APO0001703

Approval to undertake assessable prospecting operations

Tahmoor South-West Exploration Program 2024

31 May 2024

Application summary

Detail	Application
Reference	APO0001703
Date of approval	31 May 2024
Title	CCL 747 (1973)
Contact	[redacted]
Project name	Tahmoor South-West Exploration Program 2024
Project location	South-west of Tahmoor, NSW
Activity type	Non-complying exploration activity

Important note

While every effort is being made to ensure that documents hosted by the NSW Resources Regulator are WCAG 2.0 Level AA compliant, we acknowledge that not all resources have achieved this. If you require this document in an alternative format, please email industry.engagement@regional.nsw.gov.au

The Regulator may make the information in your application and any supporting information (including this approval) available for inspection by members of the public, including by publication on its website or by displaying the information at any of its offices. If you consider any part of your application to be confidential, please communicate this to the Regulator via the message function on this application within the Portal.

Project

Project details

Assessable prospecting activity APO0001703 relates to the Tahmoor South-West Exploration Program 2024 at South-west of Tahmoor, NSW.

The project has the following approved characteristics.

Detail	Proposal
Activity description	Up to nine surface to seam boreholes and non-intrusive seismic surveys is proposed in an area referred to as 'Tahmoor south-west' to confirm the specific geology and coal quality information from the area of potential future mining and inform the mine design process. The seismic survey is required to identify geological features such as dykes and faults. The upper non-cored section of each borehole will typically be drilled using a Poly Carbonate Diamond (PCD) bit, with the lower section of the borehole being cored with HQ size diamond equipment. Steel casing will be installed at the top of each borehole to ensure stability of the hole. No venting or flaring of gases is proposed. Two or more above ground tanks will be utilised to contain all drill water. Erosion and silt fencing will be erected as required on the downslope of the borehole site to prevent any dirty water runoff and to control erosion. Each borehole site will be security fenced to protect fauna and deter unauthorised access. Seismic surveys will be conducted using vibrator trucks. These low-impact surveys will be conducted along existing access tracks and will not require any surface disturbance or physical infrastructure. The time for each seismic line to be completed will be dependent on the length of survey line with each survey line typically completed in one day. Upon completion of exploration activities, drill holes which are not intended to be utilised for groundwater monitoring would be sealed, surveyed and collars cut as soon as practical. These works would be conducted in accordance with the Department of Industry Resources & Energy's Guideline for mineral exploration drilling; drilling and integrity of petroleum exploration and production

Detail	Proposal
	wells (2016). Following the completion of drilling activities, rehabilitation will be carried out in accordance with the Rehabilitation Objectives and Completion Criteria.
Earthworks or vegetation clearing	Most of the drill pads are located on already highly disturbed parking bays of existing Rural Fire Service (RFS) fire trails which have been extensively cleared with minimal groundcover, with sufficient access at seven sites to maintain the existing shrubs insitu. Borehole sites 4 and 7 will require some minor vegetation (shrubs and grasses) removal totalling 0.125 ha. Native vegetation at these two borehole sites is in moderate to degraded condition with rubbish, weeds and less diversity of plants than other borehole sites. No hollow bearing trees will be cleared. All cleared vegetation will be temporarily stockpiled for re-use in rehabilitation of the site, following completion of the drilling activities. Access to the drill pads will be from existing public roads and unsealed access tracks; no earthworks or vegetation clearing is proposed to facilitate access to the exploration activities. Minor surface disturbance is required to establish a drill pad of no more than 25 m x 25 m, to accommodate site vehicles and plant. Each drill hole will have an associated small ground disturbance for the purpose of capturing drill hole return water and pumping of this water to the above ground water tanks. There will be minor ground disturbance associated with the installation of sediment and erosion control structures. Topsoil stripped to facilitate these activities will be temporarily stockpiled for later use in rehabilitation to the prior land use of fire trails.
Access to exploration activities	Existing unsealed tracks used as firetrails by the Rural Fire Service (RFS) will be utilised for the drilling program which minimises clearing and surface disturbance associated with the exploration program. These tracks have been widened with overhanging branches and foliage removed in recent years. The trucks and vehicles with the borehole drilling equipment are expected to have clear access to each site; no road widening or grading is proposed. Open boreholes will be barricaded off using security fencing during the drilling process to prevent any unauthorised access by persons or fauna during the course of the drilling program.
Ancillary activities	Ancillary activities will be limited to the provision of water from offsite sources via water cart and transport and disposal of drill cuttings, fluids and waste materials at an appropriately licensed waste facility. Fresh water will used in the drilling operations to lubricate the drill head and to flush the borehole, with benign, nonhazardous “drilling mud” lubricants used only if required. Fresh water will be imported from a local contractor with no water taken from nearby water sources.
Anticipated start date	6 May 2024
Expected duration (weeks)	The proposed exploration activities are anticipated to take approximately 8 to 12 months to complete (29 to 52 weeks), dependent on weather and geological conditions.
Expected rehabilitation completion date	1 May 2025
Proposed hours of operation	Standard Business hours (7AM to 6PM weekdays, 8AM to 1PM Saturdays, no work Sundays and public holidays)
On-site employee or contractor numbers	10

State conservation areas

The Tahmoor South-West Exploration Program 2024 has not proposed prospecting in a State Conservation Area.

Site description and existing environment

The project comprises the following existing land uses:

The land immediately surrounding the proposed exploration activities is comprised primarily of rugged bushland. Boreholes (BH) 1-3, 5, 6, 8 and 9 are located on the verges of established fire trails, utilised by the RFS, while BH4 and BH7 are located next to established public dirt roads. The proposed borehole sites are located on crown land

and the seismic lines are located primarily on crown land and small areas of freehold land. The Bargo State Conservation Area is located to the immediate west of BH4. The land upon which the exploration activities are situated are zoned as Environmental Conservation (C2), Primary Production Small Lots (R4) and Rural Landscape (R2) under the Wingecarribee and Wollondilly LGAs.

The project is located near the following sensitive receptors:

The proposed exploration activities are located in bushland with a number of small towns in close proximity, including Buxton (2.06 km from BH6), Bargo (2.44 km away) and Balmoral (2.67km from BH1). The township of Tahmoor is located approximately 5.54 km north of BH6, with the Tahmoor Coal Mine surface facilities located 2.46km north of BH6. The closest privately owned residences are located proximate to BH7 and BH4. These receivers are located approximately 280m east and 450m south-east of BH7 and approximately 370m north north-east and 480m south of BH4. (Figure 2).

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

According to the Soil Landscapes of Central and Eastern NSW (mapped by DPIE 2020), the study area is wholly situated within the Lucas Hills Soil Landscape (see Agricultural Impact Statement appended to this application). The dominant underlying geology associated with Lucas Hills soils is the Mittagong Formation, comprising of alternating bands of shale and fine-grained sandstones. Landforms associated with this soil landscape include gently undulating crests, ridges and plateau surfaces, with a general elevation ranging from 10 m to 50 m. Slopes are usually gentle (up to 10%) and local relief is under 50 m. Lucas Hills soils are moderately deep, with topsoils comprising of a loose greyish brown fine sandy loam (A1 horizon) overlying sandy clay loam to heavy clay (B1 horizon). Total soil depths vary from 1-2 m. Rock outcrops are not usually present in this landscape. According to the estimated inherent soil fertility mapping of NSW (SEED, 2024) the proposed drill sites are on soils with moderately low (BH4, BH5 and BH7) to low soil fertility (BH1, B2, BH3, BH8 and BH9). BH6 is located on an area not assessed by the inherent soil fertility mapping of NSW. BH4, BH5 and BH7 are located on LSC Class 4; moderate to severe limitations in land and soil capability. Agricultural enterprise on LSC Class 4 can only be managed by specialised management practices with a high level of knowledge, expertise, inputs, investment and technology (OEH, 2012). Boreholes BH1, BH2, BH3, BH8, and BH9 are all located on LSC class 6; very severe limitations, generally incapable of agricultural land use. BH6 is located on land which has not been assessed for LSC class. The soil types and properties are discussed further in the attached Agricultural Impact Statement (AIS).

