Government of South Australia
Department for Energy and Mining

28 November 2024

Mr Wade Bollenhagen
Exploration Manager
SA Exploration Pty Ltd
Level 3, 170 Greenhill Road
PARKSIDE SA 5063

wade@itechminerals.com.au

Dear Mr Bollenhagen,

Approval Notification - Exploration Program for Environment Protection and Rehabilitation (EPEPR2024-036) EL6647

The program for EL6647, final version submitted on 21 November 2024 to conduct an RC drilling program at Emu Plains and Bartels, has been approved in accordance with Section 70B(5) of the *Mining Act, 1971 (the Act)*.

You are reminded that:

1. You must at all times implement and comply with the approved EPEPR.
2. The approved EPEPR will be made publicly available on the Mining Register.
3. Exploration operations on "native title land" (as defined in the *Native Title (South Australia) Act, 1994)* must be conducted in accordance with Part 9B of the Act.
4. In accordance with Section 70C of the Act, the licensee must review the EPEPR on request of the Minister's Delegate within a time specified in the request and submit the revised EPEPR for approval.
5. As the operator for the approved EPEPR you must take all reasonable and practical measures to avoid undue damage to the environment and meet all the approved outcomes (when measured against the approved criteria) listed within the EPEPR.
6. In accordance with regulation 78 of the *Mining Regulations 2020* and Terms of Reference 012 (TOR 012), the licensee must submit an Exploration Compliance Report to the Mineral Exploration Branch each year, within 60 days after the anniversary of the date the licence was granted, and 60 days after the expiry or surrender of the EL, or in accordance with joint reporting requirements agreed to with the Minister.
7. In accordance with regulation 16(4) of the *Mining Regulations 2020*, drillhole and geological samples must be kept in accordance with guidelines issued by the Department for the term of the relevant tenement and for 7 years after the expiry, surrender, cancellation or forfeiture of the tenement to which the sample relates. Furthermore, samples must be retained by the tenement holder, or provided to the Director, in accordance with those guidelines (unless the Minister has authorised, on application by the tenement holder in a manner and form set out in the guidelines, the destruction or disposal of the samples).
8. The EPEPR is approved for a period of twelve months from the date of this letter.

This approval does not constitute endorsement of the systems that you have in place to manage your exploration operations in compliance with the Act and licence conditions. In granting the approval, the EPEPR and your capacity to undertake the proposed activities have been considered. However, responsibility for compliance with the Act and the licence conditions, remains at all times with the licensee.

This approval relates only to the requirements of the Act. Other legislation relevant to this application includes the *South Australian Work Health and Safety Act, 2012* and Regulations. For example, Chapter 10 of the *Work Health and Safety Regulations, 2012 (SA)* introduced new requirements for mine operators in South Australia. The new requirements include a notification for mining operations and the establishment of a Safety Management System. For further information on your responsibilities, including a guide to Chapter 10 and the Mine Operator Notification Form, contact SafeWork SA on 08 8303 0255 or via its website at www.safework.sa.gov.au.

The proposed program may be subject to the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). Mineral exploration industry-specific information is contained in an appendix in the EPBC Matters of National Environmental Significance – Significant impact guidelines 1.1. This document is available on the Australian Government's Department for Agriculture, Water and the Environment website at http://www.environment.gov.au/resource/significant-impact-guidelines-11-matters-national-environmental-significance. For further information, contact the Department for Agriculture, Water and the Environment, or visit its website at www.environment.gov.au/.

Proposed changes to exploration operations stated in the approved EPEPR may require a *PEPR review* to be submitted for assessment. Where a *PEPR review* is required, implementation of the operational changes can only occur after the revised EPEPR is approved. Further information on when an exploration PEPR review is required can be found in Departmental guideline *MG22 Conducting mineral exploration.*

If you require any further information, please contact Jason Perry on 8177 3413 or Simon Constable on 8429 2516 or email DEM.exploration@sa.gov.au.

Yours sincerely

Simon Constable
GENERAL MANAGER MINERAL EXPLORATION REGULATION & COMPLIANCE
In accordance with delegated
Ministerial powers and functions

The Department's Regulatory Guidelines, Ministerial Determinations and Information Sheets are available at: http://energymining.sa.gov.au/minerals/knowledge_centre

APPLICATION Mining Act 1971 and Mining Regulations 2020

EXPLORATION PROGRAM FOR ENVIRONMENT PROTECTION AND REHABILITATION (PEPR)

Government of South Australia
Department for Energy and Mining

USE THIS TEMPLATE TO: Apply to conduct mineral exploration operations not covered by the Generic PEPR (Adopted Program) for a 12 month period of time on one or more exploration licences (ELs), retention leases (RLs) or mineral claims (MCs) in South Australia.

Refer to the Exploration PEPR Terms of Reference and Minerals Regulatory Guidelines MG22 when completing this application. Further information on exploration requirements in South Australia is available on the Department for Energy and Mining (DEM) Minerals website www.energymining.sa.gov.au .

SECTION A – GENERAL DETAILS

Operational approval period	**12-month approval period, with an additional 3 months to complete all rehabilitation**			
Tenement details	EL 6647 EL 6478 (Bag farm located there as per previous years approved EPEPRs)			
Tenement holder(s) (for each tenement)	SA Exploration Pty Ltd			
Operating company	SA Exploration Pty Ltd Level 3, 170 Greenhill Road, Parkside, SA 5063			
Agency agreement (if applicable)	All tenements are 100% owned by iTech Minerals Ltd			
PEPR prepared by	Wade Bollenhagen SA Exploration Pty Ltd Exploration Manager Mobile: 0499774538			
Project supervisor/contact person(s)	Wade Bollenhagen SA Exploration Pty Ltd Exploration Manager Mobile: 0499774538			
Project/prospect name	EL 6647 regional exploration Bag farm located on EL 6478			
Location details	North of Cleve, Eyre Peninsula			
Project description, commodity type and mineralisation model	Intrusive copper/gold mineralisation to follow up historical drilling			
Proposed project schedule	Start date	08/12/2024	End date	7/12/2025

DECLARATION

I, the tenement holder, declare under regulation 84 of the Mining Regulations 2020, that I have taken reasonable steps to review the information in this PEPR/revised PEPR to ensure its accuracy.

Name	Wade Bollenhagen	Signature (digital allowed)	
Position	Exploration manager	Date	19/09/2024

Copy and paste the above table if there is more than 1 tenement holder.

Note: An authorised representative from each tenement holder must sign the declaration (eg in accordance with the Corporations Act 2001).

SECTION B – PROGRAM PREPARATION AND ACCESS TO LAND

Work undertaken in preparing the proposal

Summarise the research and fieldwork undertaken in preparing the proposal including:

- desktop reviews of existing information
- field visits for reconnaissance
- contractor consultation (i.e. equipment scale, type)
- other information used when planning the proposed program.

The drilling did not occur in 2024, as such the same EPEPR is submitted again for approval.

Emu Plain

Follow up work to the 2011 – 2012 RC drilling undertaken by Archer, to determine what mineralisation existed adjacent to a historical shaft. The 2023 auger drilling revealed low level (100ppm Cu anomalism) which forms part of the targeting for drilling at Emu Plain, Historical RC drilling revealed chalcopyrite as veinlets and disseminated sulphide amongst altered igneous and sedimentary rocks. Intervals of +0.1% Cu and +100ppm Mo were reported from the surface to EOH depths of +100m.

Bartels

Follow up drilling to the SW of historical RC work to test for extensions to the mineralisation identified in 2012-2014.

The company will continue to use Lehmann drilling to drill both these targets, as they continue to dril the Lacroma graphite Prospect.

A bond was paid against the previous EPEPR, this can be transferred to this new one as no work was undertaken agains the previous EPEPR.

Consultation (r. 64)

Using the table below, provide a summary of the individual or group of similarly affected persons and summarise the results of consultation that has been undertaken on the proposed operation. Types of interested or affected parties include residents, council, government agencies etc (exclude native title groups and defence owned or controlled lands – refer to relevant sections below).

Tenement	Stakeholder	Land tenure	Land use	Date and type of NOE served	Type of exempt land	Date waiver obtained	Date consultation/access agreement and/or permits signed/authorised	Stakeholder concerns raised and how addressed
6647	Briese P & D	Freehold	Cropping	13/08/2024 ADV	Cropping			*A waiver is to be signed as the land is exempt due to it being annually cropped and the presence of a dam within 150m of the drill pattern.* *As the waiver was signed last year and the landowner is awar of their right in relation to us drilling another waiver will be signed before drilling commences.* *The largest concern is salt scarring from sumps, where water leaches into surrounding soil if too full and scars the topsoil. An excavator will be used to dig very deep sumps (+3m deep) and of excessive length (+6m) so as to prevent the excess water coming to within 1m of the surface. This way it cannot contaminate the surrounding topsoils.*

Exploration PEPR application – 12-month period

Tenement	Stakeholder	Land tenure	Land use	Date and type of NOE served	Type of exempt land	Date waiver obtained	Date consultation/access agreement and/or permits signed/authorised	Stakeholder concerns raised and how addressed
6647	Bartel	Freehold	Cropping	13/08/2024 ADV	Cropping/ Dams	16/09/2024	*16/09/2024*	*Waiver signed after meeting, no concerns raised. RC drilling has been undertaken on the property in the past with no residual issues from the work.. He has approved of drilling some 2 holes under the current Waiver that is due to expire in November.*
6478	Harradine R & L	Freehold	Cropping	28/04/2022 ADV	Cropping	17/09/2022	*17/09/2022*	None as this is the bag farm and is ongoing all the time as we are drilling under EPEPR202-001. A bond of $12,000 was paid against EPEPR2023_040, but no work was under taken. The landowner was spoken to in August and is aware of the samples to be disposed of, he will commence it once he has time post harvest 2024

If any individual or group of similar affected persons were not able to be consulted, what steps were taken to consult with them?

All land is free hold and cropped annually, the Native Title holders have not been notified. Breise has been contacted in regards to drilling I am to catch up with them in the near future to get the waiver signed with the same conditions as requested for the drilling in 2024, which did not occur.

Provide any additional relevant information.

This is the same EPEPR approved for drilling in early 2024, the drilling did not occur and as such the EPEPR is submitted again for approval.

SECTION C – DESCRIPTION OF THE ENVIRONMENT

Include a description of the features of the environment that are expected to be affected by the proposed operations. Each of the elements of the existing environment listed below must be described only to the extent that they may need to be considered in assessing the impacts that the proposed exploration operations are reasonably expected to have on the environment. If the element is not likely to be impacted by the operation, a statement to that effect must be included.

Where the terms and conditions of an RL include environmental outcomes, include any new baseline environmental data relevant to the control strategies or measurement criteria, and where changes to the environment are identified, provide an updated description of the environment to describe the changes.

Proximity to infrastructure and housing

Provide the following information:

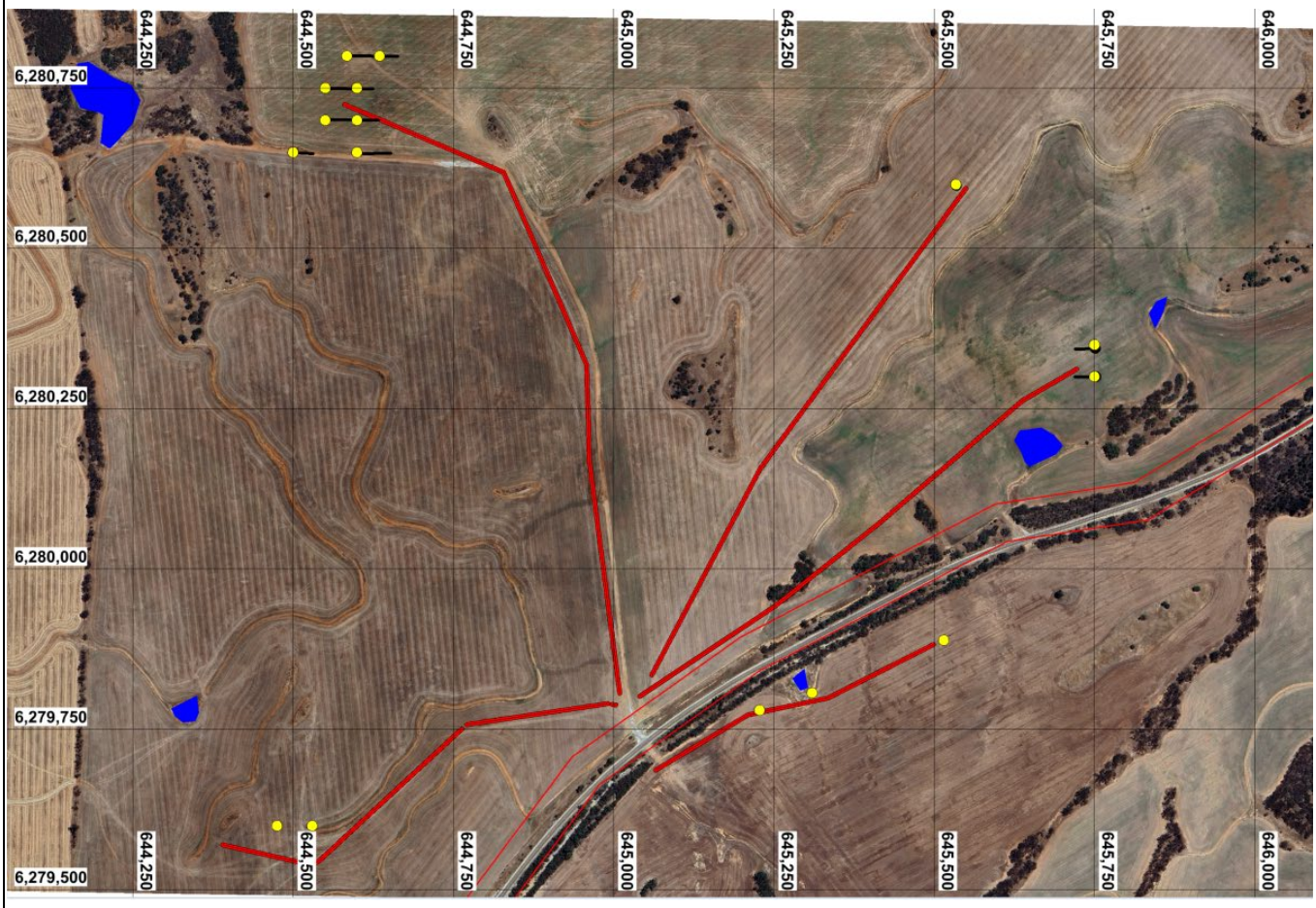
- Settlements – indicate the name and distance of the nearest town, and residences within, or near the proposed exploration operations.
- Roads and tracks – indicate existing fence lines, roads and tracks, including those which are to be used in the exploration program.
- Other human infrastructure such as schools, hospitals, commercial or industrial sites, roads, sheds, bores, dams, ruins, pumps, scenic lookouts.
- Railway lines, transmission lines, gas and water pipelines, communication lines – e.g. fibre optic cables etc., if these may be impacted by the exploration operations.

Provide this information on a locality plan/map.

Emu Plain

There are no buildings nearby, there are 5 dams within 400m of the proposed drill sampling program. Power lines are located 200m south of the last line of drill holes, as such there will be no interaction with the mentioned infrastructure.. Image below shows the location of the dams (blue).

In the image below, tracks will be used to access the drill area, then across ploughed ground. Planned holes are shown in yellow.



Bartels

A total of 8 RC holes are planned, all holes (except 2) are close to infrastucture, which includes the house, three dams and sheds. A single 19kVA powerline runs North South through the property, holes will be moved so that they are a minimal 100m from the power line.

Land use and tenure

Using the table below, select the land tenure and land use that the proposed exploration activities will occur in. Include additional information where prompted.

Land tenure/type	Applicable
Freehold	☒
Pastoral lease	☐
Perpetual lease	☐
Crown land	☐
Mining reserve	☐
Aboriginal freehold/leasehold land (e.g. Anangu Pitjantjatjara Yankunytjatjara and Maralinga Tjarutja lands)	☐
Forestry reserve	☐
Marine parks	☐
National parks, conservation parks, conservation reserves, regional reserves*	☐
Adelaide Dolphin Sanctuary	☐
Murray Darling Basin	☐
<If park/reserve is selected, please provide the name of the park>	
Other*	☐
<If other is selected, describe the land tenure here.>	

Land use	Applicable
Grazing	☐
Cultivated land	☒
Residential	☐
Township	☐
Industrial	☐
Tourism	☐
Conservation	☐
Defence activity	☐
Road reserve	☐
Sites of scientific significance (geological monuments, fossil reserves etc.)	☐
Orchard/vineyard	☐
*Native vegetation heritage agreements	☐
<Provide the name of the area>	
*European heritage sites	☐
<Provide the name of the site>	
*Other (e.g. historic mining)	
<Provide the name of the site>	

* Indicates more information required in field immediately below.

