



Government
of South Australia

Department for
Energy and Mining

24 June 2025

Mr. Peter Reid,
Chief Executive Officer,
Petratherm Ltd,
22B, Beulah Road,
NORWOOD, SOUTH AUSTRALIA, 5067.
Email: preid@petratherm.com.au

Mr. Gavin England,
Technical Director,
Leasingham Metals Pty Ltd,
6994, Horrocks Highway,
LEASINGHAM, SOUTH AUSTRALIA, 5452.
Email: gavin@claregeo.com.au

Dear Mr. Reid and Mr. England,

Approval Notification - Exploration Program for Environment Protection and Rehabilitation (EPEPR2024-028) Review EL 6815, EL 6855, EL 6715

The program review for EL6815, EL6855, EL6715, final version submitted on 23 June 2025, to conduct add new infrastructure to the existing camp and widen the exploration area to drill 520AC holes, 520 pads and 50km of tracks around Commonwealth Hill, 65km north-west of Tarcoola, has been approved in accordance with Section 70C of the *Mining Act, 1971 (the Act)*.

In accordance with section 70C(7a)(b) of the Act, the approved program is subject to the conditions listed in the attached notice.

A rehabilitation bond of \$25,000 is currently held against the works proposed on this tenement. In accordance with section 62(1) of the *Mining Act, 1971*, a new rehabilitation bond/bank guarantee to the value of **\$50,000** is required to be lodged with the Mining Registrar. This would bring the total rehabilitation bond amount for this tenement to \$75,000. Appropriate documentation will be forwarded to you shortly. The bond must be lodged within 28 days of receiving these documents.

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 Review 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 Shelley Rasmussen 0409 797 670 / Jonathan Gnanapragasam on 08 8429 7038 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



Government of South Australia

Department for Energy and Mining

EXPLORATION PROGRAM FOR ENVIRONMENT PROTECTION AND REHABILITATION (PEPR)

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 6815 – Muckanippie, EL6855 – Mulgathing, EL 6715 – Sturt.	
Tenement holder(s) (for each tenement)	EL6815, EL6855: Petratherm Limited; EL6715: Leasingham Metals Pty Ltd	
Operating company	Petratherm Limited 22B Beulah Rd Norwood SA 5067 Telephone: (61 8) 8133 5000 Fax: (61 8) 8431 3502	
Agency agreement (if applicable)	n/a	
PEPR prepared by	Barry van der Stelt Exploration Manager Mob: 0434 991 255 Email: bvanderstelt@petratherm.com.au	Samuel Rasch Project Geologist Mob: 0401 372 556 Email: srasch@petratherm.com.au
Project supervisor/contact person(s)	Barry van der Stelt Exploration Manager Mob: 0434 991 255 Email: bvanderstelt@petratherm.com.au	Samuel Rasch Project Geologist Mob: 0401 372 556 Email: srasch@petratherm.com.au
Project/prospect name	Muckanippie Project	
Location details	Commonwealth Hill Area, approximately 65km North-West of Tarcoola	
Project description, commodity type and mineralisation model	<p>The Projects focus is to further define, develop and explore for titanium and vanadium mineralisation around the Muckanippie project area including EL6815, 6855 and 6715. The program aims to do this by targeting mineralisation in a variety of both soft and hard rock targets. These have been identified from historic drilling and geophysical targeting. The Drill locations are a Quaternary sedimentary sequence at honeysuckle bore. Quaternary sediments and a magnetic horizon at Queeny bore. And magnetic targets at the Duke and Nardoo prospects, previously drilled by WPG, and Tasman Resources.</p> <p>Drilling at Honeysuckle bore will test a flat lying quaternary sedimentary sequence, which will require broad spaced, shallow air core drilling to approximately 30m depth. 10, 1km spaced traverses have been proposed with drillhole spacing initially aimed for 200m, with potential infill down to 100m where required to define continuity.</p> <p>Air Core drilling at queeny bore will be conducted along a series of traverses that target magnetic features and horizons. Drilling will target both shallow (~30m) quaternary sediments as well as basement features (up to 100m). Drilling will aim to intersect prospective sequences, from GM25.1 and GM25.2 drilled by Tasman resources in the 90s. It also aims to test a magnetic sequence believed to be prospective for Ti / V mineralisation. Drill traverses have been planned over prospective features with a 250m buffer each side for follow up drilling and scope fore extension.</p> <p>There is also potential for drilling around the Nardoo and Duke prospects associated as the source rocks to the quaternary sediments. Re-assaying is currently underway to define drill targets. These will be controlled by WPG drilling and by prospective magnetic features.</p> <p>The drilling method will be air core, mounted on the back of a light vehicle, no drill pads or sumps will be needed. Drill chips will be collected in reusable plastic buckets, and a sample will be taken. Upon completion of each drill hole, the buckets will be poured back down the open collar, before the collar is capped and buried.</p>	

This EPEPR review, comes resulting the discovery of the Rosewood Heavy Mineral Sands Prospect on EL6855 and EL6715. Petratherm will require changes in the spacing, number of drillholes and sample collection techniques of drilling, to complete initial infill lines and metallurgical testing. All other conditions of the approved EPEPR can remain the same.

Additional Drill Lines will be added 400m from existing lines to add confidence and prove continuity of mineralisation. The number of approved drillholes will increase by 300 to allow for this.

Some bulk sample will be required to advance mining studies, drill cuttings will be held in green retainer bags at the drill pad until the sample is required for analyses. Following sampling, the workflow of the original EPEPR will recommence, with backfilling of open drillholes and rehabbing.

This EPEPR review contains amendments to the Petratherm field camp and simplification of the original cleared polygons to allow for flexibility in drilling.

Petratherm intend on expanding its field camp to allow for more suitable facilities as scope of work increases. This camp will include, a sleeping unit for 4 people, a small kitchen unit. And ablutions facility and a Fuji Clean Ace 1200 septic system with grey water sprinklers. A shipping container and a water tank will also be installed. All camp unites will be non permanent and can be demobilised in the event that work ceases.

A change to the location of the proposed exploration operations has been made to the edges of Petratherm's tenements to allow for exploration of strandline mineral sands systems.

Proposed project schedule

Start date	01/10/2024	End date	31/12/2025
	20/03/2025		19/03/2026
	24/06/2024		23/06/2026

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	Samuel Rasch
Position	Project Geologist
Company	Petratherm Ltd

Signature
(digital
allowed)



Date

26/09/2024

Name	Gavin England
Position	Technical Director
Company	Leasingham Metals Pty Ltd

Signature



Date

26/09/2024

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.

Desktop review of all .

- Review of groundwater conditions using <http://www.waterconnect.sa.gov.au>.
- Review of historic exploration and company reports.
- Environmental Protection Policy (Water Quality) 2015

Consultation with Landowners

- Direct communication with traditional landowners for the purposes of native title by CEO Peter Reid
- Native title clearance was completed in February 2021 and a second clearance was completed in December 2021 to facilitate drilling.
- Multiple consultations with Tom Wheelhouse the station manager at Commonwealth Hill station by Michael Beven.

Contractor Consultation

Petratherm intends to and has commissioned both geological and drilling contractors with many years on the ground experience in this area.

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
EL 6715, 6855, 6815	Mulgathing Station	Pastoral Lease	Sheep Grazing	Form 21B 20/12/2021 8/1/2023	n/a		Ongoing, In addition to the serving of Form 21's, Petratherm is in regular contact with the Station Managers.	No concerns raised No concerns raised
EL 6715, 6855, 6815	Bulgunnia Station	Pastoral Lease	Sheep Grazing	Form 21B 8/1/2023	n/a		Ongoing, In addition to the serving of Form 21's, Petratherm is in regular contact with the Station Managers.	No concerns raised No concerns raised

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
EL 6715, 6855, 6815	Commonwealth Hill Station	Pastoral Lease	Sheep Grazing	Form 21B 8/1/2023	n/a		<i>Ongoing. In addition to the serving of Form 21's, Petratherm is in regular contact with the Station Managers.</i>	<i>No concerns raised No concerns raised</i>
EL 6715, 6855, 6815	AMYAC	SCD2011/001		Form 21 21/01/2021 20/12/2021 18/01/2023	n/a		<i>Ongoing. In addition to the serving of Form 21's Petratherm will be completing heritage surveys across all proposed drill areas in September 2024</i>	<i>No concerns raised No concerns raised</i>
EL 6715, 6855, 6815	WPA	Defence	Defence	n/a	n/a		<i>Petratherm has an Exploration Permit and all staff involved in exploration on Petratherm tenements will have appropriate levels of clearance</i>	<i>None raised No concerns raised</i>

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

Nil

Provide any additional relevant information.

n/a

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.

The nearest settlement is the Commonwealth Hill Station which lies approx. 30 kilometres to the North of EL6715, 6815 and 6855 Coober Pedy is located 110km to the northwest. No impacts on human settlements or infrastructure are expected.

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	<input type="checkbox"/>
Pastoral lease	<input checked="" type="checkbox"/>
Perpetual lease	<input type="checkbox"/>
Crown land	<input type="checkbox"/>
Mining reserve	<input type="checkbox"/>
Aboriginal freehold/leasehold land (e.g. Anangu Pitjantjatjara Yankunytjatjara and Maralinga Tjarutja lands)	<input type="checkbox"/>
Forestry reserve	<input type="checkbox"/>
Marine parks	<input type="checkbox"/>
National parks, conservation parks, conservation reserves, regional reserves*	<input type="checkbox"/>
Adelaide Dolphin Sanctuary	<input type="checkbox"/>
Murray Darling Basin	<input type="checkbox"/>
N/A	
Other*	<input type="checkbox"/>
N/A	

Land use	Applicable
Grazing	<input checked="" type="checkbox"/>
Cultivated land	<input type="checkbox"/>
Residential	<input type="checkbox"/>
Township	<input type="checkbox"/>
Industrial	<input type="checkbox"/>
Tourism	<input type="checkbox"/>
Conservation	<input type="checkbox"/>
Defence activity	<input checked="" type="checkbox"/>
Road reserve	<input type="checkbox"/>
Sites of scientific significance (geological monuments, fossil reserves etc.)	<input type="checkbox"/>
Orchard/vineyard	<input type="checkbox"/>
*Native vegetation heritage agreements	<input type="checkbox"/>
N/A	
*European heritage sites	<input type="checkbox"/>
N/A	
*Other (e.g. historic mining)	
N/A	

* Indicates more information required in field immediately below.

