APO0001736

Approval to undertake assessable prospecting operations

Koolaman PASS AC drilling

17 May 2024

Application summary

Detail	Application
Reference	APO0001736
Date of approval	17 May 2024
Title	AL 29 (1992)
Contact	[redacted]
Project name	Koolaman PASS AC drilling
Project location	Euston (Koolaman)
Activity type	Non-complying exploration activity

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Project

Project details

Application APO0001736 relates to the proposed Koolaman PASS AC drilling at Euston (Koolaman).

The application proposes the following characteristics.

Detail	Proposal
Activity description	A total of 5 reverse circulation air core (RCAC) holes with an average depth of 70m (maximum 80m) are planned for this program. Drilling aims to identify the occurrence of any potential acid sulphate contamination in the soil (PASS) and understand the distribution of sulphides across the deposit to provide information into environmental assessment documentation for the broader Euston Project. Each hole drilled is anticipated to be completed within a 24-hour period. No vegetation clearing is required as collar locations have been chosen on previously cleared areas or private access tracks. Collar locations have been chosen using the same pads and tracks as holes drilled under previous approvals (eg APO0001418), cleared and drilled as part of the Euston pre-feasibility study. Total footprint for all drilling will be limited to 100m2 (5 drill sites x 20m2 – estimated surface disturbance of ~6m x ~3m). A minor amount of surface disturbance will occur around each hole for sump digging and safe drill collar set up. A small sump to contain excess spoils will be dug next to each hole using a Skid Steer Loader. Minor branch trimming may be required to make a safe work area. Drilling will be carried out by independent contractors operating under Iluka's environmental, health and safety policies. Drilling personnel will consist of a driller, offsiders, a geologist and up to three field technicians (Iluka Resources employees and contractors). RCAC drilling will be undertaken using a mantis rig with onboard rod bin, compressor and cyclone with an Isuzu support truck and supported by 4wd vehicles. During drilling 2kg samples will be collected for assay as a 25% split; 1 metre intervals from a rotary splitter for RCAC. Immediately after drilling, RCAC holes will be plugged with a plastic octoplug at least 1m below the surface and backfilled with spoils buried in

Detail	Proposal
	the sump. Site and sump rehabilitation will occur as soon as the site is adequately dried of drill water.
Earthworks or vegetation clearing	Drill sites have been chosen specifically to be in already cleared areas, and accessed via existing tracks, so there is no need to clear any vegetation. Minor surface disturbance may occur around the drill collar location in order to create a safe working space. Excavation will be limited to the construction of one sump at each drill site (2.25m3) to contain any drill water and excess spoils. Excavated soil (approx. 2.25m3 per AC hole) from the sump will be stockpiled with the top 20cm piled separately as a seed bank. Sumps will be in-filled with the prior removed soil at the completion of drill activities.
Access to exploration activities	Access will be via existing tracks and farm access tracks. Farm roads may need to be graded, in consultation with the land holder.
Ancillary activities	There are no ancillary activities associated with this program.
Anticipated start date	15 June 2024
Expected duration (weeks)	2 weeks
Expected rehabilitation completion date	31 December 2024
Proposed hours of operation	Continuous work hours (24 hours a day, 7 days a week).
On-site employee or contractor numbers	6

Exempted areas

The Koolaman PASS AC drilling has not proposed prospecting in an exempted area.

State conservation areas

The Koolaman PASS AC drilling has not proposed prospecting in a State Conservation Area.

Site description and existing environment

The project comprises the following existing land uses:

The planned drill locations are in southwestern NSW, approximately 40km south-east of Mildura (Victoria) on the eastern side of the Murray River. The main vegetation type is Mallee scrub. The Mallee scrub grows in the sandy surface sediment and form ridges in places throughout the Euston area. The planned activity area lies on the Bulgamurra (sandplains and dunefields with belah and rosewood) and Mallee (sandplains and dunefields with mallee) Land Systems. The land area comprises Freehold, Western Land Leases and Crown tenures. Land use in the area is either cropping or dry land grazing. The program has been designed to minimise disruptions to landholders and their operations. Rehabilitation of all drill areas are designed to restore the ground to pre-drilling conditions, with the surface material removed during sump excavation returned to its original location. The proposed drilling will not impact the current land use in any way.

The project is located near the following sensitive receptors:

Local noise disturbance will be produced by the drill rig and support vehicles; however, levels will have typically reduced to 60-65 decibels (conversation level) 80m from the rig and continue reducing beyond this. No noise sensitive receptors are located proximate to any of the planned drill holes. Nearest residence is approximately 5 km away. Nearest health care facility and places of worship are in Mildura approximately 40km away from the proposed drilling at the closest point. The closest public school is in

Euston, approximately 20 km away. There are a number of orchards and agricultural businesses along the Stuart Highway, approximately 17km away from the nearest drillhole. Given the large distances to the nearest sensitive receptors, noise is considered to have a negligible impact on the surrounding environment and local communities. All staff on the drill site will wear hearing protection when equipment is operating. Land holders will be informed prior to drilling. Given the large distances to the nearest sensitive receptors the drilling will in no way exceed acceptable noise criteria of 5 dB at any sensitive receptor or cause any other disturbance. Noise is considered to have a negligible impact on the surrounding environment and local communities.

