Department of Planning, Housing & Infrastructure

Our ref: SSD-10461

Mr Stephen Barry
Planning Director
Independent Planning Commission NSW
Via email

13/05/2025

Subject: Valley of the Winds Wind Farm – Supplementary Information

Dear Mr Barry

I refer to the assessment of the Valley of the Winds Wind Farm project (the Project). I note that ACEN has provided supplementary information regarding contamination (see **Attachment A**).

The Department considers that the supplementary information is consistent with the ACEN's EIS and does not change the Department's conclusions in the Assessment Report or conditions in the Recommended Instrument of Consent.

If you wish to discuss the matter further, please contact Nicole Brewer on [redacted] or [redacted]

Yours sincerely,

[redacted]

Nicole Brewer
Director
Energy Assessments

Attachment A – Preliminary Site Investigation Report

Intended for
ACEN Australia

Document type
Preliminary Site Investigation Report

Date
May 2025

VALLEY OF THE WINDS
PRELIMINARY SITE INVESTIGATION

RAMBOLL Bright ideas. Sustainable change.

VALLEY OF THE WINDS
PRELIMINARY SITE INVESTIGATION

Project name	Valley of the Winds Stage 1 Preliminary Site Investigation
Project no.	318001172
Recipient	ACEN Australia
Document type	Report
Version	v2.0
Date	9/05/2025
Prepared by	Dr Carsten Matthai/ Tawna Krause
Checked by	Rachel Condon
Approved by	Belinda Sinclair
Description	This report documents the results of a preliminary site investigation, based on the review of existing documentation and site history information and completion of a limited site inspection to support the Environmental Impact Statement (EIS) for the proposed Valley of the Winds project.

Ramboll
The Arc, 45a Watt Street
Newcastle
NSW 2300
Australia

T +61 2 4962 5444
https://ramboll.com

Revision	Date	Prepared by	Checked by	Approved by	Description
V1.0	8/05/2025	C Matthai/ T Krause	R Condon	B Sinclair	Draft Report issued for client review
V2.0	9/05/2025		R Condon	B Sinclair	Final

Executive Summary

Ramboll was engaged by ACEN to conduct a preliminary site investigation to support the development of the proposed Valley of the Winds Project in the Warrumbungle Shire Council local government area.

The Project involves the construction, operation and decommissioning of the Valley of the Winds Project located between the townships of Coolah and Leadville, NSW. The project will connect with the Central-West Orana Renewable Energy Zone transmission line, supplying over 800 MW of electricity into the National Electricity Market and it includes up to 131 wind turbines across three clusters (Mount Hope cluster, Girragulang Road cluster, Leadville cluster).

Earthworks required for the Project would be limited to locations requiring resurfacing activities for temporary construction facilities, and permanent operational infrastructure such as the wind turbine footings, access tracks, substation, potential battery energy storage systems and ancillary infrastructure. Minor earthworks would also be required to prepare the array areas including grading or levelling, and the need for heavy earthworks would be minimised as much as practicable. The level of surface disturbance, and likelihood of exposing unknown contaminated land is therefore likely to be minimal.

The Development Corridor encompasses approximately 2,802 ha and 148 Lots.

The site history review identified that the site and surrounding area has historically been cleared agricultural land, mostly used for grazing cattle and consequently the site was unlikely to contain current and historic potentially contaminating land uses. However, based on the site history review, review of previous reports and a limited site inspection, the following potential onsite sources of contamination/land uses were identified:

- agricultural and farming practices
- infrastructure facilities (public roads)
- importation of fill material.

Onsite and offsite potential contamination sources associated with the current and historical land uses within the site include (but are not limited to) heavy metals, pesticides and herbicides, asbestos, TRH, BTEXN and PAHs and are considered to have the potential to adversely impact the soil and/or groundwater quality at the site. Acid sulfate soils are not considered to be present in the area of investigation.

A preliminary conceptual site model has been developed to address potential contaminant sources, transport mechanisms/pathways and sensitive receptors identified for the site. Based on the results of the preliminary site investigation, Ramboll considers the site is likely to be suitable for the proposed wind farm development land use subject to:

- should excavated soil be required to be disposed of offsite, it is required to be appropriately characterised in accordance with NSW EPA (2014) *Waste Classification Guidelines*
- development of an unexpected finds protocol to be implemented during the construction phase of the project, and during any excavation work required during the operational phase.

Contents

Table of Tables

Table of Figures

Appendices

Acronyms

Abbreviation	Definition
ACEN	ACEN Australia Pty Ltd
AHD	Australian Height Datum
ASS	Acid Sulfate Soil
AWS	Automatic Weather Station
BESS	Battery Energy Storage Systems
BTEXN	Benzene, Toluene, Ethylbenzene, Xylenes and Naphthalene
bgl	Below Ground Level
BOM	Bureau of Meteorology
CoPC	Contaminant of Potential Concern
CSM	Conceptual Site Model
CWO-REZ	Central-West Orana Renewable Energy Zone
DP	Deposited Plan
kV	Kilovolt
EIS	Environmental Impact Statement
LGA	Local Government Area
LEP	Local Environment Plan
LRB	Liverpool Ranges Basalt
MDB	Murray-Darling Basin
µS/cm	MicroSiemens per Centimetre
MW	Megawatt
MWh	Megawatt-hour
NEPC	National Environment Protection Council
NEPM	National Environment Protection (Assessment of Site Contamination) Measure
NSW EPA	New South Wales Environmental Protection Authority
OCP	Organochlorine Pesticides
OPP	Organophosphorus Pesticides
PAHs	Polycyclic Aromatic Hydrocarbons
PSI	Preliminary Site Investigation
TRH	Total Recoverable Hydrocarbons

Acknowledgement

Aboriginal people have had a long and continuous association with the region for thousands of years. Ramboll would like to acknowledge and pay respects to the traditional owners of the country which is encompassed by the project.

1. Introduction

1.1 Project Background

ACEN Australia Pty Ltd (ACEN) engaged Ramboll Australia Pty Ltd (Ramboll) to undertake a Preliminary Site Investigation (PSI) for the the Valley of the Winds (VOW) Project, SSD-10641.

This PSI has been prepared to address the requirements under Section 4.6(2) of *State Environmental Planning Policy (SEPP) (Resilience and Hazards) 2021* and Section 3.5.2 of *SEPP 55 – Remediation of Land*.

The PSI was prepared in accordance with the *Guidelines for Consultants Reporting on Contaminated Sites* (NSW EPA, 2020) and includes a review of current and historical site activities, an assessment of contamination areas of concern and recommended actions and the need for future investigations/management.

ACEN proposes to construct and operate the Valley of the Winds Project (the Project) located between the townships of Coolah and Leadville NSW, within the Warrumbungle Shire Council Local Government Area. The Wind Farm Site is located within the Central-West Orana Renewable Energy Zone (CWO-REZ), declared by the Minister for Energy and Environment in 2021 to help meet its objective to achieve net zero emissions by 2050. The project would connect with the CWO-REZ transmission line, supplying over 800 megawatts (MW) of electricity into the National Electricity Market.

The project includes up to 131 wind turbines across the following three clusters that would be connected by electrical and transport infrastructure:

- Mount Hope cluster
- Girragulang Road cluster
- Leadville cluster.

The locality of the Project is shown in Figure 1, Appendix 1.

This PSI has been completed for the area potentially subject to ground disturbance and provides insight into potential environmental risks based on previous and current land uses. The area potentially subject to ground disturbance is defined as the Development Corridor which is located within the VOW Wind Farm Site. The general Project layout are presented in Figure 2, Appendix 1. The Development Corridor is presented in Figures 3 to 6, Appendix 1.

The key infrastructure for the Project includes:

- Up to 131 wind turbines with a maximum tip height of 250 metres and a hardstand area at the base of each turbine.
- Electrical infrastructure, including:
  - One central substation in the Girragulang cluster and three collector substations in each cluster (one in the Leadville cluster and two in the Mount Hope cluster)
  - A step-up facility at the connection to the CWO-REZ Transmission line
  - Underground 33 kilovolt (kV) electrical reticulation connecting the turbines to the substations in each cluster
  - Overhead transmission lines (220 kV or 330 kV) dispatching electricity from each cluster
  - A high voltage transmission line (330 kV or 500 kV) connecting the wind farm to the CWO-REZ Transmission Line
  - Centralised battery energy storage system (BESS) with a capacity of 320MW/640MWh.
- Other permanent on-site ancillary infrastructure:
  - Permanent operation and maintenance facilities

  - Meteorological masts (up to nine).
- Access track network:
  - Access and egress points to each cluster from public roads
  - Operational access tracks and associated infrastructure within each cluster on private property.
- Temporary construction ancillary facilities:
  - Construction workforce accommodation on site
  - Construction compounds
  - Laydown areas
  - Concrete batching plants
  - Up to 12 temporary meteorological masts
  - Three onsite quarry sites located in each cluster for construction material (rock for access tracks and hardstands).

