration impacts .		
Proposed management controls	Noise is not anticipated to be of concern with the proposed diamond drilling as this style of drilling does not generate excessive noise. Drilling will not occur within 200m of sensitive receptors. Drilling works will be undertaken in daylight hours only. The landholders are fully informed with the proposed drilling of this hole. There are no further sensitive receptors nearby.		
Duration	Short term		
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?	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	Noise & Vibration Impacts: Affects sensitive receptors.		

Potential impacts	Noise from vehicles, plant and machinery results in unacceptable impacts on nearby sensitive receivers, such as residences, educational establishments, medical facilities, places of worship, animal boarding/training establishments, intensive livestock agriculture, etc. Percussion drilling can have localised vibration impacts. Drilling unlikely to cause vibration impacts . Hours of Operations: 12 hour shifts, 7 days a week. 1 homestead (The Mole) within the proposed drilling location. This homestead is located approx 400m N from one of the tentative locations - Macquarie 4 noted on Map1 Site Plan.		
Proposed management controls	Hours of Operations: 12 hour shifts, 7 days a week. 1 homestead (The Mole) within the proposed drilling location. This homestead is located approx 400m N from one of the tentative locations - Macquarie 4 noted on Map1 Site Plan. Noise is not anticipated to be of concern with the proposed diamond drilling as this style of drilling does not generate excessive noise. Drilling will not occur within 200m of sensitive receptors. Drilling works will be undertaken in daylight hours only. The landholders are fully informed with the proposed drilling of this hole. There are no further sensitive receptors nearby.		
Duration	Short term		
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?	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	Coastal Location & Processes: Affects coastal processes and coastal hazards, including those under projected climate change conditions.		
Potential impacts	NA – the proposed activity will not effect Coastal locations or processes		
Proposed management controls	NA – the proposed activity will not effect Coastal locations or processes		
Duration	Short term		
Application ranking			
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**	Low
Can the impacts be mitigated?	N/A	**Justification for ranking**	
Do the operations comply with standards, plans, policies?	N/A		
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	Short term		
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	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. Drill core will be removed from site to a Company storage facility. Once drilling is complete, any minor spoil will be returned down the hole and all materials will be removed from site. The collar will be capped and area made safe with all rubbish and drilling equipment removed from site at end of drilling program. Due to groundwater being shallow in this area, holes will be cemented from base to 1m below surface to ensure groundwater from different strata is not affected. Subsoil and topsoil will be replaced over drill collar position.		
Duration	Short term		
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?	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	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. The Macquarie Marshes is located close to the east of the proposed drilling area - approximately 200m. When the marshes occasionally flood the proposed drilling area would be affected. Site access will not be undertaken in times of flood. The Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) comes into force when a proposed action is likely to have a significant impact on a matter of national environmental significance (MNES), such as a listed threatened species or ecological community.		

Proposed management controls	Clean up any minor spills immediately and dispose of any contaminated materials to an appropriately managed licenced facility. NON-CEA triggered by proximity of Ramsar wetland. The applicant held a pre-referral meeting with the Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEEW) on 28 March 2024. The referral was in relation to a potential impact on the Ramsar listed Wetland – the Macquarie Marshes. During their meeting, DCCEEW advised the applicant that no formal response regarding the pre-referral meeting would be provided, and that the applicant should undertake a self-assessment to determine whether a significant impact would occur. Under the Commonwealth EPBC Act, the onus is on the person proposing to take an action to determine whether there is likely to be a significant impact on any MNES and if so, to prepare a referral for the Commonwealth Minister's consideration as to whether or not the project would require approval. If approval is required, then this is a separate approval process under Commonwealth legislation and the exploration activity cannot be undertaken until this Commonwealth approval has been granted. The granting of an approval to undertake exploration activities under NSW legislation does not negate the need for a proponent to obtain any separate Commonwealth approvals prior to proceeding. The applicant 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.		
Duration	Short term		
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?	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 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. Clean up any minor spills immediately and dispose of any contaminated materials to an appropriately managed licenced facility. NON-CEA triggered by proximity of Ramsar wetland. The applicant held a pre-referral meeting with the Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEEW) on 28 March 2024. The referral was in relation to a potential impact on the Ramsar listed Wetland – the Macquarie Marshes. During their meeting, DCCEEW advised the applicant that no formal response regarding the pre-referral meeting would be provided, and that the applicant should undertake a self-assessment to determine whether a significant impact would occur. Under the Commonwealth EPBC Act, the onus is on the person proposing to take an action to determine whether there is likely to be a significant impact on any MNES and if so, to prepare a referral for the Commonwealth Minister's consideration as to whether or not the project would require approval. If approval is required, then this is a separate approval process under Commonwealth legislation and the exploration activity cannot be undertaken until this Commonwealth approval has been granted. The granting of an approval to undertake exploration activities under NSW legislation does not negate the need for a proponent to obtain any separate Commonwealth approvals prior to proceeding. The applicant 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.		

Duration	Short term		
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?	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 and Emissions: Impacts on coastlines or dunes, alpine areas, karst features or other unique landforms.		
Potential impacts	N/A - 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	N/A Clean up any minor spills immediately and dispose of any contaminated materials to an appropriately managed licenced facility.		
Duration	Short term		
Application ranking			
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**	Low
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	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. NA - The area is predominantly open grazing land with sparse vegetation. Any areas of vegetation will be avoided and do not need to be disturbed for this drilling program. Topography is typically flat with many drainage channels that will be avoided for this program.		
Proposed management controls	Clean up any minor spills immediately and dispose of any contaminated materials to an appropriately managed licenced facility. NA - The area is predominantly open grazing land with sparse vegetation. Any areas of vegetation will be avoided and do not need to be disturbed for this drilling program. Topography is typically flat with many drainage channels that will be avoided for this program.		
Duration	Short term		
Application ranking			
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**	Low
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 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. The area is predominantly open grazing land with sparse vegetation. Any areas of vegetation will be avoided and do not need to be disturbed for this drilling program. Topography is typically flat with many drainage channels that will be avoided for this program.		
Proposed management controls	Clean up any minor spills immediately and dispose of any contaminated materials to an appropriately managed licenced facility. The area is predominantly open grazing land with sparse vegetation. Any areas of vegetation will be avoided and do not need to be disturbed for this drilling program. Topography is typically flat with many drainage channels that will be avoided for this program.		
Duration	Short term		
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?	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 acid sulphate, sodic or highly permeable soils.		
Potential impacts	There is no acid sulphate soil in this area. Only three drillholes are proposed and this drilling is likely to take approximately one week per hole. Due to the sensitivity of the soil, access will be restricted to only vital personnel and vehicle movement will be restricted where possible. Should compaction occur of the temporary access routes, this will likely be scarified after use by the landholder. Close consultation with the landholder will be maintained throughout this program. Wind erosion will be assessed in consultation with the landholder prior to site access and mitigation measures considered. Earthworks and vegetation clearance is not required for this drilling program. Sites are relatively flat and open. Drill pad areas, affecting approximately 10 x 20m may require minor clearing of grass from the surface, should this be necessary care will be taken to ensure to leave root stock to enable existing vegetation regrowth. DISTURBANCE: 600 square metres AIS Level 1 provided. The proposed drilling area covers soil types 4, 5 and 7 from the Land and Soil Capability Classification, which is moderate to extremely severe limitations. Land use agricultural- Communication with Landowner. No issues detected by RR on 11/4/2024.		
Proposed management controls	Drill core will be removed from site to a Company storage facility. Once drilling is complete, any minor spoil will be returned down the hole and all materials will be removed from site. The collar will be capped and area made safe with all rubbish and drilling equipment removed from site at end of drilling program. Due to groundwater being shallow in this area, holes will be cemented from base to 1m below surface to ensure groundwater from different strata is not affected.		
Duration	Short term		
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?	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 salinity or potential salinity problems.		

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. There is no acid sulphate soil in this area. Only three drillholes are proposed and this drilling is likely to take approximately one week per hole. Due to the sensitivity of the soil, access will be restricted to only vital personnel and vehicle movement will be restricted where possible. Should compaction occur of the temporary access routes, this will likely be scarified after use by the landholder. Close consultation with the landholder will be maintained throughout this program. Wind erosion will be assessed in consultation with the landholder prior to site access and mitigation measures considered. Earthworks and vegetation clearance is not required for this drilling program. Sites are relatively flat and open. Drill pad areas, affecting approximately 10 x 20m may require minor clearing of grass from the surface, should this be necessary care will be taken to ensure to leave root stock to enable existing vegetation regrowth. DISTURBANCE: 600 square metres AIS Level 1 provided. The proposed drilling area covers soil types 4, 5 and 7 from the Land and Soil Capability Classification, which is moderate to extremely severe limitations. Land use agricultural- Communication with Landowner. No issues detected by RR on 11/4/2024.		
Proposed management controls	Clean up any minor spills immediately and dispose of any contaminated materials to an appropriately managed licenced facility. Drill core will be removed from site to a Company storage facility. Once drilling is complete, any minor spoil will be returned down the hole and all materials will be removed from site. The collar will be capped and area made safe with all rubbish and drilling equipment removed from site at end of drilling program. Due to groundwater being shallow in this area, holes will be cemented from base to 1m below surface to ensure groundwater from different strata is not affected. Salinity of groundwater will be considered, however with the proposed drilling methods groundwater will remain in the ground and any drilling waters will be contained in above ground sumps and not affect the surrounding surface.		
Duration	Short term		
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?	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 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. There are no acid sulfate soils within this area. The proposed drilling area covers soil types 4, 5 and 7 from the Land and Soil Capability Classification, which is moderate to extremely severe limitations. Only three drillholes are proposed and this drilling is likely to take approximately one week per hole. Due to the sensitivity of the soil, access will be restricted to only vital personnel and vehicle movement will be restricted where possible. Should compaction occur of the temporary access routes, this will likely be scarified after use by the landholder. Close consultation with the landholder will be maintained throughout this program. Wind erosion will be assessed in consultation with the landholder prior to site access and mitigation measures considered. Salinity of groundwater will be considered, however with the proposed drilling methods groundwater will remain in the ground and any drilling waters will be contained in above ground sumps and not affect the surrounding surface. The area is predominantly open grazing land with sparse vegetation. Any areas of vegetation will be avoided and do not need to be disturbed for this drilling program. Topography is typically flat with many drainage channels that will be avoided for this program. Access to proposed collar locations will be undertaken in close consultation with the landholders.		

Proposed management controls	Drill core will be removed from site to a Company storage facility. Once drilling is complete, any minor spoil will be returned down the hole and all materials will be removed from site. The collar will be capped and area made safe with all rubbish and drilling equipment removed from site at end of drilling program. Due to groundwater being shallow in this area, holes will be cemented from base to 1m below surface to ensure groundwater from different strata is not affected. Salinity of groundwater will be considered, however with the proposed drilling methods groundwater will remain in the ground and any drilling waters will be contained in above ground sumps and not affect the surrounding surface.		
Duration	Short term		
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?	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 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. There are no acid sulfate soils within this area. The proposed drilling area covers soil types 4, 5 and 7 from the Land and Soil Capability Classification, which is moderate to extremely severe limitations. Only three drillholes are proposed and this drilling is likely to take approximately one week per hole. Due to the sensitivity of the soil, access will be restricted to only vital personnel and vehicle movement will be restricted where possible. Should compaction occur of the temporary access routes, this will likely be scarified after use by the landholder. Close consultation with the landholder will be maintained throughout this program. Wind erosion will be assessed in consultation with the landholder prior to site access and mitigation measures considered. Salinity of groundwater will be considered, however with the proposed drilling methods groundwater will remain in the ground and any drilling waters will be contained in above ground sumps and not affect the surrounding surface. The area is predominantly open grazing land with sparse vegetation. Any areas of vegetation will be avoided and do not need to be disturbed for this drilling program. Topography is typically flat with many drainage channels that will be avoided for this program. Access to proposed collar locations will be undertaken in close consultation with the landholders.		
Proposed management controls	Drill core will be removed from site to a Company storage facility. Once drilling is complete, any minor spoil will be returned down the hole and all materials will be removed from site. The collar will be capped and area made safe with all rubbish and drilling equipment removed from site at end of drilling program. Due to groundwater being shallow in this area, holes will be cemented from base to 1m below surface to ensure groundwater from different strata is not affected.		
Duration	Short term		
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?	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	Vegetation: Any clearing or modification of vegetation (including impacts on wildlife corridors, remnant vegetation & habitat for species of conservation significance).		

