Government of South Australia
Department for Energy and Mining

28 October 2024

Mr Greg Swain
Manager Exploration
FMG Resources Pty Ltd
Hyatt Centre
Level 2, 87 Adelaide Terrace
EAST PERTH WA 6004

greg.swain@fortescue.com.au

Dear Mr Swain,

Approval Notification - Exploration Program for Environment Protection and Rehabilitation (EPEPR2023-036) Review: EL6060, EL6110

The program review for EL 6110 and EL 6060 final version submitted on 15 October 2024, to complete rehabilitation works at your Peeweena Dam and Reedy Lagoon projects, has been approved in accordance with Section 70C of the *Mining Act, 1971* (the Act).

You are reminded that:

1. You must at all times implement and comply with the approved EPEPR.
2. The approved EPEPR will be made publicly available on the Mining Register.
3. Exploration operations on "native title land" (as defined in the *Native Title (South Australia) Act, 1994)* must be conducted in accordance with Part 9B of the Act.
4. In accordance with Section 70C of the Act, the licensee must review the EPEPR on request of the Minister's Delegate within a time specified in the request and submit the revised EPEPR for approval.
5. As the operator for the approved EPEPR you must take all reasonable and practical measures to avoid undue damage to the environment and meet all the approved outcomes (when measured against the approved criteria) listed within the EPEPR.
6. In accordance with regulation 78 of the *Mining Regulations 2020* and Terms of Reference 012 (TOR 012), the licensee/lessee 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 an additional twelve months and will expire on 1 November 2025

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 Cobus Martins on 0437252134 or Shelley Rasmussen 0409 797 670 or email DEM.exploration@sa.gov.au.

Yours sincerely

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

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

APPLICATION Mining Act 1971 and Mining Regulations 2020

EXPLORATION PROGRAM FOR ENVIRONMENT PROTECTION AND REHABILITATION (PEPR)

Government of South Australia
Department for Energy and Mining

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

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

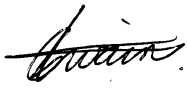
Text in red font was updated for EPEPR Review request submitted 24/06/2024

SECTION A – GENERAL DETAILS

Operational approval period	**12-month approval period, with an additional 3 months to complete all rehabilitation.**			
Tenement details	EL6110, EL6060 **AMENDED**			
Tenement holder(s) (for each tenement)	FMG Resources Pty Ltd (Fortescue)			
Operating company	FMG Resources Pty Ltd (Fortescue) Level 2, 87 Adelaide Terrace East Perth, WA, 6004			
Agency agreement (if applicable)	N/A			
PEPR prepared by	Melissa Roberts		melissa.stinear@fortescue.com	
Project supervisor/contact person(s)	Greg Swain Peter Hill		greg.swain@fortescue.com peter.hill@fortescue.com	
Project/prospect name	Peeweena Dam Prospect (EL6110) and the Reedy Lagoon Prospect (EL6060), Northwest Olympic Project			
Location details	The Peeweena Dam and the Reedy Lagoon Prospects are located approximately 100 km northwest of Roxby Downs. Access is via the Stuart Highway and existing station tracks. Native Title at Peeweena and Reedy prospects are held by Antakirinja Matu-Yankunytjatjara Corporation and Kokatha Aboriginal Corporation, respectively.			
Project description, commodity type and mineralisation model	The Peeweena Dam Prospect and Reedy Lagoon Prospect are located within the Olympic Iron-Oxide Copper-Gold (IOCG) Province on the eastern margin of the Gawler Craton, between the Olympic Dam and Prominent Hill deposits. The primary commodities sought by Fortescue are copper and gold as part of the IOCG-style mineral system akin to Olympic Dam, Prominent Hill, Carrapateena and Oak Dam West.			
Proposed project schedule	Start date	1/11/2024 **Requesting 12 month extension for EPEPR2023-036**	End date	31/10/2025

DECLARATION

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

Name	Greg Swain	Signature (digital allowed)	
Position	Manager Exploration – South Australia	Date	15/10/2024

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 (e.g. 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.

In summary, preliminary exploration activities and work completed to prepare this proposal includes:

- Compilation and revision of the historic open file data including geological and geochemical information as well as relogging existing drill holes
- Acquisition of 250x250m infill gravity data with Daishsat Geodetic Gravity Surveyors (the contracted gravity survey provider)
- Petrophysical measurements of historic drillholes
- Assessment and modelling of proprietary and historic potential field datasets (gravity and magnetics)
- Desktop GIS review of environment and groundwater, easements, dams, 'improved land', exempt land, locations of water pipelines, above ground and buried telecommunications, railways, power lines and other infrastructure
- Proposal of a main vertical hole to 1500m depth at Peeweena Dam prospect (EL6110), collared at 601395m E, 6669443m N GDA94 Zone 53, with option for a wedge from the parent hole. Up to two RC holes drilled within 20m of the planned RC/Diamond core hole will be drilled on the same pad for a temporary source of water for drilling activities.
- Proposal of a main vertical hole to 1500m depth, at Reedy Lagoon prospect (EL6060) collared at 603075m E, 6644452m N GDA94 Zone 53, with option for a wedge from the parent hole. Up to two RC holes drilled within 20m of the planned RC/Diamond core hole will be drilled on the same pad for a temporary source of water for drilling activities.

Fortescue has undertaken stakeholder engagement activities including:

- Engagement with the Antakirinja Matu-Yankunytjatjara Aboriginal Corporation (AMYAC) and Kokatha Aboriginal Corporation (KAC) under the terms of the relevant Native Title Mining Agreement.
- Engagement with the drill rig contractor (DDH1 Drilling) regarding rig's capacity, mobility over variable surfaces and sustainability for the type of program
- Engagement with Millers Creek and Parakylia pastoralist and other stakeholder engagement, including serving the Form 21 A Notice of entry and Form 21B Notice of advanced exploration operations

A search was completed on the EPBC website to search for the threatened species, ecological communities, and migratory species to be considered in this PEPR and during on ground activities. Fortescue has determined environment and groundwater, easements, dams, 'improved land', exempt land, locations of water pipelines, above ground and buried telecommunications, railways, power lines and other infrastructure.

Fortescue has undertaken two reconnaissance trips to track-log all public roads and has been collecting GPS waypoints of all gates and access points into stations and paddocks to aid operational logistics during the preparation for the drilling activities. Aboriginal Heritage clearance is pending.

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
EL6110	Danny & Janet Oldfield (managers)	Millers Creek Station CL/6179/660, Parcel ID: D81503 A501	Stock grazing	23/8/2023	N/A	N/A		*Landowner was contacted by email with follow up phone calls, serving Notice of Entry and face to face meeting at their property during site reconnaissance trip in.*
EL6060	Defence leased - c/o Woomera Range – Defence	Parakylia Station CL/6271/727, Parcel ID: F257850 A12	Stock grazing	23/8/2023	N/A	N/A		*Landowner was contacted by email with follow up phone calls, serving Notice of Entry and face to face meeting at their property during site reconnaissance trip in.*
EL6110 & EL6060	Colin & Jill Greenfield Owners of Millers Creek Station and David Michael, manager of Parakylia Station	Millers Creek Station CL/6189/897, Parcel ID: D40325 A2042 Parakylia Station CL/6271/727, Parcel ID: F257850 A12	Stock grazing Stock grazing	23/08/2023 23/08/2023	NA NA	NA NA		*During initial commencement of the drilling program in April 2024, the landowner requested that alternative station tracks be used for the duration of the drilling program (for both heavy vehicles and utilities) that are used less often by onsite station personnel.* *When moving from the drillsite on EL6060 to the drillsite on EL6110, landowner has requested that the existing north-south track between both tenements is not used, and that all vehicles must enter EL6110 via the main highway and Mt Eba Station.* *Fortescue personnel and all drilling and other contractor personnel have been advised of the requests by the landholders and are using the alternate station tracks as requested. The drilling program was paused in mid April 2024 due to some mechanical issues that required offsite attention. The drilling program will be resuming in late June 2024 and the requested alternate station tracks will continue to be used.*

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

All stakeholders have been contacted by Fortescue's Manager - Pastoral Access

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 Peeweena Dam and Reedy Lagoon Prospects are located ~95 km northwest of Roxby Downs township (Fig. 1) in the Millers Creek and Parakylia pastoral lease areas, respectively. It is expected that the drilling campaign will have no impact to the Roxby Downs community and BHP's mining operation.

The access to the Reedy Lagoon area is via Stuart Highway, followed by the ~ 70 km northwestern track from the Purple Downs station through the Roxby Downs and Parakylia stations, and subsequent east-west track for the following 30 km. The east-west track runs on the northern side of the pastoral station fence; the fence follows this track further to the east as a vermin proof fence. Fortescue is planning to build a gate (with pastoralists' approval) through the existing pastoral fence along the east-west track to allow the vehicle access to the drill pad. Alternatively, Reedy Lagoon can be access via the Borefield Road followed by the east-west track along the vermin proof fence and Parakylia station fence.

The Peeweena Dam prospect is ~25 km north from the Reedy Lagoon prospect, located along a north-south track that leads to the Millers Creek homestead. Some of the tracks follow pastoral station fences, but overall, these do not block drill site access. At Peeweena Dam, a body of water, is located 1km to the northeast from the proposed drill pad location at the Peeweena Dam target area.

Regarding the existing infrastructure, a portion of the station tracks between Parakylia and Millers Creek follow the Prominent Hill Powerline (PHP) and Miscellaneous Purposes Licences (MPL). The exploration vehicles will be able to use the track without affecting the powerline. Reedy Lagoon prospect is 3km away from the PHP and related MPL, 2.5km northeast of the ruins at 23 Mile Hut.

There are no features that constitute Exempt Land under the Mining Act 1971.

Fortescue has proposed the preferred collar locations at 601395mE, 6669443mN for the Peeweena Dam vertical drillhole PWD0001 and at 603075mE, 6644452mN for the Reedy Lagoon vertical drillhole RLD0001, with 50x50m drill pads and 50x100m camp and laydown areas within a walking distance to the drill sites. Alternative collar locations as well as camp and laydown areas have been proposed as an option, with the final decision being pending upon the Aboriginal Heritage clearances.

At the request of Colin & Jill Greenfield (owners of Millers Creek Station) in April 2024, alternative station tracks are to be used for heavy vehicles access to EL6060 and EL6110 drillsites, and an alternative route on existing station tracks for light vehicles to & from the drillsites to Roxby Downs. (Refer Figures 1a & 1b)

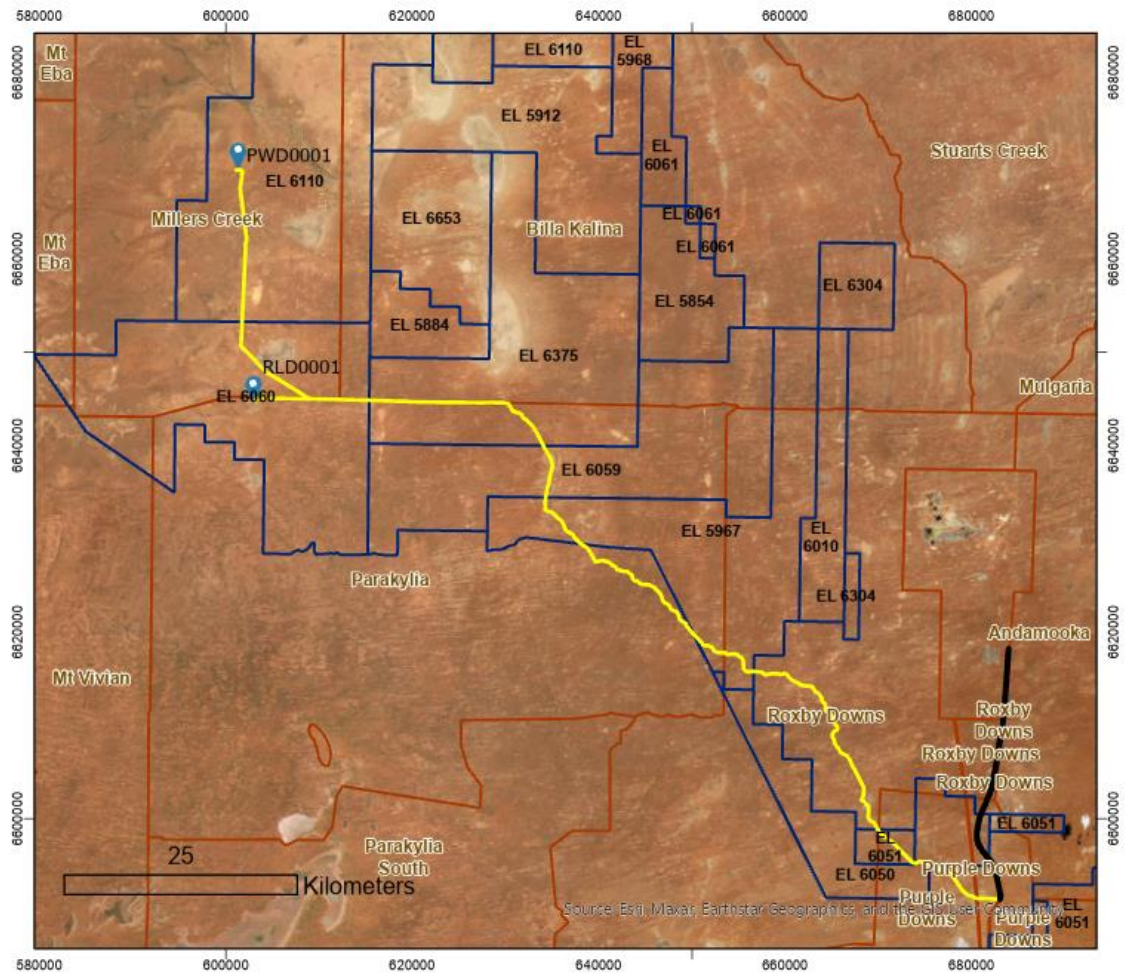


Figure 1: Fortescue's tenements EL6060 and EL6110 with the proposed collar location RLD0001, PWD0001 relative to the existing track (yellow), Stuart Highway (black) and Pastoral Lease boundaries (brown)

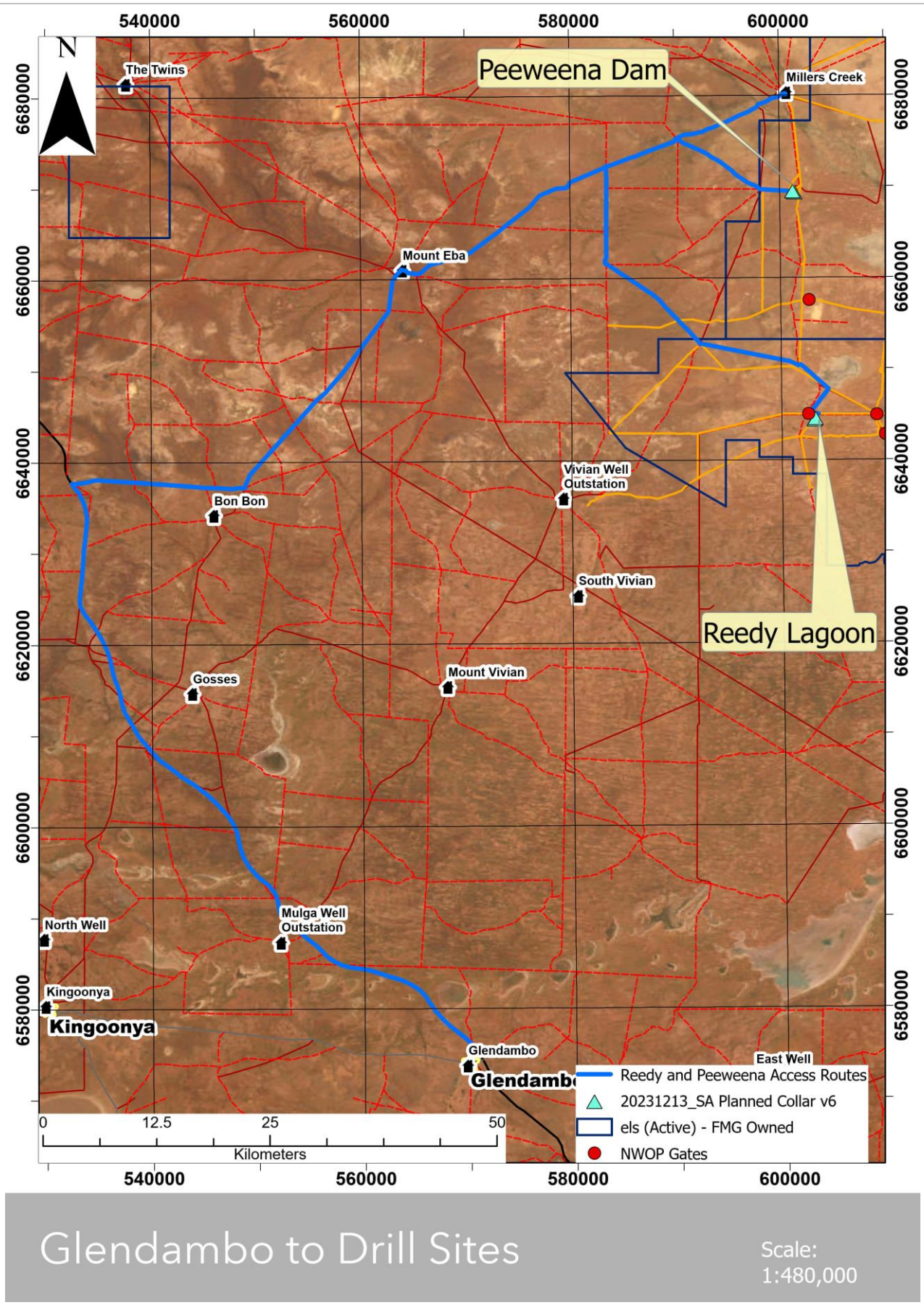


Figure 1a: Alternative heavy and light vehicle access route to drillsites on EL6060 (Reedy Lagoon) & 6110 (Peeweena Dam) at the request of Millers Creek Station.