At the end of its practical life, the Project would be decommissioned, and the site returned to its pre-existing land use in consultation with the affected landholders.

1.2 Objectives

The objectives of this PSI are to:

- identify past and present potentially contaminating activities and contamination types
- assess potential contamination sources, pathways and receptors in the disturbance footprint of the Project infrastructure development
- determine potential areas of concern and contaminants of concern and assess the risks posed by potential contamination for the Project infrastructure development
- identify areas where further investigation and/or management may be required.

1.3 Scope of Work

The PSI was carried out in accordance with *National Environment Protection Council (NEPC) National Environment Protection (Assessment of Site Contamination) Measure, NEPM Amendment 2013 No. 1* (NEPC, 1999). The scope of work to meet the objectives comprised:

- review of published data associated with the site to establish the site environmental setting and sensitivity. This included a review of the following documentation reported by Land Insight (2024) including:
  - Groundwater bore databases
  - Warrumbungle Shire Council planning information
  - Acid sulfate soils (ASS) risk map
  - Historical business directories
  - Local geological maps
  - Historical business directories
  - Publicly available data bases held by the NSW Environment Protection Authority (NSW EPA), i.e. listed as a Notified Site on NSW EPA website for contaminated sites.
- review of previous reports and investigations prepared for the Valley of the Winds project site
- an initial preliminary site inspection
- development of a conceptual site model (CSM) assessing source, pathway, receptor linkages
- preparation of this PSI report.

2. Site Description

2.1 Site Identification

Lot details associated with the development corridor are shown in Appendix 2. The Project comprises three clusters located south of Coolah and north and east of Leadville on private land that is primarily used for grazing. The three clusters and road upgrades associated with the Project are shown in Figures 3 to 6, Appendix 1.

Table 2-1: Site identification

Information	Description
Lot / DP:	The Development Corridor is located across 148 cadastral lots, and approximately 22 property owners. The lots that make up the site are listed in Appendix 2.
Site Area:	Development corridor/investigation area: 2,802 ha
Local Government:	Warrumbungle Shire Council (Council)
Zoning:	Under the *Warrumbungle Local Environment Plan 2013*, the land zoning underlain by the development corridor is as follows: • RU1 (Primary Production); • RU5 (Village); • SP2 (Infrastructure).
Owner:	The land pertaining to the investigation is owned by approximately 22 property owners with minor interactions with Crown and Council owned land.
Current Site Use:	The Development Corridor is located on predominantly rural grazing land.

2.2 Land Use

Land within the investigation area is predominantly used for agricultural purposes, specifically cattle and sheep. Some cropping of oats or barley takes place within the investigation area however due its undulating topography and rocky subsurface this is limited (Ramboll, 2022).

Areas of native vegetation is predominantly dry sclerophyll and shrubby woodland with grassy understory which has been mostly cleared or slashed to encourage grazing (Ramboll, 2022). Prominent tree species are ironbark, white box, yellow box and kurrajong trees, with some forest red gums and river oaks along lower slopes and valley floors.

2.3 Site Boundaries

The land surrounding the investigation area is predominantly rural grazing land. Agricultural activity is also evident across the land surrounding the site, especially dryland cropping and modified grazing pastures.

2.4 Sensitive Ecological Receptors

The of investigation area include numerous ecological sensitive areas including parks, watercourses such as creeks, lakes and farm dams, as identified in the Land Insight Search (2025) (Appendix 3). The Coolaburragundy River runs northeast-southwest through the centre of the site.

2.5 Topography

The investigation area is located southwest of the Liverpool Range on the tertiary basalt of the Merriwa Plateau (Ramboll, 2022). Ridgelines generally run from northeast to southwest emerging from the Liverpool Ranges where the Coolah Tops National Park is situated. The landform is characterised by gently rolling to moderately steep undulations. The undulating landform generally falls south-southwest near Leadville and Uarbry.

The onsite topography varies between approximately 400 – 770 metres Australian Height Datum (m AHD) (Land Insight, 2025). The highest point is located at Mount Hope, south-west of Coolah, near Mount Hope Road.

2.6 Site Walkover

An initial site walkover was undertaken on 24 February 2020 as part of the assessment of the site for the EIS (Ramboll, 2022) to verify results of the desktop assessment, identify any other existing land uses and gain an appreciation of the wind farm site and surrounds. No additional site walkover was undertaken during the preparation of this PSI report as Ramboll are not aware of any significant changes to the site since February 2020.

3. Site History

The following sections include a summary of the site history as recorded by the third-party database report (Land Insight, 2025) and other relevant publicly available licences, registers, records, databases or mapping pertinent to the site. The complete Land Insight (2025) report is provided as Appendix 3.

3.1 NSW EPA Licences, Registers and Records

The review of environmental registers, licences and incidents from the contaminated land public register undertaken by Land Insight (2025) (Appendix 3) confirms that there are no identified contaminated sites across the site. The results of NSW EPA Contaminated Land registers relevant to the site is summarised in Table 3-1.

Table 3-1: Summary of NSW EPA, Licences, Registers and Records

Information	Description
Licences	The following licences are recorded within, or near, the investigation area: • Licence No. 3142 issued to Australian Rail Track Corporation (ARTC) Limited for railway infrastructure operations (ARTC Network). • License No. 12981 (no longer in use) held by the Forestry Corporation of NSW for logging operations (Brigalow and Nandewar Community Conservation Area, Dubbo, NSW)
Clean Up, Penalty Notices and Orders	No properties within or near the project area have received clean up or penalty notices.
EPA Records	No properties within or near the project area are included on: • 'List of NSW contaminated sites notified to EPA' • 'Contaminated Land: Record of Notices'

3.2 Sites Regulated by Other Jurisdictional Bodies

No contaminated sites of the following type have been identified within or near the site footprint (Land Insight, 2025):

- contaminated legacy areas
- Defence, military sites and UXO areas
- former Gasworks sites
- landfills
- National Pollutant Inventory (NPI) sites
- PFAS sites.

Several quarries and mines were identified to be located within proximity (i.e. less than 500m) to the site and are summarised in Table 3-2.

Table 3-2: Summary of Mines and Quarries

Site Name	Description	Status	Location
Melrose Pit	Pit in rippable sandstone/quartzose sandstone.Not used for years	Former	Onsite
The Rock Pit	Pit in gravel and sand derived from weathered conglomerate	Current	Onsite
Pound Gully Pit	Pit 45 in gravel and sand construction derived from weathered conglomerate	Current	Onsite
Glencoe Pit	Pit 46 in gravel and sand construction derived from weathered conglomerate	Current	Onsite
Mumbedah Pit	Liverpool Range Volcanics	Current	Onsite
Mount Hope Road	Liverpool Range Volcanics	Current	Onsite
East Leadville Limestone	Small quarry operated 1890-92 to produce limestone for smelting at the Mount Stewart Mine at Leadville Number of small pits and a quarry operated between 1890 and 1892.	Former	North-west
Moorfield Road Pit	Pilliga Sandstone	Current	South
Cossington Pit	6 m deep pit in sandstone and shale. Not used recently 6 m deep pit in sandstone and shale	Former	South-west
Talbragar River Moss Agate Occurrences, Leadville Moss Agate Occurrence	Silica gems and gemstones -Moss agate occurs as pebbles in holocene alluvial gravels in a tributary of the Talbragar River.	Unknown	North
Mount Stewart Mines; Leadville Mines	Lead, Silfer, sulfur	Former	South
G 26 Prospect	Zinc, silver and lead - The mineralization is present as pyrite, sphalerite with minor galena and quartz chlorite veins in the coarser grained units and pyrite, sphalerite, galena, chlorite in the finer grained units.	Former	South
Grosvenor Workings	Lead	Former	South

3.3 Historical Aerial Photographs

An aerial photograph search was undertaken of the site and surrounding areas (Australian Government Geoscience Australia, 2024). Historical views of 1967, 1994 and 2017 showed that the site and surrounding land have predominantly been cleared agricultural land since the first available image for 1967. Historical aerial photographs are presented in Appendix 3.

3.4 Potentially Contaminating Businesses

The third-party database search undertaken by Land Insight (2025) considers a wide range of potentially contaminating activities undertaken by businesses or industries that have occurred within the site or within close proximity to the site between 1965 and 2015. A summary of the historical business directories provided by Land Insight (2025) is provided as Table 3-3 and in Appendix 2.