Potential impacts	The area is predominantly open grazing land with sparse vegetation. Any areas of vegetation will be avoided and do not need to be disturbed for this drilling program. Topography is typically flat with many drainage channels that will be avoided for this program. Access to proposed collar locations will be undertaken in close consultation with the landholders. DISTURBANCE: Earthworks and veg clearing is not required. Sites are relatively flat and open. Drill pad areas (approx 10 x 20m) may require minor clearing of grass from the surface. Should this be necessary, care will be taken to ensure to leave root stock to enable existing vegetation regrowth.		
Proposed management controls	Any areas of vegetation will be avoided. SEED search 10.1.24: PCTs within (PCT 168, 181 and 204) and surrounding (PCT 182, 212 and PCT 454) proposed drilling area. While all but PCT 454 associated with NSW listed TEC 10065 (Artesian Springs Ecological Community in the Great Artesian Basin). None associated with MNES TECs (Federally listed). MNES search dated 19/4/23 – - the proposed activity is "Within Ramsar site (Macquarie Marshes)" - Endangered TECs: "Coolibah - Black Box Woodlands of the Darling Riverine Plains and the Brigalow Belt South Bioregions" AND "Poplar Box Grassy Woodland on Alluvial Plains Endangered Community" likely to occur within area - however PCTs from SEED search don't appear to correlate. The applicant held a pre-referral meeting with the Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEEW)on 28 March 2024. The referral was in relation to a potential impact on the Ramsar listed Wetland – the Macquarie Marshes. During their meeting, DCCEEW advised the applicant that no formal response regarding the pre-referral meeting would be provided, and that the applicant should undertake a self-assessment to determine whether a significant impact would occur. Under the Commonwealth EPBC Act, the onus is on the person proposing to take an action to determine whether there is likely to be a significant impact on any MNES and if so, to prepare a referral for the Commonwealth Minister's consideration as to whether or not the project would require approval. If approval is required, then this is a separate approval process under Commonwealth legislation and the exploration activity cannot be undertaken until this Commonwealth approval has been granted. The granting of an approval to undertake exploration activities under NSW legislation does not negate the need for a proponent to obtain any separate Commonwealth approvals prior to proceeding. The applicant 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.		
Duration	Short term		
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?	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	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	The area is predominantly open grazing land with sparse vegetation. Any areas of vegetation will be avoided and do not need to be disturbed for this drilling program. Topography is typically flat with many drainage channels that will be avoided for this program. Access to proposed collar locations will be undertaken in close consultation with the landholders. DISTURBANCE: Earthworks and veg clearing is not required. Sites are relatively flat and open. Drill pad areas (approx 10 x 20m) may require minor clearing of grass from the surface. Should this be necessary, care will be taken to ensure to leave root stock to enable existing vegetation regrowth. There are many flora and fauna records that come up on the BioNet search as being of protected or vulnerable status over the proposed area, however 3 drillholes are planned within a large area and locations are shown on Map3 attached. Areas of vegetation where most of these sightings occur do not need to be affected. The area is not located within any areas of high biodiversity; however, it is listed as a Wetland. This area is occasionally flooded if the Macquarie Marshes have high water levels, and the sites will not be accessed during times of flood. Close consultation with the landholders will continue regularly prior to proposed drilling to ensure that access conditions are favourable. The olive perchlet has been sighted within one of the larger drainage areas that runs approximately north south through the proposed drilling area. This should not be affected during the proposed works which will only occur during dry periods. SEED search 10.1.24: Ramsar Wetland – Macquarie Marshes directly north of proposed drilling areas. Areas of Biodiversity Value identified West of drilling area/title boundary along Wambuul Macquarie River, and North within Macquarie Marshes. All drillholes within Bushfire Prone Land Veg Cat 3 (Medium Risk). All holes within floodplain wetland. Bionet sightings of several endangered species within the vicinity of proposed drilling: Australasian Bittern, Australian Painted Snipe, Black-necked Stork, South-eastern hooded robin (consistent with MNES report). PCTs within (PCT 168, 181 and 204) and surrounding (PCT 182, 212 and PCT 454) proposed drilling area. While all but PCT 454 associated with NSW listed TEC 10065 (Artesian Springs Ecological Community in the Great Artesian Basin). None associated with MNES TECs (Federally listed). MNES search dated 19/4/23 – - the proposed activity is "Within Ramsar site (Macquarie Marshes)" - Endangered TECs: "Coolibah - Black Box Woodlands of the Darling Riverine Plains and the Brigalow Belt South Bioregions" AND "Poplar Box Grassy Woodland on Alluvial Plains Endangered Community" likely to occur within area - Endangered species likely to occur within the area: Major Mitchell's Cockatoo (eastern), South-eastern Hooded Robin, Grey Snake, Fork-tailed Swift - Endangered species known to occur within the area: Australian Painted Snipe, Australasian Bittern - The olive perchlet has been sighted within one of the larger drainage areas that runs approximately north south through the proposed drilling area. This should not be affected during the proposed works which will only occur during dry periods.

Proposed management controls	On the MNES search there are 22 listed Threatened species, 4 listed Threatened Ecological Communities and 8 Listed Migratory Species. Of the 22 threatened species the Silver Perch, Bidyan and the Curlew Sandpiper are considered to be critically endangered. 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 Silver Perch will be in waterways which will not be affected by proposed works. The four threatened communities show Coolibah Black Box and Poplar Box Grassy to be likely in this area there are no recovery plans for this species. The Macquarie Marshes is located close to the east of the proposed drilling area - approximately 200m. When the marshes occasionally flood the proposed drilling area would be affected. Site access will not be undertaken in times of flood. The Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) comes into force when a proposed action is likely to have a significant impact on a matter of national environmental significance (MNES), such as a listed threatened species or ecological community. The applicant held a pre-referral meeting with the Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEEW)on 28 March 2024. The referral was in relation to a potential impact on the Ramsar listed Wetland – the Macquarie Marshes. During their meeting, DCCEEW advised the applicant that no formal response regarding the pre-referral meeting would be provided, and that the applicant should undertake a self-assessment to determine whether a significant impact would occur. Under the Commonwealth EPBC Act, the onus is on the person proposing to take an action to determine whether there is likely to be a significant impact on any MNES and if so, to prepare a referral for the Commonwealth Minister's consideration as to whether or not the project would require approval. If approval is required, then this is a separate approval process under Commonwealth legislation and the exploration activity cannot be undertaken until this Commonwealth approval has been granted. The granting of an approval to undertake exploration activities under NSW legislation does not negate the need for a proponent to obtain any separate Commonwealth approvals prior to proceeding. The applicant 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 during dry season only, the sites will not be accessed during times of flood. Close consultation with the landholders will continue regularly prior to proposed drilling to ensure that access conditions are favourable.		
Duration	N/A		
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?	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	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	The area is predominantly open grazing land with sparse vegetation. Any areas of vegetation will be avoided and do not need to be disturbed for this drilling program. Topography is typically flat with many drainage channels that will be avoided for this program. Access to proposed collar locations will be undertaken in close consultation with the landholders. DISTURBANCE: Earthworks and veg clearing is not required. Sites are relatively flat and open. Drill pad areas (approx 10 x 20m) may require minor clearing of grass from the surface. Should this be necessary, care will be taken to ensure to leave root stock to enable existing vegetation regrowth. There are many flora and fauna records that come up on the BioNet search as being of protected or vulnerable status over the proposed area, however 3 drillholes are planned within a large area and locations are shown on Map3 attached. Areas of vegetation where most of these sightings occur do not need to be affected. The area is not located within any areas of high biodiversity; however, it is listed as a Wetland. This area is occasionally flooded if the Macquarie Marshes have high water levels, and the sites will not be accessed during times of flood. Close consultation with the landholders will continue regularly prior to proposed drilling to ensure that access conditions are favourable. The olive perchlet has been sighted within one of the larger drainage areas that runs approximately north south through the proposed drilling area. This should not be affected during the proposed works which will only occur during dry periods. SEED search 10.1.24: Ramsar Wetland – Macquarie Marshes directly north of proposed drilling areas. Areas of Biodiversity Value identified West of drilling area/title boundary along Wambuul Macquarie River, and North within Macquarie Marshes. All drillholes within Bushfire Prone Land Veg Cat 3 (Medium Risk). All holes within floodplain wetland. Bionet sightings of several endangered species within the vicinity of proposed drilling: Australasian Bittern, Australian Painted Snipe, Black-necked Stork, South-eastern hooded robin (consistent with MNES report). PCTs within (PCT 168, 181 and 204) and surrounding (PCT 182, 212 and PCT 454) proposed drilling area. While all but PCT 454 associated with NSW listed TEC 10065 (Artesian Springs Ecological Community in the Great Artesian Basin). None associated with MNES TECs (Federally listed). MNES search dated 19/4/23 – - the proposed activity is "Within Ramsar site (Macquarie Marshes)" - Endangered TECs: "Coolibah - Black Box Woodlands of the Darling Riverine Plains and the Brigalow Belt South Bioregions" AND "Poplar Box Grassy Woodland on Alluvial Plains Endangered Community" likely to occur within area - Endangered species likely to occur within the area: Major Mitchell's Cockatoo (eastern), South-eastern Hooded Robin, Grey Snake, Fork-tailed Swift - Endangered species known to occur within the area: Australian Painted Snipe, Australasian Bittern - The olive perchlet has been sighted within one of the larger drainage areas that runs approximately north south through the proposed drilling area. This should not be affected during the proposed works which will only occur during dry periods.

Proposed management controls	On the MNES search there are 22 listed Threatened species, 4 listed Threatened Ecological Communities and 8 Listed Migratory Species. Of the 22 threatened species the Silver Perch, Bidyan and the Curlew Sandpiper are considered to be critically endangered. 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 Silver Perch will be in waterways which will not be affected by proposed works. The four threatened communities show Coolibah Black Box and Poplar Box Grassy to be likely in this area there are no recovery plans for this species. The Macquarie Marshes is located close to the east of the proposed drilling area - approximately 200m. When the marshes occasionally flood the proposed drilling area would be affected. Site access will not be undertaken in times of flood. The Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) comes into force when a proposed action is likely to have a significant impact on a matter of national environmental significance (MNES), such as a listed threatened species or ecological community. The applicant held a pre-referral meeting with the Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEEW)on 28 March 2024. The referral was in relation to a potential impact on the Ramsar listed Wetland – the Macquarie Marshes. During their meeting, DCCEEW advised the applicant that no formal response regarding the pre-referral meeting would be provided, and that the applicant should undertake a self-assessment to determine whether a significant impact would occur. Under the Commonwealth EPBC Act, the onus is on the person proposing to take an action to determine whether there is likely to be a significant impact on any MNES and if so, to prepare a referral for the Commonwealth Minister's consideration as to whether or not the project would require approval. If approval is required, then this is a separate approval process under Commonwealth legislation and the exploration activity cannot be undertaken until this Commonwealth approval has been granted. The granting of an approval to undertake exploration activities under NSW legislation does not negate the need for a proponent to obtain any separate Commonwealth approvals prior to proceeding. The applicant 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 during dry season only, the sites will not be accessed during times of flood. Close consultation with the landholders will continue regularly prior to proposed drilling to ensure that access conditions are favourable. Any areas of vegetation will be avoided and do not need to be disturbed for this drilling program. Topography is typically flat with many drainage channels that will be avoided for this program. Access to proposed collar locations will be undertaken in close consultation with the landholders.		
Duration	N/A		
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?	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	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. As per following searches: 1. Key Fish Habitat (Critical habitat) - https://webmap.industry.nsw.gov.au/Html5Viewer/index.html?viewer=Fisheries_Data_Portal 2. Areas of Outstanding Biodiversity Value register - https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity/areas-of-outstanding-biodiversity-value/area-of-outstanding-biodiversity-value-register		

Proposed management controls	There are no areas of critical habitat/area of outstanding biodiversity within the approval area. As per following searches: 1. Key Fish Habitat (Critical habitat) - https://webmap.industry.nsw.gov.au/Html5Viewer/index.html?viewer=Fisheries_Data_Portal 2. Areas of Outstanding Biodiversity Value register - https://www.environment.nsw.gov.au/topics/animals-and-plants/biodiversity/areas-of-outstanding-biodiversity-value/area-of-outstanding-biodiversity-value-register 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. Surface water should not be affected by the proposed activities. Should there be excessive water in the area this program will be postponed as it is close to the Macquarie Marshes Nature Reserve. Specific access to sites will be undertaken in close consultation with the landholder who knows the ground conditions the best. The Macquarie River is located approx 165- 200m from the E boundary of proposed drilling area, however actual collar locations are more likely to be drilled 1,200m to the w of the river (see attached Map 4). No drillholes will be advanced within 200m of the Macquarie River. There are many drainage areas within the proposed area and drillholes will be moved so they do not sit within 40m of any drainages. There will be no storage of surface water nor disposal of water to surface.		
Duration	N/A		
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?	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	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	The area is predominantly open grazing land with sparse vegetation. Any areas of vegetation will be avoided and do not need to be disturbed for this drilling program. Topography is typically flat with many drainage channels that will be avoided for this program. Access to proposed collar locations will be undertaken in close consultation with the landholders. DISTURBANCE: Earthworks and veg clearing is not required. Sites are relatively flat and open. Drill pad areas (approx 10 x 20m) may require minor clearing of grass from the surface. Should this be necessary, care will be taken to ensure to leave root stock to enable existing vegetation regrowth. SEED search 10.1.24: Ramsar Wetland – Macquarie Marshes directly north of proposed drilling areas. Areas of Biodiversity Value identified West of drilling area/title boundary along Wambuul Macquarie River, and North within Macquarie Marshes. All drillholes within PCTs within (PCT 168, 181 and 204) and surrounding (PCT 182, 212 and PCT 454) proposed drilling area. While all but PCT 454 associated with NSW listed TEC 10065 (Artesian Springs Ecological Community in the Great Artesian Basin). None associated with MNES TECs (Federally listed). MNES search dated 19/4/23 – - the proposed activity is "Within Ramsar site (Macquarie Marshes)" - Endangered TECs: "Coolibah - Black Box Woodlands of the Darling Riverine Plains and the Brigalow Belt South Bioregions" AND "Poplar Box Grassy Woodland on Alluvial Plains Endangered Community" likely to occur within area		