Describe any council policies (or out of council) or development plans that may impact the program area.

There are no council policies or development plans that may impact the program area.

Provide a description of any known plans for future land use changes by other parties.

There are no known plans for future land use changes by other parties.

Provide any additional relevant information.

<Include text here.>

Woomera Prohibited Area (WPA)

Will activities be conducted within the WPA	Yes ☐	No ☒	Do you have a resource exploration permit in place?	Yes ☐	No ☐
In which zone will activities be conducted?					
Does the Exploration Permit allow the operator to conduct exploration operations in the WPA?				Yes ☐	No ☐
What is the expiry date of the resource exploration permit?					
Identify closure periods that may impact on the exploration program.					
<Include text here.>					

Other land owned or controlled by the Commonwealth Department of Defence

Lands in South Australia that are owned or controlled by the Commonwealth Department of Defence, which they manage either as a training or test area, include the Port Wakefield Proof and Experimental Establishment, Murray Bridge Training Area, and Cultana Training Area.

These lands remain to be mineral land under the Mining Act 1971 (SA) and can be accessed for mineral exploration and mining subject to certain restrictions and conditions under the Defence Act 1903 (Cth) and the Defence Regulation 2016 (Cth).

Will operations be conducted within the Port Wakefield Proof and Experimental Establishment, Murray Bridge Training Area, or Cultana Training Area?	Yes ☐	No ☒
<If yes, indicate which area.>		
Do you have a Deed of Access with Defence?	Yes ☐	No ☐
What is the expiry date of the Deed of Access?		
Provide the date the Range Control Officer granted access permission to conduct the proposed exploration operations. Describe the results of consultation and how any concerns raised were addressed.		
<Include text here.>		

Native title

Using the table below, describe how you have complied with the requirements of Part 9B of the Mining Act for each tenement (for further information refer to Minerals Regulatory Guidelines MG22).

Native title			
Is the proposed area of exploration located on native title land?		Yes ☐ No ☒ (If no, no further information in this section required.)	
Are there registered native title party/parties in the area of proposed exploration?	Yes ☐ No ☐		If no, an Environment, Resources and Development (ERD) Court determination is required.
Have you negotiated a native title mining agreement?	Yes ☐ No ☐	Is the agreement registered?* Yes ☐ No ☐	<List the tenements covered by the agreement>
Have you accepted an Indigenous land use agreement (ILUA)?	Yes ☐ No ☐	Is the ILUA registered?* Yes ☐ No ☐	<List the tenements covered by the ILUA>
Have you obtained ERD Court determination?†	Yes ☐ No ☐	Is the determination registered?* Yes ☐ No ☐	<List the tenements covered by the determination>

* The registration date refers to the date the agreement, determination or ILUA was registered with DEM.

† An ERD Court determination cannot be conjunctive (i.e. cannot apply to subsequent licences).

Provide any additional relevant information.

All proposed drill holes are on freehold land, where native title is extinguished.

Landform and topography

Describe the topography of the general area affected by the exploration program. Include the susceptibility to erosion and visual attributes (steep or undulating slopes, plains, rocky outcrops, dunes, saltpans, claypans etc.).

The areas (Bartels and Emu Plains) for proposed drilling are typically cropped annually, as such the topographies are very gently undulating, with thin soils.

Soil and surface cover

Describe soil types and soil surface cover - e.g. gibber, rocky - in the general area affected by the exploration program. Include details on the susceptibility to compaction, erosion, dust, runoff and any other soil characteristics – e.g. acid sulphate – that may require control strategies to reduce environmental impacts during operations or rehabilitation.

The soils and surfaces at both locations are derived from locally weathered rocks (Hutchison Group), The areas drilled will be prepared for seeding and then be cropped in 2025. The RC rig and support truck have not created erosion, compaction and dust issues in the past when it has drilled holes in both areas in 2012-2014. Similar outcomes are expected again. No control strategies are planned to be used apart form the conventional use of the cyclone and tarps over the ground with complete rehabilitation to the landowners satisfaction at the completion of drilling. Rehabilitation will involve the use of a scarifying tool, dragged behind a vehicle to remoce any ruts caused by the equipment movement. Erosion can be a concern to trafficking over the ground due to the possible presence of gypsum, as the work is limited the expectation for erosion to be a problem is considered low. The presence of gypsum is considered low as it is known to exist in other locations and its presence is apparent.

Surface water

Will the proposed program interfere with surface water bodies and natural drainage (e.g. drainage lines, creeks, floodplains, wetlands)? If yes, describe the potential interference and surface water bodies and natural drainage on maps. If no, indicate why.	Yes ☐	No ☒
<include infromation here.>		
Is the program area located within water protection areas defined under the *River Murray Act 2003*? If yes, provide the name(s).	Yes ☐	No ☒
<If yes, provide the name(s)>		
Is the program area located within any prescribed watercourses or prescribed surface water areas under the *Landscape South Australia Act 2019*? If yes, provide the name(s).	Yes ☐	No ☒
<If yes, provide the name(s)>		

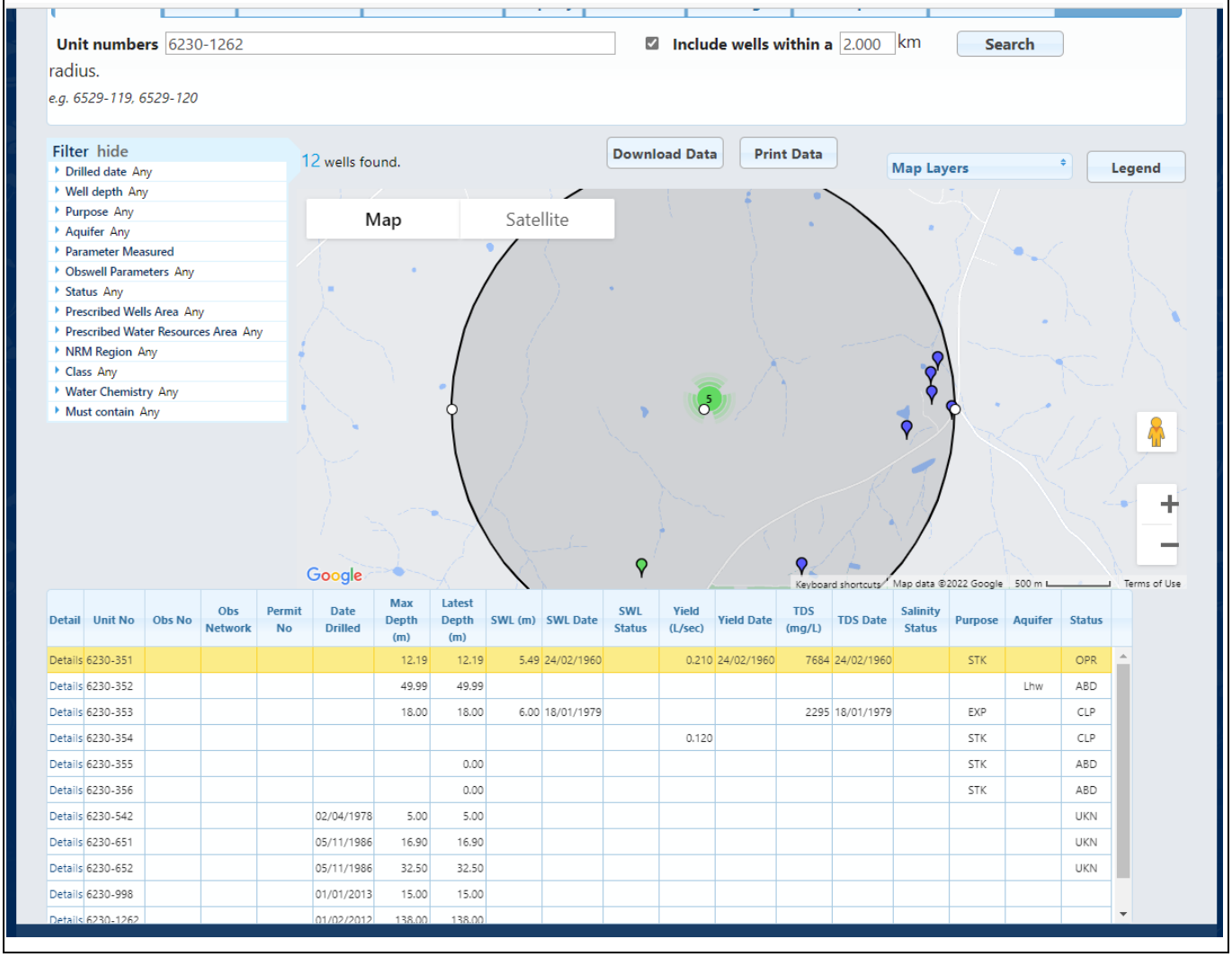
Groundwater

Is groundwater likely to be intersected when conducting the exploration program? If yes, use the table below to describe the expected groundwater (hydrogeological) conditions, and identify groundwater aquifers in the exploration area(s) that may be affected. Indicate the approximate depth of drillholes in each area. Copy and paste a new table for each area where different groundwater conditions are expected. If no, provide evidence or any supporting information demonstrating this.	Yes ☒	No ☐

Water will be encountered in the form of an unconfined fractured aquifer in the Paleoproterozoic rocks (Hutichison Gp), hence the need for the sumps. It is not known at what depth this may occur, but it is anticipated to be encountered early in all holes as such, sumps of adequate size will be prepared. The holes are planned to be over +150m deep,

Having worked for the DWLBC as a Senior Hydrogeologist at Naracoorte, I have experience with confined and unconfined aquifers and the geological setting for them, there is no geological setting present in the hard rock in the planned drill area that would permit a confined aquifer.

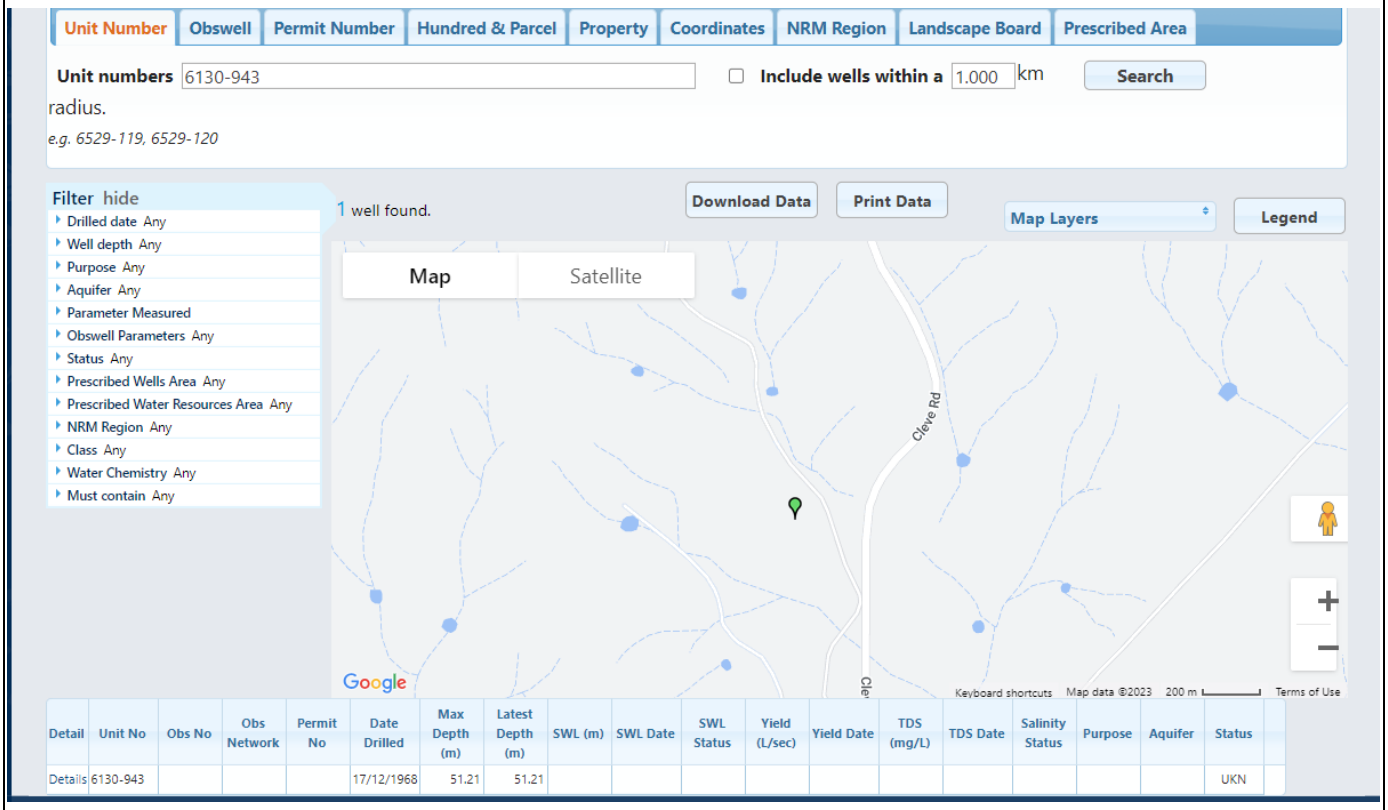
Emu Plain



Description of the locality/area where different groundwater conditions may be encountered

Bartel

Ground water will be encountered as an unconfined aquifer, more likely the Hutchison Group as per below, within 50m of the surface.



Formation age and/or stratigraphic unit	Stratigraphic intervals (depth range) (m)	Aquifer formation name	Aquifer interval/thickness (from–to) (m)	Type of aquifer(s) intersected (e.g. unconfined, confined, artesian)	Provide aquifer salinity, depth to water level and any other relevant comments
Hutchison Gp	0 – 250m	none	30- +150	Unconfined fracture system	*Obswell has no data for water levels, salinity etc.*

Provide the environmental value of each aquifer present determined according to the current Environment Protection (Water Quality) Policy.

The ground water may have a stock drinking water environmental value, however, no land owner appears to use it for this purposewithin 1km of the proposed drilling areas. It may be useful for industrial purposes that can use highly saline water.

Provide a description of the existence, location and value of all Groundwater Dependent Ecosystems (GDEs) within and immediately surrounding the project area.

See attachment at the end of this application that lists by drill area, (Emu Plain & Bartels) the GDE's present. GDE's are dominated by mallee woodlands and Melaleuca shrubland.

Is the proposed program located within a prescribed wells area or prescribed water resource area? If yes, provide the name of the area.	Yes ☐	No ☒
<Insert the name of the area>		

Provide any additional information, if required.

<Include text here.>

Native vegetation

Will you be working within areas of native vegetation? If yes, provide the following information: • description of the formation and structure of vegetation in the area (e.g. woodland, shrubland, grassland) • list of the dominant species. If no, indicate why you will not be working within areas of native vegetation?	Yes ☐	No ☒
All drilling will be performed in paddocks that are cropped annually, hence the need for a waiver.		

Significant habitats and flora

If you are working within areas of native vegetation, use the table below to list any significant habitats and any rare or endangered flora species located or reported to have been in the area that may be impacted by the proposed program. Include known sightings of listed species on a locality plan/map.

Species/habitat	Common name	NPW Act rating*	EPBC Act rating†
<Species/habitat>	<Common name>	<NPW Act rating>	<EPBC Act rating>
			<Tab to add rows.>

* *National Parks and Wildlife Act 1972* (NPW Act) conservation status includes extinct, endangered, vulnerable, threatened and rare.

† *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act) listings include extinct, extinct in the wild, critically endangered, endangered, vulnerable and conservation dependent.

Weeds and pathogens

Provide information of the extent the area is affected or potentially affected by weeds and pathogens (e.g. phytophthora; buffel grass *Cenchrus ciliaris*).