Table 3-3: Potentially Contaminating Activities

Reference	Site name	Category	Address	Location
1	Mulligan JR	Motor Mechanics	5 Moorefields Rd, Leadville, NSW	3.9 m north
2	Yeo DB & M	Graziers	Yooralla Street, Leadville, NSW	Onsite
3	Wesley A V	Graziers	Terraban Street, Leadville, NSW	Onsite
4	Dhu Robin Pty Ltd	Farmers	Weeraman Street,Leadville, NSW	Onsite
5	Stanford N S	Graziers	Narangari Street, Leadville, NSW	Onsite
6	Heath J H	Graziers	Gildry Street, Leadville, NSW	Onsite
7	Heath J H	Graziers	Rosemead Street, Leadville, NSW	Onsite
8	Sullivan R & M	Farmers	Enfield Street, Leadville, NSW	Onsite
9	Fitzwilliam Pty Ltd	Farmers	Dalestar Street, Leadville, NSW	Onsite
10	Coe NA & GE	Farmers	Ewendale Street, Leadville, NSW	Onsite
11	Collins D & M	Graziers	Koolyn Street, Leadville, NSW	Onsite
12	Hardie D M & T L	Grain & Produce Wholesale	Weeraman, Leadville, NSW 2844	Onsite
13	J W Inder	Farmers & Agriculturalists	Nestle Down Miangulliah Rd, Leadville NSW 2831	Onsite
14	Francis S G	Graziers	Berowra Leadville, NSW 2831	Onsite
15	M F Fergusson	Graziers	Moreton Bay, Leadville, NSW 2831	Onsite
16	Hardie D M & T L	Grain & Produce Packers & Wholesalers	Weeraman, Leadville, NSW 2831	Onsite

Reference	Site name	Category	Address	Location
17	McMaster W D	Stud Breeders Horses	Deep Creek, Coolah, NSW	Onsite
18	Rowbotham K V	Graziers	Box Valley, Leadville, NSW	Onsite
19	Hookway KC	Farmers	Byatta Downs, Leadville, NSW	Onsite
20	Rowbotham WK	Graziers	Box Valley, Dunedoo, NSW	Onsite
21	Lennon Robert	Graziers	Gundooee, Leadville, NSW 2844	Onsite
22	Lennon Robert	Graziers	Gundooee, Leadville, NSW 2844	Onsite
23	Henderson P S	Graziers	Leadville, NSW	Onsite
24	Henderson P L & P	Graziers	Leadville, NSW	Onsite
25	Armstrong H	Graziers	Leadville, NSW	Onsite
26	Rootyard EC	Farmers	Leadville, NSW	Onsite
27	Inder J W	Farmers	Leadville, NSW	Onsite
28	Dhu Robin Pty Ltd	Farmers	Leadville, NSW	Onsite
29	Bowman DR	Farmers	Leadville, NSW	Onsite
30	Dunedoo Transport, Leadville	Transport Services	Leadville, NSW 2844	Onsite

3.5 Dangerous Goods Search

Based on the predominant current and historical agricultural use of the site and surrounding area, a dangerous goods search was not deemed necessary.

3.6 Site History Summary

The site history review identified that the site and surrounding area has, historically, been cleared agricultural land, most likely used for grazing cattle and consequently the site was not identified as containing potentially contaminating land uses. The town of Leadville, northwest of the Leadville cluster, has historically been associated with the former Mount Stewart Mine at which active mining took place between 1888 and 1952 (McQueen, 2023).

4. Previous Investigations

There are no known contamination or geotechnical investigations at the site.

4.1 Environmental Impact Statement (Ramboll, 2022)

An Environmental Impact Statement (EIS) was prepared by Ramboll in March 2022. Key issues assessed within the EIS included:

- Landscape character and visual
- Noise and vibration impacts
- Biodiversity
- Traffic and transport
- Hazards and risks (aviation, telecommunications, human health, bushfire, blade throw, battery storage
- Aboriginal Heritage
- Historic heritage
- Water and soils
- Waste and resources
- Social
- Economic.

The EIS also considered other issues related to the land use, air quality climate change and greenhouse gas and cumulative impacts.

The environmental assessment undertaken for the EIS concluded that the wind farm development would not result in significant impacts to environmental, cultural, social and economic values and that residual impacts could be managed.

5. Geology and Hydrogeology

5.1 Regional Geology

The surface geology of the wind farm site is represented by the Gulgong 1:100,000 Geological Map (Watkins, 2000) and the Gilgandra 1:250,000 Geological Map (Offenberg, 1968). Geology of the wind farm site is shown in Figure 7.

The surface geology of the wind farm site is generally comprised of Tertiary and Quaternary-aged basalt flows and underlying Jurassic/Triassic quartz sandstones, and therefore has variable soil and vegetation depending on rock type and sediment source (Ramboll, 2022). On the lower slopes the topography is more subdued, partly buried in alluvial debris and largely eroded to rolling plains. The wind turbines are located on ridges of Tertiary-aged basalts or intrusive dolerites, or underlying Permo-Triassic sandstones.

5.2 Soil Landscapes

Ramboll (2022) defined several landscapes, such as Mitchell Landscapes that are defined ecosystem units based upon geologic, geomorphic and pedologic factors (Mitchell, 2002). The landscape types predominantly underlaying the site comprise Liverpool Range Valleys and Footslopes and Cassilis Slopes landscape types with undulating hills on volcanic and sandstone/siltstone bedrock.

5.3 Acid Sulfate Soils

Land Insight (2025) (Appendix 2) identified that the investigation area is mostly located within an area of low to extremely low probability of acid sulfate soil (ASS) occurrence, based on records from the *National Acid Sulfate Soil Register*. No ASS have been identified onsite.

5.4 Hydrogeology

The EIS (Ramboll, 2022) identified that groundwater at the wind farm project is managed under:

- *Water Sharing Plan for the NSW Murray Darling Basin Fractured Rock Groundwater Sources 2020* (Liverpool Ranges Basalt MDB Groundwater Source (LRBMDB)) – in the northeast;
- *Water Sharing Plan for the NSW Murray Darling Basin Porous Rock Groundwater Sources* 2020 in the southwest

Porous, extensive highly productive aquifers and of low to moderate productivity, and fractured or fissured, extensive aquifers of low to moderate productivity are reported at the site (Land Insight, 2025) and groundwater at the site is anticipated to be present in the bedrock between approximately 2 to 60 m depth, with flows generally expected towards the Coolaburragundy River which runs northeast-southwest through the centre of the site.

5.4.1 Groundwater Bores

Review of existing registered groundwater bores (Land Insight, 2025 and WaterNSW, 2025) identifies over 50 registered bores within the site footprint and over 100 bores within a 2 km radius. Total bore depths ranged from approximately 3 to 240 mbgl with available water levels information indicating water depths between 0.6 and 230 mbgl. Generally, wells installed in the area are listed for domestic, household, livestock supply and irrigation use. From the limited salinity information available groundwater is fresh to brackish with salinity (reported as parts per million) from 0 to 3000 ppm.

5.5 Groundwater Dependent Ecosystems

Review of regional scale mapping of groundwater dependent ecosystems (GDEs) (Land Insight, 2025) indicates the potential for GDEs ranges from a low to highacross the investigation area. Further information is provided within the Biodiversity Assessment Report prepared for the Project (Ecological Australia, March 2025)

5.6 Preferential Water Courses

The EIS (Ramboll, 2022) identified numerous first and second order streams across the site. Important rivers and creeks in the area are the Coolaburragundy River and Talbragar River, Rocky Creek, Cainbil Creek, Turee Creek and Mumbedah Creek. The Coolaburragundy and Talbragar Rivers are important waterways that feed into a number of gullies and creeks in the area. The Coolaburragundy River is a perennial stream and a tributary of the Talbragar River and carries enough water to support dryland cropping which is prominent in the region.

5.7 Direction of Surface Water Run-off

It is expected that the surface water run-off would vary with the topography across the site and land surfaces. However, as majority of the site is unsealed, it is expected the majority of rainfall would infiltrate the soil.

6. Site Condition and Surrounding Environment

6.1 Site Condition

Key features of the existing landscape including large areas of vegetation on ridgelines and grazing paddocks, undulating topography, roadside vegetation and riparian vegetation associated with rivers and creek lines. Limited cropping currently takes place within the wind farm site due its undulating topography and rocky subsurface (Ramboll, 2022).

The topography of the wind farm site is variable with the ridgelines ranging between 626 m AHD and 757 m AHD (Ramboll, 2022). The highest point is located at Mount Hope, southwest of Coolah, near Mount Hope Road.

Plates 1 to 5 illustrate the typical landscape and land use characteristics of the wind farm site.