Proposed management controls	On the MNES search there are 22 listed Threatened species, 4 listed Threatened Ecological Communities and 8 Listed Migratory Species. Of the 22 threatened species the Silver Perch, Bidyan and the Curlew Sandpiper are considered to be critically endangered. 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 Silver Perch will be in waterways which will not be affected by proposed works. The four threatened communities show Coolibah Black Box and Poplar Box Grassy to be likely in this area there are no recovery plans for this species. The Macquarie Marshes is located close to the east of the proposed drilling area - approximately 200m. When the marshes occasionally flood the proposed drilling area would be affected. Site access will not be undertaken in times of flood. The Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) comes into force when a proposed action is likely to have a significant impact on a matter of national environmental significance (MNES), such as a listed threatened species or ecological community. The applicant held a pre-referral meeting with the Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEEW)on 28 March 2024. The referral was in relation to a potential impact on the Ramsar listed Wetland – the Macquarie Marshes. During their meeting, DCCEEW advised the applicant that no formal response regarding the pre-referral meeting would be provided, and that the applicant should undertake a self-assessment to determine whether a significant impact would occur. Under the Commonwealth EPBC Act, the onus is on the person proposing to take an action to determine whether there is likely to be a significant impact on any MNES and if so, to prepare a referral for the Commonwealth Minister's consideration as to whether or not the project would require approval. If approval is required, then this is a separate approval process under Commonwealth legislation and the exploration activity cannot be undertaken until this Commonwealth approval has been granted. The granting of an approval to undertake exploration activities under NSW legislation does not negate the need for a proponent to obtain any separate Commonwealth approvals prior to proceeding. The applicant 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 during dry season only, the sites will not be accessed during times of flood. Close consultation with the landholders will continue regularly prior to proposed drilling to ensure that access conditions are favourable. Any areas of vegetation will be avoided and do not need to be disturbed for this drilling program. Topography is typically flat with many drainage channels that will be avoided for this program. Access to proposed collar locations will be undertaken in close consultation with the landholders.		
Duration	Short term		
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?	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	Habitat of a threatened species or ecological community		

Potential impacts	**There are no critically endangered species or communities recorded within the proposed drilling area The area is predominantly open grazing land with sparse vegetation. Any areas of vegetation will be avoided and do not need to be disturbed for this drilling program. Topography is typically flat with many drainage channels that will be avoided for this program. Access to proposed collar locations will be undertaken in close consultation with the landholders. DISTURBANCE: Earthworks and veg clearing is not required. Sites are relatively flat and open. Drill pad areas (approx 10 x 20m) may require minor clearing of grass from the surface. Should this be necessary, care will be taken to ensure to leave root stock to enable existing vegetation regrowth. There are many flora and fauna records that come up on the BioNet search as being of protected or vulnerable status over the proposed area, however 3 drillholes are planned within a large area and locations are shown on Map3 attached. Areas of vegetation where most of these sightings occur do not need to be affected. The area is not located within any areas of high biodiversity; however, it is listed as a Wetland. This area is occasionally flooded if the Macquarie Marshes have high water levels, and the sites will not be accessed during times of flood. Close consultation with the landholders will continue regularly prior to proposed drilling to ensure that access conditions are favourable. The olive perchlet has been sighted within one of the larger drainage areas that runs approximately north south through the proposed drilling area. This should not be affected during the proposed works which will only occur during dry periods. SEED search 10.1.24: Ramsar Wetland – Macquarie Marshes directly north of proposed drilling areas. Areas of Biodiversity Value identified West of drilling area/title boundary along Wambuul Macquarie River, and North within Macquarie Marshes. All drillholes within Bushfire Prone Land Veg Cat 3 (Medium Risk). All holes within floodplain wetland. Bionet sightings of several endangered species within the vicinity of proposed drilling: Australasian Bittern, Australian Painted Snipe, Black-necked Stork, South-eastern hooded robin (consistent with MNES report). PCTs within (PCT 168, 181 and 204) and surrounding (PCT 182, 212 and PCT 454) proposed drilling area. While all but PCT 454 associated with NSW listed TEC 10065 (Artesian Springs Ecological Community in the Great Artesian Basin). None associated with MNES TECs (Federally listed). MNES search dated 19/4/23 – - the proposed activity is "Within Ramsar site (Macquarie Marshes)" - Endangered TECs: "Coolibah - Black Box Woodlands of the Darling Riverine Plains and the Brigalow Belt South Bioregions" AND "Poplar Box Grassy Woodland on Alluvial Plains Endangered Community" likely to occur within area - Endangered species likely to occur within the area: Major Mitchell's Cockatoo (eastern), South-eastern Hooded Robin, Grey Snake, Fork-tailed Swift - Endangered species known to occur within the area: Australian Painted Snipe, Australasian Bittern - The olive perchlet has been sighted within one of the larger drainage areas that runs approximately north south through the proposed drilling area. This should not be affected during the proposed works which will only occur during dry periods.

Proposed management controls	On the MNES search there are 22 listed Threatened species, 4 listed Threatened Ecological Communities and 8 Listed Migratory Species. Of the 22 threatened species the Silver Perch, Bidyan and the Curlew Sandpiper are considered to be critically endangered. 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 Silver Perch will be in waterways which will not be affected by proposed works. The four threatened communities show Coolibah Black Box and Poplar Box Grassy to be likely in this area there are no recovery plans for this species. The Macquarie Marshes is located close to the east of the proposed drilling area - approximately 200m. When the marshes occasionally flood the proposed drilling area would be affected. Site access will not be undertaken in times of flood. The Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) comes into force when a proposed action is likely to have a significant impact on a matter of national environmental significance (MNES), such as a listed threatened species or ecological community. The applicant held a pre-referral meeting with the Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEEW)on 28 March 2024. The referral was in relation to a potential impact on the Ramsar listed Wetland – the Macquarie Marshes. During their meeting, DCCEEW advised the applicant that no formal response regarding the pre-referral meeting would be provided, and that the applicant should undertake a self-assessment to determine whether a significant impact would occur. Under the Commonwealth EPBC Act, the onus is on the person proposing to take an action to determine whether there is likely to be a significant impact on any MNES and if so, to prepare a referral for the Commonwealth Minister's consideration as to whether or not the project would require approval. If approval is required, then this is a separate approval process under Commonwealth legislation and the exploration activity cannot be undertaken until this Commonwealth approval has been granted. The granting of an approval to undertake exploration activities under NSW legislation does not negate the need for a proponent to obtain any separate Commonwealth approvals prior to proceeding. The applicant 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 during dry season only, the sites will not be accessed during times of flood. Close consultation with the landholders will continue regularly prior to proposed drilling to ensure that access conditions are favourable. Any areas of vegetation will be avoided and do not need to be disturbed for this drilling program. Topography is typically flat with many drainage channels that will be avoided for this program. Access to proposed collar locations will be undertaken in close consultation with the landholders.		
Duration	N/A		
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?	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	Habitat of protected aquatic species or those with conservation status.		

Potential impacts	There are no areas of critical habitat/area of outstanding biodiversity within the approval area. As per following search: 1. Key Fish Habitat (Critical habitat) - https://webmap.industry.nsw.gov.au/Html5Viewer/index.html?viewer=Fisheries_Data_Portal The area is predominantly open grazing land with sparse vegetation. Any areas of vegetation will be avoided and do not need to be disturbed for this drilling program. Topography is typically flat with many drainage channels that will be avoided for this program. Access to proposed collar locations will be undertaken in close consultation with the landholders. DISTURBANCE: Earthworks and veg clearing is not required. Sites are relatively flat and open. Drill pad areas (approx 10 x 20m) may require minor clearing of grass from the surface. Should this be necessary, care will be taken to ensure to leave root stock to enable existing vegetation regrowth. There are many flora and fauna records that come up on the BioNet search as being of protected or vulnerable status over the proposed area, however 3 drillholes are planned within a large area and locations are shown on Map3 attached. Areas of vegetation where most of these sightings occur do not need to be affected. The area is not located within any areas of high biodiversity; however, it is listed as a Wetland. This area is occasionally flooded if the Macquarie Marshes have high water levels, and the sites will not be accessed during times of flood. Close consultation with the landholders will continue regularly prior to proposed drilling to ensure that access conditions are favourable. The olive perchlet has been sighted within one of the larger drainage areas that runs approximately north south through the proposed drilling area. This should not be affected during the proposed works which will only occur during dry periods. SEED search 10.1.24: Ramsar Wetland – Macquarie Marshes directly north of proposed drilling areas. Areas of Biodiversity Value identified West of drilling area/title boundary along Wambuul Macquarie River, and North within Macquarie Marshes. All drillholes within Bushfire Prone Land Veg Cat 3 (Medium Risk). All holes within floodplain wetland. MNES search dated 19/4/23 – - the proposed activity is "Within Ramsar site (Macquarie Marshes)" - The olive perchlet has been sighted within one of the larger drainage areas that runs approximately north south through the proposed drilling area. This should not be affected during the proposed works which will only occur during dry periods.

Proposed management controls	Activities must comply with (Exploration Code of Practice: Environmental Management) as per the commitment in the application (APO). Relevant requirements of this Code include: a. Activities must implement all measures to prevent causing any adverse impacts on water quality or quantity. b. All sediment and erosion controls (including drainage from roads/access tracks) to be managed in accordance with Blue Book. c. No significant impact on any threatened species, threatened populations, threatened ecological communities, or their habitats. d. No removal of vegetation in waterfront land. 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. On the MNES search there are 22 listed Threatened species, 4 listed Threatened Ecological Communities and 8 Listed Migratory Species. Of the 22 threatened species the Silver Perch, Bidyan and the Curlew Sandpiper are considered to be critically endangered. 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 Silver Perch will be in waterways which will not be affected by proposed works. The four threatened communities show Coolibah Black Box and Poplar Box Grassy to be likely in this area there are no recovery plans for this species. The Macquarie Marshes is located close to the east of the proposed drilling area - approximately 200m. When the marshes occasionally flood the proposed drilling area would be affected. Site access will not be undertaken in times of flood. The Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) comes into force when a proposed action is likely to have a significant impact on a matter of national environmental significance (MNES), such as a listed threatened species or ecological community. The applicant held a pre-referral meeting with the Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEEW)on 28 March 2024. The referral was in relation to a potential impact on the Ramsar listed Wetland – the Macquarie Marshes. During their meeting, DCCEEW advised the applicant that no formal response regarding the pre-referral meeting would be provided, and that the applicant should undertake a self-assessment to determine whether a significant impact would occur. Under the Commonwealth EPBC Act, the onus is on the person proposing to take an action to determine whether there is likely to be a significant impact on any MNES and if so, to prepare a referral for the Commonwealth Minister's consideration as to whether or not the project would require approval. If approval is required, then this is a separate approval process under Commonwealth legislation and the exploration activity cannot be undertaken until this Commonwealth approval has been granted. The granting of an approval to undertake exploration activities under NSW legislation does not negate the need for a proponent to obtain any separate Commonwealth approvals prior to proceeding. The applicant 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 during dry season only, the sites will not be accessed during times of flood. Close consultation with the landholders will continue regularly prior to proposed drilling to ensure that access conditions are favourable. Any areas of vegetation will be avoided and do not need to be disturbed for this drilling program. Topography is typically flat with many drainage channels that will be avoided for this program. Access to proposed collar locations will be undertaken in close consultation with the landholders.		
Duration	Short term		
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?	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	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	The area is predominantly open grazing land with sparse vegetation. Any areas of vegetation will be avoided and do not need to be disturbed for this drilling program. Topography is typically flat with many drainage channels that will be avoided for this program. Access to proposed collar locations will be undertaken in close consultation with the landholders. DISTURBANCE: Earthworks and veg clearing is not required. Sites are relatively flat and open. Drill pad areas (approx 10 x 20m) may require minor clearing of grass from the surface. Should this be necessary, care will be taken to ensure to leave root stock to enable existing vegetation regrowth. There are many flora and fauna records that come up on the BioNet search as being of protected or vulnerable status over the proposed area, however 3 drillholes are planned within a large area and locations are shown on Map3 attached. Areas of vegetation where most of these sightings occur do not need to be affected. The area is not located within any areas of high biodiversity; however, it is listed as a Wetland. This area is occasionally flooded if the Macquarie Marshes have high water levels, and the sites will not be accessed during times of flood. Close consultation with the landholders will continue regularly prior to proposed drilling to ensure that access conditions are favourable. The olive perchlet has been sighted within one of the larger drainage areas that runs approximately north south through the proposed drilling area. This should not be affected during the proposed works which will only occur during dry periods. SEED search 10.1.24: Ramsar Wetland – Macquarie Marshes directly north of proposed drilling areas. Areas of Biodiversity Value identified West of drilling area/title boundary along Wambuul Macquarie River, and North within Macquarie Marshes. All drillholes within Bushfire Prone Land Veg Cat 3 (Medium Risk). All holes within floodplain wetland. Bionet sightings of several endangered species within the vicinity of proposed drilling: Australasian Bittern, Australian Painted Snipe, Black-necked Stork, South-eastern hooded robin (consistent with MNES report). PCTs within (PCT 168, 181 and 204) and surrounding (PCT 182, 212 and PCT 454) proposed drilling area. While all but PCT 454 associated with NSW listed TEC 10065 (Artesian Springs Ecological Community in the Great Artesian Basin). None associated with MNES TECs (Federally listed). MNES search dated 19/4/23 – - the proposed activity is "Within Ramsar site (Macquarie Marshes)" - Endangered TECs: "Coolibah - Black Box Woodlands of the Darling Riverine Plains and the Brigalow Belt South Bioregions" AND "Poplar Box Grassy Woodland on Alluvial Plains Endangered Community" likely to occur within area - Endangered species likely to occur within the area: Major Mitchell's Cockatoo (eastern), South-eastern Hooded Robin, Grey Snake, Fork-tailed Swift - Endangered species known to occur within the area: Australian Painted Snipe, Australasian Bittern - The olive perchlet has been sighted within one of the larger drainage areas that runs approximately north south through the proposed drilling area. This should not be affected during the proposed works which will only occur during dry periods.