From Nature Maps there are no indications of significant weeds or pathogesn (ie phytophthora; buffel grass *Cenchrus ciliaris). The landowner have not mentioned any specific weeds as significant to them, however they do not want weeds brought onto their properties.*

Fauna

Describe the native and feral fauna that may be present in the application area, including feral species.

Fauna are listed in each of the Protected Matters reports generated for the Emu Plain area and Bartel area (these are attached to the end of this application). Common fauna are grey kangaroos and varities of reptiles, feral species are dominated by rabbits with lesser cats. As the drill prgram is being undertaken in paddocks that are ploughed each year, there is minimal threat to native fauna.

Significant fauna

Where possible, using the table below, list any rare or endangered fauna species located or reported to have been in the area that may be impacted by the proposed program. Include known sightings of listed species on a locality plan/map.

Species	Common name	NPW Act rating	EPBC Act rating
<Species>	<Common name>	<NPW Act rating>	*<EPBC Act rating>*
			<Tab to add rows.>

Note: NPW Act conservation status includes extinct, endangered, vulnerable, threatened and rare.
EPBC Act listings include extinct, extinct in the wild, critically endangered, endangered, vulnerable and conservation dependent.

Environmentally sensitive locations

Are there any environmentally sensitive locations within or close to the proposed exploration area (e.g. areas having particular ecological, cultural, scientific, aesthetic or conservation value)? If yes, provide a description of identified environmentally sensitive location(s). Mark these areas on a locality plan to identify any areas of conflict so that access roads or other activities can be planned and located effectively.	Yes ☒	No ☐
There are no VHA's adjacent to areas being proposed to drill. The Yelduknie National park is over the road from Emu Plains, with the closest hole being 350m to the park, the drilling will have no intereaction with the park as it is within a cropped area.		
Are you likely to impact on the environmentally sensitive area? If yes, detail the likely effects the proposed program may have.	Yes ☐	No ☒
<If yes, include text>		
Include a statement concerning whether or not an Aboriginal heritage survey has been conducted by the proponent and if so, the results of the survey.		
All drilling is on freehold land that is cropped annually. No survey has been undertaken.		

SECTION D – DESCRIPTION OF PROPOSED EXPLORATION OPERATIONS

Each of the elements listed below must be described only to the extent that they apply to the proposed exploration program.

Equipment and personnel requirements

Using the table below, describe the equipment, size and composition of field crews, and proposed working hours/days required to conduct the proposed program.

Type of personnel	Number	Name of contractor company (if applicable)
Geologists	1	
Land access/environmental		
Field assistants/technicians	1	Euro
Drilling crew	3	Lehmann
Site preparation and rehabilitation	2	Euro
Other (provide details)		<Include name and contact details here.>

Shifts worked per day	Hours worked per day	Days worked per week
1	12	7

Equipment type	Owner/operator	Description/capacity	Activity/purpose
Truck Mounted RC	Lehmann	6 wheel drive truck with RC and compressor mounted	*To drill RC holes*
Support Truck	Lehmann	6 wheel drive	*Holds rods and water.*
Excavtor	Contractor	Cat Excavator	*To dig and rehabilitate sumps*

Provide any additional information, if required.

Low impact exploration activities

Will low impact exploration operations be conducted that are not covered by the Generic program for environment protection and rehabilitation – low impact mineral exploration in South Australia, (generic PEPR)? If yes, describe each type of low impact operations proposed.	Yes ☐	No ☒

Drilling activities

Will exploration drilling activities be conducted? If yes, fill out the below table	Yes ☒	No ☐

Tenement	Drilling type	Maximum number of drillholes	Maximum drillhole depth (m)	Maximum number of sumps required at each site	Maximum size of sumps (length x depth x width) (m^3)	Average size of each drill pad* (m^2) (no excavation required)	Number of sites requiring pad excavation	Average volume (m^3) of material to be excavated (excluding sumps)
6647	RC	24	200	1	8x2x4	50	0	0
TOTAL		**24**	**4,800**	**24**	**1,536**	**1,200**	**0**	**0**
		Total number of drillholes (add each row to calculate the total).	Total metres proposed (maximum number of holes x average depth for each row, then add each row to calculate the total).	Total number of sumps (maximum number of sumps x drillsites for each row, then add each row to calculate the total).	Total volume of sumps (maximum size of sumps x number of sumps for each row, then add each row to calculate the total).	Total area of disturbance (number of holes x average size for each row, then add each row to calculate the total).	Total number of pads requiring excavation (add each row to calculate the total).	Total volume of material to be excavated (number of sites requiring excavation x average volume for each row, then add each row to calculate the total).

* The footprint includes all areas of disturbance associated with the drillsite.

Drillsite preparation

If exploration drilling activities are proposed, describe the methods used to prepare sites, including vegetation clearance requirements, site levelling and digging of sumps.

For drilling (RC) apart from the digging of sumps (8m x 2m x 4m), which will include the topsoil separation at the time of digging, no other preparation is required for drilling, the holes are drilled in open paddocks that are cropped annually..The use of tarpaulins under the drill mast and under the cyclone to capture the excess drill material will be used. This excess material (drill cuttings from cyclone and collaring) will then be placed back down the hole at the completion of drilling and the hole rehabilitated.

Sumps will be dug in a manner where the toipsoils is removed and placed to the side of the sump, the sump is dug with a excavator so one side is gentle sloping with a highwall on the other, once the sump (if used) is drained the material is placed back into the sump in reverse order with the topsoil placed on last.

Drillhole construction and decommissioning

Have the personnel responsible for implementing the proposed program read and understood the Earth Resources Information Sheet M21, Mineral exploration drillholes – general specifications for construction and backfilling?	Yes ☒	No ☐

Describe how drillholes will be constructed, including the casing material to be used, depth of casing, if the casing will be cemented, cementing intervals and the class of driller that will install the casing.

The RC holes are open and will need to be cased down to a point where there is firm ground, so that when water is intersected the casing is not blown out and we lose the hole. The depth of casing required is unknown and may vary from hole to hole due to the weathering of the rocks and transported cover. Depths of 12-18m may be required to get a control on the collar.

All drill holes and sites will be rehabilitated at the completion of the drilling of the hole, if sumps need to dry, then the sump will be fenced off till it is ready for rehabilitation.

When describing drillhole decommissioning requirements, include the materials to be used, stratigraphic intervals where cement plugs will be placed, if the casing will be removed and when decommissioning will occur after drilling is completed.

Again no confined aquifers will be intersected, the holes and rocks are open to the atmosphere and require no special de-commissioning (as required in confined aquifer environments). When rehabilitated, a casing cutter is used to cut the casing off below the surface of tynes and the hole back filled and plugged.

Where confined or artesian conditions are expected, include a schematic diagram demonstrating how drillholes will be constructed and decommissioned

Costeans and bulk sample disposal pits

Will costeans/bulk sample disposal pits be required for the proposed program? If yes, fill out the table below.	Yes ☒	No ☒

Tenement	Number of costeans/pits	Size of costean (length x width) (m^2)	Average depth (m)	Volume excavated (m^3)	Total volume excavated (m^3) (number of costeans/pits x volume)	Total area of disturbance* (length x width) (m^2)
6478	2	5x5	2	50	100	50
						<Tab to add rows.>
TOTAL	**2**	**5x5**	**2**	**50**	**100**	**50**
	Total number of costeans/pits (add each row to calculate the total).				Total volume of material to be excavated (add each row to calculate the total)	Total area of disturbance (number of costeans/pits x area of disturbance for each row, then add each row to calculate the total).

*Includes storage of excavated material at the site (e.g. topsoil and subsoil segregation).

Costeans and bulk sample disposal pit preparation

If costeans/bulk sample disposal pits are required, describe site preparation methods, vegetation clearance, and safety and maintenance requirements.

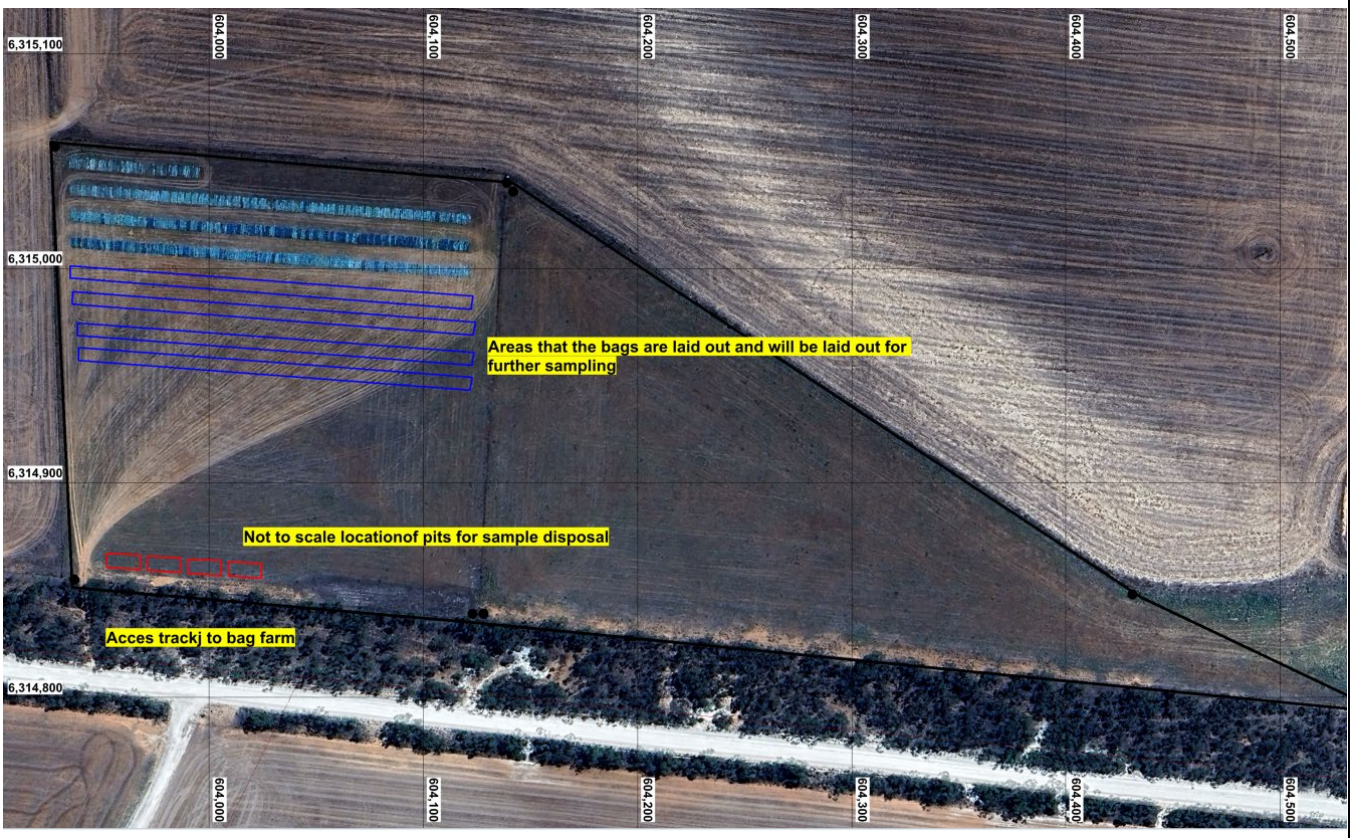
2 pits will be required, with dimensions of 5m x 5m, with an average depth of 2m these will be at the established bag farm used for previous EPEPRs.

At the bag farm, once the green bags are no longer required two bulk pits will be dug (as the sample material is weathered clays and not toxic).

Top soils will be removed and placed separately, the hole is dug with a sloping surface (ramp) to enable any fauna to escape should they get into the pit, after which the waste material will be placed inside it, excess soil from the holes is placed back in the hole and topsoils placed on top. The holes are not left open, they will only be dug and used when they are required for the waste material.

The plastic bags will be torn open, the sample material then will be disposed of in the pit, the landowner will then cover the pit over with the loader and smoothed off for cropping.

The plastic will be disposed of at the local council waste facility, the green plastic bags can endure 12 months in the weather without degredation.

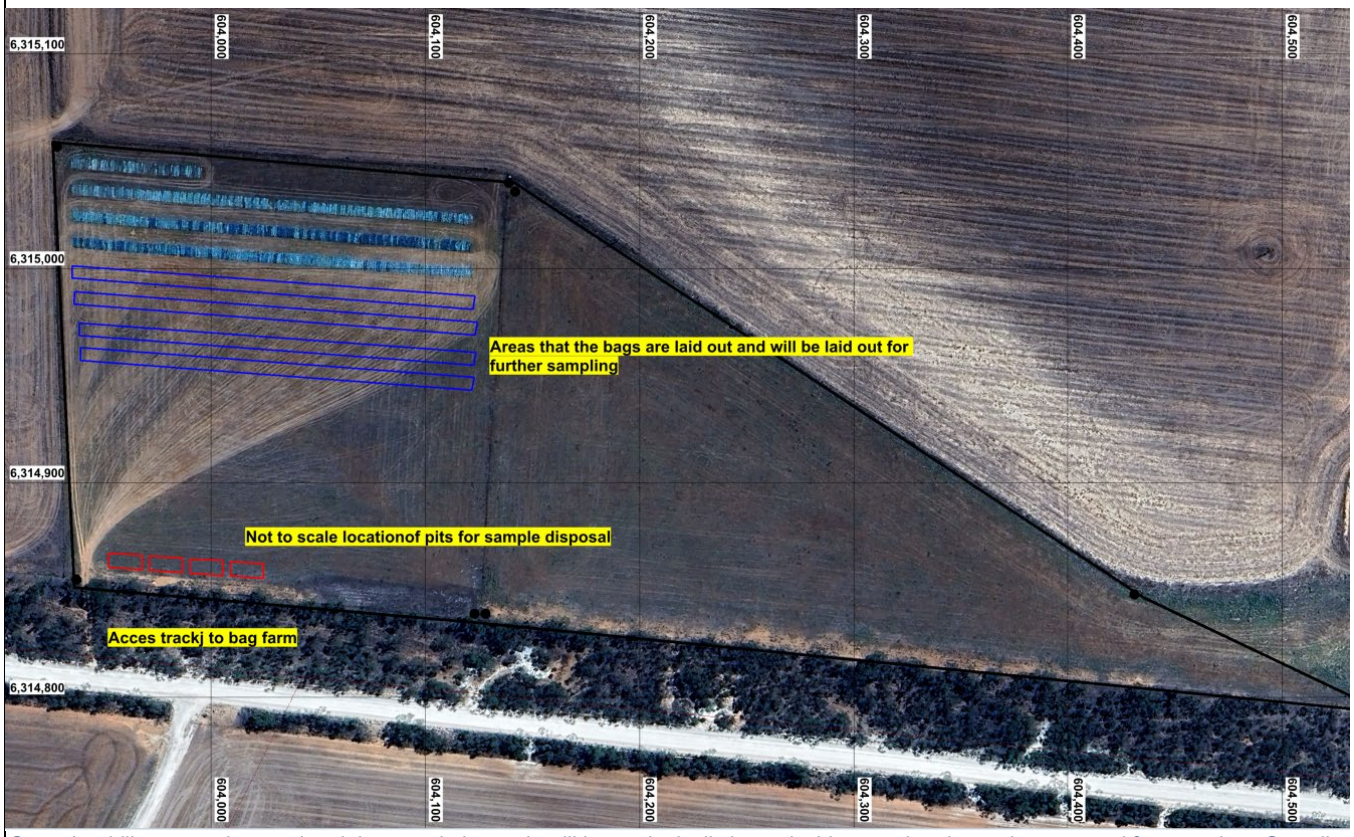


Sample management

Describe the size of samples collected (including drilling samples and bulk sampling), collection methods, materials used when collecting the sample, sample disposal methods (including removal of sample bags), safety management and any other sample management requirements at the exploration site (e.g. tarps or matting used to contain cuttings). Include requirements for on-site geological sample management (splitting of archive samples, bag farms, core processing and storage).

The drill rig is set up over a tarp to catch excess drill material, similarly the cyclone is too. Samples will be collected through the cyclone, where a bulk sample is created and a single metre split is separated. The smaller sample is placed inside the green plastic bag, once drilling is completed the plastic bags will be removed from site to a temporary site (Harradines), see below and the attachement at the end for co-ordinates and location.

The bag farm at Harradines is organised so that there is 1 entrance to the area and drill hole samples will be placed in rows with a peg.