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

All proposed drill holes are planned in areas that are identified to have severe to extremely severe land and soil capability limitations (Land and Soil Capability Class 5 and 7). No occurrence of acid sulfate soils or the potential for soils to host acid sulfates is recorded. No areas are reserved for strategic agricultural land. As the planned drill holes are on previously cleared pads or private access tracks, compaction of the ground from drill activities (incl. site set-up) will be negligible. However, ground compaction will be superficial and will not impose adverse effects on the overall ground quality. Erosion from drilling activities (incl. vehicle movement, site set-up and drilling of holes) will be negligible due to minor gradient (general surface slope has <1% gradient over 100m).

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

Surface water sources will not be impacted as all planned drill holes are designed not to impact any existing water bodies. The closest distance to the Murray River is approx. 20km. There is an unnamed non-perennial lake approximately 10km away. Sump construction will be undertaken for each individual drill hole to contain all drill spoil and drill fluids to prevent any spillage of drill material. Drilling polymers will be sparsely used, and are non-toxic and biodegradable and will be contained within the sump.

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

The anticipated average drill depth of each hole is approximately 70m with a maximum drill depth of 80m. Groundwater generally flows south-to-north regionally, with water table elevations ranging from 38 mAHD (southern end of Yalong) to 32 mAHD (northern end of Castaway; GHD, 2005). Available data suggest groundwater has a near-neutral pH, relatively low total metal concentration, and is saline regionally, with the latter potentially ranging between 35,000 and 100,000 mg/L (EMM, 2022). The LPS aquifer, which hosts the ore, is recharged via rainfall infiltration, irrigation accessions, and from the Murray River, particularly during high-flow periods. That said, given the groundwater salinity, it seems likely recharge rates are low, any recharge is mobilising salts contained within the unsaturated zone consistent with dryland or irrigation salinity impacts, or some combination thereof (Iluka, 2020). No ground water is to be extracted, and any unexpected ground water emerging from unconfined aquifers will be contained in sumps or containment tanks. Current drilling programs, as part of the Euston PFS aim, to understand the existing groundwater sources in the Project area. Drilling polymers, muds and bentonite will be used only as required to increase hole integrity. These polymers and muds are non-toxic, biodegradable and will not have impact on local water sources.

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

The general Euston Project area is a mix of native vegetation and cropping land. No vegetation will be cleared under this approval, as disturbance is limited to drilling holes on existing pads. Vegetation comprises Plant Community Type (PCT) 170: Chenopod sandplain mallee woodland/shrubland of the arid and semi-arid (warm) zones, PCT 171: Spinifex linear dune mallee mainly of the Murray Darling Depression Bioregion and PCT 58 Black Oak – Western Rosewood open woodland on deep sandy loams mainly in the Murray Darling Depression Bioregion. Vegetation condition is poor to moderate due to agricultural grazing. Topography is flat, with general surface slope has <1% gradient over 100m

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

A PMST search around all of the planned drilling areas was conducted. As works are temporary in nature, with disturbance at each drill site only lasting 24 – 48 hours, it is not anticipated that there will be any impacts to any matters of national environmental significance.

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

A BioNet search of threatened and endangered fauna for the proposed drill area was performed and a record is attached to the application. Endangered species identified near the project area include the Malleefowl, , Western Pygmy possum and the Mallee-worm lizard. Where Malleefowl or Malleefowl nests are identified, the location will be recorded and no drilling will occur within a 200m radius. As drill holes are planned on existing tracks, disturbance is temporary in nature, and activities restricted to daylight hours, adverse effects on local flora and fauna are not expected. In addition, as rehabilitation will take place almost immediately after completion of activities, the short term nature of the activity is not expected to have any effect on flora or fauna.

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

None of the proposed drill holes are located on land declared as an Aboriginal place under the National Parks and Wildlife Act 1974 and are not planned within an area identified in an environmental planning instrument (such as a state environmental planning policy or local environmental plan) as being of Aboriginal cultural significance. Works will not impact any historic cultural or natural heritage items.

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

There are no areas of critical habitat or outstanding birodiversity value in the planned drilling areas. Drilling operations are planned to occur in an area that will not impact any critical habitat under the Fisheries Management Act 1994. Three threatened fish species are identified in an area west of the proposed drill holes that are associated with the Murray River water systems: the threatened Silver Perch, the threatened Murry Crayfish and the threatened Eel Tailed Catfish. Nearest drill holes to these water systems are a minimum of 12 km away and will not impact on the water course or threatened fish species.