Plate 1 View of Coolah township from Girragulang Road cluster ridgeline

Plate 2 View of Girragulang Road cluster ridgeline (foreground)

Plate 3 View from valley towards Mount Hope

Plate 4 View of Mount Hope cluster ridgeline (foreground)

Plate 5 View of Leadville cluster ridgeline (foreground)

6.2 Visible Signs of Contamination

Due to the size of the site and the broad range of properties it encompasses, a general site inspection was not completed. No visible signs of contamination were observed during the limited preliminary site inspection in February 2020 or in the limited number of available aerial photographs of the site (Appendix 4).

6.3 Visible Signs of Plant Stress

No visible signs of contamination were observed during the general site walkover in February 2020, although the walkover was of a limited nature only.

6.4 Presence of Drums and Wastes

No visible signs of drums and waste stockpiles were observed during the general site walkover in February 2020, although the walkover was of a limited nature only.

6.5 Odours

No noticeable odours were observed during the general site walkover in February 2020, although the walkover was of a limited nature only.

7. Integrity Assessment

The site history review was completed by accessing publicly available information from the following sources:

- Land Insight Report (Land Insight, 2025)
- Previous investigations (Ramboll, 2022)
- Google Earth™ imagery
- NSW Government Spatial Services Historical Imagery
- Online EPA databases
- Online BoM databases.

Information obtained from the Land Insight Report (2025) is considered to be accurate at the date the report was received.

Ramboll did not complete an inspection of the entire site and has not visited properties considered to have a history of potentially contaminating activities (Refer to Section 3.4). Based on the current and former use of the site and surrounds, the site history review, including previous reports, Ramboll considers there is a low risk of not accurately identifying Areas of Potential Concern and Potential Contaminants of Concern within the site boundaries. With the large area of the site, it is possible for that the limited site visit resulted in the omission of identifying areas of potential environmental concern, however this is not considered significant when considered in context of the findings of the historical review.

8. Preliminary Conceptual Site Model

Based on the information collected during this PSI, a preliminary CSM has been developed for the site. The preliminary CSM addresses potential on-site contamination sources, transport mechanisms/pathways and sensitive receptors identified and presented below.

8.1 Potential Onsite and Offsite Contaminant Sources

The potential sources of contamination are presented in Table 8-1.

Table 8-1: Potential Areas and Contaminants of Concern

Potential Area of Concern	Contaminants of Potential Concern (CoPC)	Affected Media
Onsite		
Agricultural use, predominantly grazing/livestock	• Pesticides (organochlorine pesticides (OCP)/organophosphorus pesticides (OPP)), including herbicides and fungicides. • Calcium phosphate, calcium sulfate, copper chloride, potassium • Sulfur, sulfuric acid, nitrates and ammonia • Carbamates • Heavy metals (including boron, cadmium, cobalt, copper, magnesium, molybdenum, zinc) • Arsenic • Asbestos	Soil and surface water
General earthworks and filling (imported fill material)	• Total recoverable hydrocarbons (TRH) • Benzene, toluene, ethylbenzene, xylenes, and naphthalene (BTEXN) • Polycyclic aromatic hydrocarbons (PAHs) • Heavy metals • Asbestos.	Soil
Public Roads	• Asbestos • Polychlorinated biphenyls (PCB) • Heavy metals	Soil, groundwater and surface water
Offsite		
Agricultural industries, including livestock exchange, meat processing and farming/grazing	• Pesticides (OCP)/OPP), including herbicides and fungicides. • Calcium phosphate, calcium sulfate, copper chloride, potassium • Sulfur, sulfuric acid, nitrates and ammonia • Carbamates • Heavy metals (including boron, cadmium, cobalt, copper, magnesium, molybdenum, zinc) • Asbestos	Soil, groundwater and surface water

8.2 Potential Transport Mechanisms

Identified potential transport mechanisms for the CoPC include:

- presence of contamination in soil near surface or at depth
- migration of contaminants in groundwater to surface water receiving bodies
- leaching of soil contaminants to groundwater

- migration of groundwater and/or surface water (as overland flow) from the site
- volatilisation and lateral and/or vertical vapour migration of volatile organic compounds and subsequent inhalation.

8.3 Exposure Pathways

Identified exposure pathways relating to the site include:

- direct ingestion or dermal contact with impacted soil, groundwater or surface water
- inhalation of contaminated dust or fibres
- surface water pathways/migration to surface water bodies.

8.4 Potential Receptors

Identified potential receptors of CoPCs, should complete exposure pathways be present at the site, include:

1. construction workers undertaking ground disturbance
2. onsite occupants, visitors and workers
3. offsite residents adjacent to the site
4. soil and groundwater environments beneath the site and their associated ecosystems
5. surface water courses receiving groundwater discharge from the site and their associated users and ecosystems
6. buildings and structures.

9. Conclusions and recommendations

Ramboll was engaged by ACEN to conduct a preliminary site investigation to support the development of the proposed Valley of the Winds Project in the Warrumbungle Shire Council local government area.

The Project involves the construction and operation of the Valley of the Winds Project located between the townships of Coolah and Leadville, NSW. The project will connect with the Central-West Orana Renewable Energy Zone transmission line, with an installed capacity of over 800 MW of electricity and it includes up to 131 wind turbines across three clusters (Mount Hope cluster, Girragulang Road cluster, Leadville cluster).

Earthworks required for the Project would be limited to locations requiring resurfacing activities for temporary construction facilities, and permanent operational infrastructure such as the wind turbine footings, access tracks, substation, potential battery energy storage systems and ancillary infrastructure. Minor earthworks would also be required to prepare the array areas including grading or levelling, and the need for heavy earthworks would be minimised as much as practicable. The level of surface disturbance, and likelihood of exposing unknown contaminated land is therefore likely to be minimal.

The Development Corridor encompasses approximately 2,802 ha and 148 Lots.

The site history review identified that the site and surrounding area has historically been cleared agricultural land, mostly used for grazing cattle and consequently the site was unlikely to contain current and historic potentially contaminating land uses. However, based on the site history review, review of previous reports and a limited site inspection, the following potential onsite sources of contamination/land uses were identified:

- agricultural and farming practices
- infrastructure facilities (public roads)
- importation of fill material.

Onsite and offsite potential contamination sources associated with the current and historical land uses within the site include (but are not limited to) heavy metals, pesticides and herbicides, asbestos, TRH, BTEXN and PAHs and are considered to have the potential to adversely impact the soil and/or groundwater quality at the site. Acid sulfate soils are not considered to be present in the area of investigation.

A preliminary conceptual site model has been developed to address potential contaminant sources, transport mechanisms/pathways and sensitive receptors identified for the site. Based on the results of the preliminary site investigation, Ramboll considers the site is likely to be suitable for the proposed wind farm development land use subject to:

- should excavated soil be required to be disposed of offsite, it is required to be appropriately characterised in accordance with NSW EPA (2014) *Waste Classification Guidelines*
- development of an unexpected finds protocol to be implemented during the construction phase of the project, and during any excavation work required during the operational phase.

10. References

Australian Government Geoscience Australia (2024) Historical Aerial Photography, accessed at: https://www.ga.gov.au/scientific-topics/national-location-information/historical-aerial-photography

Eco Logical Australia (2025) Valley of the Wind Farm, Biodiversity Assessment Report.

Land Insight (2025). Due Diligence Insight Report, Valley of the Winds Windfarm, Coolah, NSW. Report No. LI-4717 DDR, 23 April 2025.

McQueen, K. (2023). A history of the Mount Stewart mine and 'Australia's Little Leadville', central New South Wales. Journal of Australasian History, Vol. 21, 17-37.

Mitchell (2002). Descriptions for NSW (Mitchell) Landscapes.

NearMap (2025). Map "map_20170216_2017" aerial image of the site area dated 16 February 2017.

NSW EPA (2014). Waste Classification Guidelines. Part 1 Classifying waste. NSW Environment Protection Authority, November 2014.

NSW EPA (2020). Consultants reporting on contaminated land. NSW Environment Protection Authority, May 2020.

Offenberg, A.C. (1968). Gilgandra 1:250 000 Geological Sheet SH/55-16, 1st edition, Geological Survey of New South Wales, Sydney.

Ramboll (2022). Environmental Impact Statement, Valley of the Winds. Report prepared for UPC Renewables Australia Pty Ltd, April 2022.

Watkins J.J. & C. R. (2000). Gulgong 1:100 000 Geological Sheet 8833, 1st edition. Canberra: Geological Survey of New South Wales, Sydney & Geoscience Australia.

11. Limitations

Ramboll Australia Pty Ltd prepared this report in accordance with the scope of work as outlined by ACEN Australia Pty Ltd and in accordance with our understanding and interpretation of current regulatory standards.