Once the drill program is completed the sample intervals will be geologically logged, chip trayed and samples removed for assaying. Sampling for metallurgical work will be undertaken at this time, the company is anticipating completing sampling, monitoring and removing the bags within the bag farm as an ongoing process

The green plastic bags will be removed and no remnants will remain. The remnant material will be disposed of in a pit, no toxic material is anticipated to be present (ie sulphide, radioactive or fibrous minerals either).

Ultimately,the site will be rehabilitated to the landowners (Harradine) satisfaction.

Access routes to work areas

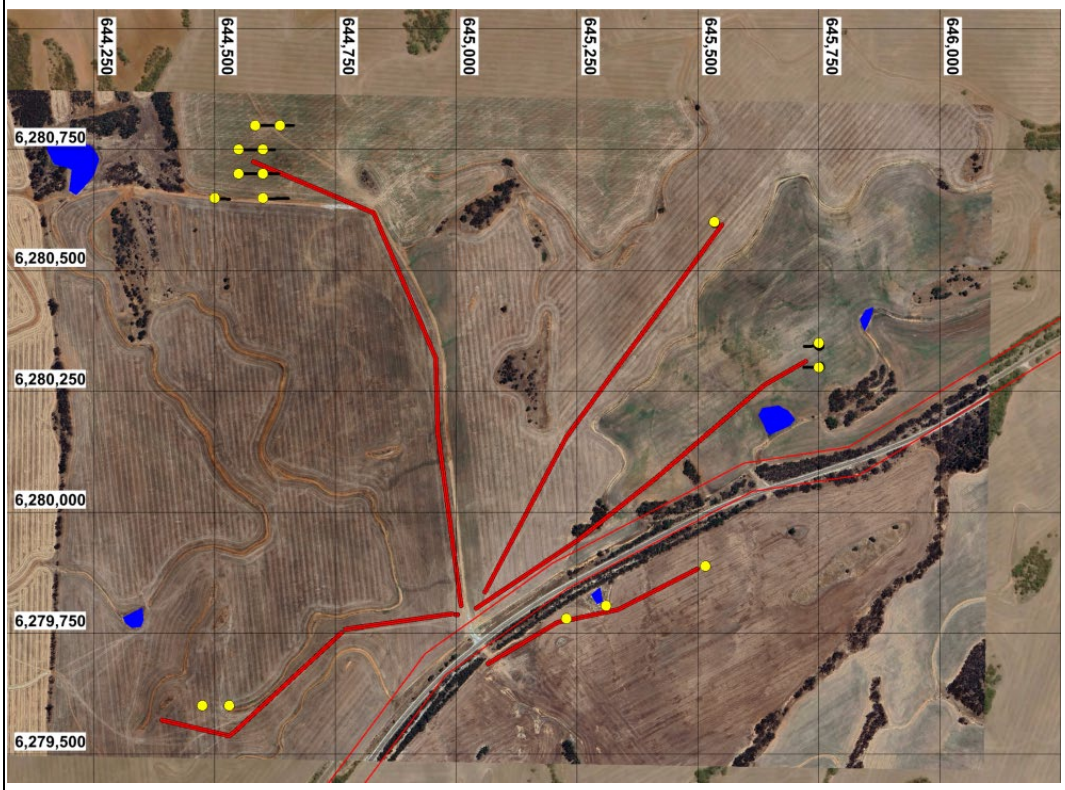
Will existing tracks require upgrading and/or maintenance? If yes, detail the work required to upgrade/maintain existing tracks.	Yes ☐	No ☒
<If yes, include text here.>		
Will access be required across adjoining tenements? If yes, detail the method(s) for gaining access, and if an agreement is in place with all stakeholders. Include the total area of disturbance required (i.e. length (km) and width (m) of tracks) and provide on a locality map.	Yes ☐	No ☒
Gazzetted roads provide access throughout the area		
Will access off existing tracks be required? If yes, detail the method(s) for gaining access and if vegetation clearance is required. Include the total area of disturbance (includes drill traverses and seismic lines) required off existing tracks (i.e. length (km) and width (m) of new tracks).	Yes ☒	No ☒

Access will be along fenceline tracks and open ground, no new tracks will be established as the ground will be ploughed post drilling in preparation for seeding in the successive year..

The routes used will be in negotiation with the landowner as a part of the Waiver and compensation agreement and will be scarified as a part of rehabilitation.

The drill holes will be on lines, as such the vehicles will drive in one way (red in image below) and out the other, the vehicles will use fenceline tracks for paddock access. The proposed access tracks are shown in red on the two images below.

Emu Plain



Bartels

Indicate planned access routes on a locality plan and distinguish between existing and proposed new access tracks and drill lines (including fence lines).

Campsites, storage and equipment laydown areas

Using the tables below, provide a description of campsites and/or laydown areas required. Indicate the campsite and laydown area on a locality plan.

Campsite details		
Indicate where staff and contractors will be accommodated during the exploration program.		
In hotels.		
What is the maximum number of personnel requiring accommodation?	5	
Is a campsite required to be established? If no, no further information is required.	Yes ☐	No ☒
Provide a description and justification of the camp location (e.g. previously cleared areas etc.), and any other relevant information.		
<Include text here.>		
What will be the total area (ha) of the campsite(s)?	ha	
What will be the total area (ha) of vegetation clearance for the campsite?	ha	
If vegetation clearance is required, describe the methods used to prepare the site.		
<Include text here.>		
Will any excavations be required? If yes, describe the purpose of the excavation and the maximum volume (m^3) of material to be excavated.	Yes ☐	No ☒
<Include text here.>		
Are the proposed ablution facilities endorsed/approved for use by the Department of Health or local council, where applicable? If no, indicate why.	Yes ☐	No ☒
<Include text here.>		

Proposed infrastructure (includes caravans, tents, offices, hydrocarbon and water storage requirements etc)	**Quantity**	**Description/capacity**
		<Tab to add rows.>

Laydown area details		
Will laydown areas be required? If no, no further information is required.	Yes ☐	No ☒
Will the laydown area(s) be located at the same location as the campsite? If no, has the location(s) been discussed with the landowner?	Yes ☐	No ☒
What will be the maximum area (ha) required for the laydown area(s)?		
What will be the total area (ha) of vegetation clearance for the site?		
If vegetation clearance is required, describe the methods used to prepare the site.		
<Include text here.>		
Will any excavations be required? If yes, describe the purpose of the excavation and volume (m^3) of material to be excavated.	Yes ☐	No ☒
<Include text here.>		

Proposed infrastructure (includes hydrocarbon and water storage requirements)	**Quantity**	**Description/capacity**
		<Tab to add rows.>
Provide a description and justification of the location (e.g. previously cleared areas), and any other relevant information if required.		

Other exploration methods and/or ancillary operations

Are any other proposed exploration methods (e.g. seismic) and/or ancillary exploration operations required? If yes, describe the activity(s), site preparation, vegetation clearance, and safety and maintenance requirements.	Yes ☐	No ☒
<If yes, include text here.>		

Water supply and management

Will camp and/or drilling water be required? If yes, describe how and where water will be sourced for drilling, track maintenance and camping purposes (e.g. groundwater, surface water, mains). Provide details on the volume of water required and how wastewater or runoff water will be managed.	Yes ☐	No ☒
If it is needed it will be sourced form a local council stand pipe located on the Cleve -Kimba road, not far from the Jameison Tank Road turn off. Less than 1000L would be required if necessary as there will be ground water present.		
Will surface water and/or mineral drillholes be used as a water source/supply? If yes, indicate if a licence for water extraction/usage is required (refer to relevant Natural Resources Management water allocation plan available on the Department for Environment and Water (DEW) website. If a licence is required and has been obtained please attach a copy. Where a licence has not been obtained, include a statement confirming that a licence will be obtained before the extraction and/or usage of water.	Yes ☐	No ☒
<Include text here.>		

Groundwater and drilling investigation activities

Will any water bores be required and/or water investigation activities (e.g. pump testing, water monitoring sites, water storage, turkey nests/dams) be conducted? If yes, describe the water drilling and investigation activities, including site preparation, vegetation clearance, and safety and maintenance requirements.	Yes ☐	No ☒
<If yes, include text here.>		
Indicate if well permits have been obtained and whether or not a water extraction licence is required in accordance with the Landscape South Australia Act 2019. If yes, attach a copy of the permit(s)/licences. If no, provide a statement confirming that permits/licences will be obtained prior to commencement of water investigation activities.	Yes ☐	No ☐
<Include text here.>		

Water affecting activities

Will any water affecting activities, other than drilling a water well, be undertaken (refer to s. 127 of the Landscape South Australia Act 2019)? If yes, attach a copy of the permit. If a permit has not been obtained, provide a statement confirming that a water affecting activity permit(s) will be obtained and provide a description of the site preparation, vegetation clearance, and safety and maintenance requirements.	Yes ☐	No ☒
<If yes, include text here.>		

Management of hazardous materials

Will activities be conducted in areas of known uranium and thorium mineralisation? If yes, attach a Radiation Management Plan and confirmation of endorsement of the plan by the Environment Protection Authority South Australia (EPA).	Yes ☐	No ☒
Will any other hazardous material be encountered when exploring in the area? If yes, list the types of hazardous materials and provide a management plan on how these materials will be managed.	Yes ☐	No ☒
<If yes, include text here.>		

Rehabilitation

Detail all the activities and strategies relating to the remediation of impacts associated with the proposed exploration operations. Completion of rehabilitation must be achieved within 3 months after the expiry of this PEPR.
All holes will be rehabilitated (including backfilling) at the end of the drilling of the hole, all rubbish will be disposed of at approved council facilities, all sample bags and material will be removed from site. Holes will have any remanant drill material poured back down them and the holes plugged 1m below the surface. Once completed the tracks and access areas will be scarified, as we have in all other drilling programs. The sites will be ploughed for cropping in the following year in preparation for seeding

Detail all the activities and strategies relating to the remediation of impacts associated with the proposed exploration operations. Completion of rehabilitation must be achieved within 3 months after the expiry of this PEPR.
State the estimated budget required to rehabilitate impacted sites.
$15,000, this will be undertaken during the drill program

Vegetation Clearance

Will any area of cleared native vegetation be unrehabilitated after the authorised period?	Yes ☐	No ☒
If yes, provide a description of the vegetation present in the application area, the extent of the proposed vegetation clearance and the likelihood of the presence of threatened flora. Provide this information on a map.		
<Include text here.>		
State the estimated quantum of significant environmental benefit (SEB) to be gained in exchange for the proposed native vegetation clearance and describe how the SEB will be provided.		
<Include text here.>		

SECTION E – LEASE CONDITIONS

Retention leases

Where the retention lease includes specific conditions that are not environmental outcomes, demonstrate where these have been addressed in the PEPR (if relevant) or demonstrate how otherwise they have or will be complied with.

<Include text here.>

SECTION F – MANAGEMENT OF ENVIRONMENTAL IMPACTS

Use the table below (instructions provided) to identify all of the potential environmental, social and economic impact events that are likely to occur as a result of the proposed exploration operations, how each of the identified impacts will be managed, and the residual risk, i.e. the level of risk remaining after implementing control and management strategies. Identified potential impact events should be developed based on the aspects of the environment that may be impacted on and the proposed operational details. Potnetial impact events must have corresponding outcomes and measurement criteria.

Where the terms and conditions of an RL include environmental outcomes, list them (where different) in the table below and complete all sections (ie receptor, potential impacts, control strategies, risk assessment and measurement criteria).

Environmental management – potential impacts/events, outcomes, measurable criteria and monitoring plan

			Likelihood of consequence (LH)				
			1	2	3	4	5
			Rare	Unlikely	Possible	Likely	Almost certain
Severity of consequence (CQ)	A	Insignificant	Low	Low	Low	Low	Low
	B	Minor	Low	Low	Moderate	Moderate	Moderate
	C	Moderate	Moderate	Moderate	High	High	High
	D	Major	High	High	Extreme	Extreme	Extreme
	E	Catastrophic	High	Extreme	Extreme	Extreme	Extreme

How to fill out the table

1. Based on the description of the environment and exploration operations, indicate which potential impacts are applicable to the proposed program. Note that some potential impacts are applicable to all programs.
2. For each applicable potential impact (and corresponding receptor), describe control strategies that will reduce the risk of the potential impact to an acceptable level, and achieve the corresponding environmental outcomes.
3. Conduct an impact assessment to determine if the control strategies address the potential impact (i.e. reduce the risk to an acceptable level). Indicate where there is uncertainty pertaining to the likely effectiveness of the control strategies. Where the risk is not considered low, provide justification that the risk is acceptable, or consider additional strategies to reduce the risk to an acceptable level.
4. For each applicable potential impact, the corresponding outcome and outcome measurement criteria are required.

5 Based on the description of the environment and proposed exploration activities, determine if any other potential impacts are applicable. For each new potential impact, describe proposed control and rehabilitation strategies, conduct an impact assessment, and develop corresponding outcomes and outcome measurement criteria.

Use the above matrix to conduct an impact assessment for each potential impact.

Impact assessment							Outcomes	Outcome measurement criteria (inc. monitoring plan)
Receptor Lists are not exhaustive.	**Potential impacts** Lists are not exhaustive.	**Is the potential impact applicable (Yes/No)** Some potential impacts are applicable to all programs.	**Control strategies** Indicate where there is uncertainty pertaining to the likely effectiveness of the control strategies. Where the risk is not considered low, provide justification that the risk is acceptable, or consider additional strategies to reduce the risk to an acceptable level. – refer to Minerals Regulatory Guidelines MG22 for more information.	**Risk assessment** LH = likelihood of consequence CQ = severity of consequence				
				LH	**CQ**	**Risk**		
Stakeholders: • freehold land owners • perpetual lease holders • pastoral lease holders • Aboriginal land (Anangu Pitjantjatjara Yankunytjatjara and Maralinga Tjarutja lands) • Department of Defence • state government departments. • local government (councils) • federal government • native title parties.	Interference to: • existing or permissible land use (includes loss of income, noise, dust, light and other emissions). • buildings, structures, existing tracks or other infrastructure. • aesthetic values of an area. Noncompliance with legislative requirements.	Yes (Applicable to all programs.)	Individual landowners (Freehold) manage the land where the drilling is proposed, they are communicated with by letter, phone and email at all times regarding our activites, an agreement (Waiver) has been entered into with them, as the ground is cropping ground and exempt . We will comply will all directions agreed upon, which is in writing. The use of vehicles across cropping land does disturb the soils, by limiting the paths and frequency of the vehicles the damage can be minimised. At each of the drill sites a tarpaulin is laid down around the drill collar as well as under the cyclone/splitter to contain the excess drill material for disposal down the hole after drilling	4	A	low	**Stakeholders are fully informed and satisfied with the proposed methods used to conduct exploration activities on their land, and all prescribed forms are served and agreements obtained in accordance with the Mining Act.**	Provide the information requested within the 'Complaints' section of the annual exploration compliance report demonstrating that all reasonable complaints from stakeholders are resolved to the satisfaction of both parties prior to and ongoing during the course of exploration program, without the involvement of DEM. Provide the information requested within the 'Landowner details and liaison' section of the annual exploration compliance report demonstrating that prescribed forms were served and agreements obtained in accordance with the Mining Act prior to the commencement of exploration activities.
Stakeholder: DEW	Interference to: • existing or permissible land use. • buildings, structures, existing tracks or other infrastructure. • aesthetic values of an area. Noncompliance with legislative requirements.	NO (Applicable to programs located adjacent to or within parks and reserves.)					**For activities located within or adjacent to regional reserves, national, conservation and marine parks only:** • **no unauthorised interference with park management activities.**	Provide confirmation that: • Park access notification forms were submitted to DEW and DEM at least 10 days prior to entry into regional reserves, national, conservation and marine parks, or • Program notifications for PEPRs approved for an ongoing period of time, were submitted to DEW and the DEM at least 21 days prior to entry into regional reserves, national, conservation and marine parks.