Proposed management controls	Activities must comply with (Exploration Code of Practice: Environmental Management) as per the commitment in the application (APO). Relevant requirements of this Code include: a. Minimise extent of vegetation clearing and surface disturbance to as low as practicable. b. Prevent adverse impacts to fauna caused by vegetation clearing, including relocation of resident fauna. All disturbed areas to be rehabilitated in accordance with title conditions (Exploration Code of Practice: Rehabilitation). Rehabilitation to occur as soon as practicable after completion of activity. The Macquarie Marshes is located close to the east of the proposed drilling area - approximately 200m. When the marshes occasionally flood the proposed drilling area would be affected. Site access will not be undertaken in times of flood. The Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) comes into force when a proposed action is likely to have a significant impact on a matter of national environmental significance (MNES), such as a listed threatened species or ecological community. The applicant held a pre-referral meeting with the Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEEW)on 28 March 2024. The referral was in relation to a potential impact on the Ramsar listed Wetland – the Macquarie Marshes. During their meeting, DCCEEW advised the applicant that no formal response regarding the pre-referral meeting would be provided, and that the applicant should undertake a self-assessment to determine whether a significant impact would occur. Under the Commonwealth EPBC Act, the onus is on the person proposing to take an action to determine whether there is likely to be a significant impact on any MNES and if so, to prepare a referral for the Commonwealth Minister's consideration as to whether or not the project would require approval. If approval is required, then this is a separate approval process under Commonwealth legislation and the exploration activity cannot be undertaken until this Commonwealth approval has been granted. The granting of an approval to undertake exploration activities under NSW legislation does not negate the need for a proponent to obtain any separate Commonwealth approvals prior to proceeding. The applicant 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 during dry season only, the sites will not be accessed during times of flood. Close consultation with the landholders will continue regularly prior to proposed drilling to ensure that access conditions are favourable. Any areas of vegetation will be avoided and do not need to be disturbed for this drilling program. Topography is typically flat with many drainage channels that will be avoided for this program. Access to proposed collar locations will be undertaken in close consultation with the landholders.		
Duration	Short term		
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?	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	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	The area is predominantly open grazing land with sparse vegetation. Any areas of vegetation will be avoided and do not need to be disturbed for this drilling program. Topography is typically flat with many drainage channels that will be avoided for this program. Access to proposed collar locations will be undertaken in close consultation with the landholders. DISTURBANCE: Earthworks and veg clearing is not required. Sites are relatively flat and open. Drill pad areas (approx 10 x 20m) may require minor clearing of grass from the surface. Should this be necessary, care will be taken to ensure to leave root stock to enable existing vegetation regrowth. There are many flora and fauna records that come up on the BioNet search as being of protected or vulnerable status over the proposed area, however 3 drillholes are planned within a large area and locations are shown on Map3 attached. Areas of vegetation where most of these sightings occur do not need to be affected. The area is not located within any areas of high biodiversity; however, it is listed as a Wetland. This area is occasionally flooded if the Macquarie Marshes have high water levels, and the sites will not be accessed during times of flood. Close consultation with the landholders will continue regularly prior to proposed drilling to ensure that access conditions are favourable. The olive perchlet has been sighted within one of the larger drainage areas that runs approximately north south through the proposed drilling area. This should not be affected during the proposed works which will only occur during dry periods. SEED search 10.1.24: Ramsar Wetland – Macquarie Marshes directly north of proposed drilling areas. Areas of Biodiversity Value identified West of drilling area/title boundary along Wambuul Macquarie River, and North within Macquarie Marshes. All drillholes within Bushfire Prone Land Veg Cat 3 (Medium Risk). All holes within floodplain wetland. Bionet sightings of several endangered species within the vicinity of proposed drilling: Australasian Bittern, Australian Painted Snipe, Black-necked Stork, South-eastern hooded robin (consistent with MNES report). PCTs within (PCT 168, 181 and 204) and surrounding (PCT 182, 212 and PCT 454) proposed drilling area. While all but PCT 454 associated with NSW listed TEC 10065 (Artesian Springs Ecological Community in the Great Artesian Basin). None associated with MNES TECs (Federally listed). MNES search dated 19/4/23 – - the proposed activity is "Within Ramsar site (Macquarie Marshes)" - Endangered TECs: "Coolibah - Black Box Woodlands of the Darling Riverine Plains and the Brigalow Belt South Bioregions" AND "Poplar Box Grassy Woodland on Alluvial Plains Endangered Community" likely to occur within area - Endangered species likely to occur within the area: Major Mitchell's Cockatoo (eastern), South-eastern Hooded Robin, Grey Snake, Fork-tailed Swift - Endangered species known to occur within the area: Australian Painted Snipe, Australasian Bittern - The olive perchlet has been sighted within one of the larger drainage areas that runs approximately north south through the proposed drilling area. This should not be affected during the proposed works which will only occur during dry periods.		
Proposed management controls	Activities must comply with (Exploration Code of Practice: Environmental Management) as per the commitment in the application (APO). Relevant requirements of this Code include: a. Minimise extent of vegetation clearing and surface disturbance to as low as practicable. b. Prevent adverse impacts to fauna caused by vegetation clearing, including relocation of resident fauna. All disturbed areas to be rehabilitated in accordance with title conditions (Exploration Code of Practice: Rehabilitation). Rehabilitation to occur as soon as practicable after completion of activity. Drilling during dry season only, the sites will not be accessed during times of flood. Close consultation with the landholders will continue regularly prior to proposed drilling to ensure that access conditions are favourable. Any areas of vegetation will be avoided and do not need to be disturbed for this drilling program. Topography is typically flat with many drainage channels that will be avoided for this program. Access to proposed collar locations will be undertaken in close consultation with the landholders.		
Duration	Short term		
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?	Partly	**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. The area is not located within any areas of high biodiversity, however it is listed as a Wetland. This area is occasionally flooded if the Macquarie Marshes have high water levels and the sites will not be accessed during times of flood. Close consultation with the relevant landholders will continue regularly prior to proposed drilling to ensure that access conditions are favourable.		
Proposed management controls	Activities must comply with (Exploration Code of Practice: Environmental Management) as per the commitment in the application (APO). Relevant requirements of this Code include: a. Minimise extent of vegetation clearing and surface disturbance to as low as practicable. b. Prevent adverse impacts to fauna caused by vegetation clearing, including relocation of resident fauna. c. Setbacks from steep slopes/cliffs to limit impact of shots on cave dwelling fauna. Noise impacts / disruption to fauna are temporary. Vehicle movements are limited and unlikely to have significant injury/mortality impacts. 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. Extreme care will be taken on this site to avoid uncontrolled fires. Weather conditions and bush fire alert levels will be monitored. Local emergency services contact details will be readily available for the duration of the activity. All equipment will be maintained to high standards and processes will be in place to minimise risk. All vehicles are appropriately prepared and equipped to minimise fire risk.		
Duration	Short term		
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?	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	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. The area is not located within any areas of high biodiversity, however it is listed as a Wetland. This area is occasionally flooded if the Macquarie Marshes have high water levels and the sites will not be accessed during times of flood. Close consultation with the relevant landholders will continue regularly prior to proposed drilling to ensure that access conditions are favourable.		

Proposed management controls	Activities must comply with (Exploration Code of Practice: Environmental Management) as per the commitment in the application (APO). Relevant requirements of this Code include: a. Minimise extent of vegetation clearing and surface disturbance to as low as practicable. b. Prevent adverse impacts to fauna caused by vegetation clearing, including relocation of resident fauna. c. Setbacks from steep slopes/cliffs to limit impact of shots on cave dwelling fauna. Noise impacts / disruption to fauna are temporary. Vehicle movements are limited and unlikely to have significant injury/mortality impacts. 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. Extreme care will be taken on this site to avoid uncontrolled fires. Weather conditions and bush fire alert levels will be monitored. Local emergency services contact details will be readily available for the duration of the activity. All equipment will be maintained to high standards and processes will be in place to minimise risk. All vehicles are appropriately prepared and equipped to minimise fire risk.		
Duration	Short term		
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?	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?	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. SEED search 10.1.24: All drillholes within Bushfire Prone Land Veg Cat 3 (Medium Risk). The area is not located within any areas of high biodiversity, however it is listed as a Wetland. This area is occasionally flooded if the Macquarie Marshes have high water levels and the sites will not be accessed during times of flood. Close consultation with the relevant landholders will continue regularly prior to proposed drilling to ensure that access conditions are favourable.		
Proposed management controls	Activities must comply with (Exploration Code of Practice: Environmental Management) as per the commitment in the application (APO). Relevant requirements of this Code include: a. Minimise extent of vegetation clearing and surface disturbance to as low as practicable. b. Prevent adverse impacts to fauna caused by vegetation clearing, including relocation of resident fauna. c. Setbacks from steep slopes/cliffs to limit impact of shots on cave dwelling fauna. Noise impacts / disruption to fauna are temporary. Vehicle movements are limited and unlikely to have significant injury/mortality impacts. 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. Extreme care will be taken on this site to avoid uncontrolled fires. Weather conditions and bush fire alert levels will be monitored. Local emergency services contact details will be readily available for the duration of the activity. All equipment will be maintained to high standards and processes will be in place to minimise risk. All vehicles are appropriately prepared and equipped to minimise fire risk.		
Duration	Short term		
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?	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	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 No diversion of resources required		
Proposed management controls	The area is predominantly open grazing land with sparse vegetation. Any areas of vegetation will be avoided and do not need to be disturbed for this drilling program. Topography is typically flat with many drainage channels that will be avoided for this program. Access to proposed collar locations will be undertaken in close consultation with the landholders. DISTURBANCE: Earthworks and veg clearing is not required. Sites are relatively flat and open. Drill pad areas (approx 10 x 20m) may require minor clearing of grass from the surface. Should this be necessary, care will be taken to ensure to leave root stock to enable existing vegetation regrowth. Negligible impacts likely. Activities must comply with (Exploration Code of Practice: Environmental Management) as per the commitment in the application (APO) including protection of all elements of the environment, culture and heritage. 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 (includes weed growth management). Legislative requirement for landholder access arrangements and compensation. Hours of Operations: 12 hour shifts, 7 days a week. 1 homestead (The Mole) within the proposed drilling location. This homestead is located approx 400m N from one of the tentative locations - Macquarie 4 noted on Map1 Site Plan. NOISE MGMT: Noise is not anticipated to be of concern with the proposed diamond drilling as this style of drilling does not generate excessive noise. Drilling will not occur within 200m of sensitive receptors. Drilling works will be undertaken in daylight hours only. The landholders are fully informed with the proposed drilling of this hole. There are no further sensitive receptors nearby. ANTICIPATED REHAB COMPLETE: 17 Feb 2025**(updated in APO 6.3.24 in line with title expiry). ROCCs for Agricultural land use included with each.		
Duration	Short term		
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	Community Resources: Any diversion of resources to the detriment of other communities or natural systems.		
Potential impacts	There will be no impact to the demand or use of local services and resources for this drill program No diversion of resources required		

Proposed management controls	The area is predominantly open grazing land with sparse vegetation. Any areas of vegetation will be avoided and do not need to be disturbed for this drilling program. Topography is typically flat with many drainage channels that will be avoided for this program. Access to proposed collar locations will be undertaken in close consultation with the landholders. DISTURBANCE: Earthworks and veg clearing is not required. Sites are relatively flat and open. Drill pad areas (approx 10 x 20m) may require minor clearing of grass from the surface. Should this be necessary, care will be taken to ensure to leave root stock to enable existing vegetation regrowth. Negligible impacts likely. Activities must comply with (Exploration Code of Practice: Environmental Management) as per the commitment in the application (APO) including protection of all elements of the environment, culture and heritage. 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 (includes weed growth management). Legislative requirement for landholder access arrangements and compensation. Hours of Operations: 12 hour shifts, 7 days a week. 1 homestead (The Mole) within the proposed drilling location. This homestead is located approx 400m N from one of the tentative locations - Macquarie 4 noted on Map1 Site Plan. NOISE MGMT: Noise is not anticipated to be of concern with the proposed diamond drilling as this style of drilling does not generate excessive noise. Drilling will not occur within 200m of sensitive receptors. Drilling works will be undertaken in daylight hours only. The landholders are fully informed with the proposed drilling of this hole. There are no further sensitive receptors nearby. ANTICIPATED REHAB COMPLETE: 17 Feb 2025**(updated in APO 6.3.24 in line with title expiry). ROCCs for Agricultural land use included with each.		
Duration	Short term		
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	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 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 The area is predominantly open grazing land with sparse vegetation. Any areas of vegetation will be avoided and do not need to be disturbed for this drilling program. Topography is typically flat with many drainage channels that will be avoided for this program. Access to proposed collar locations will be undertaken in close consultation with the landholders. DISTURBANCE: Earthworks and veg clearing is not required. Sites are relatively flat and open. Drill pad areas (approx 10 x 20m) may require minor clearing of grass from the surface. Should this be necessary, care will be taken to ensure to leave root stock to enable existing vegetation regrowth.		