In performing its assignment, Ramboll must rely upon publicly available information, information provided by the client and information provided by third parties. Accordingly, the conclusions in this report are valid only to the extent that the information provided to Ramboll was accurate and complete. This report is not intended as legal advice, nor is it an exhaustive review of site conditions or facility compliance. Ramboll makes no representations or warranties, express or implied, about the conditions of the site.

Ramboll's scope of work for this assignment did not include collecting samples of any environmental media. As such, this report cannot rule out the existence of latent conditions, and is intended, consistent with normal standards of practice and care, to assist the client in identifying the risks of such conditions.

Site conditions may change over time. This report is based on conditions encountered at the Site at the time of the report and Ramboll disclaims responsibility for any changes that may have occurred after this time.

The conclusions presented in this report represent Ramboll's professional judgment based on information made available during the course of this assignment and are true and correct to the best of Ramboll's knowledge as at the date of the assessment.

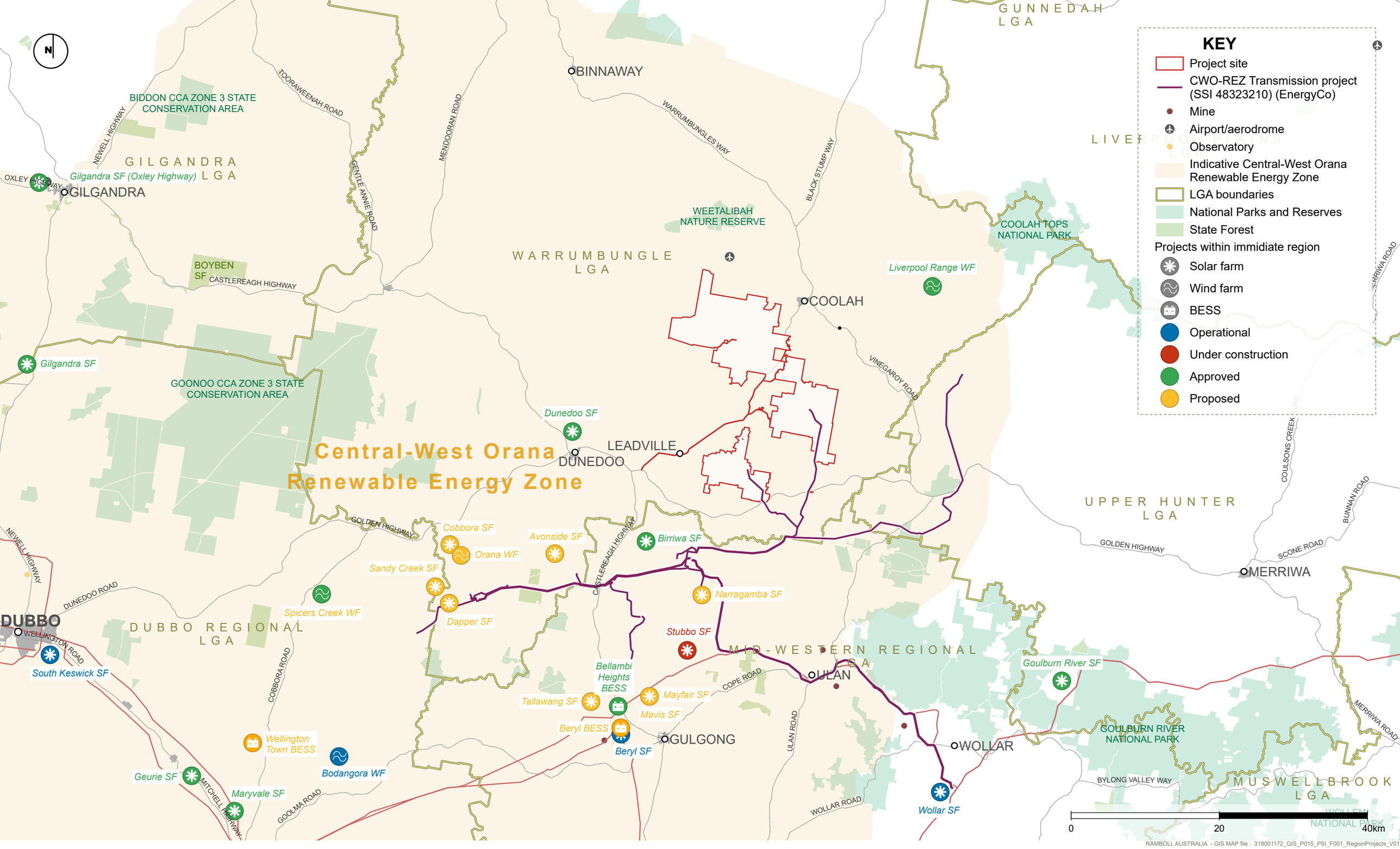
Ramboll did not independently verify all of the written or oral information provided to Ramboll during the course of this investigation. While Ramboll has no reason to doubt the accuracy of the information provided to it, the report is complete and accurate only to the extent that the information provided to Ramboll was itself complete and accurate.

This report does not purport to give legal advice. This advice can only be given by qualified legal advisors.

11.1 User Reliance

This report has been prepared exclusively for ACEN Australia Pty Ltd and may not be relied upon by any other person or entity without Ramboll's express written permission.

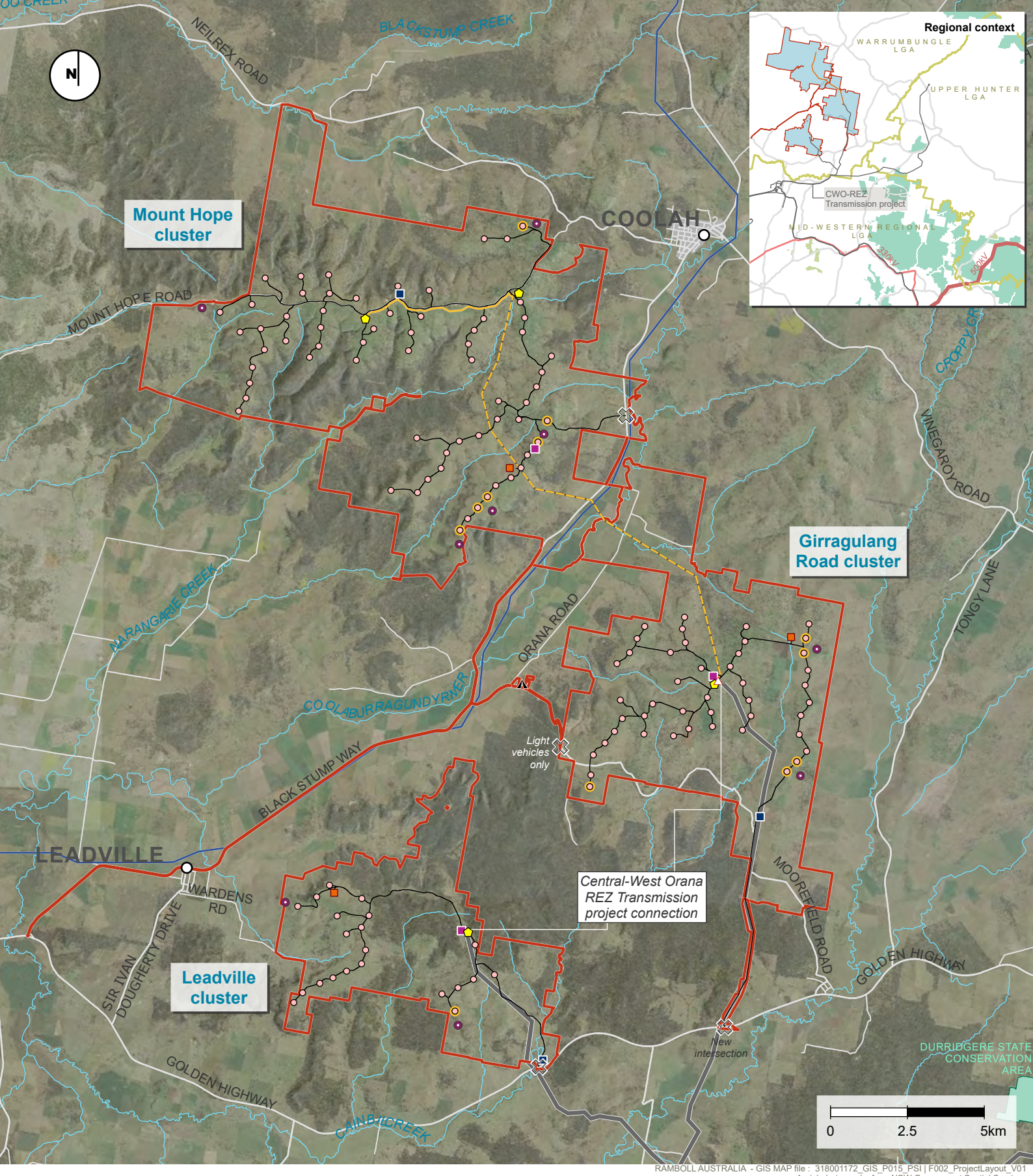
APPENDIX 1 - FIGURES



Information presented in this figure is approximate only and should not be relied upon as accurate

