Doc ID: EPEPR2014-107 (EPR-03995)

4 December 2025

Mr Dwayne Povey
Mineral Resource Manager
Central Iron Pty Ltd
Level 8, 33 King William Street
ADELAIDE SA 5000

Via email: dwayne.povey@peakiron.com

Dear Mr Povey

Notification of Approved Exploration Program for Environment Protection and Rehabilitation (EPR-03995) Review

In reference to your final submission dated 1 December 2025, the EPEPR has been approved pursuant to section 70C(5) of the *Mining Act 1971* (the Mining Act).

The approved EPEPR will be made publicly available on the Mining Register and the Department for Energy and Mining (DEM) website. Details of the approved EPEPR are listed below.

Approval Granted to	Central Iron Pty Ltd
Tenement Type & Number	Exploration License EL 6395
Program Number	EPR-03995 review
EPEPR Description	For the exploration, resource definition drilling, geotechnical and groundwater drilling over the Hawks Nest EL, with the main focus on iron ore and IOCG prospects.

You are reminded that you must always implement and comply with this approved EPEPR.

This approval does not constitute endorsement of the systems that you have in place to manage the mining operations in compliance with the Mining Act. Whilst your capability to undertake this activity has been considered in this approval, the responsibility for compliance with the Mining Act always remains with the tenement holder.

The legislative requirements associated with the EPEPR are outlined below, and certain requirements must be actioned prior to commencement of operations authorised by the EPEPR.

1	**PEPR Conditions**

	In accordance with section 70B(7a)(b) of the Mining Act, the approved EPEPR is subject to the conditions listed in the Notice of Approval Conditions – EPR-03995 (Appendix 1)
2	**Public Liability Insurance** Pursuant to Regulation 81 of the *Mining Regulations 2020* (the Mining Regulations), you are required to provide a copy of a certificate evidencing the insurance coverage over the tenement(s).
3	**Compliance Reporting** You are required to submit an annual exploration compliance report. The report is required to be submitted **within 2 months** after the anniversary of the date the licence/ease was granted, or in accordance with joint reporting requirements agreed to with the Minister. Please refer to the DEM website for more information on the reporting requirements. You are reminded that a separate compliance report is required **2 months after** the expiry or surrender of the EL.
4	**Work, Health and Safety Compliance** In accordance with Chapter 10 of the *Work Health and Safety Regulations 2012* (SA), you must meet the requirements for mine operators in South Australia, which include a notification for mining operations, the establishment of a Safety Management System, the identification of Principal Mining Hazards and development of a Principal Mining Hazard Management Plan. Further information on your responsibilities, including a guide to Chapter 10, and the Mine Operator Notification Form, is available on the SafeWork SA website.
5	**Water Licence** Under the requirements of the *Landscape South Australia Act 2019* a water licence may be required. You are advised to consult with the Department for Environment and Water, Water Licensing Branch to seek further information regarding licensing requirements. And/or Under the requirements of the *Landscape South Australia Act 2019,* a water affecting activity permit will/may be required. You are advised to consult with the SA Arid Lands, to seek further information regarding permitting requirements.
6	**EPEPR Timeframe** The EPEPR is approved for the term of Exploration Licence (EPR-03995. A further 3 months after expiry of the program notification is provided to complete all rehabilitation.

Please note, proposed changes to exploration operations stated in the approved EPEPR may require a EPEPR review to be submitted for assessment. Where a EPEPR 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.*

In addition to the requirements under the Mining Act, you are reminded that your operation will have other legislative requirements that you will need to comply with.

If you have any further queries, please contact DEM staff as below:

General enquiries	Jason Perry Assessment Officer, Exploration Regulation DEM.exploration@sa.gov.au

Yours sincerely

Simon Constable
DIRECTOR MINERALS REGULATION
In accordance with delegated
powers and functions

CC: DEW Drilling Inspector miningwatersciencereferrals@sa.gov.au
CC: DEW Hydrogeologist miningwatersciencereferrals@sa.gov.au

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

Appendix 1

Notice of Approval Conditions – EPR-03995

In accordance with section 70B(7a)(b) of the *Mining Act 1971*, EP-03995 is approved subject to the following conditions:

Notice of Approval Conditions – EPR-03995	
1	**Prior to conducting exploration operations an EPEPR Program Notification must be submitted to the Department for Energy and Mining in accordance with the approved EPEPR, 21 days prior to commencement of operations.** Forward all EPEPR Notifications to: **Mineral Exploration** Exploration Regulation DEM.exploration@sa.gov.au The EPEPR notification must be submitted using the template provided on the DEM website.

Exploration PEPR - EPEPR | Ongoing PEPR Review

Reference Number: **EPR-03995** • Status: **Assessment**

Begin

PEPR Type

Ongoing PEPR Review

Request for Information

Listed below are any RFIs that impact your application. Confirmation of which RFI you are responding to may be required on the Review step.

Ref. No.	Required Action	Date Received	Due Date	Status
REQ-1367 (/InformationRequest/?id=33d36082-78ca-f011-bbd3-002248933384)	Resubmit Application	1/12/2025 3:51 PM	26/12/2025	Closed

Select Applicable PEPR

Is historical?

○ No ◉ Yes

Previous PEPR ID

2014-107

Search PEPRs

—

Applicant and General Details

Applicant Details

Dwayne Povey

Full Name *

Dwayne Povey

Business Phone

Mobile Phone

Email *

dwayne.povey@peakiron.com (mailto:dwayne.povey@peakiron.com)

Project Supervisor

Dwayne Povey

General Details

Tenement Details

Tenement Type	Tenement Name	Tenement Holder
Exploration Licence	EL 6395	Central Iron Pty Ltd

Operating Company

Central Iron Pty Ltd

If there is another Operating Company, please provide

Account Name	Entity Type	Registered Address	Registered Email

There are no records to display.

Project/prospect name

Hawks Nest - Kite, Kestrel, Eagle, Raptor, Harrier, Flintoft, Goshawk, Griffon, Kea, Billah, Osprey,

Mineral Model

Primary iron ore exploration
Banded Iron Formations (BIFs) are chemical sedimentary rocks consisting of alternating iron-rich (hematite/magnetite) and silica-rich (chert/jasper) layers, typically 30–50% Fe. At Hawks Nest a secondary upgrading event possibly related to the Hiltaba Suite has local enriched the Kite magnetite deposit with Fe grades exceeding 65%Fe. No other iron ore deposits at Hawks Nest have identified this unique body of mineralisation.
Discrete gravity and offset magnetic anomalies exist at the Billah and Osprey prospects and are postulated to be IOCG style exploration targets.

Primary Commodities

Commodity Name ↑	Commodity Group
Copper	Exploration
Gold	Exploration
Hematite	Exploration
Iron	Exploration
Iron Ore	Exploration
Iron Ore - Magnetite	Exploration

Secondary Commodities

Commodity Name ↑	Commodity Group
Rare Earths	Exploration

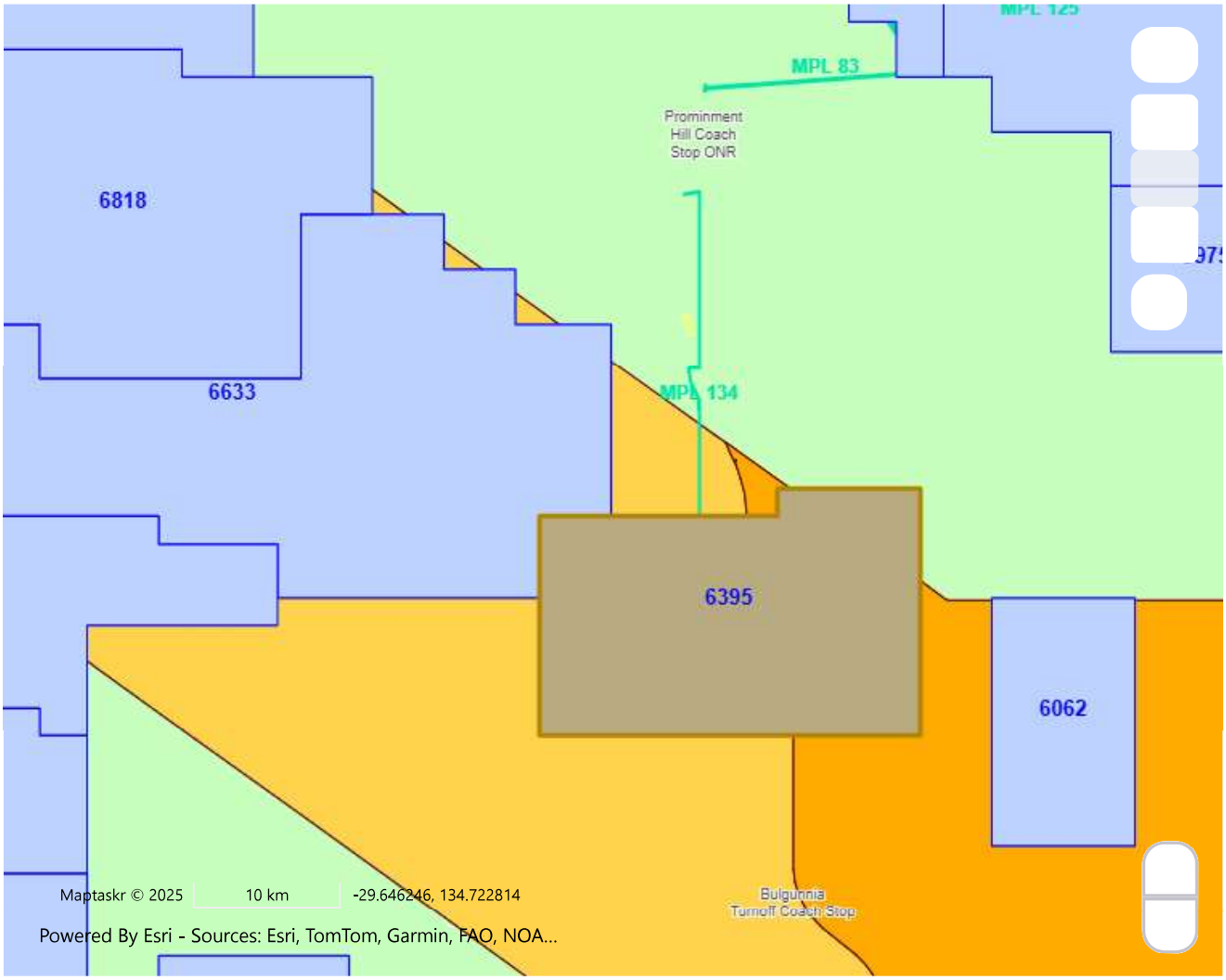
Project Description

The proposed exploration operations are designed to follow up drilling and geophysical results (high resolution aeromagnetic and ground gravity surveys) from the previous exploration undertaken by Arrium Mining as well as more recent exploration drilling campaigns. Further exploration, resource definition drilling, geotechnical and groundwater drilling will be completed over the Hawks Nest EL, with the main focus on iron ore and IOCG prospects.
Follow up drilling is planned for numerous Magnetite prospects within the Hawks Nest tenement to increase geological confidence in these prospects and updating mineral resources.
Central Iron representatives have met with the pastoral lease holder (McDouall Peak, Mt Eba and Bulgunnia) and the native title holders (AMYAC) and briefed all parties on the development and exploration plans for the Hawks Nest tenement.
All drill programs will be tendered and contracted to reputable drilling contractors with suitable drill rigs, RC, RAB/Rotary and/or diamond capabilities UDR 1000 or equivalent supporting equipment, Schramm 650 and boosters.
Baseline flora and fauna surveys for the Hawks Nest project area were undertaken in 2022 and 2023 (EBS Ecology) with follow up annual Spring survey each subsequent year.

Clearly describe why a PEPR review is required, summarise all content changes made to the approved PEPR, and provide appropriate justification where a time extension is required.

An administrative PEPR review is required to add an additional pastoral landholder and uploading of the ongoing E-PEPR 2014-107 to the MERS system.

Identify Application Area



Map Layer Intersects

Application Area Details

Location Description

Hawks Nest - Billah Hill approximately 125km south of Coober Pedy

Area (Sqkm)

398.16

Spatial Data Intersects - Summary Table

Show 10 entries Search:

Spatial Layer Name	Category	Referral	Intersect Count
1:250K mapsheets	Other		2
Cadastral Parcels	Other		5
Determinations of Native Title	Other		1
Exploration licences (mineral/opal)	No-Go Area		1
Mineral leases (ML)	No-Go Area		1
Mines and Projects	Other		1
Mining lease	No-Go Area		1
Miscellaneous purposes licences (MPL)	No-Go Area		1
Pastoral Lease Boundaries	Other		3
Prescribed Wells Area (Far North GAB)	Other		1

Showing 1 to 10 of 14 entries Previous 1 2 Next

Spatial Data Intersects - Details Table

Show 10 entries Search:

Spatial Layer Name	Shape	Primary Attribute	All Attributes	Category
1:250K mapsheets	Shape 1	KINGOONYA	View attributes	Other
1:250K mapsheets	Shape 1	BILLA KALINA	View attributes	Other
Cadastral Parcels	Shape 1	H833600BL1099	View attributes	Other
Cadastral Parcels	Shape 1	D28563QP3	View attributes	Other
Cadastral Parcels	Shape 1	D28563QP1	View attributes	Other
Cadastral Parcels	Shape 1	D28562QP2	View attributes	Other
Cadastral Parcels	Shape 1	F260271QP101	View attributes	Other

Spatial Layer Name	Shape	Primary Attribute	All Attributes	Category
Determinations of Native Title	Shape 1	Antakirinja Matu-Yankunytjatjara	View attributes	Other
Exploration licences (mineral/opal)	Shape 1	EL 6395	View attributes	No-Go Area
Mineral leases (ML)	Shape 1	ML 6531	View attributes	No-Go Area

Showing 1 to 10 of 26 entries

Previous 1 2 3 Next

Program Preparation

Work Undertaken in Preparing the Proposal

The proposed exploration operations are designed to follow up drilling and geophysical results (high resolution aeromagnetic and ground gravity surveys) from the previous exploration undertaken by Arrium Mining as well as more recent geophysical and exploration drilling campaigns undertaken by Central Iron. Further investigative drilling for geotechnical and groundwater data will also be completed over the Hawks Nest iron ore project and Billah/Osprey IOCG targets.
Follow up drilling is planned for numerous Magnetite prospects within the Hawks Nest tenement to increase geological confidence in these prospects and updating mineral resources. Further exploration will also target other anomalies over the Hawks Nest tenement.
Central Iron representatives have met with the pastoral lease holders (McDouall Peak, Mt Eba and Bulgunnia) and the native title holders (AMYAC) and briefed both parties on the development and exploration plans for the Hawks Nest tenement.
All drill programs will be tendered and contracted to reputable drilling contractors with suitable drill rigs, RC, Rotary and/or diamond capabilities UDR 1000 or equivalent supporting equipment, Schramm 650 and booster/auxiliary compressor.
Baseline flora and fauna surveys for the Hawks Nest project area were undertaken in 2022 and 2023 (EBS Ecology) and followed up with annual Spring surveys.

Operator Capability

Peak Iron maintains a comprehensive Environmental Management System (EMS) that applies to all projects, including exploration programs and mining operations. Relevant components of the Peak Iron EMS include the following documents:

- Peak Iron Cultural Heritage Management Plan
  - Cultural Heritage Discovery Procedure
- Peak Iron Vegetation and Fauna Management Plan
  - Ground Disturbance Procedure
  - Vehicle Weed and Seed Management Procedure
- Peak Iron Erosion and Runoff Management Plan
- Peak Iron Waste, Hydrocarbon and Chemical Management Plan
- Peak Iron Environmental Incident Response Procedure

Peak Iron has robust incident reporting and compliance tracking systems already in place, used for current operations and previous exploration programs. Peak Iron has an induction process which is mandatory for all access to the exploration licence area (applies to staff, contractors, and visitors). Peak Iron has a dedicated full-time Stakeholder Relationship Manager who oversees the existing relationships we have with landowners and other external parties and responds to any feedback or complaints. Peak Iron has a dedicated Environment Team who will undertake site inspections to assess compliance during and after an exploration program.

Lease Conditions

No other exploration licence conditions are applicable

Land Access

Identify the Owners of Land and authority to access land

Land Title Reference	Plan Parcel Reference	Type of Land	Owner of Land ↑	Land Access Authorisation Method	Date of Form 21 or Agreement Signed	Instrument or Uploaded Document Id	Uncheck land not applicable to your application ar
CL 6304/473	F260271QP101	Leasee	Commonwealth Hill Pty Ltd - MacLachlan Family	Service of Notice of Entry	07/07/2023		Checked
/	H833600BL1099	Leasee	Commonwealth Hill Pty Ltd - McLachlan Family	Service of Notice of Entry	07/07/2023		Checked
CL 6211/148	D28563QP3	Leasee	McDouall Peak Ryan and Petie Rankin - Ryan Rankin Pty Ltd	Service of Notice of Entry	07/07/2023		Checked
CL 6164/642	D28562QP2	Leasee	Mt Eba Pastoral Pty Ltd Peter and Margie Whittlesea	Service of Notice of Entry	19/11/2025		Checked
CL 6211/148	D28563QP1	Leasee	The Twins Ryan and Petie Rankin - Ryan Pankin Pty Ltd	Service of Notice of Entry	07/07/2023		Checked

Regulation 4 Consent – Exercise a right over a road, street or highway

No

Woomera Prohibited Area (WPA)

Will activities be conducted within the WPA?

Yes

In which zone will activities be conducted?

Name	Are you intending to undertake work?	Closure start date	Closure end date
Defence periodic use zone 1	No	20/10/2025	21/12/2025
Defence periodic use zone 2	No	20/10/2025	16/11/2025
Defence infrequent zone	No		

Do you have a resource exploration permit in place?

Yes

Permit No.

REX 016-15

What is the expiry date of the exploration permit?

24/11/2028

Does the Exploration Permit allow the operator to conduct exploration operations in the WPA?

Yes

Other Land Owned or Controlled by the Commonwealth Department of Defence

Indicate if you are intending to undertake exploration operations within the identified defence land?

No

Other Commonwealth Defence Land

Defence Land	Applicable

There are no records to display.

Do you have a Deed of Access with Defence?

—

Expiry date of the Deed of Access

—

Enter the date the Range Control Officer granted permission to conduct the proposed exploration operations

—

Describe the results of consultation and how any concerns raised were addressed

—

Native Title

Does 'Native Title land' exist within the application area?

Yes

Using the table below, describe how you have complied with the requirements of Part 9B of the Mining Act for each tenement.

Name of Determined / Claimant Group	Agreement Type	Instrument Number	Applicable
Antakirinja Matu-Yankunytjatjara	Native Title	NTMA	Yes
Antakirinja Area Minerals Exploration ILUA			No
McDouall Peak Pastoral ILUA			No
Bulgunnia Pastoral ILUA			No
Antakirinja Matu-Yankunytjatjara Aboriginal Corporation RNTBC	Native Title	NTMA	Yes

Provide any additional relevant information

—

Exempt Land

Has Exempt land been identified?