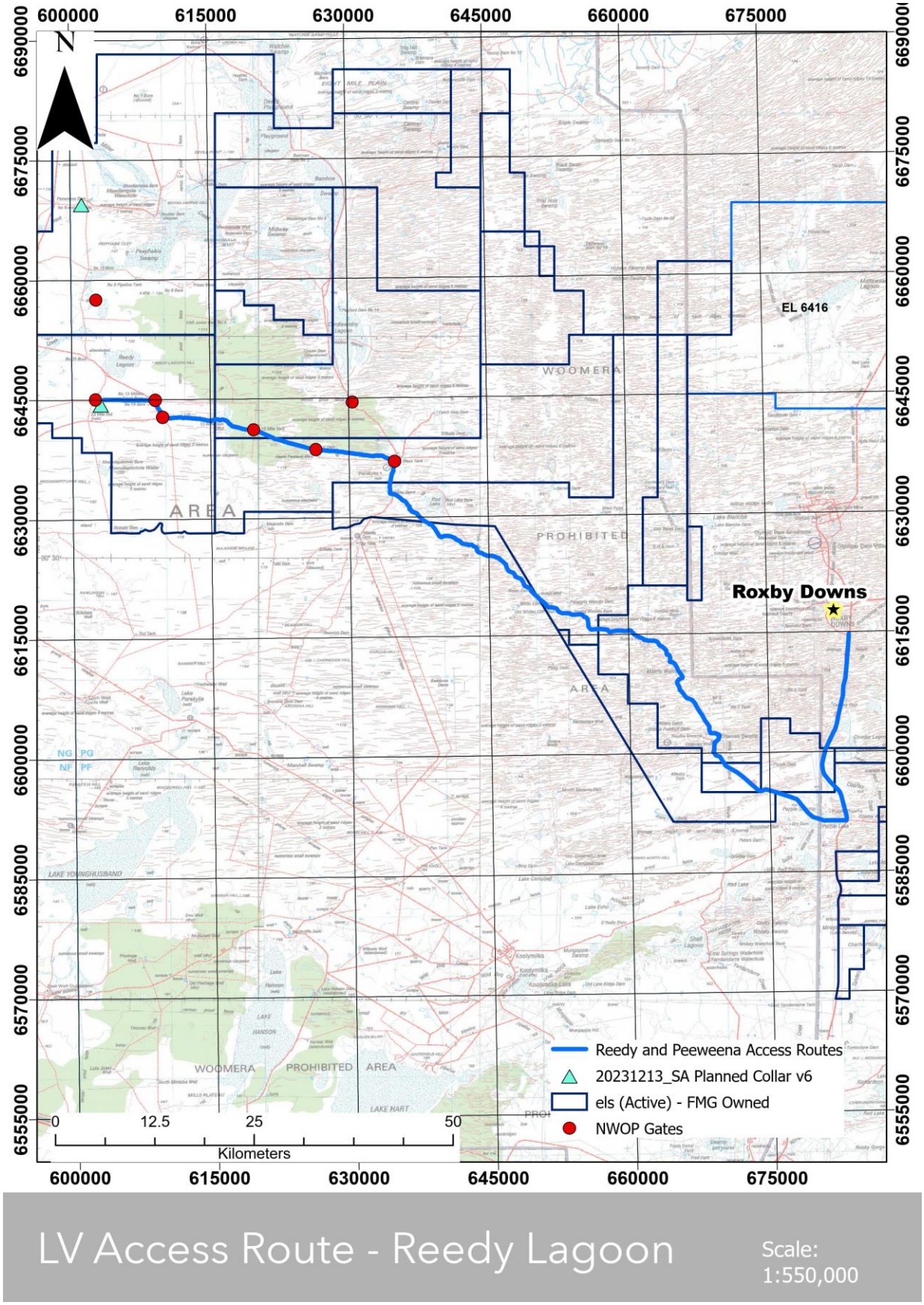


Figure 1b: Light Vehicle access route to Reedy Lagoon drillsite (EL6060) as requested by station manager of Millers Creek Station.

Land use and tenure

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

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

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

* Indicates more information required in field immediately below.

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

N/A

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

N/A

Provide any additional relevant information.

N/A

Woomera Prohibited Area (WPA)

Will activities be conducted within the WPA	Yes ☒	No ☐	Do you have a resource exploration permit in place?	Yes ☒	No ☐
In which zone will activities be conducted?			Defence Periodic use zone 1		
Does the Exploration Permit allow the operator to conduct exploration operations in the WPA?				Yes ☒	No ☐
What is the expiry date of the resource exploration permit? 14/10/2028					

Identify closure periods that may impact on the exploration program. 13/11/2023-17/12/2023; 6/05/24-9/06/24, 5/08/2024–15/09/2024 and possibly 21/11/24-18/12/24 if rehabilitation has not been completed during the October/November 2024 access window.

Both Peeweena Dam and Reedy Lagoon target areas are located within the Defence Periodic use zone 1 (Fig. 2). The Department of Defence of the Australian Government has issued a resource exploration permit REX003-14-6 providing permission for exploration activities outside of the exclusion periods. The exploration activities may be carried out by an approved person or an escorted person under this permit. All Fortescue staff have been granted an approved person status to carry out exploration activities in the area. All contractor personnel will have the required access approvals in place prior to entry.

Greg Swain has maintained constant communication with representatives at WPACO regarding the commencement (and pausing) of drilling activities and proposed access routes in an out of the drillsites. As of 24/6/24, discussion is currently underway regarding the potential use of the main Bon Bon, Mount Eba and Millers Creek public access roads during the upcoming exclusion period 05/08/24 – 15/09/24.

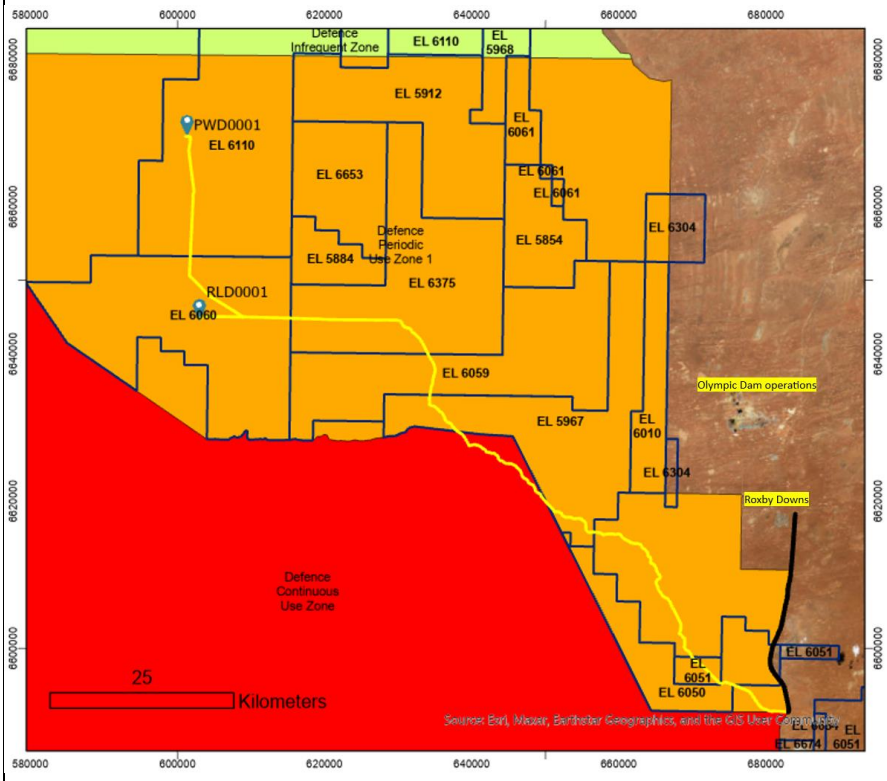


Figure 2. Woomera Prohibited Area defence use zones relative to the FMG tenure and the Peeweena Dam target area on the EL6110.

Other land owned or controlled by the Commonwealth Department of Defence

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

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

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

Native title

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

Native title			
Is the proposed area of exploration located on native title land?	Yes ☒ No ☐ (If no, no further information in this section required.)		
Are there registered native title party/parties in the area of proposed exploration?	Yes ☒ No ☐	Antakirinja Matu-Yankunytjatjara and Kokatha Aboriginal Corporations	If no, an Environment, Resources and Development (ERD) Court determination is required.
Have you negotiated a native title mining agreement?	Yes ☒ No ☐	Is the agreement registered?* Yes ☒ No ☐	EL6110 (Antakirinja Matu-Yankunytjatjara Aboriginal Corporation (RNTBC) NTMA), registered 04/09/2013, EL6110 added via Letter of Exchange July 2019 ; EL6060 (previously EL5026) (Kokatha Aboriginal Corporation RNTBC NTMA), registered 13/01/2016.
Have you accepted an Indigenous land use agreement (ILUA)?	Yes ☐ No ☒	Is the ILUA registered?* Yes ☐ No ☒	N/A
Have you obtained ERD Court determination?†	Yes ☐ No ☒	Is the determination registered?* Yes ☐ No ☒	N/A

* 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.

FMG Resources Pty Ltd has a Native Title Mining and land access agreement with the Antakirinja Matu-Yankunytjatjara Aboriginal Corporation RNTBC and a Native Title Mining Agreement for Exploration with the Kokatha Aboriginal Corporation RNTBC.

At the time of submission of this PEPR Fortescue had initiated requests for an Aboriginal Cultural Heritage Survey (ACHS) with the Kokatha Aboriginal Corporation and Antakirinja and plans for conducting a survey under the terms of the NTMAs are anticipated to result in an ACHS at some time in the next three months (by December 2023). It's possible that this timeframe can extend to April 2024 or later.

No ground disturbing work relating to this PEPR will commence prior to receiving full clearance approval and executed AHCS Reports by Kokatha Aboriginal Corporation or the Antakirinja Matu-Yankunytjatjara Aboriginal Corporation.

Landform and topography

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

The area is in the “South Australian Arid Lands” Landscape Management Region. The broader topography of the district is with variations in altitude from just above sea level to about 300 m above sea level. The terrain at the Peeweena Dam target area is a flat plain with very mild undulations and minor clay pans with no hills. Under the Landscapes and Bioregions (Naturemaps online GIS by Environment SA), the “Mudla” terrain is described as undulating gibber plains and tablelands with saltbush, bladder saltbush, glasswort with Mitchell grass, blackbush, nitrebush; watercourses of coolibah and Broughton willow.

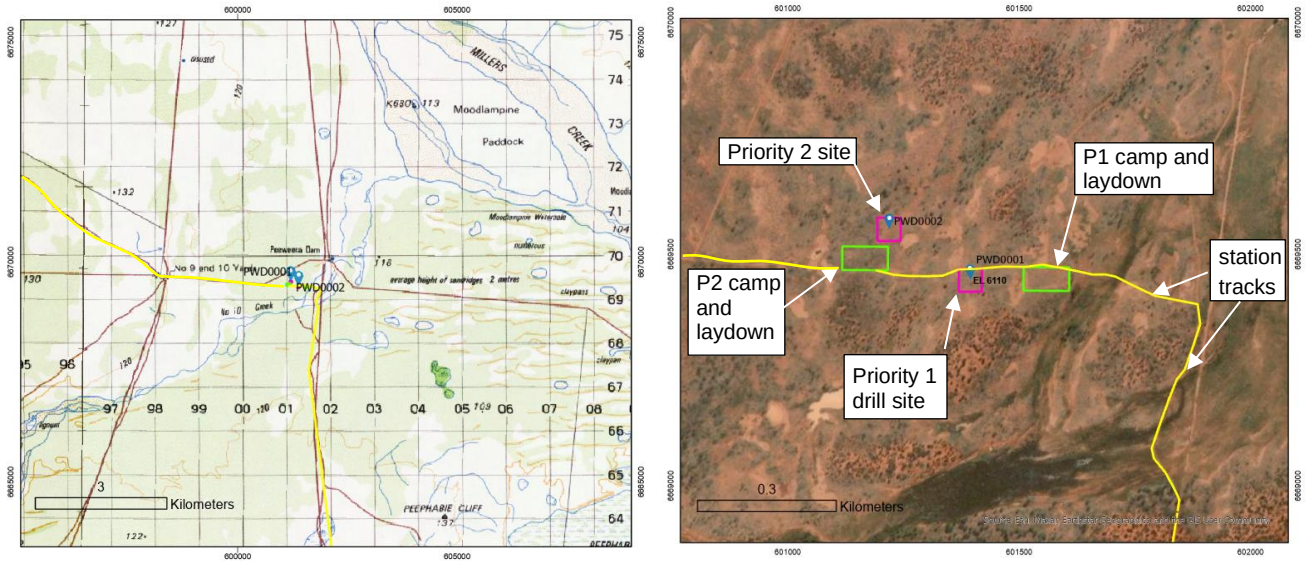
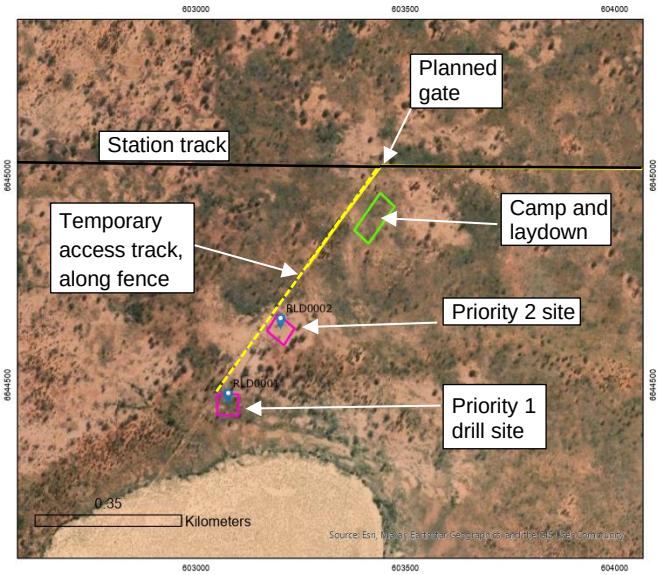


Figure 3. A 100k topographic map (left) showing landform and topography of the Peeweena Dam area and an existing Millers Creek north-south track (yellow); Satellite image (right) showing the proposed drill pads (purple), camp areas together with a laydown zone (green) and collar locations (blue), with PWD0001 being a preferred drill collar site due to being on the existing east-west track.