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

The proposed AC program is not situated near any previously identified historic cultural or natural heritage items, with the closest known site being approximately 13km east of the program. An extensive search for Aboriginal Heritage Sites (objects and places) has been conducted for AL29 through the AHIMS database - refer attachments. Additional due diligence surveys have also been completed in consultation with Registered Aboriginal Parties (RAPs) to ensure no impacts to Aboriginal cultural heritage artefacts, sites or places. A number of sites have been identified as part of the survey, but are not impacted by this drilling program. Iluka exploration have an establishment Aboriginal Heritage Protocol in place in the event that artefacts, sites or places of significance are encountered during the exploration drilling program.

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

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
Koolaman PASS AC EA0005109	Air core drilling	100		11.25		ADE2000, ADE2072, ADE2073	ADE2000 m, r, s, x, y, z ADE2072 e ADE2073 a f g m n s

Impact management

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

Surface water courses will not be impacted. The closest distance to the Murray River is approx. 20km. Sumps (1.5m W x 3m L x 0.5m D) will be used to contain all water returned from drilling and will be buried as soon as all water has evaporated. Any water required for drilling activities will be sourced from a nearby town and stored in appropriate containers on the drilling and support vehicles. An average maximum of 100L of water will be required per AC hole.

The project includes the following measures to manage groundwater impacts:

The anticipated average drill depth of each hole is approximately 70m with a maximum drill depth of 80m. These drill depths confine the planned activity to within the Loxton Parilla Sands formation and will not penetrate the underlying confined aquifer. If the drilling does intercept the Geera clay, drilling will cease immediately. No ground water is to be extracted, and any unexpected ground water emerging from unconfined aquifers will be contained in sumps or containment tanks. Drilling polymers, muds and bentonite will be used only as required to increase hole integrity. These polymers and muds are non-toxic, biodegradable and will not have impact on local water sources.

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

All rubbish generated at the drill sites (typically two bags per day) will be removed from site and disposed of at an appropriately licensed waste refuse facility whilst personnel are active in the area. This includes any hydrocarbon and chemical waste which will be managed and transported as per the NSW Environment Protection Agency and the Transport of Dangerous Goods Code. Where possible, drill holes will be infilled with excess drill spoils, with any larger or excess material buried in the sumps during site rehabilitation. Sump construction will be sufficient to contain all drill spoil and drill fluids. In the unlikely event that holes produce an excessive amount of water return from drilling, the sumps will be incrementally increased to contain drill fluids. Total excavation calculations have been designed to exceed expected spoil volumes so sumps will likely be smaller than proposed, with any required incremental increases accounted for in the total excavation volumes.

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

All chemical and hazardous substances will be stored in sealed containers with appropriate signage in place. Safety Data Sheets will be available on site for all chemicals present and storage guidelines adhered to strictly. Regular inspection of chemical storage will be enacted prior to, during, and after active drilling operations. All vehicles are inspected daily for leaks. The operating contractors will manage storage, transport and handling of all chemicals on the drill site; however, this management will be supervised by Iluka staff and undergo regular inspections to ensure compliance to legislative requirements as well as internal Iluka standards. Drilling polymers, muds and bentonite will be used only as required and are non-toxic and biodegradable. There is no long-term storage of hydrocarbons on site. All chemical and hydrocarbon spillages, regardless of size, are reportable within Iluka's internal reporting system. Hydrocarbon spill kits are carried in each vehicle.

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

Local noise disturbance will be produced by the drill rig and support vehicles; however, levels will have typically reduced to 60-65 decibels (conversation level) 80m from the rig. No noise sensitive receptors are located proximate to any of the planned drill holes. Given the large distances to the nearest sensitive receptors the drilling will in no way exceed acceptable noise criteria of 5 dB at any sensitive receptor. The duration of drilling activities at any one site for an AC hole will be cumulatively less than one day (average 3 hours). On site activities will only occur during daylight hours. All staff on the drill site will wear hearing protection when equipment is operating. Land holders will be informed prior to drilling. Noise is considered to have a negligible impact on the surrounding environment.

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

Heavy vehicle traffic will be minimised to essential rig, support and water truck movement. Maximum speed limits will be prescribed to minimise dust production and track conditions will be monitored daily. Water injection will be used when required to manage dust generated through drilling. All vehicles are fitted with exhaust mufflers engineered to manufacturers specifications. The vehicles will be inspected prior to commencing activities. Should dust creation from either drilling operations or track usage become a concern, the situation will be assessed and managed by amending procedures in consultation with the landowner.