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

No Council or development plans will have any impact on the program.

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

There are no known plans for future land use by other parties that Petrathern is aware of.

Provide any additional relevant information.

n/a

Woomera Prohibited Area (WPA)

Will activities be conducted within the WPA	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Do you have a resource exploration permit in place?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
In which zone will activities be conducted?			Defence Infrequent Use Zone (Green Zone)		
Does the Exploration Permit allow the operator to conduct exploration operations in the WPA?				Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
What is the expiry date of the resource exploration permit?				28-June-2026	
Identify closure periods that may impact on the exploration program.					
No upcoming closures					

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 <input type="checkbox"/>	No <input checked="" type="checkbox"/>
<If yes, indicate which area.>		
Do you have a Deed of Access with Defence?	Yes <input type="checkbox"/>	No <input type="checkbox"/>
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 <input checked="" type="checkbox"/> No <input type="checkbox"/> (If no, no further information in this section required.)		
Are there registered native title party/parties in the area of proposed exploration?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	AMYAC (SAD 6007/98)	If no, an Environment, Resources and Development (ERD) Court determination is required.
Have you negotiated a native title mining agreement?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the agreement registered?*	EL6815 Instrument Number 438, EL6855 Instrument Number 438, EL6715 Instrument Number 54782,
Have you accepted an Indigenous land use agreement (ILUA)?	Yes <input type="checkbox"/> No <input type="checkbox"/>	Is the ILUA registered?*	

Exploration PEPR application – 12-month period

Have you obtained ERD Court determination? [†]	Yes <input type="checkbox"/> No <input type="checkbox"/>	Is the determination registered?*	<List the tenements covered by the determination>
		Yes <input type="checkbox"/> No <input type="checkbox"/>	

* 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.

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, salt pans, clay pans etc.).

The tenements topography and surface are largely flat laying sand plains dominated by lightly populated scrubland with Senna and Acacia being the dominant plants. Isolated patches of bluebush exist on topographic highs dominated by silcrete and or calcrete. The exploration activities will have no impact on erosion on the tenement.

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.

A thin veneer of flat laying sand dominates the surface. The exploration activities will have no significant impact on the soil and surface cover.

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 <input type="checkbox"/>	No <input checked="" type="checkbox"/>
During the exploration program no works will be completed of such significance that could alter or interfere with natural drainage. ' Drill collars can be moved up to 50m in order to avoid drainage lines.		
Is the program area located within water protection areas defined under the <i>River Murray Act 2003</i> ? If yes, provide the name(s).	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
n/a		
Is the program area located within any prescribed watercourses or prescribed surface water areas under the <i>Landscape South Australia Act 2019</i> ? If yes, provide the name(s).	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
n/a		

Exploration PEPR application – 12-month period

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 <input checked="" type="checkbox"/>	No <input type="checkbox"/>
<p>The Muckanippie project lies outside of the Far North Prescribed Wells Area. There are multiple Mineral drillholes on the tenements, which describe, shallow 20-30m cover above paleoproterozoic, Muckanippie Anorthosite Complex. Hiistoric Drilling has been drilled to blade refusal without groundwater issues. The majority of drilling will be shallower than historic drilling in similar locations. It is Highly unlikely that we will encounter ground water in the proposed drillholes due to their shallow nature.</p> <p>All mineral drill holes will be backfilled and rehabilitated in accordance with the Mineral Exploration Drillholes – General specifications for construction and backfilling for bores completed within an. A class one driller will be on site to drill all mineral drill holes and supervise the rehabilitation of drill holes should any water be intersected.</p>		

Description of the locality/area where different groundwater conditions may be encountered					
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
Jurassic – Cretaceous JK1	5-50	JK1	15m onwards	Unconfined	<i>Depth of sands recorded JK-1 Aquifers varies over the region but are typically not deeper than fifty metres. These sediments do not always contain water and overly the Archean basement. Salinity where water is found in this lithology can greatly vary from greater than 1000 to greater than 10,000.</i>
Archean-Devonian A-d	5 ~	A-d	34m to ongoing	Unconfined	<i>Water Salinity of ground waters found in broken rock aquifers in this region is usually very high in salinity. Recent water bores drilled at nearby Aurora Tank returned salinity readings of 35,000 and 75,000.</i>

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

Aquifer Name	Water Quality (TDS)	Aquatic Ecosystems	Recreation and aesthetic	Drinking water for human consumption	Primary Industries - Irrigation and general water use	Primary Industries - Livestock	Primary Industries - Aquaculture
Jurassic-Cret. unit JK1	Unknown			X	X	X	X
Archean – Devonian A-d	Unknown						X

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

Terrestrial GDEs (See Figure1.)
 The majority of proposed areas are within Low Potential GDEs from National Assessment, with vegetation of “Acacia Woodland” associated with Low Lying Alluvial plains and salt lakes with some dunes with low rainfall.
 One small area of High Potential GDE (description as above) occurs in the central western part of the PEPR project area.

Aquatic GDE (See Figure2.)
 The proposed project area has several locations identified as having low and moderate potential GDEs. They are all described as lacustrine wetlands.