Proposed management controls	Negligible impacts likely. Activities must comply with (Exploration Code of Practice: Environmental Management) as per the commitment in the application (APO). Relevant requirements of this Code include protection of all elements of the environment (water, land, soil, air), culture and heritage. 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. Legislative requirement for landholder access arrangements and compensation limit any potential impacts. Drilling during dry season only, the sites will not be accessed during times of flood. Close consultation with the landholders will continue regularly prior to proposed drilling to ensure that access conditions are favourable. Any areas of vegetation will be avoided and do not need to be disturbed for this drilling program. Topography is typically flat with many drainage channels that will be avoided for this program. Access to proposed collar locations will be undertaken in close consultation with the landholders.		
Duration	N/A		
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	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 drilling program is not anticipated to disrupt, deplete, or destroy any natural resources 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 The area is predominantly open grazing land with sparse vegetation. Any areas of vegetation will be avoided and do not need to be disturbed for this drilling program. Topography is typically flat with many drainage channels that will be avoided for this program. Access to proposed collar locations will be undertaken in close consultation with the landholders. DISTURBANCE: Earthworks and veg clearing is not required. Sites are relatively flat and open. Drill pad areas (approx 10 x 20m) may require minor clearing of grass from the surface. Should this be necessary, care will be taken to ensure to leave root stock to enable existing vegetation regrowth.		
Proposed management controls	Negligible impacts likely. Activities must comply with (Exploration Code of Practice: Environmental Management) as per the commitment in the application (APO). Relevant requirements of this Code include protection of all elements of the environment (water, land, soil, air), culture and heritage. 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. Legislative requirement for landholder access arrangements and compensation limit any potential impacts. Drilling during dry season only, the sites will not be accessed during times of flood. Close consultation with the landholders will continue regularly prior to proposed drilling to ensure that access conditions are favourable. Any areas of vegetation will be avoided and do not need to be disturbed for this drilling program. Topography is typically flat with many drainage channels that will be avoided for this program. Access to proposed collar locations will be undertaken in close consultation with the landholders.		
Duration	Short term		
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	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. The area is predominantly open grazing land with sparse vegetation. Any areas of vegetation will be avoided and do not need to be disturbed for this drilling program. Topography is typically flat with many drainage channels that will be avoided for this program. Access to proposed collar locations will be undertaken in close consultation with the landholders. DISTURBANCE: Earthworks and veg clearing is not required. Sites are relatively flat and open. Drill pad areas (approx 10 x 20m) may require minor clearing of grass from the surface. Should this be necessary, care will be taken to ensure to leave root stock to enable existing vegetation regrowth. SEED search 10.1.24: Ramsar Wetland – Macquarie Marshes directly north of proposed drilling areas. Areas of Biodiversity Value identified West of drilling area/title boundary along Wambuul Macquarie River, and North within Macquarie Marshes. All drillholes within PCTs within (PCT 168, 181 and 204) and surrounding (PCT 182, 212 and PCT 454) proposed drilling area. While all but PCT 454 associated with NSW listed TEC 10065 (Artesian Springs Ecological Community in the Great Artesian Basin). None associated with MNES TECs (Federally listed). MNES search dated 19/4/23 – - the proposed activity is "Within Ramsar site (Macquarie Marshes)" - Endangered TECs: "Coolibah - Black Box Woodlands of the Darling Riverine Plains and the Brigalow Belt South Bioregions" AND "Poplar Box Grassy Woodland on Alluvial Plains Endangered Community" likely to occur within area		

Proposed management controls	On the MNES search there are 22 listed Threatened species, 4 listed Threatened Ecological Communities and 8 Listed Migratory Species. Of the 22 threatened species the Silver Perch, Bidyan and the Curlew Sandpiper are considered to be critically endangered. 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 Silver Perch will be in waterways which will not be affected by proposed works. The four threatened communities show Coolibah Black Box and Poplar Box Grassy to be likely in this area there are no recovery plans for this species. The Macquarie Marshes is located close to the east of the proposed drilling area - approximately 200m. When the marshes occasionally flood the proposed drilling area would be affected. Site access will not be undertaken in times of flood. The Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) comes into force when a proposed action is likely to have a significant impact on a matter of national environmental significance (MNES), such as a listed threatened species or ecological community. The applicant held a pre-referral meeting with the Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEEW)on 28 March 2024. The referral was in relation to a potential impact on the Ramsar listed Wetland – the Macquarie Marshes. During their meeting, DCCEEW advised the applicant that no formal response regarding the pre-referral meeting would be provided, and that the applicant should undertake a self-assessment to determine whether a significant impact would occur. Under the Commonwealth EPBC Act, the onus is on the person proposing to take an action to determine whether there is likely to be a significant impact on any MNES and if so, to prepare a referral for the Commonwealth Minister's consideration as to whether or not the project would require approval. If approval is required, then this is a separate approval process under Commonwealth legislation and the exploration activity cannot be undertaken until this Commonwealth approval has been granted. The granting of an approval to undertake exploration activities under NSW legislation does not negate the need for a proponent to obtain any separate Commonwealth approvals prior to proceeding. The applicant 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 during dry season only, the sites will not be accessed during times of flood. Close consultation with the landholders will continue regularly prior to proposed drilling to ensure that access conditions are favourable. Any areas of vegetation will be avoided and do not need to be disturbed for this drilling program. Topography is typically flat with many drainage channels that will be avoided for this program. Access to proposed collar locations will be undertaken in close consultation with the landholders.		
Duration	N/A		
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?	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	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	Activity not permitted in these areas.		
Proposed management controls	N/A		
Duration	N/A		
Application ranking			
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?**	
Can the impacts be reversed?	N/A	**Ranking of potential significance**	
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	Activity not permitted in these areas.		
Proposed management controls	N/A		
Duration	N/A		
Application ranking			
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?**	
Can the impacts be reversed?	N/A	**Ranking of potential significance**	
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	Activity not permitted in these areas.		
Proposed management controls	N/A		
Duration	N/A		
Application ranking			
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?**	
Can the impacts be reversed?	N/A	**Ranking of potential significance**	
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 area is predominantly open grazing land with sparse vegetation. Any areas of vegetation will be avoided and do not need to be disturbed for this drilling program. Topography is typically flat with many drainage channels that will be avoided for this program. Access to proposed collar locations will be undertaken in close consultation with the landholders. DISTURBANCE: Earthworks and veg clearing is not required. Sites are relatively flat and open. Drill pad areas (approx 10 x 20m) may require minor clearing of grass from the surface. Should this be necessary, care will be taken to ensure to leave root stock to enable existing vegetation regrowth. SEED search 10.1.24: Ramsar Wetland – Macquarie Marshes directly north of proposed drilling areas. Areas of Biodiversity Value identified West of drilling area/title boundary along Wambuul Macquarie River, and North within Macquarie Marshes. All drillholes within PCTs within (PCT 168, 181 and 204) and surrounding (PCT 182, 212 and PCT 454) proposed drilling area. While all but PCT 454 associated with NSW listed TEC 10065 (Artesian Springs Ecological Community in the Great Artesian Basin). None associated with MNES TECs (Federally listed). MNES search dated 19/4/23 – - the proposed activity is "Within Ramsar site (Macquarie Marshes)" - Endangered TECs: "Coolibah - Black Box Woodlands of the Darling Riverine Plains and the Brigalow Belt South Bioregions" AND "Poplar Box Grassy Woodland on Alluvial Plains Endangered Community" likely to occur within area