Impact assessment							Outcomes	Outcome measurement criteria (inc. monitoring plan)
Receptor Lists are not exhaustive.	**Potential impacts** Lists are not exhaustive.	**Is the potential impact applicable (Yes/No)** Some potential impacts are applicable to all programs.	**Control strategies** Indicate where there is uncertainty pertaining to the likely effectiveness of the control strategies. Where the risk is not considered low, provide justification that the risk is acceptable, or consider additional strategies to reduce the risk to an acceptable level. – refer to Minerals Regulatory Guidelines MG22 for more information.	**Risk assessment** LH = likelihood of consequence CQ = severity of consequence				
				LH	**CQ**	**Risk**		
Flora and fauna and their habitats; includes Commonwealth and state scheduled species.	Loss/modification of native vegetation and associated habitats through the clearance of vegetation.	*NO* (Applicable to exploration programs located within or impacting on native vegetation.)					**No permanent loss/modification of native flora and fauna populations and their habitats through:** • **clearance** • **fire** • **other** **unless prior approval under the relevant legislation is obtained.**	Maintain before, during and after photographic evidence of all exploration sites (e.g. drillsites, new track exit/entry points off existing tracks, costeans, campsites) demonstrating that: • The area and method of disturbance is consistent with that described in the PEPR. • No uncontrolled fires* occurred as a result of exploration activities. Representative photos to be included within the annual exploration compliance report.
All flora and fauna, especially listed species.	Loss/modification of the environment (biological, social and economic) through the introduction of weeds and pathogens.	Yes (Applicable to all programs.)	The vehicles tyres will be cleaned with a wire brush to minimise the potential for introducing weeds into the drill area for the first time. The vehicles will be inspected for vegetation and seed matter that can be cleaned off to minimise the potential to transport weeds into that properties drill area. The drill equipment will be inspected again when it moves to a new property only. Light vehicles which access the area frequently will be inspected in the same manner, ie only when they access a new property will the be inspected, as they travel on hard roads when away from the drill sites. A logbook and photographs will be kept which document the cleaning of vehicles. All landowners instructions are followed when it comes to weeds and access. According to Protected matters and Nature Maps there are no significant weeds in the area, hence the chance to distribute them is considered low.	*3*	*A*	*Low*	**No introduction of new species of weeds and plant pathogens, nor increase in abundance of existing weeds species.**	Provide a statement within the 'Compliance with approved programs' section of the annual exploration compliance report, confirming that: • Vehicle logs were kept during the exploration program, demonstrating that all vehicles are clean and free of plant and mud material prior to entering properties† within the tenement areas, unless otherwise agreed to with the relevant landowners. • Photographic evidence before and during exploration operations and after rehabilitation of disturbed sites was captured, demonstrating that no new weeds and plant pathogens were introduced, nor an increase in abundance of existing weeds recorded.
All fauna	Entrapment of fauna through open drillholes and excavations.	Yes (Applicable to exploration programs that involve drilling and/or require excavations.)	No fauna traps will be created through activities, ie all holes are plugged immediately after drilling is completed. All sumps will be secured off with fencing to prevent animals entering them. The bulk disposal pits will not be left open for any period of time except what is required for the disposal, fenceing will be used overnight to secure them.	*1*	*A*	*Low*	**No fauna traps created as a result of exploration activities.**	Maintain before, during and after photographic evidence of all drillholes and/or excavations demonstrating that: • All drillholes were permanently or temporarily capped/plugged immediately upon completion. • No fauna and livestock became trapped in drillholes and/or excavations throughout the duration of the program. • All rehabilitation was completed within 3 months of expiry of the PEPR approval (for PEPRs approved for a period of 12 months), or 3 months after the expiry of a program notification (for PEPRs approved for an ongoing period), unless otherwise authorised. Representative photos are to be included within the annual exploration compliance report. Provide the information requested within the 'Rehabilitation' section of the annual exploration compliance report.
Aboriginal heritage sites	Disturbance to Aboriginal heritage.	Yes (Applicable to all programs.)	All holes are to be drilled in annually ploughed and cropped paddocks. No holes are positioned near river systems, all holes are being drilled in areas cropped annually. Searches have been undertaken and no heritage sites have been identified in the proposed drill area.	*2*	*B*	*low*	**No disturbance to Aboriginal artefacts or sites of significance unless prior approval under the relevant legislation is obtained.**	Maintain a database and provide a statement within the 'Compliance with approved programs' section of the annual exploration compliance report demonstrating that: • Heritage sites were not impacted during the conduct of the exploration program, unless prior approval was obtained under the appropriate legislation. • Work ceased on discovery of a significant site and recommenced only after authorisation. • Aboriginal heritage sites identified during the exploration program were appropriately recorded and reported to authorities, if not previously known.
European heritage sites and sites of scientific and environmental significance	Disturbance to European heritage sites and sites of scientific and environmental significance (e.g. geological monuments, fossil reserves).	No (Applicable to exploration programs located close to or within European heritage sites and sites of scientific and environmental significance.)					**No disturbance to European heritage sites and to sites of scientific and environmental significance unless prior approval under the relevant legislation is obtained.**	Demonstrate no impact to heritage sites and sites of scientific and environmental significance by: • Maintaining evidence, including detailed maps showing sites compared to the location of exploration activities, and photographic evidence of sites before and after the conduct of the exploration program. • Providing a statement within the annual exploration compliance report confirming sites were not impacted during the conduct of the exploration program.

Impact assessment							Outcomes	Outcome measurement criteria (inc. monitoring plan)
Receptor Lists are not exhaustive.	**Potential impacts** Lists are not exhaustive.	**Is the potential impact applicable (Yes/No)** Some potential impacts are applicable to all programs.	**Control strategies** Indicate where there is uncertainty pertaining to the likely effectiveness of the control strategies. Where the risk is not considered low, provide justification that the risk is acceptable, or consider additional strategies to reduce the risk to an acceptable level. – refer to Minerals Regulatory Guidelines MG22 for more information.	**Risk assessment** LH = likelihood of consequence CQ = severity of consequence				
				LH	**CQ**	**Risk**		
Soil/vegetation/fauna	Soil/vegetation contamination (e.g. hydrocarbons, rubbish, drill samples/cuttings, ablutions, other sources).	Yes (Applicable to all programs.)	All sites are cleared of rubbish, spill kits are available. All personnel will undergo site specific induction to address the waste management for the program. All drill waste will be removed from the site and disposed of at a local waste disposal facility (As has been done on previous drill programs). Drill spoil material will be returned down the drill hole. Tarpaulins will be used around the drill site to capture spilt drill cuttings to minimise the impact of excess drill material.. Any hydrocarbon spills are collected up inplastic bags and disposed of at the Cleve facility.	*2*	*A*	*Low*	**No contamination of soil and vegetation as a result of exploration activities.**	Demonstrate that all domestic or industrial waste (includes general rubbish and hydrocarbons) is disposed of in accordance with the *Environment Protection Act 1993* within 3 months of the expiry of the PEPR approval (for PEPRs approved for a period of 12 months), or 3 months after the expiry of a program notification (for PEPRs approved for an ongoing period), and that all fuel and chemicals are stored in accordance with EPA requirements, by providing: • The name, location and contact details of the authorised waste disposal facility. • A statement within the 'Compliance with approved programs' section of the annual exploration compliance report confirming domestic and industrial waste was removed from all exploration sites and disposed of at an authorised waste disposal facility. • Photographic evidence within the annual exploration compliance report demonstrating that all fuel and chemical storage facilities were managed in accordance with EPA requirements. Maintain photographs of all exploration sites and provide representative photos within the annual exploration compliance report demonstrating that drill cuttings are: • removed from site and disposed of at a licensed facility • buried under a minimum of 30 cm of soil, or in accordance with EPA guideline, *Radiation protection guidelines on mining in South Australia: mineral exploration*, available on the EPA website, or • backfilled down the drillhole, within 3 months of the expiry of the PEPR approval (for PEPRs approved for a period of 12 months), or 3 months after the expiry of a program notification (for PEPRs approved for an ongoing period), unless otherwise authorised. Provide the information requested within the 'Rehabilitation' section of the annual exploration compliance report.
Soil	Disturbance to the soil profile and topography, and accelerated soil erosion caused by exploration activities (e.g. construction of sumps, new tracks and drill pads; ground compaction at laydown areas and camps).	Yes (Applicable to all programs.)	Compaction and erosion are the most significant concern from traffic on the ground, however sand is the dominant material on the surface and **compaction in sand is considered low**. Erosion is a potential and restricted vehicle movements are planned to assist with the traffic as a mechanism to reduce the creation of erosion. As the drill lines are completed and rehabilitated the line will be scarified. These rehabilitated drill lines will be ploughed in the following cropping season in preparation for seeding. Access to the paddocks may have to vary in consultation with the landowner to minimse the potential for track degradation, ie they may suggest using another gate for entry for a period. Any maintenance and alterations to tracks will be in line with landowner expectations. The current proposal is of staged limited scale (3 phases) and the impact on topsoil is conceived to be minimal. Sumps and pits are excavated in a manner of removing and stockpiling the topsoil separately to the bulk of the material reoved from the ground. At the time of rehabilitation the bulk material is placed in before the topsoil, which is back bladed on completion.	*3*	*A*	*low*	**Where soil disturbance occurs as a result of exploration activities, ensure that:** • **topsoil quality and quantity is maintained** • **the soil profile and topography is reinstated to original conditions** • **there is no accelerated soil erosion.**	Maintain before, during and after photographic evidence of all excavations, drillsites, camps, laydown areas and new tracks demonstrating that: • The soil profile and topography is reinstated to original conditions and is consistent with natural surroundings within 3 months of the expiry of the PEPR approval (for PEPRs approved for a period of 12 months), or 3 months after the expiry of a program notification (for PEPRs approved for an ongoing period), unless otherwise authorised. • Where required, sufficient topsoil is removed (depending on soil profile), stored separately from subsoil and reinstated (in the correct order) within 3 months of the expiry of the PEPR approval (for PEPRs approved for a period of 12 months), or 3 months after the expiry of a program notification (for PEPRs approved for an ongoing period), unless otherwise authorised. • There are no signs of accelerated soil erosion during and post rehabilitation of disturbed sites. Representative photos to be included within the annual exploration compliance report. Provide the information requested within the 'Rehabilitation' section of the annual exploration compliance report.
Surface water	Alteration to surface water – interference to surface drainage.	No (Applicable to exploration programs that are likely to impact on surface drainage channels.)	The activities proposed will have negligible effect on the surface drainage, no changes to the land surface apart from creating sumps is occurring. All access to the drill sites is by landowner consultation and agreement. All drill areas will be ploughed in the following season in preparation for cropping that year.				**No permanent modification to hydrological features caused by exploration activities without obtaining a water affecting permit from the relevant Landscape Board (under Landscapes Act SA 2019).**	Provide before, during and after photographic evidence within the annual exploration compliance report demonstrating that original drainage contours (watercourses and lakes) are consistent with the natural relief post rehabilitation within 3 months of the expiry of the PEPR approval (for PEPRs approved for a period of 12 months), or 3 months after the expiry of a program notification (for PEPRs approved for an ongoing period). Alternatively, provide copies of water affecting permits within the annual exploration compliance report.

Impact assessment							Outcomes	Outcome measurement criteria (inc. monitoring plan)
Receptor Lists are not exhaustive.	**Potential impacts** Lists are not exhaustive.	**Is the potential impact applicable (Yes/No)** Some potential impacts are applicable to all programs.	**Control strategies** Indicate where there is uncertainty pertaining to the likely effectiveness of the control strategies. Where the risk is not considered low, provide justification that the risk is acceptable, or consider additional strategies to reduce the risk to an acceptable level. – refer to Minerals Regulatory Guidelines MG22 for more information.	**Risk assessment** LH = likelihood of consequence CQ = severity of consequence				
				LH	**CQ**	**Risk**		
Groundwater/aquifer	Groundwater contamination: • contamination of aquifers through entry of pollutants from the surface • interconnection between aquifers • degradation of natural hydrostatic conditions (maintain pre-drilling pressures).	*yes* (Applicable to all exploration programs that may intersect groundwater.)	The ground may host open (unconfined) aquifers. Any aquifer present will be connected as they are exposed to the atmospehere (unconfined) No pollutants will be introduced through drilling. The hole is sealed at the surface due to the collaring of the hole, which stops the introduction of any other substance (apart from drilling fluids) into the hole. All holes will be rehabilitated in a manner whereby drill cuttings will be returned down the hole and the hole capped..	*B*	*2*	*Low*	**Drillholes restored to controlling geological conditions that existed before the hole was drilled or, where it is intended to re-enter the hole, the hole must be completed with casing of adequate strength and the casing cemented so that all aquifers are isolated to prevent the movement of any fluids behind the casing.**	Maintain evidence demonstrating that drillholes are decommissioned in accordance with Earth Resources Information Sheet M21, *Mineral exploration drillholes – general specifications for construction and backfilling*, and/or specific conditions from DEW (Groundwater) within 3 months of the expiry of the PEPR approval (for PEPRs approved for a period of 12 months), or 3 months after the expiry of a program notification (for PEPRs approved for an ongoing period), unless otherwise authorised. Provide the information requested within the 'Groundwater' section of the annual exploration compliance report.
Soil/vegetation/fauna	Discharge of groundwater into the surrounding environment.	*yes* (Applicable to all exploration programs that may intersect groundwater or where activities require the discharge of groundwater into the surrounding environment.)	No discharge of ground water onto the surface or into watercourses will occur, sumps will created to prevent and control this.	*B*	2	*Low*	**No discharge of groundwater outside of the exploration site (e.g. drillsite) into the surrounding environment and no discharge of water into a watercourse, unless prior approval under the relevant legislation is obtained.**	Maintain photographic evidence of all drillsites demonstrating that groundwater was not discharged into the surrounding environment, unless water affecting activity permits were obtained allowing the discharge of groundwater into watercourses and/or lakes. Representative photos and water affecting activity permits (where applicable) to be included within the annual exploration compliance report.
Groundwater users	Interference to existing water users when extracting water from existing dams, water bores or mineral drillholes.	No (Applicable to all exploration programs that may require the use of water from existing dams, water bores or mineral drillholes.)	No water is required from bore or dams, as such no interference to them will occur.				**No public nuisance impacts resulting from the extraction of water for exploration purposes, unless prior approval under the relevant legislation is obtained.**	Provide the information requested within the 'Complaints' section of the annual exploration compliance report demonstrating that all reasonable complaints from stakeholders were resolved to the satisfaction of both parties, prior to and ongoing during the course of the exploration program without the involvement of DEM. Where permits are required for the extraction and/or usage of groundwater, provide copies of the licence or permit within the annual exploration compliance report.
Soil/vegetation/fauna	Degradation of rehabilitated access tracks caused by third party access (includes previously closed and rehabilitated access tracks).	No (Applicable to exploration programs that create new access tracks.)	All drill holes are drilled on private land where there is no public access, all holes will be drilled in paddocks between the cropping cycle. No new access tracks will be created. Afterwhich the ground will be ploughed for seeding and cropping in 2024.				**Rehabilitated access tracks remain permanently closed, unless prior approval under the relevant legislation is obtained.**	Maintain before and after photographic evidence demonstrating that all tracks are closed and rehabilitated within 3 months of the expiry of the PEPR approval (for PEPRs approved for a period of 12 months), or 3 months after the expiry of a program notification (for PEPRs approved for an ongoing period), unless otherwise authorised. Representative photos are to be included within the annual exploration compliance report. Provide the information requested within the 'Rehabilitation' section of the annual exploration compliance report.
Community/landowners	Damage to infrastructure and loss of income through fire.	Yes (Applicable to all programs.)	No uncontrolled fires will occur, the vegetation is very sparse and scarifying the ground before drilling will assist in fire prevention.. Fire extinguishers and suppression equipment is kept on the drill rig and light vehicles. If 'extreme' days are announced then drilling will cease to minimise the the potential for fire. Drilling will then only commence once the "extreme fire days" are over. .	*1*	*B*	*low*	**No loss of infrastructure or income through fire as a result of exploration activities.**	Provide a statement within the 'Compliance with approved programs' section of the annual exploration compliance report confirming that no uncontrolled fires* occurred. Alternatively, provide a report on the independent investigation of all uncontrolled fires* demonstrating that the licensee could not have reasonably prevented the fire through the implementation of precautionary measures.
General public	Injury or death to members of the public as a result of exploration activities.	Yes (Applicable to all programs.)	NO access to the work areas for public, the areas being drilled are on private land behind closed gates. There will be no access to the drill rig for anyone apart form the drill crew. Site and drill inductions are undertaken for any individual arriving at the site, prior to gaining access to the drill rig	*3*	*C*	*High*	**No accidents involving the public that could have been reasonably prevented by the licensee.**	Provide a statement within the 'Compliance with approved programs' section of the annual exploration compliance report confirming no accidents occurred involving the public during and after the exploration program. If an accident involving the public did occur, provide a copy of the independent investigation report within the annual exploration compliance report demonstrating that the licensee could not have reasonably prevented the accident through the implementation of precautionary measures.