Sensitivity of the land to be disturbed

Question	Yes/no
Conservation areas	
Land reserved under the *National Parks and Wildlife Act 1974*?	No
Land acquired by the Minister under Part 11 of the *National Parks and Wildlife Act 1974*?	No
Land subject to a 'conservation agreement' under the *National Parks and Wildlife Act 1974* and/or *the Biodiversity Conservation Act 2016*?	No
Land declared as an aquatic reserve under the *Marine Estate Management Act 2014*?	No
Land declared as a marine park under the *Marine Estate Management Act 2014*?	No
Land within State Forests set aside under the *Forestry Act 2012* for conservation values, including Flora Reserves or Special Management (and other) Zones?	No
Land reserved or dedicated under the *Crown Lands Act 1989/Crown Lands Management Act 2016* (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 *Wilderness Act 1987*?	No
Land subject to 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*?	No
Land subject to a Wildlife Refuge agreement under the *Biodiversity Conservation Act 2016*?	No
Land subject to existing conservation agreements on private land under repealed legislation that continue to have effect (e.g., trust agreements under *Native Conservation Trust Act 2001*, Property vegetation plans under *Native Vegetation Act 2003*, Registered property agreements under *Native Vegetation Conservation Act 1997*)?	No
Drinking water catchment protection areas	
Land declared to be a 'controlled area' or a 'special area' under the *Water NSW Act 2014*?	No
Land declared to be a 'special area' under the *Water Management Act 2000* or *Hunter Water Act 1991*?	No
Sensitive areas	
Land declared as area of outstanding biodiversity value under the *Biodiversity Conservation Act 2016* or critical habitat under Part 7A of the *Fisheries Management Act 1994*?	No
Wetlands of international significance listed under the Ramsar Wetlands Convention?	No

Question	Yes/no
Land designated as a nationally important wetland in the Directory of Important Wetlands?	No
Coastal wetlands mapped under *State Environmental Planning Policy (Resilience and Hazards) 2021*?	No
Littoral rainforests mapped under *State Environmental Planning Policy (Resilience and Hazards) 2021*?	No
Coastal zone as defined in the *Coastal Management Act 2016*?	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 *Water Management Act 2000*?	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
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 *National Parks and Wildlife Act 1974*?	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 *State Environmental Planning Policy (Resources and Energy) 2021*?	No
Community land	
Public land classified as community land under the *Local Government Act 1993*?	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 *National Parks and Wildlife Act 1974*?	No
Will the activity damage any listed heritage items?	No

Attachment 1 – Statement of commitments

Item	Commitment
Activity type	Exploration activity comprising: • 0 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 • 100 square metres of air core drilling • 0 square metres of other drilling
Activity location	Euston (Koolaman), within AL 29 (1992).
Activity scope (including any ancillary activities)	A total of 5 reverse circulation air core (RCAC) holes with an average depth of 70m (maximum 80m) are planned for this program. Drilling aims to identify the occurrence of any potential acid sulphate contamination in the soil (PASS) and understand the distribution of sulphides across the deposit to provide information into environmental assessment documentation for the broader Euston Project. Each hole drilled is anticipated to be completed within a 24-hour period. No vegetation clearing is required as collar locations have been chosen on previously cleared areas or private access tracks. Collar locations have been chosen using the same pads and tracks as holes drilled under previous approvals (eg APO0001418), cleared and drilled as part of the Euston pre-feasibility study. Total footprint for all drilling will be limited to 100m2 (5 drill sites x 20m2 – estimated surface disturbance of ~6m x ~3m). A minor amount of surface disturbance will occur around each hole for sump digging and safe drill collar set up. A small sump to contain excess spoils will be dug next to each hole using a Skid Steer Loader. Minor branch trimming may be required to make a safe work area. Drilling will be carried out by independent contractors operating under Iluka's environmental, health and safety policies. Drilling personnel will consist of a driller, offsiders, a geologist and up to three field technicians (Iluka Resources employees and contractors). RCAC drilling will be undertaken using a mantis rig with onboard rod bin, compressor and cyclone with an Isuzu support truck and supported by 4wd vehicles. During drilling 2kg samples will be collected for assay as a 25% split; 1 metre intervals from a rotary splitter for RCAC. Immediately after drilling, RCAC holes will be plugged with a plastic octoplug at least 1m below the surface and backfilled with spoils buried in the sump. Site and sump rehabilitation will occur as soon as the site is adequately dried of drill water. There are no ancillary activities associated with this program.
Hours of operation	Continuous work hours (24 hours a day, 7 days a week).
Expected duration (weeks)	2 weeks
Anticipated start date	15 June 2024
Expected rehabilitation completion date	Estimated 31 December 2024
Maximum area of disturbance	100 square metres
Agricultural impact	The activity will be undertaken in accordance with 1_APO1736_Agricultural Impact Statement_AL29.pdf (684529 bytes)
Air quality	Heavy vehicle traffic will be minimised to essential rig, support and water truck movement. Maximum speed limits will be prescribed to minimise dust