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

The study area is located within the Hawkesbury-Nepean catchment, with the Bargo River located approximately 160 m to the south of BH5 and 440 m southwest of BH3. The other closest waterway to the boreholes is an unnamed 3rd-order (Strahler) creek flowing to the north-east and almost parallel to the Bargo River. This unnamed tributary and the Bargo River converge 770 m north of BH3. Approximately 7.6 km north-east of this confluence, the Bargo River flows into the Nepean River, a 7thth-order watercourse and a major regional waterway. The only borehole located on the border of the WaterNSW Declared Catchment – outer catchment is BH4; all other boreholes and seismic lines are located outside of the Declared Catchment. No discharges of water are required as part of the exploration program, and all drill pads will have appropriate erosion and sedimentation controls installed as required. Therefore, with the surface water and soil and stability management and mitigation measures implemented, as outlined in the REF form, the exploration activities are likely to have a neutral effect on water quality within the Water NSW Special Areas.

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

The exploration activities are located within the Hawkesbury Sandstone System, which includes the catchment of the Bargo River. This system is considered highly productive. Groundwater flow within this system is dominantly horizontal with confined flow along discrete layers, underlain by fine grained or relatively impermeable strata. No water will be extracted from aquifers for use in the exploration activities, and there is no quantifiable

groundwater anticipated as a result of the project. Resultingly, there are no anticipated impacts to the Hawkesbury Sandstone groundwater system.

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

The topography of the exploration program varies from 270m to 440m (Figure 2). Vegetation of the areas surrounding the exploration activities is comprised generally of eucalypt forests with sclerophyllous shrub that have been extensively cleared. Tree species that dominant this landscape include turpentine smooth-barked apple red bloodwood, silvertop ash, snappy gum and Sydney peppermint. The native vegetation mapped as occurring in the Subject Area where the borehole sites are aligns to the following Plant Community Types (PCTs): • PCT 3598 Woronora Plateau Scribbly Gum Woodland. • PCT 3619 Sydney Hinterland Enriched Sandstone Bloodwood Forest. Neither of these PCTs are Threatened Ecological Communities (TECs) as listed under the Biodiversity Conservation Act 2016 (BC Act) or the Environmental Protection Biodiversity Conservation Act 1999 (EPBC Act). There are no mapped or existing TECs listed under the BC Act or EPBC Act within the Subject Area. It is unlikely that the exploration activities would cause any significant direct or indirect impacts, however some very minor impacts may occur to PCT 3598 at borehole sites 4 and 7. These impacts will be short in duration and temporary in nature, with both drill pads being rehabilitated upon completion of drilling activities in accordance with the ROCC.

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

A Flora and Fauna Impact Assessment was completed for the proposed exploration program (attached to this APO application), which found the activities will not impact on Matters of National Environmental Significance (MNES). The FFIA considered the MNES; 'listed threatened species and communities' and found no mapped or existing Threatened Ecological Communities (TECs) listed under the EPBC Act within the exploration area. The Mittagong Geebung (Persooonia glaucescens) listed as Vulnerable under the EPBC Act was recorded in the Subject Area. The potential impact of the Project on this threatened species and its habitat has been assessed via the application of the Significant Impact Guidelines for vulnerable species under the EPBC Act. The assessment found the local occurrence of P. glaucescens is unlikely to be significantly affected by the Project as: • no P. glaucescens individuals will be directly or indirectly affected • no trail maintenance or upgrades are required • no important habitat will be affected.

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

FLORA There are no mapped or existing TECs listed under the BC Act or EPBC Act within the Subject Area. Threatened flora, as listed on the BC and/or EPBC Acts, were considered as part of the FFIA. Based on the available habitat and previous records in the locality, seven threatened plant species have been given a Moderate or High likelihood of occurrence within the Subject Area including Bynoe's Wattle, Dwarf Kerrawang, Small-flowered Grevillea, Bargo Geebung, Hairy Geebung, Mittagong Geebung and Brown Pomaderris. Three individual plants of the threatened flora species - Mittagong Geebung were recorded but due to being sensitive species, are not mapped in this report. The coordinates and photos are provided to SIMEC separately. The Project would avoid all possible invasive processes to flora (a Key Threatening Process listed on the BC and/or EPBC Acts), via the cleaning of plant and machinery prior to entry to the exploration areas. FAUNA BH4 and BH7 have some native habitat; however, due to edge effects, the habitat quality is moderate to degraded. The trees and shrubs present are regrowth and are too young to support hollows. There is minimal rock or large woody debris present. As such, BH 4 and BH7 are unlikely to be important/limiting habitat for any threatened fauna species. The remaining borehole sites have already been cleared/were burnt in December 2019 and contain approximately 10% groundcover. The remaining 90% is bare earth with leaf litter. These areas are unlikely to be important habitat for any threatened fauna species, including foraging or breeding habitat. Security fencing around drill pads will ensure death or injury of individual fauna is highly unlikely. No KTPs would be affected by the exploration activities; there is no removal of bushrock, hollow-bearing trees or dead wood and trees proposed. The activity will not result in permanent impacts on habitat or a permanent increase of KTPs.

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

A search of the World Heritage List, Commonwealth Heritage List, National Heritage Register, State Heritage Register, and the Wingecarribee and Wollondilly LEPs was conducted on 25 January 2024. The results of the searches found no listed sites or historic or natural heritage in the vicinity of the proposed exploration activities.

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

No Critical habitat would be affected by the Project. No Areas of Outstanding Biodiversity Value (AOBV) listed under the BC Act are present within the Subject Area. No AOBV would be affected by the Project.

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

An Aboriginal Heritage Due Diligence Assessment (AHDDA) has been completed for the Tahmoor south-west exploration program. The AHDDA found that the exploration activities have a low risk of causing adverse impacts to Aboriginal heritage. The study area does not intersect with any registered Aboriginal sites and has been heavily disturbed through previous clearing activities. Although the Bargo River and its tributaries are in close proximity to the borehole locations, previous disturbance activities are considered to have completely truncated the upper layers of the soil profile in which archaeological deposits may be expected to occur.