RAMBOLL AUSTRALIA - GIS MAP file : 318001172_GIS_P015_PSI_F001_RegionProjects_V01

Figure 1 | Regional context



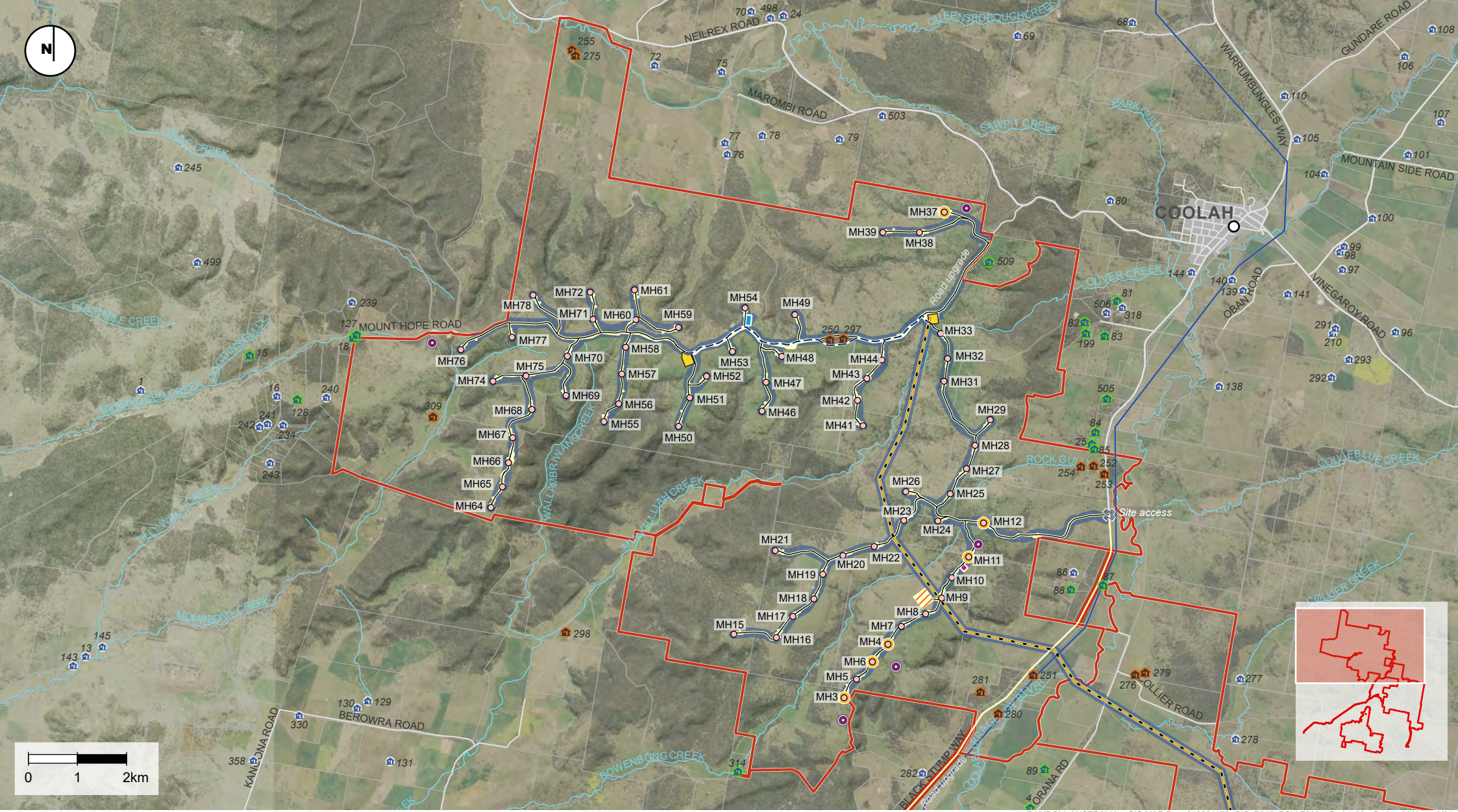
RAMBOLL AUSTRALIA - GIS MAP file : 318001172_GIS_P015_PSI | F002_ProjectLayout_V01
Aerial photography from NSW Government Spatial Services

KEY

- Project site
- Turbine location
- Overhead transmission line (up to 330kV)
- Underground transmission line (up to 330kV)
- Access track and cabling
- Site access
- Construction workforce accommodation
- BESS location**
- Substation and associated buildings
- Construction and permanent operation and maintenance compound
- Temporary facilities area*
- Quarry location**
- Permanent meteorological mast location
- Temporary meteorological mast location (co-located with turbine)
- National Parks and Reserves
- CWO-REZ Transmission project (SSI 48323210) (EnergyCo)
- Gas pipeline (Geoscience AU)

*May include site offices rock crushing facilities, concrete or asphalt batching plants, materials storage compounds, maintenance workshops, material stockpiles, laydown areas and parking spaces.
**Approximate only

Figure 2 | Project layout



RAMBOLL AUSTRALIA - GIS MAP file : 318001172_GIS_P015_PSI | F003a_ProjectMapSeries_MtHope_V01
Aerial photography from NSW Government Spatial Services