No

Land Title	Plan Parcel	Owner of Land that has benefit of exemption ↑	Why is the land exempt land?	Waiver of exemption(s) been negotiated	Instrument Number or Uploaded Document Id
CL 6304/473	F26027 1QP101	Commonwealth Hill Pty Ltd - MacLachlan Family			
/	H83360 0BL109 9	Commonwealth Hill Pty Ltd - McLachlan Family			
CL 6211/148	D28563 QP3	McDouall Peak Ryan and Petie Rankin - Ryan Rankin Pty Ltd			
CL 6164/642	D28562 QP2	Mt Eba Pastoral Pty Ltd Peter and Margie Whittlesea			
CL 6211/148	D28563 QP1	The Twins Ryan and Petie Rankin - Ryan Pankin Pty Ltd			

Consultation

Stakeholder ↑	Land Use	Matters raised	Stakeholder concerns raised and how addressed
Commonwealth Hill Pty Ltd - MacLachlan Family	Grazing	No concerns or matters raised	No concerns or matters raised
Commonwealth Hill Pty Ltd - McLachlan Family	Grazing	No concerns or matters raised	No concerns or matters raised
McDouall Peak Ryan and Petie Rankin - Ryan Rankin Pty Ltd	Grazing	All gates to be closed and access via existing tracks only	All gates are to be shut on entering/egress via exsiting access tracks
Mt Eba Pastoral Pty Ltd Peter and Margie Whittlesea	Grazing	Open communication and work with each on other station activities and exploration program timing	Planning and approval timeframes and communicating developments as they come to hand.
The Twins Ryan and Petie Rankin - Ryan Pankin Pty Ltd	Grazing	All gates to be closed and access via existing tracks only	All gates are to be shut on entering/egress via existing access tracks

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

No affected persons were not able to be consulted.

Describe any council policies (or out of council) or development plans that may impact the program area and a description of any known plans for future land use changes by other parties.

Out of Councils and no development plans impact the program area. No future land use changes by other parties are known.

Provide any additional relevant information.

NofE for Mt Eba will be uploaded to Mining Register imminently

Description of Environment

Proximity to Infrastructure and Housing

Proximity to infrastructure and housing

The closest towns are Coober Pedy, approximately 125km to the north and Glendambo, approximately 90km to the southeast. EL6395 covers parts of the Crown Leases for the pastoral stations of McDouall Peak Station, Bulgunnia Station and Mount Eba Station. The Stuart Highway bisects EL6395 to the east of the Buzzard Mining Lease ML 6531, within a generally north-south corridor.
There are no houses present within the boundaries of EL6395. McDouall Peak Station (the Twins) Homestead is the closest homestead approximately 10kms to the east of the Exploration Licence eastern boundary. Infrastructure includes a shearing shed, two cattle yards, fences, gates, windmills, tanks and associated poly pipelines, all associated with the pastoral activity.

Attach Files

Expand/Collapse

File Name	File Size (Mb)	Created On	Download
Access tracks.jpg	0.41 Mb	18-11-2025 15:50:34	Download (MERS/EPR-03995/Proximity to infrastructure/Access tracks_2025-11-18T05-20-34.537Z.jpg)
Hawks Nest Pastoral Stations.jpeg	1.19 Mb	18-11-2025 14:01:15	Download (MERS/EPR-03995/Proximity to infrastructure/Hawks Nest Pastoral Stations_2025-11-18T03-31-15.908Z.jpeg)
Location Map.jpg	0.29 Mb	18-11-2025 14:26:38	Download (MERS/EPR-03995/Proximity to infrastructure/Location Map_2025-11-18T03-56-39.312Z.jpg)
Woomera Prohibited Area and Pastoral Stations.jpg	0.69 Mb	18-11-2025 15:47:59	Download (MERS/EPR-03995/Proximity to infrastructure/Woomera Prohibited Area and Pastoral Stations_2025-11-18T05-17-59.934Z.jpg)

Landform, Topography, Soil and Surface Cover

Describe the topography and soil and surface cover (e.g. gibber) of the general area affected by the exploration program. Include details on the susceptibility to compaction, erosion, dust, runoff and visual attributes (steep or undulating slopes, plains, rocky outcrops, dunes, saltpans, claypans etc) any other characteristics (e.g. acid sulphate soils) that may require control strategies to reduce environmental impacts during operations or rehabilitation.

The regional land systems comprise gently undulating gibber plains, breakaways, creek lines and gilgais (drainage systems) as well as canegrass swamps and samphire wetlands. The immediate area of the Hawks Nest project lies on a gently undulating broad plateau. There is less than 70m of variation in elevation across the tenement along a 28km long east-west transect, from the high point to the east of the Stuart Highway in the north eastern corner of the tenement (~212m ASL) to the low-lying canegrass swamp area (~145m ASL) in the south western corner of the tenement.
Banded Iron Formation (BIF) outcropping at several locations forms low rocky ridges with steep dips on exposed bedding. Elsewhere on the tenement landforms comprise recent low sand dunes and colluvium. Minor drainage lines occur in the western and southern extent of the site and include cane-grass swamps. The stony tableland supports cracking clays in some areas; gilgais are shallow and limited in the landscape. The subdued topography limits the potential for erosion via runoff. Significant rain events may produce low velocity sheet wash and channelling along existing station tracks. The amenity of the area is characterised by pastoral grazing paddocks, with land use predominantly low-density sheep and cattle grazing.
Soils are generally broad calcareous loams. Gibbers commonly occur on the soil surface and form a partial protection to erosion. Gilgais with cracking clays also occur, and sandier soils may develop on alluvium. Soils developed on Bulldog Shale may be up to 0.5 m deep but are typically of low biological activity and low in nutrients, as is typical in arid South Australia. Evidence from station tracks in use over several decades suggests limited potential for compaction. The subdued topography limits the potential for erosion via runoff.

Attach Files

Expand/Collapse

File Name	File Size (Mb)	Created On	Download
Surface water and bodies.jpg	0.25 Mb	19-11-2025 18:24:09	Download (MERS/EPR-03995/Landform, topography/Surface water and bodies_2025-11-19T07-54-12.478Z.jpg)

Surface Water

Will the proposed program interfere with surface water bodies and natural drainage (e.g. drainage lines, creeks, floodplains, wetlands)?

Yes

Describe the potential interference and surface water bodies and natural drainage on maps

With regard to surface water, the project is located in the South Australian Arid Land Landscape area (SAAL Landscape), but more specifically in the Kingoonya region. Ill-defined and minor drainage lines occur in the proposed exploration area. The project occurs within the upper part of the Gairdner catchment, with broad drainage to the south towards Lake Gairdner. The divide between the Gairdner catchment and neighbouring Lake Frome sub-catchment of the Lake Eyre Basin is about 35 km NE of the Hawk's Nest site. During most of the year the normal condition for swamps and creeks in the arid zone of South Australia is dry. Waterbodies mapped in the area are all non-perennial including some named swamps. Swamps within EL 6395 include Horse Shoe Swamp in the north-western corner, Stafford Swamp in the centre, and Ten Mile Swamp to the east. Where drainage channels are located within target sites, care will be taken to minimise disruption to watercourses.
Original contours will be re-established as part of the rehabilitation process.
Disturbance to potentially sensitive surface water bodies and natural drainage systems is avoided by: avoiding mapped surface water features (shallow ephemeral swamps) during planning exploration programs, ground-truthing exploration programs prior to ground disturbance to ensure lesser features (such as minor drainage lines and claypans) are not impacted), locating access tracks outside of low-lying areas where possible, and rehabilitating disturbed areas in a timely manner to minimise the potential for erosion.

Indicate how you will avoid disturbance

—

Is the program area located within water protection areas defined under the River Murray Act 2003?

No

Select the name(s) of protected water areas

Is the program area located within any prescribed watercourses or prescribed surface water areas under the Landscape South Australia Act 2019?

No

Select the name(s) of the prescribed watercourses or prescribed surface water areas under the Landscape South Australia Act 2019.

Name	Applicable

There are no records to display.

Attach Files

Expand/Collapse

File Name	File Size (Mb)	Created On	Download
Surface water and bodies.jpg	0.25 Mb	18-11-2025 15:48:50	Download (MERS/EPR-03995/Surface water/Surface water and bodies_2025-11-18T05-18-51.055Z.jpg)

Groundwater

Is groundwater likely to be intersected when conducting the exploration program?

Yes

Provide evidence or any supporting information why groundwater is unlikely to be intersected.

—

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

The tenement lies near the south western margin of the Great Artesian Basin (GAB), specifically within a non- artesian part of the Western Eromanga Basin of the GAB. Sedimentary units at Hawks Nest which belong to the GAB are the Bulldog Shale and Algebuckina Sandstone, and are partly saturated or unsaturated. The Cadna- owie Formation (mainly sandstone) also occurs in the Western Eromanga Basin, however this unit is not well represented at Hawks Nest. The nearest artesian part of the GAB lies about 125 km northeast of Hawks Nest. Plans of groundwater streamlines indicate flow directions in the artesian section of the SW Eromanga Basin are largely to the south. These plans do not indicate any flow directions in the non-artesian part of the basin near Hawks Nest. A recharge area for GAB sediments is inferred to the west of Hawk's Nest. This implies an easterly direction of groundwater flow near Hawk's Nest. Within the immediate vicinity of the Hawks Nest project area, groundwater has been identified to date in occasional water-bearing fractures in bedrock. At the nearby Buzzard Project, Proterozoic bedrock of the Wilgena Hill Formation is overlain by up to 20m of Cretaceous clay/shale (Bulldog Shale) and generally sandy Cainozoic superficial deposits. This cover is unsaturated. Static water level occurs in bedrock, approximately 32m below ground level (bgl). Locally, Jurassic Algelbuckina Sandstone also overlies bedrock up to 40m bgl, and is partly saturated in some locations. Previous groundwater investigations (to 100m) intersected productive aquifers locally in fracture banded iron formation of the Proterozoic Wilgena Hill Formation.

The SA EPA Water Quality Policy (2015) describes water by its suitability for different purposes, defined as environmental values. Groundwater salinity is used as the primary guide to assess applicable environmental values for a particular groundwater source. To determine the environmental values for this project, salinity data from within the project area has been used and assessed against the environmental value salinity ranges.

Groundwater salinity within the project area is highly variable ranging from 357 mg/L up to 18,735 mg/L. Groundwater is mainly suitable for livestock drinking water (3,000 to 13,000 mg/L) in the project area, though some wells show water quality low enough for irrigation and general purposes (1,200 to 3000 mg/L), and some suitable for human consumption (less than 1,200 mg/L, see Figure 7). There is a greater occurrence of lower salinity wells in the northwest of the project area, which may indicate higher recharge in this area. There are no distinguishable trends when comparing TDS to well depth.

The table below summarises the salinity data within the project area sorted by aquifer monitored. The data suggests that on average the lowest salinity water occurs in the basement fractured rock aquifer, noting that the total number of basement wells is significantly less than what is available for the J-K aquifer. The J-K aquifer has both the highest and lowest recorded salinity within the project area with a median salinity of 5,375 mg/L. There is only one well completed in the Arckaringa Basin in the project area with a recorded salinity of 10,953 mg/L.

Table: Groundwater Salinity by Aquifer Assigned

Aquifer	Max mg/L	Min mg/L	Average mg/L	Median mg/L	Count
JK	18,735	357	5,622	5,375	56
Basement	8,217	506	3,065	2,250	12
Arckaringa	10,953	10,953	10,953	10,953	1
Not assigned	15,848	440	5,562	4,874	55

Add the different groundwater conditions for each localities/areas to the table below.

Name ↑	Formation age and/or stratigraphic unit	Stratigraphic intervals (depth range) (m)	Aquifer formation name	Aquifer Interval/thinkness (from-to) (m)	Aquifer Type	Aquifer salinity (TDS)	Depth to groundwater (m)	Comments
Far North								
Hawks Nest	Palaeoproterozoic - Wilgena Hill Formation	40	Basement	Not consistent interval - reliant on fracture network	Confined	Generally, above 5000 TDS	40	
Hawks Nest	Jurassic Algebuckina Sandstone	20	J-K Aquifer	32-40	Unconfined	Generally, above 1000 TDS	32	
Hawks Nest	Cretaceous Bulldog Shale and possible Cadna-Owie Formation	30	Nil	Nil	Unconfined	Nil	32	At Hawks Nest Standing Water Levels are below the depth of the base of the Bulldog Shale

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

The SA EPA Water Quality Policy (2015) describes water by its suitability for different purposes, defined as environmental values. Groundwater salinity is used as the primary guide to assess applicable environmental values for a particular groundwater source. To determine the environmental values for this project, salinity data from within the project area has been used and assessed against the environmental value salinity ranges.
Groundwater salinity within the project area is highly variable ranging from 357 mg/L up to 18,735 mg/L. Groundwater is mainly suitable for livestock drinking water (3,000 to 13,000 mg/L) in the project area, though some wells show water quality low enough for irrigation and general purposes (1,200 to 3000 mg/L), and some suitable for human consumption (less than 1,200 mg/L). There is a greater occurrence of lower salinity wells in the northwest of the project area, which may indicate higher recharge in this area. There are no distinguishable trends when comparing TDS to well depth. The salinity data within the project area was sorted by aquifer monitored. The data suggests that on average the lowest salinity water occurs in the basement fractured rock aquifer, noting that the total number of basement wells is significantly less than what is available for the J-K aquifer. The J-K aquifer has both the highest and lowest recorded salinity within the project area with a median salinity of 5,375 mg/L. There is only one well completed in the Arckaringa Basin in the project area with a recorded salinity of 10,953 mg/L.

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

Mapping from the Groundwater Dependant Ecosystem Atlas strongly indicates that there are unlikely to be any aquatic or terrestrial GDE in the Project Area. Ephemeral swamps and wetlands are likely to be dependent on inflows from surface runoff. These swamps have been previously assessed as a part of the Buzzard PEPR and were found not to be groundwater dependent. Low-potential terrestrial ecosystems are found in the west and south of the project area and are listed as acacia woodland across the Simpson Desert. To the north there are minimal terrestrial GDEs as the land is flat, arid desert.

Is the proposed program located within a prescribed wells area?

Yes

Select the prescribed wells

Far North Prescribed Wells Area

Is the proposed program located within a prescribed water resource area?

No

Select the prescribed water resource areas

Provide any additional information

Groundwater in the project area falls within the Far North Prescribed Wells Area (FNPWA) and therefore is subject to the Landscape South Australia Act 2019. Central Iron and its associated contractors will comply with all conditions as described in the Far North Prescribed Wells Area Water Allocation Plan.
Central Iron is progressively implementing procedures consistent with M21 Mineral Exploration Drillholes – General Specifications for Construction and Backfilling. This includes systematic dipping of holes during drilling operations to assist in understanding the groundwater regime, and cement grouting and backfilling as per the guidelines. The intersections documented above at various depths from 100-200m bgl are believed to represent potentially permeable fault/fracture zones, and their presence or absence is not possible to predict prior to drilling. In addition, the number of aquifers, the flow directions and potential interconnectivity is not predictable prior to drilling.
The following are extracts from a desktop hydrogeology report compiled by consulting hydrologists Water Technology (2022):
Existing users
The site is located near the southern boundary of the Far North Prescribed Wells Area (FNPWA), a regional-scale resource for which groundwater is prescribed under the Landscape South Australia Act 2019. The climate is arid with little to no surface water available, making groundwater the main supply option for mining operations as well as the pastoral industry, inland population centres, and stock and domestic users. The FNPWA Water Allocation Plan (WAP) provides for the sustainable management of water resources in the region. Extraction of groundwater within the FNPWA requires a groundwater licence. Stock and domestic groundwater users have been identified using data from WaterConnect. Filters were applied prior to reviewing the data to remove all drillholes not assigned as water wells and all water wells classified as; abandoned, backfilled, blocked, capped, collapsed, decommissioned, mined, not located, plugged, or rehabilitated. Licenced well user locations were provided by the Department for Environment and Water (DEW). Information including ownership and allocated volumes were not provided for privacy reasons.

The nearest existing user to the Kite deposit is located 5 km to the south. Near the Kestrel deposit, the nearest user is located 3 km to the northeast. Potential impacts on these and other users will need to be considered in the groundwater impact assessment for the Kite and Kestrel deposits. The nearest user to the Billah prospect is Billah bore 2.5km west of proposed drilling.

Groundwater levels and flow
Groundwater occurs in multiple aquifers within the project area including the basement fractured rock aquifer, the J-K aquifer and the Mount Toondina Formation and Boorthanna Formation. Of these the J-K aquifer of the Eromanga Basin is the most widely recognised, as it is one of three sedimentary basins which make up the Great Artesian Basin (GAB). Despite its association with the GAB, it is important to note that the project area lies at the southwestern margin of the Eromanga Basin over 130 km away from the spring communities of the GAB. Hydrogeological mapping completed by DEW indicates that aquifer conditions in the J-K aquifer are either unconfined or dry (Sampson at al., 2012). Confined conditions in the J-K aquifer occur over 50 km to the north, while the artesian extent of the aquifer is 130 km to the northeast. The general groundwater flow direction in the J-K aquifer is from the west to northeast across the site.
Archaean to Mesoproterozoic basement rocks are also known to store and transmit groundwater within the project area, particularly where secondary porosity has developed though fracturing and faulting. Geological units include the Hutchison Quartzite and the ore bearing Wilgena Hill Formation. Groundwater elevation data for wells completed in basement rocks indicate a west to east hydraulic gradient across the site. Aquifers associated with the Arckaringa Basin including the Mount Toondina and Boorthanna Formation are mapped to the south, east and north of the project area based on work completed by Keppel et al. (2014). Despite the inferred presence of these formations, there is very little known about the hydrogeological characteristics of these formations within the project area due to the limited number of wells completed in these formations. The nearest well recorded as being completed in the Arckaringa Basin is located over 30 km to the northeast, installed during water supply investigations for the Prominent Hill mine site. The hydrogeological characteristics and flow directions of the Arckaringa Basin remain largely unknown within the project area.
Regionally, groundwater flow towards the northeast towards the GAB springs which are located around 130km away where the J-K aquifer transitions from confined to artesian.
See attachment - GW continued text

Attach Files

Expand/Collapse

File Name	File Size (Mb)	Created On	Download
Groundwater existing users.jpg	0.25 Mb	18-11-2025 16:50:02	Download (MERS/EPR-03995/Groundwater/Groundwater existing users_2025-11-18T06-20-02.807Z.jpg)
Groundwater Salinity by aquifer.jpg	0.26 Mb	18-11-2025 16:50:11	Download (MERS/EPR-03995/Groundwater/Groundwater Salinity by aquifer_2025-11-18T06-20-12.032Z.jpg)
Groundwater salinity table.jpg	0.04 Mb	18-11-2025 16:49:58	Download (MERS/EPR-03995/Groundwater/Groundwater salinity table_2025-11-18T06-19-59.297Z.jpg)
GW continued.jpg	0.23 Mb	01-12-2025 12:49:04	Download (MERS/EPR-03995/Groundwater/GW continued_2025-12-01T02-19-06.243Z.jpg)

Native Vegetation

Will you be working within areas of native vegetation?