Impact assessment							Outcomes	Outcome measurement criteria (inc. monitoring plan)
Receptor Lists are not exhaustive.	**Potential impacts** Lists are not exhaustive.	**Is the potential impact applicable (Yes/No)** Some potential impacts are applicable to all programs.	**Control strategies** Indicate where there is uncertainty pertaining to the likely effectiveness of the control strategies. Where the risk is not considered low, provide justification that the risk is acceptable, or consider additional strategies to reduce the risk to an acceptable level. – refer to Minerals Regulatory Guidelines MG22 for more information.	**Risk assessment** LH = likelihood of consequence CQ = severity of consequence				
				LH	**CQ**	**Risk**		
General public, employees, contractors and the environment	Contamination of the environment when exploring for known uranium and thorium deposits. Public and employee/contractor exposure to low level radiation.	No (Applicable to exploration programs located within known uranium or thorium deposits.)	No radioactive deposits are present.				**No increase in background radiation levels, and employee/contractor exposure levels during the exploration program are within safe limits.**	Maintain a database and provide a statement within the 'Compliance with approved programs' section of the annual exploration compliance report demonstrating that: • Radiation levels post exploration and rehabilitation are consistent with pre-existing background levels. • Employee and contractors exposure levels were within safe limits during the exploration program.
Other (if applicable)								

* Uncontrolled fires = fires that escape outside of the work area (e.g. drillsite).

† Properties = freehold (cropping and grazing land); perpetual/pastoral lease land; council land; regional reserves; national, conservation and marine parks; Aboriginal land; Commonwealth land etc.

SECTION G - OPERATOR CAPABILITY

Provide information demonstrating that the tenement holder and operator (where applicable) has the capability to conduct the program in a manner that consistently ensures ongoing achievement of the environmental outcomes. This may be demonstrated within the PEPR by providing an overview of the following:

- Manuals or standard operating procedures that outline the safe and environmentally sound operation of all critical operations associated with the exploration program that ensure compliance with the PEPR.
- Systems in place to monitor, audit and assess compliance against the criteria approved in the PEPR.
- Systems in place to identify and report any noncompliance with regulatory requirements or relevant environmental outcomes (e.g. measures in place to report incidents in accordance with regulation 79(3)).
- Practices and procedures in place to provide appropriate communication of regulatory requirements to employees and contractors (e.g. induction programs).
- Practices and procedures in place to respond to, and communicate with landowners and external parties on the proposed program and compliance matters (e.g. complaints)

All personnel are required to undertake the iTech site Induction, which outlines the requirements of the personnel and the stanrd operating procedures that they must follow during the program.

- As the manager of the program and the person responsible for the compiling and submitting the Environmental Complianbce Report, I continually asses and monitor the compliance against the criteria approved in the EPEPR.
- iTech has a number of forms for which reporting of incidents in accordance with regulation 79(3), that may occur in the field, additionally as the manager I continually monitor the program after the field work has ceased and rehabilitation is complete.
- iTech has an induction program that all site personnel must complete.
- As the manager of the program I maintain communication with the property manager at ll time throughout the program, this is continued until rehabilitation and compensation is completed, as the company wants to ensure that it can be welcome to come back again to undertake exploration programs.

History of successfully completing PEPR's should also be considered as well as the successful completion of drilling and rehabilitation in previous exploration programs.

Recent non compliances with the EPEPR's by drilling holes deeper than we expected (due to success) will be avoided in the future by proposing much greater depths of final holes, the hole depths proposed are at 200m, far beyond the drill string available.

Non compliance with drilling additional holes has been addressed through internal processes restricting the work to less than what is requested in the EPEPR. The board approves a budget for drilling, in the application phase more holes than the budget permits are applied for, as such not even the MD can approve then approve the drilling of more holes than the EPEPR has requested.

For example, the budget for this EPEPR only permits the drilling of 16 holes

SECTION H –ADDITIONAL INFORMATION

List any other supporting information and/or documents submitted with the application, including land access approvals/permits required to conduct the proposed exploration program.

All land is exempt as it is annually cropped as such any image shown is showing land that is exempt from the Act as it is used for cropping purposes and requires a signed Waiver for access. All images below are in relation to exempt land

SECTION I – PHOTOS

Include photographs in this section:

- that have been obtained during site visits
- that help describe relevant environmental and operational aspects in the PEPR.

To insert photos, copy and paste the photo into the template below. Resize photos to fit page width. Ensure that all information about each photo is completed and refer to the photo number in the relevant section of the PEPR.

Site identification	Date taken	Photo number & PEPR section reference	Easting (GDA94)	Northing (GDA94)	Zone	Details and Comments
Bartel SW_1	15/09/2022	Bartel SW	638866	62839638	53	Looking NW across drill area.

Site identification	Date taken	Photo number & PEPR section reference	Easting (GDA94)	Northing (GDA94)	Zone	Details and Comments
Bartel_SW_2	15/09/2023	Bartel SW	638866	62839631	53	Looking North West across drill area

Site identification	Date taken	Photo number & PEPR section reference	Easting (GDA94)	Northing (GDA94)	Zone	Details and Comments
Briese	22/09/2023	Emu Plain	644756	6280635	53	Looking W-NW over srill area

SECTION J – MAPS

Provide a map(s) showing the following information that is located adjacent to or within the proposed area of operations, where applicable:

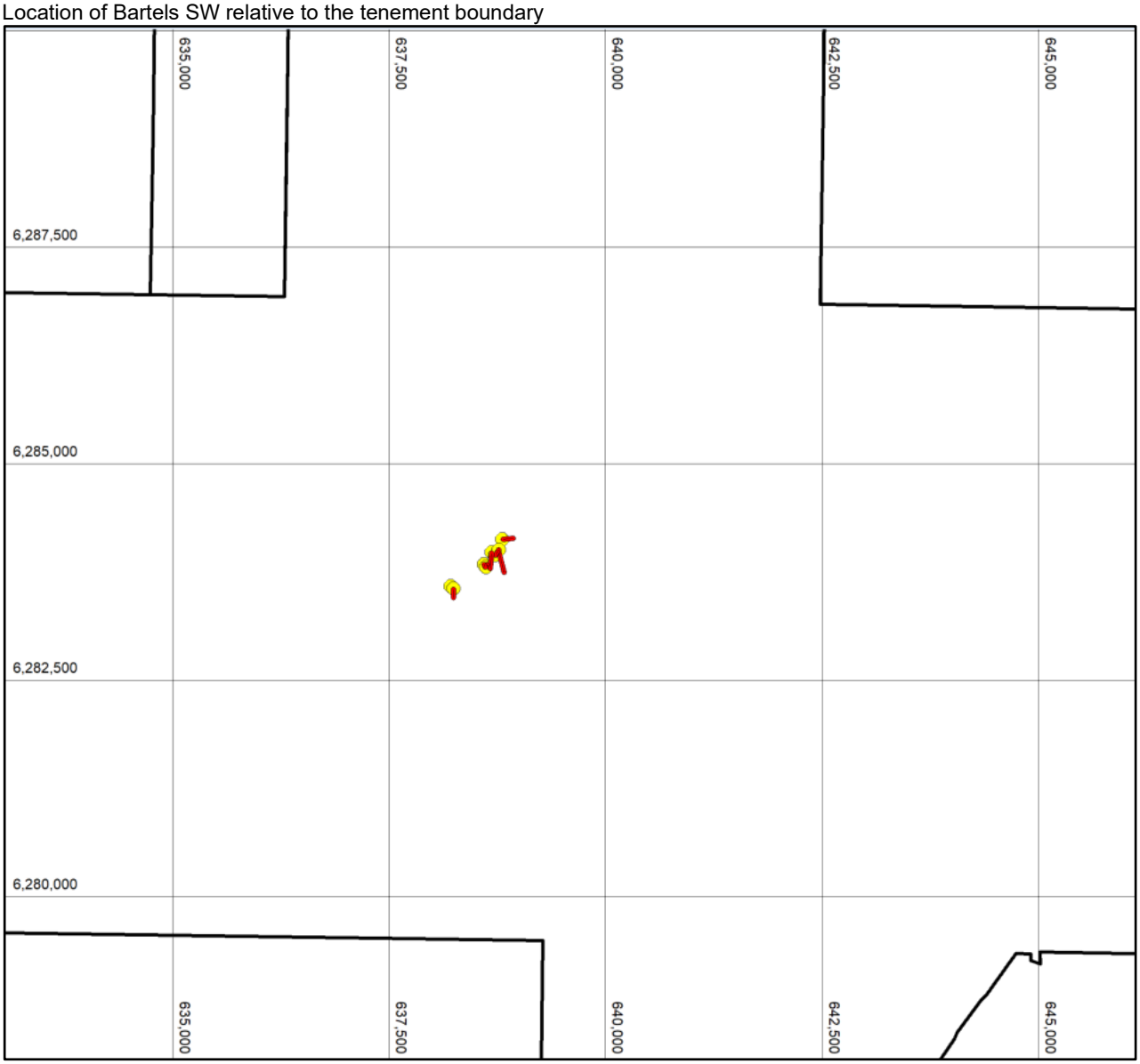
- tenement boundaries,
- cadastral information,
- existing surface contours,
- existing vegetation,
- location of the proposed exploration operations (includes drillholes, existing and new access tracks, drill traverses, campsites, laydown areas and other applicable information) and/or the target exploration area(s),
- location of existing ephemeral and permanent rivers, creeks, swamps, streams or watercourses and water management structures,
- location of towns, houses and homesteads, existing roads, rails, fences, transmission lines, buildings, dams and pipelines
- known sightings of listed species,
- location and extent of all environmentally sensitive areas,
- any relevant land use types (e.g. parks and reserves, Aboriginal freehold land, Woomera Prohibited Area).

All maps and sections must conform to the standards outlined in the Exploration PEPR Terms of Reference.

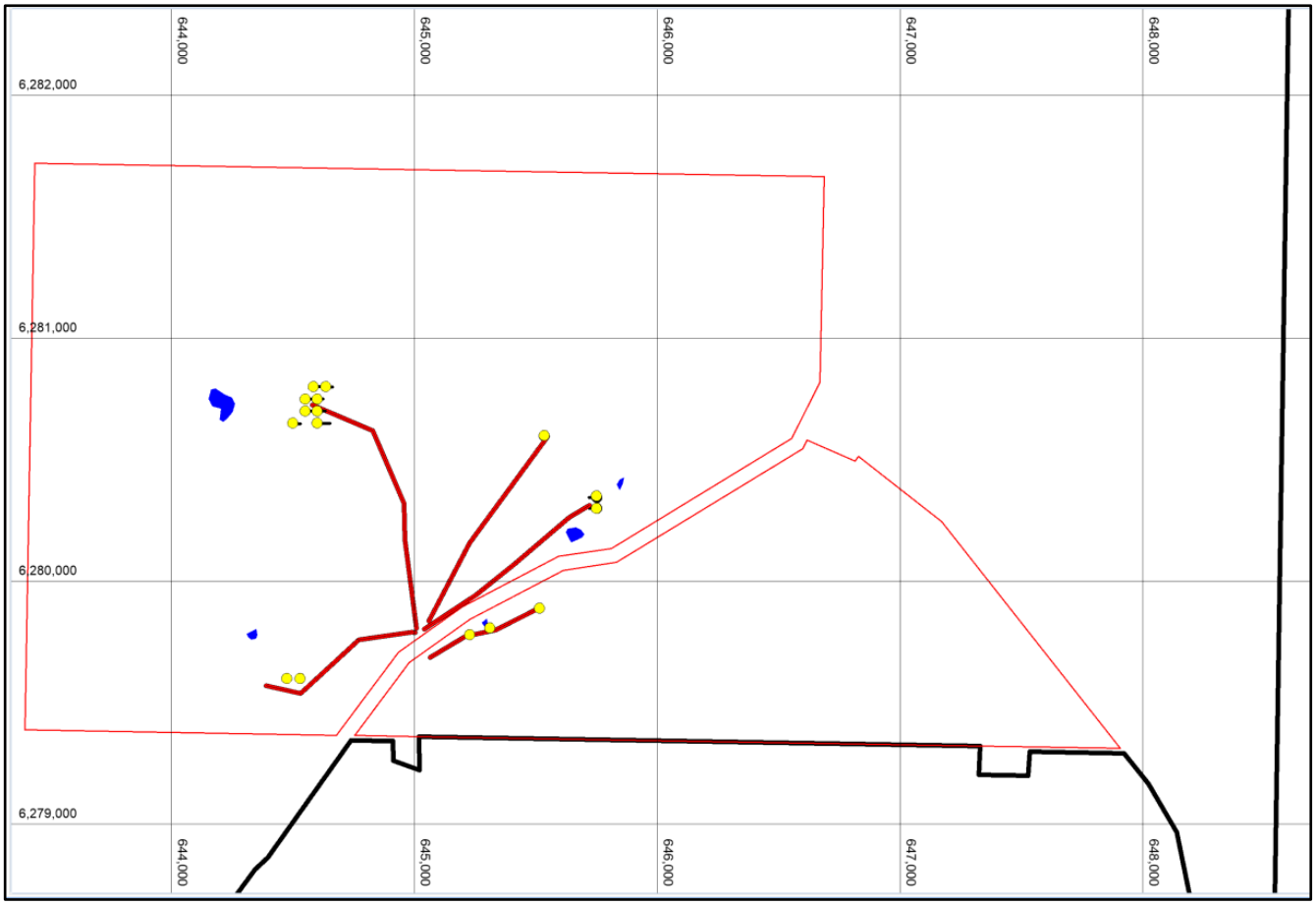
- **Planned drill hole collars are listed below**

Id	Easting	Northing	dip	azi
BSW_001	638805	6284128	-60	135
BSW_002	638766	6284009	-60	315
BSW_003	638732	6284045	-60	315
BSW_004	638532	6283808	-60	315
BSW_005	638814	6283970	-60	315
BSW_006	638421	6283726	-60	315
BSW_007	638212	6283588	-60	315
BSW_008	638244	6283561	-60	315
EP_001	644635	6280800	-60	90
EP_002	644584	6280800	-60	90
EP_003	644600	6280750	-60	90
EP_004	644550	6280750	-60	90
EP_005	644600	6280700	-60	90
EP_006	644550	6280700	-60	90
EP_007	644600	6280650	-60	90
EP_008	644500	6280650	-60	90
EP_009	645534	6280600	-60	270
EP_010	645750	6280350	-60	270
EP_011	645750	6280300	-60	270
EP_012	644475	6279600	-60	270
EP_013	644530	6279600	-60	270
EP_014	645515	6279889	-90	0
EP_015	645228	6279780	-60	45
EP_016	645310	6279807	-90	315

Location of Bartels SW relative to the tenement boundary



Location of Emu Plain drilling relative to the tenement boundary



Location of drilling wrt to EL boundary and cadastral information

SECTION K – PUBLIC RELEASE

PEPR documents will be registered on the mining register and publicly released in full without the need to request consent from the tenement holder(s). Ultimately, it is the applicant's responsibility to ensure that confidential, or commercially sensitive, information is not included within the PEPR application.

SECTION L – SUBMISSION OF THE APPLICATION

An application for an Exploration PEPR or PEPR review, must be submitted in the following form, unless otherwise specified by the Director of Mines or an authorised officer:

- an electronic version of the PEPR must be submitted using the exploration PEPR template(s) provided on the DEM Minerals website,
- the electronic version must be submitted online through the DEM Minerals website using the exploration PEPR submission form,
- the electronic version must be submitted in one single Acrobat PDF file, and
- Microsoft Word-compatible files must be submitted if requested by the Director of Mines (or delegate), or other authorised officers.

Protected Matters Bartels SW


Enter address
Advanced Search
XY
500 m
2000 ft
Unnamed (No HA1152) HA
Leaflet | Powered by Esri | Maxar, Environmental Resources Information Network; Department of Agriculture, Water and the Environment

Australian Government
Department of Agriculture, Water and the Environment

EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Please see the caveat for interpretation of information provided here.