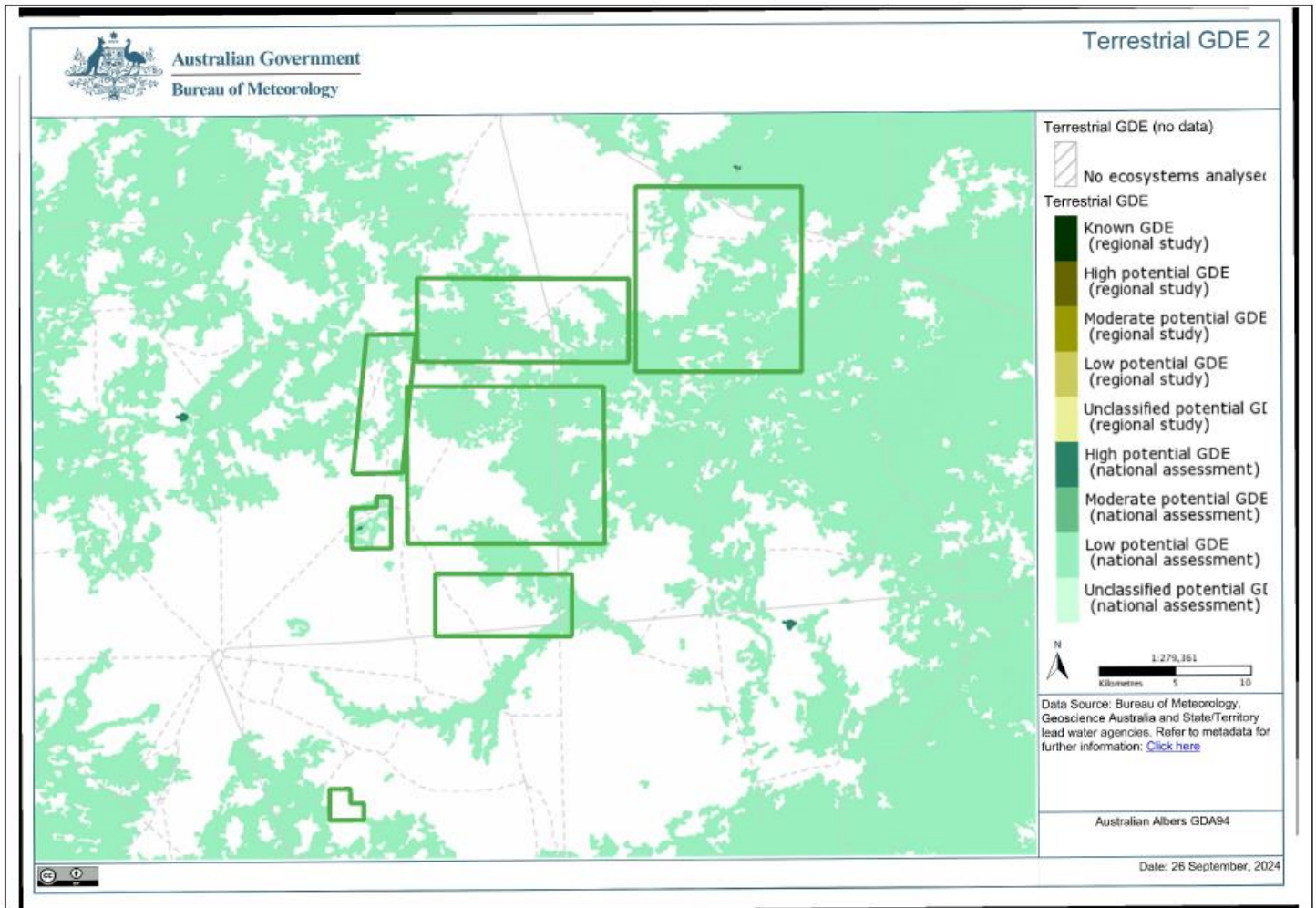


Figure 1 Terrestrial GDE

Exploration PEPR application – 12-month period

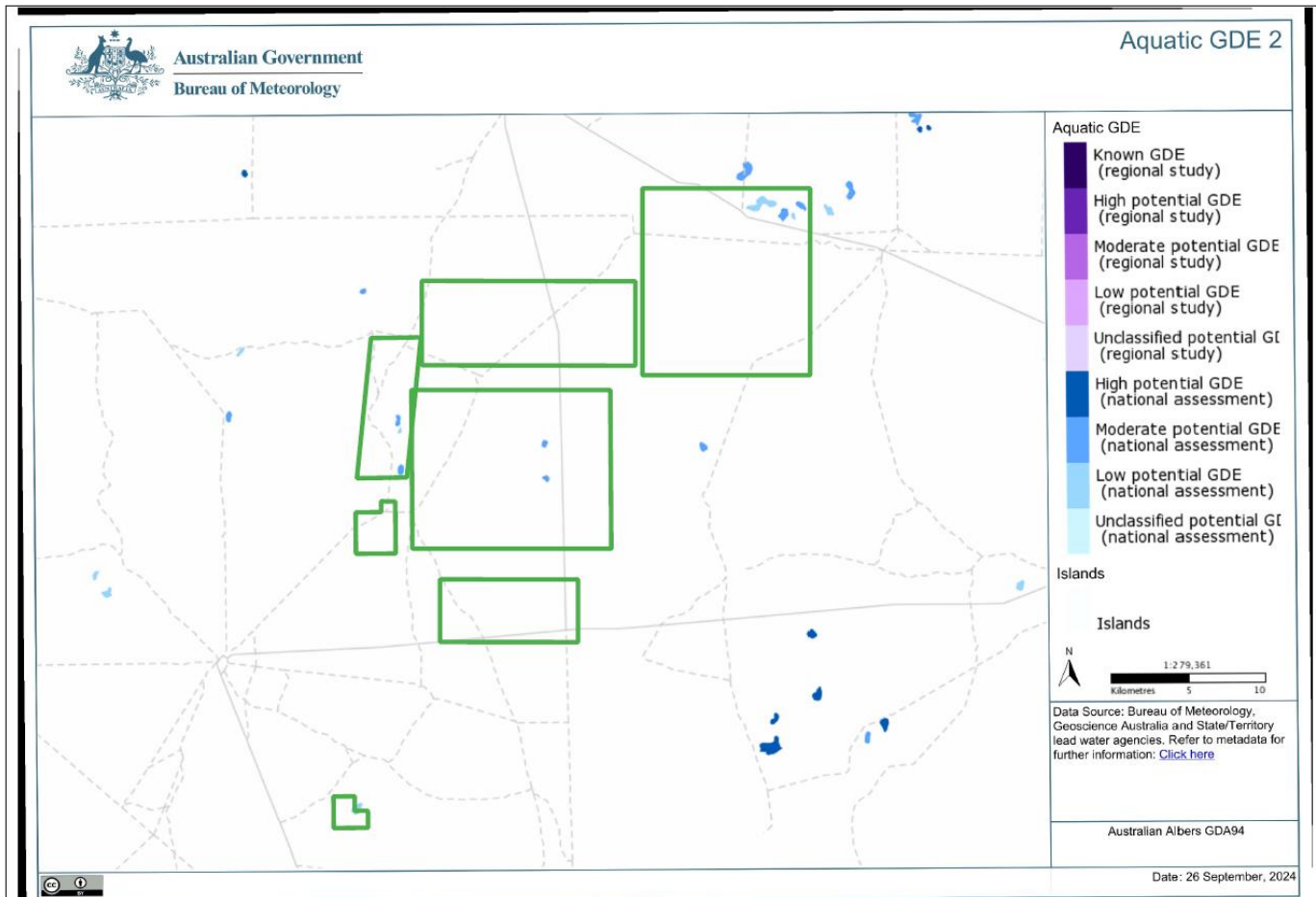


Figure 2 Aquatic GDE

Is the proposed program located within a prescribed wells area or prescribed water resource area? If yes, provide the name of the area.	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>

Provide any additional information, if required.

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 <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Vegetation consists of chenopod-dominated shrublands, with open woodland groves of <i>Acacia</i> restricted to sandy areas. In the extensive dunes to the south-west, taller vegetation of <i>Casuarina</i> , <i>Callitris</i> and <i>Eucalyptus</i> is found.		

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†
None known			

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

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† *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*).

The exploration area occurs within the Arid Lands Natural Resources Management Region. The Area is within a known Buffel Grass region- Zone 2 on the SA Buffel Grass Strategic Plan 2012-2017. When looking at the map of known locations of Buffel Grass it is dominantly located along bitumen Stuart Highway and beginning to spread to the west along the Tarcoola unsealed road. There are no known pathogens within the proposed drilling area.

If any infestations of Buffel Grass are encountered during the drilling program, cleaning procedures will be implemented when leaving the area and the infestation will be avoided.

Fauna

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

Most common Fauna present in the area are traditional outback species such as Kangaroos, Emus, Wedge Tailed Eagles, Brown Falcons, Budgies, Galahs, Finches, Bearded Dragons, Sand Goanna and Military Dragons. Various species of mice both native and feral are known to inhabit the area.

The most common feral species in the area are sheep along with feral cats, foxes, and species of mice.

A search was conducted on <https://pmst.environment.gov.au/> There is no change in significant fauna compared to the previously approved Exploration area.

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
None known			

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.

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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 <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Claypans and creeks are listed as sensitive areas and exploration in or on the verges of creeks, significant claypans or salt lakes are to be avoided. No areas of environmental significance or cultural significance will be impacted by this exploration program. This will be done by leaving a 50m buffer around creeks and clay pans for drill pads and access tracks.		
Are you likely to impact on the environmentally sensitive area? If yes, detail the likely effects the proposed program may have.	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
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.		
Aboriginal heritage surveys were conducted on 22-24 September 2024. A final report detailing survey results was provided to PTR and AMYAC by the consultant anthropologists on 8 October outlining allowable exploration activities.		

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	3	Petratherm	
Land access/environmental			
Field assistants/technicians	2	Petratherm	
Drilling crew	3	Jim McLeod Drilling/MJ Drilling/Bullion Drilling or similar contractor	
Site preparation and rehabilitation	1	McLeod Drilling	
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
4x4 Mounted RAB/AC rig	Jim McLeod Drilling Services	4 x 4 Drill Rig mounted on light truck	AC drilling.
4x4 Light vehicle	Petratherm Ltd	Landcruiser for Geologist and field assistant	AC drilling

Provide any additional information, if required.

<Include text here.>

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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 <input type="checkbox"/>	No <input checked="" type="checkbox"/>
<Include text here.>		

Drilling activities

Will exploration drilling activities be conducted? If yes, fill out the below table	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
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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 width) (m ²)	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)
6715	AC	100 250	80	0	0	100	0	0
6855	AC	100 250	80	0	0	100	0	0
6815	AC	20	80	0	0	100	0	0
<hr/>								
TOTAL		220 520	17600 41600	0	0	22,000m² 52,000m²	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).
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* The footprint includes all areas of disturbance associated with the drillsite.

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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.

No clearing will be required for shallow AC drilling, The Drill rig and support vehicles are mounted on light vehicles which can be driven off road to the collar location. Each Collar location can be adjusted within reason to avoid dense vegetation or dunes. Samples will be collected in reusable containers which will be placed on the ground away from vegetation to allow sampling. No sumps will be required for the shallow AC Drilling as no water is expected to be intersected.

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 <input checked="" type="checkbox"/>	No <input type="checkbox"/>
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.		
<p>For AC drilling, most drillholes will not require casing and will be drilled as open holes. If required, a 1m casing will be used, after the completion of the drill hole, the casing will be removed during back filling. Once sampling is completed at each site the drillhole will be backfilled with the drill cuttings in the same stratigraphic order it was withdrawn with remaining metre placed on top with the topsoil reinstated. During this process the PVR collar will be removed and reused on subsequent drillholes.</p> <p>All drillholes will be backfilled and rehabilitated in accordance with the “Mineral Exploration Drillholes — General specifications for construction and backfilling” for bores completed within an unconfined aquifer. Drillholes which penetrate a single unconfined aquifer — backfill with drill cuttings, clean fill containing clay, or cement</p> <p>The rehabilitation of all AC drill holes will be completed within three months of the expiry of the EPEPR in line with DEM requirements.</p> <p>As the drilling will occur in non-artesian conditions a level 1-3 driller is satisfactory for the purposes of completing the exploration.</p> <p style="color: red;">Some bulk sample will be required to advance mining studies, drill cuttings will be held in green retainer bags at the drill pad until the sample is required for lab work. Drillholes will be capped with a hole plug in the interim period. Holes will be decommissioned using the same backfilling process stated in the approved EPEPR during the bulk sampling process.</p>		
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.		
No cementing of intervals is not required as no water is expected to be intersected during the drilling.		
All drill casing from around the collar will be removed once decommissioning is complete.		

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 <input type="checkbox"/>	No <input checked="" type="checkbox"/>
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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)
TOTAL						

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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.

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).

During the AC drilling drill cuttings will be poured directly into reusable tubs for each meter drilled, a sample will be taken using a splitter off of the side of the cyclone, into a calico bag. A sample will be taken from each reusable tub, to be logged and a sample take in a chip tray. Any bulk samples can be taken from these tubs.

At the completion of each hole, All calico bags will be collected for assay, and all reusable tubs will be poured back down the open drill collar, in stratigraphic order. Any PVR pipe will be removed during this process.

Bulk samples from selected drill holes will be required for mining studies. These will be selected once initial analysis of drill samples is complete. Drill cuttings will be held in green plastic retainer bags, until data is analysed to determine bulk sampling. Bulk samples will be composited from retainer bags, and excess material will be returned down the open drill hole along with material from unsampled bags. All waste and green bags will be removed from the drill pad, and the hole will be rehabbed during bulk sampling.