Yes

Provide the following information:

A vegetation survey completed by EBS Ecology in 2022 and 2023 and annual spring surveys of the Hawks Nest area provides the following:
The Interim Bio-regionalisation of Australia (IBRA) classifies Australia's landscapes into geographically distinct Bioregions based on common climate, landform, geology and native vegetation. Each Bioregion is further divided into smaller sub-regions based on differences in the above at a more local scale. The Project Area is in the Breakaways subregion of the Stony Plains Bioregion.
The Stony Plains bioregion is described as arid stony silcrete tablelands and gibber and gypsum plains with sparse low chenopod shrublands on duplex soils and calcareous earths, dissected by large arid drainage systems with Coolabah and River Red gum on cracking clays along riverbanks of numerous creeks and rivers. The Breakaways subregion is described as a dissected silcrete tableland and mesas, and extensive gibber-covered footslopes on deeply weathered shales. There is a cover of chenopod shrubs and forbs (Atriplex vesicaria, Sclerolaena spp. Halosarcia spp.) on crusty red duplex soils and reddish firm siliceous loams with small areas of low woodland (Acacia cambagei, Eucalyptus camaldulensis, E. coolabah ssp. arida) on brown self-mulching cracking clays.
The field survey mapped five vegetation associations across the Project Area. Open shrublands covered the greatest extent of undulating plains, dominated by Maireana spp., Acacia spp. and Eremophila spp. These shrublands had a sparse, grassy understorey with Aristida contorta, Enneapogon spp. and Eragrostis spp. common. Open Acacia aptaneura low woodlands were also extensive, particularly in areas with sandy soil and low-lying flats, run-on areas and drainage lines within undulating plains. In ephemeral swamps subject to infrequent inundation, woodlands were replaced by a sparse to open shrubland of Chenopodium nitrariaceum, with Eragrostis setifolia and Marsilea drummondii dominating the grass/forb under storey.
Overall vegetation condition was reflective of the land use of the Project Area (i.e. sheep and cattle grazing), with grazing utilisation evident at most vegetation survey sites. Grazing impact was generally low. The shrubland here was dominated by unpalatable species, such as Acacia tetragonophylla, with only sparse Maireana spp. shrubs and very sparse grassy under storey.
VA1: Vegetation association description: Acacia aptaneura +/- Santalum lanceolatum Low Woodland over Acacia tetragonophylla and Maireana spp.
VA2: Vegetation association description: Acacia aptaneura Sparse to Mid-dense Low Woodland over Acacia tetragonophylla +/- Eremophila latrobei ssp. glabra, Aristida contorta and Eragrostis eriopoda.
VA3: Vegetation association description: Eremophila rotundifolia / Eremophila duttonii +/- Eremophila latrobei ssp. glabra +/- Acacia tetragonophylla Open Shrubland over Ptilotus obovatus and Aristida contorta.
VA4: Vegetation association description: Maireana sedifolia / Maireana triptera / Maireana astrotricha Low Open Shrubland over Ptilotus obovatus, Aristida contorta and Enneapogon polyphyllus.
VA5: Vegetation association description: Chenopodium nitrariaceum Open Shrubland over Teucrium racemosum and Marsilea drummondii.

No flora species listed under the National Parks and Wildlife Act SA 1999 (NPW Act) and the Environmental Protection and Biodiversity Conservation Act 1999 (EPBC Act) have been recorded in the study area.

Indicate why you will not be working within areas of native vegetation?

—

Attach Files

Expand/Collapse

File Name	File Size (Mb)	Created On	Download
EPBC Threatened species 50km .jpg	0.2 Mb	18-11-2025 16:54:41	Download (MERS/EPR-03995/Native Vegetation/EPBC Threatened species 50km _2025-11-18T06-24-42.248Z.jpg)

File Name	File Size (Mb)	Created On	Download
NPW Listed species.jpg	0.23 Mb	18-11-2025 16:54:24	Download (MERS/EPR-03995/Native Vegetation/NPW Listed species_2025-11-18T06-24-25.174Z.jpg)
Threatened Species.jpg	0.47 Mb	18-11-2025 16:54:20	Download (MERS/EPR-03995/Native Vegetation/Threatened Species_2025-11-18T06-24-20.759Z.jpg)
Vegetation communities.jpg	0.43 Mb	18-11-2025 16:54:15	Download (MERS/EPR-03995/Native Vegetation/Vegetation communities_2025-11-18T06-24-16.135Z.jpg)

Fauna

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

Fauna surveys have been completed by EBS Ecology over Hawks Nest provides the following:
The surveys recorded 71 fauna species. This consisted of one frog, 10 reptiles, 48 birds and 12 mammals.
Three threatened fauna species, including one listed as Vulnerable under the EPBC Act, were recorded in the Project Area: Southern Whiteface (Aphelocephala leucopsis) EPBC Act Vulnerable, Chestnut-breasted Whiteface (Aphelocephala pectoralis) NPW Act Rare, and Scarlet-chested Parrot (Neophema splendens) NPW Act Rare.
The Southern Whiteface was recorded in all but one of the vegetation associations mapped in the Project Area. It is likely to be widespread, with all vegetation in the Project Area representing suitable habitat. The species is known to be largely sedentary, although some local movements are likely due to climatic conditions. It may be more common in the Project Area following periods of increased rainfall.
The Project Area contains large areas of semi-arid to arid shrublands known as the typical habitat for Chestnut-breasted Whiteface. This species is probably widespread across the Project Area, with its non-detection in spring relating to the dry conditions. Birds in general were in low numbers in spring and difficult to detect.
The Project Area probably represents poor habitat for Scarlet-chested Parrot. This species is typically known to inhabit mallee vegetation associations which do not occur in the Project Area. Only a single bird was located, despite several searches at the record's location on consecutive days. It is probable that the record represents a single bird dispersing between areas of more suitable habitat.
Historic fauna surveys have also occurred in November 2012 (Ecological Horizons 2012 and Bebbington 2012). The State-listed vulnerable Brown Quail was recorded in the study area and the EPBC listed Plains Mouse was recorded in Fox scats found in the study area. Both species most likely inhabit densely vegetated drainage termini in the study area. Other species of conservation interest recorded from field work was the State-listed rare Chestnut-breasted Whiteface and database searches identified Major Mitchell Cockatoo and Grey Falcon as potential species of interest in the area, although not recorded during the survey. The Hawks Nest region was not considered to contain core habitat for any of these species of conservation concern. Although the Hawks Nest region contains relatively intact reptile and bird assemblages, mammal abundance and diversity were low. Most likely reasons for the low mammal records were the dry conditions at the time of survey, habitat modification caused by extensive cattle grazing and predation by dense populations of foxes and to a lesser extent cats. Bat diversity and abundance was low due to the paucity of roosting sites such as caves or hollow trees.
Overall, the Habitat Score Ranking for the Buzzard area is considered to be High due to the mosaic of interconnected vegetation types, the presence of open grasslands and the linkages to Stafford Swamp and Gilgai's in high rainfall years. A total of 30 bird species were recorded in the immediate vicinity of Buzzard. Only four reptile species were recorded opportunistically which is likely to be attributed to the high number of foxes recorded during spotlight surveys within the study area. Overall, the Habitat Score Ranking for Tui is considered to be Moderate due to the previous clearance reducing vegetative linkages, except along the northern boundary drainage line which still provide excellent linkages to the adjoining Buzzard are. Only 13 bird species were recorded in the Tui site with the majority of opportune sightings occurring within the northern run-off area. The habitat values for the Kestrel area and surrounds is classified as High due to the mosaic of landforms, soil types and associated vegetation communities which have good connectivity to adjoining areas. A total of 24 bird species, three mammals and three reptiles were recorded opportunistically during survey.
Predation of ground dwelling fauna within a three-kilometre radius of the Coronation Bore watering point is high as foxes and cats source water from the stock trough and then radiate out into dunes and Shrublands to hunt. During spotlight surveys of the Coronation paddock high numbers of foxes and cats in good condition were recorded in the vicinity of the Coronation Bore watering point.
In the Species table below the EPBC Rating has been assigned Conservation dependent for NPW rating without EPBC reference.

Significant Habitats, Flora and Fauna

Are there any significant habitats, flora and fauna within the project area?

Yes

Use the table below to list any significant habitats and any rare or endangered flora and 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 name/habitat	Common name	NPW Act Rating	EBPC Act Rating
Coturnix ypsilophora	Brown Quail	Vulnerable (VU)	Conservation dependent
Aphelocephala pectoralis	Chestnut-breasted Whiteface	Endangered (EN)	Conservation dependent
Pseudomys australis	Plains Mouse	Vulnerable (VU)	Vulnerable
Aphelocephala leucopsis	Southern Whiteface	Vulnerable (VU)	Vulnerable
Neophema splendens	Scarlet-chested Parrot	Endangered (EN)	Conservation dependent

Attach Files

Expand/Collapse

File Name	File Size (Mb)	Created On	Download
EPBC Threatened species 50km .jpg	0.2 Mb	18-11-2025 17:22:39	Download (MERS/EPR-03995/Fauna/EPBC Threatened species 50km _2025-11-18T06-52-39.622Z.jpg)
NPW Listed species.jpg	0.23 Mb	18-11-2025 17:22:48	Download (MERS/EPR-03995/Fauna/NPW Listed species_2025-11-18T06-52-48.982Z.jpg)
Threatened Species.jpg	0.47 Mb	18-11-2025 17:23:05	Download (MERS/EPR-03995/Fauna/Threatened Species_2025-11-18T06-53-06.440Z.jpg)

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).

Previous surveys at Hawks Nest have identified several weed species in the area: Buffel Grass (Cenchrus ciliaris), Spike Malvastrum (Malvastrum americanum), and Caltrop (Tribulus terrestris) (EBS 2023). Caltrop is widespread in the Project Area, with Spiked Malvastrum present in most swamps and drainage areas. Only three locations of Buffel Grass have been recorded. Horehound (Marrubium vulgare) has also been recorded, predominately in disturbed cattle camps and old stock yards near Coronation Bore (Bebbington 2012).
Buffel Grass and Caltrop are both listed as Declared under the Landscape SA Act 2019, although only Buffel Grass is a priority for control in the region. The Stony Plains bioregion (Zone 2) is identified as a protection and management zone for Buffel Grass (Cenchrus ciliaris) in the draft SA Arid Lands Buffel Grass Management Plan (2007), and that appropriate steps should be taken to minimise the potential for spread of this weed species. There is an ongoing weed control program by Peak Iron Mines targeting Buffel Grass on site.

Attach Files

Expand/Collapse

File Name	File Size (Mb)	Created On	Download
No Files Uploaded			

Aboriginal Heritage

Describe the steps taken to identify Aboriginal heritage sites within the proposed area of exploration. Include a statement advising if an Aboriginal heritage survey has been conducted by the proponent and if so, the results of the survey.

Aboriginal Heritage clearance surveys have been conducted over the whole of the exploration licence. These surveys have identified several areas of heritage significance associated with surface water features. A 50m buffer was applied to the significant areas, and Peak Iron has agreed to avoid accessing these areas for any exploration activities. Maps displaying the areas of heritage significance cannot be published as this data is confidential; however, this data is used in planning of all exploration activities to ensure that the heritage areas are not accessed by staff or contractors.

Environmentally Sensitive Locations

Indicate if you are intending to undertake exploration operations within the environmentally sensitive locations listed.

No

Name	Applicable
There are no records to display.	

Are you likely to impact on the environmentally sensitive area?

—

Detail the likely effects the proposed program may have.

—

Attach Files

Expand/Collapse

File Name	File Size (Mb)	Created On	Download
No Files Uploaded			

Exploration Operations

Exploration Scope

Describe all exploration methods to be covered by the PEPR

The following exploration activities are proposed:
• Ground geophysical surveys and airborne geophysical surveys
• Resource Reverse Circulation and Diamond Drilling at numerous prospects within the Hawks Nest project area
• Auger, Air Core, Reverse Circulation and Diamond Drilling to follow up targets generated by geophysical and/or geochemical methods
• Hydrogeological studies, including installation of groundwater monitoring bores and aquifer testing requiring temporary turkeys nests
• Metallurgical test work, large diameter core or specific bulk sampling machinery
• Geotechnical studies, drilling or monitoring equipment
• Ground geochemical surveys, soil sample and rock chip sampling

Describe the extent of exploration operations – e.g. drillhole spacing and drill line density.

Drill hole spacings may range from 50 x 25 metres to in excess of 100 x 50 metres in defined resource drilling – on occasion, more than one hole may be drilled from one drill pad to minimise environmental impact (eg an angled hole and a vertical hole with hole collars separated by 5-10m).
Geophysical anomalies may also be tested by holes on a spacing determined by the anomaly footprint, but not necessarily on a defined pattern.

Describe the geographic extent of the area covered by the PEPR, including a general locality plan with tenement details, landowner boundaries and areas with environmental classifications or sensitivities.

The geographic extent of the area covered by this PEPR is focused on geophysical targets and recent exploration activities are shown in attached map.

Describe the specific environments where exploration operations will not be conducted – e.g. parks, reserves, salt lakes etc.

Aboriginal Heritage Areas

Equipment and Personnel Requirements

Describe the maximum composition of field crews (operator, contractors, and geologists) and proposed working hours/days for each type of activity.

The maximum size of field crew on the Hawks Nest tenement is anticipated to consist of 3-4 person crews for one drill rig, as well as technical support crews (geologists, field technicians, other contractors). All staff associated with the drilling activities will work a roster, 12hrs shift – Both day and night shift.

Using the table below, describe the equipment (size, number and contractor details) required to conduct the proposed operations.

Name	Owner/Operator	Description/capacity	Activity/purpose
Drill rig	Bullion Drilling	This rig is capable of drilling RC holes to depth of 500m.	RC drilling
Drill rig	Foraco	Diamond drill rig and support equipment - rod slew, rod handler, operators hut Rig is capable of core drilling to 2000m NQ, 1000m HQ, 500m PQ and multipurpose RC/Air drilling to 500m	Diamond and RC drilling
Support trucks	Bullion and Foraco	Merecedes or equivalent support trucks	Primer mover, equipment, fuel and water supplies
Front end loader or backhoe	Agile	Suitable size to undertake sumps creation	Drill pad clearing/ excavation of sumps and turkey nests for the purpose of aquifer testing
Auxiliary booster/compressor	Bullion and Foraco	Auxiliary booster, high pressure 2000cfm 1000psi	Auxiliary booster/compressor for drilling operations
Grader	Agile	Grader suitable size to grade station tracks	Prepare access tracks and drill track forming.
Light vehicle	Exploration contractors and staff	4WD light vehicles	Access to and from exploration sites

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)?

No

Describe each type of low impact operations proposed.

—

Drilling Operations

Will exploration drilling operations be conducted?

Yes

Identify all the drilling methods that will be used.

Aircore, Rotary Air Blast, Rotary Mud, Reverse Circulation, Diamond Drilling, Aircore with Diamond Tails, Rotary A...

Where 'Other' drilling method is selected, provide a description of the drilling method.

Sonic drilling and/or Caldwell drilling. Sonic drilling to drill in formations of low recovery. Caldwell drilling to take large sample mass.
Multiple drilling methods are anticipated to be used for exploration on the Hawks Nest tenement, as there are multiple targets across different commodities at various stages of exploration. There is the potential for Auger drilling to be completed on potential gold targets, RC and Diamond drilling on Magnetite targets and rotary mud drilling for water bores. Large diameter (Caldwell) type rig/excavator capable of bulk sampling.

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.

Earthworks will be minimised as much as practicable to provide a safe work area. Drill pads will be approximately 30 x 25 horizontal metres, which is the minimum safety requirement for access. Sumps may be required for drill holes, dependent on drilling method (Diamond) used and if groundwater is likely to be encountered. Nominal sump dimensions are 6m x 3m x 1-2m deep, subject to topography and ground conditions. A minimum of one sump will be required per drilling type. Vegetation clearance will be kept to a minimum and where possible by adjusting drill hole locations. All sumps will be backfilled once groundwater has evaporated, and displaced soil replaced to the original ground profile.
Drill cuttings will be back filled down the drill holes, buried in sumps or removed from the site.

Drillhole Construction and Decommissioning

Drillhole construction and decommissioning

Drill holes constructed by air or rotary methods will have PVC casing installed in the collar, with diamond holes utilising steel casing that will be removed or cut off below the ground in line with DEM Guideline M21 – Mineral Exploration Drill holes - General Specifications for Construction and Backfilling.

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

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.

Exploration drilling
Exploration drilling will be undertaken using auger, aircore, rotary, reverse circulation (RC) and diamond drilling methods.
RC holes will be drilled using a 5 ¾ inch hammer up to a maximum depth of 500m, depending on survey requirements.
RC holes will be reamed for the first 6-12m and cased with PVC casing to a depth of approximately 6-12m and cemented in place with setting foam to prevent collar collapse.
Diamond holes drilled to a maximum depth of 1,000m, depending on survey requirements. Diamond holes are steel cased during drilling operations and generally do not require PVC casing.
Aircore drilling does not use casing. Auger and Rotary holes may require PVC casing in the collar section of the hole.
Groundwater wells:
Drilling will be undertaken using rotary air blade and/or rotary air hammer drilling methods. The first 6-30m of each hole will be cased and cemented with 200mm steel starter casing to provide stability and integrity for the hole during drilling.
Test dewatering wells will be drilled to around 220m and completed as open holes if the formation is deemed to be stable. If the formation is not stable, 125mm screw-threaded PVC casing will be used with screens aligned to the fractured zones observed during drilling.
Investigation wells will be completed with 125mm screw-threaded PVC casing to depths of 50-150m. If unconsolidated sediments are encountered, the screened interval will be gravel packed before a bentonite plug and pressure cement to surface.
All drilling and well construction will be undertaken in accordance with the well permits and the Minimum Construction Requirements for Water Bores in Australia (4th Edition 2020). A Class 2 driller will be engaged to complete the wells in accordance with the requirements of the well construction permits.

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.

Drill holes will have PVC casing removed or cut off below the ground in line with DEM Guideline M21 – Mineral Exploration Drill holes - General Specifications for Construction and Backfilling. Should casing be required to be left temporarily above ground (e.g. for down hole survey, monitoring water levels etc), then casing will be capped immediately, reported in the annual compliance report and permission sought from DEM to keep holes open, and cutting and rehabilitation completed when monitoring is complete.
The method followed by Southern Iron and Central Iron with regard to managing drilling activities with respect to groundwater, in accordance with the DEM guidelines is as follows:
• On intersection of any groundwater during drilling, the level is recorded, the hole is left to stand for 15 minutes, and downhole measurements taken to determine whether the water level is static, rising or falling
• Drill holes which penetrate a single unconfined aquifer — on completion, backfill with drill cuttings, clean fill containing clay, or cement
• Drill holes which penetrate a single confined aquifer — plug from the level at which the aquifer was penetrated with cement grout back to a minimum of 15 m into the confining bed above; and then backfill as above.
• Drill holes which penetrate more than one aquifer — separate each aquifer by a cement grout plug and then backfill as above. The length of plug used will be dependent on aquifer pressure and thickness. The plug should extend through the aquifer back into the confining bed above, with a total minimum length of 20 m of grout. In an intermediate aquifer the plug should be emplaced from 15 m below the aquifer and extend upwards through the aquifer and to a distance of 15 m above the aquifer. Generally a minimum of 20 m of cement should be positioned between aquifers. Shallow holes (<200 m) may be back- filled from the bottom back to surface with grout.
Where no groundwater is encountered, drill holes will be capped if required for surveying or monitoring purposes, with permission from DEM to keep holes open, otherwise PVC casing will be cut off at ground level or below and then backfilled with drill cuttings from bottom of hole to top as per M21.
It is noted that should the Stuart Range Formation (generally an aquitard) and the Boorthanna Formation (generally an aquifer) be intersected in possible exploration drill holes in the north-east of EL6395, backfilling would take into account the requirements of the M21 guidelines for abandonment of drill holes penetrating multiple aquifers.
If groundwater is encountered in the Eromanga Sediments aquifer and in the underlying fractured rock aquifer, the basement unit would be isolated from the Eromanga aquifer with cement plug to maintain groundwater quality in each aquifer.
On completion of the exploration program, all drill cuttings will be back filled down the drillholes, buried in sumps or removed from the site. Drill sites and sumps will be rehabilitated as per DEM requirements. Sumps that are lined with plastic and upon rehabilitation as much of the plastic as reasonably practicable will be removed. The pastoral lease holder will be consulted during rehabilitation of drill pads and sumps to minimise potential impacts on pastoral activities. There are no salt lakes in the vicinity of these drill sites. Where drainage channels are located within target sites, care will be taken to minimise disruption to watercourses. Original contours will be re-established as part of the rehabilitation process. Soil pushed aside to establish level drill pads will be re-instated as close as practicable to the original contour profile of the terrain.
No artesian conditions are expected.