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
BH8 EDH0014493	Other	625				455	1951	h
BH4 EDH0014489	Other	625	625			440	1951	g
BH2 EDH0014487	Other	625				450	1951	h
BH6 EDH0014491	Other	625				460	1951	d
BH5 EDH0014490	Other	625				465	1951	d
BH1 EDH0014486	Other	625				440	1951	n
BH7 EDH0014492	Other	625	625			444	1951	g
BH9 EDH0014494	Other	625				450	1951	h
BH3	Other	625				454	1951	h

Id/ Regulator no.	Type	Surface disturbance (m^2)	Veg. Clearing (m^2)	Excavations (m^3)	Produced water (ml)	Depth (m)	Block number	Unit letters
EDH0014488								

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
Line A start EA0004998	Seismic testing					NA	NA
Line A end EA0004999	Seismic testing					NA	NA
Line B end EA0005001	Seismic testing					NA	NA
Line E start EA0005006	Seismic testing					NA	NA
Line C end EA0005003	Seismic testing					NA	NA
Line D end EA0005005	Seismic testing					NA	NA
Line B start EA0005000	Seismic testing					NA	NA
Line C start EA0005002	Seismic testing					NA	NA
Line D start EA0005004	Seismic testing					NA	NA

Id/ Regulator no.	Type	Surface disturbance (m^2)	Veg. Clearing (m^2)	Excavations (m^3)	Produced water (ml)	Block number	Unit letters
Line E end EA0005007	Seismic testing					NA	NA

Impact management

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

The study area is located within the Hawkesbury-Nepean catchment. Drill pads have been intentionally positioned as far away from creeks and drainage lines as practicable, in areas accessible by existing access tracks. The closest waterway is the Bargo River, located approximately 160 m to the south of BH5 and 440 m southwest of BH3 (Figure 1.1, attached). The other closest waterway to the boreholes is an unnamed 3rd-order (Strahler) creek flowing to the north-east and almost parallel to the Bargo River. This unnamed tributary and the Bargo River converge 770 m north of BH3. Whilst these drill pads are located proximate to the Bargo River, there are no anticipated impacts as a result of the exploration activities, and no change to the upstream or downstream hydrology of the drainage lines. No water will be taken from nearby drainage lines or water sources. Water impacts and mitigation measures are outlined in the REF.

The project includes the following measures to manage groundwater impacts:

No water will be extracted from aquifers for use in the exploration activities, and there is no quantifiable groundwater make anticipated as a result of the exploration activities. In the unlikely event that drill holes meet artesian or dynamic water flows, they would be sealed to prevent contamination or cross contamination of groundwater, and exploration works at the drill site would cease. Cement would be used as a permanent seal in accordance with sealed in accordance with the Department of Industry Resources & Energy's Guideline for mineral exploration drilling; drilling and integrity of petroleum exploration and production wells (2016).

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

Due to the short-term and temporary nature of the proposed exploration activities, minor quantities of the waste streams identified below have the potential to be generated: • general waste - domestic refuse (litter) generated by onsite personnel • human waste - mobile site toilets (sewage) • maintenance waste - waste generated from site plant and minor vehicle maintenance eg oils, fuels, lubricants and wash down wastewater • Drilling waste - drill cuttings and fluids generated from the drilling operations. These would be contained in above ground tanks which would be lined sufficiently to prevent leakage. Each of the identified waste streams would be managed throughout the duration of the proposed exploration activities to ensure appropriate disposal of chemical, fuel and lubricant containers, solid and liquid wastes that conforms to EPA requirements. Waste impacts and mitigation measures are outlined in the REF.

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

Chemicals and hydrocarbons which may be utilised during the exploration activities include drill cuttings and fluids from the drilling process, hydrocarbons for minor maintenance of plant and equipment including fuels, oils and lubricants and chemicals required for the drilling and sealing of boreholes, such as bentonite. Chemical impacts and mitigation measures are outlined in the REF.

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

The closest privately owned residences are located approximately 280m east and 450m south-east of BH7 and approximately 370m north north-east and 480m south of BH4 (refer to attached noise impact assessment). The Noise Impact Assessment (attached) adopted the noise management levels (NML) based on rating background level (RBL) for private residences; 35 decibels (dB), and LAeq,15minute of 45 dB. Exploration drilling activities

are predicted to exceed the noise-affected NML at times, but remain in compliance with the highly-affected NML at all assessment locations. The activities will be short in duration, with works at each drill pad expect to last between four and six weeks, depending on borehole depth, weather and site conditions). There were no predicted exceedances of the highly noise affected NML of LAeq,15minute 75 dB that would require restriction of work hours to provide respite to affected community members. Noise impacts and mitigation measures are outlined in the REF.

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

Drill pads and access tracks have been positioned in areas of existing disturbance with only minor vegetation removal required reducing the potential generation of airborne dust. Minor and short duration dust generation is anticipated from drilling activities and vehicular movements. Emissions from vehicles, plant and equipment associated with the proposed exploration activities have the potential for minor, localised impacts. The closest privately-owned residence is located approximately 280m east of drill pad BH7. With the implementation of the mitigation measures outlined, privately-owned residences are anticipated to experience minor air quality impacts associated with the proposed exploration activities. These impacts will be temporary in nature and short-term in duration. Air quality impacts and mitigation measures are outlined in the REF.

Sensitivity of the land to be disturbed

Question	Yes/no
Conservation areas	
Land reserved under 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 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

Question	Yes/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?	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?	Yes
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 • 9 other drill holes • 0 cubic metres of bulk sampling • 0 square metres of new access tracks • 10 lines of seismic testing • 0 square metres of air core drilling • 0 square metres of other drilling
Activity location	South-west of Tahmoor, NSW, within CCL 747 (1973).
Activity scope (including any ancillary activities)	Up to nine surface to seam boreholes and non-intrusive seismic surveys is proposed in an area referred to as 'Tahmoor south-west' to confirm the specific geology and coal quality information from the area of potential future mining and inform the mine design process. The seismic survey is required to identify geological features such as dykes and faults. The upper non-cored section of each borehole will typically be drilled using a Poly Carbonate Diamond (PCD) bit, with the lower section of the borehole being cored with HQ size diamond equipment. Steel casing will be installed at the top of each borehole to ensure stability of the hole. No venting or flaring of gases is proposed. Two or more above ground tanks will be utilised to contain all drill water. Erosion and silt fencing will be erected as required on the downslope of the borehole site to prevent any dirty water runoff and to control erosion. Each borehole site will be security fenced to protect fauna and deter unauthorised access. Seismic surveys will be conducted using vibrator trucks. These low-impact surveys will be conducted along existing access tracks and will not require any surface disturbance or physical infrastructure. The time for each seismic line to be completed will be dependent on the length of survey line with each survey line typically completed in one day. Upon completion of exploration activities, drill holes which are not intended to be utilised for groundwater monitoring would be sealed, surveyed and collars cut as soon as practical. These works would be conducted in accordance with the Department of Industry Resources & Energy's Guideline for mineral exploration drilling; drilling and integrity of petroleum exploration and production wells (2016). Following the completion of drilling activities, rehabilitation will be carried out in accordance with the Rehabilitation Objectives and Completion Criteria. Ancillary activities will be limited to the provision of water from offsite sources via water cart and transport and disposal of drill cuttings, fluids and waste materials at an appropriately licensed waste facility. Fresh water will used in the drilling operations to lubricate the drill head and to flush the borehole, with benign, nonhazardous "drilling mud" lubricants used only if required. Fresh water will be imported from a local contractor with no water taken from nearby water sources.
Hours of operation	Standard Business hours (7AM to 6PM weekdays, 8AM to 1PM Saturdays, no work Sundays and public holidays)
Expected duration (weeks)	The proposed exploration activities are anticipated to take approximately 8 to 12 months to complete (29 to 52 weeks), dependent on weather and geological conditions.
Anticipated start date	6 May 2024

