

APO0001692

Approval to undertake assessable prospecting operations

Canonba Nth 3

25 April 2024

Application summary

Detail	Application
Reference	APO0001692
Date of approval	25 April 2024
Title	EL 8848 (1992)
Contact	[REDACTED]
Project name	Canonba Nth 3
Project location	20km west of the locality of Oxley, NSW
Activity type	Non-complying exploration activity

Important note

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Project

Project details

Application APO0001692 relates to the proposed Canonba Nth 3 at 20km west of the locality of Oxley, NSW.

The application proposes the following characteristics.

Detail	Proposal
Activity description	Proposed exploration is to drill 1 rotary mud hole with diamond tail up to 700m depth within the approval area as shown on the attached maps. Proposed collar location is shown on the maps, however given the landscape in the area hole may require to be moved to not adversely affect the environment - vegetation or drainages. Equipment will comprise a diamond drilling rig and support vehicles. A light vehicle will also be used by the field technician and geologist. Drilling is expected to take approximately 14 weeks. The drill site will be made safe prior to leaving site, and rehabilitation will be fully completed within 24 months, likely sooner. Drilling contractors will utilise above ground sumps and so no excavations are required. The drillhole will be backfilled and rehabilitated in accordance with the requirements of the Exploration Code of Practice – Rehabilitation. 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.
Earthworks or vegetation clearing	Earthworks and vegetation clearance is not required for this drilling program. Sites are relatively flat and open. Drill pad area, 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.
Access to exploration activities	Access to proposed drilling location will be along station tracks and along the edges of paddocks if necessary, in line with landholder specifications. No new tracks are required to be constructed.

Detail	Proposal
Ancillary activities	No ancillary infrastructure or water storage is required for this program. Accommodation will be in the nearest hotel/motel.
Anticipated start date	4 March 2024
Expected duration (weeks)	14
Expected rehabilitation completion date	23 April 2025
Proposed hours of operation	Other 12hr shifts 6am-6pm, 7 days a week
On-site employee or contractor numbers	5

Exempted areas

The Canonba Nth 3 has not proposed prospecting in an exempted area.

State conservation areas

The Canonba Nth 3 has not proposed prospecting in a State Conservation Area.

Site description and existing environment

The project comprises the following existing land uses:

The land is currently utilised for agricultural grazing or cropping purposes. The land use will not be changed during or after the proposed drilling works.

The project is located near the following sensitive receptors:

Canonba Nth_03 is over 6 km north of Millmalands Homestead. Drilling will not occur within 2km of houses. Carinda Road runs through the approval area. There are no further sensitive receptors within or near by the application area. Given the distance from the drill rig and relatively low noise output of the drilling method, the activity is not expected to impact sensitive receptors.

The project is located with the following soil types and properties:

There are no acid sulfate soils within this area. The proposed drilling areas cover soil types 3 and 4 from the Land and Soil Capability Classification. 3 being moderate limitations and 4, moderate to severe limitations. Even though this is not super sensitive, Company procedures will remain as if it is sensitive with access being restricted to only vital personnel and vehicle movement 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.

The project has the following existing surface water sources in the area that are likely to be affected by the activity:

Surface water will not be affected by the proposed activities. The nearest named waterway is Milmiland Creek which runs through the approval area. No impact is expected as the method of drilling method will ensure that all ground water remains in the ground, and there will be no ancillary water stored on site. No drilling will occur within 200m of Milmiland Creek. The approval area includes the Macquarie Marshes Wetland under the Warren Local Environmental Plan 2012. There are areas of swampland

which are sensitive and will be avoided, in addition, work will be conducted in the dry season and not during wet conditions.

The project has the following existing groundwater sources that occur in the area that are likely to be affected by the activity:

Groundwater sources should not be adversely affected by the proposed drilling. Suitable drilling methods will be utilised to ensure that water is contained in the same strata and not cross to different water bearing strata. There are no bores within the approval area. Canonba Nth_03 is 2.5km from GW801821. Bores are not anticipated to be impacted by drilling as the mud rotary and diamond drilling ensures that water contained in the same strata and not cross to different water bearing strata.

The project is in an area with the following topography, vegetation cover type, density and condition:

The area is open grazing land with sparse vegetation. Drill sites will avoid any vegetation disturbance. Topography is typically flat with Milmiland Creek running through the approval area. Access to proposed collar locations will be undertaken in close consultation with the landholders.

The project will impact the following matters of national environmental significance:

On the MNES search there are 4 listed Threatened Ecological Communities, 25 listed Threatened species, 7 Listed Migratory Species, and 4 wetlands of international importance. The 4 listed threatened ecological communities show Coolibah – Black Box Woodlands of the Darling Riverine Plains and the Brigalow Belt South Bioregions, Poplar Box Grassy Woodland on Alluvial Plains, Grey Box (*Eucalyptus microcarpa*) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia, and Weeping Myall Woodlands are Endangered and communities likely to occur in this area. Of the 25 listed threatened species the Curlew Sandpiper, Swift Parrot, and Plains-Wanderer are critically endangered, and the Silver Perch (the link in the MNES report states the Curlew Sandpiper, and Plains Wanderer species are endangered and not critical for NSW). The Curlew is migratory and if sighted will be reported to the Department for Environment. This species is not known to breed in Australia, therefore will not be at its most vulnerable if it is sighted. The 7 listed migratory species has the Curlew Sandpiper listed as critically endangered – however the link to this species differs stating for NSW this is endangered. Areas of drilling are relatively open, and vegetation is not expected to be impacted, and therefore threatened species should not be impacted. Banrock Station Wetland complex, Riverland, The Coorong, and Lakes Alexandrina and Albert Wetland are over 600km away. The Macquarie Marshes Nature Reserve is located 3km north of the approval area.