Proposed management controls	Activities must comply with (Exploration Code of Practice: Environmental Management) as per the commitment in the application (APO). Relevant requirements of this Code include: a. Activities must implement all measures to prevent causing any adverse impacts on water quality or quantity. b. All sediment and erosion controls (including drainage from roads/access tracks) to be managed in accordance with Blue Book. c. No significant impact on any threatened species, threatened populations, threatened ecological communities, or their habitats. d. No removal of vegetation in waterfront land. 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. On the MNES search there are 22 listed Threatened species, 4 listed Threatened Ecological Communities and 8 Listed Migratory Species. Of the 22 threatened species the Silver Perch, Bidyan and the Curlew Sandpiper are considered to be critically endangered. 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 Silver Perch will be in waterways which will not be affected by proposed works. The four threatened communities show Coolibah Black Box and Poplar Box Grassy to be likely in this area there are no recovery plans for this species. The Macquarie Marshes is located close to the east of the proposed drilling area - approximately 200m. When the marshes occasionally flood the proposed drilling area would be affected. Site access will not be undertaken in times of flood. The Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) comes into force when a proposed action is likely to have a significant impact on a matter of national environmental significance (MNES), such as a listed threatened species or ecological community. The applicant held a pre-referral meeting with the Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEEW)on 28 March 2024. The referral was in relation to a potential impact on the Ramsar listed Wetland – the Macquarie Marshes. During their meeting, DCCEEW advised the applicant that no formal response regarding the pre-referral meeting would be provided, and that the applicant should undertake a self-assessment to determine whether a significant impact would occur. Under the Commonwealth EPBC Act, the onus is on the person proposing to take an action to determine whether there is likely to be a significant impact on any MNES and if so, to prepare a referral for the Commonwealth Minister's consideration as to whether or not the project would require approval. If approval is required, then this is a separate approval process under Commonwealth legislation and the exploration activity cannot be undertaken until this Commonwealth approval has been granted. The granting of an approval to undertake exploration activities under NSW legislation does not negate the need for a proponent to obtain any separate Commonwealth approvals prior to proceeding. The applicant 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 during dry season only, the sites will not be accessed during times of flood. Close consultation with the landholders will continue regularly prior to proposed drilling to ensure that access conditions are favourable. Any areas of vegetation will be avoided and do not need to be disturbed for this drilling program. Topography is typically flat with many drainage channels that will be avoided for this program. Access to proposed collar locations will be undertaken in close consultation with the landholders.		
Duration	Short term		
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	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 area is predominantly open grazing land with sparse vegetation. Any areas of vegetation will be avoided and do not need to be disturbed for this drilling program. Topography is typically flat with many drainage channels that will be avoided for this program. Access to proposed collar locations will be undertaken in close consultation with the landholders. DISTURBANCE: Earthworks and veg clearing is not required. Sites are relatively flat and open. Drill pad areas (approx 10 x 20m) may require minor clearing of grass from the surface. Should this be necessary, care will be taken to ensure to leave root stock to enable existing vegetation regrowth. SEED search 10.1.24: Ramsar Wetland – Macquarie Marshes directly north of proposed drilling areas. Areas of Biodiversity Value identified West of drilling area/title boundary along Wambuul Macquarie River, and North within Macquarie Marshes. All drillholes within PCTs within (PCT 168, 181 and 204) and surrounding (PCT 182, 212 and PCT 454) proposed drilling area. While all but PCT 454 associated with NSW listed TEC 10065 (Artesian Springs Ecological Community in the Great Artesian Basin). None associated with MNES TECs (Federally listed). MNES search dated 19/4/23 – - the proposed activity is "Within Ramsar site (Macquarie Marshes)" - Endangered TECs: "Coolibah - Black Box Woodlands of the Darling Riverine Plains and the Brigalow Belt South Bioregions" AND "Poplar Box Grassy Woodland on Alluvial Plains Endangered Community" likely to occur within area
Proposed management controls	On the MNES search there are 22 listed Threatened species, 4 listed Threatened Ecological Communities and 8 Listed Migratory Species. Of the 22 threatened species the Silver Perch, Bidyan and the Curlew Sandpiper are considered to be critically endangered. 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 Silver Perch will be in waterways which will not be affected by proposed works. The four threatened communities show Coolibah Black Box and Poplar Box Grassy to be likely in this area there are no recovery plans for this species. The Macquarie Marshes is located close to the east of the proposed drilling area - approximately 200m. When the marshes occasionally flood the proposed drilling area would be affected. Site access will not be undertaken in times of flood. The Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) comes into force when a proposed action is likely to have a significant impact on a matter of national environmental significance (MNES), such as a listed threatened species or ecological community. The applicant held a pre-referral meeting with the Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEEW)on 28 March 2024. The referral was in relation to a potential impact on the Ramsar listed Wetland – the Macquarie Marshes. During their meeting, DCCEEW advised the applicant that no formal response regarding the pre-referral meeting would be provided, and that the applicant should undertake a self-assessment to determine whether a significant impact would occur. Under the Commonwealth EPBC Act, the onus is on the person proposing to take an action to determine whether there is likely to be a significant impact on any MNES and if so, to prepare a referral for the Commonwealth Minister's consideration as to whether or not the project would require approval. If approval is required, then this is a separate approval process under Commonwealth legislation and the exploration activity cannot be undertaken until this Commonwealth approval has been granted. The granting of an approval to undertake exploration activities under NSW legislation does not negate the need for a proponent to obtain any separate Commonwealth approvals prior to proceeding. The applicant 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 during dry season only, the sites will not be accessed during times of flood. Close consultation with the landholders will continue regularly prior to proposed drilling to ensure that access conditions are favourable. Any areas of vegetation will be avoided and do not need to be disturbed for this drilling program. Topography is typically flat with many drainage channels that will be avoided for this program. Access to proposed collar locations will be undertaken in close consultation with the landholders.
Duration	N/A
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	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	NA		
Proposed management controls	N/A		
Duration	N/A		
Application ranking			
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?**	
Can the impacts be reversed?	N/A	**Ranking of potential significance**	
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	NA		
Proposed management controls	N/A		
Duration	N/A		
Application ranking			
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?**	
Can the impacts be reversed?	N/A	**Ranking of potential significance**	
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	The area is predominantly open grazing land with sparse vegetation. Any areas of vegetation will be avoided and do not need to be disturbed for this drilling program. Topography is typically flat with many drainage channels that will be avoided for this program. Access to proposed collar locations will be undertaken in close consultation with the landholders. DISTURBANCE: Earthworks and veg clearing is not required. Sites are relatively flat and open. Drill pad areas (approx 10 x 20m) may require minor clearing of grass from the surface. Should this be necessary, care will be taken to ensure to leave root stock to enable existing vegetation regrowth. SEED search 10.1.24: Ramsar Wetland – Macquarie Marshes directly north of proposed drilling areas. Areas of Biodiversity Value identified West of drilling area/title boundary along Wambuul Macquarie River, and North within Macquarie Marshes. All drillholes within PCTs within (PCT 168, 181 and 204) and surrounding (PCT 182, 212 and PCT 454) proposed drilling area. While all but PCT 454 associated with NSW listed TEC 10065 (Artesian Springs Ecological Community in the Great Artesian Basin). None associated with MNES TECs (Federally listed). MNES search dated 19/4/23 – - the proposed activity is "Within Ramsar site (Macquarie Marshes)" - Endangered TECs: "Coolibah - Black Box Woodlands of the Darling Riverine Plains and the Brigalow Belt South Bioregions" AND "Poplar Box Grassy Woodland on Alluvial Plains Endangered Community" likely to occur within area		
Proposed management controls	The Macquarie Marshes is located close to the east of the proposed drilling area - approximately 200m. When the marshes occasionally flood the proposed drilling area would be affected. Site access will not be undertaken in times of flood. The Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) comes into force when a proposed action is likely to have a significant impact on a matter of national environmental significance (MNES), such as a listed threatened species or ecological community. The applicant held a pre-referral meeting with the Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEEW)on 28 March 2024. The referral was in relation to a potential impact on the Ramsar listed Wetland – the Macquarie Marshes. During their meeting, DCCEEW advised the applicant that no formal response regarding the pre-referral meeting would be provided, and that the applicant should undertake a self-assessment to determine whether a significant impact would occur. Under the Commonwealth EPBC Act, the onus is on the person proposing to take an action to determine whether there is likely to be a significant impact on any MNES and if so, to prepare a referral for the Commonwealth Minister's consideration as to whether or not the project would require approval. If approval is required, then this is a separate approval process under Commonwealth legislation and the exploration activity cannot be undertaken until this Commonwealth approval has been granted. The granting of an approval to undertake exploration activities under NSW legislation does not negate the need for a proponent to obtain any separate Commonwealth approvals prior to proceeding. The applicant 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 during dry season only, the sites will not be accessed during times of flood. Close consultation with the landholders will continue regularly prior to proposed drilling to ensure that access conditions are favourable. Any areas of vegetation will be avoided and do not need to be disturbed for this drilling program. Topography is typically flat with many drainage channels that will be avoided for this program. Access to proposed collar locations will be undertaken in close consultation with the landholders.		
Duration	N/A		
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?	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	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	NA		
Proposed management controls	N/A		
Duration	N/A		
Application ranking			
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?**	
Can the impacts be reversed?	N/A	**Ranking of potential significance**	
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	NA		
Proposed management controls	N/A		
Duration	N/A		
Application ranking			
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?**	
Can the impacts be reversed?	N/A	**Ranking of potential significance**	
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	NA		
Proposed management controls	N/A		
Duration	N/A		
Application ranking			
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?**	
Can the impacts be reversed?	N/A	**Ranking of potential significance**	
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	NA		
Proposed management controls	N/A		
Duration	N/A		
Application ranking			
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**	Low
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 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 The area is predominantly open grazing land with sparse vegetation. Any areas of vegetation will be avoided and do not need to be disturbed for this drilling program. Topography is typically flat with many drainage channels that will be avoided for this program. Access to proposed collar locations will be undertaken in close consultation with the landholders. DISTURBANCE: Earthworks and veg clearing is not required. Sites are relatively flat and open. Drill pad areas (approx 10 x 20m) may require minor clearing of grass from the surface. Should this be necessary, care will be taken to ensure to leave root stock to enable existing vegetation regrowth. SEED search 10.1.24: All drillholes within Bushfire Prone Land Veg Cat 3 (Medium Risk)		
Proposed management controls	Work will be undertaken in dry conditions and not during wet weather. Management controls Proposed works will be undertaken in open agricultural land, rotating cropping and grazing land and away from any vegetated areas where species are more likely. Drilling will only occur during dry conditions, the sites will not be accessed during times of flood. Close consultation with the landholders will continue regularly prior to proposed drilling to ensure that access conditions are favourable. No waterways will be affected by this proposed drilling. As a minimum requirement all drilling will be completed at least 40m from any drainage system Any existing/proposed access tracks can be used as firebreaks in event of fire.		
Duration	Short term		
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?	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?	Fully	**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 area is predominantly open grazing land with sparse vegetation. Any areas of vegetation will be avoided and do not need to be disturbed for this drilling program. Topography is typically flat with many drainage channels that will be avoided for this program. Access to proposed collar locations will be undertaken in close consultation with the landholders. DISTURBANCE: Earthworks and veg clearing is not required. Sites are relatively flat and open. Drill pad areas (approx 10 x 20m) may require minor clearing of grass from the surface. Should this be necessary, care will be taken to ensure to leave root stock to enable existing vegetation regrowth. Limited potential for any significant change in the demographic structure of the community. The proposed program is small and will not affect the demographics of the local communities. Negligible impacts and only localised changes in demand for community resources. Minimal increase in demand for accommodation, food, mechanical and fuel supplies, etc. Not large enough to warrant significant changes in supply.		
Proposed management controls	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. Negligible impacts likely due to low personnel numbers and temporary nature of exploration. Generally positive for suppliers of services and goods utilised.		
Duration	Short term		
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	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	Environmental impacts from activities not of a nature to cause any significant or long term change or disruption to community. Areas used for exploration activities, temporarily removed from natural systems and / community use. Short term noise, air quality and visual impacts. The area is predominantly open grazing land with sparse vegetation. Any areas of vegetation will be avoided and do not need to be disturbed for this drilling program. Topography is typically flat with many drainage channels that will be avoided for this program. Access to proposed collar locations will be undertaken in close consultation with the landholders. DISTURBANCE: Earthworks and veg clearing is not required. Sites are relatively flat and open. Drill pad areas (approx 10 x 20m) may require minor clearing of grass from the surface. Should this be necessary, care will be taken to ensure to leave root stock to enable existing vegetation regrowth.		
Proposed management controls	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. Activities must comply with (Exploration Code of Practice: Environmental Management) as per the commitment in the application (APO). Relevant requirements of this Code include minimising potential impacts on all aspects of the environment (including water, land, air). 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 (including sealing of any boreholes).		
Duration	Short term		
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?	Partly	**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	Impacts from activities not of a nature to cause any significant or long term change or disruption to community. The small program will not disadvantage the community or individuals in the area. Limited potential to significantly impact on individuals or communities - short term impacts only. Areas used for exploration activities, temporarily removed from natural systems and / community use. Short term noise, air quality and visual impacts. The area is predominantly open grazing land with sparse vegetation. Any areas of vegetation will be avoided and do not need to be disturbed for this drilling program. Topography is typically flat with many drainage channels that will be avoided for this program. Access to proposed collar locations will be undertaken in close consultation with the landholders. DISTURBANCE: Earthworks and veg clearing is not required. Sites are relatively flat and open. Drill pad areas (approx 10 x 20m) may require minor clearing of grass from the surface. Should this be necessary, care will be taken to ensure to leave root stock to enable existing vegetation regrowth.		
Proposed management controls	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. Activities must comply with (Exploration Code of Practice: Environmental Management) as per the commitment in the application (APO). Relevant requirements of this Code include protection of all elements of the environment (water, land, soil, air), culture and heritage. 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. Legislative requirement for landholder access arrangements and compensation limit any potential impacts. Compensation under Mining Act available to mitigate compensation. Activities must comply with WHS legislative requirements.		
Duration	Short term		
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	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	Activities not of a nature to cause any significant or long term health, safety, privacy or welfare impacts. The impacts are minimal and not within proximity to sensitive receptors or communities. Limited potential to significantly impact on individuals or communities - short term impacts only. Short term and temporary noise, air quality and visual impacts. The area is predominantly open grazing land with sparse vegetation. Any areas of vegetation will be avoided and do not need to be disturbed for this drilling program. Topography is typically flat with many drainage channels that will be avoided for this program. Access to proposed collar locations will be undertaken in close consultation with the landholders. DISTURBANCE: Earthworks and veg clearing is not required. Sites are relatively flat and open. Drill pad areas (approx 10 x 20m) may require minor clearing of grass from the surface. Should this be necessary, care will be taken to ensure to leave root stock to enable existing vegetation regrowth. Hours of Operations: 12 hour shifts, 7 days a week. 1 homestead (The Mole) within the proposed drilling location. This homestead is located approx 400m N from one of the tentative locations - Macquarie 4 noted on Map1 Site Plan. NOISE MGMT: Noise is not anticipated to be of concern with the proposed diamond drilling as this style of drilling does not generate excessive noise. Drilling will not occur within 200m of sensitive receptors. Drilling works will be undertaken in daylight hours only. The landholders are fully informed with the proposed drilling of this hole. There are no further sensitive receptors nearby.		
Proposed management controls	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. Activities must comply with (Exploration Code of Practice: Environmental Management) as per the commitment in the application (APO). Relevant requirements of this Code include protection of all elements of the environment (water, land, soil, air), culture and heritage. 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. Legislative requirement for landholder access arrangements and compensation limit any potential impacts. Compensation under Mining Act available to mitigate compensation. Activities must comply with WHS legislative requirements. Hours of Operations: 12 hour shifts, 7 days a week. 1 homestead (The Mole) within the proposed drilling location. This homestead is located approx 400m N from one of the tentative locations - Macquarie 4 noted on Map1 Site Plan. NOISE MGMT: Noise is not anticipated to be of concern with the proposed diamond drilling as this style of drilling does not generate excessive noise. Drilling will not occur within 200m of sensitive receptors. Drilling works will be undertaken in daylight hours only. The landholders are fully informed with the proposed drilling of this hole. There are no further sensitive receptors nearby.		
Duration	Short term		
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	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	Negligible potential to effect a locality, place or building having aesthetic, anthropological, archaeological, architectural, cultural, historical, scientific or social significance or other special value. There will be no detrimental effect on the aesthetics, or any other special value Short term and temporary impacts only. The area is predominantly open grazing land with sparse vegetation. Any areas of vegetation will be avoided and do not need to be disturbed for this drilling program. Topography is typically flat with many drainage channels that will be avoided for this program. Access to proposed collar locations will be undertaken in close consultation with the landholders. DISTURBANCE: Earthworks and veg clearing is not required. Sites are relatively flat and open. Drill pad areas (approx 10 x 20m) may require minor clearing of grass from the surface. Should this be necessary, care will be taken to ensure to leave root stock to enable existing vegetation regrowth. Hours of Operations: 12 hour shifts, 7 days a week. 1 homestead (The Mole) within the proposed drilling location. This homestead is located approx 400m N from one of the tentative locations - Macquarie 4 noted on Map1 Site Plan. NOISE MGMT: Noise is not anticipated to be of concern with the proposed diamond drilling as this style of drilling does not generate excessive noise. Drilling will not occur within 200m of sensitive receptors. Drilling works will be undertaken in daylight hours only. The landholders are fully informed with the proposed drilling of this hole. There are no further sensitive receptors nearby.		
Proposed management controls	Negligible impacts likely due to low impact of complying exploration activities and temporary nature of exploration. 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. Activities must comply with (Exploration Code of Practice: Environmental Management) as per the commitment in the application (APO). Impacts limited to immediate vicinity of exploration activity. The area is predominantly open grazing land with sparse vegetation. Any areas of vegetation will be avoided and do not need to be disturbed for this drilling program. Topography is typically flat with many drainage channels that will be avoided for this program. Access to proposed collar locations will be undertaken in close consultation with the landholders. DISTURBANCE: Earthworks and veg clearing is not required. Sites are relatively flat and open. Drill pad areas (approx 10 x 20m) may require minor clearing of grass from the surface. Should this be necessary, care will be taken to ensure to leave root stock to enable existing vegetation regrowth. Hours of Operations: 12 hour shifts, 7 days a week. 1 homestead (The Mole) within the proposed drilling location. This homestead is located approx 400m N from one of the tentative locations - Macquarie 4 noted on Map1 Site Plan. NOISE MGMT: Noise is not anticipated to be of concern with the proposed diamond drilling as this style of drilling does not generate excessive noise. Drilling will not occur within 200m of sensitive receptors. Drilling works will be undertaken in daylight hours only. The landholders are fully informed with the proposed drilling of this hole. There are no further sensitive receptors nearby.		
Duration	Short term		
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?	Partly	**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	Community likely to include members who have concerns about possible future mining following any exploration program. Short term and temporary impacts only. The area is predominantly open grazing land with sparse vegetation. Any areas of vegetation will be avoided and do not need to be disturbed for this drilling program. Topography is typically flat with many drainage channels that will be avoided for this program. Access to proposed collar locations will be undertaken in close consultation with the landholders. DISTURBANCE: Earthworks and veg clearing is not required. Sites are relatively flat and open. Drill pad areas (approx 10 x 20m) may require minor clearing of grass from the surface. Should this be necessary, care will be taken to ensure to leave root stock to enable existing vegetation regrowth. Hours of Operations: 12 hour shifts, 7 days a week. 1 homestead (The Mole) within the proposed drilling location. This homestead is located approx 400m N from one of the tentative locations - Macquarie 4 noted on Map1 Site Plan. NOISE MGMT: Noise is not anticipated to be of concern with the proposed diamond drilling as this style of drilling does not generate excessive noise. Drilling will not occur within 200m of sensitive receptors. Drilling works will be undertaken in daylight hours only. The landholders are fully informed with the proposed drilling of this hole. There are no further sensitive receptors nearby.		
Proposed management controls	Short term impacts on the community and predominantly limited to immediate site. Subject to landholder agreement and any compensation. 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. 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. The area is predominantly open grazing land with sparse vegetation. Any areas of vegetation will be avoided and do not need to be disturbed for this drilling program. Topography is typically flat with many drainage channels that will be avoided for this program. Access to proposed collar locations will be undertaken in close consultation with the landholders. DISTURBANCE: Earthworks and veg clearing is not required. Sites are relatively flat and open. Drill pad areas (approx 10 x 20m) may require minor clearing of grass from the surface. Should this be necessary, care will be taken to ensure to leave root stock to enable existing vegetation regrowth. Hours of Operations: 12 hour shifts, 7 days a week. 1 homestead (The Mole) within the proposed drilling location. This homestead is located approx 400m N from one of the tentative locations - Macquarie 4 noted on Map1 Site Plan. NOISE MGMT: Noise is not anticipated to be of concern with the proposed diamond drilling as this style of drilling does not generate excessive noise. Drilling will not occur within 200m of sensitive receptors. Drilling works will be undertaken in daylight hours only. The landholders are fully informed with the proposed drilling of this hole. There are no further sensitive receptors nearby.		
Duration	Short term		
Application ranking			
What is the confidence in predicting impacts?	Medium	**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: Impacts on disadvantaged communities.		