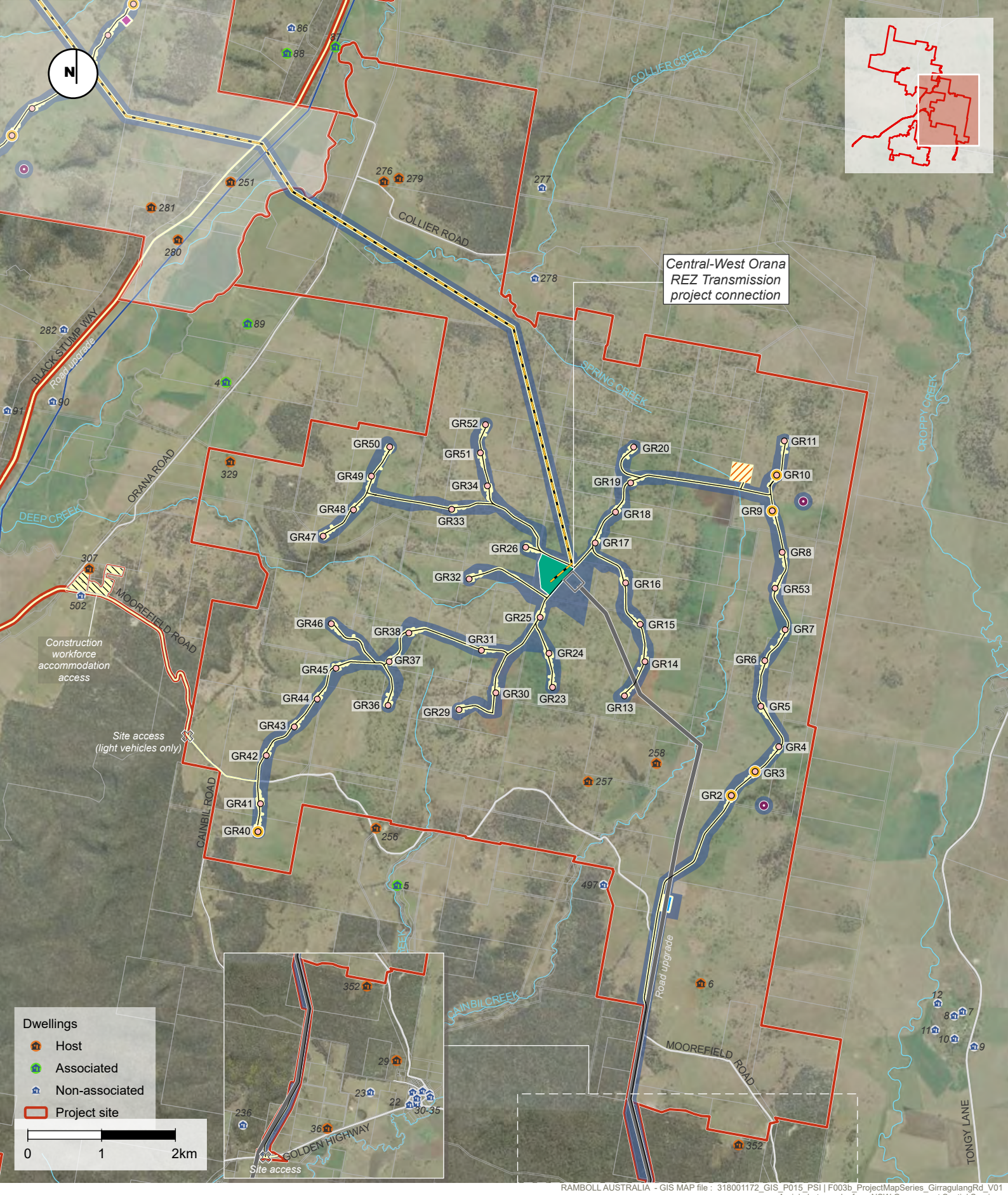
KEY

- Project site
- Turbine location
- Indicative construction footprint
- Development corridor
- Overhead transmission line (up to 330kV)
- Underground transmission line (up to 330kV)
- Access track and cabling
- Site access
- Construction and permanent operation and maintenance compound area
- Substation and associated buildings
- Temporary facilities area*
- Quarry location**
- Permanent meteorological mast location
- Temporary meteorological mast location (co-located with turbine)
- Gas pipeline (Geoscience AU)

Dwellings
- Host
- Associated
- Non-associated

Figure 3 | Project layout at the Mount Hope cluster

*May include site offices rock crushing facilities, concrete or asphalt batching plants, materials storage compounds, maintenance workshops, material stockpiles, laydown areas and parking spaces.
**Approximate only



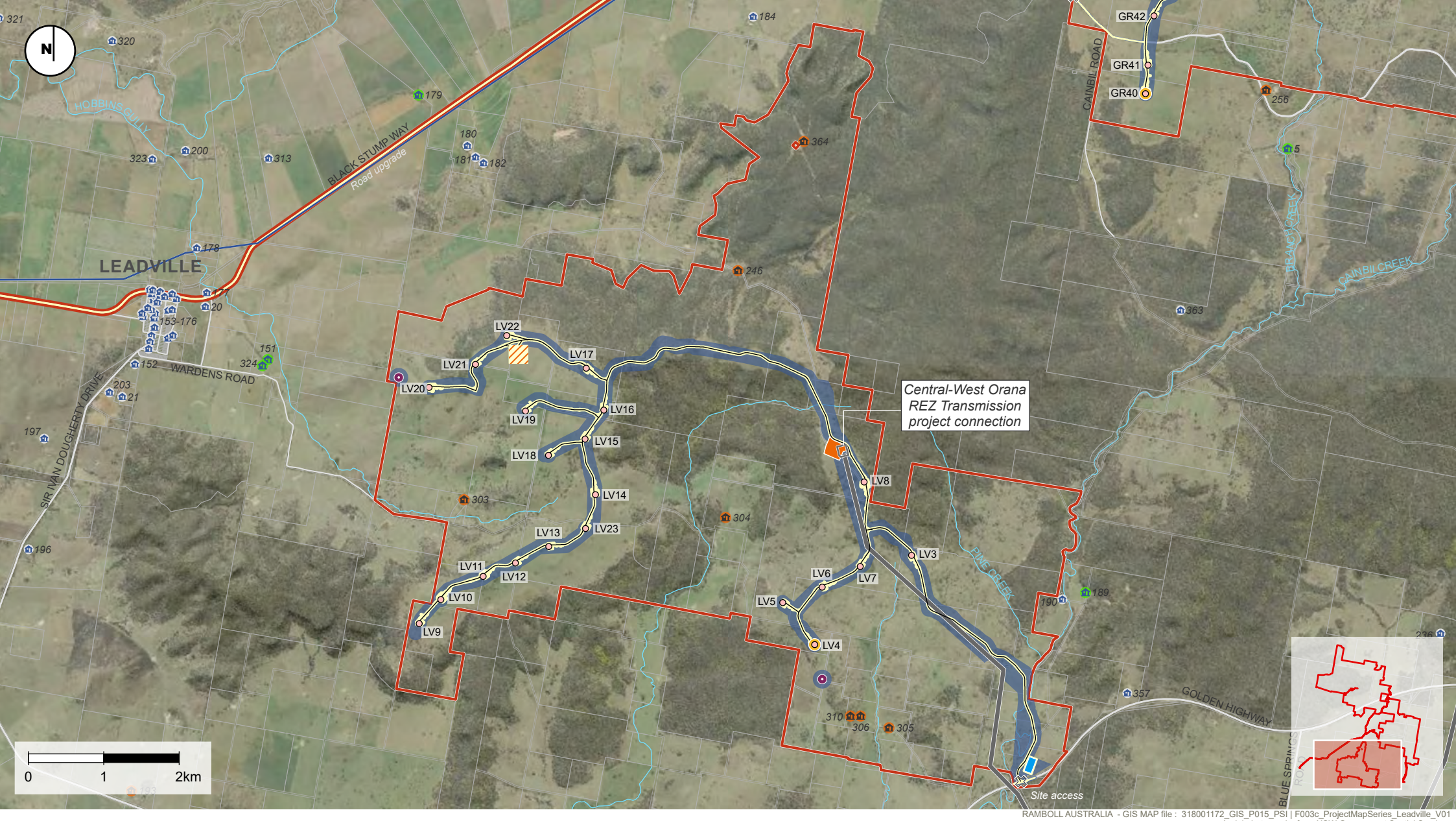
RAMBOLL AUSTRALIA - GIS MAP file : 318001172_GIS_P015_PSI | F003b_ProjectMapSeries_GirragulangRd_V01
Aerial photography from NSW Government Spatial Services

KEY

- Project site
- Turbine location
- Indicative construction footprint
- Development corridor
- Overhead transmission line (up to 330kV)
- Access track and cabling
- Site access
- Construction workforce accommodation
- Construction and permanent operation and maintenance compound area
- Substation, BESS and construction and permanent operation and maintenance compound area
- Temporary facilities area*
- Quarry location**
- Permanent meteorological mast location
- Temporary meteorological mast location (co-located with turbine)
- CWO-REZ Transmission project (SSI 48323210) (EnergyCo)
- Gas pipeline (Geoscience AU)

*May include site offices rock crushing facilities, concrete or asphalt batching plants, materials storage compounds, maintenance workshops, material stockpiles, laydown areas and parking spaces.
** Approximate only

Figure 4 | Project layout at the Girragulang Road cluster



RAMBOLL AUSTRALIA - GIS MAP file : 318001172_GIS_P015_PSI | F003c_ProjectMapSeries_Leadville_V01
Aerial photography from NSW Government Spatial Services