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 <input type="checkbox"/>	No <input checked="" type="checkbox"/>
<i><If yes, include text here.></i>		
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 <input type="checkbox"/>	No <input checked="" type="checkbox"/>
<i><If yes, include text here.></i>		
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 <input checked="" type="checkbox"/>	No <input type="checkbox"/>
<ul style="list-style-type: none"> • The Drill rig will be Mounted on a Light Vehicle which is capable of accessing all drill pads, cross country. Access tracks are limited however fence lines can be used to get within ~2km of each target. Access between each drill site will require cross country driving. All vehicles will follow the same tire lines between drill sites. Access tracks will pass around areas of dense vegetation for the most efficient and least damaging route. • Drill program will be planned as it progresses, the shortest route with least environmental disturbance will be followed. • No clearing will be required for light vehicles • Routes will be traversed once before moving to the next collar location • Fencelines will be followed where possible <p>Approximately 50km of access track will be required to gain access to drill collars off existing tracks.</p> <p style="color: green;">Only the approved 50km of tracks will be cleared for drilling, in updated PEPR Review</p>		

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

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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.		
<p>Drill Contractors will bring a towed Caravan with them to serve as a kitchen and to store food and perishables while staff will sleep in small individual tents.</p> <p>Petratherm staff will stay in a towed accommodation caravan or if not available in individual tents and share the facilities provided by the drilling company.</p> <p>A small laydown area will be required for storage or drill consumables and drilling equipment.</p> <p>During drilling an average of 6 people will live on site however this may be exceeded temporarily as visitors visit the site during resupply or site visits.</p> <p style="color: green;">Alteration to the camp set up is required to accommodate extra staff and with more permanence, the camp set up will be portable and can be demobilised by Petratherm if no longer required. Staff will be accommodated in portable sleeping units with portable amenity units.</p>		
What is the maximum number of personnel requiring accommodation?	9	
Is a campsite required to be established? If no, no further information is required.	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Provide a description and justification of the camp location (e.g. previously cleared areas etc.), and any other relevant information.		
<p>The campsite will be set up at the site of a previous fly camp on a clear vegetation free patch just off a main track to the north Muckanippie outstation. The Camp will consist of tents and/or up to four towable caravans. Small hand dug sumps will be dug to facilitate any runoff from shower facilities. A generator will be onsite to power the camp and all hydrocarbons will be stored on the back of the driller's support/camp truck used for the program.</p> <p style="color: green;">The Camp modifications will occur in the same location as the previous camp, which was selected by local farmers in an area with little vegetation to disturb. The footprint of the new camp will not exceed that of the old camp.</p>		
What will be the total area (ha) of the campsite(s)?	0.8 ha	
What will be the total area (ha) of vegetation clearance for the campsite?	.05 ha	
If vegetation clearance is required, describe the methods used to prepare the site.		
Will any excavations be required?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
If yes, describe the purpose of the excavation and the maximum volume (m ³) of material to be excavated.		
2 Small hand dug sumps for shower run off, maximum volume of 4m ³		
Are the proposed ablution facilities endorsed/approved for use by the Department of Health or local council, where applicable? If no, indicate why.		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
<p>A Portable ablution facility will be used that meets department of health requirements. Alternatively, a small 3-6 metres drop hole will be drilled in the vicinity of the camp. The camp is of such a small scale that no approval by the Department of Health is considered necessary'</p> <p style="color: green;">Yes the new ablution facility is approved by the department of health.</p>		
Proposed infrastructure (includes caravans, tents, offices, hydrocarbon and water storage requirements etc)	Quantity	Description/capacity
Camping trailer/Caravan	4	<i>Towed camping trailers or Caravans to provide kitchen and storage space for personnel.</i>
Tent	8	<i>Tents for persons to sleep in.</i>
Water Cube 1000L	1	<i>1000L Litre water cube stored on trailer.</i>
Diesel Pods 1000L	2	<i>2 x 100 litre pods for storage of diesel stored on drillers trailer.</i>
Sleeping Unit	1	<i>2.44m x 12.2m, 4 person transportable sleeping unit</i>
Ablution facility	1	<i>2.42m x 9.86m, A portable shower/ toilet ablution unit</i>
Kitchen unit	1	<i>2.42m x 9.86m, A portable kitchen facility</i>
Fuji Clean Ace 1200 septic system	1	<i>Above ground system. A septic system for kitchen and ablution facility with grey water sprinklers</i>
40ft Shipping container	1	<i>2.44m x 12.2m, Portable shipping container, for consumable and field equipment storage</i>
Laydown area details		

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Will laydown areas be required? If no, no further information is required.	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
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 <input checked="" type="checkbox"/>	No <input type="checkbox"/>
<i>A small lay down area may be required adjacent to the camp for the storage of drill rods and drilling consumables.</i>		
What will be the maximum area (ha) required for the laydown area(s)?	0.2 ha	
What will be the total area (ha) of vegetation clearance for the site?	0	
If vegetation clearance is required, describe the methods used to prepare the site.		
<i>There will be enough unvegetated land for a lay down area without clearing</i>		
Will any excavations be required? If yes, describe the purpose of the excavation and volume (m ³) of material to be excavated.	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
<i><Include text here.></i>		
Proposed infrastructure (includes hydrocarbon and water storage requirements)	Quantity	Description/capacity
Nil		<i>All water storage and hydrocarbons will be stored on the trucks they are brought in on. There is no requirement for infrastructure for hydrocarbon or water storage on site.</i>
Provide a description and justification of the location (e.g. previously cleared areas), and any other relevant information if required.		
<i><Include text here.></i>		

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 <input type="checkbox"/>	No <input checked="" type="checkbox"/>
<i><If yes, include text here.></i>		

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. Approximately 400L of water will be used per day for all drilling activities and at camp. Minimal water will be used during drilling, only for unblocking drill tubes, which will not form any run off. Run off from the camp will all be contained within hand dug sumps up to 4m ³	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
<i>The drilling contractor will truck in potable drinking water for the duration of the program and will resupply as required when completed diesel and other consumable resupply runs to Glendambo. Camp and or drill water may also be accessed from the Muckanippie tank with permission and agreement from Jumbuck Pastoral.</i>		
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 <input type="checkbox"/>	No <input checked="" type="checkbox"/>
<i><Include text here.></i>		

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 <input type="checkbox"/>	No <input checked="" type="checkbox"/>
<i><If yes, include text here.></i>		
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 <input type="checkbox"/>	No <input checked="" type="checkbox"/>
<i><Include text here.></i>		

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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 <input type="checkbox"/>	No <input checked="" type="checkbox"/>
<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 <input type="checkbox"/>	No <input checked="" type="checkbox"/>
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 <input type="checkbox"/>	No <input checked="" type="checkbox"/>
<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. Upon completion of the exploration and assessment of results rehabilitation of all drill sites and new tracks will be completed within three months of the expiry of the PEPR and will be completed in line with <i>M33 Statement of environmental objectives and environmental guidelines for mineral exploration activities in South Australia</i> <i>The first 220 approved drillhole will be rehabilitated, before the commencement of the additional 300 drillholes, outlined in this EPEPR Review.</i> State the estimated budget required to rehabilitate impacted sites. \$13000
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Vegetation Clearance

Will any area of cleared native vegetation be unrehabilitated after the authorised period?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
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.

n/a

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. Potential 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

- 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.
- 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.
- 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.
- For each applicable potential impact, the corresponding outcome and outcome measurement criteria are required.
- 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	Potential impacts	Is the potential impact applicable (Yes/No)	Control strategies	Risk assessment				
Lists are not exhaustive.	Lists are not exhaustive.	Some potential impacts are applicable to all programs.	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.	LH	CQ	Risk		
Stakeholders: <ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> 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.)	<ul style="list-style-type: none"> Commence early consultation (phone and face to face discussions) with Pastoral Lease holders to explain scope of program, and to ascertain areas of concern. Meet with Pastoral Lease holders at an agreed frequency, to discuss drill program progress/issues, once program is underway. Drill holes will be situated well away from infrastructure and stock watering points (i.e., >500m). Water for drilling to only be sourced from sites and in quantities approved by Station owners. Use existing track networks wherever possible. Rehabilitate any areas of disturbance within required timeframes. All drill sites are situated at least 10km from the nearest occupied residences. Minimal dust will be generated from drilling activities Night-time vehicle movements will be minimal. Vehicles may have various speed limits imposed in different areas, to limit dust generation from dirt roads, for example 25kph when driving past homesteads. A Heritage Clearance has been completed covering all proposed exploration activities. A WPA permit has been granted. All persons are W003 Approved Persons and a W007 Access Request to complete the program has been completed. Petrathern will abide by all WPA instructions. 	2	B	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.