The project is in an area with the following threatened species, ecological communities (or habitats):

There is one sighting of Australian Bustard (SDRS20120401) on the Carinda Road with NSW Status E1. There are no other listings of threatened species or ecological communities, or their habitats listed within the application area.

The project is in an area with the following historic cultural or natural heritage items:

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.

The project is in an area with the following critical habitat/area of outstanding biodiversity value:

There are no areas of critical habitat or areas of outstanding biodiversity value within the proposed drilling area. There are no areas listed as terrestrial biodiversity, (see Map2). The temporary drilling program is not anticipated to have adverse impacts on the flora and fauna.

The project is located in an area with the following location, type and distance to the nearest Aboriginal heritage sites:

There are no known Aboriginal Sites noted on the AHIMS search of the approval area. 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). The newly discovered 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 drilling will be conducted within 200m of Milmiland Creek.

Exploration activities

The following exploration activities have been approved.

Drill holes

Id/ Regulator no.	Type	Surface disturbance (m ²)	Veg. Clearing (m ²)	Excavations (m ³)	Produced water (ml)	Depth (m)	Block number	Unit letters
Canonba Nth_03 EDH0014 272	DDH drill hole	200				700	BOU2634	n

Other exploration activities

Id/ Regulator no.	Type	Surface disturbance (m ²)	Veg. Clearing (m ²)	Excavations (m ³)	Produced water (ml)	Block number	Unit letters
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Impact management

The project includes the following measures to manage surface water impacts:

Surface water will not be affected by the proposed activities. No impact is expected as the drilling method will ensure that all ground water remains in the ground, and there will be no ancillary water stored on site. The nearest named waterway is Milmiland Creek which runs through the approval area. No drilling will occur within 200m of Milmiland Creek. The approval area includes the Macquarie Marshes Wetland under the Warren Local Environmental Plan 2012. As per 3.1 (c) To be exempt development, the development must not be designated development. As per 6.7 (3) designated development is listed as artificial waterbodies, earthworks, intensive livestock agriculture, or intensive plant agriculture. No earthworks are required for the drilling program. Perusal of the Warren Shire website revealed under S 68 no permit or approval is required from them.

The project includes the following measures to manage groundwater impacts:

Groundwater encountered during drilling will be managed and contained by the drilling methods.

The project includes the following measures to manage waste and excess materials:

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.

The project includes the following measures regarding the handling, use, storage and transportation of any chemicals and hydrocarbons:

No chemicals anticipated to be used in this drilling program. Diesel will be kept in a bunded storage area. Bio-degradable drilling muds to be utilised with the diamond drilling.

The project includes the following measures of how noise impacts will be managed to minimise impacts on nearby sensitive receptors:

Noise is not anticipated to be of concern with the proposed diamond drilling as this style of drilling does not generate excessive noise.

The project includes the following measures to manage air quality impacts:

Air quality is not anticipated to be of concern with the drilling methods proposed.

Sensitivity of the land to be disturbed

Question	Yes/no
Conservation areas	
Land reserved under the <i>National Parks and Wildlife Act 1974</i> ?	No
Land acquired by the Minister under Part 11 of the <i>National Parks and Wildlife Act 1974</i> ?	No
Land subject to a 'conservation agreement' under the <i>National Parks and Wildlife Act 1974</i> and/or the <i>Biodiversity Conservation Act 2016</i> ?	No
Land declared as an aquatic reserve under the <i>Marine Estate Management Act 2014</i> ?	No
Land declared as a marine park under the <i>Marine Estate Management Act 2014</i> ?	No
Land within State Forests set aside under the <i>Forestry Act 2012</i> for conservation values, including Flora Reserves or Special Management (and other) Zones?	No
Land reserved or dedicated under the <i>Crown Lands Act 1989/Crown Lands Management Act 2016</i> (as applicable) for the preservation of flora, fauna, geological formations or other environmental protection purposes?	No
Land identified as wilderness or declared a wilderness area under the <i>Wilderness Act 1987</i> ?	No
Land subject to a Biobanking agreement (established under the now repealed <i>Threatened Species Conservation Act 1995</i>) or a Biodiversity Stewardship agreement established under the <i>Biodiversity Conservation Act 2016</i> ?	No
Land subject to a Wildlife Refuge agreement under the <i>Biodiversity Conservation Act 2016</i> ?	No
Land subject to existing conservation agreements on private land under repealed legislation that continue to have effect (e.g., trust agreements under <i>Native Conservation Trust Act 2001</i> , Property vegetation plans under <i>Native Vegetation Act 2003</i> , Registered property agreements under <i>Native Vegetation Conservation Act 1997</i>)?	No
Drinking water catchment protection areas	
Land declared to be a 'controlled area' or a 'special area' under the <i>Water NSW Act 2014</i> ?	No
Land declared to be a 'special area' under the <i>Water Management Act 2000</i> or <i>Hunter Water Act 1991</i> ?	No
Sensitive areas	
Land declared as area of outstanding biodiversity value under the <i>Biodiversity Conservation Act 2016</i> or critical habitat under Part 7A of the <i>Fisheries Management Act 1994</i> ?	No
Wetlands of international significance listed under the Ramsar Wetlands Convention?	No
Land designated as a nationally important wetland in the Directory of Important Wetlands?	Yes
Coastal wetlands mapped under <i>State Environmental Planning Policy (Resilience and Hazards) 2021</i> ?	No
Littoral rainforests mapped under <i>State Environmental Planning Policy (Resilience and Hazards) 2021</i> ?	No
Coastal zone as defined in the <i>Coastal Management Act 2016</i> ?	No
Land identified in an environmental planning instrument as being of biodiversity/conservation significance or zoned for environmental conservation, protection and/or management?	No
Waterfront land defined under the <i>Water Management Act 2000</i> ?	No
Land with a slope greater than 18 degrees measured from the horizontal?	No
Land with potential for soil and water contamination	
Land mapped as Actual Acid Sulfate Soils (AASS) or Potential Acid Sulfate Soils (PASS) on the Acid Sulfate Soils Risk Maps for NSW?	No