Item	Commitment
Expected rehabilitation completion date	Estimated 1 May 2025
Maximum area of disturbance	5,625 square metres
Agricultural impact	The activity will be undertaken in accordance with Tahmoor SW Exploration AIS.pdf (5540125 bytes)
Air quality	Drill pads and access tracks have been positioned in areas of existing disturbance with only minor vegetation removal required reducing the potential generation of airborne dust. Minor and short duration dust generation is anticipated from drilling activities and vehicular movements. Emissions from vehicles, plant and equipment associated with the proposed exploration activities have the potential for minor, localised impacts. The closest privately-owned residence is located approximately 280m east of drill pad BH7. With the implementation of the mitigation measures outlined, privately-owned residences are anticipated to experience minor air quality impacts associated with the proposed exploration activities. These impacts will be temporary in nature and short-term in duration. Air quality impacts and mitigation measures are outlined in the REF.
Protection of water sources	The study area is located within the Hawkesbury-Nepean catchment. Drill pads have been intentionally positioned as far away from creeks and drainage lines as practicable, in areas accessible by existing access tracks. The closest waterway is the Bargo River, located approximately 160 m to the south of BH5 and 440 m southwest of BH3 (Figure 1.1, attached). The other closest waterway to the boreholes is an unnamed 3rd-order (Strahler) creek flowing to the north-east and almost parallel to the Bargo River. This unnamed tributary and the Bargo River converge 770 m north of BH3. Whilst these drill pads are located proximate to the Bargo River, there are no anticipated impacts as a result of the exploration activities, and no change to the upstream or downstream hydrology of the drainage lines. No water will be taken from nearby drainage lines or water sources. Water impacts and mitigation measures are outlined in the REF. No water will be extracted from aquifers for use in the exploration activities, and there is no quantifiable groundwater make anticipated as a result of the exploration activities. In the unlikely event that drill holes meet artesian or dynamic water flows, they would be sealed to prevent contamination or cross contamination of groundwater, and exploration works at the drill site would cease. Cement would be used as a permanent seal in accordance with sealed in accordance with the Department of Industry Resources & Energy's Guideline for mineral exploration drilling; drilling and integrity of petroleum exploration and production wells (2016).
Soil and land stability	• Drill pads and access tracks have largely been positioned in areas of existing disturbance and vegetation clearing. • Vegetation removal will be via slasher to minimise soil disturbance. In the small areas where soil disturbance is required, topsoil will be stripped and stockpiled for use in rehabilitation. • Erosion and sediment controls will be installed as required. • Chemicals and/or other hazardous substances will be managed to minimise the risk of soil contamination. • Upon completion of exploration activities, boreholes will be sealed/suspended in accordance with indsutry Guidelines. • Exploration areas would be rehabilitated and revegetated as soon as practically possible to limit areas of surface exposure in accordance with the ROCC. • Rehabilitated sites will be inspected to ensure rehabilitation and drill hole sealing has been effective.
Noise and vibration	The closest privately owned residences are located approximately 280m east and 450m south-east of BH7 and approximately 370m north north-east and 480m south of

Item	Commitment
	BH4 (refer to attached noise impact assessment). The Noise Impact Assessment (attached) adopted the noise management levels (NML) based on rating background level (RBL) for private residences; 35 decibels (dB), and LAeq,15minute of 45 dB. Exploration drilling activities are predicted to exceed the noise-affected NML at times, but remain in compliance with the highly-affected NML at all assessment locations. The activities will be short in duration, with works at each drill pad expect to last between four and six weeks, depending on borehole depth, weather and site conditions). There were no predicted exceedances of the highly noise affected NML of LAeq,15minute 75 dB that would require restriction of work hours to provide respite to affected community members. Noise impacts and mitigation measures are outlined in the REF.
Coastal processes and hazards	No management/mitigation controls are proposed as the impact level has been assessed as not applicable.
Hazardous substances or chemicals	Chemicals and hydrocarbons which may be utilised during the exploration activities include drill cuttings and fluids from the drilling process, hydrocarbons for minor maintenance of plant and equipment including fuels, oils and lubricants and chemicals required for the drilling and sealing of boreholes, such as bentonite. Chemical impacts and mitigation measures are outlined in the REF.
Wastes and emissions	Due to the short-term and temporary nature of the proposed exploration activities, minor quantities of the waste streams identified below have the potential to be generated: • general waste - domestic refuse (litter) generated by onsite personnel • human waste - mobile site toilets (sewage) • maintenance waste - waste generated from site plant and minor vehicle maintenance eg oils, fuels, lubricants and wash down wastewater • Drilling waste - drill cuttings and fluids generated from the drilling operations. These would be contained in above ground tanks which would be lined sufficiently to prevent leakage. Each of the identified waste streams would be managed throughout the duration of the proposed exploration activities to ensure appropriate disposal of chemical, fuel and lubricant containers, solid and liquid wastes that conforms to EPA requirements. Waste impacts and mitigation measures are outlined in the REF.
Vegetation	• No clearing of native vegetation is to occur beyond 0.125 ha at BH4 and BH7 • Clear vegetation to the minimum extent necessary and define clearing limits (e.g. with pegs). • Soil disturbance for the borehole sites should be minimised and soil that is disturbed should be replaced according to the natural profile of the soil (i.e. topsoil reinstated) to expedite rehabilitation. • Ensure works vehicles and machinery are clean prior to commencing the work to mitigate against the introduction of weeds. • Ensure all workers and contractors are aware of ecologically sensitive areas and the need to avoid impacts. This includes adjacent native vegetation. Bushfire: • consideration will be given to local fire danger conditions as advised by the RFS. • RFS contact details will be provided to the drilling contractor and Tahmoor supervising staff. • access tracks are currently used as fire trails and maintained by the RFS for fire-fighting activities. Tahmoor Coal will maintain communications with the RFS in the event of a bushfire which requires use of the fire trails. Work would cease in the event of a bushfire. • no fires will be lit by the drilling contractors or supervisory staff. • during the fire season daily safety briefings will have consideration of the bushfire danger (existing or potential) and works will be undertaken accordingly.