Attach Files

Expand/Collapse

File Name	File Size (Mb)	Created On	Download
ISM21 Mineral Exploration drillings - construction and backfilling.pdf	1.38 Mb	20-11-2025 09:40:52	Download (MERS/EPR-03995/Drillhole construction and decommissioning/ISM21 Mineral Exploration drillings - construction and backfilling_2025-11-19T23-10-56.819Z.pdf)

Costeans and Bulk Sample Disposal Pits

Will costeans/bulk sample disposal pits be required for the proposed program?

Yes

Indicate the maximum dimensions and size of pits and costeans.

36.00

Describe site preparation methods, vegetation clearance, and safety and maintenance requirements

The location of sumps/costeans will be placed close to proposed drillholes in the drill pad disturbed area and where there is minimal vegetation clearance required. The site of the sump/costean will be prepared by removing the topsoil from the designated area and storing it separately for future rehabilitation. Sumps/Costeans will be backfilled once any groundwater has evaporated and the land surface reinstated to the original ground profile. Surface water flow will be redirected around the drill pad area. Sumps will be constructed with a sloping ingress/egress to prevent fauna from falling into the sumps/costeans. Costeans and sumps will be 6 x 3 x 2m deep = 36.00

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).

Exploration Drilling Techniques
Diamond holes drilled at Hawks Nest will be BQ, NQ, HQ or PQ size and will be placed into core trays and removed from the drill site once drilling has been completed. Samples are transported to the geological core facility at the Buzzard mine site for further processing and sampling.
RC, RAB and AC samples are to be collected for each one metre of hole drilled, with a split of the sample collected via onboard sampling systems and the remaining sample cuttings placed into green plastic bags and placed on the ground. The green plastic bags will be removed from site when the drillhole is rehabbed, by either backfilling the drillhole with drill cuttings or the green bags are transported to our sample storage facility at Buzzard for future metallurgical and geological review testwork offsite.
Tarps and/or matting will be used if cuttings cannot be contained within the drill pad.
Water Bore Drilling Techniques
Rotary air blade/hammer and rotary mud samples will be collected and laid out in 1 to 3m intervals within the drill pad for geological logging. A small portion of sample will be collected to fill chip trays. Remaining samples will be placed into the drill sump which will be backfilled and rehabilitated with stockpiled topsoil collected prior to excavating the sump.
Tarps and/or matting will be used if cuttings cannot be contained within the drill pad

Access Routes to Work Areas

Will existing tracks require upgrading and/or maintenance?

Yes

Detail the work required to upgrade/maintain existing tracks.

Access will be via existing station tracks network from the Stuart Highway, adjacent to the exploration prospect. Existing baseline tracks traverse the exploration licence and will be used to access drill sites and reduce the length of new track to be created. Where widening or maintenance is required, clearing will be restricted to a maximum of 4 m.
Working with the pastoralist, maintenance of station tracks will be maintained or upgraded during the course of exploration and on as required basis.

Will access off existing tracks be required?

Yes

Detail the method(s) for gaining access and if vegetation clearance is required. Details of 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) must be provided in the program notification.

Access will be via existing station tracks from the Stuart Highway, with local tracks constructed as required. Where practicable, access to planned drill pads will be by single line access without grading, or with minimal ground disturbance by high-blading. Newly constructed tracks will be prepared with regard to contours to provide a safe and level working area for drill crews while accessing. Consideration will be given to gradient and surface water run-off to minimise the potential for erosion. Blade work will be kept to a minimum with rolling rather than grading being the preferred strategy where practicable, to create a safe working environment. Any new tracks will be a maximum of 4 m wide.

Attach Files

Expand/Collapse

File Name	File Size (Mb)	Created On	Download
Access tracks.jpg	0.41 Mb	18-11-2025 18:14:14	Download (MERS/EPR-03995/Access routes to work areas/Access tracks_2025-11-18T07-44-15.693Z.jpg)
Deposits.jpg	0.42 Mb	18-11-2025 18:14:18	Download (MERS/EPR-03995/Access routes to work areas/Deposits_2025-11-18T07-44-19.126Z.jpg)
Hawks Nest Deposits and station tracks.jpeg	1.25 Mb	01-12-2025 15:35:18	Download (MERS/EPR-03995/Access routes to work areas/Hawks Nest Deposits and station tracks_2025-12-01T05-05-19.151Z.jpeg)
Hawks Nest Pastoral Stations.jpeg	1.19 Mb	01-12-2025 14:56:25	Download (MERS/EPR-03995/Access routes to work areas/Hawks Nest Pastoral Stations_2025-12-01T04-26-27.379Z.jpeg)

Campsites and Equipment Laydown Areas

Indicate where staff and contractors will be accommodated during the exploration program.

Drill crew, geologists and other contractors will be located at a temporary campsite located on the Buzzard Mining Lease (ML6531). The proposed area is a cleared hardstand with existing structures (storage containers, shade dome, ablutions) used by the geology team to store and access geology samples. There is a large amount of space available to accommodate a temporary camp and laydown for drilling equipment. The area was cleared as part of the Buzzard construction and no additional vegetation clearing will be required. Accommodation facilities are also available at Windy Valley Camp, approximately 65km north of Hawks Nest, where the Buzzard and Peculiar Knob mine site staff are located.

What is the maximum number of personnel requiring accommodation?

8

Is a campsite required to be established?

Yes

Provide a description and justification of the camp location (e.g. previously cleared areas etc.), and any other relevant information.

Drill crew, geologists and other contractors will be located at a temporary campsite located on the Buzzard Mining Lease (ML6531). The proposed area is a cleared hardstand with existing structures (storage containers, shade dome, ablutions). The Windy Valley mine camp is the preferred option for accommodation and messing facilities.

What will be the total area (ha) of the campsite(s)?

1.00

Will native vegetation clearance required?

No

What will be the total area (ha) of vegetation clearance for the campsite?

—

Describe the methods used to prepare the campsite includuing vegetation requirements and site levelling.

—

Will any excavations be required?

No

Describe the purpose of the excavation

—

Describe the maximum volume (m3) of material to be excavated.

—

Provide confirmation that the proposed ablution facilities have been endorsed for use by the Department of Health or local council, where applicable.

No

Indicate why endorsement approval is not required by the Department of Health or local council.

A toilet ablution block has a Septic tank which is pumped by an authorised septic contractor.

Proposed Infrastructure (includes caravans, tents, offices, hydrocarbon and water storage requirements etc)

Proposed infrastructure	Quantity	Description / capacity
Caravan	2	Explorex or equivalent caravans - 3-4 berth
40 foot accommodation container	1	4 individual room bedrooms
Oil and fluids chemical bunds	2	4 x 44 drum pallet bunds

Will laydown areas be required?

Yes

Will the laydown area(s) be located at the same location as the campsite?

Yes

Provide a description and justification of the laydown area location (e.g. previously cleared areas etc.), and any other relevant information.

Drill crew, geologists and other contractors will be located at a temporary laydown area located on the Buzzard Mining Lease (ML6531). The proposed area is a cleared hardstand with existing structures (storage containers, shade dome, ablutions).

What will be the maximum area (ha) required for the laydown area(s)?

1.00

Will native vegetation clearance be required?

No

What will be the total area (ha) of vegetation clearance for the laydown area?

—

Describe the methods used to prepare the laydown area includuing vegetation requirements and site levelling.

—

Will any excavations be required?

No

Describe the purpose of the excavation.

—

What will be the volume (m3) of material to be excavated.

—

Proposed infrastructure (includes hydrocarbon and water storage requirements)

Proposed infrastructure	Quantity	Description / capacity
Toilet block	1	4 male and 2 female
Tank	1	5000 gallon rainwater tank
40 foot fuel container	1	A purpose built self bunded fuel cell with 30,000L capacity is utilised for bulk fuel storage

Other Exploration Methods and/or Ancillary Operations

Are any other proposed exploration methods (e.g. seismic) and/or ancillary exploration operations required?

Yes

Describe the activity(s), site preparation, vegetation clearance, and safety and maintenance requirements.

All ancillary activities will be undertaken under the same conditions and precedents of drilling operations. Minimum disturbance and safe working conditions

Water Supply and Management

Will camp and/or drilling water be required?

Yes

Describe how and where water will be sourced for drilling, track maintenance and camping purposes (e.g. groundwater, surface water, mains). Indicate how wastewater and/or runoff water will be managed.

The project will require water for drilling activities, camp amenities and dust suppression. Water will either be sourced from the Buzzard Mine Site from within the existing water allocation, the Windy Valley Camp from the Peculiar Knob existing water allocation or carted from Coober Pedy. A water tank or tanker may be provided onsite to minimise road travel to resupply water. Sumps will be excavated adjacent to drill pads to collect groundwater produced during drilling operations and minimise surface run-off. All sumps will be backfilled to restore the area to is original condition once contained potentially saline groundwater has evaporated.
Water production from groundwater bores at Hawks Nest is required for aquifer testing. Exploration holes outside of the FNPWA may be utilised to provide water for diamond drilling activities.

Will surface water and/or mineral drillholes be used as a water source/supply?

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.

No

Attach a copy of the licence or include a statement confirming that a licence will be obtained before the extraction and/or usage of water.

Exploration holes required to supply groundwater for exploration purposes will be outside the FNPWA area. There is no permanent surface water in the region.
Water will be sourced from existing projects with an existing water licence and allocation (the Buzzard Project). Any new water wells will be permitted through DEW, all new well permits will be sourced prior to commencement of water investigation activities and will be provided to the Department per the relevant Program Notification.

Groundwater Investigation and Water Affecting Activities

Will any water investigation (e.g. pump testing, water monitoring sites, water storage, turkey nests/dams) and/or water affecting activities, be undertaken (refer to s. 127 of the Landscape South Australia Act 2019)?

Yes

Describe the water investigation and/or water affecting activities, including site preparation, vegetation clearance, and safety and maintenance requirements.

Investigation and monitoring bores are required to obtain data to develop and update a hydrogeological conceptual model for the site and to assess impacts of potential future mining programs. This complements the existing groundwater quality monitoring network installed to date and additional work scheduled for 2026 and beyond. Aquifer testing will inform groundwater modelling and identify potential future water sources to be included in the Mining Lease Proposal for Hawks Nest.
The following is a description of the works required to support the drilling and aquifer testing program:
 Drill site pads: Drill pad sizes are 25m x 20m. Site levelling and vegetation clearance within the pad area is only carried out if required. Due to the flat topography and sparse vegetation this is generally not required.
 Drill Sumps: A minimum of one drill sump is required for each drill pad to store any groundwater produced from the drillhole during drilling. This sump allowance is 6m x 3m x 1m. An egress ramp is included to allow any trapped fauna to escape.
 Aquifer testing: If groundwater yields greater than 1L/s are encountered during drilling an aquifer test may be undertaken. The aquifer test will require the construction of a water storage pit (turkeys nest) to store the pumped water. Turkeys nests will be located to cause the least possible disturbance to existing vegetation and may be located so as to service more than one bore (using hoses to transport the pumped water). The dimensions will be up to 30m x 35m x 2m which will accommodate a well pumping at 10 L/s for 48 hours. Turkeys nests will be made smaller where yields are less than 10L/s. An egress ramp is included to allow any trapped fauna to escape. Once stored water has fully evaporated, turkeys nests will be backfilled and the land rehabilitated.

Indicate if water affecting activities permits (eg well and water extraction/discharge permits) have been obtained and in accordance with the Landscape South Australia Act 2019.

Yes

Attach a copy of the permit(s) or include a statement confirming that permits will be obtained prior to the commencement of the water investigation activities.

The two wells endorsed on WKA-409245 are 5938-959 and 5938-960.
Email from Water Licensing
Approval is granted to your application to vary Water Resource Works Approval 409245 to endorse wells 5938-959 and 5939-960, pursuant to section 136(1)(a) of the Landscape South Australia Act2019.
Please note that we are not able to issue you with a copy of your works approval at this time, which will be issued in due course.
Well permits will be sourced prior to commencement of water investigation activities and will be provided to the Department as per the relevant Program Notification.

Management of Hazardous Materials

Will activities be conducted in areas of known uranium and thorium mineralisation?

No

Attach Files

Expand/Collapse

File Name	File Size (Mb)	Created On	Download
No Files Uploaded			

Will any other hazardous material be encountered when exploring in the area?

No

List the types of hazardous materials and provide a management plan on how these materials will be managed.

—

Rehabilitation

Detail all the activities and strategies relating to the remediation of all impacts associated with the proposed exploration operations (includes exploration camps and laydown areas, tracks). Completion of rehabilitation must be achieved within 3 months after the expiry of each program notification.

On completion of the exploration program, all drill cuttings will be back filled down the drillholes, buried in sumps or removed from the site. Drill sites, sumps and turkeys nests will be rehabilitated as per DEM requirements. Sumps that are lined with plastic and upon rehabilitation as much of the plastic as reasonably practicable will be removed. The pastoral lease holder will be consulted during rehabilitation of drill pads, sumps, turkeys nests and access tracks to minimise potential impacts on pastoral activities. There are no salt lakes in the vicinity of these drill sites.
Original contours will be re-established as part of the rehabilitation process. Soil pushed aside to establish level drill pads will be re-instated as close as practicable to the original contour profile of the terrain.

State the estimated budget required to rehabilitate all impacted sites. Include a breakdown of the cost associated with each rehabilitation component.

Changes to the existing bond will be provided and assessed though program notifications. An estimated budget for one hole is provided

Access and drill track creation	1 hour	$200
Drill pad and sump creation	2 hours	$400
Drillhole backfilling	2 hours	Staff
Drill pad rehabilitation	2 hours	$400

This is an estimate based on rounded times and provided as a worse case scenario - drill access tracks only require driving to the drill site as there is very limited vegetation.

Vegetation Clearance

Will any area of cleared native vegetation be unrehabilitated after the authorised period?

No

Provide a map and description of the vegetation present in the application area, the extent of any proposed vegetation clearance and the likelihood of the presence of threatened flora.

—

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.

—

Management of Environmental Impacts

Applicable environmental aspects and potential impacts

Environmental Aspect	Receptor	Potential Impact	Control Strategies	Risk	Outcomes	Outcome Measurement Criteria
Aboriginal heritage	Aboriginal heritage sites	Disturbance to Aboriginal heritage	Exploration activities to be carried out with minimal disturbance and areas reinstated to current condition if further exploration/mining activity does not eventuate. Exploration activity to be undertaken with consideration of heritage survey results and in liaison with representatives of Antakirinja Matu-Yankunytjatjara Aboriginal Corporation (AMYAC). In the event of discovery of a potential Aboriginal heritage artefact all works will stop in the immediate vicinity, the area will be clearly marked and isolated from other work and relevant authorities will be notified. Work to recommence only after authorisation has been received.	Moderate	No disturbance to Aboriginal artefacts or sites of significance unless prior approval under the relevant legislation is obtained.	Maintain a database and provide a statement within the 'Compliance with approved programs' section of the annual exploration compliance report demonstrating that: • Heritage sites were not impacted during the conduct of the exploration program, unless prior approval was obtained under the appropriate legislation • Work ceased on discovery of a significant site and recommenced only after authorisation. • Aboriginal heritage sites identified during the exploration program were appropriately recorded and reported to authorities, if not previously known.

Environmental Aspect	Receptor	Potential Impact	Control Strategies	Risk	Outcomes	Outcome Measurement Criteria
Contamination	Soil/vegetation/fauna	Soil/vegetation contamination (e.g. hydrocarbons, rubbish, drill samples/cuttings, ablutions, other sources)	Pre-start checks (safety and environment) will be undertaken on equipment to identify any leaks. Site inspection will be undertaken and corrective actions implemented before project sign-off is completed. All spills greater than 20 litres will trigger incident report to Central Iron. Any potentially contaminating activities associated with exploration are managed in accordance with industry and regulatory guidelines. All rubbish will be contained and removed daily. Drill cuttings will be: o buried under a minimum of 30cm of soil or o backfilled down the drill hole. Hydrocarbons and chemical storage to occur within laydown area that is bunded. Vehicles/drill rigs will have a spill kit on board in the event of a leak/burst hose/loss of fuel. All operators will be trained in the use of the spill kits. Hydrocarbon spills will be contained immediately, collected, bagged and disposed of at Peculiar Knob bioremedial pad	Moderate	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

Environmental Aspect	Receptor	Potential Impact	Control Strategies	Risk	Outcomes	Outcome Measurement Criteria
			(once constructed) or a licenced EPA waste facility.			annual exploration compliance report.
Fauna	All fauna	Entrapment of fauna through open drillholes and excavations.	Collars will be capped immediately after exploration and investigative drilling is completed. Hole casings will be cut off at ground level, holes plugged and backfilled once field survey and any planned down hole surveys are complete. □ Sumps will be constructed with a sloping ingress/egress to prevent fauna from falling into the sumps. □ Windrows will also be established around the sumps to deter fauna from congregating around the sumps and potentially falling in.	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.

Environmental Aspect	Receptor	Potential Impact	Control Strategies	Risk	Outcomes	Outcome Measurement Criteria
Fire	Community/landowners	Damage to infrastructure and loss of income through fire.	Drilling to comply with DEM guidelines to minimise impact to landholders. Ongoing liaison with stakeholders will occur before, during and following exploration activities. Agreements to be in place with affected stakeholders before exploration activities commence. Drill rigs will be fitted with fire suppression and dust collection equipment. All light vehicles fitted with a fire extinguisher. Any complaints received will be investigated and actions put in place to achieve an agreed (by Central Iron and complainant) resolution within one month of the complaint. Details will be communicated to DEM.	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.

Environmental Aspect	Receptor	Potential Impact	Control Strategies	Risk	Outcomes	Outcome Measurement Criteria
General Public	General Public	Injury or death to members of the public as a result of exploration activities.	Adopt practices to protect personnel, land users, the public and animals from dangers to health and safety arising from exploration activities. During drilling activities signage and barricades will be erected in work areas to notify unauthorised personnel of 'no-go' zones. Comply with all relevant fire restrictions and safeguards in the conduct of exploration activities. Access to the drill site will be limited to the drilling crew, geologists, field assistants and safety and environmental personnel. Site work will usually involve a single entry and exit per day by the drilling crew, and up to three entries and exits per day by geologists, field assistants and other personnel. The service truck and water truck for the drill rig are the only other normal traffic. All drill holes will have PVC casing removed or cut off below the ground in line with DEM Guideline M21 – Mineral Exploration Drill holes – General Specifications for Construction and	High	No accidents involving the public that could have been reasonably prevented by the licensee.	Provide a statement within the 'Compliance with approved programs' section of the annual exploration compliance report confirming no accidents occurred involving the public during and after the exploration program. If an accident involving the public did occur, provide a copy of the independent investigation report within the annual exploration compliance report demonstrating that the licensee could not have reasonably prevented the accident through the implementation of precautionary measures.

Environmental Aspect	Receptor	Potential Impact	Control Strategies	Risk Outcomes	Outcome Measurement Criteria
			Backfilling. □ Should casing be required to be left temporarily above ground (e.g. for down hole survey, monitoring water levels etc.), then casing will be capped immediately, permission sought from DEM to keep holes open and record the status of open drillholes in the annual compliance report and cutting and rehabilitation completed when no longer required. □ Where practical the start of new access tracks coming off existing tracks will be doglegged and blocked at the entrance to reduce visibility and prevent third party access. □ Open excavations will comply with SafeWork SA requirements.		