At Peeweena Dam, a body of water is located 1km to the northeast from the proposed drillhole PWD0001, and the closest drainage system ‘Millers Creek’ is ~5km northeast. ‘No 10 Creek’ is a small drainage system running southwest-northeast ~300m away from the proposed collar location PWD0001. The creek joins Millers Creek in the north. Within the 2 km to the east, the terrain changes to an extensive dune field over a calcareous plain with an average height of 2 m (Fig. 3). The nearest hill is within 2 km to the east-northeast and reaches up to 116 m (GOV 100k scale topographic map, AHD). None of Fortescues’s operations will reach any of the drainage areas or disturb the natural environment of the dune field.

The terrain at the Reedy Lagoon target area is extensive, undulating calcareous plains with myall. Under the Landscapes and Bioregions (Naturemaps online GIS by Environment SA), the “Glendambo” terrain is described as plains of myall with open woodland pearl bluebush, blackbush and cassia; sandspreads of mulga and myall woodland over pearl bluebush, cassia and woollybutt; flats of mulga and dead finish over saltbush and blackbush; low shrubland sandy plains of bladder saltbush and low bluebush with blackbush. The proposed drill site at the Reedy Lagoon area is located ~4km from the Reedy Lagoon topographic feature with the closest drainage system ‘Mulga Creek’. There are numerous small discrete clay pans with the closest being ~100m from the priority collar RDL0001.



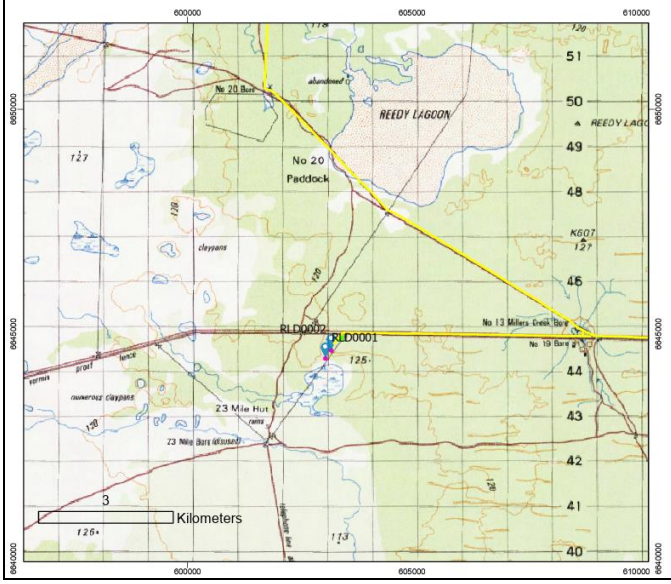


Figure 4. A 100k topographic map (left) showing landform in topography of the Reedy Lagoon area and an existing east-west track along the pastoral fence, and a north-westerly to northerly track leading to the Peeweena Dam area. A satellite image (right) showing the proposed drill pads (purple), a camp area together with a laydown zone (green) and collar locations (blue), with RDL0001 being a Priority 1 drill collar site. An east-west track is marked in black, and a tentative location for the gate has been proposed to ensure the access to the drill pad, and a temporary access track (yellow) along the fence line for 600m to the planned drill pad.

Source: http://spatialwebapps.environment.sa.gov.au/

The following photos are in Section I:

Photo 1: Peeweena Dam Prospect. Topography, existing track, and soil cover at the PWD0001 (preferred collar location), looking towards northwest;

Photo 2: Peeweena Dam Prospect. Topography and soil cover at the PWD0002 (alternative collar location), looking towards south;

Photo 3: Reedy Lagoon. Topography, soil cover and vegetation at the RLD0001, looking south-southwest;

Photo 4: Reedy Lagoon. Topography, soil cover and vegetation at the RLD0001, looking west.

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.

Under 'Soil Conservation Districts' the proposed exploration areas are classified as Kingoonya Soil District. In the broader area, the soil types vary from deep sandy soils that support woodlands to loam and clay soils supporting chenopod shrublands and to calcareous soils being the reason for the dominance of the western myalls. The district is characterised by hot arid climate with a short cool winter and a high year-to-year variability of the rainfall. There are no Government conservation areas within the Kingoonya SCD. Source: https://cdn.environment.sa.gov.au/landscape/docs/saal/kingoonya_soil_conservation_board_plan.pdf

Surface water

Will the proposed program interfere with surface water bodies and natural drainage (e.g. drainage lines, creeks, floodplains, wetlands)? If yes, describe the potential interference and surface water bodies and natural drainage on maps. If no, indicate why.	Yes ☐	No ☒
The PWD0001 is 300 m away from a local 'No 10 Creek' (Fig. 3) which feeds into regional 'Millers Creek' ~ 5 km northeast. There is no surface water in the vicinity to the RLD0001.		
Is the program area located within water protection areas defined under the *River Murray Act 2003*? If yes, provide the name(s).	Yes ☐	No ☒
N/A		
Is the program area located within any prescribed watercourses or prescribed surface water areas under the *Landscape South Australia Act 2019*? If yes, provide the name(s).	Yes ☐	No ☒
N/A		

Groundwater

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

Reedy Lagoon Prospect EL6060 (Map 1; Section J):

Reedy Lagoon Prospect is located in the South Australia Arid Lands Non-Prescribed Water Area (see Waterconnect).

Historic drill hole RL 1 was drilled by Shell Australia and is located 800m northeast of the planned Reedy Lagoon proposed drill site. The drillhole intersected Andamooka Limestone (unconfined aquifer) at between 26.55-71.7m. The Andamooka Limestone overlies the Tregolana Shale. The Pandurra Formation (sandstone), which forms an aquifer in the Southern and Western portion of the Stuart Shelf was intersected between 238-596m, is unlikely to contain groundwater in the area. The reported salinity of the ground water within the Andamooka Limestone is ~8320 uS/cm with total dissolved solids (TDS) of 4712 mg/l, standing water level of 35m. The same levels of salinity and TDS have been reported in the observation water bores in the area. The data provided above is from the latest groundwater reading 07/05/2013.

Approximately 6km to the east of the Reedy Lagoon Prospect, there are water bore records for 'No 20 Bore' that show TDS ranging between 1278 mg/l, with standing water level 30.76m (measured in 1978), to 9574 mg/l (measured in 1978).

The drill hole at Reedy Lagoon will be plugged by 20m of cementing ('cement grout') placed just below the base of the Andamooka Limestone in the Tregolana Shale.

Peeweena Prospect EL6110 (Map 2; Section J):

Peeweena prospect is in the Far North Prescribed Wells Area.

Historic drill hole PEEWEENA 1 (drillhole number 16698) drilled in 1978 by Kennecott is sited 6km to the north-northeast of Peeweena Prospect, reached the depth of 655m. The drillhole reached Boorthanna Formation/Cadna-owie Formation at 81m and Andamooka Limestone between 81-112 m overlying Tregolana Shale. Pandurra Formation was intersected between 353-655 m. No salinity data has been reported from the drill hole.

Within 1km of the Peeweena Dam area, the salinity ranges from 11909 mg/l (Unit number 6137-4, surface water level (SWL) 45.72m, TDS measured in 1952) to 11981 mg/l (unit number 6137-85, SWL 47m, TDS measured 2013).

According to the Naturemaps (https://data.environment.sa.gov.au/), the Reedy Lagoon Prospect is not within the Great Artesian Basin, however the Peeweena Prospect is within the GIS outline. The Cadna-owie Formation is intrinsic with the Great Artesian Basin however the SWL of 45-47m depth as indicated by the two water wells at Peeweena Dam show that the groundwater is not artesian nor unconfined.

For a precautionary approach and to ensure isolation of the two potential aquifers, plugging the drillhole at Peeweena will comprise a 20m of cementing ('cement grout') that will be placed just below the base of the Andamooka Limestone (in the Tregolana Shale) and a second cement plug will be placed at the top of the Andamooka Limestone and the base of the Cadna Owie to keep the GAB separate from any deeper aquifers.

In conclusion, permeable Andamooka Limestone and the Cadna Owie formations are unconfined aquifers which will be intersected during the drilling program at Reedy Lagoon and Peeweena. The Andamooka Limestone overlies impermeable Tregolana Shale. Source: https://www.waterconnect.sa.gov.au/Systems/GSR/Pages/default.aspx.

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

<Provide description here.>

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
Andamooka Limestone	~30-80m	Andamooka Limestone	Variable from 30-80m thick	Unconfined	*Salinity ranging 1287-9574 mg/l, standing water level 30-40m.*
Cadna-owie Formation	~1-80m	Cadna-owie Fm	50 to over 80m	Unconfined	*TDS ranging 11909 to 11981 mg/l, SWL of 45-47 m depth,*

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

From the EPA website: "Clauses 10 and 11 of the Water Quality Policy states that a person must not discharge pollutants listed in Schedules 2 and 3 of the Policy into any waters. Furthermore, those pollutants known as Class 1 and listed in Schedule 2 must not be deposited onto land where they are likely to enter waters. The definition of waters includes the stormwater systems, groundwater, surface water and marine. This means that listed pollutants cannot be placed in a water system or on land where they may enter the water body or the stormwater system. Advice & assistance | EPA."

The planned drilling will not emit any listed pollutants into any waters, including the unconfined aquifers of Andamooka Limestone or the Cadna Owie Formation. None of the additives that are mixed with drilling water are toxic or hazardous or classed as pollutants by the EPA.

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

A search of the GDE Atlas showed there are no aquatic or terrestrial ecosystems such as springs, mound springs, wetlands, caves, rivers, or forests (nor anything else that comes under the definition of Groundwater Dependent Ecosystems) at the site of the planned drilling and not within 5km of the planned drilling. See below screen shot of search results of the GDE Atlas Home: Water Information: Bureau of Meteorology (bom.gov.au).

Is the proposed program located within a prescribed wells area or prescribed water resource area? If yes, provide the name of the area.	Yes ☒	No ☐
The Peeweena Prospect (EL6110) is located within the Far North Prescribed Wells area		

Provide any additional information, if required.

<Include text here.>

Native vegetation

Will you be working within areas of native vegetation? If yes, provide the following information: • description of the formation and structure of vegetation in the area (e.g. woodland, shrubland, grassland) • list of the dominant species. If no, indicate why you will not be working within areas of native vegetation?	Yes ☒	No ☐

For the Peeweena Prospect, the Landscapes and Bioregions-Pastoral Land System (Naturemaps online GIS by Environment SA), the vegetation of the "Mudla" terrain is described as comprising saltbush, bladder saltbush, glasswort with Mitchell grass, blackbush, and nitrebush; with watercourses of coolibah and Broughton willow.

For the Reedy Lagoon Prospect the Landscapes and Bioregions-Pastoral Land System (Naturemaps online GIS by Environment SA), the vegetation of the "Glendambo" terrain is described as comprising plains of myall open woodland over pearl bluebush and cassia; sandspreads of mulga and myall woodland over pearl bluebush, cassia and woollybutt; flats of mulga and dead finish over saltbush and blackbush; low shrubland sandy plains of bladder saltbush and low bluebush with blackbush.

In the National Vegetation Information System (NVIS) and the Interim Biogeographic Regionalisation for Australia (IBRA) version 7.0, the vegetation in the Peeweena Dam and Reedy Lagoon target areas is classified under Major Vegetation Group 22 -Chenopod shrublands, samphire shrublands and forblands which contains saltbush, bluebush and chenopod, samphire +/- fobs (https://www.dcceew.gov.au/sites/default/files/documents/mvg22-nvis-chenopod-shrublands-sampire-shrublands-and-forblands.pdf; and Naturemaps). The area is characterized by predominantly Acacia open woodlands with rare patches of acacia forests and woodlands. In the area, there are also occurrences of western myall (*Acacia papyrocarpa),* jointed bottle-washers (*Enneapogon cylindricus*), button grass (*Dactyloctenium radulans*), native camomile (G*nephosis eriocarpa*) and caustic bush (*Cynanchum viminale*). There are occurrences of rare, relatively small inland salt lakes, lagoons and claypans.

In the Reedy Lagoon target area, the proposed drill pads, camp, and layout area is within ~500m off the existing east-west track. The preferred drill collar location PWD0001 is proposed on the existing track (Photo 1) which will minimise the impact on native vegetation. Both proposed campsite locations are placed adjacent to the track to minimise driving between the site and the camp. The 'priority 2' drill collar location PWD0002 is proposed within 100m off the existing track (Photo 2; Figs. 3; 4).

There is a native vegetation Heritage Agreement area (number 1573) centred approximately 20 km northeast of Peeweena Prospect, well away from any potential impacts of drilling at Peeweena or Reedy Lagoon.

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†
Peeweena Dam Area			
Frankenia plicata			Endangered
Atriplex eichleri	Eichler's Saltbush		Rare
Swainsona oligophylla			Rare
Abutilon oxycarpum ssp. Prostrate (A.A.Mitchell PRP 1266)			Rare
Plantago multiscapa	Many-stem Plantain		Vulnerable
Santalum spicatum	Sandalwood		Vulnerable
Eremophila pentaptera			Rare
Reedy Lagoon area			
Gilesia biniflora	Western Tar-vine		Vulnerable

Santalum spicatum	Sandalwood		Vulnerable
Swainsona oligophylla			Rare

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

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

Weeds and pathogens

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

Buffel grass (*Cenchrus ciliaris*) has been identified as a major threat and it occurs across most of South Australia, particularly along major roads including the Stuart Highway, at Roxby Downs and Olympic Dam. Naturemaps shows occurrences of buffel grass at Parakylia homestead and at approximately 15km to the east at '13 Mile Dam'.

Procedures will be taken to avoid the spread of buffel grass by the proposed exploration activities. The major dispersal mechanism is by the accidental transportation of seeds via seed bearing mud carried on and under dirty vehicles.

An occurrence of Boxing glove cactus (*Cylindropuntia fulgida var. mamillata*) is located approximately 15 km to the west, of Reedy Lagoon.

An occurrence of Athel pine (*Tamarix aphylla*) also occurs at Parakylia homestead.

To prevent the spread of Buffel grass and other weeds, all vehicles, trailers, equipment, and the boots of field staff will be checked and cleaned of any mud or organic matter when entering and leaving the project area. All vehicles (both Fortescue and drill contractor) vehicles will be washed down off-site with a record of this in the attached document: FMG - Exploration Weed Hygiene - Vehicle Inspection Checklist - June 2020.

Information from The South Australian Buffel Grass Strategic Plan 2019-2024 and Weed Control Handbook will be included in the Fortescue Site Induction process.

Fauna

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

The predominant native fauna within the area are kangaroos, emus, bird species and reptiles. Feral fauna includes foxes, dingoes, goats, cats, rabbits and possibly camels. Other fauna from pastoral activities includes sheep and cattle.

EPBC Protected Matters report (generated online via https://www.dcceew.gov.au/environment/epbc/protected-matters-search-tool) for Threatened and Migratory species listed below in Significant Fauna Table, and refers to a report extracted by a spatial search area centred over the planned drill site as shown in inserted screen shot below (Fig. 4).

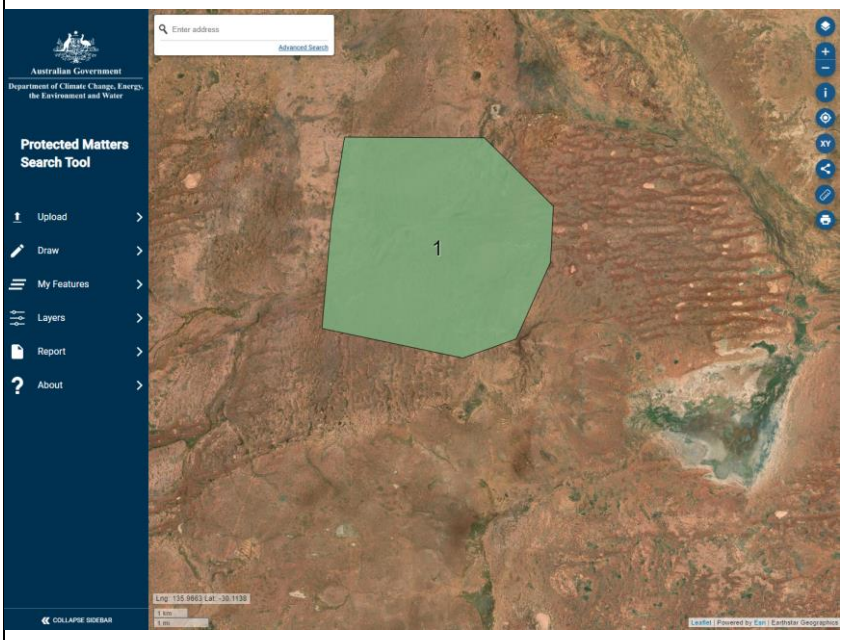


Figure 4. A screenshot of the Peeweena Dam search area for the EPBC Protected Matters for Threatened and Migratory species listed below in Significant Fauna table.