Question	Yes/no
Aboriginal protection areas	
Land identified in an environmental planning instrument (such as a State Environmental Planning Policy or Local Environment Plan) as being of Aboriginal cultural significance?	No
Land declared as an Aboriginal place under the <i>National Parks and Wildlife Act 1974</i> ?	No
Historic or natural heritage protection areas	
Land listed on the World Heritage List, National Heritage List or Commonwealth Heritage List?	No
Land, places, buildings or structures listed on the NSW State Heritage Register?	No
Land identified in an environmental planning instrument (such as a State Environmental Planning Policy or Local Environment Plan) as being of heritage significance or a heritage conservation area?	No
Critical industry clusters	
Land identified as Critical Industry Cluster under <i>State Environmental Planning Policy (Resources and Energy) 2021</i> ?	No
Community land	
Public land classified as community land under the <i>Local Government Act 1993</i> ?	No
Other areas	
Land identified on the authority (e.g., exploration licence or assessment lease) as environmentally sensitive land?	No
Ecology	
Will the activity have a significant effect on threatened species or their habitats?	No
Will the activity have a significant effect on threatened ecological communities or their habitats?	No
Will vegetation be removed as part of access track upgrade works in waterfront land?	No
Aboriginal and European heritage	
Will the activity harm Aboriginal objects as defined under the <i>National Parks and Wildlife Act 1974</i> ?	No
Will the activity damage any listed heritage items?	No

Attachment 1 – Statement of commitments

Item	Commitment
Activity type	<p>Exploration activity comprising:</p> <ul style="list-style-type: none"> • 1 diamond drill holes • 0 reverse circulation drill holes • 0 other drill holes • 0 cubic metres of bulk sampling • 0 square metres of new access tracks • 0 lines of seismic testing • 0 square metres of air core drilling • 0 square metres of other drilling
Activity location	20km west of the locality of Oxley, NSW, within EL 8848 (1992).
Activity scope (including any ancillary activities)	<p>Proposed exploration is to drill 1 rotary mud hole with diamond tail up to 700m depth within the approval area as shown on the attached maps. Proposed collar location is shown on the maps, however given the landscape in the area hole may require to be moved to not adversely affect the environment - vegetation or drainages. Equipment will comprise a diamond drilling rig and support vehicles. A light vehicle will also be used by the field technician and geologist. Drilling is expected to take approximately 14 weeks. The drill site will be made safe prior to leaving site, and rehabilitation will be fully completed within 24 months, likely sooner. Drilling contractors will utilise above ground sumps and so no excavations are required. The drillhole will be backfilled and rehabilitated in accordance with the requirements of the Exploration Code of Practice – Rehabilitation. 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.</p> <p>No ancillary infrastructure or water storage is required for this program. Accommodation will be in the nearest hotel/motel.</p>
Hours of operation	Other 12hr shifts 6am-6pm, 7 days a week
Expected duration (weeks)	14
Anticipated start date	4 March 2024
Expected rehabilitation completion date	Estimated 23 April 2025
Maximum area of disturbance	200 square metres
Agricultural impact	The activity will be undertaken in accordance with APO0001692 Level 2 AIS.zip (1708988 bytes)
Air quality	Air quality is not anticipated to be of concern with the drilling methods proposed.
Protection of water sources	Surface water will not be affected by the proposed activities. No impact is expected as the drilling method will ensure that all ground water remains in the ground, and there will be no ancillary water stored on site. The nearest named waterway is Milmiland Creek which runs through the approval area. No drilling will occur within 200m of Milmiland Creek. The approval area includes the Macquarie Marshes Wetland under the Warren Local Environmental Plan 2012. As per 3.1 (c) To be exempt development, the development must not be designated development. As per 6.7 (3) designated development is listed as artificial waterbodies, earthworks, intensive livestock