Item	Commitment
Threatened fauna and flora species	See FFIA attached; no management / mitigation controls specific to the Mittagong Geebung are required.
Areas of outstanding biodiversity value/critical habitat	
Endangered ecological community or critically endangered ecological community	No management/mitigation controls are proposed as the impact level has been assessed as not applicable.
Habitat of a threatened species or ecological community	No management/mitigation controls are proposed as the impact level has been assessed as not applicable.
Key threatening processes	• No clearing of native vegetation is to occur beyond 0.125 ha at borehole sites 4 and 7. • Clear vegetation to the minimum extent necessary and define clearing limits (e.g. with pegs). • Soil disturbance for the borehole sites should be minimised and soil that is disturbed should be replaced according to the natural profile of the soil (i.e. topsoil reinstated) to expedite rehabilitation. • Ensure works vehicles and machinery are clean prior to commencing the work to mitigate against the introduction of weeds. • Ensure all workers and contractors are aware of ecologically sensitive areas and the need to avoid impacts. This includes adjacent native vegetation.
Barriers to movement of fauna	No management/mitigation controls are proposed as the impact level has been assessed as not applicable.
Ecological and biosecurity impacts	No management/mitigation controls are proposed as the impact level has been assessed as not applicable.
Community resources	No management/mitigation controls are proposed as the impact level has been assessed as not applicable.
Natural resources	Mitigation measures for air quality, water, and soils have been outlined in this REF and are included in the Level 1 Agricultural Impact Statement attached to this application. Upon completion of exploration activities, the drill sites will be cleaned with all foreign material including waste removed. Rehabilitation activities will be conducted in accordance with the ROCC including the re-spread of temporarily stockpiled vegetation and soil. The sites will be rehabilitated to their previous land capability classes and inspected at 6 and 12-monthly intervals.
Social impacts	Air quality, noise and vibration mitigation measures, including consultation with sensitive receivers, is outlined in this REF. No mitigation measures in addition to those already stated are required.
Economic impacts	No management/mitigation controls are proposed as the impact level has been assessed as positive.
Heritage impacts	No management/mitigation controls are proposed as the impact level has been assessed as not applicable.
Aesthetic impacts	Rehabilitation of the drill pads will be conducted in accordance with the ROCC and inspected at 6 and 12 monthly intervals, following the completion of exploration activities.
Aboriginal cultural heritage	The mitigation measures outlined in the AHDDA will be adopted for the proposed exploration activity. • All ground disturbance activities must be confined to within the assessed area. • In the event that unexpected Aboriginal objects, sites or places (or potential Aboriginal objects, site or places) are discovered during exploration activities, all

Item	Commitment
	works in the vicinity must cease and the proponent should determine the subsequent course of action in consultation with a heritage professional and/or the relevant State government agency as appropriate.
Land use impacts	No management/mitigation controls are proposed as the impact level has been assessed as not applicable.
Transportation impacts	No management/mitigation controls are proposed as the impact level has been assessed as not applicable.
Matters of national environmental significance	See FFIA attached; no management / mitigation controls specific to the Mittagong Geebung are required.
Cumulative impacts	No management/mitigation controls are proposed as the impact level has been assessed as not applicable.
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 CCL 747 (1973).
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 CCL 747 (1973).
Codes of Practice	Tahmoor South-West Exploration Program 2024 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

Word	Definition
	includes all operations for preventing collapse of the sides of 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

Word	Definition
	• 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 • 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

Word	Definition
	• milking sheds and holding yards associated with dairies • animal boarding or training establishments • aquaculture • 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.

Drill pads and access tracks have been positioned in areas of existing disturbance with only minor vegetation removal required. Minor and short duration dust generation from drilling activities and vehicle movements.

Emissions from vehicles, plant and equipment associated with the proposed exploration activities have the potential for minor, localised impacts.

The closest privately-owned residence is located approximately 280m east of drill pad BH7. With the implementation of the mitigation measures outlined, privately-owned residences are anticipated to experience minor air quality impacts associated with the proposed exploration activities. These impacts will be temporary in nature and short-term in duration.

With the implementation of mitigation measures outlined, the impact level of the activity has been assessed as low adverse.

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?

Low adverse

Outline any proposed management controls and/or mitigation measures.

The following air quality management measures will be implemented during the exploration activities including:

- access for vehicles and plant will be limited to existing, stable access tracks to reduce dust generation
- appropriate vehicle speed limits will be established and enforced, which will be reviewed depending on meteorological conditions or safety requirements
- slashing would be undertaken to the minimum extent required for access and drill site establishment to avoid exposed areas and vegetation removal
- vehicles and drilling activities will be confined to designated work areas to minimise any dust generation
- a watercart will be operated for dust suppression as required
- during adverse weather conditions operations will be reviewed and modified and/or ceased if dust generation from drilling operations is unable to be managed adequately
- machinery will be maintained to appropriate operating standards

Water impacts

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

Drill pads and access tracks have been intentionally positioned as far away from drainage lines as practicable, in areas accessible by existing access tracks and in areas of existing disturbance, to avoid potential erosion and sedimentation impacts.

Water for the proposed exploration activities will be sourced from local water supply contractors; no water will be taken from nearby drainage lines or water sources. Above-ground sumps will be utilised during the drilling activities to contain drill cuttings and fluids. Drilling is the only surface disturbance activity proposed. With the implementation of measures outlined, runoff resulting from the proposed drilling activities is not anticipated.

No quantifiable water make is anicipated as a result of the activity.

The proposed exploration activities are not expected to result in impacts to surface and/or groundwater use, storage of water, changes to natural bodies, riparian areas and runoff patterns, aquatic ecology, aquifer interference including changes to inter-aquifer connectivity, changes to flooding or tidal regimes or changes in either surface or groundwater quality and quantity.

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

Negligible Negligible

Water impacts

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

Negligible Negligible

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

Negligible

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?

Negligible

What is the likely level of any water impacts?

Negligible

Outline any proposed management controls and/or mitigation measures.

The following measures will be implemented during the exploration activities where required:

- the need for erosion and sediment control measures will be assessed on a pad-by-pad basis, and may include sediment fencing, clean water diversion bunds etc. These structures will be installed prior to commencement of disturbance works, on the downslope of exploration activities.
- sediment and erosion control structures required will be installed in accordance with the publication Managing Urban Stormwater: Soils and construction - Volume 1 (the 'blue book')
- the Site Supervisor will check erosion and sediment control measures prior to leaving the active sites each day
- drill cuttings and fluids would be contained in above-ground tanks and disposed of at a licensed waste disposal facility
- exploration areas would be rehabilitated as soon as practically possible to limit areas of surface exposure and possible subsequent sedimentation of waters in accordance with the ROCC
- upon completion of exploration activities, boreholes will be sealed/suspended

Soil and stability impacts

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

Drill pads and access tracks have been positioned in areas of existing disturbance with only minor vegetation removal required to minimise the amount of soil disturbance required, and to minimise the potential for ground instability.

Approximately 0.125 ha of degraded vegetation will be slashed at BH4 and BH7, and only minimal soil removal is required for the drill hole and installation of sediment and erosion controls (as required). Gravel and/or dura-mats may be utilised to assist with access if required to ensure minimal surface disturbance.

Water will be contained in above ground tanks. No excavations are proposed, as in-ground sumps will not be required.

With the implementation of mitigation measures outlined, the impact level of the activity has been assessed as negligible.

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?

Nil/Not applicable

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

Soil and stability impacts

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

Negligible

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

Negligible

What is the likely level of any impacts?

Negligible

Outline any proposed management controls and/or mitigation measures.

• Drill pads and access tracks have largely been positioned in areas of existing disturbance and vegetation clearing.

• Vegetation removal will be via slasher to minimise soil disturbance. In the small areas where soil disturbance is required, topsoil will be stripped and stockpiled for use in rehabilitation.

• Erosion and sediment controls will be installed as required.

• Chemicals and/or other hazardous substances will be managed to minimise the risk of soil contamination.

• Upon completion of exploration activities, boreholes will be sealed/suspended in accordance with indsutry Guidelines.

• Exploration areas would be rehabilitated and revegetated as soon as practically possible to limit areas of surface exposure in accordance with the ROCC.

• Rehabilitated sites will be inspected to ensure rehabilitation and drill hole sealing has been effective.

Noise and vibration impacts

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

Minor and short duration noise levels are anticipated from drilling activities. Exploration activities will only take place during between 7:00am and 6:00pm, in accordance with the Interim Construction Noise Guidelines (ICNG 2009). No activities will be undertaken on weekends or public holidays.