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<p>Stakeholder: DEW</p>	<p>Interference to:</p> <ul style="list-style-type: none"> existing or permissible land use. buildings, structures, existing tracks or other infrastructure. aesthetic values of an area. <p>Noncompliance with legislative requirements.</p>	<p>No (Applicable to programs located adjacent to or within parks and reserves.)</p>				<p>For activities located within or adjacent to regional reserves, national, conservation and marine parks only:</p> <ul style="list-style-type: none"> no unauthorised interference with park management activities. 	<p>Provide confirmation that:</p> <ul style="list-style-type: none"> 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.
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Impact assessment						Outcomes	Outcome measurement criteria (inc. monitoring plan)	
Receptor	Potential impacts	Is the potential impact applicable (Yes/No)	Control strategies	Risk assessment				
Lists are not exhaustive.	Lists are not exhaustive.	Some potential impacts are applicable to all programs.	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.	LH = likelihood of consequence CQ = severity of consequence	LH			CQ
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.	Yes (Applicable to exploration programs located within or impacting on native vegetation.)	<ul style="list-style-type: none"> - Interrogate relevant SA Govt. GIS databases to become familiar with presence of significant flora and fauna species in drilling area. - Any sightings of significant species will be recorded and reported. - Use existing station tracks wherever possible. - Initial planned drillhole locations to be inspected in the field during the reconnaissance phase – hole locations to be modified if site is located within dense vegetation (e.g., if within an isolated stand of trees, move to adjacent grassland). Sites will be located in naturally cleared areas where possible. - All overland tracking takes the most direct, practical routes. - Overland tracking utilises naturally open areas to avoid trees and densely vegetated areas. - Overland tracking was created by driving across unprepared ground to retain root stock and minimise potential for erosion. No deviations (multi-tracking) to occur, and designated routes will be flagged for clarity. - All areas of disturbance are to be rehabilitated after the drilling program within 15 months of the PEPR approval date. 	3	A	low	<p>No permanent loss/modification of native flora and fauna populations and their habitats through:</p> <ul style="list-style-type: none"> • clearance • fire • other <p>unless prior approval under the relevant legislation is obtained.</p>	<p>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:</p> <ul style="list-style-type: none"> • The area and method of disturbance is consistent with that described in the PEPR. • No uncontrolled fires* occurred as a result of exploration activities. <p>Representative photos to be included within the annual exploration compliance report.</p>
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.)	<p>Interrogate Weeds in Australia Public Resources website (Australian Government) to determine presence and extent of current weed infestation.</p> <ul style="list-style-type: none"> - Make observations of current weed presence and distribution during the reconnaissance phase. - Any new vehicle/earthmoving equipment to be brought on site is to be thoroughly washed off-site first. A visual inspection for introduced mud/soil is to be made by Petrathern personnel, prior to vehicle/machinery operation. - All new vehicles entering the program area, or vehicles re-entering the program area after travelling on other unsealed roads, are to be cleaned at first, and be visually inspected. - Risk of weed introduction to be discussed with all new personnel coming to site as a part of induction process. - Rehabilitated sites are to be revisited periodically. If weed infestation or increase in abundance of pre-existing weeds is noticed, selective spraying is to occur. 	1	A	Low	<p>No introduction of new species of weeds and plant pathogens, nor increase in abundance of existing weeds species.</p>	<p>Provide a statement within the 'Compliance with approved programs' section of the annual exploration compliance report, confirming that:</p> <ul style="list-style-type: none"> • 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.)	<ul style="list-style-type: none"> - Drillholes will be temporary plugged to prevent any Fauna falling or becoming trapped in the collar while awaiting rehabilitation. 	1	A	Low	<p>No fauna traps created as a result of exploration activities.</p>	<p>Maintain before, during and after photographic evidence of all drillholes and/or excavations demonstrating that:</p> <ul style="list-style-type: none"> • 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. <p>Representative photos are to be included within the annual exploration compliance report.</p> <p>Provide the information requested within the 'Rehabilitation' section of the annual exploration compliance report.</p>
Aboriginal heritage sites	Disturbance to Aboriginal heritage.	Yes (Applicable to all programs.)	<ul style="list-style-type: none"> - Heritage approval has been granted to use the overlanding tracks during the drilling program. All vehicles will follow wheel prints to avoid multiple tracking. - The onsite supervisor will have Heritage Clearance outcome maps (including exclusion zones) on site, at all times, for reference. - Personnel will be notified of any heritage sites during the induction process, on maps, and at toolbox meetings, etc. - Any suspected sites, that may have been overlooked during the Heritage Clearance will be recorded and reported. The suspected site will be avoided 	1	A	Low	<p>No disturbance to Aboriginal artefacts or sites of significance unless prior approval under the relevant legislation is obtained.</p>	<p>Maintain a database and provide a statement within the 'Compliance with approved programs' section of the annual exploration compliance report demonstrating that:</p> <ul style="list-style-type: none"> • 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.

Exploration PEPR application – 12-month period

Impact assessment						Outcomes	Outcome measurement criteria (inc. monitoring plan)	
Receptor	Potential impacts	Is the potential impact applicable (Yes/No)	Control strategies	Risk assessment				
Lists are not exhaustive.	Lists are not exhaustive.	Some potential impacts are applicable to all programs.	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.	LH = likelihood of consequence CQ = severity of consequence	LH			CQ
			for the duration of the program (flagged off with a 50m exclusion zone put in place).					
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.)					<p>No disturbance to European heritage sites and to sites of scientific and environmental significance unless prior approval under the relevant legislation is obtained.</p> <p>Demonstrate no impact to heritage sites and sites of scientific and environmental significance by:</p> <ul style="list-style-type: none"> 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. 	
Soil/vegetation/fauna	Soil/vegetation contamination (e.g. hydrocarbons, rubbish, drill samples/cuttings, ablutions, other sources).	Yes (Applicable to all programs.)	<ul style="list-style-type: none"> No bulk diesel or other hydrocarbon/chemical storage is required for the program. All diesel will be stored on support vehicle fuel tank (compliant with Australian Standards). At least one large spill kit to be present at the drill rig. All personnel to be reminded in the induction of the need to clean up any small hydrocarbon spills, using shovels and green plastic bags. Any hydrocarbon spill/leak contaminated soil will be immediately collected/bagged for disposal at a licenced waste disposal point (Coober Pedy). Any hydrocarbon spills >5L are to be reported. All rubbish to be securely placed in bins or bags and disposed of at approved waste facility. Rubbish is not to be left in areas accessible to wildlife or vermin. Drill cuttings will be stored in green bags and returned downhole when no longer required. Empty green bags will be disposed of at the Port Augusta or Coober Pedy tip after completion of rehabilitation. 	2	A	Low	<p>No contamination of soil and vegetation as a result of exploration activities.</p> <p>Demonstrate that all domestic or industrial waste (includes general rubbish and hydrocarbons) is disposed of in accordance with the <i>Environment Protection Act 1993</i> 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:</p> <ul style="list-style-type: none"> 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. <p>Maintain photographs of all exploration sites and provide representative photos within the annual exploration compliance report demonstrating that drill cuttings are:</p> <ul style="list-style-type: none"> 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. <p>Provide the information requested within the 'Rehabilitation' section of the annual exploration compliance report.</p>	
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.)	<ul style="list-style-type: none"> Existing tracks will be used where possible. when traversing cross country vehicle will travel in single file to minimise impacts. Access tracks, drill line and drill pad clearance will only occur on an as needed basis. To Prevent accidentally exceeding the required and approved camp area witches' hats will be placed around the area to demark the approved area. Appropriate speed restrictions (e.g., <25km/hr) will be imposed (communicated during the company induction) Complete rehabilitation of temporary tracks and drill pads as per the M33 guidelines. Tacks will be lightly scarified and closed off by placing fallen logs and debris across the entrance to the tracks to discourage reuse. the tracks and terrain in the vicinity of this PEPR are generally not prone to erosion and is not a general concern in the area. Drill pads are scarified by hand at the completion of each hole, to avoid discolouration from dust. Appropriate PPE is used by all staff and contractors. 	1	A	Low	<p>Where soil disturbance occurs as a result of exploration activities, ensure that:</p> <ul style="list-style-type: none"> topsoil quality and quantity is maintained the soil profile and topography is reinstated to original conditions there is no accelerated soil erosion. <p>Maintain before, during and after photographic evidence of all excavations, drillsites, camps, laydown areas and new tracks demonstrating that:</p> <ul style="list-style-type: none"> 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. <p>Representative photos to be included within the annual exploration compliance report.</p>	

Exploration PEPR application – 12-month period

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
							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.)	<If the potential impact is applicable, list the control and rehabilitation strategies>				<p>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).</p> <p>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).</p> <p>Alternatively, provide copies of water affecting permits within the annual exploration compliance report.</p>	
Groundwater/aquifer	Groundwater contamination: <ul style="list-style-type: none"> 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.)	<p>- No ground water was intersected during previous drilling and it is not expected that any will be intersected during this program.</p> <p>-Drill holes will be decommissioned as per page 13 drill hole construction and decommissioning and accordance with M21 specifications.</p> <p>-backfill and rehabilitate bore holes in accordance with the "Mineral Exploration Drillholes — General specifications for construction and backfilling" for bores completed within an unconfined aquifer. Drillholes which penetrate a single unconfined aquifer — backfill with drill cuttings, clean fill containing clay, or cement.</p>	1	A	Low	<p>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.</p> <p>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.</p> <p>Provide the information requested within the 'Groundwater' section of the annual exploration compliance report.</p>	
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.)	<p>-If groundwater is intersected the drillhole will be terminated. No discharge of ground water of any significant amount will occur during this program.</p> <p>- Petratherm will not be exploring in or proximal to any creeks and or water courses.</p>	1	A	Low	<p>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.</p> <p>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.</p> <p>Representative photos and water affecting activity permits (where applicable) to be included within the annual exploration compliance report.</p>	
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.)	<If the potential impact is applicable, list the control and rehabilitation strategies>				<p>No public nuisance impacts resulting from the extraction of water for exploration purposes, unless prior approval under the relevant legislation is obtained.</p> <p>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.</p> <p>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.</p>	
Soil/vegetation/fauna	Degradation of rehabilitated access tracks caused by third party access (includes previously closed and rehabilitated access tracks).	Yes (Applicable to exploration programs)	- Degradation of temporary/rehabilitated access tracks are unlikely to occur, given that drilling is occurring on privately owned pastoral leases (i.e. minimal through traffic).	1	A	Low	<p>Rehabilitated access tracks remain permanently closed, unless prior approval under</p> <p>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</p>	

Exploration PEPR application – 12-month period

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
		that create new access tracks.)	- Once rehabilitation is complete, entry points to access to tracks will be disguised with extreme care.				<p>the relevant legislation is obtained.</p> <p>program notification (for PEPRs approved for an ongoing period), unless otherwise authorised.</p> <p>Representative photos are to be included within the annual exploration compliance report.</p> <p>Provide the information requested within the 'Rehabilitation' section of the annual exploration compliance report.</p>	
Community/landowners	Damage to infrastructure and loss of income through fire.	Yes (Applicable to all programs.)	<p>- Hot works permits (internal management tool) will be required for activities such as welding, grinding, oxy cutting – i.e., firefighting provisions need to be in place.</p> <p>- All vehicles will be fitted with fire extinguishers.</p> <p>- Fire suppression units will be fitted to large plant such as the rig.</p> <p>- The area is not prone to fires due to minimal ground cover and the presence of native grasses in some areas only.</p>	1	A	Low	<p>No loss of infrastructure or income through fire as a result of exploration activities.</p> <p>Provide a statement within the 'Compliance with approved programs' section of the annual exploration compliance report confirming that no uncontrolled fires* occurred.</p> <p>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.</p>	
General public	Injury or death to members of the public as a result of exploration activities.	Yes (Applicable to all programs.)	<p>Given the drilling program is occurring on a private pastoral lease, the likelihood of members of the public being present is reduced.</p> <p>- Only inducted personnel who have direct need to be in the work area of the rig will be permitted near operations.</p> <p>- Any visitors to the drilling operations will undergo a visitor's induction and will be required to be accompanied by a fully inducted staff member.</p> <p>- Warning signs, highlighting the hazards of drilling operations will be erected around the drill site.</p> <p>- Note that whilst the likelihood of such an incident occurring is rated as rare (1), the consequence has been rated as Major (D), producing a risk ranking of 'high'. This is deemed acceptable, given the likelihood, and the safety measures and level of supervision that will be present at the rig.</p>	1	D	High	<p>No accidents involving the public that could have been reasonably prevented by the licensee.</p> <p>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.</p> <p>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.</p>	
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.)					<p>No increase in background radiation levels, and employee/contractor exposure levels during the exploration program are within safe limits.</p> <p>Maintain a database and provide a statement within the 'Compliance with approved programs' section of the annual exploration compliance report demonstrating that:</p> <ul style="list-style-type: none"> • 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)

Petratherm has an integrated SHEQ management system which provides the standard operating procedures and systems for all areas of Petratherm activities including safety, health, environment and quality control. Petratherm Exploration Manager Peter Reid is the identified responsible officer for Petratherm to ensure the SHEQ management system including PEPRs, Exploration Permits and deeds are adhered to.