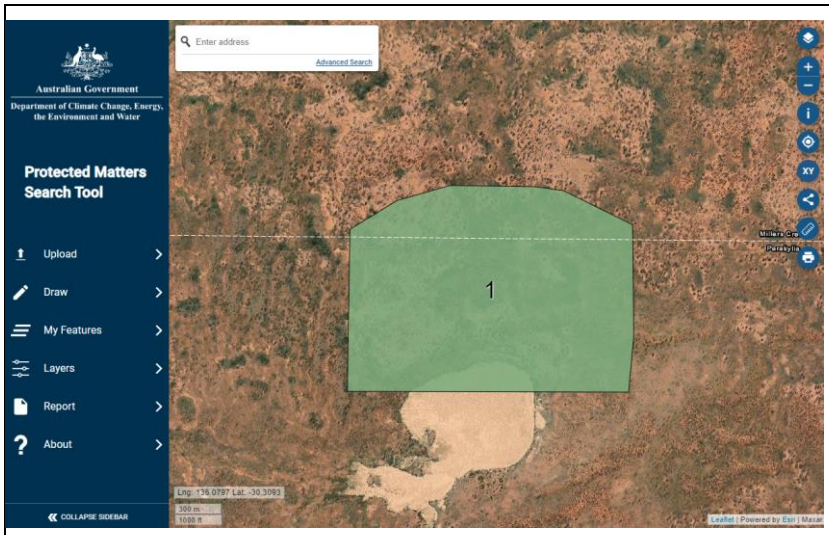


Figure 5. A screenshot of the Reedy Lagoon search area for the EPBC Protected Matters for Threatened and Migratory species listed below in Significant Fauna table.

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
Amytornis modestus	Thick-billed Grasswren		Vulnerable
Aphelocephala leucopsis	Southern Whiteface		Vulnerable
Calidris ferruginea	Curlew Sandpiper		Critically Endangered
Falco hypoleucos	Grey Falcon		Vulnerable
Neophema chrysostoma	Blue-winged Parrot		Vulnerable
Pedionomus torquatus	Plains-wanderer		Critically Endangered
Pezoporus occidentalis	Night Parrot		Endangered
Polytelis alexandrae	Princess Parrot, Alexandra's Parrot		Vulnerable
Notomys fuscus	Dusky Hopping-mouse		Vulnerable
Pseudomys australis	Plains Rat, Palyoora, Plains Mouse		Vulnerable

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

Environmentally sensitive locations

Are there any environmentally sensitive locations within or close to the proposed exploration area (e.g. areas having particular ecological, cultural, scientific, aesthetic or conservation value)? If yes, provide a description of identified environmentally sensitive location(s). Mark these areas on a locality plan to identify any areas of conflict so that access roads or other activities can be planned and located effectively.	Yes ☐	No ☒
N/A		
Are you likely to impact on the environmentally sensitive area? If yes, detail the likely effects the proposed program may have.	Yes ☐	No ☐
N/A		
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.		
A heritage survey has not yet been completed with the Antakirinja Matu-Yankunytjatjara Aboriginal Corporation and Kokatha Aboriginal Corporations		

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	2	Fortescue
Land access/environmental	1	Fortescue
Field assistants/technicians	2	Fortescue
Drilling crew	6	DDH 1
Site preparation and rehabilitation	1	Remote Civil and Construction, or other (under supervision by Fortescue)
Other (provide details)		

Shifts worked per day	Hours worked per day	Days worked per week
2	24	7

Equipment type	Owner/operator	Description/capacity	Activity/purpose
Drill Rig	DDH1	20-30 tonne 6 x 6	*RC/RAB Pre-collar, Diamond Tail*
Booster truck	DDH1	20 tonne flatbed 8x8 support truck with mounted Air Compressor Booster	*Fr RC precollar and drilling*
Support trucks for drilling	DDH1	Up to three x 10-20 tonne flatbed trucks including 8x8 support truck to transport drill rod sloops and 20,000L water tank on a hydraulic jack up platform.	*Transporting drilling parts, consumables and supplies, drill rod sloop, water tank to drill site.*
'telehandler' all terrain forklift	DDH1	5 to 7 tonnes total weight	*For moving heavy gear at site (drill rods, water pumps, generators, unloading pallets of supplies from flatbed)*
Toyota Utes	DDH1 and Fortescue	Up to three x 3 tonne utes	*Personnel transport to site from accommodation, replenishing drilling consumables and supplies.*
Front end loader	Contractor or pastoralist	15-20 tonne front end loader	*Digging drill fluid sumps, levelling drill pad and drillers workspace, and rehabilitating sumps and drill pad, rehabilitating tyre tracks, rehabilitating pastoral station tracks after de-mobilisation of drill trucks*
Grader	Contractor or pastoralist	Motor Grader with 3.7m blade width	*Will be used for maintaining areas of existing station tracks that have been identified as degrading quickly*
Backhoe	Contractor	9 tonne Backhoe Loader	*For rehabilitation of sumps and drillsite area if the pastoralist is unavailable to undertake the works required*
Tipper truck	Contractor	8 tonne tipper	*For rehabilitation of sumps and drillsite area if the pastoralist is unavailable to undertake the works required*

Provide any additional information, if required.

Other ancillary equipment for the drilling activities will include:
Up to three lighting plants on 5 ft trailers and powers generators
Drill site supply humpy and drillers office caravan next to drill rig
Trailer with RC drilling dust suppression unit and sample cyclone for RC precollar.
Enclosed trailer for assorted equipment
Two 5000 polycarb above ground water tanks for management and mixing drill fluids

Campsite: Up to **three** caravans (sleeping quarters for up to 6, kitchen and shower), a generator on a trailer and two 500L polycarb water tanks,

Drill site setup of the above equipment is subject to change based on requirements however a planned setup that was employed in previous drill campaigns by Fortescue is shown below plus photograph of typical drill site showing (L to R) rod rack/sloop (on a hydraulic powered flatbed truck platform), driller office caravan, drill rig, support truck, core presentation and processing area.

Figure 6. An example of the 50x50m drill pad with the drill rig (left) and core processing area (right). The photograph of typical drill site showing (L to R) rod rack/sloop (on a hydraulic powered flatbed truck platform), driller office caravan drill rig, support truck, core presentation and processing area.

Low impact exploration activities

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

Drilling activities

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

Tenement	Drilling type	Maximum number of drillholes	Maximum drillhole depth (m)	Maximum number of sumps required at each site	Maximum size of sumps (length x depth x width) (m^3)	Average size of each drill pad* (m^2) (no excavation required)	Number of sites requiring pad excavation	Average volume (m^3) of material to be excavated (excluding sumps)
EL6110	RC/DD	1	1500	3	6x3x1.5m (27 m^3)	50x50m (2500m^2)	0	0
EL6110	RC	2	250					
EL6060	RC/DD	1	1500	3	6x3x1.5m (27 m^3)	50x50m (2500m^2)	1	24m^3
EL6060	RC	2	250					
TOTAL		**6**	**4000**	**6**	**162 m^3**	**5000 m^2**	**1**	**24m^3**
		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	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).

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

calculate the total).

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

Drillsite preparation

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

Fortescue will demarcate the boundary of the Aboriginal Heritage approved 50 x 50m drill pad areas with stakes and flagging prior to any drill site preparation. Fortescue is proposing to clear a 50x50m area, however the drill pad will be contained within a smaller area.

The final positioning of drill pads will be optimised to minimise disturbance to existing soil and vegetation by using available tracks and natural clearings for parking of the rig and support vehicles, sump excavation and RC sample work area. Vehicle access around drill sites will be delineated with wooden survey stakes and flagging tape to restrict vehicle movements to the proposed drill pad and proposed off-track access routes. Site visits show that there is plenty of open ground or sparse low shrubland so clearing of shrubland will be minimised and no trees will be cleared.

Specifically in the **Reedy Lagoon** area, if Aboriginal Heritage clears RDL0001 (“Priority 1”) drill pad, the sloping ground may need small excavations for truck levelling. Generally, the rig’s hydraulic legs will be used to level the rig, however it’s possible that at the proposed drill site the ground slope might exceed the rig’s safe levelling capacity. As such, the drill rig may need a levelled parking bay excavated into the slope of the ground to a maximum depth of approximately 0.3m. The RC Booster truck will also need a levelled parking bay. For two 20m x 4m parking bays to a maximum depth of 0.3m the volume of material to be excavated is approximately 24m^3 (for a wedge-shaped volume). As with sump excavation, the bays will be rehabilitated by backfilling and matching the pre-existing contour and redistributing stockpiled topsoil and any cleared vegetation/mulch. The final decision for the need of these parking bay excavations depends strongly on the final drill site approved by AMYAC and the recommendations from the drilling contractor during a pre-mobilisation site visit.

If Aboriginal Heritage disapprove of the Priority 1 location for RLD0001, Fortescue will ask for clearance of RLD0002 (drill site “Priority 2”) instead and no excavation is required for the Priority 2 site.

With the level of topography at **Peeweena Dam** area, there will be no need for excavating drill pads.

For the work area of the drill rig, clearing of lower storey (chenopod shrubland e.g., bluebush, saltbush, cassia etc) for the drill work area, care will be taken to leave roots in place and to not cut into the soil, i.e. The loader bucket/blade will skim over the ground surface to cut the vegetation and leave the soil in place. Any pruned or cut vegetation will be temporarily stockpiled for later redistribution over the ground to act as natural seed bank, soil windbreak and mulch.

Up to three 6m x 3m x 1.5m deep sumps will be excavated to contain drilling fluids. Sumps will have a ramp at one end to enable the exit of any potentially straying fauna and stock after the drill rig has left the site and before final rehabilitation can be completed. Bunting will be erected around the excavated sumps and will remain in place until site rehabilitation is completed. In the excavation of the sumps, the top 10-20cm layer of topsoil will be scraped aside and temporarily stockpiled adjacent to the sumps for later re-distribution over the backfilled sumps and re-contoured ground. Where the sump is lined with plastic, the plastic will be removed for final rehabilitation and disposed at the EPA approved Waste Management facility at the Port Augusta Resource Recovery Centre.

Drillhole construction and decommissioning

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

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

Construction of drillholes will be compliant with Information Sheet M21.

Step 1: Open hole 8 inch face-sampling RC drilling 0-6m which is cased with 6m of eight inch PVC collar casing. This collar is suitable as there is no pressurised artesian water within the Peeweena and Reedy Lagoon region.

Step 2. 5.5 inch Reverse Circulation Percussion 'pre-collar' to approximately 100-300m depth (depending on sample recovery and the rig's capacity to hold back groundwater from the sample).

Step 1 and 2 will be for the RC-only mineral exploration water hole and for the RC pre-collar to the diamond tail hole. The diamond tail for the mineral hole will continue with Steps 3-5 below.

Step 3: Insert HWT steel casing to base of RC pre-collar

Step 4: HQ Diamond core drilling to 500-700m depth, or possibly to NQ2 diamond core drilling at base of RC pre-collar (with HQ casing inside the HWT casing) to planned target depth of 1500m.

Step 5. Optional wedge to parent hole: insert vanruth plugs 10m below wedge off depth (roughly 700m), navidrill to desired dip and azimuth, then commence NQ2 coring to the end of the hole (up to 1500m).

Casing will not need cementing in place to prevent leakage as there are no pressurised aquifers than could leak around the casing. In the vicinity of the Peeweena prospect there is only a low yield rate from the Cadna-owie Formation (i.e. Great Artesian Basin).

There are no Tertiary or Permian basins in the vicinity of Peeweena and Reedy Lagoon that usually host aquifers in other parts of the state.

If, in the unlikely event a pressurised aquifer is encountered, a Class 3 licenced water driller can be sourced by **DDH1 Drilling (drill contractor)** to supervise required grouting operations. Salt and barium will be kept on site should the drilling fluid density require increasing to hold back any excessive confined aquifer flow.

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.

Upon completion of the hole (and after any downhole geophysics), the steel casing will be removed, and the hole will be abandoned in accordance with requirements outlined in M21. If more than one aquifer is encountered, cement grout plugs will be used to isolate aquifers (Andamooka Limestone), followed by drill cuttings or clay (alternatively, the entire hole will be grouted).

On departure of the rig from the site the PVC collar casing will be securely capped until the drill assay results of the drill core can be assessed, in case of the need to return to the drill site to re-enter the hole to continue diamond core drilling deeper or by wedging or for downhole geophysics or wireline logging.

For final rehabilitation the 6m PVC drill collar casing will be cut off below ground level (approx. 30cm). The RC drill cuttings will be used to backfill the hole as much as possible and the hole will be capped and buried. For final rehabilitation the sumps, drill collar and drill site ground surface will be smoothed and contoured to resemble the ground's pre-drilling surface form. The temporarily stockpiled topsoil will be redistributed over the drill collar and cleared parts of the drill pad.

The timing of final rehabilitation may be dependent on the results obtained from the drilling. Final rehabilitation will be completed within 3 months after the expiry of the 12-Month PEPR. If it seems unlikely the rehabilitation can be completed by this date, an application for a 12-month extension to the PEPR will be submitted prior to its expiry.

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

Costeans and bulk sample disposal pits

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

Tenement	Number of costeans/pits	Size of costean (length x width) (m^2)	Average depth (m)	Volume excavated (m^3)	Total volume excavated (m^3) (number of costeans/pits x volume)	Total area of disturbance* (length x width) (m^2)
						<Tab to add rows.>
TOTAL						
	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.

<Insert information here.>

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).

Reverse Circulation Percussion (RC) Drilling:

For the RC pre-collar, a hessian groundsheet will be spread over the ground to contain the drill chips and dust. One to two kgs of representative drill chips will be collected every 1 m by the driller offsider who place it on the hessian covered ground, in rows of 30, for geological logging and magnetic susceptibility measurements.

Rehabilitation of drill cuttings will be completed as soon as practicable following completion of drilling and receipt of sample analysis results, with drill cuttings used to back-fill drill holes where possible. Excess drill cuttings will be buried in the drill sumps when they are sufficiently depleted of water and any spilt drill chips shovelled into the sump to leave the original red clayey silty soil at the surface.

No green sample bags will be used for the RC drilling and hence there will be no need for bag farms.

HQ & NQ Diamond Drilling:

All diamond core will be placed in core trays as the core is retrieved. Drill core will be orientated, metre marked and logged (both geological interpretation and petrophysical analysis) on site. Following this, the core will then be transported back to Fortescue's office/warehouse storage facility in Pt Augusta or Adelaide, and depending on intersected lithologies, selected core will be transported to Challenger Services in Adelaide for cutting, bagging and despatch to the assay laboratory. This ensures all drill sample will be removed from the drill site and from pastoralists' property.

In accordance with MG18 Guidelines and Mining Regulations 2020, Section 16.4, all drilled diamond core and drill hole samples will be retained by Fortescue for up to seven years after the expiry, surrender, cancellation or forfeiture of the tenement. The samples and core will be stored primarily in Fortescue's Port Augusta yard, and will be offered to the South Australian core library if it is deemed unrequired by senior Fortescue geologists.