Item	Commitment
	<p>agriculture, or intensive plant agriculture. No earthworks are required for the drilling program. Perusal of the Warren Shire website revealed under S 68 no permit or approval is required from them.</p> <p>Groundwater encountered during drilling will be managed and contained by the drilling methods.</p>
Soil and land stability	<p>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.</p>
Noise and vibration	<p>Noise is not anticipated to be of concern with the proposed diamond drilling as this style of drilling does not generate excessive noise.</p>
Coastal processes and hazards	<p>n/a</p>
Hazardous substances or chemicals	<p>No chemicals anticipated to be used in this drilling program. Diesel will be kept in a bunded storage area. Bio-degradable drilling muds to be utilised with the diamond drilling.</p>
Wastes and emissions	<p>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.</p>
Vegetation	<p>n/a</p>
Threatened fauna and flora species	<p>n/a</p>
Areas of outstanding biodiversity value/critical habitat	
Endangered ecological community or critically endangered ecological community	<p>n/a</p>
Habitat of a threatened species or ecological community	<p>n/a</p>
Key threatening processes	<p>n/a</p>
Barriers to movement of fauna	<p>Drill site locations are determined based on area of least impact to the environment. Rehabilitation will be undertaken as soon as is reasonably practicable but within the timeframe of this drilling approval application.</p>
Ecological and biosecurity impacts	<p>n/a</p>
Community resources	<p>n/a</p>
Natural resources	<p>Work will be undertaken in the dry season and not during extreme weather events.</p>
Social impacts	<p>Exploration has been undertaken in this area by previous explorers for many years. Community consultation has been initiated with affected landholders and the community. A regular flow of information will be provided, and any concerns will be addressed immediately. No issues have been raised to date.</p>
Economic impacts	<p>n/a</p>
Heritage impacts	<p>n/a</p>

Item	Commitment
Aesthetic impacts	No drilling within 2km of houses.
Aboriginal cultural heritage	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 drilling within 200m of Milmiland Creek.
Land use impacts	n/a
Transportation impacts	n/a
Matters of national environmental significance	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.
Cumulative impacts	n/a
Rehabilitation commitments	The activity will be undertaken in accordance with the rehabilitation objectives and targets provided for this project.
Risk assessments	The titleholder must monitor the risks associated with activities and, if the risk associated with an activity changes, implement revised environmental management controls.
Incident management	The NSW Resources Regulator will be notified of all incidents in accordance with the requirements of EL 8848 (1992).
Reporting	Reporting to the NSW Resources Regulator and Mining, Exploration and Geoscience – Department of Regional NSW will be in accordance with the legislation and conditions of EL 8848 (1992).
Codes of Practice	Canonba Nth 3 will be operated in accordance with: <ul style="list-style-type: none"> • Exploration Code of Practice: Environmental Management • Exploration Code of Practice: Rehabilitation
Other (as applicable)	1. No additional terms specified.

Attachment 2 – Definitions

To search for NSW legislation, visit www.legislation.nsw.gov.au. Commonwealth legislation can be found at www.legislation.gov.au.

Word	Definition
Aboriginal object	Has the same meaning as it has in the <i>National Parks and Wildlife Act 1974</i> .
Aboriginal place	Has the same meaning as it has in the <i>National Parks and Wildlife Act 1974</i> .
Acid Sulfate Soils	Sediments and soils containing iron sulfides which, when exposed to oxygen, generate sulfuric acid. Acid sulfate soils include actual acid sulfate soils (AASS) or potential acid sulfate soils (PASS).
Activity	Any activity carried out in connection with exploration, including: <ul style="list-style-type: none"> the use of land means of accessing land the carrying out of a work.
Activity approval	An approval to carry out assessable prospecting operations granted under the <i>Mining Act 1992 / Petroleum (Onshore) Act 1991</i> – as relevant.
Actual Acid Sulfate Soils (AASS)	Sediments and soils containing highly acidic soil horizons or layers resulting from the aeration of sediments and soils that are rich in iron sulfides, primarily sulphide.
Applicant	In relation to an exploration activity, the person proposing to carry out the exploration activity.
Aquatic reserve	Has the same meaning as it has in the <i>Marine Estate Management Act 2014</i> .
Areas of Outstanding Biodiversity Value (AOBVs)	Has the same meaning as it has in the <i>Biodiversity Conservation Act 2016</i> . Note: Areas of declared critical habitat under the now repealed <i>Threatened Species Conservation Act 1995</i> have become Areas of Outstanding Biodiversity Value (AOBVs) under the <i>Biodiversity Conservation Act 2016</i> .
Assessable prospecting operation	Any prospecting operation that is not exempt development within the meaning of <i>State Environmental Planning Policy (Resources and Energy) 2021</i> .
Clearing of vegetation	Any one or more of the following: <ul style="list-style-type: none"> cutting down, felling, thinning, lopping, logging or removing vegetation, or killing, destroying, poisoning, ringbarking, uprooting or burning vegetation.
Complying exploration activities (CEA)	Exploration activities that are considered unlikely to significantly affect the environment as set out in <i>Exploration guideline: Application and assessment process for exploration activities</i> .
Critical habitat	Has the same meaning as it has in the <i>Fisheries Management Act 1994</i> . Areas of declared critical habitat under the now repealed <i>Threatened Species Conservation Act 1995</i> have become Areas of Outstanding Biodiversity Value (AOBVs) under the <i>Biodiversity Conservation Act 2016</i> .
Drill hole	A hole made by drilling or boring, but excludes: <ul style="list-style-type: none"> sampling and coring using handheld equipment, petroleum wells.
Drilling	The perforation of the earth's surface crust by mechanical means to form a hole, whether the hole caused by the perforation is vertical, inclined or horizontal, and includes all operations for preventing collapse of the sides of