The internal systems and controls that Petratherm have in place under the supervision and direction of Peter Reid have ensured that in the past environmental outcomes have been achieved.

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.

Department of health approval for ablution facility



Contact: Callum Brady
Telephone: (08) 8226 7100
Email: healthwastewatermanagement@sa.gov.au

Health Protection & Regulation

Citi Centre Building
11 Hindmarsh Square
Adelaide SA 5000

PO Box 6
Rundle Mall SA 5000
DX 243

Tel 08 8226 7100

Fax 08 8226 7102

ABN 97 643 356 590

www.health.sa.gov.au

Our reference: WWP-20162

Attn: Shunya Kitai
FujiClean Australia
PO BOX 1230
Oxenford QLD 4210

Dear Mr Kitai,

RE: PRODUCT APPROVAL FOR THE FUJICLEAN ACE1200 SECONDARY TREATMENT SYSTEM

We refer to your application seeking product approval for the FujiClean ACE1200 Secondary Treatment System.

Approval of the product is granted on the basis that the FujiClean ACE1200 has been certified by Global Certification Pty Ltd to conform with:

- AS/NZS1546.1:2008 On-site domestic wastewater treatment units – Septic tanks, certification no. 249/4; and
- AS 1546.3:2017 On-site domestic wastewater treatment units – Secondary treatment System - certification no. 5627-3568-01.

Pursuant to the South Australian Public Health (Wastewater) Regulations 2013, this product approval is granted subject to the following conditions:

1. The approved secondary treatment system incorporates:
 - 1.1. A single horizontal axis type cylindrical fibreglass reinforced plastic tank with a total design capacity of 3,265L manufactured by FujiClean.
 - 1.2. Maximum treatment capacity of 1200L/day hydraulic load and 560g BOD₅/day organic load.
2. The product shall be manufactured and constructed in accordance with:
 - 2.1. The plans, drawings and specifications, as referenced in this approval.
 - 2.2. AS/NZS 1546.1:2008 On-site domestic wastewater treatment units – Septic tanks.
 - 2.3. AS 1546.3:2017 On-site domestic wastewater treatment units – Secondary treatment systems.
 - 2.4. All other relevant standards and codes.
 - 2.5. Conditions of this approval.

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Product Approval for the FujiClean ACE1200 Domestic Wastewater Treatment System

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Exploration PEPR application – 12-month period

3. The seller of the approved product shall provide the purchaser with an electronic or hard copy of the following:
 - 3.1. FujiClean ACE Installation Manual,
 - 3.2. FujiClean ACE Operation & Maintenance Manual,
 - 3.3. FujiClean ACE Owner’s Manual, and
 - 3.4. any other instructions relating to the installation, operation or maintenance of the product.
4. Modification of the design, materials or manufacturing process of the approved products or any of their associated components requires a variation to this approval by the DHW.
5. This product approval will expire on **15 March 2029**, at which time the product will no longer be approved and will be removed from the SA Health approved product database.
6. This product approval does not constitute approval for the installation of the product. For individual installations, an application for wastewater works approval must be sought from the relevant authority as defined in the Wastewater Regulations.

Approved by:

Date: 20 June 2024



Manager, Wastewater Management

Delegate of the Minister for Health and Wellbeing

- References:**
- Global Certification Audit Report AS 1546.3:2017, report no. 2636 by Global Certification Pty Ltd dated February 2020
 - Product Certificate of Registration no. 5627-3568-01 by Global Certification Pty Ltd, for Product Performance Testing AS 1546.3:2017 Advanced Secondary 8EP Level, date of issue 7 February 2024
 - Product Certificate of Registration no. 249/4 by Global Certification Pty Ltd, for Product Performance Testing AS/NZS 1546.1:2008 On-site Domestic Wastewater Treatment Units – Septic Tanks, date of issue 14 September 2021
 - “FujiClean ACE Installation Manual” version 15 by FujiClean updated 5 June 2024
 - “FujiClean ACE Operation & Maintenance Manual” version 14 by FujiClean updated 5 June 2024
 - “FujiClean ACE Owner’s Manual” version 12 by FujiClean updated 5 June 2024
 - “FujiClean ACE 1200 Product Specifications” by FujiClean
 - “FujiClean ACE Overall view” schematic drawing by FujiClean dated November 2018

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Product Approval for the FujiClean ACE1200 Domestic Wastewater Treatment System

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Exploration PEPR application – 12-month period

- "Short Instruction Manual FujiMAC Air Pump"
- "FujiClean ACE 1200 Wiring Instructions"
- "Fuji Clean Australia ACE Domestic System Commissioning Form"
- "Fuji Clean Australia ACE Domestic System CE1500EX/ACE1200 Servicing Report"
- "FujiClean Wastewater Treatment Systems ACE 1200 Service Guide"

Notes:

Pursuant to the SA Public Health (Wastewater) Regulations 2013

1. *The Department for Health and Wellbeing (DHW) may, by written notice, revoke the approval if satisfied that:*
 - 1.1. *The approval was obtained improperly.*
 - 1.2. *A condition of the approval has been contravened.*
2. *The DHW may conduct an inspection of an approved product to establish compliance with the submitted plans and the conditions of this approval.*
3. *The DHW may vary or revoke any or all of the approval conditions, or impose a further condition where:*
 - 3.1. *Variation, revocation or imposition is necessary in order to prevent or mitigate significant harm to public or environmental health or the risk of such harm.*
 - 3.2. *Reference to a new version of a manual is required.*

New Camp Information

Lynx Mining and Exploration Services Exploration Camps



40ft Accommodation Container

FEATURES	FLOOR PLAN
<ul style="list-style-type: none"> • 40' Late model High Cube container • Painted colour of choice • Fully lined in a 50mm insulated panel • Vinyl floor throughout • 3 x insulated partition walls • 4 x PA doors • 4 x windows with shutters <p>Electrical fit out includes</p> <ul style="list-style-type: none"> • 4 x Double Fluro's • 4 x light switches • 4 x double 10 amp GPO's • 4 x 10 amp smoke detectors • 1 x Junction box & 1 x RCD circuit breaker 	

20ft Kitchen Container

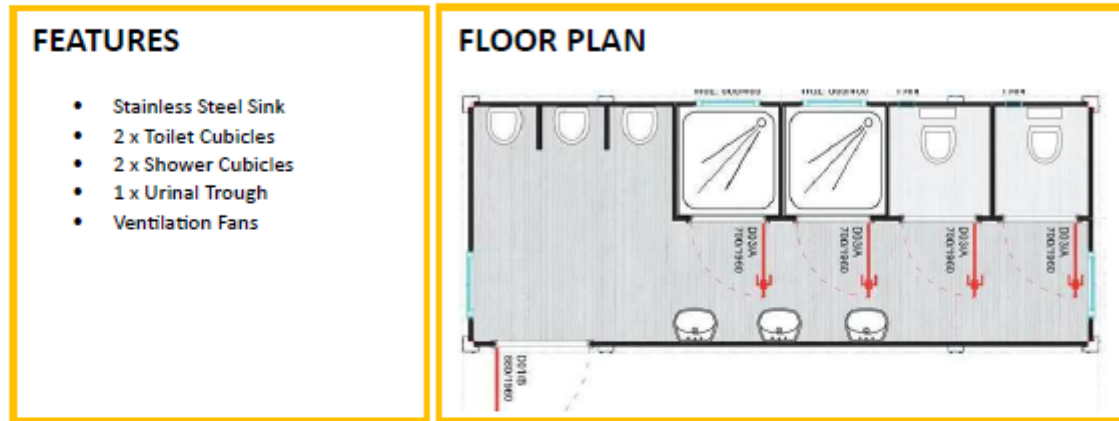
FEATURES	FLOOR PLAN
<ul style="list-style-type: none"> • Kitchen Bench with cupboards • Cuttlery draws • 1 x 415L fridge • 1 x Chest Freezer • Airconditioning • stainless steel sink • microwave • Hot water service • Gas oven and cook top. • Table and Chairs. 	

Exploration PEPR application – 12-month period



Lynx Mining and Exploration Services Exploration Camps

20ft Ablution Block



Extra accessories to complete camp setup.

Generator

A diesel powered generator can be provided with 3 phase cables to mount on cable rails above walkways to connect all containers to the generator.

Wastewater treatment systems

All camps which have ablution blocks or kitchens will be supplied with mobile waste water treatment systems that will treat water down to grey water that is disposed of near by through a sprinkler or grey water soakage.

Water Tanks

Depending on the customers preference a 5000L tank can be supplied on site for the client to have filled with clean water. Or a trailer and IBC or 2000L water tank can be supplied so customer can retrieve water when required.