Access routes to work areas

Will existing tracks require upgrading and/or maintenance? If yes, detail the work required to upgrade/maintain existing tracks.	Yes ☒	No ☐
General access to the Peeweena Dam and Reedy Lagoon target area is via Stuart Highway. Approximately 66 km NW of Glendambo, then NNE along 95km of station tracks via Mt Eba Outstation to Millers Creek Woolshed, then 12km east on station tracks to the prospect and planned drill site. Alternatively, the drill site can be accessed from Roxby Downs via station tracks across Parakylia and Millers Creek station (Figs 1; 3-4). The heavy vehicles (rig and support trucks) can cause bulldust and cut deep ruts over short sections (50 to 300m) of station tracks that have fine alluvium at the surface. The existing station tracks may require periodic grading on an 'as needs' basis during the drilling campaign followed by grading and smoothing over the ruts for final rehabilitation. Fortescue's longer-term monitoring of the area demonstrates that bulldust patches rehabilitate well for light vehicle usage after a single grader passing followed by a few weeks with no heavy vehicle traffic and/or an episode of light rain (1-5mm) or dew. After the completion of the drilling program it is expected that the station tracks may require some remedial work. The pastoralists have also advised Fortescue that long term remedial work for tracks is best completed after some light rain.		
Will access be required across adjoining tenements? If yes, detail the method(s) for gaining access, and if an agreement is in place with all stakeholders. Include the total area of disturbance required (i.e. length (km) and width (m) of tracks) and provide on a locality map.	Yes ☒	No ☐
The access to the Peeweena Dam target area (EL6110) is via Fortescue's EL6060. Access along public roads and station tracks will cross several exploration licence areas and Miscellaneous Purposes Licence, specifically OZ Minerals-BHP powerlines. Fortescue's planned vehicle access will not violate or damage the existing infrastructure along the access routes.		
Will access off existing tracks be required? If yes, detail the method(s) for gaining access and if vegetation clearance is required. Include the total area of disturbance (includes drill traverses and seismic lines) required off existing tracks (i.e. length (km) and width (m) of new tracks).	Yes ☐	No ☒
In the Peeweena Dam target area, no new access track will be required due to the preferred drill site location being positioned along the well-maintained existing track (see Figure 3). In the Reedy Lagoon area, a ~600m (x 5m width) track will be required from Fortescue's built gate through the existing east-west track which runs along the fence (see Figure 4). The route of the proposed new tracks has been optimised to use the least vegetated chenopod shrubland. In clearing the lower storey (chenopod shrubland e.g. bluebush, saltbush, etc) for the temporary access track, care will be taken to leave roots in place and to not cut into the soil, i.e. The loader bucket/blade will skim over the ground surface to cut the vegetation and leave the soil in place. Any pruned or cut vegetation will be temporarily stockpiled for later redistribution over the ground to act as natural seed bank, soil windbreak and mulch. For final rehabilitation of the drill site, campsite and access track, the track will be blocked from any vehicle use.		

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

Campsites, storage and equipment laydown areas

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

Campsite details		
Indicate where staff and contractors will be accommodated during the exploration program.		
All Fortescue and drilling contractor staff will be accommodated in the self-contained caravan park within the proposed camp and laydown areas.		
What is the maximum number of personnel requiring accommodation?	8	
Is a campsite required to be established? If no, no further information is required.	Yes ☒	No ☐
Provide a description and justification of the camp location (e.g. previously cleared areas etc.), and any other relevant information.		
It is proposed that the drill crew and Fortescue staff will use temporary caravan camp accommodation at a drill site for the estimated 3-4-week drilling duration at each of the drill sites. The DDH1 drill crew will camp in an area about 500m northeast from the RLD0001 drill pad along the Fortescue's proposed temporary track at the Reedy Lagoon target area; and within ~150 m east from the preferred drill pad PWD0001 adjacent to the existing track. The Aboriginal Heritage will clear the proposed area for the temporary camp 50 x 50m and adjoining 50 x 50m laydown area, a total of 50x100m area marked in Figs. 3; 4. The campsite and laydown area will use the temporary drill site access track. The area for the camp location at the Peeweena Dam prospect is flat lying, however, is nearly flat lying (1-to-2-degree slope to the south) at the Reedy Lagoon prospect. Both areas are vegetated by chenopod shrubland, whereas at Reedy Lagoon some Western Myall trees are present off the proposed temporary track and laydown area.		
What will be the total area (ha) of the campsite(s)? <50x50m	0.25ha	
What will be the total area (ha) of vegetation clearance for the campsite? <50x50m	0.25ha	
If vegetation clearance is required, describe the methods used to prepare the site.		
A 50m x 50m area will be used for the campsite (Figs 3-4). The camp pad will be prepared at the same time and in the same manner as the drill pad preparation, whilst maximising the use of naturally clear ground, avoiding all trees. Up to 0.25ha of lower storey (chenopod shrubland e.g., bluebush, saltbush etc), care will be taken to leave roots in place and to not cut into the soil, i.e. The front-end loader bucket/blade will skim over the ground surface to cut the vegetation and leave the soil in place. Any pruned or cut vegetation will be temporarily stockpiled around the margin of the camp area for later redistribution over the ground to act as natural seed bank, soil windbreak and much. For the grey water soakage pit the ground will be trimmed of chenopod scrub, 10-20cm of topsoil temporarily moved and stockpiled close to the sump (for later redistribution over the backfilled sump).		
Will any excavations be required? If yes, describe the purpose of the excavation and the maximum volume (m^3) of material to be excavated.	Yes ☒	No ☐
A fenced 3m x 3m x 1.5m soakage pit will be excavated for grey water (shower and kitchen). Beneath the surficial clayey silt is calcrete which will be a suitably porous substrate for the greywater to soak into.		
Are the proposed ablution facilities endorsed/approved for use by the Department of Health or local council, where applicable? If no, indicate why.	Yes ☒	No ☐
There will be a portable Chemical Toilet on site which will be emptied once a week by a contractor from Roxby Downs or Port Augusta. The greywater from the campsite soakage pit will soak through limestone (calcrete) and will not measurably affect the quality of the salty unconfined aquifer or percolate more than several metres beyond the greywater pit. The greywater will comprise potable water, shampoo, soaps, domestic dishwashing detergents and clothes washing detergents. Over the duration of the drilling program at Peeweena Dam and Reedy Lagoon there will be between 30,000 to 45,000 L of greywater generated (up to 1000 litres per day). Fortescue will have the option of engaging a locally based contractor's 'sump sucker' for removal of greywater if the volumes become excessive compared to the rate of soakage. Pursuant to the provisions of the South Australian Public Health Act 2011 (SAPH Act) and the Regulations, greywater is dealt with in the 'On-Site Wastewater Systems Code April 2013' under the Wastewater Regulations. This usually deals with grey water, septic tanks, overflows, and soakage pits for permanent buildings. There are no regulations preventing short term grey water soakage pits and longdrops in remote areas such as Peeweena Dam and Reedy Lagoon. In 2020 a phone enquiry with the Department of Health (by one of the authors of this PEPR in preparation for an older PEPR for another similar prospect) confirmed that the Department has no application or approval procedure for allowing or denying temporary grey water sumps or longdrops, but its construction should not be a potential hazard to health, emit odours, or attract flies or mosquitoes. The sumps are for a short period only in a remote low rainfall environment and are rehabilitated by backfilling.		

Proposed infrastructure (includes caravans, tents, offices, hydrocarbon and water storage requirements etc)	**Quantity**	**Description/capacity**
Explorex self-contained caravans	3	*4-6 people with beds, shower, and kitchen.*
Water Tank	1	
Portable Chemical Toilet.	2	
Diesel generator on bunded skid.	1	

Laydown area details		
Will laydown areas be required? If no, no further information is required.	Yes ☒	No ☐
Will the laydown area(s) be located at the same location as the campsite? If no, has the location(s) been discussed with the landowner?	Yes ☒	No ☐
The laydown area is within the proposed campsite with both comprising 100x50m area.		
What will be the maximum area (ha) required for the laydown area(s)?	0.25ha	
What will be the total area (ha) of vegetation clearance for the site?	0.25ha	
If vegetation clearance is required, describe the methods used to prepare the site.		
<Include text here.>		
Will any excavations be required? If yes, describe the purpose of the excavation and volume (m^3) of material to be excavated.	Yes ☐	No ☒
Methods for preparation and rehabilitation of the laydown area is the same as for the campsite and drill pad. A 50x50m area will be used for the laydown (Figs. 3; 4). The laydown will be prepared at the same time and in the same manner as the drill pad preparation, whilst maximising the use of naturally clear ground, avoiding Western Myall trees (only applicable to the Reedy Lagoon area). Up to 0.25ha of lower storey (chenopod shrubland e.g., bluebush, blackbush, saltbush), care will be taken to leave roots in place and to not cut into the soil, i.e. The front-end loader bucket/blade will skim over the ground surface to cut the vegetation and leave the soil in place. Any pruned or cut vegetation will be temporarily stockpiled around the margin of the camp area for later redistribution over the ground to act as natural seed bank, soil windbreak and mulch.		

Proposed infrastructure (includes hydrocarbon and water storage requirements)	Quantity	Description/capacity
		<Tab to add rows.>

Provide a description and justification of the location (e.g. previously cleared areas), and any other relevant information if required.
All essential on-site drilling equipment will be contained within the cleared drill pad area. All non-essential drilling equipment will be located at Fortescue's storage yard in Port Augusta.

Other exploration methods and/or ancillary operations

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

Water supply and management

Will camp and/or drilling water be required? If yes, describe how and where water will be sourced for drilling, track maintenance and camping purposes (e.g. groundwater, surface water, mains). Provide details on the volume of water required and how wastewater or runoff water will be managed.	Yes ☒	No ☐
A separate mineral drillhole drilled within 20 metres of the main percussion-diamond core hole (within the proposed drill pad) will be used as a water source for the diamond drilling activities. Water from the hole will be pumped directly into the sumps or into the mixing polycarb tanks. An extra 10,000 to 15,000L water tank will be kept at each of the drill sites either in polycarb tanks or in a 20,000L tank on a hydraulic powered flatbed truck platform. In case of temporary water supply problems, there will be the option for carting water into the drill site by the driller's water truck or by a separate water carting contractor and to be placed directly into the drill sumps and mixing polycarb tanks. The drillers' campsite will need approximately 500 to 1000 litres per day and will be carted to the campsite and stored in polycarb tanks or on a tank on a hydraulic powered flatbed truck platform. Tanks of 10,000 to 20,000 litres water can be purchased from a Pt Augusta/Roxby Downs based water carting contractor if required.		
Will surface water and/or mineral drillholes be used as a water source/supply? If yes, indicate if a licence for water extraction/usage is required (refer to relevant Natural Resources Management water allocation plan available on the Department for Environment and Water (DEW) website. If a licence is required and has been obtained please attach a copy. Where a licence has not been obtained, include a statement confirming that a licence will be obtained before the extraction and/or usage of water.	Yes ☒	No ☐
A separate mineral drillhole drilled within 20 metres of the main percussion-diamond core hole (within the proposed drill pad) will be used as a water source for the diamond drilling activities. Using the salty water from the unconfined fracture rock aquifer mitigates against having to source water from pastoral dams, bores, or other existing fresh water that the pastoral station uses for their own purposes. This process also mitigates against the need for water carting and subsequent track degradation. The hole will be drilled on the corner of the proposed drill pad and will be rehabilitated at the end of the program in accordance with M21, as per the proposed drillhole.		

Groundwater and drilling investigation activities

Will any water bores be required and/or water investigation activities (e.g. pump testing, water monitoring sites, water storage, turkey nests/dams) be conducted? If yes, describe the water drilling and investigation activities, including site preparation, vegetation clearance, and safety and maintenance requirements.	Yes ☐	No ☒
<If yes, include text here.>		
Indicate if well permits have been obtained and whether or not a water extraction licence is required in accordance with the Landscape South Australia Act 2019. If yes, attach a copy of the permit(s)/licences. If no, provide a statement confirming that permits/licences will be obtained prior to commencement of water investigation activities.	Yes ☐	No ☒
A completed waterbore will not be constructed. A mineral hole will be drilled specifically for a proximal temporary supply of groundwater for the deeper percussion-diamond core hole and will be rehabilitated at the end of the program in accordance with M21, the same as the proposed drillhole.		

Water affecting activities

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

Management of hazardous materials

Will activities be conducted in areas of known uranium and thorium mineralisation? If yes, attach a Radiation Management Plan and confirmation of endorsement of the plan by the Environment Protection Authority South Australia (EPA).	Yes ☒	No ☐
Will any other hazardous material be encountered when exploring in the area? If yes, list the types of hazardous materials and provide a management plan on how these materials will be managed.	Yes ☐	No ☒
Fortescue scans the drill core every metre with a portable X-ray Fluorescence analyser (pXRF) that can detect uranium and thorium to very low levels (down to 20ppm) which is well below levels at which they could be hazardous due to radiation. Fortescue also scans the core with a portable radiation dosimeter to monitor and record gamma radiation emitted by the drill core. Additionally, Fortescue ensures workers wash their hands after handling rock samples and before eating. An approved radiation management plan (100-PL-EX-0003; 2019) for the use of the pXRF devices is included in the attached appendices.		

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.

Fortescue is committed to ensuring proactive rehabilitation practises are maintained to meet Department for Energy and Mining (DEM) requirements, and associated tenement conditions, under the Mining Act 1971 (SA). The method of rehabilitation for the exploration works proposed in this EPEPR are detailed in the Drill Hole Stabilisation and Site Rehabilitation Procedure attached in the appendix.

Specific to the works at the Reedy Lagoon and Peeweena Dam prospects, the following rehabilitation procedures will be met:
Immediately post drilling when the rig leaves the site:

- Insert a PVC Collar into drillhole that protrudes a maximum of 0.3m above ground level (if collar PVC casing stops below surface level) and backfill any collar blow-outs or collar perimeter cavities.
- Place (glue or teck screwed) a temporary cap on PVC collars. Plugging drillholes is crucial to prevent animals falling into the hole and to stop potential surface water (from heavy rains) draining into it and causing collar collapse and widening of the hole at the surface.
- After each drillhole is collared and capped, collect, and remove all rubbish and drillers equipment from the site.
- Ensure capped drill collar cannot act as a pitfall trap to animals.

Upon completion of the Drilling Program, where no further downhole geophysics, wireline logging or re-entering of holes is required:

- Cut and remove the PVC collar to 50cm below the ground surface level, as described in Information Sheet M21.
- Backfill the hole with RC chips as much as possible.
- Securely block the cut PVC with a pvc cap and backfill the hole.
- Mound over the backfilled hole with soil.
- Remove all casing foam and rubbish from around the collar.
- Relocate RC chips to a heap next to the sumps in preparation for dumping in the sumps when they've dried.
- Remove the hessian tarp for the RC chips and scoop up any drill chips or dust to the heap next to the sump.

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.
• Dispose of rubbish, including PVC collar, in the Pt Augusta Resource Recovery Centre waste facility. Final Rehabilitation once the target area site is no longer required for future works or access -final rehabilitation of drill site, temporary access track and campsite: • Remove temporary fencing from around drill sumps and grey water sump at the campsite. • Remove plastic liners from drill sumps. Backfill to the surface with stockpiled RC chips and stockpiled excavated material and backfill greywater campsite sump. • Dispose of sump liner at the Pt Augusta Resource Recovery Centre waste facility. • For final rehabilitation the sumps, drill collar, drill site and campsite, the ground surface will be smoothed and contoured to resemble the ground's pre-drilling surface form, consistent with the surrounding natural landscape and provides for successful revegetation and reduces the potential for excessive erosion. • Scarify compacted areas (e.g., drill pads, tracks and campsite) to loosen compacted soil, promote vegetation regrowth and ensure draining and contours are adequate. Scarify on the contour where the compacted area is in a sloping landscape to avoid erosion gullying. Where contour scarification is not possible, scarify against the contour but periodically raise the tynes of the machinery to provide some resistance to downhill surface water flow. • The temporarily stockpiled topsoil will be redistributed over the drill collar and cleared parts of the drill pad and campsite. • Flatten windrows, lightly scarify compacted temporary access tracks, and redistribute cleared vegetation over track to act as natural seed bank, soil windbreak and mulch. For final rehabilitation of the drill site, campsite and access track, the track will be blocked from any vehicle use. Block access to rehabilitated tracks to prevent vehicle use and to allow vegetation to establish. Post exploration drilling activities, Fortescue will continue to monitor the rehabilitation.
State the estimated budget required to rehabilitate impacted sites.
Proposed budget for rehabilitation works is approximately $12,500 and includes salaries for Fortescue personnel required to monitor and report on rehabilitation works as well as payments to the pastoral lease station or contractor for earthworks on behalf of Fortescue.

Vegetation Clearance

Will any area of cleared native vegetation be unrehabilitated after the authorised period?	Yes ☐	No ☒
If yes, provide a description of the vegetation present in the application area, the extent of the proposed vegetation clearance and the likelihood of the presence of threatened flora. Provide this information on a map.		
N/A		
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.		
N/A		

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 (i.e. receptor, potential impacts, control strategies, risk assessment and measurement criteria).