Consultation will take place between Tahmoor Coal and affected landholders, which will outline notification procedures.

The closest privately-owned residence is located approximately 280m east of BH7. Privately-owned residences are are anticipated to experience minor noise impacts associated with the proposed exploration activities. These impacts will be temporary in nature and short-term in duration.

With the implementation of mitigation measures outlined, the impact level of the activity has been assessed as low adverse.

What is the likely level of any impacts?

Low adverse

Outline any proposed management controls and/or mitigation measures.

• exploration activities will be strictly limited to the hours of 7.00 am and 6.00 pm Monday to Friday. Site access for personnel and light vehicles will occur no earlier than 6:30am

• no exploration activities will take place on Sundays or public holidays

• minimise the use of light vehicles and other noise producing plant when drilling is taking place

• minimise the use of other plant and vehicles when backhoes or water carts are operational

• turn off plant that is not being used

• ensure plant is regularly maintained

• locate and orientate noisy plant away from potentially noise-affected residences

• potentially noise-affected residences will be contacted at the earliest possible time before any site work begins

• contact details will be provided on a site board at the front of the project area, and a complaints register suited to the scale of works will be kept.

Coastal locations and processes

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

There are no coastal environments, coastal processes or coastal hazards in the study area.

What is the likely level of any impacts?

Nil/Not applicable

Outline any proposed management controls and/or mitigation measures.

No management/mitigation controls are proposed as the impact level has been assessed as not applicable.

Hazardous substances and chemicals

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

Chemicals, hydrocarbons and hazardous substances which may be utilised during the exploration activities include drill cuttings and fluids from the drilling process, hydrocarbons for minor maintenance of plant and equipment including fuels, oils and lubricants and chemicals required for the drilling and sealing of boreholes, such as bentonite.

Following completion of drilling, drill holes will be geophysically logged, utilizing radioactive sources.

No radioactive materials will be used during any stage of the proposed exploration program.

With the implementation of mitigation measures outlined, the impact level of the activity has been assessed as negligible.

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.

• All exploration workers undertake an induction prior to commencing work which includes chemical and hazardous substance and spill management.

• Drill cuttings and fluids would be contained in above-ground tanks.

• Hydrocarbons should be stored in accordance with the Australian Standard: The Storage and Handling of Flammable and Combustible Liquids (AS 1940 – 2004). The Standard requires all hydrocarbon storage containers to be bunded, with the volume of the bund equal to 110% of the volume of the largest tank.

• Emergency spill kits must be stocked and readily accessible at each drill pad.

• All exploration workers are responsible for reporting and containing and cleaning up of any spills.

• When the radioactive source is not in use, it must be placed at least 3 m from the logging vehicle and demarcated.

• Any radioactive source that is not being used must be securely locked into source containers, the source containers must be fixed or locked onto the vehicle and the vehicle must have appropriate radiation signage.

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.

Due to the short-term and temporary nature of the proposed exploration activities, minor quantities of following have the potential to be generated:

• General waste - domestic refuse (litter) generated by onsite personnel.

• Human waste - mobile site toilets (sewage).

• Maintenance waste - waste generated from site plant and minor vehicle maintenance eg oils, fuels, lubricants and wash down wastewater.

• Drilling waste - drill cuttings and fluids generated from the drilling operations. These would be contained in above ground tanks which would be lined sufficiently to prevent leakage.

With the implementation of mitigation measures outlined, the impact level of the activity has been assessed as negligible.

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

Wastes and emissions

Areas sensitive to waste and emissions impacts are not located in the study area.

What is the likely level of the impacts?

Negligible

Outline any proposed management controls and/or mitigation measures.

• All waste would be classified according to the Waste Classification Guidelines.

• Any general inert and solid waste generated should be stored in waste containers located at designated points, and isolated from surface water drains.

• At regular intervals, waste to be disposed of offsite will be taken to a waste facility that is licensed under the NSW Protection of the Environment Operations Act 1995 (POEO Act) to receive waste of that type.

• Exploration waste tracking will be undertaken including: solid and inert waste materials; provision of a description of the waste types, physical nature of wastes, proposed treatment, dates of movement, transporters and waste desalination details.

• Waste would be managed according to the Waste Avoidance and Resource Recovery Act 2001 and by adopting the Resource Management Hierarchy principles of avoidance, resource recovery and disposal.

Vegetation

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

A FFIA has been completed for the proposed activity and is provided in attached.

Drill pads and access tracks will be slashed of vegetation to ensure safe access and use of the drill pads.

Approximately 0.125 ha of vegetation clearing is proposed, associated with BH4 and BH7. No removal of tree canopy, hollow-bearing trees, bushrock or fallen timber is proposed.

With the implementation of mitigation measures outlined, the impact level of the activity has been assessed as negligible.

What is the likely level of the impacts?

Negligible

Outline any proposed management controls and/or mitigation measures.

• No clearing of native vegetation is to occur beyond 0.125 ha at BH4 and BH7

• Clear vegetation to the minimum extent necessary and define clearing limits (e.g. with pegs).

• Soil disturbance for the borehole sites should be minimised and soil that is disturbed should be replaced according to the natural profile of the soil (i.e. topsoil reinstated) to expedite rehabilitation.

• Ensure works vehicles and machinery are clean prior to commencing the work to mitigate against the introduction of weeds.

• Ensure all workers and contractors are aware of ecologically sensitive areas and the need to avoid impacts. This includes adjacent native vegetation.

Bushfire:

- consideration will be given to local fire danger conditions as advised by the RFS.
- RFS contact details will be provided to the drilling contractor and Tahmoor supervising staff.
- access tracks are currently used as fire trails and maintained by the RFS for fire-fighting activities. Tahmoor Coal will maintain communications with the RFS in the event of a bushfire which requires use of the fire trails. Work would cease in the event of a bushfire.
- no fires will be lit by the drilling contractors or supervisory staff.
- during the fire season daily safety briefings will have consideration of the bushfire danger (existing or potential) and works will be undertaken accordingly.

Threatened species

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

Threatened species
A Five Part Test of significance (BC Act) has been conducted for one flora species; the Mittagong Geebung (Persooonia glaucescens), listed as Endangered under the BC Act. The assessment found that the local occurrence of P. glaucescens is unlikely to be significantly affected by the Project as: • No P. glaucescens individuals will be directly or indirectly affected • No trail maintenance or upgrades are required • No important habitat will be affected. The impact level has therefore been assessed as negligible.
What is the likely level of the impacts?
Negligible
Outline any proposed management controls and/or mitigation measures.
See FFIA attached; no management / mitigation controls specific to the Mittagong Geebung are required.

Area of outstanding biodiversity value (AOBV) / Critical habitat
Provide a brief description of any likely impacts to AOBV/critical habitat.
There are no declared areas of outstanding biodiversity value (BC Act 2016), or areas declared as critical habitat (Fisheries Management Act 1994) in the vicinity of the proposed exploration activities. The proposed exploration activities will therefore not result in a direct or indirect impact to areas of biodiversity value, or areas of critical habitat therefore the impact level has been assessed as not applicable.
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.
Assessment of significance (EPBC Act) has been conducted for Critically Endangered and Endangered flora, Vulnerable flora, and Threatened fauna. The assessments found that the activity is unlikely to have an adverse effect on the extent of the ecological communities, and unlikely to substantially and adversely modify the composition of the ecological communities. The impact level has therefore been assessed as not applicable.
What is the likely level of the impacts?
Nil/Not applicable
Outline any proposed management controls and/or mitigation measures.
No management/mitigation controls are proposed as the impact level has been assessed as not applicable.