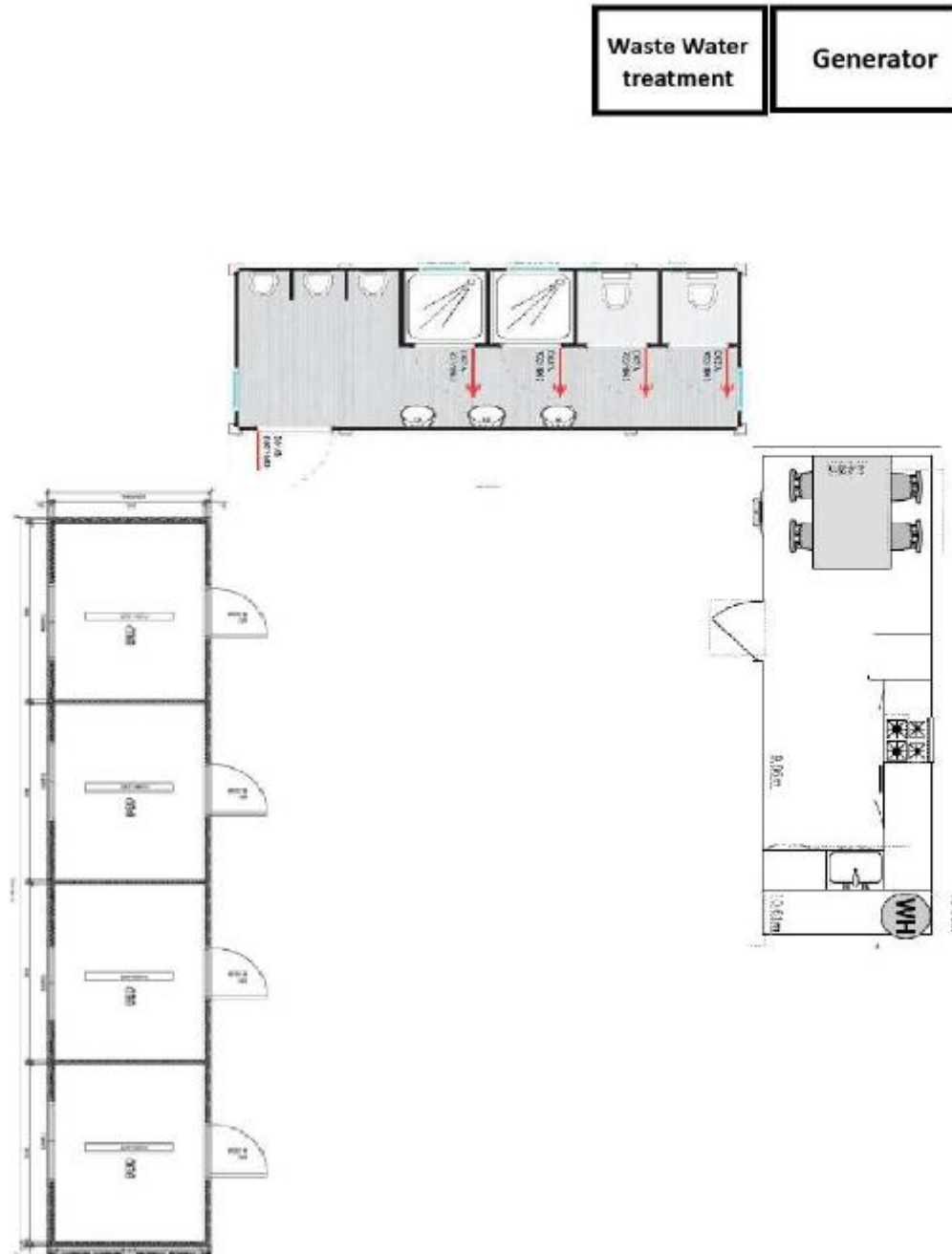
Walk ways

If requested further walkways or PVC bog mats can be supplied to run between camps to allow a mess free track between accommodation, ablution blocks and Kitchen. Please Enquire about the different options for this.



Lynx Mining and Exploration Services Exploration Camps

Typical Small Camp Layout



Exploration PEPR application – 12-month period

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
Rosewood Prospect	14/08/2014	1	415388	6664119	53	Typical vegetation over rosewood prospect area/



Site identification	Date taken	Photo number & PEPR section reference	Easting (GDA94)	Northing (GDA94)	Zone	Details and Comments
Camp	30/03/2025	2	420875	6673178	53	Current Camp Layout



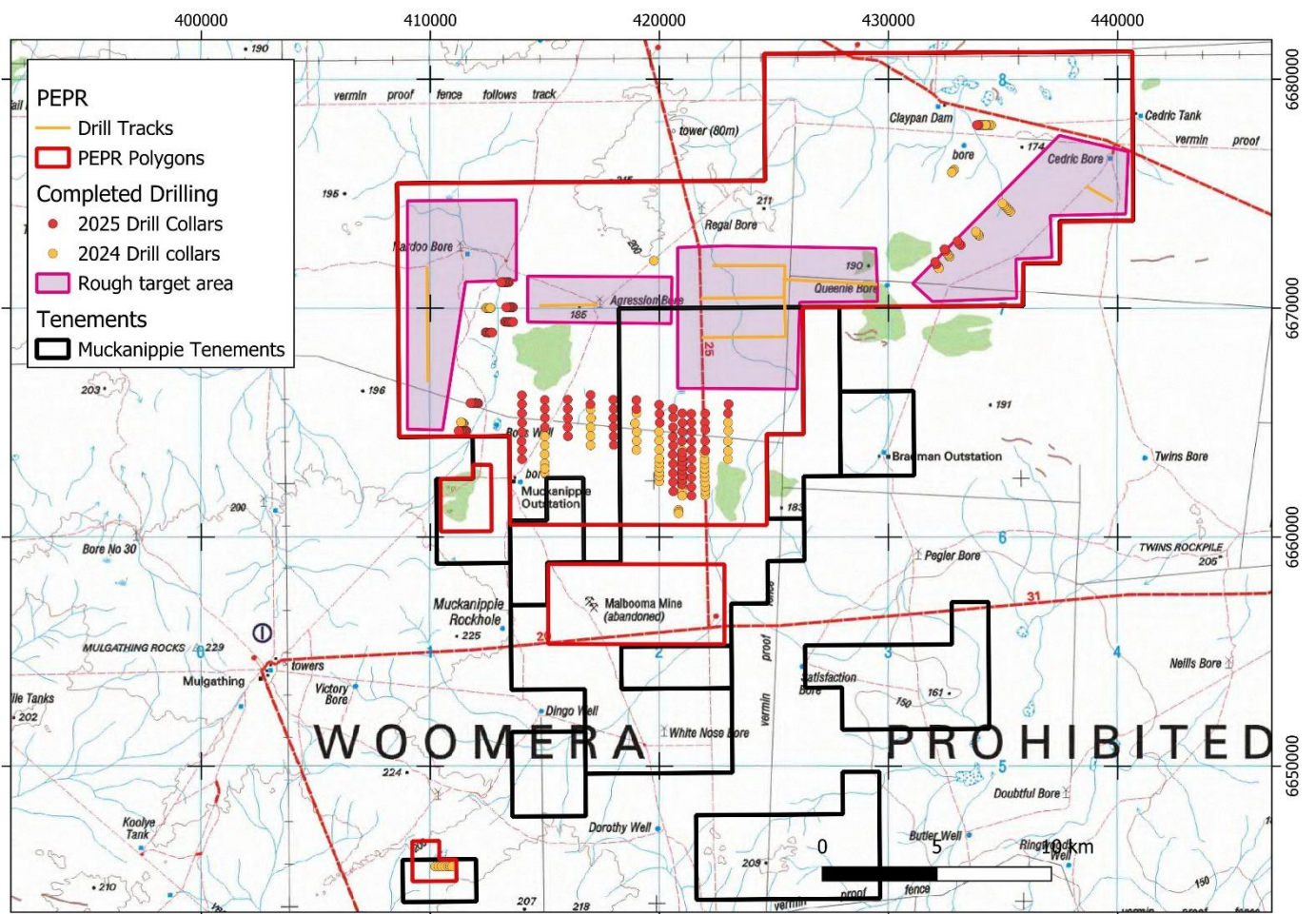
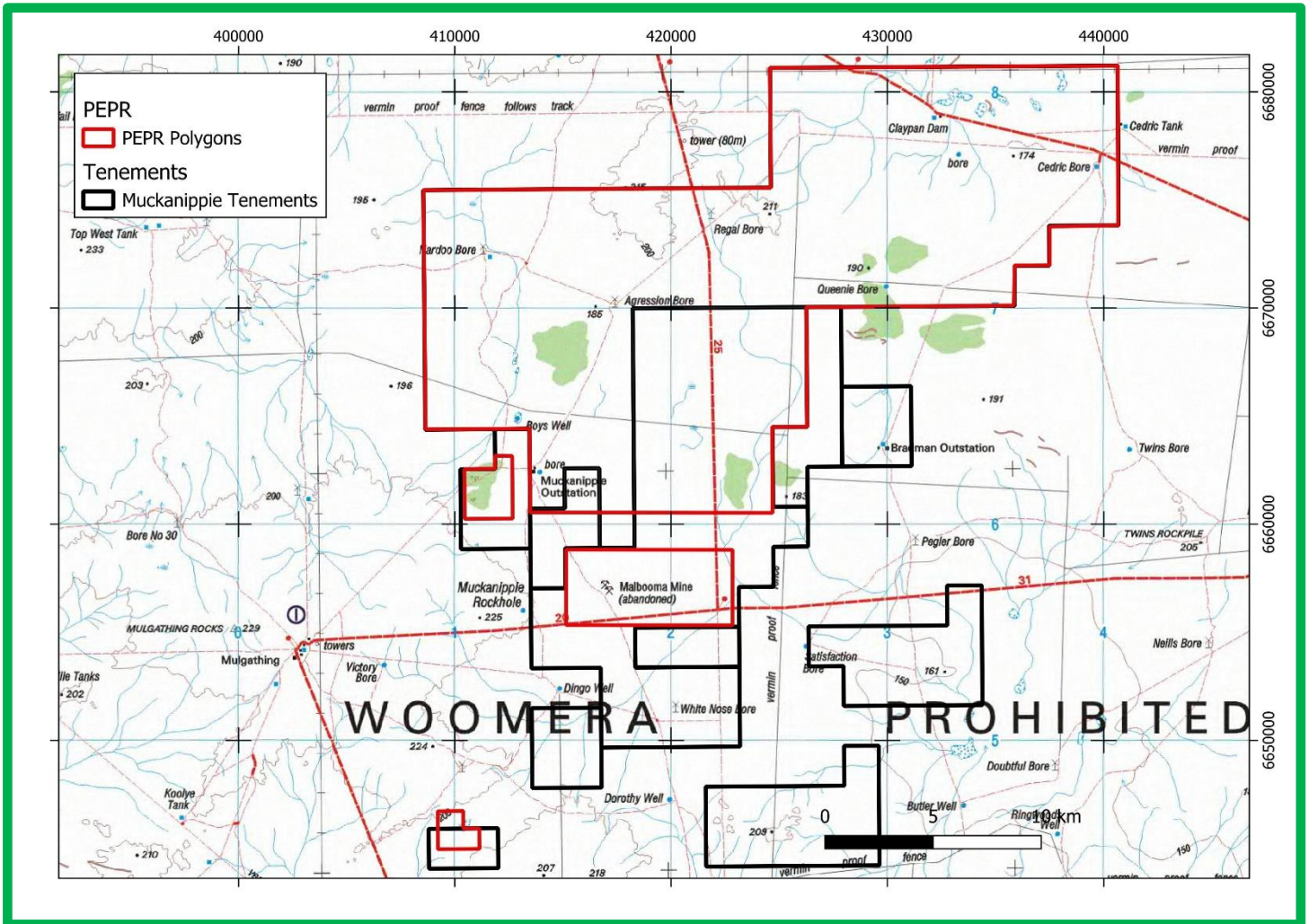
SECTION J – MAPS