Item	Commitment
	production and track conditions will be monitored daily. Water injection will be used when required to manage dust generated through drilling. All vehicles are fitted with exhaust mufflers engineered to manufacturers specifications. The vehicles will be inspected prior to commencing activities. Should dust creation from either drilling operations or track usage become a concern, the situation will be assessed and managed by amending procedures in consultation with the landowner.
Protection of water sources	Surface water courses will not be impacted. The closest distance to the Murray River is approx. 20km. Sumps (1.5m W x 3m L x 0.5m D) will be used to contain all water returned from drilling and will be buried as soon as all water has evaporated. Any water required for drilling activities will be sourced from a nearby town and stored in appropriate containers on the drilling and support vehicles. An average maximum of 100L of water will be required per AC hole. The anticipated average drill depth of each hole is approximately 70m with a maximum drill depth of 80m. These drill depths confine the planned activity to within the Loxton Parilla Sands formation and will not penetrate the underlying confined aquifer. If the drilling does intercept the Geera clay, drilling will cease immediately. No ground water is to be extracted, and any unexpected ground water emerging from unconfined aquifers will be contained in sumps or containment tanks. Drilling polymers, muds and bentonite will be used only as required to increase hole integrity. These polymers and muds are non-toxic, biodegradable and will not have impact on local water sources.
Soil and land stability	As the planned drill holes are on previously cleared pads or private access tracks, compaction of the ground from drill activities (incl. site set-up) will be negligible. However, ground compaction will be superficial and will not impose adverse effects on the overall ground quality. Erosion from drilling activities (incl. vehicle movement, site set-up and drilling of holes) will be negligible due to minor gradient (general surface slope has <1% gradient over 100m).
Noise and vibration	Local noise disturbance will be produced by the drill rig and support vehicles; however, levels will have typically reduced to 60-65 decibels (conversation level) 80m from the rig. No noise sensitive receptors are located proximate to any of the planned drill holes. Given the large distances to the nearest sensitive receptors the drilling will in no way exceed acceptable noise criteria of 5 dB at any sensitive receptor. The duration of drilling activities at any one site for an AC hole will be cumulatively less than one day (average 3 hours). On site activities will only occur during daylight hours. All staff on the drill site will wear hearing protection when equipment is operating. Land holders will be informed prior to drilling. Noise is considered to have a negligible impact on the surrounding environment.
Coastal processes and hazards	N/A
Hazardous substances or chemicals	All chemical and hazardous substances will be stored in sealed containers with appropriate signage in place. Safety Data Sheets will be available on site for all chemicals present and storage guidelines adhered to strictly. Regular inspection of chemical storage will be enacted prior to, during, and after active drilling operations. All vehicles are inspected daily for leaks. The operating contractors will manage storage, transport and handling of all chemicals on the drill site; however, this management will be supervised by Iluka staff and undergo regular inspections to ensure compliance to legislative requirements as well as internal Iluka standards. Drilling polymers, muds and bentonite will be used only as required and are non-toxic and biodegradable. There is no long-term storage of hydrocarbons on site. All chemical and hydrocarbon spillages, regardless of size, are reportable within Iluka's internal reporting system. Hydrocarbon spill kits are carried in each vehicle.
Wastes and emissions	All rubbish generated at the drill sites (typically two bags per day) will be removed from site and disposed of at an appropriately licensed waste refuse

Item	Commitment
	facility whilst personnel are active in the area. This includes any hydrocarbon and chemical waste which will be managed and transported as per the NSW Environment Protection Agency and the Transport of Dangerous Goods Code. Where possible, drill holes will be infilled with excess drill spoils, with any larger or excess material buried in the sumps during site rehabilitation. Sump construction will be sufficient to contain all drill spoil and drill fluids. In the unlikely event that holes produce an excessive amount of water return from drilling, the sumps will be incrementally increased to contain drill fluids. Total excavation calculations have been designed to exceed expected spoil volumes so sumps will likely be smaller than proposed, with any required incremental increases accounted for in the total excavation volumes.
Vegetation	Drill sites and access tracks have been chosen to remove the requirement for any vegetation clearing. This will eliminate the need to clear any areas of sensitive flora. Access will be conducted using existing tracks and drill sites will be moved to clear areas to reduce impacts to vegetation. No vegetation, native grasses or plant litter will be removed from site. The impact of this activity on vegetation is negligible.
Threatened fauna and flora species	As drill holes are planned on existing tracks, disturbance is temporary in nature, and activities restricted to daylight hours, adverse effects on local flora and fauna are not expected. In addition, as rehabilitation will take place almost immediately after completion of activities, the short term nature of the activity is not expected to have any effect on flora or fauna.
Areas of outstanding biodiversity value/critical habitat	
Endangered ecological community or critically endangered ecological community	N/A
Habitat of a threatened species or ecological community	N/A
Key threatening processes	N/A
Barriers to movement of fauna	N/A
Ecological and biosecurity impacts	N/A
Community resources	N/A
Natural resources	As activities are planned for existing cleared areas and are temporary in nature, there is no disruption expected to farming activities. Iluka team members will communicate with the landholder to ensure that all requirements are fulfilled.
Social impacts	N/A
Economic impacts	N/A
Heritage impacts	N/A
Aesthetic impacts	N/A
Aboriginal cultural heritage	Additional due diligence surveys have been completed in consultation with Registered Aboriginal Parties (RAPs) to ensure no impacts to Aboriginal cultural heritage artefacts, sites or places. Several sites have been identified as part of these surveys but proposed drill hole locations do not affect any sites. Iluka have an established Aboriginal Heritage Protocol in the event that items of value are encountered during the exploration drilling program.
Land use impacts	N/A