Word	Definition
	such hole or for preventing it from being filled with extraneous materials including water
Environment	Has the same meaning as it has in the <i>Mining Act 1992 / Petroleum (Onshore) Act 1991</i> – as relevant.
Environmentally sensitive area of State significance	Has the same meaning as it has in <i>State Environmental Planning Policy (Resources and Energy) 2021</i> .
Excavation	The removal of the surface layer to a depth greater than 500 mm from the natural surface level.
Exempt development	Has the same meaning as it has in <i>State Environmental Planning Policy (Resources and Energy) 2021</i> .
Exploration	Has the same meaning as it has in <i>State Environmental Planning Policy (Resources and Energy) 2021</i> .
Fauna	Has the same meaning as it has in the <i>National Parks and Wildlife Act 1974</i> .
Groundwater	Water that occurs beneath the ground surface in the saturated zone.
Habitat	Has the same meaning as it has in the <i>Biodiversity Conservation Act 2016</i> or the <i>Fisheries Management Act 1994</i> (as relevant).
Harm	<p>In relation to matters of national environmental significance, has the same meaning as 'significant impact' as provided by the 'Significant Impact Guidelines' used to determine whether assessment and approval is required under the <i>Commonwealth Environment Protection and Biodiversity Conservation Act 1999</i>.</p> <p>In relation to the environment, has the same meaning as it has in the <i>Protection of the Environment Operations Act 1997</i>.</p> <p>In relation to threatened species or ecological communities, has the same meaning as:</p> <ul style="list-style-type: none"> • 'harm an animal' in the <i>National Parks and Wildlife Act 1974</i> • 'pick a native plant' in the <i>National Parks and Wildlife Act 1974</i> • 'harm' in the <i>Fisheries Management Act 1994</i>. <p>In relation to an aquifer or waterfront land, has the same meaning as it has in the <i>Water Management Act 2000</i>.</p> <p>In relation to Aboriginal places or Aboriginal objects has the same meaning as it has in the <i>National Parks and Wildlife Act 1974</i>.</p> <p>In relation to items of heritage significance, has the same meaning as it has in the <i>Heritage Act 1977</i>.</p> <p>In relation to protected marine vegetation, has the same meaning as it has in the <i>Fisheries Management Act 1994</i>.</p>
Items of heritage significance	<p>Means:</p> <ul style="list-style-type: none"> • any heritage items listed in one or more of the following: <ul style="list-style-type: none"> — the Commonwealth Heritage List — the World Heritage List — the National Heritage List — the State Heritage Register — an Environmental Planning Instrument • any relic (being any deposit, object or material evidence which relates to the settlement of the area that comprises New South Wales, not being Aboriginal settlement, and which is 50 or more years old), or

Word	Definition
	<ul style="list-style-type: none"> • within State Conservation Areas: <ul style="list-style-type: none"> — items that are listed on the DECC Historic Heritage Information Management System, or — any deposit, object or material evidence relating to the settlement or occupation of New South Wales or a part of New South Wales (not being Aboriginal settlement or occupation) if the deposit, object or material evidence is more than 25 years old at the date of the interference or removal.
Land	Includes: <ul style="list-style-type: none"> • the sea or an arm of the sea • a bay, inlet, lagoon, lake or body of water, whether inland or not and whether tidal or non-tidal • a river, stream or watercourse, whether tidal or non-tidal, and • a building erected on the land
Marine vegetation	Has the same meaning as it has in the <i>Fisheries Management Act 1994</i> .
Matters of national environmental significance	'Matters of national environmental significance' protected under the <i>Commonwealth Environment Protection and Biodiversity Conservation Act 1999</i> .
Minister	The Minister administering the <i>Mining Act 1992 / Petroleum (Onshore) Act 1991</i> – as relevant.
Native vegetation	Has the same meaning as it has in the <i>Local Land Services Act 2013</i> .
Potential acid sulphate soils (PASS)	Sediments and soils that contain iron sulfides or sulfidic material which have not been exposed to air and oxidised
Produced water	Any form of groundwater that is actively extracted from a borehole or excavation, excluding incidental groundwater mixed with drilling fluids.
Rehabilitation	Has the same meaning as it has in the <i>Mining Act 1992 / Petroleum (Onshore) Act 1991</i> – as relevant.
Seismic survey	The use of shock waves (generated in the ground using either small explosive charges detonated below the surface, hand-held mechanical hammers or vehicle-mounted hammers) and an array of geophones, which are connected to measuring instruments, to differentiate the geophysical properties of the subsurface of the earth.
Sensitive receiver	Includes: <ul style="list-style-type: none"> • dwellings • libraries • educational and research institutions (including schools, colleges and universities) • childcare centres • kindergartens • hospitals, surgeries and other medical institutions • places of worship • milking sheds and holding yards associated with dairies • animal boarding or training establishments • aquaculture

Word	Definition
	<ul style="list-style-type: none"> intensive livestock agriculture
Site	The land on which an activity is located.
State Conservation Area	Has the same meaning as it has in the <i>National Parks and Wildlife Act 1974</i> .
Surface disturbance	Means: <ul style="list-style-type: none"> disturbance or exposure of the soil or surface rock layer, or degradation or deterioration in any manner of the physical surface of land.
Terms	In relation to activity approvals, the terms imposed by the decision-maker on the grant of an activity approval.
Threatened species or ecological communities	Has the same meaning as it has in the <i>Biodiversity Conservation Act 2016</i> or <i>Fisheries Management Act 1994</i> (as relevant).
Title	An authority under the <i>Mining Act 1992</i> / a title under the <i>Petroleum (Onshore) Act 1991</i> – as relevant.
Titleholder	A person or company to whom a title has been issued.
Track	All unsealed routes that will be traversed multiple times, but does not include single pass (ingress and egress) routes or seismic shot and receiver lines.
Waste	Has the same meaning as it has in the <i>Protection of the Environment Operations Act 1997</i> .
Water source	Has the same meaning as it has in the <i>Water Management Act 2000</i> .
Water land	Has the same meaning as it has in the <i>Fisheries Management Act 1994</i> .
Waterfront land	Has the same meaning as it has in the <i>Water Management Act 2000</i> .
Wetlands	Has the same meaning as it has in the <i>Fisheries Management Act 1994</i> .
Wilderness	Lands identified as wilderness under the <i>Wilderness Act 1987</i> .
Wilderness area	Lands (including subterranean lands) declared to be a wilderness area under the <i>Wilderness Act 1987</i> or the <i>National Parks and Wildlife Act 1974</i> .