Environmental Aspect	Receptor	Potential Impact	Control Strategies	Risk	Outcomes	Outcome Measurement Criteria
Groundwater	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).	Refuelling (if necessary) will be undertaken with spill controls in place. Hydrocarbons and chemicals stored onsite will be in bunded areas. Collars will be capped immediately after drilling is completed if drill holes are required for further surveys. Hole casing will be cut off at ground level, hole plugged and backfilled once field survey and any planned down hole surveys are complete. On intersection of any groundwater during drilling, the level is recorded, the hole is left to stand for 15 minutes, and downhole measurements taken to determine whether the water level is static, rising or falling. Drillholes which penetrate a single unconfined aquifer — on completion, backfill with drill cuttings, clean fill containing clay, or cement. Drillholes which penetrate a single confined aquifer — plug from the level at which the aquifer was penetrated with cement grout back to a minimum of 15 m into the confining bed above; and then backfill as above. Drillholes which	Moderate	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.

Environmental Aspect	Receptor	Potential Impact	Control Strategies	Risk Outcomes	Outcome Measurement Criteria
			penetrate more than one aquifer — separate each aquifer by a cement grout plug and then backfill as above. The length of plug used will be dependent on aquifer pressure and thickness. The plug should extend through the aquifer back into the confining bed above, with a total minimum length of 20 m of grout. In an intermediate aquifer the plug should be emplaced from 15 m below the aquifer and extend upwards through the aquifer and to a distance of 15 m above the aquifer. Generally, a minimum of 20 m of cement should be positioned between aquifers.		

Environmental Aspect	Receptor	Potential Impact	Control Strategies	Risk	Outcomes	Outcome Measurement Criteria
Groundwater	Soil/vegetation/fauna	Discharge of groundwater into the surrounding environment.	Sumps will be constructed adjacent to each drill hole. Nominal sump dimensions are 6 x 3 x 1 m, subject to topography and ground conditions. All sumps will be backfilled to restore the area to its original condition once contained potentially saline groundwater has evaporated. Turkeys nests will be located to cause the least possible disturbance to existing vegetation and may service more than one bore. Turkeys nests will be up to 30m x 35m x 2m which will accommodate a well pumping at 10 L/s for 48 hours. Turkeys nests will be made smaller where yields are less than 10L/s. Once stored water has fully evaporated, turkeys nests will be backfilled and the land rehabilitated. Drilling will stop if sumps approach their design capacity. Experience has shown that the level will fall relatively quickly over 12-24 hours in the hot dry conditions in which the site is located. If required, excess water from sumps	Moderate	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.

Environmental Aspect	Receptor	Potential Impact	Control Strategies	Risk	Outcomes	Outcome Measurement Criteria
			will be transported via water cart to the Buzzard water storage dam.			
Groundwater users	Groundwater users	Interference to existing water users when extracting water from existing dams, water bores or mineral drillholes.	Not applicable	Low	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.

Environmental Aspect	Receptor	Potential Impact	Control Strategies	Risk	Outcomes	Outcome Measurement Criteria
Native Vegetation	Flora and fauna and their habitats; includes Common wealth and state schedule d species.	Loss/modificatio n of native vegetation and associated habitats through the clearance of vegetation.	Unnecessary vegetation disturbance will be avoided following Peak Iron Codes of practice section 14, DEM guidelines and requirements of the Mining Act 1971, Native Vegetation Act 1991 and the NRM Act 2004. Minimum earthworks necessary to provide a safe work area will be carried out. Drill pads will be approximately 20 x 25 horizontal metres, the minimum required for safe access. Existing roadways will be used for access, where possible. New access tracks, if necessary, will be designed to minimise impacts and be kept to a minimum width for safe passage and turning of drill rigs and support vehicles. Traffic will be restricted to one track to minimise potential for multiple tracks developing. Newly constructed roadways will be scarified to return the area to its original condition. Drill pad areas will be scarified to return the area to its original condition. Exploration drill pads and associated infrastructure (such	Low	No permanent loss/modifi cation 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.

Environmental Aspect	Receptor	Potential Impact	Control Strategies	Risk Outcomes	Outcome Measurement Criteria
			as sump bunds and access tracks) will be decommissioned, removed and the areas rehabilitated at completion of exploration drilling, unless prior approval from DEM is received. Progressive rehabilitation works will restore land to a stable condition that will facilitate land use consistent with that established prior to implementing the exploration program of work. Remediation works will promote natural regeneration of vegetation. In the event of a fire, Peak Iron Mines emergency response plan will be implemented. All vehicles entering site will have fire extinguishers. Drill rigs have on-board fire suppression systems, and fire extinguishers will be placed at strategic locations around the drill rig during operations. Auxilliary and booster compressor equipment has on-board fire suppression systems. No works are undertaken on days rated as catastrophic fire danger. On extreme fire danger days, review the		

Environmental Aspect	Receptor	Potential Impact	Control Strategies	Risk	Outcomes	Outcome Measurement Criteria
			proposed works once the fire danger rating has been released and determine if work is to be suspended for the following day.			
Other	Not Applicable	Not Applicable	Not Applicable	Low	Not Applicable	Not Applicable

Environmental Aspect	Receptor	Potential Impact	Control Strategies	Risk	Outcomes	Outcome Measurement Criteria
Soil	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).	Consultation and agreement of actions and remediation with all stakeholders prior to commencement of work. Available topsoil will be removed, stored and reinstated post exploration where necessary. Hole casing will be cut off at ground level, hole plugged and backfilled once field survey and any planned down hole surveys are complete. Drill pads will be approximately 20 x 25 horizontal metres (the minimum safety requirement for access) to minimise the area of soil disturbance. Nominal sump dimensions will be 6 x 3 x 1 m to reduce the area of soil disturbance. Sumps will collect excess water to reduce surface runoff and potential soil erosion. Sumps will be backfilled once any standing water has evaporated and the surface reinstated to the original ground profile. Surface water flow will be redirected around the drill pad area. Any new access tracks and/or drill pads will be constructed at a gradient that will provide a safe working platform while also minimising	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.

Environmental Aspect	Receptor	Potential Impact	Control Strategies	Risk	Outcomes	Outcome Measurement Criteria
			stormwater runoff. Blade work will be kept to a necessary minimum, with rolling rather than grading being the preferred strategy. In areas where ground compaction has occurred, the area will be scarified to return the area to its original condition. Rehabilitation works will be completed within 3 months of completion of exploration activity.			
Stakeholders	Stakeholders	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.	Existing station and previous drill tracks tracks will be utilised wherever reasonable and practicable to do so. Unnecessary disturbance of vegetation will be avoided. Rubbish will be contained and removed daily. Rehabilitation works will be completed within 3 months of completion of program notification. Ongoing liaison with stakeholders prior to, during and following exploration activities will occur. Statutory notification forms related to land access will be issued prior to entry onto land.	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.

Environmental Aspect	Receptor	Potential Impact	Control Strategies	Risk	Outcomes	Outcome Measurement Criteria
Third party access	Soil/vegetation/fauna	Degradation of rehabilitated access tracks caused by third party access (includes previously closed and rehabilitated access tracks).	Any previously closed and rehabilitated access tracks that are used in future exploration programs will be managed and rehabilitated in the same manner as a new track. Audits of the rehabilitated areas will be performed post closure to ensure that all areas have been professionally and adequately rehabilitated.	Low	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.

Environmental Aspect	Receptor	Potential Impact	Control Strategies	Risk	Outcomes	Outcome Measurement Criteria
Weeds and Pathogens	All flora and fauna, especially listed species.	Loss/modification of the environment (biological, social and economic) through the introduction of weeds and pathogens.	All new pest plant species incursions and existing pest plant species will be managed in accordance with control measures described in Central Iron Weed and Pest management plan (C-3-PLN-3-1007_0) □ Weed incursions are to be mapped using active searches and opportunistic sightings recorded by GPS location and controlled as per the Central Iron Weed and Pest management plan (C-3-PLN-3-1007_0) □ Vehicles will be inspected before entering properties associated with exploration activity to check that they are clean and free of plant and mud material, and vehicle hygiene logs will be provided in all vehicles to document the inspection. □ Vehicles are washed before entering new sites where the risks warrant it (i.e. between mining areas of different weed profiles; or where surveys indicate potential risk; or if there are specific landholder concerns).	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.

Supporting Information

Photos

Upload Photos

Expand/Collapse

File Name	File Size (Mb)	Created On	Download
Kestrel Deposit.jpg	0.16 Mb	20-11-2025 10:16:57	Download (MERS/EPR-03995/Supporting information/Photos/Kestrel Deposit_2025-11-19T23-46-59.685Z.jpg)
Kite Deposit.jpg	0.14 Mb	20-11-2025 10:15:18	Download (MERS/EPR-03995/Supporting information/Photos/Kite Deposit_2025-11-19T23-45-21.925Z.jpg)

Site identification	Date taken	Photo number & PEPR section reference	Easting (GDA94)	Northing (DGA94)	Zone	Details and comments	Document ID
Kite Deposit	20/09/2023		506559	6678135	53	Typical surface conditions at the Kite Deposit	Kite Deposit
Kestrel Deposit	20/09/2023		511811	6682388	53	Surface conditions at the Kestrel Deposit	Kestrel Deposit

Supporting Maps

Upload Maps

Expand/Collapse

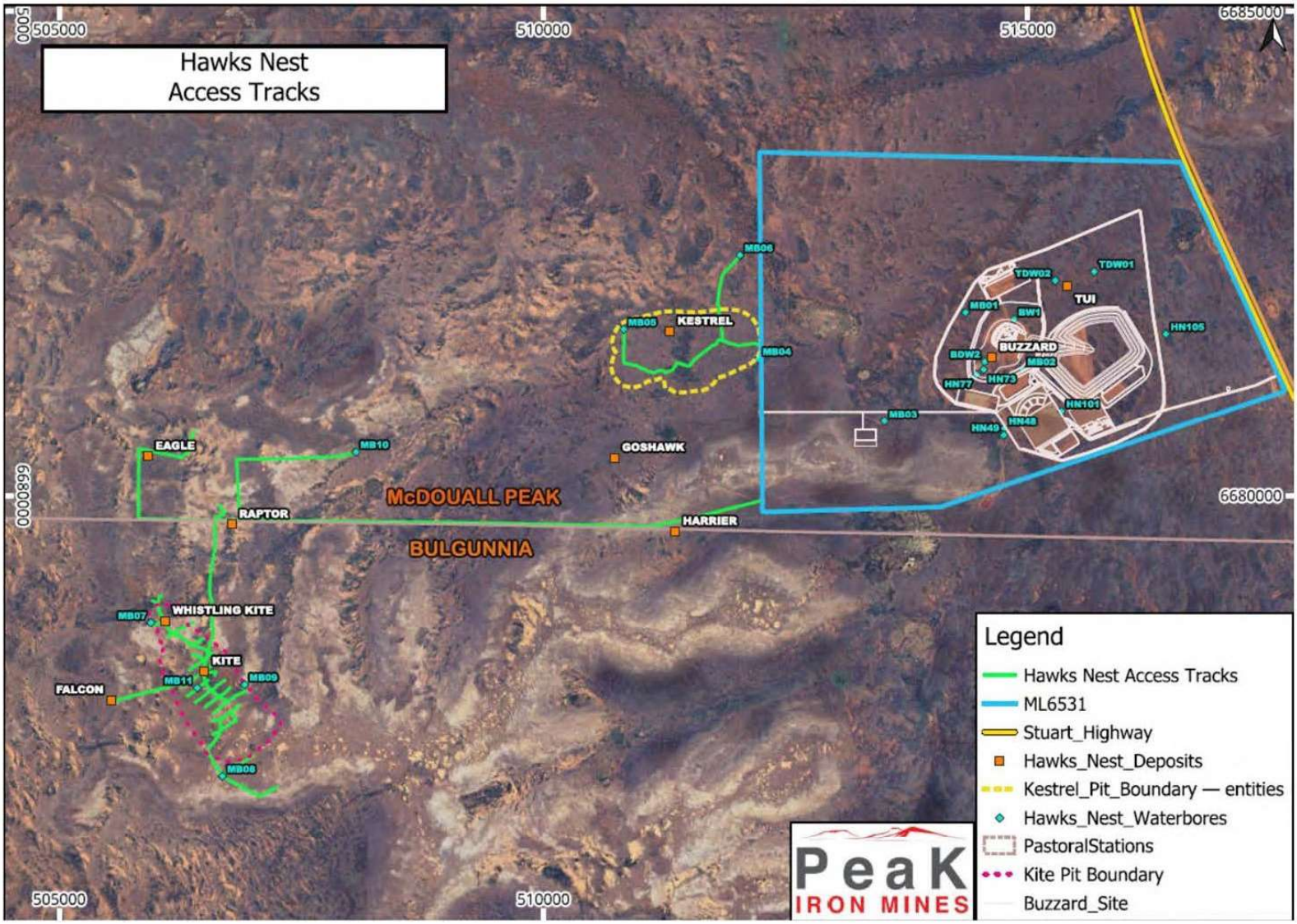
File Name	File Size (Mb)	Created On	Download
Hawks Nest Deposits and station tracks.jpeg	1.25 Mb	01-12-2025 15:41:50	Download (MERS/EPR-03995/Supporting information/Maps/Hawks Nest Deposits and station tracks_2025-12-01T05-11-51.322Z.jpeg)
Location Map.jpg	0.29 Mb	20-11-2025 10:19:52	Download (MERS/EPR-03995/Supporting information/Maps/Location Map_2025-11-19T23-49-54.786Z.jpg)

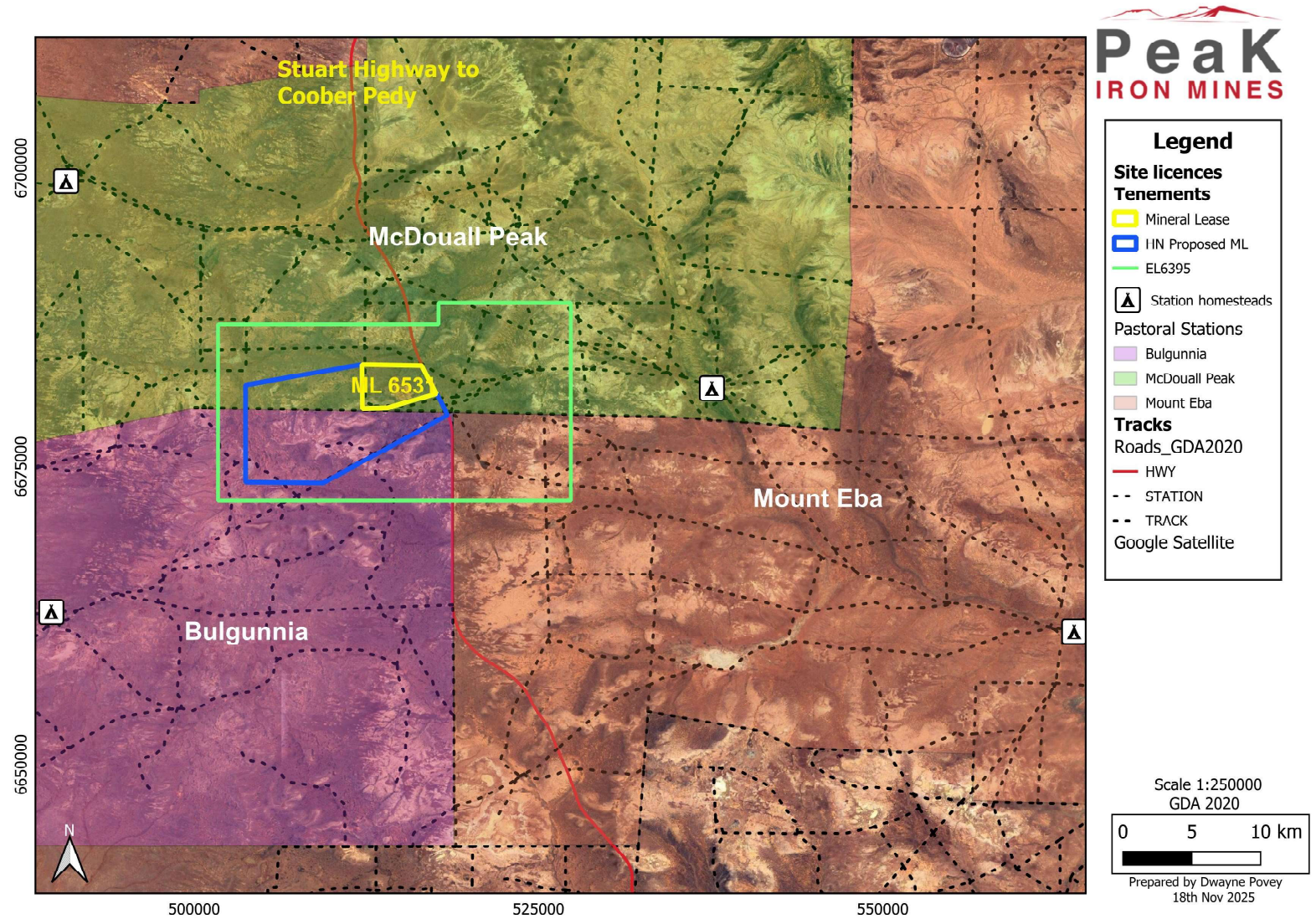
Figure Description	Document ID
Location Map	Location Map
Hawks Nest	

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.

Central Iron, as a subsidiary of Peak Iron Mines, operates in accordance with the Peak Iron Environment Policy. Central Iron has an Environmental Management System with a series of management plans, procedures, forms and registers to guide the management of environmental risks, including the following:
Erosion and Runoff Management Plan
Native Vegetation and Fauna Management Plan
Waste, Hydrocarbon and Chemical Management Plan
Incident Reporting and Investigation Procedure
Ground Disturbance Procedure
Pest Animal and Weed Control Procedure
Environmental Inspection Procedure
All employees and contractors are required to undertake inductions prior to attending site.
Environmental inspections are undertaken during operations to ensure that relevant procedures are being followed.
Rehabilitation inspections are undertaken to confirm rehab has been completed as per requirements and that there has been no weed spread.
A stakeholder engagement register is maintained to document interactions with all stakeholders, including any complaints (and subsequent resolution).
The incident reporting and investigation procedure includes the reporting of complaints.