Report created: 19-Jan-2022

Summary

Matters of National Environment Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the Administrative Guidelines on Significance.

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance (Ramsar	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	1
Listed Threatened Species:	16
Listed Migratory Species:	10

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at http://www.environment.gov.au/heritage

A permit may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Lands:	None
Commonwealth Heritage Places:	None
Listed Marine Species:	16
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None
Habitat Critical to the Survival of Marine Turtles:	None

Extra Information

This part of the report provides information that may also be relevant to the area you have

State and Territory Reserves:	None
Regional Forest Agreements:	None
Nationally Important Wetlands:	None
EPBC Act Referrals:	3
Key Ecological Features (Marine):	None
Biologically Important Areas:	None
Bioregional Assessments:	None
Geological and Bioregional Assessments:	None

Details

Matters of National Environmental Significance

Listed Threatened Ecological Communities [Resource Information]

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.
Status of Vulnerable, Disallowed and Ineligible are not MNES under the EPBC Act.

Community Name	Threatened Category	Presence Text
Eyre Peninsula Blue Gum (Eucalyptus petiolaris) Woodland	Endangered	Community likely to occur within area

Listed Threatened Species [Resource Information]

Status of Conservation Dependent and Extinct are not MNES under the EPBC Act.
Number is the current name ID.

Scientific Name	Threatened Category	Presence Text
BIRD		
Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	Species or species habitat may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Falco hypoleucos Grey Falcon [929]	Vulnerable	Species or species habitat may occur within area
Grantiella picta Painted Honeyeater [470]	Vulnerable	Species or species habitat may occur within area
Leipoa ocellata Malleefowl [934]	Vulnerable	Species or species habitat may occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Pedionomus torquatus Plains-wanderer [906]	Critically Endangered	Species or species habitat may occur within area
Rostratula australis Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area
MAMMAL		
Sminthopsis psammophila Sandhill Dunnart [291]	Endangered	Species or species habitat likely to occur within area
PLANT		
Acacia enterocarpa Jumping-jack Wattle [17615]	Endangered	Species or species habitat may occur within area
Acacia rhetinocarpa Neat Wattle, Resin Wattle (SA) [11282]	Vulnerable	Species or species habitat likely to occur within area
Caladenia brumalis Winter Spider-orchid [54993]	Vulnerable	Species or species habitat may occur within area
Caladenia tensa Greencomb Spider-orchid, Rigid Spider-orchid [24390]	Endangered	Species or species habitat likely to occur within area
Olearia pannosa subsp. pannosa Silver Daisy-bush, Silver-leaved Daisy, Velvet Daisy-bush [12348]	Vulnerable	Species or species habitat likely to occur within area
Pterostylis mirabilis Nodding Rufoushood [86228]	Vulnerable	Species or species habitat likely to occur within area
Swainsona pyrophila Yellow Swainson-pea [56344]	Vulnerable	Species or species habitat likely to occur within area

Listed Migratory Species		[Resource Information]
Scientific Name	Threatened Category	Presence Text
Migratory Marine Birds		

Scientific Name	Threatened Category	Presence Text
[Apus pacificus](#) Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Migratory Terrestrial Species		
[Motacilla cinerea](#) Grey Wagtail [642]		Species or species habitat may occur within area
[Motacilla flava](#) Yellow Wagtail [644]		Species or species habitat may occur within area
Migratory Wetlands Species		
[Actitis hypoleucos](#) Common Sandpiper [59309]		Species or species habitat may occur within area
[Calidris acuminata](#) Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area
[Calidris ferruginea](#) Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
[Calidris melanotos](#) Pectoral Sandpiper [858]		Species or species habitat may occur within area
[Charadrius veredus](#) Oriental Plover, Oriental Dotterel [882]		Species or species habitat may occur within area
[Gallinago hardwickii](#) Latham's Snipe, Japanese Snipe [863]		Species or species habitat may occur within area
[Numenius madagascariensis](#) Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area

Other Matters Protected by the EPBC Act

Listed Marine Species		[Resource Information]
Scientific Name	Threatened Category	Presence Text
Bird		
Actitis hypoleucos Common Sandpiper [59309]		Species or species habitat may occur within area
Apus pacificus Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area
Bubulcus ibis as Ardea ibis Cattle Egret [66521]		Species or species habitat may occur within area overfly marine area
Calidris acuminata Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area overfly marine area
Calidris melanotos Pectoral Sandpiper [858]		Species or species habitat may occur within area overfly marine area
Chalcites osculans as Chrysococcyx osculans Black-eared Cuckoo [83425]		Species or species habitat likely to occur within area overfly marine area
Charadrius veredus Oriental Plover, Oriental Dotterel [882]		Species or species habitat may occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat may occur within area overfly marine area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat may occur within area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area
Motacilla cinerea Grey Wagtail [642]		Species or species habitat may occur within area overfly marine area
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area overfly marine area
Neophema chrysostoma Blue-winged Parrot [726]		Species or species habitat likely to occur within area overfly marine area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Rostratula australis as Rostratula benghalensis (sensu lato) Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area overfly marine area

Extra Information

EPBC Act Referrals			[Resource Information]
Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action			
Improving rabbit biocontrol: releasing another strain of RHDV,	2015/7522	Not Controlled Action	Completed

Title of referral	Reference	Referral Outcome	Assessment Status
Not controlled action			
sthrn two thirds of Australia			
INDIGO Central Submarine Telecommunications Cable	2017/8127	Not Controlled Action	Completed
Not controlled action (particular manner)			
INDIGO Marine Cable Route Survey (INDIGO)	2017/7996	Not Controlled Action (Particular Manner)	Post-Approval

Caveat

1 PURPOSE

This report is designed to assist in identifying the location of matters of national environmental significance (MNES) and other matters protected by the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) which may be relevant in determining obligations and requirements under the EPBC Act.

The report contains the mapped locations of:

- World and National Heritage properties;
- Wetlands of International and National Importance;
- Commonwealth and State/Territory reserves;
- distribution of listed threatened, migratory and marine species;
- listed threatened ecological communities; and
- other information that may be useful as an indicator of potential habitat value.

2 DISCLAIMER

This report is not intended to be exhaustive and should only be relied upon as a general guide as mapped data is not available for all species or ecological communities listed under the EPBC Act (see below). Persons seeking to use the information contained in this report to inform the referral of a proposed action under the EPBC Act should consider the limitations noted below and whether additional information is required to determine the existence and location of MNES and other protected matters.

Where data are available to inform the mapping of protected species, the presence type (e.g. known, likely or may occur) that can be determined from the data is indicated in general terms. It is the responsibility of any person using or relying on the information in this report to ensure that it is suitable for the circumstances of any proposed use. The Commonwealth cannot accept responsibility for the consequences of any use of the report or any part thereof. To the maximum extent allowed under governing law, the Commonwealth will not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance

3 DATA SOURCES

Threatened ecological communities

For threatened ecological communities where the distribution is well known, maps are generated based on information contained in recovery plans, State vegetation maps and remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species

Threatened, migratory and marine species distributions have been discerned through a variety of methods. Where distributions are well known and if time permits, distributions are inferred from either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc.) together with point locations and described habitat; or modelled (MAXENT or BIOCLIM habitat modelling) using

Where little information is available for a species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc.).

In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More detailed distribution mapping methods are used to update these distributions

4 LIMITATIONS

The following species and ecological communities have not been mapped and do not appear in this report:

- threatened species listed as extinct or considered vagrants;
- some recently listed species and ecological communities;
- some listed migratory and listed marine species, which are not listed as threatened species; and
- migratory species that are very widespread, vagrant, or only occur in Australia in small numbers.

The following groups have been mapped, but may not cover the complete distribution of the species:

- listed migratory and/or listed marine seabirds, which are not listed as threatened, have only been mapped for recorded
- seals which have only been mapped for breeding sites near the Australian continent

The breeding sites may be important for the protection of the Commonwealth Marine environment.

Refer to the metadata for the feature group (using the Resource Information link) for the currency of the information.

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

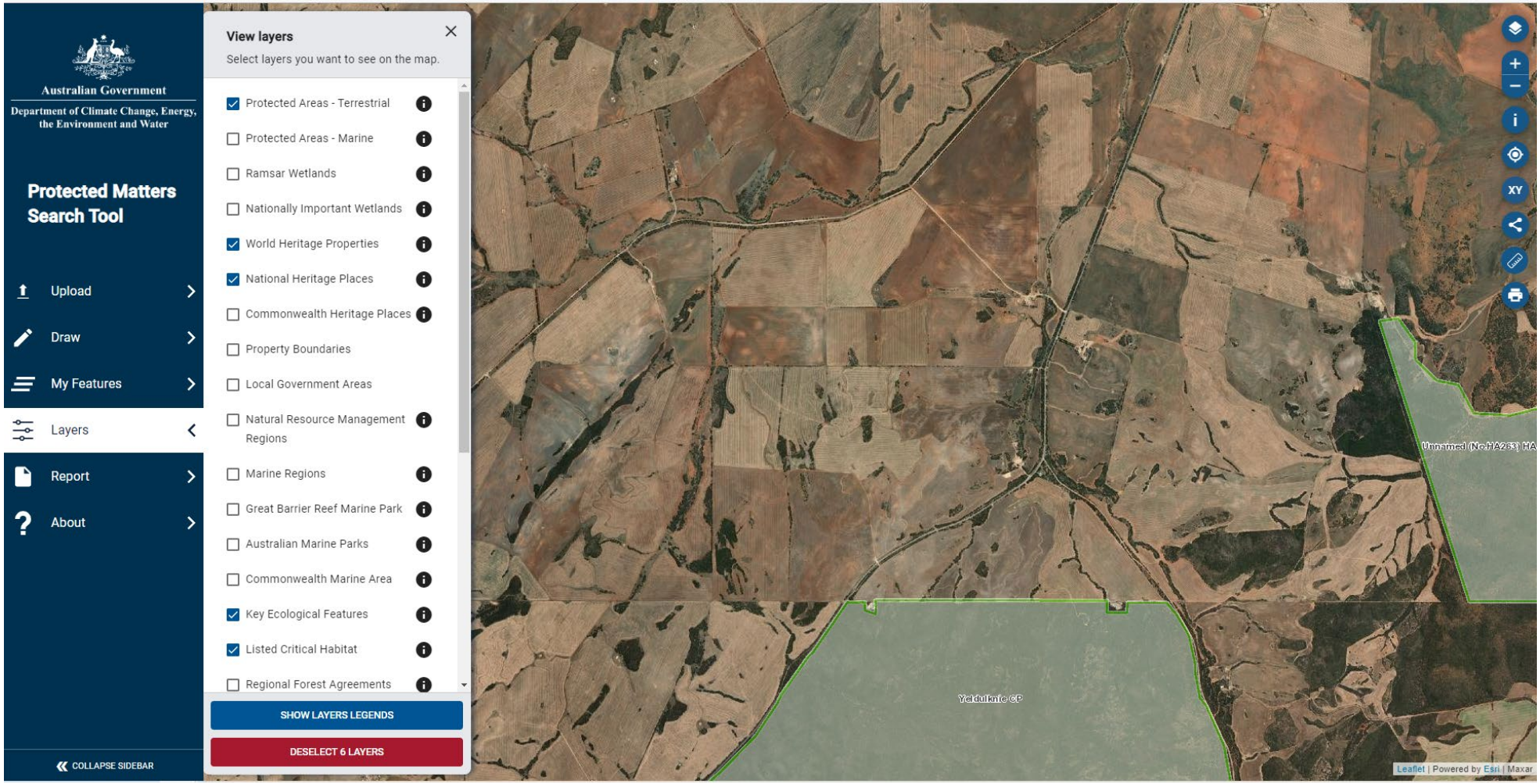
-Office of Environment and Heritage, New South Wales
-Department of Environment and Primary Industries, Victoria
-Department of Primary Industries, Parks, Water and Environment, Tasmania
-Department of Environment, Water and Natural Resources, South Australia
-Department of Land and Resource Management, Northern Territory
-Department of Environmental and Heritage Protection, Queensland
-Department of Parks and Wildlife, Western Australia
-Environment and Planning Directorate, ACT
-Birdlife Australia
-Australian Bird and Bat Banding Scheme
-Australian National Wildlife Collection
-Natural history museums of Australia
-Museum Victoria
-Australian Museum
-South Australian Museum
-Queensland Museum
-Online Zoological Collections of Australian Museums
-Queensland Herbarium
-National Herbarium of NSW
-Royal Botanic Gardens and National Herbarium of Victoria
-Tasmanian Herbarium
-State Herbarium of South Australia
-Northern Territory Herbarium
-Western Australian Herbarium
-Australian National Herbarium, Canberra
-University of New England
-Ocean Biogeographic Information System
-Australian Government, Department of Defence
Forestry Corporation, NSW
-Geoscience Australia
-CSIRO
-Australian Tropical Herbarium, Cairns
-eBird Australia
-Australian Government – Australian Antarctic Data Centre
-Museum and Art Gallery of the Northern Territory
-Australian Government National Environmental Science Program
-Australian Institute of Marine Science
-Reef Life Survey Australia
-American Museum of Natural History
-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania
-Tasmanian Museum and Art Gallery, Hobart, Tasmania
-Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the Contact Us page.

Department of Agriculture Water and the Environment
GPO Box 858
Canberra City ACT 2601 Australia
+61 2 6274 1111

Protected Matters Emu Plain


Australian Government
Department of Climate Change, Energy, the Environment and Water
Protected Matters Search Tool
Upload
Draw
My Features
Layers
Report
About
COLLAPSE SIDEBAR
View layers
Select layers you want to see on the map.
Protected Areas - Terrestrial
Protected Areas - Marine
Ramsar Wetlands
Nationally Important Wetlands
World Heritage Properties
National Heritage Places
Commonwealth Heritage Places
Property Boundaries
Local Government Areas
Natural Resource Management Regions
Marine Regions
Great Barrier Reef Marine Park
Australian Marine Parks
Commonwealth Marine Area
Key Ecological Features
Listed Critical Habitat
Regional Forest Agreements
SHOW LAYERS LEGENDS
DESELECT 6 LAYERS
Yeddulknie CP
Leaflet | Powered by Esri | Maxar

Australian Government
Department of Agriculture, Water and the Environment

EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected. Please see the caveat for interpretation of information provided here.

Report created: 12-Sep-2022

Summary

Matters of National Environment Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the Administrative Guidelines on Significance.

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance (Ramsar	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	1
Listed Threatened Species:	18
Listed Migratory Species:	10

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at http://www.environment.gov.au/heritage

A permit may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Lands:	None
Commonwealth Heritage Places:	None
Listed Marine Species:	16
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None
Habitat Critical to the Survival of Marine Turtles:	None

Extra Information

This part of the report provides information that may also be relevant to the area you have

State and Territory Reserves:	1
Regional Forest Agreements:	None
Nationally Important Wetlands:	None
EPBC Act Referrals:	5
Key Ecological Features (Marine):	None
Biologically Important Areas:	None
Bioregional Assessments:	None
Geological and Bioregional Assessments:	None

Details

Matters of National Environmental Significance

Listed Threatened Ecological Communities [Resource Information]

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.
Status of Vulnerable, Disallowed and Ineligible are not MNES under the EPBC Act.

Community Name	Threatened Category	Presence Text
Eyre Peninsula Blue Gum (Eucalyptus petiolaris) Woodland	Endangered	Community may occur within area

Listed Threatened Species [Resource Information]

Status of Conservation Dependent and Extinct are not MNES under the EPBC Act.
Number is the current name ID.