Attachment 3 – Review of environmental factors

Air impacts

Provide a brief description of likely impacts to air quality, including the distance to, and impacts on, nearby sensitive receivers.

Air impacts from the proposed program are negligible.

The nearest sensitive receptor located over 5km away from proposed drilling is the Millmalands 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.

What is the activity's likely impact due to generation of greenhouse gases emissions or release of chemicals which affect the ozone layer or produce photo-chemical smog?

Negligible

What is the likely level of any impacts?

Negligible

Outline any proposed management controls and/or mitigation measures.

Drilling will not occur within 2km 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.

Water impacts

Provide a brief description of the likely impacts to water quality and/quantity.

The program is not expected to impact groundwater. Suitable drilling methods will be utilised to ensure that water is contained in the same strata and not cross to different water bearing strata.

The program is not expected to have an impact on surface water. The nearest watercourse is Milmiland Creek which runs through the proposal area. No drilling within 200m of creek. Drilling is not expected to impact Milmiland Creek as the method of drilling will ensure that all ground water remains in the ground, and there will be no ancillary water stored on site. All proposed activities will be completed in dry season as the approval area is within the Macquarie Marshes Wetland.

What is the activity's impact due to the storage of water?

Negligible Nil/Not applicable

What is the activity's impact to natural water bodies, wetlands or runoff patterns?

Nil/Not applicable Nil/Not applicable

What is the activity's impact due to aquifer interference, including changes to inter-aquifer connectivity?

Nil/Not applicable

What is the activity's impact due to changes to flooding or tidal regimes?

Nil/Not applicable Nil/Not applicable

What are the impacts from any hydraulic fracturing (well stimulation), including through gas and fluid migration?

Nil/Not applicable

What is the activity's impact due to changes in surface or groundwater quality and quantity?

Nil/Not applicable

What is the likely level of any water impacts?

Nil/Not applicable

Outline any proposed management controls and/or mitigation measures.

Water impacts

Drilling will not be undertaken during extreme weather events and so surface water will not be affected. Groundwater is not expected to cause concern as areas close by have been drilled previously with no concerns.

Soil and stability impacts

Provide a brief description of the likely impacts to soil quality or land stability.

The effects of this small drilling program within the area will not cause soil erosion. There is no acid sulphate soil in this area. Existing tracks will be utilised where possible. This area has vegetation nearby which will mitigate wind erosion issues.

What is the activity's impact on the degradation of soil quality including contamination, salinisation or acidification?

Negligible

What is the activity's impact on land with high agricultural capability?

Negligible

What is the activity's impact due to loss of soil from wind or water erosion?

Negligible

What is the activity's impact due to the loss of structural integrity of the soil?

Negligible

What is the activity's impact due to increased land instability with high risks from landslides or subsidence?

Nil/Not applicable

What is the activity's impact due to any induced seismicity or ground movements associated with fracture stimulation or injection or extraction of groundwater?

Nil/Not applicable

What is the likely level of any impacts?

Negligible

Outline any proposed management controls and/or mitigation measures.

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.

Noise and vibration impacts

Provide a brief description of the likely noise and/or vibration impacts.

There are no receptors located in the proposed approval area. Millmalands homestead is more than 5km away from proposed drilling. Drilling will be undertaken in daylight hours only and not within 500m of receptors. Mud rotary and diamond drilling method selected has relatively low noise outputs compared to other drilling methods.

What is the likely level of any impacts?

Negligible

Outline any proposed management controls and/or mitigation measures.

Drilling will not occur within 500m of sensitive receptors. Drilling works will be undertaken in daylight hours only.

Coastal locations and processes

Provide a brief description of likely impacts on coastal environments, coastal processes and coastal hazards.

n/a

What is the likely level of any impacts?

Nil/Not applicable

Outline any proposed management controls and/or mitigation measures.

n/a

Hazardous substances and chemicals

Provide a brief description of likely impacts associated with the use, generation, storage or transport of hazardous substances or chemicals.

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.

What is the likely level of the impact associated with the use, generation, storage or transport of hazardous substances or chemicals?

Negligible

Outline any proposed management controls and/or mitigation measures.

Maintain regular checks of all fuel and lubricants, provide bunded areas where required. A spill kit will be at the site at all times.

Wastes and emissions

Provide a brief description of likely impacts to the environment from the generation or disposal of gaseous, liquid or solid wastes or emissions.

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.

Provide a brief description of likely impacts on areas sensitive to this type of impact.

There will be no impact to the Macquarie Marshes Wetlands during this proposed short drilling program. Drilling to be conducted in the dry season.

What is the likely level of the impacts?

Negligible

Outline any proposed management controls and/or mitigation measures.

Clean up any minor spills immediately and dispose of any contaminated materials to an appropriately managed licenced facility.

Vegetation

Provide a brief description of any vegetation clearing or modification and the likely impacts to the environment.