Hawks Nest
Access Tracks
505000
510000
515000
6685000
6680000
6680000
505000
510000
MB06
KESTREL
MB05
MB04
TDW02
TDW01
TUI
MB01
BW1
HN105
BUZZARD
BDW2
MB02
HN77
HN73
HN101
MB03
HN48
HN49
EAGLE
MB10
GOSHAWK
McDOUALL PEAK
RAPTOR
HARRIER
BULGUNNIA
WHISTLING KITE
MB07
KITE
MB11
MB09
FALCON
MB08
Legend
Hawks Nest Access Tracks
ML6531
Stuart_Highway
Hawks_Nest_Deposits
Kestrel_Pit_Boundary — entities
Hawks_Nest_Waterbores
PastoralStations
Kite Pit Boundary
Buzzard_Site
PeaK
IRON MINES



PeaK IRON MINES

Legend

Site licences
Tenements
- Mineral Lease
- HN Proposed ML
- EL6395
- Station homesteads

Pastoral Stations
- Bulgunnia
- McDouall Peak
- Mount Eba

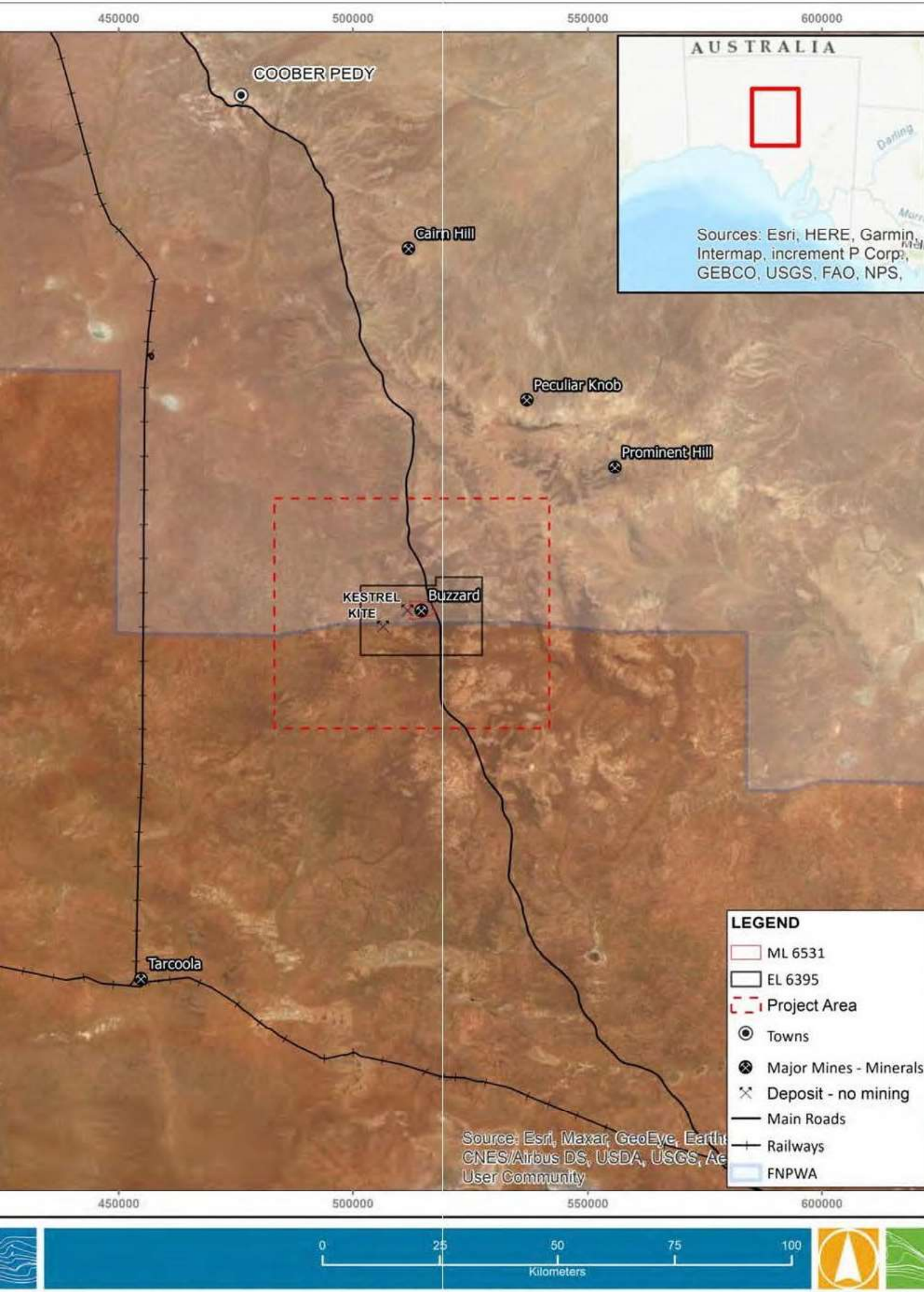
Tracks
Roads_GDA2020
- HWY
- STATION
- TRACK

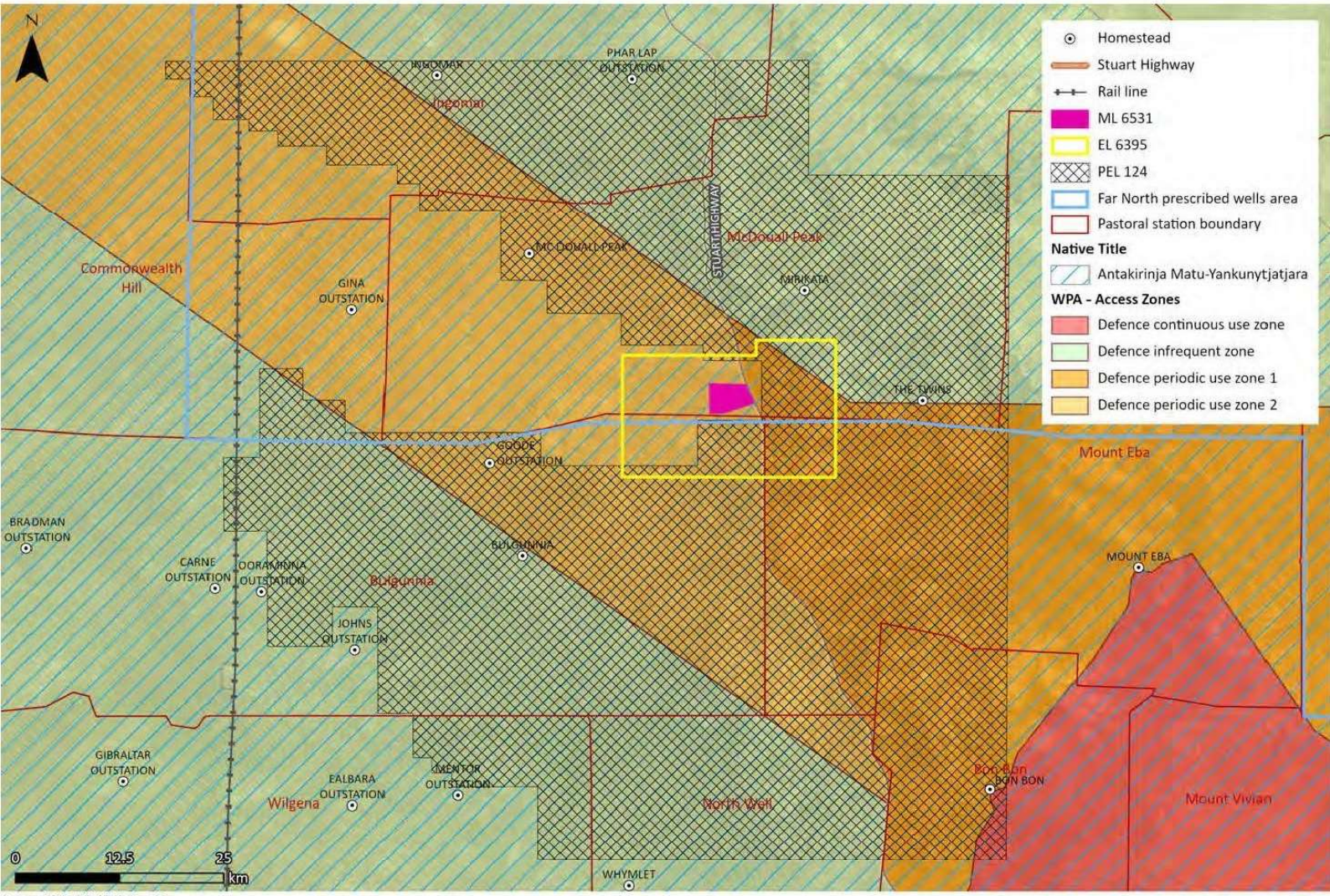
Google Satellite

Scale 1:250000
GDA 2020

0 5 10 km

Prepared by Dwayne Povey
18th Nov 2025

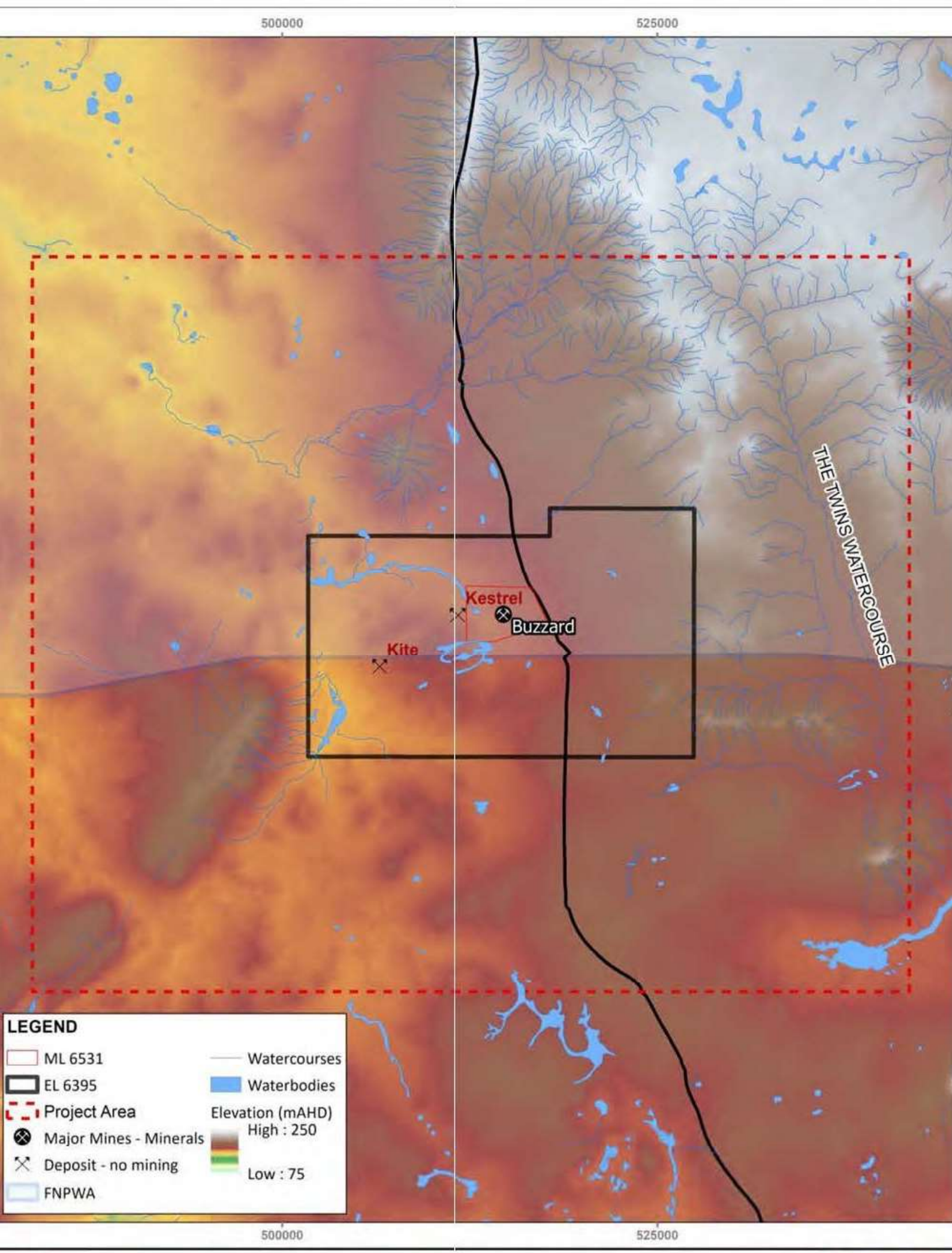

450000
500000
550000
600000
AUSTRALIA
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS,
COOBER PEDY
Cairn Hill
Peculiar Knob
Prominent Hill
KESTREL
KITE
Buzzard
Tarcoola
Source: Esri, Maxar, GeoEye, Earth
CNES/Airbus DS, USDA, USGS, Ae
User Community
LEGEND
ML 6531
EL 6395
Project Area
Towns
Major Mines - Minerals
Deposit - no mining
Main Roads
Railways
FNPWA
0
25
50
75
100
Kilometers

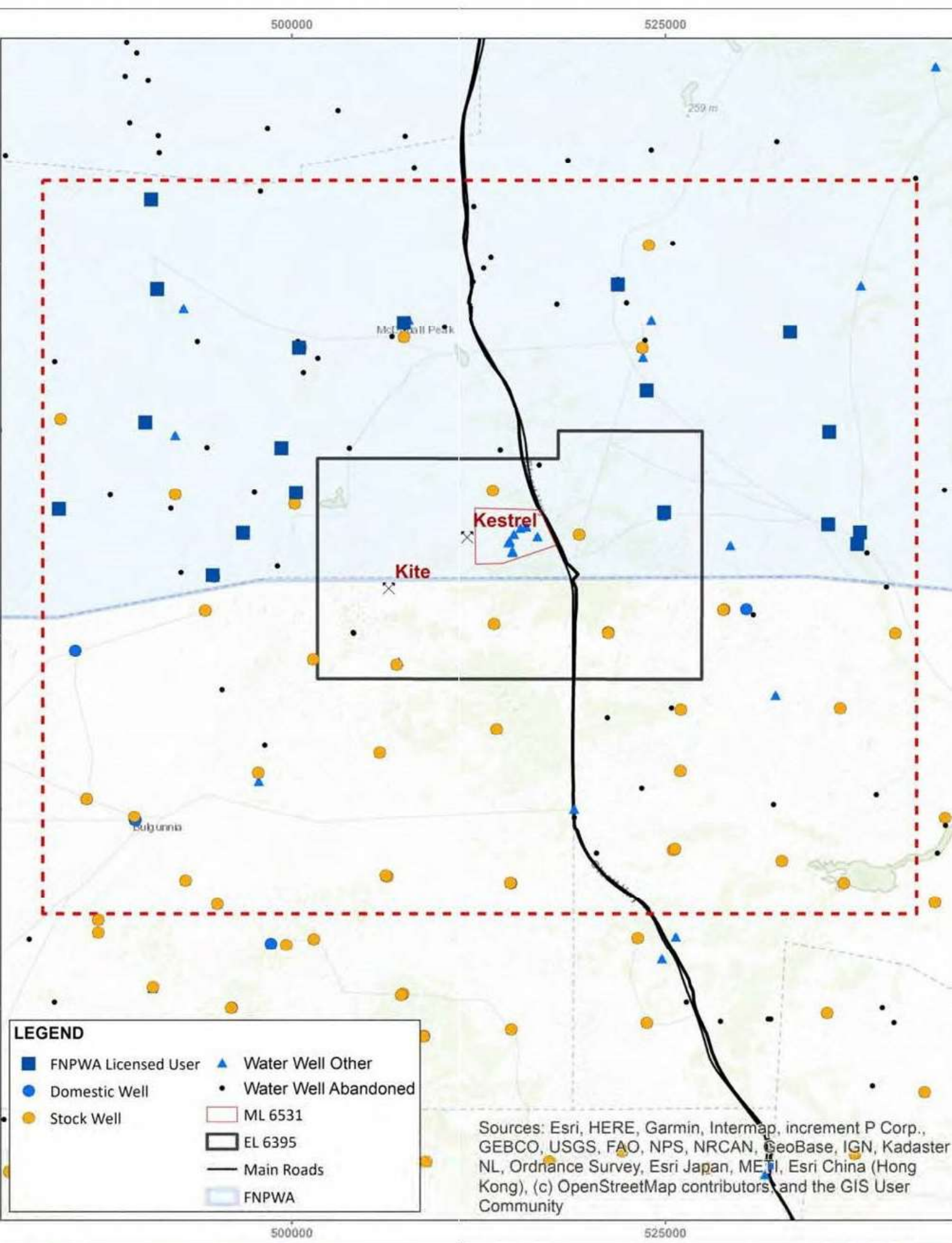


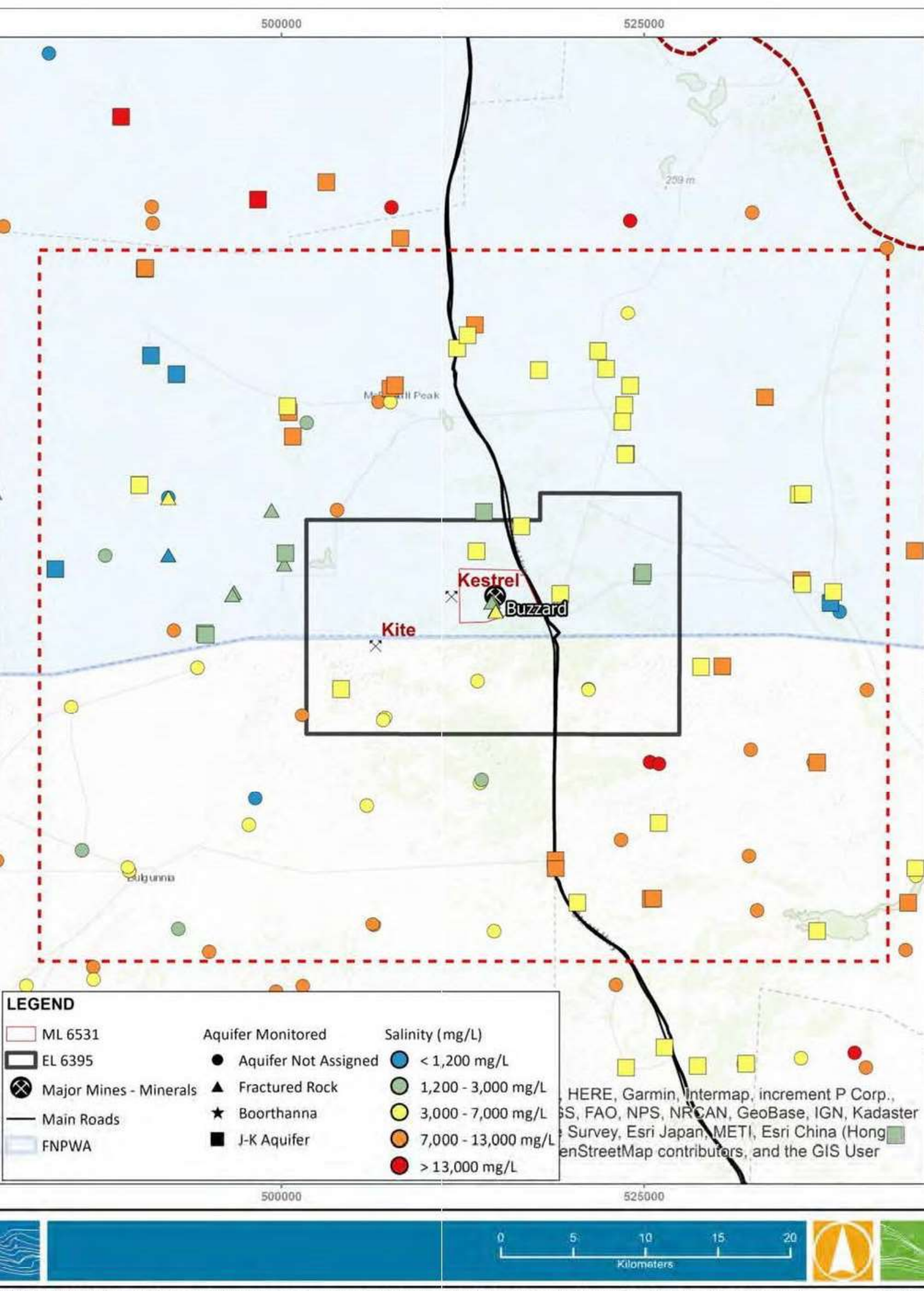
Datum: GDA 1994 MGA Zone 53
Author: Chathuri Nisansala
Date: 24/11/2021 Rev: A

Land use

environmental projects


500000
525000
THE TWINS WATERCOURSE
Kestrel
Buzzard
Kite
LEGEND
ML 6531
EL 6395
Project Area
Major Mines - Minerals
Deposit - no mining
FNPWA
Watercourses
Waterbodies
Elevation (mAHD)
High : 250
Low : 75
500000
525000
0
5
10
15
20
Kilometers


500000
525000
259 m
Kestrel
Kite
Eulgunna
LEGEND
FNPWA Licensed User
Domestic Well
Stock Well
Water Well Other
Water Well Abandoned
ML 6531
EL 6395
Main Roads
FNPWA
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community
500000
525000
0
5
10
15
20
Kilometers


500000
525000
Kestrel
Buzzard
Kite
LEGEND
ML 6531
EL 6395
Major Mines - Minerals
Main Roads
FNPWA
Aquifer Monitored
Aquifer Not Assigned
Fractured Rock
Boorthanna
J-K Aquifer
Salinity (mg/L)
< 1,200 mg/L
1,200 - 3,000 mg/L
3,000 - 7,000 mg/L
7,000 - 13,000 mg/L
> 13,000 mg/L
HERE, Garmin, Intermap, increment P Corp.,
S, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster
Survey, Esri Japan, METI, Esri China (Hong
enStreetMap contributors, and the GIS User
0
5
10
15
20
Kilometers

Groundwater Salinity by Aquifer Assigned

Aquifer	Max (mg/L)	Min (mg/L)	Average (mg/L)	Median (mg/L)	Count
J-K	18,735	357	5,622	5,375	56
Basement	8,217	506	3,065	2,250	12
Arckaringa	10,953	10,953	10,953	10,953	1
Not Assigned	15,848	440	5,562	4,874	55

remain largely unknown within the project area.