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.

Habitat of a threatened species or ecological community

No threatened species or ecological communities were identified at the exploration drill pad sites. The FFIA concluded that the exploration activities are unlikely to have a significant impact to threatened species listed under the BC Act or EPBC Act.

The impact level has therefore been assessed as not applicable.

What is the likely level of the impacts?

Nil/Not applicable

Outline any proposed management controls and/or mitigation measures.

No management/mitigation controls are proposed as the impact level has been assessed as not applicable.

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.

The FFIA identified one key threatening processes for flora that the proposed activity has the potential to contribute toward:

• Clearing of native vegetation;

The FFIA found that the small amount of vegetation clearing (0.125 ha) is in a moderate to degraded condition, and the drill pads will be rehabilitated. Therefore there is no anticipated impact to flora from the KTP clearing of vegetation.

The activity would avoid all possible invasive processes to flora by the cleaning of plant and machinery prior to entry to the exploration areas.

KTPs related to fauna would be avoided by the design features of the exploration activities including that there will be no removal of bushrock, hollow-bearing trees or dead wood and trees which could be used for fauna habitat. No disturbances would result in a permanent impact on habitat or a permanent increase of the KTPs.

The impact level has therefore been assessed as negligible.

What is the likely level of any impacts?

Negligible

Outline any proposed management controls and/or mitigation measures.

• No clearing of native vegetation is to occur beyond 0.125 ha at borehole sites 4 and 7.

• Clear vegetation to the minimum extent necessary and define clearing limits (e.g. with pegs).

• Soil disturbance for the borehole sites should be minimised and soil that is disturbed should be replaced according to the natural profile of the soil (i.e. topsoil reinstated) to expedite rehabilitation.

• Ensure works vehicles and machinery are clean prior to commencing the work to mitigate against the introduction of weeds.

• Ensure all workers and contractors are aware of ecologically sensitive areas and the need to avoid impacts. This includes adjacent native vegetation.

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.

The FFIA found that the activity does not have the potential to endanger, displace or disturb fauna, or creat a barrier to their movement.

What is the likely level of any impacts?

Nil/Not applicable

Outline any proposed management controls and/or mitigation measures.

No management/mitigation controls are proposed as the impact level has been assessed as not applicable.

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.
The FFIA found that the small amount of vegetation clearing (0.125 ha) is in a moderate to degraded condition, and the drill pads will be rehabilitated. Therefore there is no anticipated impact to flora from the clearing of vegetation. The activity would avoid all possible invasive processes to flora by the cleaning of plant and machinery prior to entry to the exploration areas. The exploration activities will not include removal of bushrock, hollow-bearing trees or dead wood and trees which could be used for fauna habitat. No disturbances would result in a permanent impact on habitat. The impact level has therefore been assessed as negligible.
What is the likely level of any impacts?
Nil/Not applicable Negligible
Outline any proposed management controls and/or mitigation measures.
No management/mitigation controls are proposed as the impact level has been assessed as not applicable.

Community resources
Describe whether the activity is likely to degrade or significantly increase the demand for services and infrastructure resources.
Due to the temporary nature and short-term duration of the proposed exploration drilling activities, the impact to services and infrastructure resources has been assessed as not applicable.
Describe whether the activity is likely to result in any diversion of resources to the detriment of other communities or natural systems.
Due to the temporary nature and short-term duration of the proposed exploration drilling activities, the diversion of resources has been assessed as not applicable.
What is the likely level of the impact?
Nil/Not applicable
Outline any proposed management controls and/or mitigation measures.
No management/mitigation controls are proposed as the impact level has been assessed as not applicable.

Natural resources
Describe any likely impacts that would disrupt, deplete or destroy natural resources.
Due to the temporary nature and short-term duration of the proposed exploration drilling activities and the proposed rehabilitation of land upon completion of exploration, with the implementation of the mitigation measures proposed, the disruption from the activity to natural resources has been assessed as negligible.
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).
A level 1 AIS has been completed and is attached to this application. The AIS found there would be no impact to farming industries in the vicinity of the activities, and the land is not suitable for farming enterprise. There will be no impact to forestry or extractive industries as a result of the proposed activities. Due to the temporary and short-term duration of the

Natural resources
proposed exploration drilling activities, the potential to disrupt existing activities, or reduce options for future activities has been assessed as not applicable.
Describe whether the activity is likely to result in the degradation of any area reserved for conservation purposes.
Lot 100//DP751271 is zoned C2, Environmental Conservation under the Wingecarribee LEP. Exploration activities on this parcel of land are limited to a portion of Seismic Line E. As no ground disturbance is required to facilitate this activity, no impact is proposed and there will be no degradation of the land parcel. The impact has therefore been assessed as not applicable.
What is the likely level of the impact?
Negligible
Outline any proposed management controls and/or mitigation measures.
Mitigation measures for air quality, water, and soils have been outlined in this REF and are included in the Level 1 Agricultural Impact Statement attached to this application. Upon completion of exploration activities, the drill sites will be cleaned with all foreign material including waste removed. Rehabilitation activities will be conducted in accordance with the ROCC including the re-spread of temporarily stockpiled vegetation and soil. The sites will be rehabilitated to their previous land capability classes and inspected at 6 and 12-monthly intervals.

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 activity is not likely to cause a change to the demographic structure of the community. The impact has therefore been assessed as not applicable.
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.
The activity is not likely to have an environmental impact that may cause substantial change or disruption to the community. The impact has therefore been assessed as not applicable.
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).
Due to the temporary nature and short-term duration of the proposed exploration drilling activities the activity is not likely to change demand for community resources, and will not result in individuals or communities being significantly disadvantaged. The impact has therefore been assessed as not applicable.
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 activity is not likely to result in any significant impacts to the health, safety, privacy or welfare of individuals or communities. With the implementation of mitigation measures outlined in this REF, any temporary and short-term minor impacts to air quality, noise and vibration will minimised such that they will not impact the health, safety, privacy or welfare of individuals or communities. The impact has therefore been assessed as negligible.
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.
The activity is not likely to cause impacts on localities, places or buildings having aesthetic, anthropological, archaeological, architectural, cultural, historical, scientific or social significance or other special value for present or future generations. There are no known places or items of these values located within the vicinity of the exploration activities. The impact level has therefore been assessed as not applicable.
What is the likely level of any social impacts?
Negligible

Social impacts

Outline any proposed management controls and/or mitigation measures.

Air quality, noise and vibration mitigation measures, including consultation with sensitive receivers, is outlined in this REF. No mitigation measures in addition to those already stated are required.

Economic impacts

Provide a brief description of any likely economic impacts.

The activity is likely to provide a minor and short-term positive stimulus to the local economy. Contractors will supply labour for the drilling program for the duration of the works. Due to the small scale of works, there is no anticipated decrease in the economic stability of the community, or any change to public sector revenue or expenditure base. The impact level has therefore been assessed as positive.

What is the likely level of any impacts?