There will be no vegetation clearing for the proposed drilling.

There are no threatened flora species recorded within the proposed drilling area on BioNet.

What is the likely level of the impacts?

Nil/Not applicable

Outline any proposed management controls and/or mitigation measures.

Vegetation

n/a

Threatened species**Provide a brief description of any likely impacts to threatened fauna and flora species.**

There is one sighting of Australian Bustard (NSW E1). There are no other threatened fauna or flora recorded in this area

What is the likely level of the impacts?

Nil/Not applicable

Outline any proposed management controls and/or mitigation measures.

n/a

Area of outstanding biodiversity value (AOBV) / Critical habitat**Provide a brief description of any likely impacts to AOBV/critical habitat.**

There are no areas of critical habitat/area of outstanding biodiversity within the approval area.

What is the likely level of the impacts?**Outline any proposed management controls and/or mitigation measures.****Endangered ecological community or critically endangered ecological community****Is the activity likely to have an adverse effect on an endangered ecological community or critically endangered ecological community? Select as relevant:**

N/A

Provide a brief description of any impacts.

There are no endangered communities listed in the proposed drilling area

What is the likely level of the impacts?

Nil/Not applicable

Outline any proposed management controls and/or mitigation measures.

n/a

Habitat of a threatened species or ecological community**Is the activity likely to have an adverse effect on the habitat of a threatened species or ecological community (including protected aquatic species)? Select as relevant:**

N/A

Describe the impacts.

There are no critically endangered species or communities recorded within the proposed drilling area

What is the likely level of the impacts?

Nil/Not applicable

Outline any proposed management controls and/or mitigation measures.

n/a

Key threatening process

Provide a brief description of whether the activity will constitute, or form part of, a key threatening process - or is likely to increase the impact of a key threatening process.

There are no critically endangered species in this area and so no key threatening processes

What is the likely level of any impacts?

Nil/Not applicable

Outline any proposed management controls and/or mitigation measures.

n/a

Barriers to movement of fauna

Provide a brief description regarding the potential of the activity to endanger, displace or disturb fauna or create a barrier to their movement.

There is one sighting of Australian Bustard (E1) and no critically endangered species. 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.

What is the likely level of any impacts?

Negligible

Outline any proposed management controls and/or mitigation measures.

Drill site locations are determined based on area of least impact to the environment. Rehabilitation will be undertaken as soon as is reasonably practicable but within the timeframe of this drilling approval application.

Ecological and biosecurity impacts

Is the activity likely to have any adverse ecological or biosecurity impacts? Select as relevant:

N/A

Provide a brief description of any impacts.

No impact envisaged

What is the likely level of any impacts?

Nil/Not applicable Negligible

Outline any proposed management controls and/or mitigation measures.

n/a

Community resources

Describe whether the activity is likely to degrade or significantly increase the demand for services and infrastructure resources.

There will be no impact to the demand or use of local services and resources for this drill program

Describe whether the activity is likely to result in any diversion of resources to the detriment of other communities or natural systems.

No diversion of resources required

What is the likely level of the impact?

Nil/Not applicable

Outline any proposed management controls and/or mitigation measures.

Community resources

n/a

Natural resources

Describe any likely impacts that would disrupt, deplete or destroy natural resources.

The proposed drilling program is not anticipated to disrupt, deplete, or destroy any natural resources

Describe whether the activity is likely to disrupt existing activities which rely upon natural resources, including forestry, farming or extractive industries (or will reduce options for future activities).

The proposed program will be undertaken at a time appropriate to landholders and so will not disrupt any existing activities. The drill hole is to be collared in paddock used for grazing purposes

Describe whether the activity is likely to result in the degradation of any area reserved for conservation purposes.

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.

What is the likely level of the impact?

Negligible

Outline any proposed management controls and/or mitigation measures.

Work will be undertaken in the dry season and not during extreme weather events.

Social impacts

Describe whether the activity is likely to result in a change to the demographic structure of the community, including changes to the workforce or industry structure of the area/region.

The proposed program is small and will not affect the demographics of the local communities

Describe whether the activity is likely to have an environmental impact that may cause substantial change or disruption to the community, including loss of facilities, reduced links to other communities or loss of community identity.

There will be no impact or change to the community following the proposed drilling program

Describe whether the activity is likely to result in some individuals or communities being significantly disadvantaged, including a change in the level of demand for community resources (e.g. community facilities / services, and labour force).

The small program will not disadvantage the community or individuals in the area

Describe whether the activity likely to result in any impacts on the health, safety, privacy or welfare of individuals or communities because of factors such as pollution, odour, noise, vibration, lighting, visual impacts, etc.

The impacts are minimal and not within proximity to sensitive receptors or communities

Describe if the activity is likely to have any 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.

There will be no detrimental effect on the aesthetics, or any other special value

What is the likely level of any social impacts?

Negligible

Outline any proposed management controls and/or mitigation measures.

Exploration has been undertaken in this area by previous explorers for many years. Community consultation has been initiated with affected landholders and the community. A regular flow of information will be provided, and any concerns will be addressed immediately. No issues have been raised to date.

Economic impacts

Provide a brief description of any likely economic impacts.

n/a

What is the likely level of any impacts?

Nil/Not applicable

Outline any proposed management controls and/or mitigation measures.

n/a

Heritage impacts

Describe whether the activity is likely to cause impacts on localities, places, landscapes, buildings or archaeological relics of heritage significance.