Regionally, groundwater flow towards the northeast towards the GAB springs which are located around 130 km away where the J-K aquifer transitions from confined to artesian. Wells have been grouped into their respective aquifers where this data is available. A large proportion of the wells do not have an aquifer assigned.

Depth to groundwater is greatest in high topography areas such as the Stuart Range to the east of the highway. Depth to groundwater ranges from over 100 m in these high elevation areas to less than 10 m in some lower elevation areas. In the project area, depth to water has been recorded as being as shallow as 30 m below ground level.

Groundwater yield

Groundwater yields in the project area range from less than 1 L/s up to 6 L/s. The highest yields are associated with wells installed in the fractured rock aquifer within ML 6531. These wells have been installed to investigate dewatering and water supply options for the Buzzard Project. They are interpreted to be completed within the fractured metasedimentary rocks hosting the iron mineralisation. Elsewhere, yields in the fractured rock aquifer are less than 1 L/s.

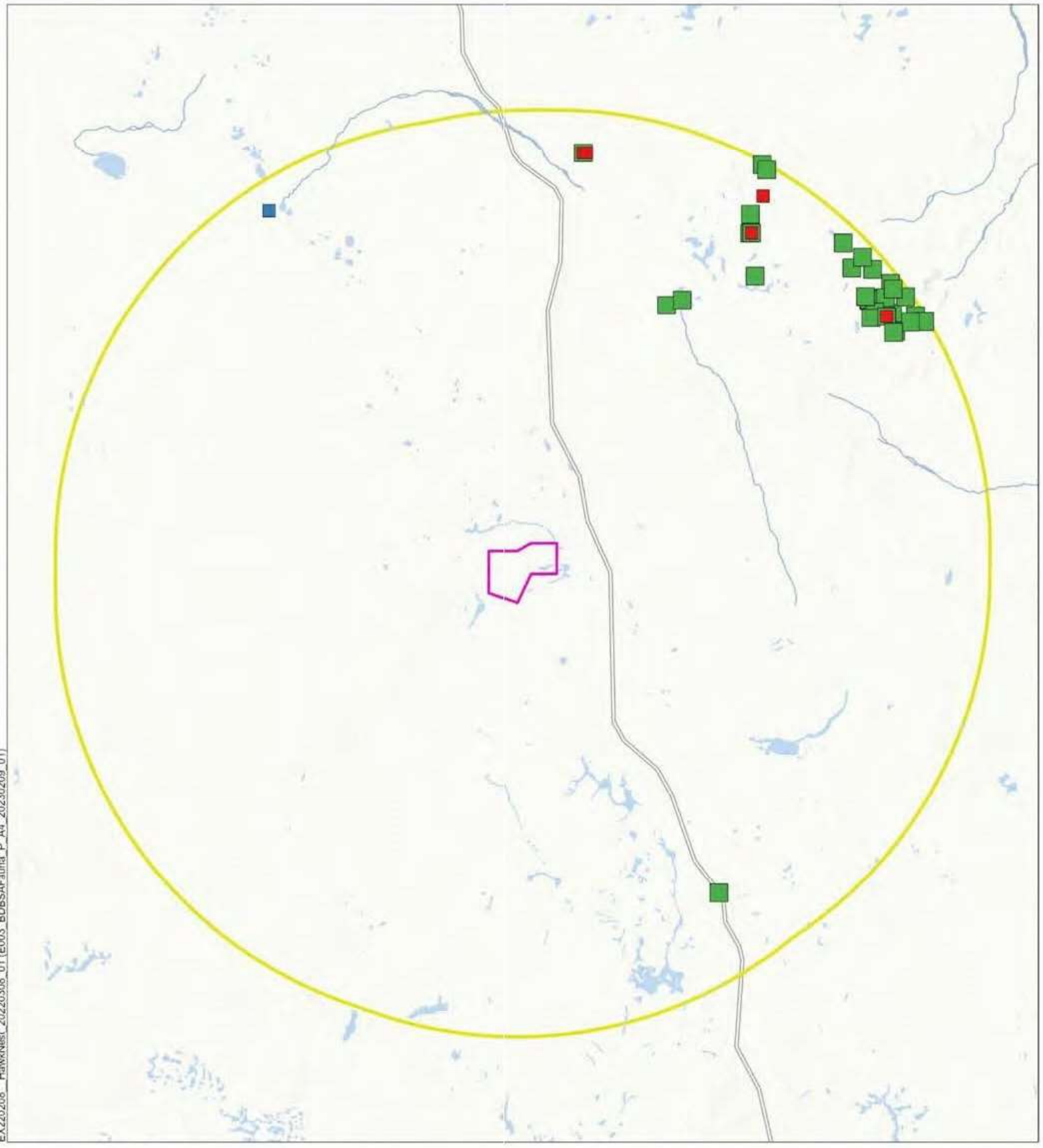
Yields in the J-K aquifer range from less than 1 L/s up to 2.5 L/s. The majority of these wells are used for stock and domestic purposes. Yields in the southwestern portion of the J-K aquifer are significantly lower than those to the northeast where yields in excess of 20 L/s are common. Several other wells have no aquifer assigned, however, their yield estimates are similar to those in the fractured rock and J-K aquifers. There are no recorded yields for wells completed in the Arckaringa Basin within the project area.

It is noted that yields recorded in WaterConnect can be calculated in various ways. A common method is to estimate the flow of water during development at the end of drilling. Airlift yields are indicative and can vary in the field depending on well diameter, size of the air compressor, and submergence of the airline.

Recharge and discharge

Groundwater recharge in the area is thought to be very low to negligible due to the low rainfall and the presence of the overlying Bulldog Shale aquitard. Recent research has shown that much of the groundwater contained in the J-K aquifer in South Australia was recharged more than 10,000 years ago under different climatic conditions to those observed today (FNPWA status report 2017). Diffuse recharge is reported to be less than 0.2 mm/year. Keppel et al. (2013) describes potentiometric head and flowlines in this area of the great artesian basin to be the result of palaeo-recharge and that groundwater levels are likely to be in a natural state of decline. Groundwater flow is to the northeast towards discharge points including the GAB springs and Lake Eyre.

Reference: Water Technology (2009). *Kite and Kestrel Desktop Groundwater Assessment*, unpublished report prepared for Peak Iron Mines, September 2022



Project Area
Search Area (50km Buffer)
Water course
Water body

EPBC Act threatened species
- Plains Mouse (*Pseudomys australis*)
- Plains-wanderer (*Pedionomus torquatus*)
- Thick-billed Grasswren (*Amytornis modestus*)

ebs ecology

Data Source: EBS Ecology (2022), ESRI (2022), DEW (2022), DIT (2022)

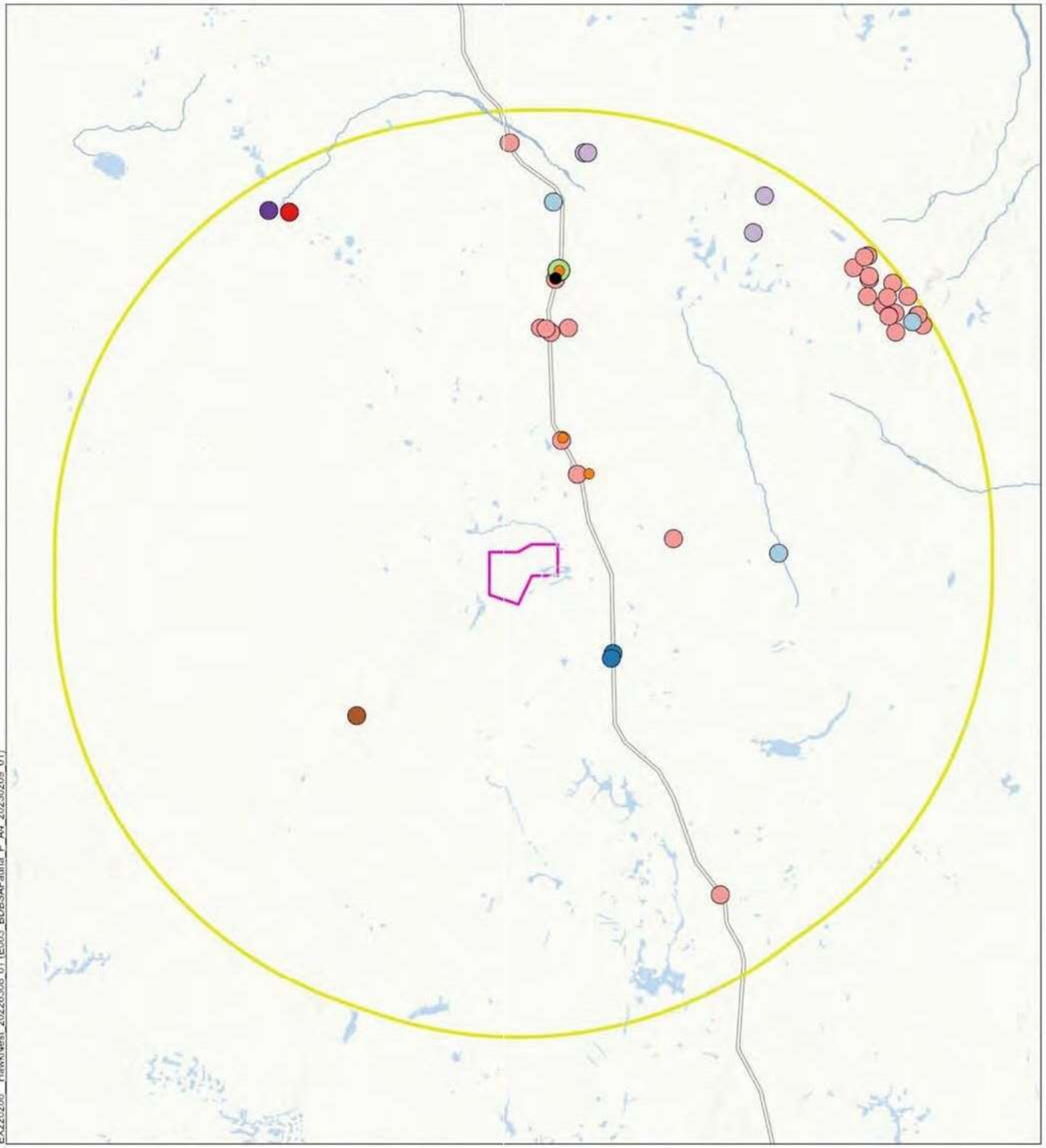
Date Exported: 9/02/2023 10:50 AM
Created by: murphy.homes

GDA2020 MGA Zone 53

N

0 5 10 km

EX220206_PalWkNest_20220308_01TE005_BDBSAFauna_P_A4_20230209_01



Project Area
Search Area (50km Buffer)
Water course
Water body

NPW listed vunerable species

- Australian Bustard (*Ardeotis australis*)
- Black-breasted Buzzard (*Hamirostra melanosternon*)
- Blue-winged Parrot (*Neophema chrysostoma*)
- Chestnut-breasted Whiteface (*Aphelocephala pectoralis*)
- Freckled Duck (*Stictonetta naevosa*)
- Little Eagle (*Hieraaetus morphnoides*)
- Major Mitchell's Cockatoo (*Lophochroa leadbeateri*)
- Plains Mouse (*Pseudomys australis*)
- Plains-wanderer (*Pedionomus torquatus*)
- White-browed Treecreeper (GR, NW) (*Climacteris affinis affinis*)

ebs ecology

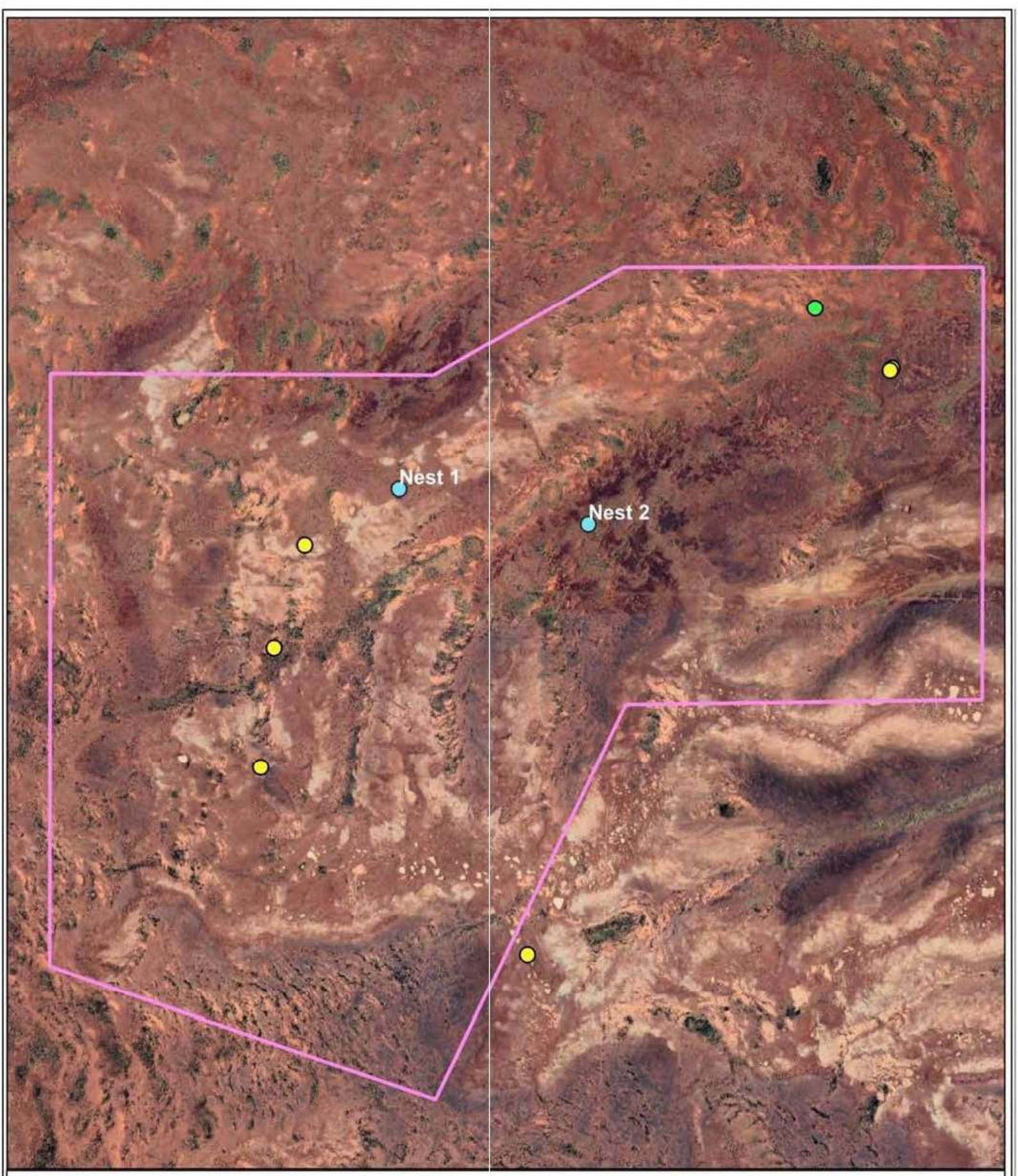
Data Source: EBS Ecology (2022), ESRI (2022), DEW (2022), DIT (2022)

Date Exported: 9/02/2023 10:09 AM
Created by: murphy.homes

GDA2020 MGA Zone 53

N

0 5 10 km



Project Area

Wedge-tailed Eagle (*Aquila audax*) nest

Chestnut-breasted Whiteface (*Aphelocephala pectoralis*)

Scarlet-chested parrot (*Neophema splendida*)

ebs ecology

Data Source: EBS Ecology (2023) ESRI (2023), DEW (2023), DIT (2023)

0 0.5 1 1.5 km

GDA 2020 MGA Zone 53

M21
July 2012

South Australia
EarthResources
Information Sheet

Mineral Exploration Drillholes — General specifications for construction and backfilling

Introduction

These specifications have been prepared to assist in the protection, from wastage, contamination and deterioration, of groundwater resources encountered during mineral exploration drilling in South Australia. Groundwater exists in two major environments — unconfined and confined (Fig. 1). An unconfined aquifer is one in which the water is under atmospheric pressure, and generally the water remains at the level at which it was cut. Confined aquifers are under pressure, have a confining layer of impervious strata above, and the water will rise above the level at which it is cut. When the pressure is sufficient to cause the water to flow at the surface, the aquifer is artesian.

Drillholes must be appropriately abandoned/ completed to restore, as far as feasible, the controlling geological conditions that existed before the hole was drilled and so prevent:

- contamination of aquifers through entry of pollutants from the surface
- interconnection between aquifers
- flow of pressurised water to the surface or into dry 'thief' zones
- degradation of natural hydrostatic conditions (maintain pre-drilling pressures)
- any physical hazard resulting from an open hole
- any environmental hazard resulting from an open hole which could become a trap for small animals or be hazardous to stock.

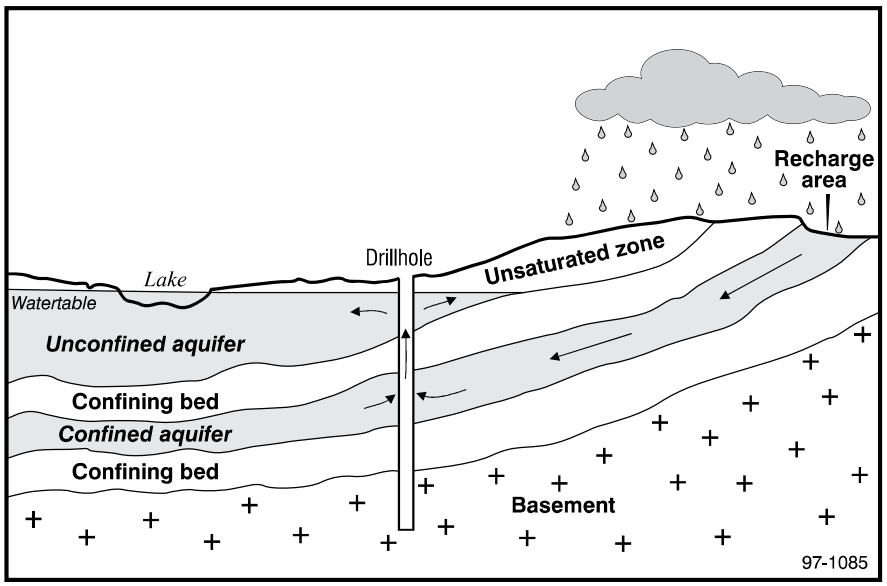


Figure 1 *Groundwater environments (arrows indicate flow direction).*

Related advice on drillsite access, location, management and restoration are provided in *Environmental guidelines for mineral exploration activities in South Australia, Information Sheet M33.* These are only guides and tenement holders also need to consult the *Mining Act 1971* and *Regulations* and the *Natural Resources Management Act 2004.*

Construction

Drillholes that are likely to intersect artesian aquifers must be pre-collared by installation and pressure cementing casing of adequate strength, to sufficient depth, to enable well control procedures to be carried out in the event of a blow-out.