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

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

How to fill out the table

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

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

Impact assessment							**Outcomes**	**Outcome measurement criteria (inc. monitoring plan)**
Receptor Lists are not exhaustive.	**Potential impacts** Lists are not exhaustive.	**Is the potential impact applicable (Yes/No)** Some potential impacts are applicable to all programs.	**Control strategies** Indicate where there is uncertainty pertaining to the likely effectiveness of the control strategies. Where the risk is not considered low, provide justification that the risk is acceptable, or consider additional strategies to reduce the risk to an acceptable level. – refer to Minerals Regulatory Guidelines MG22 for more information.	**Risk assessment** LH = likelihood of consequence CQ = severity of consequence **LH**	**CQ**	**Risk**		
Stakeholders: • freehold land owners • perpetual lease holders • pastoral lease holders • Aboriginal land (Anangu Pitjantjatjara Yankunytjatjara and Maralinga Tjarutja lands) • Department of Defence • state government departments. • local government (councils) • federal government • native title parties.	Interference to: • existing or permissible land use (includes loss of income, noise, dust, light and other emissions). • buildings, structures, existing tracks or other infrastructure. • aesthetic values of an area. Noncompliance with legislative requirements.	Yes (Applicable to all programs.)	The proposed exploration area for drilling activities is over areas located on Millers Creek and Parakylia pastoral stations. Proposed locations of the drill site, campsite and laydown area will have negligible impact on existing land use such as stock grazing and won't restrict stock access to feed nor water. Notice of Entry Form 21B: Notice of entry on land – advanced exploration operations have been served to the appropriate stakeholders. Engagement with stakeholders Antakirinja Matu-Yankunytjatjara and Kokatha Aboriginal Corporations and pastoral lease holders to detail the scope of the exploration program and to conduct heritage surveys over the drill pad, campsite, and laydown areas. Assign a designated landholder communication and liaison officer to engage with stakeholders as the exploration program progresses. Use existing station tracks with imposed speed limits and warning signs to reflect the local road conditions and proximity to the Fortescue's exploration and pastoral lease holders' infrastructure, as well as stock grazing. Planning and coordination will be used to minimize the number of individual vehicle movements. Rehabilitation of tracks and pads at the end of the program.	*1*	*A*	*Low*	**Stakeholders are fully informed and satisfied with the proposed methods used to conduct exploration activities on their land, and all prescribed forms are served and agreements obtained in accordance with the Mining Act.**	Provide the information requested within the 'Complaints' section of the annual exploration compliance report demonstrating that all reasonable complaints from stakeholders are resolved to the satisfaction of both parties prior to and ongoing during the course of exploration program, without the involvement of DEM. Provide the information requested within the 'Landowner details and liaison' section of the annual exploration compliance report demonstrating that prescribed forms were served and agreements obtained in accordance with the Mining Act prior to the commencement of exploration activities.
Stakeholder: DEW	Interference to: • existing or permissible land use. • buildings, structures, existing tracks or other infrastructure. • aesthetic values of an area. Noncompliance with legislative requirements.	No (Applicable to programs located adjacent to or within parks and reserves.)	Proposed target area is under pastoral lease.				**For activities located within or adjacent to regional reserves, national, conservation and marine parks only:** • **no unauthorised interference with park management activities.**	Provide confirmation that: • Park access notification forms were submitted to DEW and DEM at least 10 days prior to entry into regional reserves, national, conservation and marine parks, or • Program notifications for PEPRs approved for an ongoing period of time, were submitted to DEW and the DEM at least 21 days prior to entry into regional reserves, national, conservation and marine parks.

Impact assessment							Outcomes	Outcome measurement criteria (inc. monitoring plan)
Receptor Lists are not exhaustive.	**Potential impacts** Lists are not exhaustive.	**Is the potential impact applicable (Yes/No)** Some potential impacts are applicable to all programs.	**Control strategies** Indicate where there is uncertainty pertaining to the likely effectiveness of the control strategies. Where the risk is not considered low, provide justification that the risk is acceptable, or consider additional strategies to reduce the risk to an acceptable level. – refer to Minerals Regulatory Guidelines MG22 for more information.	**Risk assessment** LH = likelihood of consequence CQ = severity of consequence				
				LH	**CQ**	**Risk**		
Flora and fauna and their habitats; includes Commonwealth and state scheduled species.	Loss/modification of native vegetation and associated habitats through the clearance of vegetation.	Yes (Applicable to exploration programs located within or impacting on native vegetation.)	Existing station roads and tracks will be used to minimise impact and disturbance to native vegetation. Vehicles will not be driven across unprepared terrain or in the area's vegetation, gibber, or scree thus minimizing ground disturbance. The same station tracks will be used each time when traversing in and out multiple times. The Peeweena Dam drill site is proposed on the existing track. The Reedy Lagoon drill site will require a short ~500 m track to access the proposed. The campsites are proposed to be located adjacent to the tracks, within walking distance from the drill site. This will minimise the impact to the vegetation since no driving will be required between camp and the drill site. Minimise the shrubland clearance for the temporary drill site access tracks and minimise the drill pad, laydown and campsite to below 50m x 50m if possible by using naturally clear areas and constraining the spread of equipment. All new tracks and pads are to be rehabilitated as described in the Rehabilitation section of this PEPR. Site access, preparation and rehabilitation will be completed in line with the objectives and guidelines outlined in Information Sheet M33 and in this PEPR. To avoid the potential ignition of wildfires, no spark generating activities (e.g., angle grinding or welding) will be conducted at the drill site.	*1*	*B*	*Low*	**No permanent loss/modification of native flora and fauna populations and their habitats through:** • **clearance** • **fire** • **other** **unless prior approval under the relevant legislation is obtained.**	Maintain before, during and after photographic evidence of all exploration sites (e.g. drillsites, new track exit/entry points off existing tracks, costeans, campsites) demonstrating that: • The area and method of disturbance is consistent with that described in the PEPR. • No uncontrolled fires* occurred as a result of exploration activities. Representative photos to be included within the annual exploration compliance report.
All flora and fauna, especially listed species.	Loss/modification of the environment (biological, social and economic) through the introduction of weeds and pathogens.	Yes (Applicable to all programs.)	A table of key environmental considerations encompassing flora and fauna (including weeds and pathogens) has been generated according to information provided in the regulatory feedback from DEW coupled with information identified from site specific searches (20km radius) conducted for EPBC Act Protected Matters Report. This information will be included in the Fortescue site/project specific Inductions. There is a low risk to the modification of the environment by introducing weeds. Buffel Grass has been identified as a major threat. This grass is known along the Stuart Highway. Steps will be taken to avoid the introduction and/or establishment of Buffel Grass due to the proposed exploration activities. The major dispersal vector is machinery. All vehicles, trailers, equipment, and the boots of field staff will be checked for any mud or organic matter when entering the project area. Where possible, any earth works machinery will be sourced from the pastoral station to minimise contamination risks. Key components of the South Australia Buffel Grass Strategic Plan (2019-2024) including impacts and mitigation of spread and infestation will be addressed in the Fortescue site induction process.	*2*	*B*	*Low*	**No introduction of new species of weeds and plant pathogens, nor increase in abundance of existing weeds species.**	Provide a statement within the 'Compliance with approved programs' section of the annual exploration compliance report, confirming that: • Vehicle logs were kept during the exploration program, demonstrating that all vehicles are clean and free of plant and mud material prior to entering properties† within the tenement areas, unless otherwise agreed to with the relevant landowners. • Photographic evidence before and during exploration operations and after rehabilitation of disturbed sites was captured, demonstrating that no new weeds and plant pathogens were introduced, nor an increase in abundance of existing weeds recorded.
All fauna	Entrapment of fauna through open drillholes and excavations.	Yes (Applicable to exploration programs that involve drilling and/or require excavations.)	There is a low risk of entrapment of native animals and cattle into the (3) 6m x 3m x 1.5m deep sumps constructed at the drill site. To mitigate the risk, the sumps will be barricaded with bunting or fenced immediately after construction. The sumps will also be tapered at one end to permit egress of native fauna and stock in the event of breaching the erected bunting/fencing. Bunting or temporary fencing will remain around the sumps until the sumps have dried out enough to facilitate rehabilitation. Upon completion of the drillholes, abandonment procedures will be compliant with specifications documented within Information Sheet M21. Initially, PVC collar casing and/or cemented casing will remain in the hole and collars initially capped, pending assay results to allow for later geophysical logging or further drilling. Upon final hole abandonment, holes will have any casing cut off below ground level, backfilled and then capped to prevent cave in. Sumps will be backfilled with excavated material and then original topsoil and vegetation matter will be spread across the site to reduce visual impact and encourage regeneration.	*1*	*A*	*Low*	**No fauna traps created as a result of exploration activities.**	Maintain before, during and after photographic evidence of all drillholes and/or excavations demonstrating that: • All drillholes were permanently or temporarily capped/plugged immediately upon completion. • No fauna and livestock became trapped in drillholes and/or excavations throughout the duration of the program. • All rehabilitation was completed within 3 months of expiry of the PEPR approval (for PEPRs approved for a period of 12 months), or 3 months after the expiry of a program notification (for PEPRs approved for an ongoing period), unless otherwise authorised. Representative photos are to be included within the annual exploration compliance report. Provide the information requested within the 'Rehabilitation' section of the annual exploration compliance report.
Aboriginal heritage sites	Disturbance to Aboriginal heritage.	Yes (Applicable to all programs.)	Fortescue is aware of its obligations under the Aboriginal Heritage Act 1988 which protects all Aboriginal sites, objects, and remains. The Company acknowledges that under this Act it is an offence to damage, disturb or interfere with an Aboriginal site, object or remains. The Native Title Mining	*1*	*B*	*Low*	**No disturbance to Aboriginal artefacts or sites of significance unless prior approval under the relevant legislation is obtained.**	Maintain a database and provide a statement within the 'Compliance with approved programs' section of the annual exploration compliance report demonstrating that: • Heritage sites were not impacted during the conduct of the exploration program, unless prior approval was obtained under the appropriate legislation.

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**		
			Agreement for Exploration includes the requirement for heritage survey clearances prior to ground disturbing work. Fortescue has consulted with Antakirinja Matu-Yankunytjatjara and Kokatha Aboriginal Corporations for an Aboriginal Heritage approval for the proposed exploration drilling programs. Heritage sites identified during the clearance survey process will be flagged in the field and avoided. Personnel will be notified of any heritage sites during the induction process, on maps, and at toolbox meetings, etc. All vehicle movements will be limited to existing station tracks and Aboriginal Corporations' approved site access routes.					• Work ceased on discovery of a significant site and recommenced only after authorisation. • Aboriginal heritage sites identified during the exploration program were appropriately recorded and reported to authorities, if not previously known.
European heritage sites and sites of scientific and environmental significance	Disturbance to European heritage sites and sites of scientific and environmental significance (e.g. geological monuments, fossil reserves).	No (Applicable to exploration programs located close to or within European heritage sites and sites of scientific and environmental significance.)	N/A. There are no non-Aboriginal heritage sites or sites of scientific and environmental significance in the area.				**No disturbance to European heritage sites and to sites of scientific and environmental significance unless prior approval under the relevant legislation is obtained.**	Demonstrate no impact to heritage sites and sites of scientific and environmental significance by: • Maintaining evidence, including detailed maps showing sites compared to the location of exploration activities, and photographic evidence of sites before and after the conduct of the exploration program. • Providing a statement within the annual exploration compliance report confirming sites were not impacted during the conduct of the exploration program.
Soil/vegetation/fauna	Soil/vegetation contamination (e.g. hydrocarbons, rubbish, drill samples/cuttings, ablutions, other sources).	Yes (Applicable to all programs.)	All general and non-degradable waste generated by the drilling program waste will be removed from site and disposed of at the Roxby Downs waste transfer facility. Hydrocarbon and chemical wastes (including oily water) will be segregated from the general waste and removed offsite to be disposed of at an approved waste transfer facility (e.g. Port Augusta Resource Recovery Centre). To mitigate against higher risk sources of hydrocarbon contamination and spills, plastic bunding will be placed under major drilling equipment such as the drill rig, rod handling equipment and generators. Any fuel/oil supply stations will be located on containment spill bunds. Spill kits will be on site. All waste will be managed and disposed of in accordance with Fortescue's EMP (EX-PL-EN-0006). The greywater soakage pits for the campsite will be constructed and maintained in a manner that will not be a potential hazard to health, not emit odours, not attract flies or mosquitoes, is for a short period only in a remote low rainfall environment and is rehabilitated by backfilling. If the greywater soakage pits become excessively full compared to the rate of soakage, a Roxby Downs based contract 'sump sucker' will be engaged for the removal of greywater.	*2*	*B*	*Low*	**No contamination of soil and vegetation as a result of exploration activities.**	Demonstrate that all domestic or industrial waste (includes general rubbish and hydrocarbons) is disposed of in accordance with the *Environment Protection Act 1993* within 3 months of the expiry of the PEPR approval (for PEPRs approved for a period of 12 months), or 3 months after the expiry of a program notification (for PEPRs approved for an ongoing period), and that all fuel and chemicals are stored in accordance with EPA requirements, by providing: • The name, location and contact details of the authorised waste disposal facility. • A statement within the 'Compliance with approved programs' section of the annual exploration compliance report confirming domestic and industrial waste was removed from all exploration sites and disposed of at an authorised waste disposal facility. • Photographic evidence within the annual exploration compliance report demonstrating that all fuel and chemical storage facilities were managed in accordance with EPA requirements. Maintain photographs of all exploration sites and provide representative photos within the annual exploration compliance report demonstrating that drill cuttings are: • removed from site and disposed of at a licensed facility • buried under a minimum of 30 cm of soil, or in accordance with EPA guideline, *Radiation protection guidelines on mining in South Australia: mineral exploration*, available on the EPA website, or • backfilled down the drillhole, within 3 months of the expiry of the PEPR approval (for PEPRs approved for a period of 12 months), or 3 months after the expiry of a program notification (for PEPRs approved for an ongoing period), unless otherwise authorised. Provide the information requested within the 'Rehabilitation' section of the annual exploration compliance report.