There are no listed heritage items, places or areas in this proposed drilling area

What is the likely level of the impact?

Nil/Not applicable

Outline any proposed management controls and/or mitigation measures.

n/a

Aesthetic impacts

Describe whether the activity is likely to cause impacts on the visual or scenic landscape, including any lighting, venting or flaring of gas.

The proposed drilling is more than 5km away from nearest residence and will likely not be visible at all. No night works so no lights.

What is the likely level of any impacts?

Negligible

Outline any proposed management controls and/or mitigation measures.

No drilling within 2km of houses.

Cultural impacts

Describe the likely impacts associated with any disturbance of the ground surface or any culturally modified trees.

The proposed drilling program is not anticipated to disturb or destroy any Aboriginal heritage

Describe whether the activity will affect known Aboriginal objects or Aboriginal places.

There are no known Aboriginal Sites noted on the AHIMS search located within the approval area.

Describe whether the activity is located in areas where landscape features indicate the presence of Aboriginal objects.

Milmland Creek is present within the approval area and no drilling will occur within 200m. There are no other landscape features as listed above.

Describe whether the activity will affect areas where native title exists or land subject to native title claims, indigenous land use agreements or joint management agreements.

The proposed drilling area is not within an area where native title may exist.

Cultural impacts**What is the likely level of any cultural impacts?**

Nil/Not applicable

Outline any proposed management controls and/or mitigation measures.

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 drilling within 200m of Milmiland Creek.

Land use impacts**Provide a brief description of any impacts on land use including any major changes to land use and/or curtailment of other beneficial land uses.**

n/a

What is the likely level of any impacts?

Nil/Not applicable

Outline any proposed management controls and/or mitigation measures.

n/a

Transportation impacts**Provide a brief description of any significant impacts on transportation.**

There will be no significant impact on transportation from a small temporary drilling program

What is the likely level of any impacts?

Nil/Not applicable

Outline any proposed management controls and/or mitigation measures.

n/a

Consistency with applicable local strategic planning statements, regional strategic plans or district strategic plans**Provide a brief description of any relevant local strategic planning statements, regional strategic plans or district strategic plans and whether the proposed activity is consistent with these.**

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. Map and further information relating to the Macquarie Marshes Wetlands are attached to the APO.

What is the likely level of any impacts?

Negligible

Outline any proposed management controls and/or mitigation measures.

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.

Consistency with applicable local strategic planning statements, regional strategic plans or district strategic plans

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.

Matters of national environmental significance

Is the activity likely to impact on any of the following matters of national environmental significance under the *Commonwealth Environment Protection and Biodiversity Conservation Act 1999*? Select as relevant:

N/A

Provide further details relating to any impacts on matters of national environmental significance.

On the MNES search there are 4 listed Threatened Ecological Communities, 25 listed Threatened species, 7 Listed Migratory Species, and 4 wetlands of international importance. The 4 listed threatened ecological communities show Coolibah – Black Box Woodlands of the Darling Riverine Plains and the Brigalow Belt South Bioregions, Poplar Box Grassy Woodland on Alluvial Plains, Grey Box (*Eucalyptus microcarpa*) Grassy Woodlands and Derived Native Grasslands of South-eastern Australia, and Weeping Myall Woodlands are Endangered and communities likely to occur in this area. Of the 25 listed threatened species the Curlew Sandpiper, Swift Parrot, and Plains-Wanderer are critically endangered, and the Silver Perch (the link in the MNES report states the Curlew Sandpiper, and Plains Wanderer species are endangered and not critical for NSW). The Curlew is migratory and if sighted will be reported to the Department for Environment. This species is not known to breed in Australia, therefore will not be at its most vulnerable if it is sighted. The 7 listed migratory species has the Curlew Sandpiper listed as critically endangered – however the link to this species differs stating for NSW this is endangered. Areas of drilling are relatively open, and vegetation is not expected to be impacted, and therefore threatened species should not be impacted. Banrock Station Wetland complex, Riverland, The Coorong, and Lakes Alexandrina and Albert Wetland are over 600km away. The RAMSAR Macquarie Marshes Nature Reserve is located 3km north of the approval area.

What is the likely level of any impacts?

Nil/Not applicable

Outline any proposed management controls and/or mitigation measures.

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.

Cumulative impacts

Is the activity likely to result in cumulative environmental effects with other existing or likely future activities?

No

Describe the impact.

n/a

What is the likely level of any impacts?

Nil/Not applicable

Outline any proposed management controls and/or mitigation measures.

n/a

Environmental assessment conclusions

Having regard to the potential significance of the individual impacts of the proposed activity (as well as the aggregation of all the impacts of the activity) determine whether (select as relevant):

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.

Provide any further details as relevant.

not required

Attachment 4 – List of supporting documents

- APO0001692 Level 2 AIS.zip
 - APO0001692_Submission Report_12 Feb 2024 5:33pm.pdf
 - APO0001692_Submission Report_29 Mar 2024 4:05pm.pdf
 - CANONBA NORTH 03 PADDOCK.jpg
 - Map1_ Site plan and location details_APO0001692.zip
 - Map2_ Other assessed environmental layers_APO0001692.zip
 - Map3_ Threatened species record search_APO0001692.zip
 - Map5_ Historic cultural or natural heritage items_APO0001692.png
 - Map6_ Aboriginal heritage sites_APO0001692.zip
 - Protected Matters - MNES layers-EPBC SelfAssessment.zip

FORM: APO_NC_Apvl v3.3