Potential impacts	No negative impacts predicted. The area is predominantly open grazing land with sparse vegetation. Any areas of vegetation will be avoided and do not need to be disturbed for this drilling program. Topography is typically flat with many drainage channels that will be avoided for this program. Access to proposed collar locations will be undertaken in close consultation with the landholders. DISTURBANCE: Earthworks and veg clearing is not required. Sites are relatively flat and open. Drill pad areas (approx 10 x 20m) may require minor clearing of grass from the surface. Should this be necessary, care will be taken to ensure to leave root stock to enable existing vegetation regrowth. Hours of Operations: 12 hour shifts, 7 days a week. 1 homestead (The Mole) within the proposed drilling location. This homestead is located approx 400m N from one of the tentative locations - Macquarie 4 noted on Map1 Site Plan. NOISE MGMT: Noise is not anticipated to be of concern with the proposed diamond drilling as this style of drilling does not generate excessive noise. Drilling will not occur within 200m of sensitive receptors. Drilling works will be undertaken in daylight hours only. The landholders are fully informed with the proposed drilling of this hole. There are no further sensitive receptors nearby.		
Proposed management controls	Short term impacts on the community and predominantly limited to immediate site. Subject to landholder agreement and any compensation. 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. 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	Short term		
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 may affect economic activity (positive or negative), including a decrease to net economic welfare.		
Potential impacts	No significant impacts predicted. Minimal increase in demand for accommodation, food, mechanical and fuel supplies, etc. Not large enough to warrant significant changes in supply. The area is predominantly open grazing land with sparse vegetation. Any areas of vegetation will be avoided and do not need to be disturbed for this drilling program. Topography is typically flat with many drainage channels that will be avoided for this program. Access to proposed collar locations will be undertaken in close consultation with the landholders. DISTURBANCE: Earthworks and veg clearing is not required. Sites are relatively flat and open. Drill pad areas (approx 10 x 20m) may require minor clearing of grass from the surface. Should this be necessary, care will be taken to ensure to leave root stock to enable existing vegetation regrowth.		
Proposed management controls	Negligible impacts likely due to low personnel numbers and temporary nature of exploration. Generally positive for suppliers of services and goods utilised.		
Duration	Short term		
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 that result in a decrease in the economic stability of the community.		
Potential impacts	Activities not of a scale to warrant changes in supply side. Temporary increase in demand will result in increased income for some suppliers. The area is predominantly open grazing land with sparse vegetation. Any areas of vegetation will be avoided and do not need to be disturbed for this drilling program. Topography is typically flat with many drainage channels that will be avoided for this program. Access to proposed collar locations will be undertaken in close consultation with the landholders. DISTURBANCE: Earthworks and veg clearing is not required. Sites are relatively flat and open. Drill pad areas (approx 10 x 20m) may require minor clearing of grass from the surface. Should this be necessary, care will be taken to ensure to leave root stock to enable existing vegetation regrowth.		
Proposed management controls	Negligible impacts likely due to low personnel numbers and temporary nature of exploration. Generally positive for suppliers of services and goods utilised.		
Duration	Short term		
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?	Partly	**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	Rehabilitation security bond covers any future public liability for rehabilitation. Investment in exploration may lead to significant mining investment. Limited long term negative economic impacts from exploration. The area is predominantly open grazing land with sparse vegetation. Any areas of vegetation will be avoided and do not need to be disturbed for this drilling program. Topography is typically flat with many drainage channels that will be avoided for this program. Access to proposed collar locations will be undertaken in close consultation with the landholders. DISTURBANCE: Earthworks and veg clearing is not required. Sites are relatively flat and open. Drill pad areas (approx 10 x 20m) may require minor clearing of grass from the surface. Should this be necessary, care will be taken to ensure to leave root stock to enable existing vegetation regrowth.		
Proposed management controls	Small increase in public revenue associated with exploration, including taxes from wages.		
Duration	Short term		
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?	No	**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	Limited potential to significantly impact on locality, places, landscapes or buildings. Short term noise, air quality and visual impacts. There are no listed heritage items, places, or areas in this proposed drilling area The area is predominantly open grazing land with sparse vegetation. Any areas of vegetation will be avoided and do not need to be disturbed for this drilling program. Topography is typically flat with many drainage channels that will be avoided for this program. Access to proposed collar locations will be undertaken in close consultation with the landholders. DISTURBANCE: Earthworks and veg clearing is not required. Sites are relatively flat and open. Drill pad areas (approx 10 x 20m) may require minor clearing of grass from the surface. Should this be necessary, care will be taken to ensure to leave root stock to enable existing vegetation regrowth There are no listed Aboriginal Sites noted within the proposed drilling area on the attached AHIMS search. The Macquarie River at its closest point is located less than 200m from the south eastern point of the proposed drilling area. No drillholes will be advanced within 200m of the Macquarie River. There are many drainage areas within the proposed area and drillholes will be moved so they do not sit within 40m of any drainages.. There are no items of historic cultural or natural heritage listed within the searches performed for this proposed drilling program and as such no impact envisaged. This area is within the extents of lands classified as wetlands; braided swamps, channels and floodplain of the Macquarie River, however is not part of the Macquarie Marshes Nature Reserve and all due care will be taken regarding access. This drilling can only be carried out in times of dry and in close consultation with the landholder who best understands his land to ensure no adverse effects occur from the proposed activities.		
Proposed management controls	Limited potential to significantly impact on locality, places, landscapes or buildings. Short term noise, air quality and visual impacts. There are no listed heritage items, places, or areas in this proposed drilling area Activities must comply with (Exploration Code of Practice: Environmental Management) as per the commitment in the application (APO). Relevant requirements of this Code include minimising potential impacts on all aspects of the environment (including water, land, air), culture and heritage (Aboriginal and Non-Indigenous heritage). All disturbed areas to be rehabilitated in accordance with title conditions (Exploration Code of Practice: Rehabilitation). Rehabilitation to occur as soon as practicable after completion of activity (including sealing of any boreholes).		
Duration	Short term		
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?	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	Limited potential to significantly impact on visual or scenic landscape. The proposed drilling will be of short duration, is over 200m away from nearest residence, and no night works so no lights. Short term noise, air quality and visual impacts. Potential for temporary impact on aesthetics of a locality. 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 The area is predominantly open grazing land with sparse vegetation. Any areas of vegetation will be avoided and do not need to be disturbed for this drilling program. Topography is typically flat with many drainage channels that will be avoided for this program. Access to proposed collar locations will be undertaken in close consultation with the landholders. DISTURBANCE: Earthworks and veg clearing is not required. Sites are relatively flat and open. Drill pad areas (approx 10 x 20m) may require minor clearing of grass from the surface. Should this be necessary, care will be taken to ensure to leave root stock to enable existing vegetation regrowth. Hours of Operations: 12 hour shifts, 7 days a week. 1 homestead (The Mole) within the proposed drilling location. This homestead is located approx 400m N from one of the tentative locations - Macquarie 4 noted on Map1 Site Plan.		
Proposed management controls	Activities must comply with (Exploration Code of Practice: Environmental Management) as per the commitment in the application (APO). Relevant requirements of this Code include minimising potential impacts on all aspects of the environment (including water, land, air), culture and heritage (Aboriginal and Non-Indigenous heritage). No drilling proposed within 200m of homestead. 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 (including sealing of any boreholes). NOISE MGMT: Noise is not anticipated to be of concern with the proposed diamond drilling as this style of drilling does not generate excessive noise. Drilling will not occur within 200m of sensitive receptors. Drilling works will be undertaken in daylight hours only. The landholders are fully informed with the proposed drilling of this hole. There are no further sensitive receptors nearby.		
Duration	Short term		
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?	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	Limited potential to significantly impact on visual or scenic landscape. The proposed drilling will be of short duration, is over 200m away from nearest residence, and no night works so no lights. Short term noise, air quality and visual impacts. Potential for temporary impact on aesthetics of a locality. The area is predominantly open grazing land with sparse vegetation. Any areas of vegetation will be avoided and do not need to be disturbed for this drilling program. Topography is typically flat with many drainage channels that will be avoided for this program. Access to proposed collar locations will be undertaken in close consultation with the landholders. DISTURBANCE: Earthworks and veg clearing is not required. Sites are relatively flat and open. Drill pad areas (approx 10 x 20m) may require minor clearing of grass from the surface. Should this be necessary, care will be taken to ensure to leave root stock to enable existing vegetation regrowth. Hours of Operations: 12 hour shifts, 7 days a week. 1 homestead (The Mole) within the proposed drilling location. This homestead is located approx 400m N from one of the tentative locations - Macquarie 4 noted on Map1 Site Plan.		
Proposed management controls	Short term impacts predominantly limited to immediate site. Activities must comply with (Exploration Code of Practice: Environmental Management) as per the commitment in the application (APO). Relevant requirements of this Code include minimising potential impacts on all aspects of the environment (including water, land, air), culture and heritage (Aboriginal and Non-Indigenous heritage). No drilling proposed within 200m of homestead. 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 (including sealing of any boreholes).		
Duration	Short term		
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?	Partly	**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	Short term ground disturbance. Potential for temporary impact on aesthetics of a locality. The area is predominantly open grazing land with sparse vegetation. Any areas of vegetation will be avoided and do not need to be disturbed for this drilling program. Topography is typically flat with many drainage channels that will be avoided for this program. Access to proposed collar locations will be undertaken in close consultation with the landholders. DISTURBANCE: Earthworks and veg clearing is not required. Sites are relatively flat and open. Drill pad areas (approx 10 x 20m) may require minor clearing of grass from the surface. Should this be necessary, care will be taken to ensure to leave root stock to enable existing vegetation regrowth. AHIMS search 19/4/23 – There are no listed Aboriginal Sites noted within the proposed drilling area on the attached AHIMS search. The Macquarie River at its closest point is located less than 200m from the south eastern point of the proposed drilling area. No drillholes will be advanced within 200m of the Macquarie River. There are many drainage areas within the proposed area and drillholes will be moved so they do not sit within 40m of any drainages.		