Item	Commitment
Transportation impacts	N/A
Matters of national environmental significance	N/A
Cumulative impacts	Works under this approval are using existing areas cleared under previous approvals (eg APO0001418) to avoid cumulative impacts on the environment.
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 AL 29 (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 AL 29 (1992).
Codes of Practice	Koolaman PASS AC drilling will be operated in accordance with: • 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 *National Parks and Wildlife Act 1974.*
Aboriginal place	Has the same meaning as it has in the *National Parks and Wildlife Act 1974.*
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: • 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 *Mining Act 1992* / *Petroleum (Onshore) Act 1991* – 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 *Marine Estate Management Act 2014.*
Areas of Outstanding Biodiversity Value (AOBVs)	Has the same meaning as it has in the *Biodiversity Conservation Act 2016*. Note: Areas of declared critical habitat under the now repealed *Threatened Species Conservation Act 1995* have become Areas of Outstanding Biodiversity Value (AOBVs) under the *Biodiversity Conservation Act 2016*.
Assessable prospecting operation	Any prospecting operation that is not exempt development within the meaning of *State Environmental Planning Policy (Resources and Energy) 2021.*
Clearing of vegetation	Any one or more of the following: • 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 *Exploration guideline: Application and assessment process for exploration activities*.
Critical habitat	Has the same meaning as it has in the *Fisheries Management Act 1994*. Areas of declared critical habitat under the now repealed *Threatened Species Conservation Act 1995* have become Areas of Outstanding Biodiversity Value (AOBVs) under the *Biodiversity Conservation Act 2016.*
Drill hole	A hole made by drilling or boring, but excludes: • 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 *Mining Act 1992 / Petroleum (Onshore) Act 1991* – as relevant.
Environmentally sensitive area of State significance	Has the same meaning as it has in *State Environmental Planning Policy (Resources and Energy) 2021.*
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 *State Environmental Planning Policy (Resources and Energy) 2021*.
Exploration	Has the same meaning as it has in *State Environmental Planning Policy (Resources and Energy) 2021*.
Fauna	Has the same meaning as it has in the *National Parks and Wildlife Act 1974*.
Groundwater	Water that occurs beneath the ground surface in the saturated zone.
Habitat	Has the same meaning as it has in *the Biodiversity Conservation Act 2016* or the *Fisheries Management Act 1994* (as relevant).
Harm	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 *Commonwealth Environment Protection and Biodiversity Conservation Act 1999*. In relation to the environment, has the same meaning as it has in the *Protection of the Environment Operations Act 1997*. In relation to threatened species or ecological communities, has the same meaning as: • 'harm an animal' in the *National Parks and Wildlife Act 1974* • 'pick a native plant' in the *National Parks and Wildlife Act 1974* • 'harm' in the *Fisheries Management Act 1994*. In relation to an aquifer or waterfront land, has the same meaning as it has in the *Water Management Act 2000*. In relation to Aboriginal places or Aboriginal objects has the same meaning as it has in the *National Parks and Wildlife Act 1974*. In relation to items of heritage significance, has the same meaning as it has in the *Heritage Act 1977*. In relation to protected marine vegetation, has the same meaning as it has in the *Fisheries Management Act 1994*.
Items of heritage significance	Means: • any heritage items listed in one or more of the following: — 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
	• within State Conservation Areas: — 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: • 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 *Fisheries Management Act 1994*.
Matters of national environmental significance	'Matters of national environmental significance' protected under the *Commonwealth Environment Protection and Biodiversity Conservation Act 1999*.
Minister	The Minister administering the *Mining Act 1992 / Petroleum (Onshore) Act 1991* – as relevant.
Native vegetation	Has the same meaning as it has in the *Local Land Services Act 2013*.
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 *Mining Act 1992 / Petroleum (Onshore) Act 1991* – 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: • 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
	• intensive livestock agriculture
Site	The land on which an activity is located.
State Conservation Area	Has the same meaning as it has in the *National Parks and Wildlife Act 1974.*
Surface disturbance	Means: • 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 *Biodiversity Conservation Act 2016* or *Fisheries Management Act 1994* (as relevant).
Title	An authority under the *Mining Act 1992* / a title under the *Petroleum (Onshore) Act 1991* – 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 *Protection of the Environment Operations Act 1997.*
Water source	Has the same meaning as it has in the *Water Management Act 2000.*
Water land	Has the same meaning as it has in the *Fisheries Management Act 1994.*
Waterfront land	Has the same meaning as it has in the *Water Management Act 2000.*
Wetlands	Has the same meaning as it has in the *Fisheries Management Act 1994*.
Wilderness	Lands identified as wilderness under the *Wilderness Act 1987.*
Wilderness area	Lands (including subterranean lands) declared to be a wilderness area under the *Wilderness Act 1987* or the *National Parks and Wildlife Act 1974.*

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.
Dust production from track use and drilling.
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?
Nil/Not applicable
What is the likely level of any impacts?
Negligible
Outline any proposed management controls and/or mitigation measures.
Heavy vehicle traffic will be minimised to essential rig and support truck movement. Maximum speed limits will be prescribed to minimise dust production and track conditions will be monitored daily. Water injection will be used when required to manage dust generated through drilling. All vehicles are fitted with exhaust mufflers engineered to manufacturers specifications. The vehicles will be inspected prior to commencing activities. Should dust creation from either drilling operations or track usage become a concern, the situation will be assessed and managed by amending procedures in consultation with the landowner.