Water supply and drainage wells

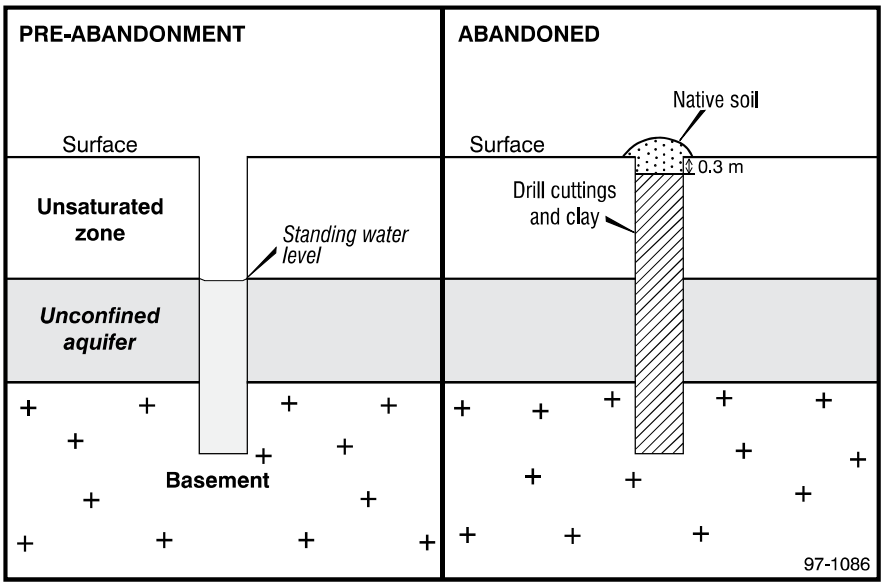
Mineral exploration or mining activities may entail the drilling of a water supply or drainage well or the conversion of an existing drillhole for this purpose. Under the *Natural Resources Management Act* such work requires a permit and must be carried out by an appropriately licensed well driller. Permits are obtainable from the Department of Environment, Water and Natural Resources (DEWNR). It is the licensed driller's responsibility to ensure that work is carried out in accordance with the *Natural Resources Management Act* including any special conditions on the permit.

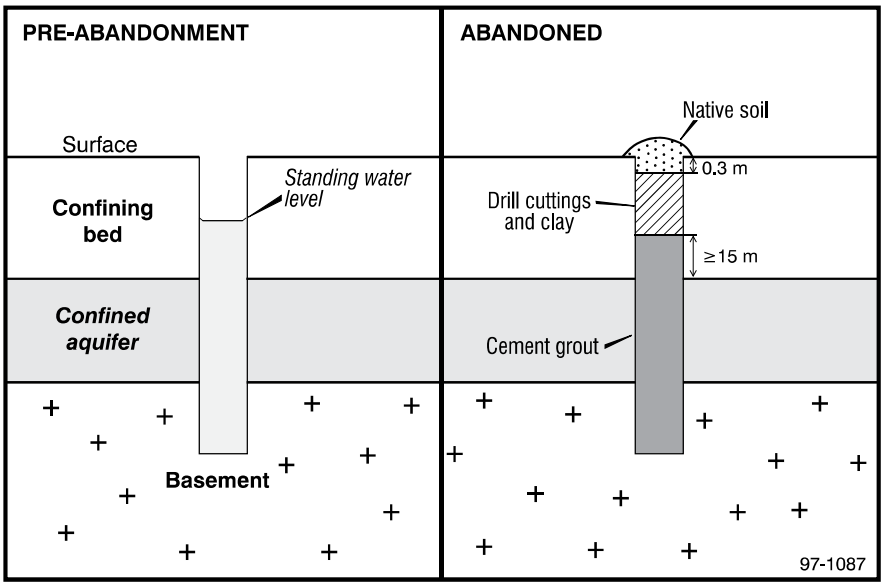
On completion of the mineral exploration program the wells must be backfilled by the tenement holder in accordance with these guidelines unless the owner or occupier of the land requests retention of such wells in writing from the tenement holder and obtains a permit.

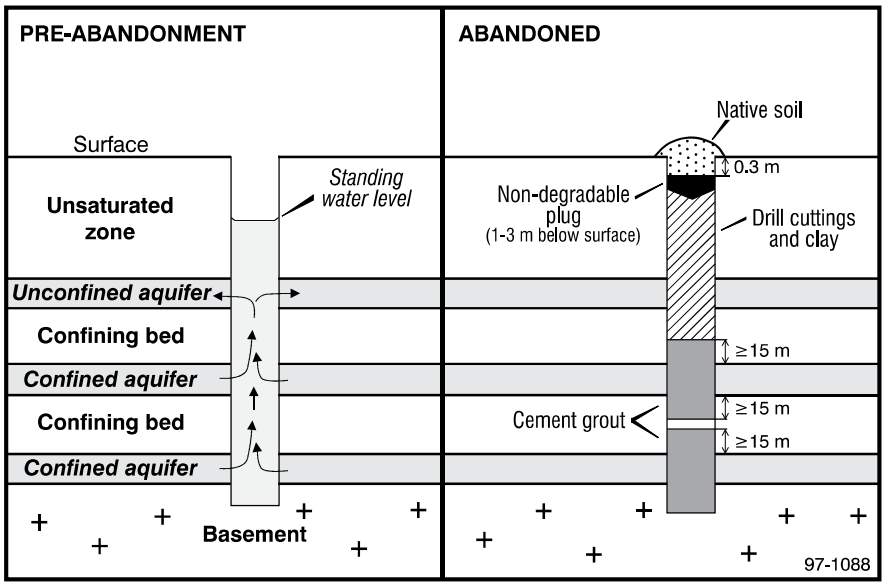
Government of South Australia
Department of State Development

Resources and Energy Group
www.minerals.statedevelopment.sa.gov.au
www.petroleum.statedevelopment.sa.gov.au
www.statedevelopment.sa.gov.au/sarig

101 Grenfell Street, Adelaide SA
GPO Box 320, Adelaide SA 5001
Phone +61 8 8463 3000
Email Resources.CustomerServices@sa.gov.au







Backfilling

- Drillholes which penetrate a single unconfined aquifer — backfill with drill cuttings, clean fill containing clay, or cement (Fig. 2).
- Drillholes which penetrate a single confined aquifer — plug from the level at which the aquifer was penetrated with cement grout back to a minimum of 15 m into the confining bed above; and then backfill as above (Fig. 3).
- Drillholes which penetrate more than one aquifer — separate each aquifer by a cement grout plug and then backfill as above. The length of plug used will be dependent on aquifer pressure and thickness. The plug should extend through the aquifer back into the confining bed above, with a total minimum length of 20 m of grout. In an intermediate aquifer the plug should be emplaced from 15 m below the aquifer and extend upwards through the aquifer and to a distance of 15 m above the aquifer. Generally a minimum of 20 m of cement should be positioned between aquifers (Fig. 4). Shallow holes (<200 m) can be back-filled from the bottom back to surface with grout.
- Drillholes which penetrate artesian aquifers — abandon in such a way that the flow of water to surface or to other aquifers is prevented. The length of plug used to achieve this is dependent on the aquifer 'shut-in' pressure at surface. Normally allow 1 m of grout above top of aquifer for every 7 kPa of head, with a minimum of 20 m of plug (Fig. 4).
- Drillholes that do not penetrate aquifers — backfill with drill cuttings or clean fill.

Casing should be removed from the drillhole to ensure placement of effective seals. Where possible, obstructions should also be removed prior to sealing. If casing cannot be removed or has been pressure cemented in position, the drillhole should be securely capped at or below ground level as agreed with the landowner. If any radioactive source, such as a gamma probe used in downhole geophysical

Figure 2 *Backfilling of a drillhole penetrating a single unconfined aquifer.*

Figure 3 *Backfilling of a drillhole penetrating a single confined aquifer.*

Figure 4 *Backfilling of a drillhole penetrating multiple aquifers or artesian aquifers (arrows indicate flow direction).*

logging, is lost down a hole the licensee must ensure that the source is recovered before the drillhole is backfilled. Non-degradable plugs can be used as an aid to backfilling. Care must be taken when installing a proprietary plastic plug as there have been cases where these have failed, probably through negligent installation procedures, causing subsidence and exposing the hole.

The top 0.3 m of fill should consist of native soil, and a soil mound left over the hole's position to allow for any subsidence.

Cement grouting

Cement used to plug, backfill or secure the casing in a drillhole must be fresh, of good quality and mixed as a neat slurry with not more than 30 litres of fresh water per 40 kilogram sack of cement, and be positively placed to reach the required position without contamination or dilution. A drilling inspector may approve the expansion of standard grout by the addition of up to 10% API grade bentonite by weight of cement mixed with not more than 11 L of fresh water per kilogram of bentonite added.

Grouting is achieved by pumping slurry of approved mix ratio and quality, through drill pipe or tremie line to the depth at which it is to be set. The equipment for mixing and placing grout must be adequate for the operation. The tremie line or grout pipe needs to be at the appropriate depth (i.e. at the bottom of the zone to be sealed) and drilling fluid or water pumped through it to ensure against any blockage, prior to the grout being pumped. It may be necessary to place a bridge plug or formation packer ahead of the grout to provide a seat for the plug. This can save large amounts of grout being lost to the formation. The chemical reactions that cause grout to set begin as soon as the slurry is prepared, so it is essential that the grout is emplaced while it is still fluid. The grout needs to be positioned in one continuous operation to provide an effective seal, and the bottom of the tremie line or grout pipe must remain below the surface of the slurry during grouting.

Completion

Exploration drillholes intended for future re-entry must be completed with casing of adequate strength installed, and the casing cemented so that all aquifers are isolated to prevent the movement of any fluids behind the casing. Where possible, casing should be severed below ground level, and covered with a steel plate, to ensure maximum site safety and to allow future relocation with a metal detector, when the further work is required. A stand-pipe is suitable in locations where its positioning does not present a problem.

Inspection

All operations carried out by a tenement holder or licensee are subject to the direction of authorised officers of DEWNR in respect to compliance with the conditions under which the tenement or licence was granted, or work program was approved. In addition, any person appointed as an authorised officer under the *Natural Resources Management Act*, may, by written notice to the tenement holder, licensee or driller, delay any operation on a well or drillhole, or direct modification to the operation if not satisfied that it will achieve the requirement for long-term protection of the groundwater or feels that the personal attendance of an authorised officer of DEWNR is required.

Responsibility

The responsibility for conformation with these guidelines rests with the tenement holder, but it would be prudent for the driller to assume joint responsibility to minimise the likelihood of being required to return to the drillsite to carry out remedial work. Therefore it is imperative that the site geologist and the driller are made aware of this information prior to commencement of drilling.

If the operator or the driller considers that the purpose outlined herein can be reliably achieved in any manner other than in accordance with these specifications, they may discuss the proposal, prior to commencement of drilling operations, with the Drilling Inspector, Department of Environment, Water and Natural Resources.

Contact

Customer Services (general inquiries)
Level 7, 101 Grenfell Street
Adelaide, South Australia 5000

GPO Box 320
Adelaide, South Australia 5000

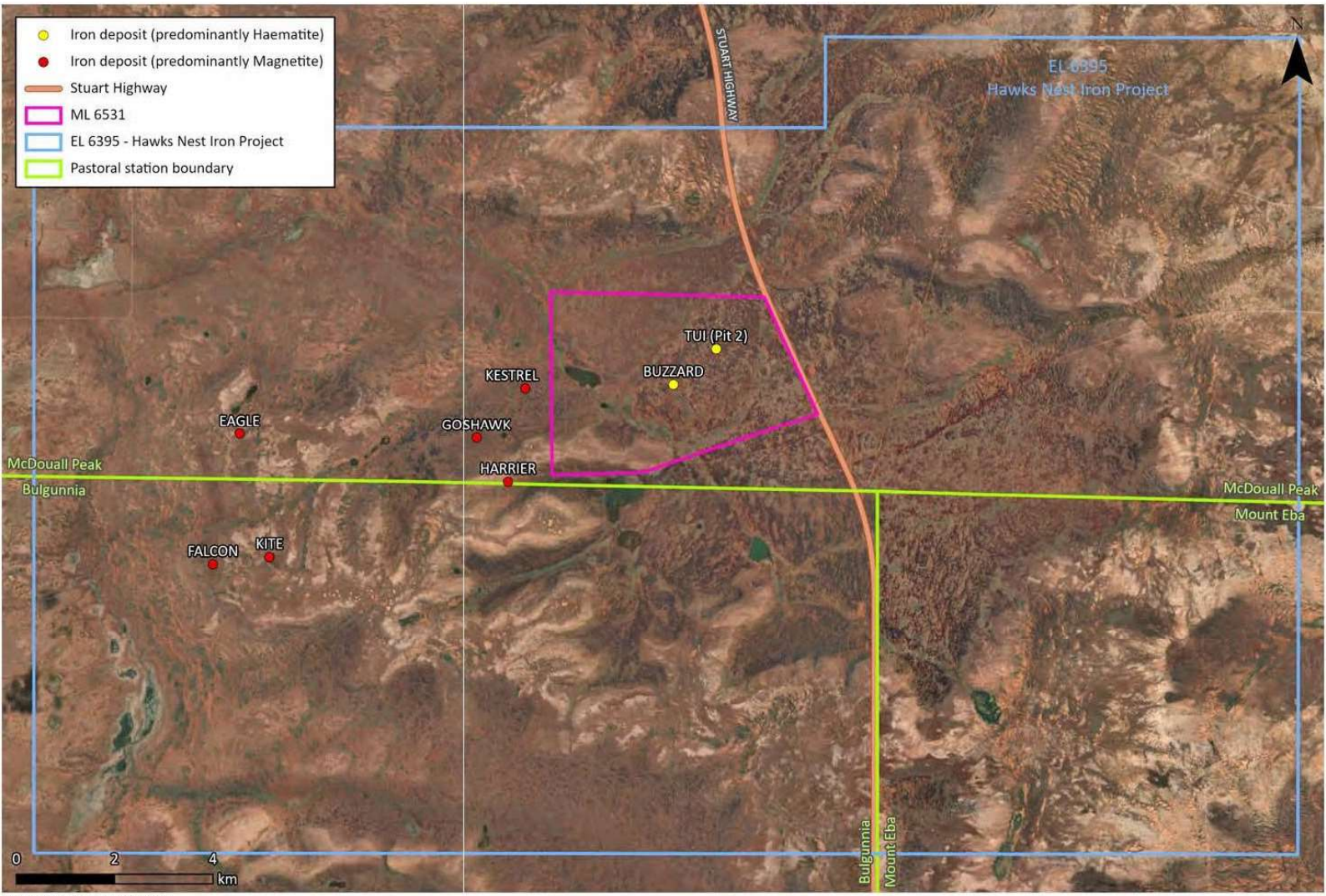
Resources.CustomerServices@sa.gov.au
Phone (08) 8463 3000
Fax (08) 8463 6518

For further mineral exploration information visit
www.minerals.statedevelopment.sa.gov.au

SARIG (South Australian Resources Information Geoserver) provides up-to-date views of mineral, petroleum and geothermal tenements and other geoscientific data. You can search, view and download information relating to minerals and mining in South Australia including:

- Tenement details
- Mines and mineral deposits
- Geological and geophysical data
- Publications and reports (including company reports)

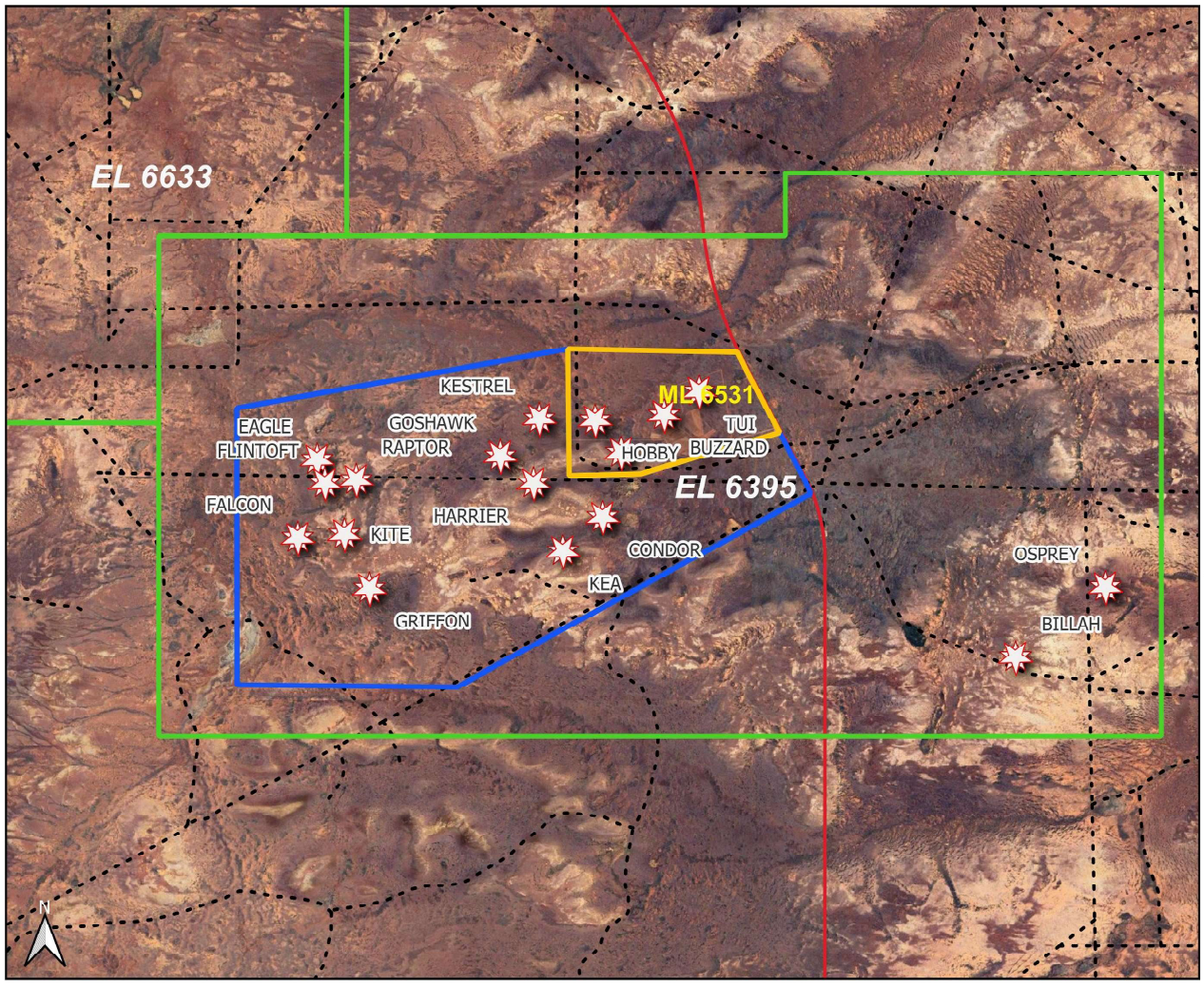
www.statedevelopment.sa.gov.au/sarig



Datum: GDA 1994 MGA Zone 53
Author: Chathuri Nisansala
Date: 23/11/2021 Rev: A

Hawks Nest identified prospects

environmental projects



PeaK IRON MINES

Legend

Site licences
Tenements
Mineral Exploration Licences
Mineral Lease
HN Proposed ML
EL6395
Prospects

Tracks
Roads_GDA2020
HWY
STATION
TRACK
Google Satellite

Scale 1:100000
GDA 2020
0 2.5 5 km

Prepared by Dwayne Povey
26th Nov 2025