Impact assessment							Outcomes	Outcome measurement criteria (inc. monitoring plan)
Receptor Lists are not exhaustive.	**Potential impacts** Lists are not exhaustive.	**Is the potential impact applicable (Yes/No)** Some potential impacts are applicable to all programs.	**Control strategies** Indicate where there is uncertainty pertaining to the likely effectiveness of the control strategies. Where the risk is not considered low, provide justification that the risk is acceptable, or consider additional strategies to reduce the risk to an acceptable level. – refer to Minerals Regulatory Guidelines MG22 for more information.	**Risk assessment** LH = likelihood of consequence CQ = severity of consequence				
				LH	**CQ**	**Risk**		
Soil	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.)	Excavation of the general drill pad will be undertaken with up to three (3) 6m x 3m x 1.5m deep sumps to contain drilling fluids. In the instance of preparing sumps for drilling fluids, the top 20-30cm of soil will be removed and stockpiled separately from the remainder of excavated sump material, such that the topsoil can be replaced upon final drill site rehabilitation. There are no acid sulphate soils in the area, so no control strategies or management plans are required for that potential impact. In the Reedy Lagoon area, if Aboriginal Heritage clears RDL0001 (“Priority 1”) drill pad, the sloping ground may need small excavations for truck levelling. Generally the rig’s hydraulic legs will be used to level the rig, however it is possible that at the proposed drill site the ground slope might exceed the rig’s safe levelling capacity. As such, the drill rig may need a levelled parking bay excavated into the slope of the ground to a maximum depth of approximately 0.3m. The RC Booster truck will also need a levelled parking bay. For two 20m x 4m parking bays to a maximum depth of 0.3m the volume of material to be excavated is approximately 24m^3 (for a wedge shaped volume). As with sump excavation, the bays will be rehabilitated by backfilling and matching the pre-existing contour and redistributing stockpiled topsoil and any cleared vegetation/mulch. Rehabilitation of topsoil and subsoil at drill sites and any new tracks will be undertaken in a manner which is compliant with the guidelines outlined in Information Sheet M33. In areas of soil compaction such as the drill site and short access track off the existing station track, light scarification will be conducted to promote natural vegetation regrowth and reduce risk of soil erosion. Fortescue will ensure rehabilitation is completed within 3 months of expiry of the PEPR approval or program notification unless written arrangements are approved.	*1*	*A*	*Low*	**Where soil disturbance occurs as a result of exploration activities, ensure that:** • **topsoil quality and quantity is maintained** • **the soil profile and topography is reinstated to original conditions** • **there is no accelerated soil erosion.**	Maintain before, during and after photographic evidence of all excavations, drillsites, camps, laydown areas and new tracks demonstrating that: • The soil profile and topography is reinstated to original conditions and is consistent with natural surroundings within 3 months of the expiry of the PEPR approval (for PEPRs approved for a period of 12 months), or 3 months after the expiry of a program notification (for PEPRs approved for an ongoing period), unless otherwise authorised. • Where required, sufficient topsoil is removed (depending on soil profile), stored separately from subsoil and reinstated (in the correct order) within 3 months of the expiry of the PEPR approval (for PEPRs approved for a period of 12 months), or 3 months after the expiry of a program notification (for PEPRs approved for an ongoing period), unless otherwise authorised. • There are no signs of accelerated soil erosion during and post rehabilitation of disturbed sites. Representative photos to be included within the annual exploration compliance report. Provide the information requested within the ‘Rehabilitation’ section of the annual exploration compliance report.
Surface water	Alteration to surface water – interference to surface drainage.	No (Applicable to exploration programs that are likely to impact on surface drainage channels.)	Drill holes and new access tracks are not located within the vicinity of any natural ephemeral surface drainage, creeks and claypans. The topography at the ‘Priority 1’ planned drill site and planned temporary access track at the Reedy Lagoon is very flat to mildly dipping to the south (1-2 degrees). The P2 site option is on flat lying land. The topography at the Peeweena Dam proposed site area is flat and there will be no interference with surface drainage after full rehabilitation of the drill pad, camp and laydown.	*1*	*A*	*Low*	**No permanent modification to hydrological features caused by exploration activities without obtaining a water affecting permit from the relevant Landscape Board (under Landscapes Act SA 2019).**	Provide before, during and after photographic evidence within the annual exploration compliance report demonstrating that original drainage contours (watercourses and lakes) are consistent with the natural relief post rehabilitation within 3 months of the expiry of the PEPR approval (for PEPRs approved for a period of 12 months), or 3 months after the expiry of a program notification (for PEPRs approved for an ongoing period). Alternatively, provide copies of water affecting permits within the annual exploration compliance report.
Groundwater/aquifer	Groundwater contamination: • contamination of aquifers through entry of pollutants from the surface • interconnection between aquifers • degradation of natural hydrostatic conditions (maintain pre-drilling pressures).	<Yes/No> (Applicable to all exploration programs that may intersect groundwater.)	Upon completion of the hole (and after any downhole geophysics), the hole will be abandoned in accordance with requirements outlined in Information Sheet M21: Mineral Exploration Drillholes - General specifications for construction and backfilling Water Connect water bore record of previous drilling in the area shows that Andamooka Limestone and the Cadna-owie Formation are aquifers with SWL between 30 to 50m depth. In construction of the initial RC pre-collar, the drill hole will be cased with PVC (0-6m) and removable steel drill pipe to prevent ingress of water, to aid continued deeper percussion/diamond drilling and prevent groundwater ingress between potential aquifers. HQ casing to the bottom of the RC precollar will remain in the hole during NQ diamond core drilling, isolating the aquifer, until completion of the drill hole, followed by removal at the end of the hole. The PVC casing will be grouted in the hole and remain in the hole upon abandonment (but capped and blocked 30cm below ground level), which will result in permanent isolation of the unconfined aquifer and prevent interconnection between the underlying deeper confined fractured rock aquifers if present. For plugging the drillhole at Peeweena, a 20m of cementing (‘cement grout’) will be placed just below the base of the Andamooka Limestone (in the				**Drillholes restored to controlling geological conditions that existed before the hole was drilled or, where it is intended to re-enter the hole, the hole must be completed with casing of adequate strength and the casing cemented so that all aquifers are isolated to prevent the movement of any fluids behind the casing.**	Maintain evidence demonstrating that drillholes are decommissioned in accordance with Earth Resources Information Sheet M21, *Mineral exploration drillholes – general specifications for construction and backfilling*, and/or specific conditions from DEW (Groundwater) within 3 months of the expiry of the PEPR approval (for PEPRs approved for a period of 12 months), or 3 months after the expiry of a program notification (for PEPRs approved for an ongoing period), unless otherwise authorised. Provide the information requested within the ‘Groundwater’ section of the annual exploration compliance report.

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**		
			Tregolana Shale) and a second cement plug will be placed at the top of the Andamooka Limestone and the base of the Cadna-owie to isolate the two aquifers. The drill hole at Reedy Lagoon will be plugged by 20m of cementing ('cement grout') placed just below the base of the Andamooka Limestone in the Tregolana Shale. The RC hole that was used for a groundwater supply will be backfilled with the stockpiled RC drill chips as much as possible and the PVC collar rehabilitated in the same manner as the collar of the full diamond tail hole (described above).					
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.)	Up to three (3) 6m x 3m x 1.5m deep sumps constructed on the drill pad will be utilised to contain drilling fluids for diamond drilling. These sumps will also be utilised to contain any discharge of groundwater during the percussion drilling of the pre-collar. Fortescue maintains regular practice to take north, east, south, and west directional photographs of each site, prior to, during and after drilling activities and then post rehabilitation, for the annual exploration compliance report.	*1*	A	*Low*	**No discharge of groundwater outside of the exploration site (e.g. drillsite) into the surrounding environment and no discharge of water into a watercourse, unless prior approval under the relevant legislation is obtained.**	Maintain photographic evidence of all drillsites demonstrating that groundwater was not discharged into the surrounding environment, unless water affecting activity permits were obtained allowing the discharge of groundwater into watercourses and/or lakes. Representative photos and water affecting activity permits (where applicable) to be included within the annual exploration compliance report.
Groundwater users	Interference to existing water users when extracting water from existing dams, water bores or mineral drillholes.	No (Applicable to all exploration programs that may require the use of water from existing dams, water bores or mineral drillholes.)	N/A				**No public nuisance impacts resulting from the extraction of water for exploration purposes, unless prior approval under the relevant legislation is obtained.**	Provide the information requested within the 'Complaints' section of the annual exploration compliance report demonstrating that all reasonable complaints from stakeholders were resolved to the satisfaction of both parties, prior to and ongoing during the course of the exploration program without the involvement of DEM. Where permits are required for the extraction and/or usage of groundwater, provide copies of the licence or permit within the annual exploration compliance report.
Soil/vegetation/fauna	Degradation of rehabilitated access tracks caused by third party access (includes previously closed and rehabilitated access tracks).	No (Applicable to exploration programs that create new access tracks.)	All new tracks will be rehabilitated and closed off from the existing station track at the end of the drilling program. The access track will be scarified, and all topsoil and vegetation piles will be spread evenly across the rehabilitated area.				**Rehabilitated access tracks remain permanently closed, unless prior approval under the relevant legislation is obtained.**	Maintain before and after photographic evidence demonstrating that all tracks are closed and rehabilitated within 3 months of the expiry of the PEPR approval (for PEPRs approved for a period of 12 months), or 3 months after the expiry of a program notification (for PEPRs approved for an ongoing period), unless otherwise authorised. Representative photos are to be included within the annual exploration compliance report. Provide the information requested within the 'Rehabilitation' section of the annual exploration compliance report.
Community/landowners	Damage to infrastructure and loss of income through fire.	Yes (Applicable to all programs)	The risk of fires is very low. However, management protocols will be adhered to by field personnel to reduce the risk of wildfire ignition by exploration activities. Such protocols shall include no parking of vehicles over vegetation and no comfort fires at the proposed drill sites. The Peeweena and Reedy Lagoon targets area is located within the Region 13 North West Pastoral Areas and Fire Danger Ratings are published by Country Fire Service after 4:30 pm the day prior during the fire season (1st November to 31st March). On days of Total Fire Ban (declared for Extreme and Catastrophic Fire Danger Rating) Fortescue will comply with the Fire and Emergency Services Act 2005, specifically: 1. cease any activities that could be spark generating (activities include the operation of Stationary Engines, generators; Internal combustion engines; vehicles; gas welding, soldering, metal cutting, grinding and abrasion); 2. Not drive a vehicle referred to in sub regulation (1) within 2 m of flammable bush or grass unless the vehicle is fitted with an exhaust system that complies with the Act. The sparse shrubland of bluebush, saltbush and cassia comprises very low fuel load in the project area and the drill pad will be cleared of vegetation. The underside of vehicles, especially light vehicles will be kept clear of grass.	*1*	*A*	*Low*	**No loss of infrastructure or income through fire as a result of exploration activities.**	Provide a statement within the 'Compliance with approved programs' section of the annual exploration compliance report confirming that no uncontrolled fires* occurred. Alternatively, provide a report on the independent investigation of all uncontrolled fires* demonstrating that the licensee could not have reasonably prevented the fire through the implementation of precautionary measures.

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**		
			Vehicles will only park in the cleared drill pad or the tracks, away from vegetation.					
General public	Injury or death to members of the public as a result of exploration activities.	Yes (Applicable to all programs.)	The location of the proposed drill site is not frequented by the public. The drill site will have safety and access permission signage to prevent undue entry of personnel who have not completed company and site-specific safety inductions.	*1*	*A*	*Low*	**No accidents involving the public that could have been reasonably prevented by the licensee.**	Provide a statement within the 'Compliance with approved programs' section of the annual exploration compliance report confirming no accidents occurred involving the public during and after the exploration program. If an accident involving the public did occur, provide a copy of the independent investigation report within the annual exploration compliance report demonstrating that the licensee could not have reasonably prevented the accident through the implementation of precautionary measures.
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.)	N/A				**No increase in background radiation levels, and employee/contractor exposure levels during the exploration program are within safe limits.**	Maintain a database and provide a statement within the 'Compliance with approved programs' section of the annual exploration compliance report demonstrating that: • Radiation levels post exploration and rehabilitation are consistent with pre-existing background levels. • Employee and contractors exposure levels were within safe limits during the exploration program.
Other (if applicable)								

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

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

SECTION G - OPERATOR CAPABILITY

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

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

As specified in this PEPR, Fortescue is committed to upholding its program in a manner that ensures achievement of all the environmental outcomes. Fortescue employs geologists and field staff in the Adelaide office who are dedicated to South Australian exploration, ensuring compliance, and achieving environmental outcomes of this PEPR.

To achieve this, Fortescue has numerous documented procedures including, but not limited to, Drillhole Stabilisation and Site Rehabilitation, Rehabilitation Safe Work Instructions, Stakeholder Management Plans and Environmental Management Plans. Constant internal auditing of these procedures and guidelines to ensure that they are followed is carried out at every level of exploration activities.

Fortescue integrates the PEPRs with its own 'Land Use Certificate' which is used to manage land use and associated activities, including access, ground disturbance, construction and compliance activities (e.g. rehabilitation).

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.

Fortescue has had ongoing relations and regular consultation with the relevant pastoralists, including face-to-face meetings, delivery of email updates and phone calls to update on planned activities and arranging site access.

Also see attached documents for reference:

- EX-PL-EN-0006_South Australia Exploration Activities – Environmental Management Plan
- FMG – Exploration Weed Hygiene – Vehicle Inspection Checklist – June 2020100-PL-EX-0003_South Australia Radiation Management Plan

SECTION I – PHOTOS

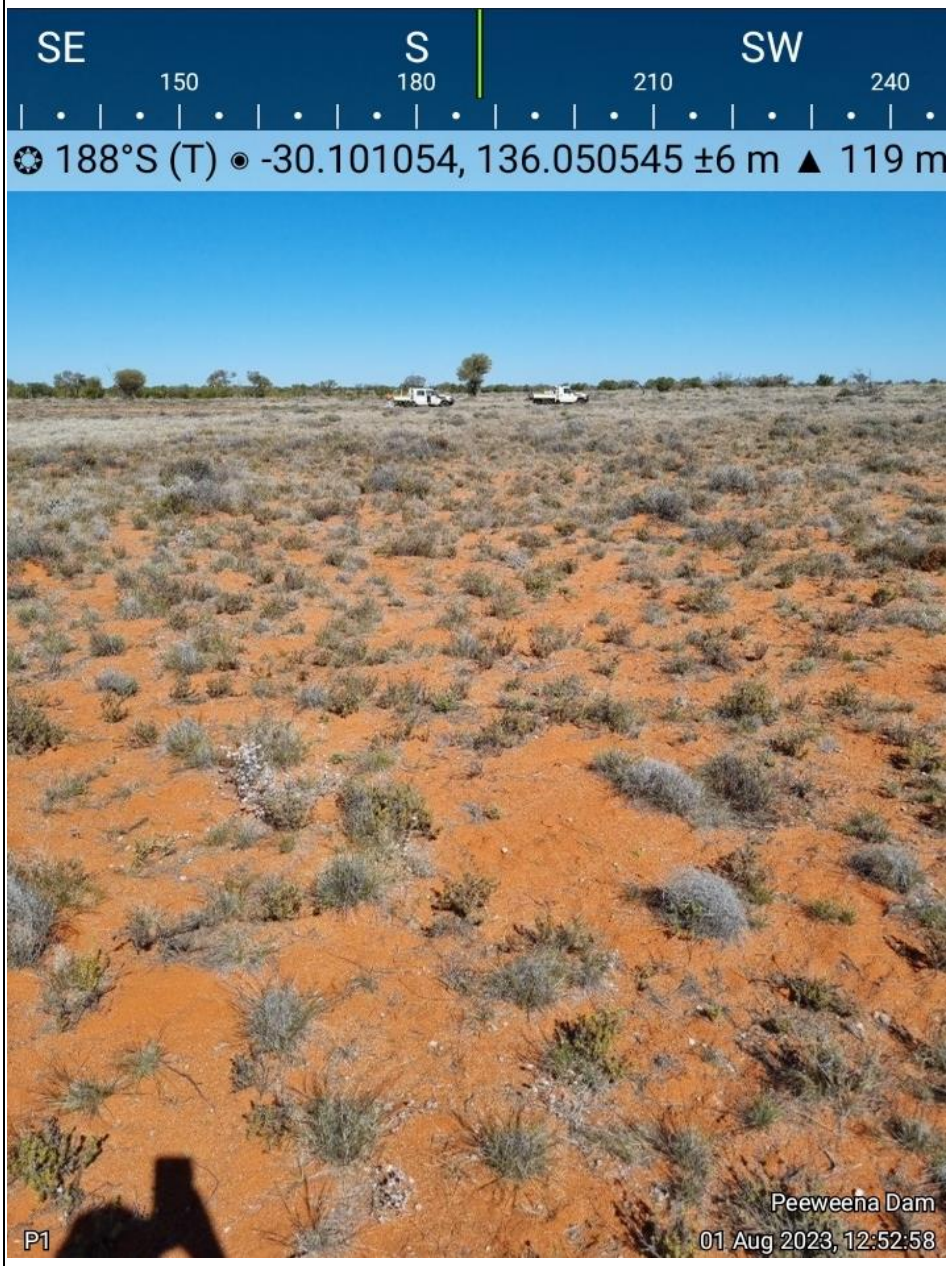
Include photographs in this section:

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

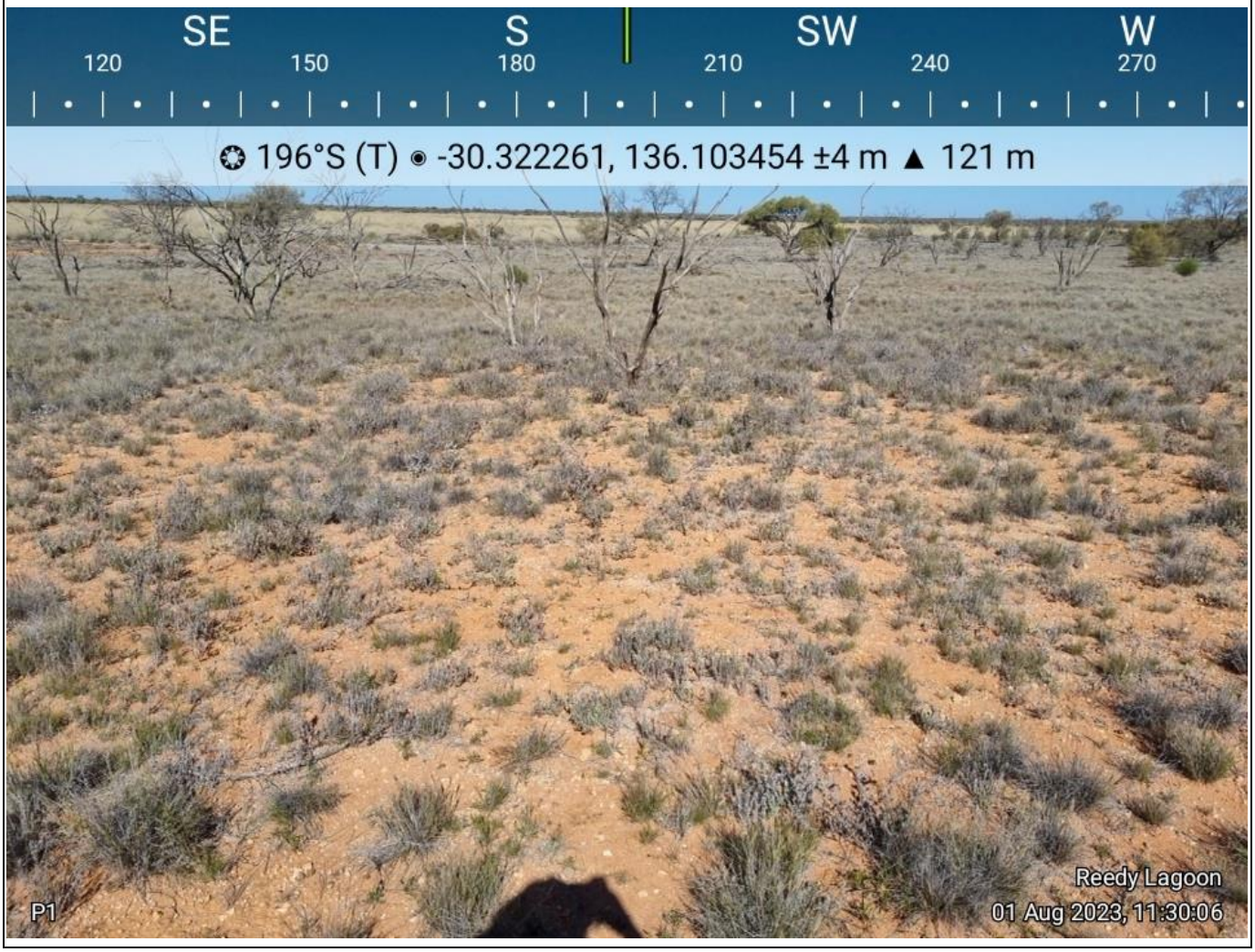
To insert photos, copy and paste the photo into the template below. Resize photos to fit page width. Ensure that all information about each photo is completed and refer to the photo number in the relevant section of the PEPR.

Site identification	Date taken	Photo number & PEPR section reference	Easting (GDA94)	Northing (GDA94)	Zone	Details and Comments
PWD0001	01/08/2023	Photo 1; Section C: Landform and topography	601222	6669551	53	Peeweena Prospect. The landform, topography, and vegetation of the proposed PWD0001 drill collar (top priority). The collar is located on the existing track; Note relatively good track conditions and sparse vegetation. Looking northwest.

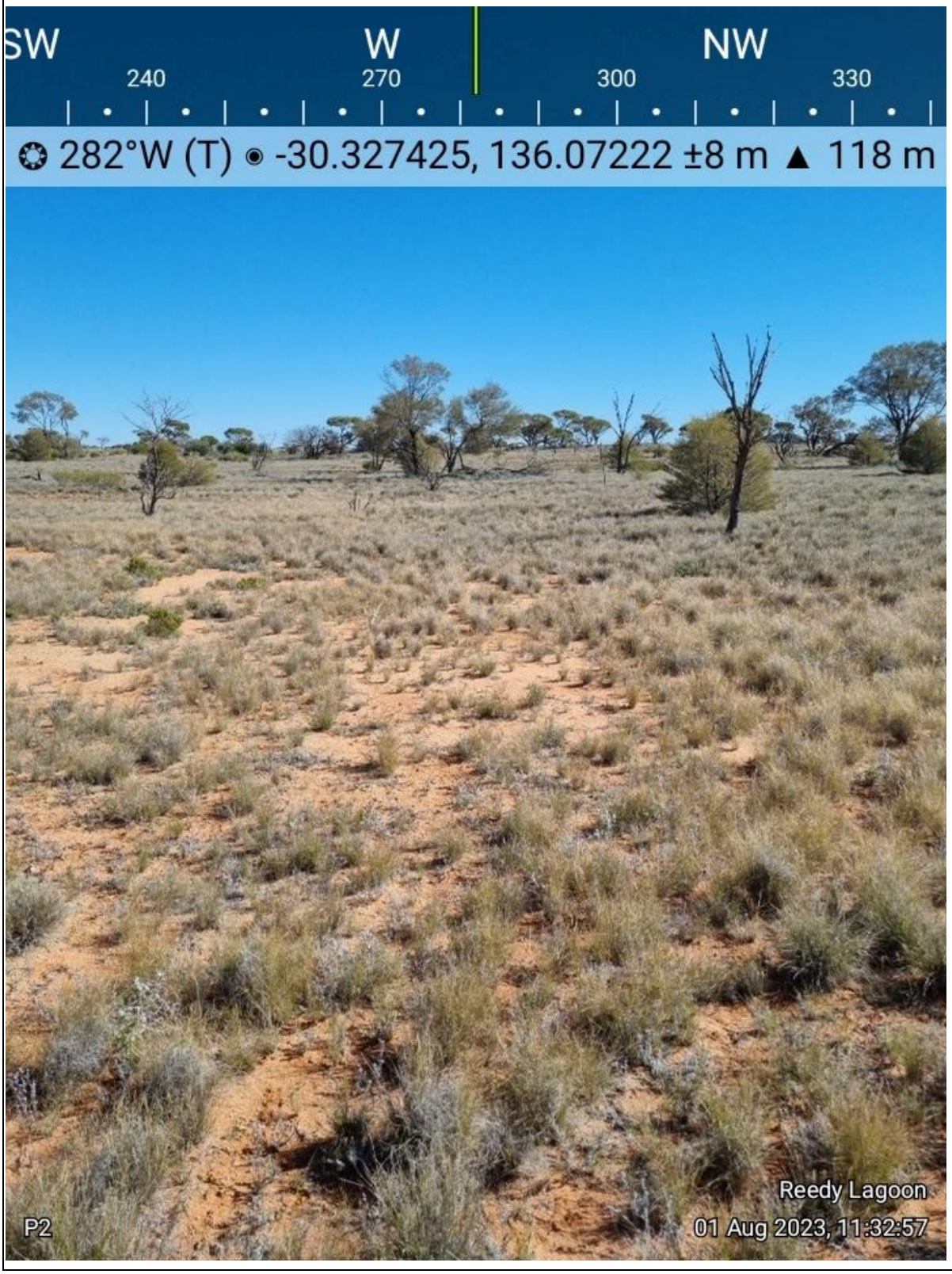
Site identification	Date taken	Photo number & PEPR section reference	Easting (GDA94)	Northing (GDA94)	Zone	Details and Comments
PWD0002	01/08/2023	Photo 2; Section C: Landform and topography	601222	6669551	53	Peeweena Prospect. The location of the proposed PWD0002 drill collar within ~100m from the existing track and PWD0001; Looking south.



Site identification	Date taken	Photo number & PEPR section reference	Easting (GDA94)	Northing (GDA94)	Zone	Details and Comments
RLD0001	01/08/2023	Photo 3; Section C: Landform and topography	597131	6645072	53	Reedy Lagoon Prospect. Soil and vegetation cover, looking south-southwest.



Site identification	Date taken	Photo number & PEPR section reference	Easting (GDA94)	Northing (GDA94)	Zone	Details and Comments
RLD0002	01/08/2023	Photo 4; Section C: Landform and topography	603074	6644445	53	Soil and vegetation cover, looking west

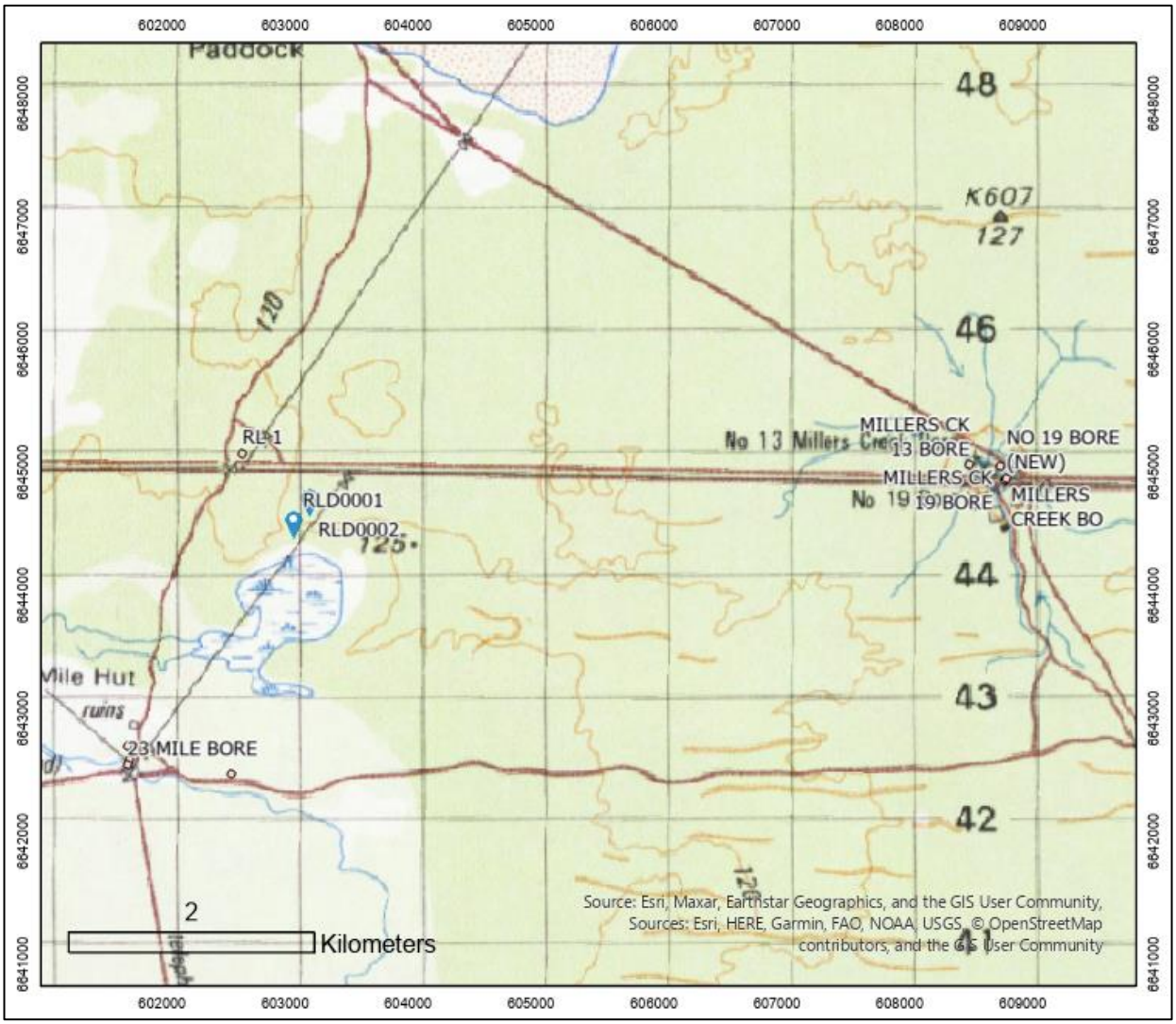


SECTION J – MAPS

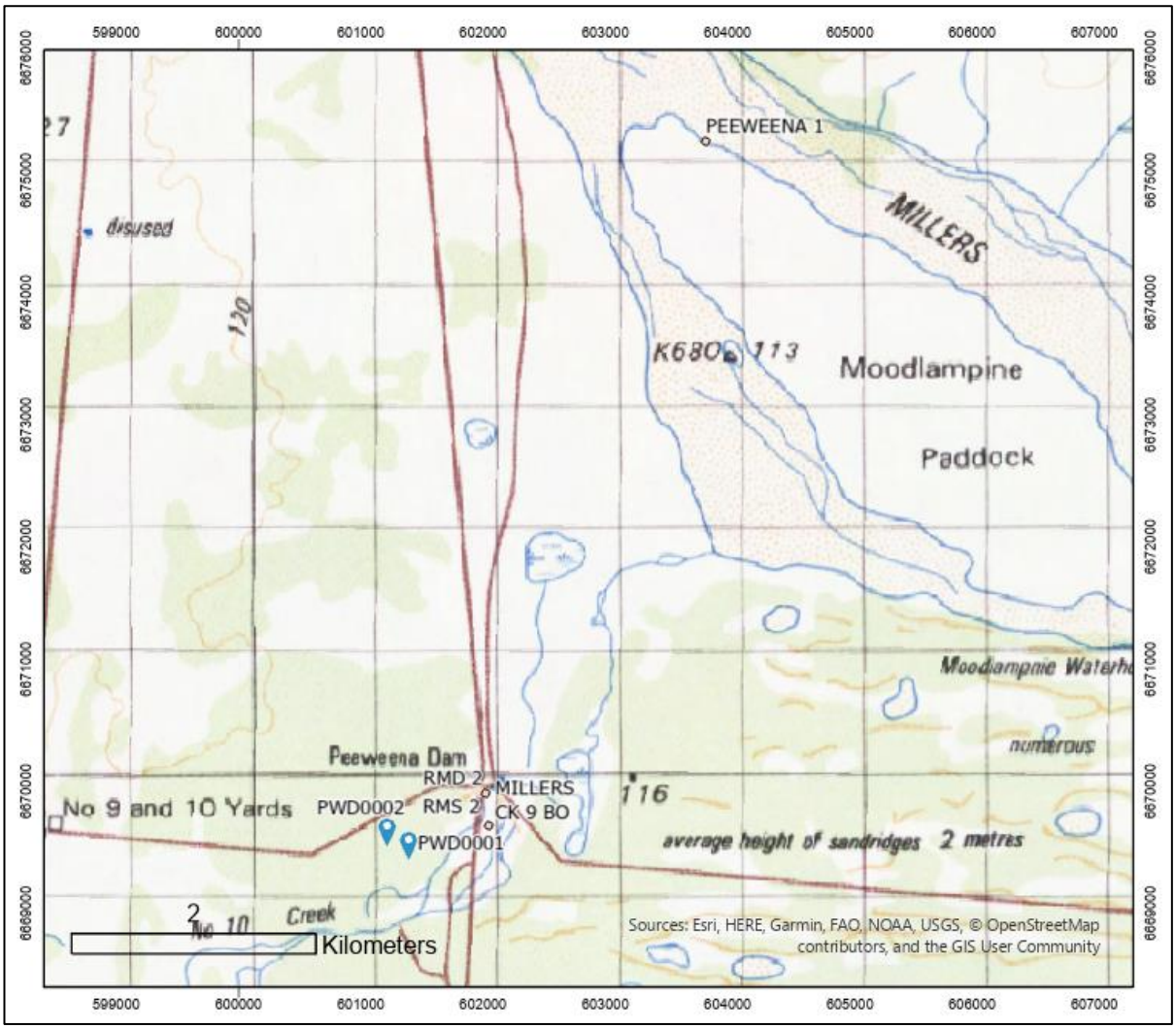
Provide a map(s) showing the following information that is located adjacent to or within the proposed area of operations, where applicable:

- 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.



Map 1. Reedy Lagoon Prospect. A 100k topographic map overlaid with the proposed drill collar location RLD0001 and RLD0002 and existing water bores in the area. See Section C: Groundwater for further details.



Map 2. Peeweena Dam Prospect. A 100k topographic map overlaid with the proposed drill collar location PWD0001 and PWD0002 and existing water bores in the area. See Section C: Groundwater for further details.

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.