Water impacts
Provide a brief description of the likely impacts to water quality and/quantity.
There will be no impact to any water sources.
What is the activity's impact due to the storage of water?
Nil/Not applicable
What is the activity's impact to natural water bodies, wetlands or runoff patterns?
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
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.
Sumps will be used to contain all water return from drilling and will be buried as soon as all water has evaporated. Any water required for drilling activities will be sourced from a nearby town and stored in appropriate containers on the drilling and support vehicles. The anticipated average drill depth of each hole is approximately 70m with a maximum drill depth of 80m. These drill depths confine the planned activity to within the Loxton Parilla Sands formation and will not penetrate the underlying confined aquifer. If the drilling does intercept the Geera clay, drilling will cease immediately. No ground water is to be extracted, and any unexpected ground water emerging from unconfined aquifers will be contained in sumps.

Soil and stability impacts

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

Due to the short term nature of the exploration drilling, there are no impacts to soil quality or land stability.

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

Nil/Not applicable

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

Nil/Not applicable

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

Nil/Not applicable

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

Nil/Not applicable

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?

Nil/Not applicable

Outline any proposed management controls and/or mitigation measures.

As the planned drill holes are on previously cleared pads or private access tracks, compaction of the ground from drill activities (incl. site set-up) will be negligible. However, ground compaction will be superficial and will not impose adverse effects on the overall ground quality. Erosion from drilling activities (incl. vehicle movement, site set-up and drilling of holes) will be negligible due to minor gradient (general surface slope has <1% gradient over 100m).

Noise and vibration impacts

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

Noise will occur from the air core rig and supporting vehicle movements.

What is the likely level of any impacts?

Nil/Not applicable

Outline any proposed management controls and/or mitigation measures.

Local noise disturbance will be produced by the drill rig and support vehicles; however, levels will have typically reduced to 60-65 decibels (conversation level) within 50m from the rig. On site activities will occur seven days a week (including public holidays) but be limited to daylight hours only. All staff on the drill site will wear hearing protection when equipment is operating. Land holders will be informed prior to drilling. Noise is considered to have a negligible impact on the surrounding environment.

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?

Coastal locations and processes

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.

Drilling polymers will be sparsely used, and they are non-toxic and biodegradable.

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

Nil/Not applicable

Outline any proposed management controls and/or mitigation measures.

All chemical and hazardous substances will be stored in sealed containers with appropriate signage in place. Safety Data Sheets will be available on site for all chemicals present and storage guidelines adhered to strictly. Regular inspection of chemical storage will be enacted prior to, during, and after active drilling operations. All vehicles are inspected daily for leaks. All chemical and hydrocarbon spillages, regardless of size, are reportable within Iluka's internal reporting system. Hydrocarbon spill kits are carried in each vehicle.

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.

Drilling polymers will be sparsely used, and they are non-toxic and biodegradable. All waste will be contained in sumps.

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

No ground water is to be extracted or affected, and any unexpected ground water emerging from unconfined aquifers will be contained in sumps.

What is the likely level of the impacts?

Nil/Not applicable

Outline any proposed management controls and/or mitigation measures.

Where possible, drill holes will be infilled with excess drill spoils, with any larger or excess material buried in the sump during site rehabilitation. Sump construction will be sufficient to contain all drill spoil and drill fluids. In the unlikely event that holes produce an excessive amount of water return from drilling, the sumps will be incrementally increased to contain drill fluids.

Vegetation

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

Drill sites have been chosen to remove the requirement for any vegetation clearing. This will eliminate the need to clear any areas of sensitive flora. Access will be conducted using existing tracks and drill sites have be moved to clear areas to reduce impacts to vegetation. No vegetation, native grasses or plant litter will be removed from site.

Vegetation comprises Plant Community Type (PCT) 170: Chenopod sandplain mallee woodland/shrubland of the arid and semi-arid (warm) zones, PCT 171: Spinifex linear dune mallee mainly of the Murray Darling Depression Bioregion and PCT 58 Black Oak – Western Rosewood open woodland on deep sandy loams mainly in the Murray Darling Depression Bioregion.

Vegetation condition is poor to moderate due to agricultural grazing.

Vegetation

What is the likely level of the impacts?

Nil/Not applicable

Outline any proposed management controls and/or mitigation measures.