Scientific Name	Threatened Category	Presence Text
BIRD		
Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	Species or species habitat may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Falco hypoleucos Grey Falcon [929]	Vulnerable	Species or species habitat likely to occur within area
Grantiella picta Painted Honeyeater [470]	Vulnerable	Species or species habitat may occur within area
Leipoa ocellata Malleefowl [934]	Vulnerable	Species or species habitat known to occur within area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
[Pedionomus torquatus](#) Plains-wanderer [906]	Critically Endangered	Species or species habitat may occur within area
[Pezoporus occidentalis](#) Night Parrot [59350]	Endangered	Species or species habitat may occur within area
[Rostratula australis](#) Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area
MAMMAL		
[Sminthopsis psammophila](#) Sandhill Dunnart [291]	Endangered	Species or species habitat likely to occur within area
PLANT		
[Acacia enterocarpa](#) Jumping-jack Wattle [17615]	Endangered	Species or species habitat may occur within area
[Acacia praemorsa](#) Senna Wattle [55363]	Vulnerable	Species or species habitat likely to occur within area
[Acacia rhetinocarpa](#) Neat Wattle, Resin Wattle (SA) [11282]	Vulnerable	Species or species habitat likely to occur within area
[Caladenia brumalis](#) Winter Spider-orchid [54993]	Vulnerable	Species or species habitat likely to occur within area
[Caladenia tensa](#) Greencomb Spider-orchid, Rigid Spider-orchid [24390]	Endangered	Species or species habitat likely to occur within area
[Olearia pannosa subsp. pannosa](#) Silver Daisy-bush, Silver-leaved Daisy, Velvet Daisy-bush [12348]	Vulnerable	Species or species habitat likely to occur within area
[Pterostylis mirabilis](#) Nodding Rufoushood [86228]	Vulnerable	Species or species habitat likely to occur within area

Scientific Name	Threatened Category	Presence Text
Swainsona pyrophila		
Yellow Swainson-pea [56344]	Vulnerable	Species or species habitat likely to occur within area

Listed Migratory Species

[Resource Information]

Scientific Name	Threatened Category	Presence Text
Migratory Marine Birds		
Apus pacificus		
Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Migratory Terrestrial Species		
Motacilla cinerea		
Grey Wagtail [642]		Species or species habitat may occur within area
Motacilla flava		
Yellow Wagtail [644]		Species or species habitat may occur within area
Migratory Wetlands Species		
Actitis hypoleucos		
Common Sandpiper [59309]		Species or species habitat may occur within area
Calidris acuminata		
Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area
Calidris ferruginea		
Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Calidris melanotos		
Pectoral Sandpiper [858]		Species or species habitat may occur within area
Charadrius veredus		
Oriental Plover, Oriental Dotterel [882]		Species or species habitat may occur within area
Gallinago hardwickii		
Latham's Snipe, Japanese Snipe [863]		Species or species habitat may occur within area

Scientific Name	Threatened Category	Presence Text
Numenius madagascariensis		
Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area

Other Matters Protected by the EPBC Act

Listed Marine Species		[Resource Information]
Scientific Name	Threatened Category	Presence Text
Bird		
Actitis hypoleucos		
Common Sandpiper [59309]		Species or species habitat may occur within area
Apus pacificus		
Fork-tailed Swift [678]		Species or species habitat likely to occur within area overfly marine area
Bubulcus ibis as Ardea ibis		
Cattle Egret [66521]		Species or species habitat may occur within area overfly marine area
Calidris acuminata		
Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area
Calidris ferruginea		
Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area overfly marine area
Calidris melanotos		
Pectoral Sandpiper [858]		Species or species habitat may occur within area overfly marine area

Scientific Name	Threatened Category	Presence Text
Chalcites osculans as Chrysococcyx osculans Black-eared Cuckoo [83425]		Species or species habitat likely to occur within area overfly marine area
Charadrius veredus Oriental Plover, Oriental Dotterel [882]		Species or species habitat may occur within area overfly marine area
Gallinago hardwickii Latham's Snipe, Japanese Snipe [863]		Species or species habitat may occur within area overfly marine area
Haliaeetus leucogaster White-bellied Sea-Eagle [943]		Species or species habitat may occur within area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area overfly marine area
Motacilla cinerea Grey Wagtail [642]		Species or species habitat may occur within area overfly marine area
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area overfly marine area
Neophema chrysostoma Blue-winged Parrot [726]		Species or species habitat likely to occur within area overfly marine area
Numenius madagascariensis Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Rostratula australis as Rostratula benghalensis (sensu lato) Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area overfly marine area

Extra Information

State and Territory Reserves		[Resource Information]
Protected Area Name	Reserve Type	State
Yeldulknie	Conservation Park	SA

EPBC Act Referrals			[Resource Information]
Title of referral	Reference	Referral Outcome	Assessment Status
Controlled action			
Eyre Peninsula Transmission Line	2019/8583	Controlled Action	Post-Approval
Not controlled action			
Improving rabbit biocontrol: releasing another strain of RHDV, sthrn two thirds of Australia	2015/7522	Not Controlled Action	Completed
INDIGO Central Submarine Telecommunications Cable	2017/8127	Not Controlled Action	Completed
Not controlled action (particular manner)			
INDIGO Marine Cable Route Survey (INDIGO)	2017/7996	Not Controlled Action (Particular Manner)	Post-Approval
Transmission Line Servicing Yabmana Wind Farm	2003/981	Not Controlled Action (Particular Manner)	Post-Approval

Caveat

1 PURPOSE

This report is designed to assist in identifying the location of matters of national environmental significance (MNES) and other matters protected by the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) which may be relevant in determining obligations and requirements under the EPBC Act.

The report contains the mapped locations of:

- World and National Heritage properties;
- Wetlands of International and National Importance;
- Commonwealth and State/Territory reserves;
- distribution of listed threatened, migratory and marine species;
- listed threatened ecological communities; and
- other information that may be useful as an indicator of potential habitat value.

2 DISCLAIMER

This report is not intended to be exhaustive and should only be relied upon as a general guide as mapped data is not available for all species or ecological communities listed under the EPBC Act (see below). Persons seeking to use the information contained in this report to inform the referral of a proposed action under the EPBC Act should consider the limitations noted below and whether additional information is required to determine the existence and location of MNES and other protected matters.

Where data are available to inform the mapping of protected species, the presence type (e.g. known, likely or may occur) that can be determined from the data is indicated in general terms. It is the responsibility of any person using or relying on the information in this report to ensure that it is suitable for the circumstances of any proposed use. The Commonwealth cannot accept responsibility for the consequences of any use of the report or any part thereof. To the maximum extent allowed under governing law, the Commonwealth will not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance

3 DATA SOURCES

Threatened ecological communities

For threatened ecological communities where the distribution is well known, maps are generated based on information contained in recovery plans, State vegetation maps and remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species

Threatened, migratory and marine species distributions have been discerned through a variety of methods. Where distributions are well known and if time permits, distributions are inferred from either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc.) together with point locations and described habitat; or modelled (MAXENT or BIOCLIM habitat modelling) using

Where little information is available for a species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc.).

In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More detailed distribution mapping methods are used to update these distributions

4 LIMITATIONS

The following species and ecological communities have not been mapped and do not appear in this report:

- threatened species listed as extinct or considered vagrants;
- some recently listed species and ecological communities;
- some listed migratory and listed marine species, which are not listed as threatened species; and
- migratory species that are very widespread, vagrant, or only occur in Australia in small numbers.

The following groups have been mapped, but may not cover the complete distribution of the species:

- listed migratory and/or listed marine seabirds, which are not listed as threatened, have only been mapped for recorded
- seals which have only been mapped for breeding sites near the Australian continent

The breeding sites may be important for the protection of the Commonwealth Marine environment.

Refer to the metadata for the feature group (using the Resource Information link) for the currency of the information.

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

-Office of Environment and Heritage, New South Wales
-Department of Environment and Primary Industries, Victoria
-Department of Primary Industries, Parks, Water and Environment, Tasmania
-Department of Environment, Water and Natural Resources, South Australia
-Department of Land and Resource Management, Northern Territory
-Department of Environmental and Heritage Protection, Queensland
-Department of Parks and Wildlife, Western Australia
-Environment and Planning Directorate, ACT
-Birdlife Australia
-Australian Bird and Bat Banding Scheme
-Australian National Wildlife Collection
-Natural history museums of Australia
-Museum Victoria
-Australian Museum
-South Australian Museum
-Queensland Museum
-Online Zoological Collections of Australian Museums
-Queensland Herbarium
-National Herbarium of NSW
-Royal Botanic Gardens and National Herbarium of Victoria
-Tasmanian Herbarium
-State Herbarium of South Australia
-Northern Territory Herbarium
-Western Australian Herbarium
-Australian National Herbarium, Canberra
-University of New England
-Ocean Biogeographic Information System
-Australian Government, Department of Defence
Forestry Corporation, NSW
-Geoscience Australia
-CSIRO
-Australian Tropical Herbarium, Cairns
-eBird Australia
-Australian Government – Australian Antarctic Data Centre
-Museum and Art Gallery of the Northern Territory
-Australian Government National Environmental Science Program
-Australian Institute of Marine Science
-Reef Life Survey Australia
-American Museum of Natural History
-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania
-Tasmanian Museum and Art Gallery, Hobart, Tasmania
-Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert advice and information on numerous draft distributions.

Please feel free to provide feedback via the Contact Us page.

Department of Agriculture Water and the Environment
GPO Box 858
Canberra City ACT 2601 Australia
+61 2 6274 1111

Emu Plain GDE Assesment

Ecosystem type	Supplied ecosystem type	GDE Potential	IDE likelihood	River region
Vegetation	Eucalyptus mallee forest and mallee woodland	Low potential GDE - from national assessment	6	SPENCER GULF
Vegetation	Melaleuca shrubland >1m	Low potential GDE - from national assessment	9	SPENCER GULF
Vegetation	Eucalyptus mallee forest and mallee woodland	Low potential GDE - from national assessment	7	GAIRDNER
Vegetation	Eucalyptus mallee forest and mallee woodland	Low potential GDE - from national assessment	8	GAIRDNER
Vegetation	Eucalyptus mallee forest and mallee woodland	Low potential GDE - from national assessment	4	SPENCER GULF
Vegetation	Eucalyptus mallee forest and mallee woodland	Low potential GDE - from national assessment	10	SPENCER GULF
Vegetation	Melaleuca shrubland >1m	Low potential GDE - from national assessment	8	SPENCER GULF
Vegetation	Eucalyptus mallee forest and mallee woodland	Low potential GDE - from national assessment	8	GAIRDNER
Vegetation	Melaleuca shrubland >1m	Low potential GDE - from national assessment	9	SPENCER GULF
Vegetation	Eucalyptus mallee forest and mallee woodland	Low potential GDE - from national assessment	10	SPENCER GULF
Vegetation	Eucalyptus mallee forest and mallee woodland	Low potential GDE - from national assessment	9	GAIRDNER
Vegetation	Allocasuarina forest and woodland	Low potential GDE - from national assessment	10	GAIRDNER
Vegetation	Eucalyptus mallee forest and mallee woodland	Low potential GDE - from national assessment	7	SPENCER GULF
Vegetation	Eucalyptus mallee forest and mallee woodland	Low potential GDE - from national assessment	8	GAIRDNER
Vegetation	Eucalyptus mallee forest and mallee woodland	Low potential GDE - from national assessment	7	GAIRDNER
Vegetation	Melaleuca shrubland >1m	Low potential GDE - from national assessment	9	GAIRDNER
Vegetation	Eucalyptus mallee forest and mallee woodland	Low potential GDE - from national assessment	9	GAIRDNER
Vegetation	Eucalyptus mallee forest and mallee woodland	Low potential GDE - from national assessment	10	SPENCER GULF
Vegetation	Eucalyptus mallee forest and mallee woodland	Low potential GDE - from national assessment	7	GAIRDNER
Vegetation	Melaleuca shrubland >1m	Low potential GDE - from national assessment	7	GAIRDNER
Vegetation	Eucalyptus mallee forest and mallee woodland	Low potential GDE - from national assessment	4	GAIRDNER
Vegetation	Melaleuca shrubland >1m	Low potential GDE - from national assessment	10	SPENCER GULF
Vegetation	Melaleuca shrubland >1m	Low potential GDE - from national assessment	8	GAIRDNER
Vegetation	Melaleuca shrubland >1m	Low potential GDE - from national assessment	9	SPENCER GULF
Vegetation	Allocasuarina forest and woodland	Low potential GDE - from national assessment	10	GAIRDNER
Vegetation	Eucalyptus mallee forest and mallee woodland	Low potential GDE - from national assessment	7	SPENCER GULF
Vegetation	shrubland >1m	Low potential GDE - from national assessment	9	GAIRDNER
Vegetation	Eucalyptus mallee forest and mallee woodland	Low potential GDE - from national assessment	10	GAIRDNER
Vegetation	Eucalyptus mallee forest and mallee woodland	Low potential GDE - from national assessment	5	GAIRDNER
Vegetation	Melaleuca shrubland >1m	Low potential GDE - from national assessment	9	SPENCER GULF
Vegetation	Eucalyptus mallee forest and mallee woodland	Low potential GDE - from national assessment	9	GAIRDNER
Vegetation	Melaleuca shrubland >1m	Low potential GDE - from national assessment	9	SPENCER GULF
Vegetation	Eucalyptus mallee forest and mallee woodland	Low potential GDE - from national assessment	10	GAIRDNER
Vegetation	Eucalyptus mallee forest and mallee woodland	Low potential GDE - from national assessment	8	SPENCER GULF
Vegetation	Eucalyptus mallee forest and mallee woodland	Low potential GDE - from national assessment	10	GAIRDNER

Vegetation	Eucalyptus mallee forest and mallee woodland	Low potential GDE - from national assessment	10	SPENCER GULF
Vegetation	Melaleuca shrubland >1m	Low potential GDE - from national assessment	10	GAIRDNER
Vegetation	Eucalyptus mallee forest and mallee woodland	Low potential GDE - from national assessment	10	SPENCER GULF
Vegetation	Eucalyptus mallee forest and mallee woodland	Low potential GDE - from national assessment	10	GAIRDNER
Vegetation	Melaleuca shrubland >1m	Low potential GDE - from national assessment	9	SPENCER GULF
Vegetation	Eucalyptus mallee forest and mallee woodland	Low potential GDE - from national assessment	10	SPENCER GULF
Vegetation	Melaleuca shrubland >1m	Low potential GDE - from national assessment	9	SPENCER GULF
Vegetation	Eucalyptus mallee forest and mallee woodland	Low potential GDE - from national assessment	10	SPENCER GULF
Vegetation	Eucalyptus mallee forest and mallee woodland	Low potential GDE - from national assessment	10	SPENCER GULF
Vegetation	Eucalyptus mallee forest and mallee woodland	Low potential GDE - from national assessment	4	GAIRDNER
Vegetation	Melaleuca shrubland >1m	Low potential GDE - from national assessment	10	GAIRDNER
Vegetation	Allocasuarina forest and woodland	Low potential GDE - from national assessment	10	GAIRDNER
Vegetation	Allocasuarina forest and woodland	Low potential GDE - from national assessment	10	GAIRDNER
Vegetation	Eucalyptus mallee forest and mallee woodland	Low potential GDE - from national assessment	10	GAIRDNER
Vegetation	Eucalyptus mallee forest and mallee woodland	Low potential GDE - from national assessment	6	GAIRDNER
Vegetation	Eucalyptus mallee forest and mallee woodland	Low potential GDE - from national assessment	4	GAIRDNER
Vegetation	Eucalyptus mallee forest and mallee woodland	Low potential GDE - from national assessment	10	GAIRDNER
Vegetation	Melaleuca shrubland >1m	Low potential GDE - from national assessment	8	SPENCER GULF
Vegetation	Eucalyptus mallee forest and mallee woodland	Low potential GDE - from national assessment	4	SPENCER GULF
Vegetation	Melaleuca shrubland >1m	Low potential GDE - from national assessment	9	SPENCER GULF
Vegetation	Eucalyptus mallee forest and mallee woodland	Low potential GDE - from national assessment	3	GAIRDNER
Vegetation	Melaleuca shrubland >1m	Low potential GDE - from national assessment	9	GAIRDNER
Vegetation	Eucalyptus mallee forest and mallee woodland	Low potential GDE - from national assessment	10	GAIRDNER
Vegetation	Eucalyptus mallee forest and mallee woodland	Low potential GDE - from national assessment	4	GAIRDNER
Vegetation	Eucalyptus mallee forest and mallee woodland	Low potential GDE - from national assessment	8	GAIRDNER
Vegetation	Eucalyptus mallee forest and mallee woodland	Low potential GDE - from national assessment	10	SPENCER GULF
Vegetation	Eucalyptus mallee forest and mallee woodland	Low potential GDE - from national assessment	8	GAIRDNER
Vegetation	Eucalyptus mallee forest and mallee woodland	Low potential GDE - from national assessment	10	SPENCER GULF
Vegetation	Melaleuca shrubland >1m	Low potential GDE - from national assessment	10	SPENCER GULF
Vegetation	Melaleuca shrubland >1m	Low potential GDE - from national assessment	10	SPENCER GULF