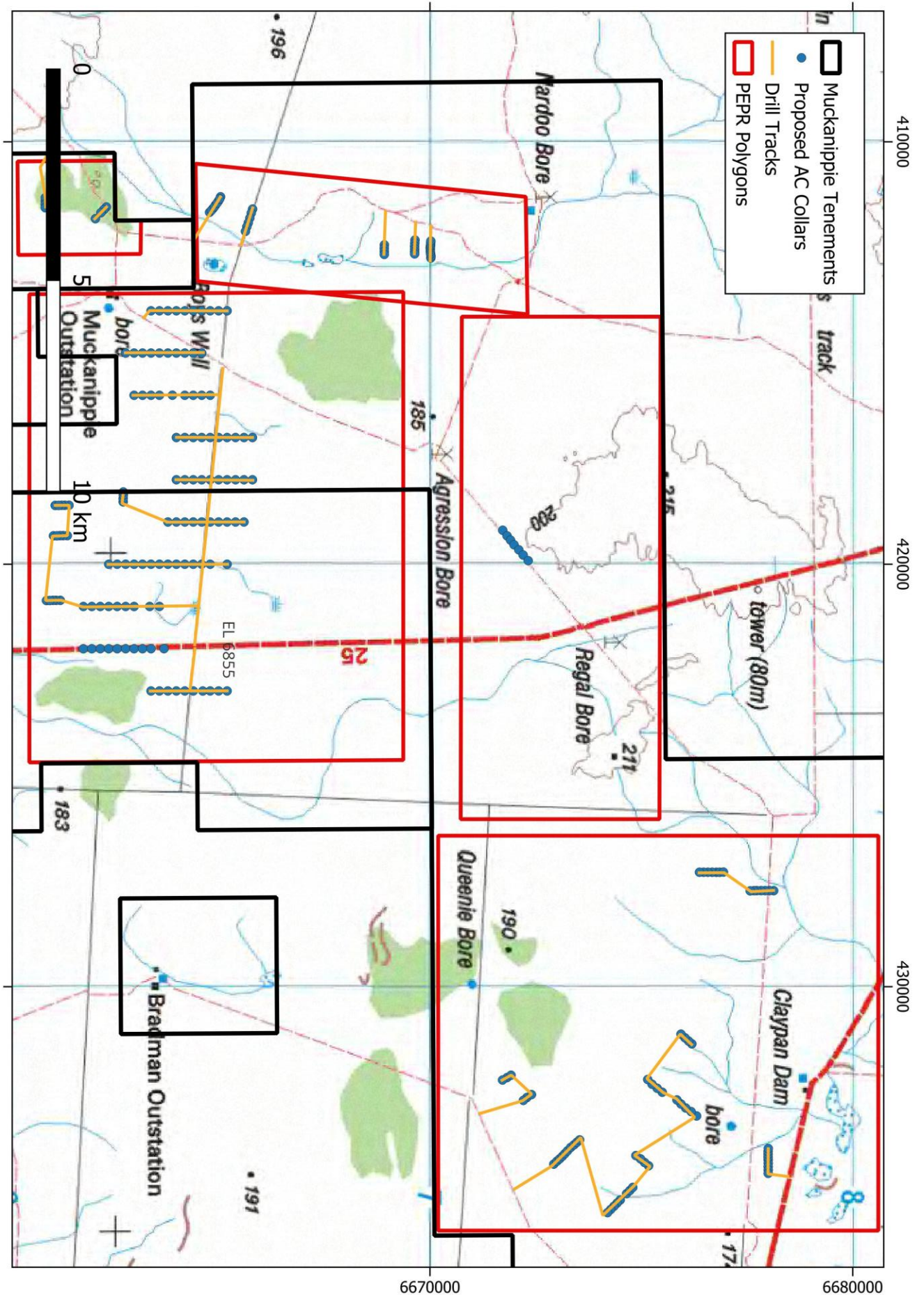
Provide a map(s) showing the following information that is located adjacent to or within the proposed area of operations, where applicable:

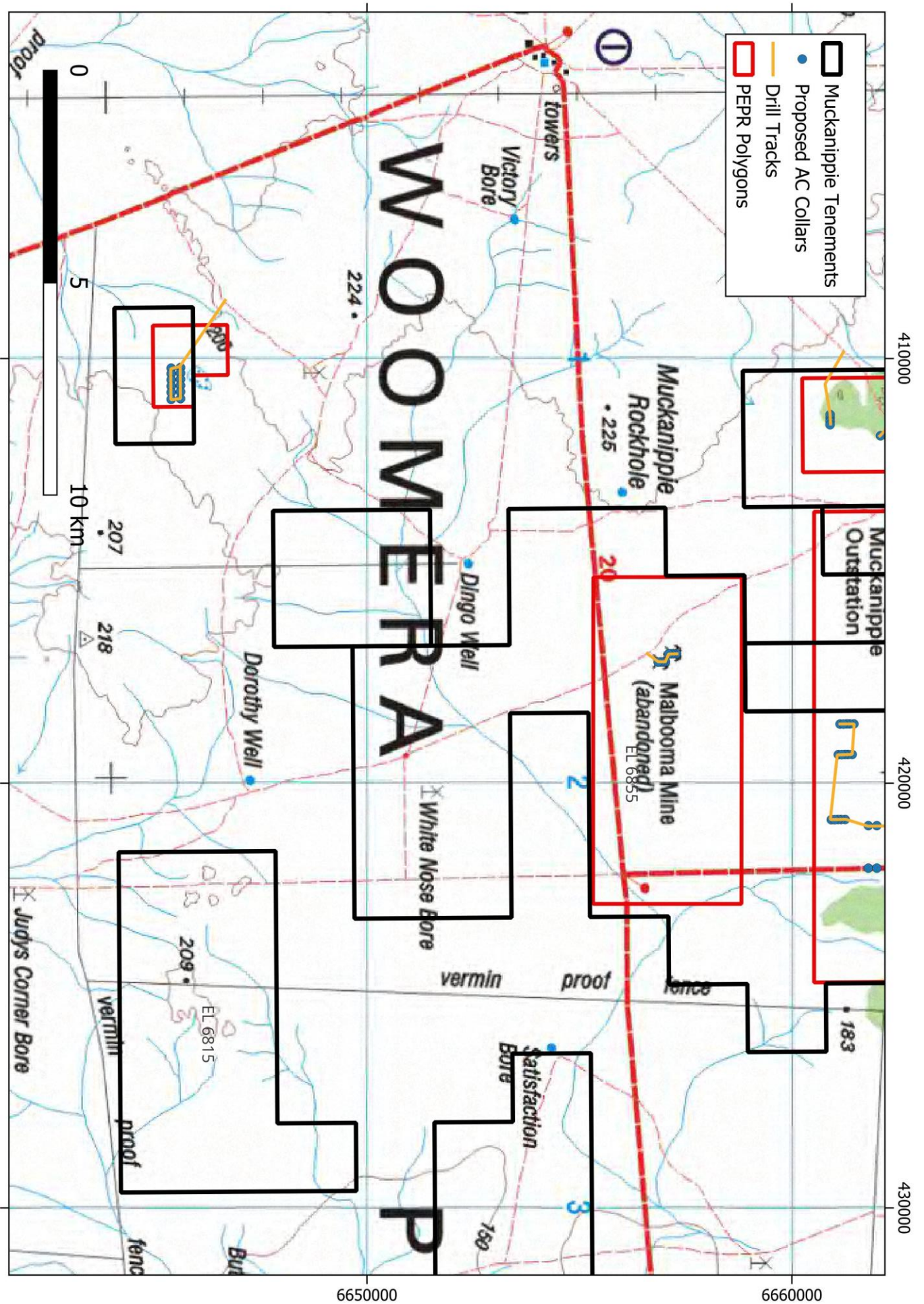
- tenement boundaries,
- cadastral information,
- existing surface contours,
- existing vegetation,
- location of the proposed exploration operations (includes drillholes, existing and new access tracks, drill traverses, campsites, laydown areas and other applicable information) and/or the target exploration 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.

Updated location of the proposed exploration operations, to extend to the edge of Petrathern Tenements, to allow freedom to explore for mineral sands.







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.