Proposed management controls	Activities must comply with (Exploration Code of Practice: Environmental Management) as per the commitment in the application (APO). Relevant requirements of this Code include minimising potential impacts on all aspects of the environment (including water, land, air), culture and heritage (Aboriginal and Non-Indigenous heritage). All disturbed areas to be rehabilitated in accordance with title conditions (Exploration Code of Practice: Rehabilitation). Rehabilitation to occur as soon as practicable after completion of activity (including sealing of any boreholes). 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. No drillholes will be advanced within 200m of the Macquarie River.		
Duration	Short term		
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?	Medium Resilience	**What is the level of public concern?**	Medium
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: Any impacts on known Aboriginal objects or Aboriginal places.		
Potential impacts	Short term ground disturbance. Potential for impact on Aboriginal objects and places through ground disturbance, excavations, vegetation clearing, etc. The area is predominantly open grazing land with sparse vegetation. Any areas of vegetation will be avoided and do not need to be disturbed for this drilling program. Topography is typically flat with many drainage channels that will be avoided for this program. Access to proposed collar locations will be undertaken in close consultation with the landholders. DISTURBANCE: Earthworks and veg clearing is not required. Sites are relatively flat and open. Drill pad areas (approx 10 x 20m) may require minor clearing of grass from the surface. Should this be necessary, care will be taken to ensure to leave root stock to enable existing vegetation regrowth. AHIMS search 19/4/23 – There are no listed Aboriginal Sites noted within the proposed drilling area on the attached AHIMS search. The Macquarie River at its closest point is located less than 200m from the south eastern point of the proposed drilling area. No drillholes will be advanced within 200m of the Macquarie River. There are many drainage areas within the proposed area and drillholes will be moved so they do not sit within 40m of any drainages.		
Proposed management controls	Activities must comply with (Exploration Code of Practice: Environmental Management) as per the commitment in the application (APO). Relevant requirements of this Code include minimising potential impacts on all aspects of the environment (including water, land, air), culture and heritage (Aboriginal and Non-Indigenous heritage). All disturbed areas to be rehabilitated in accordance with title conditions (Exploration Code of Practice: Rehabilitation). Rehabilitation to occur as soon as practicable after completion of activity (including sealing of any boreholes). 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. No drillholes will be advanced within 200m of the Macquarie River.		
Duration	Short term		
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?	Medium Resilience	**What is the level of public concern?**	Medium
Can the impacts be reversed?	Uncertain	**Ranking of potential significance**	Low
Can the impacts be mitigated?	Uncertain	**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	Short term ground disturbance. Potential for impact on Aboriginal objects and places through ground disturbance, excavations, vegetation clearing, etc. The area is predominantly open grazing land with sparse vegetation. Any areas of vegetation will be avoided and do not need to be disturbed for this drilling program. Topography is typically flat with many drainage channels that will be avoided for this program. Access to proposed collar locations will be undertaken in close consultation with the landholders. DISTURBANCE: Earthworks and veg clearing is not required. Sites are relatively flat and open. Drill pad areas (approx 10 x 20m) may require minor clearing of grass from the surface. Should this be necessary, care will be taken to ensure to leave root stock to enable existing vegetation regrowth. AHIMS search 19/4/23 – There are no listed Aboriginal Sites noted within the proposed drilling area on the attached AHIMS search. The Macquarie River at its closest point is located less than 200m from the south eastern point of the proposed drilling area. No drillholes will be advanced within 200m of the Macquarie River. There are many drainage areas within the proposed area and drillholes will be moved so they do not sit within 40m of any drainages.		
Proposed management controls	Activities must comply with (Exploration Code of Practice: Environmental Management) as per the commitment in the application (APO). Relevant requirements of this Code include minimising potential impacts on all aspects of the environment (including water, land, air), culture and heritage (Aboriginal and Non-Indigenous heritage). All disturbed areas to be rehabilitated in accordance with title conditions (Exploration Code of Practice: Rehabilitation). Rehabilitation to occur as soon as practicable after completion of activity (including sealing of any boreholes). 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. No drillholes will be advanced within 200m of the Macquarie River.		
Duration	Short term		
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?	Medium Resilience	**What is the level of public concern?**	Medium
Can the impacts be reversed?	Uncertain	**Ranking of potential significance**	Low
Can the impacts be mitigated?	Uncertain	**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	Condition of exploration title/authority prohibits exploration on any land or waters on which Native Title has not been extinguished, unless the prior consent of the Minister has been obtained. The area is predominantly open grazing land with sparse vegetation (Private freehold land). Any areas of vegetation will be avoided and do not need to be disturbed for this drilling program. Topography is typically flat with many drainage channels that will be avoided for this program. Access to proposed collar locations will be undertaken in close consultation with the landholders. DISTURBANCE: Earthworks and veg clearing is not required. Sites are relatively flat and open. Drill pad areas (approx 10 x 20m) may require minor clearing of grass from the surface. Should this be necessary, care will be taken to ensure to leave root stock to enable existing vegetation regrowth. AHIMS search 19/4/23 – There are no listed Aboriginal Sites noted within the proposed drilling area on the attached AHIMS search. The Macquarie River at its closest point is located less than 200m from the south eastern point of the proposed drilling area. No drillholes will be advanced within 200m of the Macquarie River. There are many drainage areas within the proposed area and drillholes will be moved so they do not sit within 40m of any drainages.		
Proposed management controls	Condition of exploration title/authority prohibits exploration on any land or waters on which Native Title has not been extinguished, unless the prior consent of the Minister has been obtained. 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. No drillholes will be advanced within 200m of the Macquarie River.		
Duration	Short term		
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?	Medium Resilience	**What is the level of public concern?**	Medium
Can the impacts be reversed?	Uncertain	**Ranking of potential significance**	Low
Can the impacts be mitigated?	Uncertain	**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	Condition of exploration title/authority prohibits exploration on any land or waters on which Native Title has not been extinguished, unless the prior consent of the Minister has been obtained. The area is predominantly open grazing land with sparse vegetation (Private freehold land). Any areas of vegetation will be avoided and do not need to be disturbed for this drilling program. Topography is typically flat with many drainage channels that will be avoided for this program. Access to proposed collar locations will be undertaken in close consultation with the landholders. DISTURBANCE: Earthworks and veg clearing is not required. Sites are relatively flat and open. Drill pad areas (approx 10 x 20m) may require minor clearing of grass from the surface. Should this be necessary, care will be taken to ensure to leave root stock to enable existing vegetation regrowth. AHIMS search 19/4/23 – There are no listed Aboriginal Sites noted within the proposed drilling area on the attached AHIMS search. The Macquarie River at its closest point is located less than 200m from the south eastern point of the proposed drilling area. No drillholes will be advanced within 200m of the Macquarie River. There are many drainage areas within the proposed area and drillholes will be moved so they do not sit within 40m of any drainages. Any impacts are short term and temporary.		

Proposed management controls	Condition of exploration title/authority prohibits exploration on any land or waters on which Native Title has not been extinguished, unless the prior consent of the Minister has been obtained. 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. No drillholes will be advanced within 200m of the Macquarie River.		
Duration	Short term		
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?	Medium Resilience	**What is the level of public concern?**	Medium
Can the impacts be reversed?	Uncertain	**Ranking of potential significance**	Low
Can the impacts be mitigated?	Uncertain	**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	Short term and temporary impacts only. The area is predominantly open grazing land with sparse vegetation (Private freehold land). Any areas of vegetation will be avoided and do not need to be disturbed for this drilling program. Topography is typically flat with many drainage channels that will be avoided for this program. Access to proposed collar locations will be undertaken in close consultation with the landholders. DISTURBANCE: Earthworks and veg clearing is not required. Sites are relatively flat and open. Drill pad areas (approx 10 x 20m) may require minor clearing of grass from the surface. Should this be necessary, care will be taken to ensure to leave root stock to enable existing vegetation regrowth. AHIMS search 19/4/23 – There are no listed Aboriginal Sites noted within the proposed drilling area on the attached AHIMS search. The Macquarie River at its closest point is located less than 200m from the south eastern point of the proposed drilling area. No drillholes will be advanced within 200m of the Macquarie River. There are many drainage areas within the proposed area and drillholes will be moved so they do not sit within 40m of any drainages.		
Proposed management controls	Activities must comply with (Exploration Code of Practice: Environmental Management) as per the commitment in the application (APO). Relevant requirements of this Code include minimising potential impacts on all aspects of the environment (including water, land, air), culture and heritage (Aboriginal and Non-Indigenous heritage). Aboriginal or European heritage objects/items/areas to be demarcated and avoided. 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 (including sealing of any boreholes). 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. No drillholes will be advanced within 200m of the Macquarie River.		
Duration	N/A		
Application ranking			
What is the confidence in predicting impacts?	Uncertain	**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?**	Medium

Can the impacts be reversed?	Uncertain	**Ranking of potential significance**	Low
Can the impacts be mitigated?	Uncertain	**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	The land is currently used for agricultural grazing purposes. The land use will not be changed during or after the proposed drilling works due to short term and temporary nature of exploration. Proposed collar locations are shown on the maps, however given the landscape in the area, holes may require to be moved to not adversely affect the environment - vegetation or drainage. Negligible impacts and limited to immediate vicinity of site. Areas used for exploration activities, temporarily removed from existing land use/s but no long term impacts (e.g. temporary impacts on productive rural industries, including agriculture). The area is predominantly open grazing land with sparse vegetation (Private freehold land). Any areas of vegetation will be avoided and do not need to be disturbed for this drilling program. Topography is typically flat with many drainage channels that will be avoided for this program. Access to proposed collar locations will be undertaken in close consultation with the landholders. DISTURBANCE: Earthworks and veg clearing is not required. Sites are relatively flat and open. Drill pad areas (approx 10 x 20m) may require minor clearing of grass from the surface. Should this be necessary, care will be taken to ensure to leave root stock to enable existing vegetation regrowth.		
Proposed management controls	Minimal impacts likely and limited to immediate site of the activity. The land is currently used for agricultural grazing purposes. The land use will not be changed during or after the proposed drilling works due to short term and temporary nature of exploration. Proposed collar locations are shown on the maps, however given the landscape in the area, holes may require to be moved to not adversely affect the environment - vegetation or drainage. Negligible impacts and limited to immediate vicinity of site. Areas used for exploration activities, temporarily removed from existing land use/s but no long term impacts (e.g. temporary impacts on productive rural industries, including agriculture). Activities must comply with (Exploration Code of Practice: Environmental Management) as per the commitment in the application (APO). 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. Legislative requirement for landholder access arrangements and compensation limit any potential impacts. Hours of Operations: 12 hour shifts, 7 days a week. 1 homestead (The Mole) within the proposed drilling location. This homestead is located approx 400m N from one of the tentative locations - Macquarie 4 noted on Map1 Site Plan. NOISE MGMT: Noise is not anticipated to be of concern with the proposed diamond drilling as this style of drilling does not generate excessive noise. Drilling will not occur within 200m of sensitive receptors. Drilling works will be undertaken in daylight hours only. The landholders are fully informed with the proposed drilling of this hole. There are no further sensitive receptors nearby.		
Duration	Short term		
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?	No	**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	Short term additional traffic during exploration activity, primarily during set-up/construction stage. Limited to immediate site. Subject to landholder agreement and any compensation.		
Duration	Short term		
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	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	Short term additional traffic during exploration activity, primarily during set-up/construction stage. Limited to immediate site. Subject to landholder agreement and any compensation.		
Duration	Short term		
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	Consistency with applicable local strategic planning statements, regional strategic plans or district strategic plans.		
Potential impacts	Temporary and short term impact on the land. The area is predominantly open grazing land with sparse vegetation (Private freehold land). Any areas of vegetation will be avoided and do not need to be disturbed for this drilling program. Topography is typically flat with many drainage channels that will be avoided for this program. Access to proposed collar locations will be undertaken in close consultation with the landholders. DISTURBANCE: Earthworks and veg clearing is not required. Sites are relatively flat and open. Drill pad areas (approx 10 x 20m) may require minor clearing of grass from the surface. Should this be necessary, care will be taken to ensure to leave root stock to enable existing vegetation regrowth 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, sites are within agricultural land. Map and further information relating to the Macquarie Marshes Wetlands are attached to the APO.		

Proposed management controls	Exploration comprises development that does not need consent under the EP&A Act and associated local, regional and district plans. There will be no conflict or inconsistency with applicable local strategic planning statements, regional strategic plans or district strategic plans. Minimal impacts likely and limited to immediate site of the activity. Impacts are compensable under relevant legislation, including Mining Act 1992 and Petroleum (Onshore) Act 1991. Subject to landholder agreement and any compensation. 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 (including sealing of any boreholes). 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	Short term - until land is rehabilitated.		
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?	Fully	**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 22 listed Threatened species, 4 listed Threatened Ecological Communities and 8 Listed Migratory Species. Of the 22 threatened species the Silver Perch, Bidyan and the Curlew Sandpiper are considered to be critically endangered. 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 Silver Perch will be in waterways which will not be affected by proposed works. The four threatened communities show Coolibah Black Box and Poplar Box Grassy to be likely in this area there are no recovery plans for this species. The Macquarie Marshes is located close to the east of the proposed drilling area - approximately 200m. When the marshes occasionally flood the proposed drilling area would be affected. Site access will not be undertaken in times of flood. The Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) comes into force when a proposed action is likely to have a significant impact on a matter of national environmental significance (MNES), such as a listed threatened species or ecological community.		

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. The applicant 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. In times of high rainfall this area can extend into the proposed drilling area. Should there be elevated water levels this drilling will not be undertaken until water subsides. There are several drainages within the proposed drilling area. Proposed collars will not be progressed if they occur within 40m of any existing drainages. Specific access to sites will be undertaken in close consultation with the landholder who knows the ground conditions the best. The applicant held a pre-referral meeting with the Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEEW)on 28 March 2024. The referral was in relation to a potential impact on the Ramsar listed Wetland – the Macquarie Marshes. During their meeting, DCCEEW advised the applicant that no formal response regarding the pre-referral meeting would be provided, and that the applicant should undertake a self-assessment to determine whether a significant impact would occur. Under the Commonwealth EPBC Act, the onus is on the person proposing to take an action to determine whether there is likely to be a significant impact on any MNES and if so, to prepare a referral for the Commonwealth Minister's consideration as to whether or not the project would require approval. If approval is required, then this is a separate approval process under Commonwealth legislation and the exploration activity cannot be undertaken until this Commonwealth approval has been granted. The granting of an approval to undertake exploration activities under NSW legislation does not negate the need for a proponent to obtain any separate Commonwealth approvals prior to proceeding. The applicant 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.		
Duration	N/A		
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?	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?	Uncertain	**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	Only short term and temporary impacts. No significant additional impacts on the environment from past, current and relevant future projects. The area is predominantly open grazing land with sparse vegetation (Private freehold land). Any areas of vegetation will be avoided and do not need to be disturbed for this drilling program. Topography is typically flat with many drainage channels that will be avoided for this program. Access to proposed collar locations will be undertaken in close consultation with the landholders. DISTURBANCE: Earthworks and veg clearing is not required. Sites are relatively flat and open. Drill pad areas (approx 10 x 20m) may require minor clearing of grass from the surface. Should this be necessary, care will be taken to ensure to leave root stock to enable existing vegetation regrowth.		
Proposed management controls	Short term impacts predominantly limited to immediate site. Subject to landholder agreement and any compensation. Activities must comply with (Exploration Code of Practice: Environmental Management) as per the commitment in the application (APO). Relevant requirements of this Code include minimising all impacts on the environment. 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 (including sealing of any boreholes).		
Duration	Short term		

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		

FORM: Brief NonCEA (v3.4)

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