Positive

Outline any proposed management controls and/or mitigation measures.

No management/mitigation controls are proposed as the impact level has been assessed as positive.

Heritage impacts

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

The activity is not likely to cause impacts on localities, places, landscapes, buildings or archaeological relics of heritage significance. There are no known places heritage places or items (Aboriginal or historic) located within the vicinity of the exploration activities (see AHDDA attached). The impact level has therefore been assessed as not applicable.

What is the likely level of the impact?

Nil/Not applicable

Outline any proposed management controls and/or mitigation measures.

No management/mitigation controls are proposed as the impact level has been assessed as not applicable.

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.

No venting or flaring of gas is proposed as part of the exploration activities. The proposed activities are located in rugged bushland which naturally screen the activities. Due to the temporary and short-term duration of the proposed exploration drilling activities, natural visual screening, and rehabilitation of all drill pads following completion of drilling activities, the aesthetic impact to the local landscape has been assessed as negligible.

What is the likely level of any impacts?

Negligible

Outline any proposed management controls and/or mitigation measures.

Rehabilitation of the drill pads will be conducted in accordance with the ROCC and inspected at 6 and 12 monthly intervals, following the completion of exploration activities.

Cultural impacts

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

The Aboriginal heritage due diligence assessment (AHDDA, attached) concluded that the proposed works will have a minor impact on the ground surface, however no Aboriginal objects, including culturally modified trees or intact archaeological deposits will be harmed by the activities.

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

An AHDDA (attached) was completed for the exploration activities and a field survey conducted. No Aboriginal objects were identified in the survey and no AHIMs sites are registered proximate to the exploration activities. The AHDDA concluded that the activity will not harm any known Aboriginal places.

With the implementation of the mitigation measures outlined, the impact has been assessed as negligible.

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

Landscape features which may indicate the presence of Aboriginal objects include water courses, areas of outcropping bedrock and ridgelines. Whilst these landscape features are present proximate to the study area, the field survey did not identify any Aboriginal objects within the proposed drill pads.

With the implementation of the mitigation measures outlined, the impact has been assessed as negligible.

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 activity is not located on areas subject to native title claims, indigenous land use agreements or joint management agreements.

The impact level has therefore been assessed as not applicable.

What is the likely level of any cultural impacts?

Negligible

Outline any proposed management controls and/or mitigation measures.

The mitigation measures outlined in the AHDDA will be adopted for the proposed exploration activity.

• All ground disturbance activities must be confined to within the assessed area.

• In the event that unexpected Aboriginal objects, sites or places (or potential Aboriginal objects, site or places) are discovered during exploration activities, all works in the vicinity must cease and the proponent should determine the subsequent course of action in consultation with a heritage professional and/or the relevant State government agency as appropriate.

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.

There are no major changes to existing land uses including any curtailment of other beneficial land use proposed as a result of the proposed exploration activities. The land is not suitable for other beneficial land uses. The impact level has therefore been assessed as not applicable.

What is the likely level of any impacts?

Nil/Not applicable

Outline any proposed management controls and/or mitigation measures.

No management/mitigation controls are proposed as the impact level has been assessed as not applicable.

Transportation impacts

Provide a brief description of any significant impacts on transportation.

Transportation impacts
Due to the temporary nature and short-term duration of the proposed exploration drilling activities, and the minimal additional vehicle movements required to support the program, there are no significant impacts to transportation predicted, therefore the impact level has been assessed as not applicable.
What is the likely level of any impacts?
Nil/Not applicable
Outline any proposed management controls and/or mitigation measures.
No management/mitigation controls are proposed as the impact level has been assessed as not applicable.

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.
Strategic Statement on Coal Exploration and Mining In June 2020, the NSW Government released the Strategic Statement on Coal Exploration and Mining in NSW (Strategic Statement). The key objective of the Strategic Statement is to provide greater certainty to explorers, investors, industry stakeholders and communities about the future of coal mining in the state to 2050. The statement recognises the significance of coal to NSW, indicating that the industry provides over 22,000 direct jobs and around 89,000 indirect jobs. In 2018–2019, royalties from coal generated around $2 billion in government revenue. The proposed activity will enable Tahmoor Coal to determine suitably of coal resource for potential future expansions of the coal mine and support ongoing employment in the region. Illawarra-Shoalhaven Regional Plan 2041 The Illawarra-Shoalhaven Regional Plan 2041 (Regional Plan) applies to the Wollongong, Kiama, Shellharbour and Shoalhaven LGAs. The Regional Plan 2041 provides the strategic directions for planning and growth of the region. The Project is located within the area covered by the Regional Plan. The Regional Plan recognises that mining is a key contributor to the economy of the region, stating that the region lies partly within the Southern Coalfield that provides the only hard coking coal in NSW and is in high demand for steel production around the world. Further, it states that as the region grows, the continued extraction of resource lands should remain a priority. The Regional Plan makes it clear that the NSW Government considers the important role the coal industry continues to play in the region and supports its continuation. The proposed activity aligns with the strategic direction of the Regional Plan. Wollondilly 2040 Wollondilly 2040 is Wollondilly Council's local strategic planning statement (LSPS). It details the land use planning vision for Wollondilly LGA over the next 20 years. It recognises that there are significant mineral resources in the LGA and that primary industries are essential to the area's economy. The LSPS states that "Bargo is constrained by the need to protect State significant mineral resources and is unsuitable for expansion and further intensification until mining activity is complete". The proposed activity does not impact the growth and future expansion within the Wollondilly LGA.
What is the likely level of any impacts?
Positive
Outline any proposed management controls and/or mitigation measures.
No management/mitigation controls are proposed as the impact level has been assessed as positive.

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.
A Flora and Fauna Impact Assessment was completed for the proposed exploration program (attached to this APO application), which found the activities will not impact on Matters of National Environmental Significance (MNES). The FFIA considered the MNES; 'listed threatened species and communities' and found no mapped or existing Threatened Ecological Communities (TECs) listed under the EPBC Act within the exploration area.
What is the likely level of any impacts?
Negligible
Outline any proposed management controls and/or mitigation measures.
See FFIA attached; no management / mitigation controls specific to the Mittagong Geebung are required.

Cumulative impacts
Is the activity likely to result in cumulative environmental effects with other existing or likely future activities?
No
Describe the impact.
There are no activities or projects from the past, present or proposed activities or projects located in the vicinity of the proposed exploration drilling activities, and therefore no cumulative environmental effects associated with the activity. Therefore the impact level has been assessed as not applicable.
What is the likely level of any impacts?
Nil/Not applicable
Outline any proposed management controls and/or mitigation measures.
No management/mitigation controls are proposed as the impact level has been assessed as not applicable.

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 activity is not likely to result in a significant impact to the environment.

Attachment 4 – List of supporting documents

- AHIMS Search.pdf
  - APO0001703_Submission Report_10 May 2024 11:01am.pdf
  - APO0001703_Submission Report_15 Feb 2024 5:22pm.pdf
  - Consolidated Heritage Searches.pdf
  - EOBV and Critical habitat.zip
  - Protected Matters - MNES layers 10km buffer - February 15th 2024.pdf
  - Tahmoor south-west APO Application Appendices.zip
  - Tahmoor SW Exploration AIS.pdf
  - Tahmoor SW Exploration FFIA.pdf
  - Tahmoor SW Exploration_Pre drilling photos.pdf