Drill sites and access tracks have been chosen to remove the requirement for any vegetation clearing. This will eliminate the need to clear any areas of sensitive flora. Access will be conducted using existing tracks and drill sites will be moved to clear areas to reduce impacts to vegetation. No vegetation, native grasses or plant litter will be removed from site. The impact of this activity on vegetation is negligible.

Threatened species

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

A BioNet search of threatened and endangered fauna for the proposed drill area was performed and a record is attached to the application. Endangered species identified near the project area include the Malleefowl, Western Pygmy possum and the Mallee-worm lizard. Where Malleefowl or Malleefowl nests are identified, the location will be recorded and no drilling will occur within a 200m radius.

What is the likely level of the impacts?

Negligible

Outline any proposed management controls and/or mitigation measures.

As drill holes are planned on existing tracks, disturbance is temporary in nature, and activities restricted to daylight hours, adverse effects on local flora and fauna are not expected. In addition, as rehabilitation will take place almost immediately after completion of activities, the short term nature of the activity is not expected to have any effect on flora or fauna.

Area of outstanding biodiversity value (AOBV) / Critical habitat

Provide a brief description of any likely impacts to AOBV/critical habitat.

N/A

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.

N/A

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.
N/A
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.
N/A
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.
N/A
What is the likely level of any impacts?
Nil/Not applicable
Outline any proposed management controls and/or mitigation measures.
N/A

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.
N/A
What is the likely level of any impacts?
Nil/Not applicable
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.

The activity is not likely to degrade or increase the demand for services and infrastructure resources

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

N/A

What is the likely level of the impact?

Nil/Not applicable

Outline any proposed management controls and/or mitigation measures.

N/A

Natural resources

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

N/A

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).

As activities are planned for existing cleared areas and are temporary in nature, there is no disruption expected to farming activities. Iluka team members will communicate with the landholder to ensure that all rehabilitation requirements are fulfilled.

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

N/A

What is the likely level of the impact?

Negligible

Outline any proposed management controls and/or mitigation measures.

As activities are planned for existing cleared areas and are temporary in nature, there is no disruption expected to farming activities. Iluka team members will communicate with the landholder to ensure that all requirements are fulfilled.

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.

N/A

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.

N/A

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).

N/A

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.

Social impacts

N/A

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.

N/A

What is the likely level of any social impacts?

Nil/Not applicable

Outline any proposed management controls and/or mitigation measures.

N/A

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 heritage items near to the planned exploration activity

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.

N/A

What is the likely level of any impacts?

Nil/Not applicable

Outline any proposed management controls and/or mitigation measures.

N/A

Cultural impacts

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

Cultural impacts

There will be no impacts to any culturally modified trees

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

The activity will no affect known Aboriginal objects or places.

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

The activity is not located in areas where landscape features indicate the presence of Aboriginal objects.

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.

There are no native title claims over the area, with a determination for the Barkandji (Paakantyi) People #11 settled.

What is the likely level of any cultural impacts?

Nil/Not applicable

Outline any proposed management controls and/or mitigation measures.

Additional due diligence surveys have been completed in consultation with Registered Aboriginal Parties (RAPs) to ensure no impacts to Aboriginal cultural heritage artefacts, sites or places. Several sites have been identified as part of these surveys but proposed drill hole locations do not affect any sites. Iluka have an established Aboriginal Heritage Protocol in the event that items of value are encountered during the exploration drilling program.

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.

N/A

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.

Consistency with applicable local strategic planning statements, regional strategic plans or district strategic plans
N/A
What is the likely level of any impacts?
Nil/Not applicable
Outline any proposed management controls and/or mitigation measures.
N/A

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.
The activity is likely not to impact any matters of environmental significance under the Commonwealth Environment Protection and Biodiversity Conservation Act 1999.
What is the likely level of any impacts?
Nil/Not applicable
Outline any proposed management controls and/or mitigation measures.
N/A

Cumulative impacts
Is the activity likely to result in cumulative environmental effects with other existing or likely future activities?
No
Describe the impact.
Works under this approval are using existing areas cleared under previous approvals (eg APO0001418) to avoid cumulative impacts on the environment.
What is the likely level of any impacts?
Nil/Not applicable
Outline any proposed management controls and/or mitigation measures.
Works under this approval are using existing areas cleared under previous approvals (eg APO0001418) to avoid cumulative impacts on the environment.

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.
The exploration program has been designed to remain on existing cleared areas, to remove the requirement to disturb any vegetation and reduce surface disturbance. Rehabilitation will be undertaken immediately upon

Environmental assessment conclusions

completion of the program, and there are no anticipated long-term effects to the environment or land from the planned activities.

Attachment 4 – List of supporting documents

- 1_APO1736_Agricultural Impact Statement_AL29.pdf
- 2_Location Map EustonPFS AL29.pdf
- 3_APO_Representative Photographs_Euston.pdf
- 6_Species Search.zip
- 8_AHIMS.pdf
- APO0001736_Submission Report_3 May 2024 2:16pm.pdf
- Protected Matters - MNES layers - March 19th 2024.pdf
- SEED_Environment.pdf
- SEED_Heritage.pdf