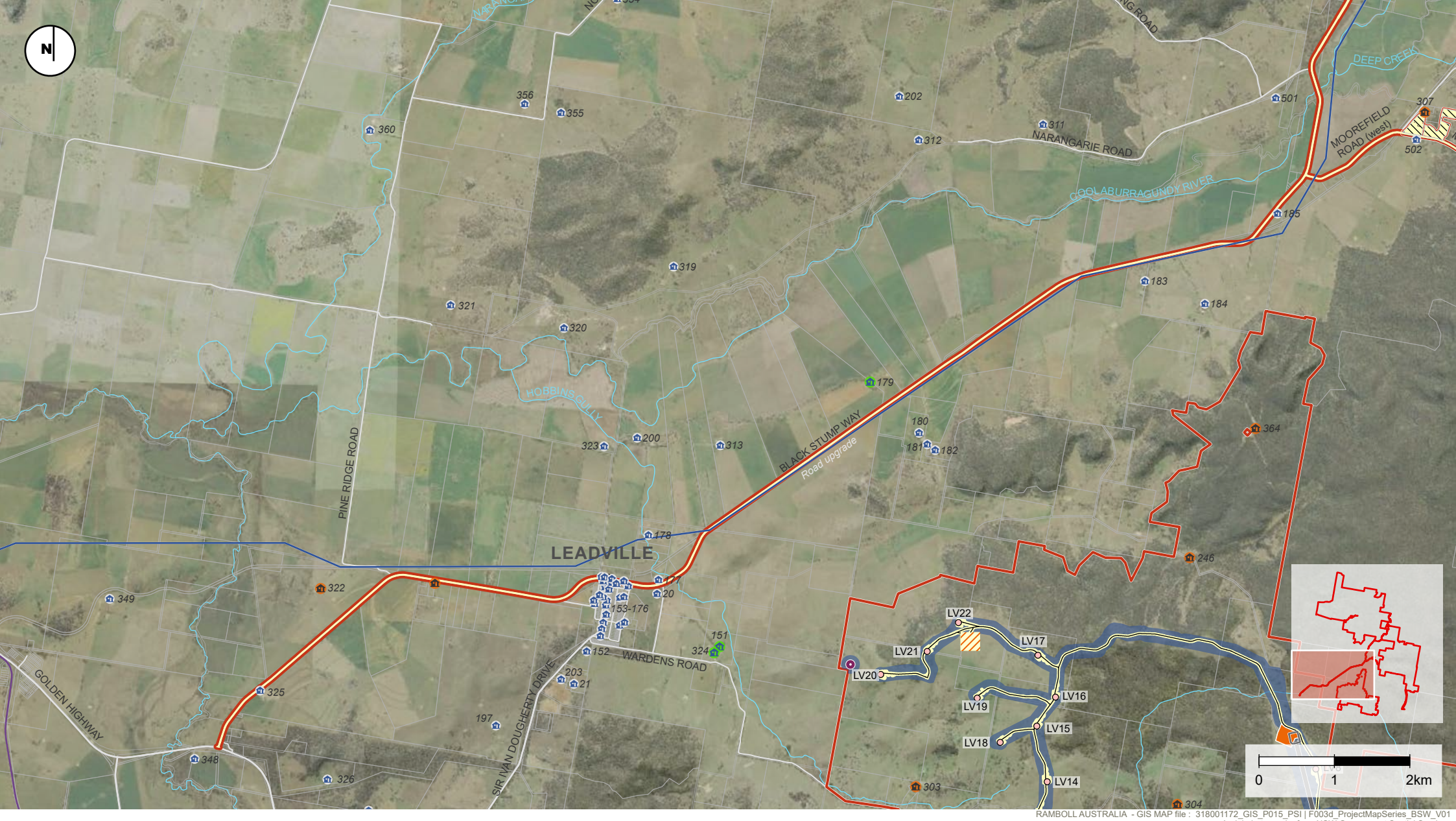
KEY

- Project site
- Turbine location
- Indicative construction footprint
- Development corridor
- Access track and cabling
- Site access
- Substation, construction and permanent operation and maintenance compound area
- Temporary facilities area*
- Quarry location**
- Permanent meteorological mast location
- Temporary meteorological mast location (co-located with turbine)
- CWO-REZ Transmission project (SSI 48323210) (EnergyCo)
- Gas pipeline (Geoscience AU)

Dwellings
- Host
- Associated
- Non-associated

Figure 5 | Project layout at the Leadville cluster

*May include site offices rock crushing facilities, concrete or asphalt batching plants, materials storage compounds, maintenance workshops, material stockpiles, laydown areas and parking spaces.
**Approximate only



RAMBOLL AUSTRALIA - GIS MAP file : 318001172_GIS_P015_PSI | F003d_ProjectMapSeries_BSW_V01
Aerial photography from NSW Government Spatial Services

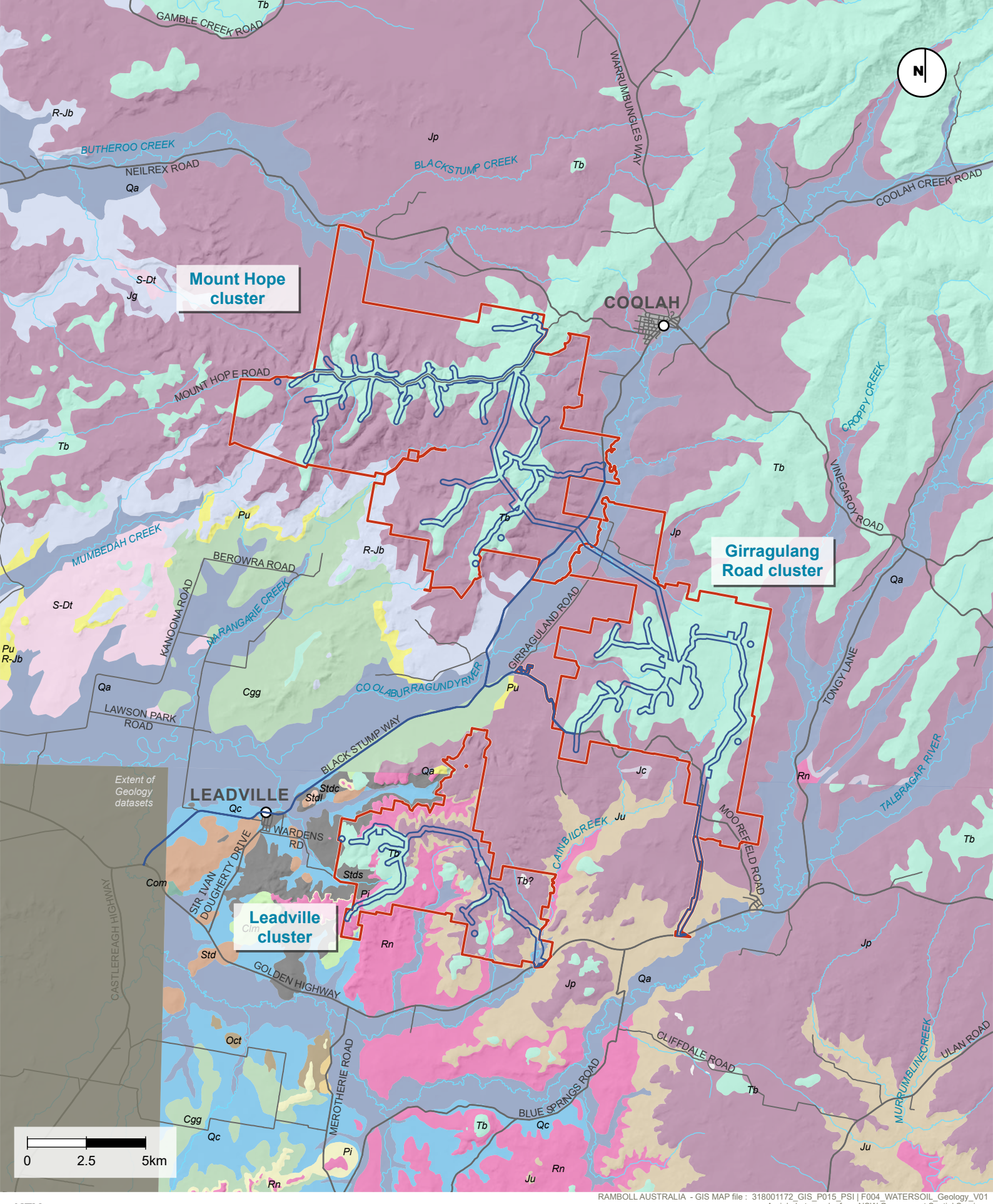
KEY

- Project site
- Turbine location
- Indicative construction footprint
- Development corridor
- Construction workforce accommodation
- Access track and cabling
- Substation, construction and permanent operation and maintenance compound area
- Quarry location**
- Permanent meteorological mast location
- CWO-REZ Transmission project (SSI 48323210) (EnergyCo)
- Gas pipeline (Geoscience AU)

Dwellings
- Host
- Associated
- Non-associated

Figure 6 | Project layout along Black Stump Way

*May include site offices rock crushing facilities, concrete or asphalt batching plants, materials storage compounds, maintenance workshops, material stockpiles, laydown areas and parking spaces.
**Approximate only



RAMBOLL AUSTRALIA - GIS MAP file : 318001172_GIS_P015_PSI | F004_WATERSOIL_Geology_V01
Aerial photography from NSW Government Spatial Services

KEY

- Development corridor
- Project site

Gulgong 1:100,000 Geological Map (Watkins J.J., 2000) and the Gilgandra 1:250,000 Geological Map (Offenberg A.C, 1968) - sourced from DIGS

Cgg	Jg	Pi	Qc	Std	Tb
Clm	Jp	Pr	R-Jb	Stdc	Tb?
Com	Ju	Pu	Rn	Stdl	
Jc	Oct	Qa	S-Dt	Stds	

Figure 7 | Geology

APPENDIX 2 – LOT AND DP

Lot	Deposited plan
143	DP750772
142	DP750772
157	DP750772
92	DP754966
126	DP750745
140	DP750772
66	DP750745
113	DP750745
13	DP754967
11	DP754975
12	DP754975
3	DP754975
7001	DP1028400
3	DP719732
163	DP750772
177	DP750772
113	DP750740
150	DP750740
54	DP750768
44	DP750768
53	DP750768
1	DP378972
105	DP750740
126	DP750740
97	DP750740
96	DP750740
107	DP750740
2	DP244310
65	DP750772
3	DP244310
76	DP750772
91	DP750772

Lot	Deposited plan
11	DP132925
10	DP132925
72	DP750772
96	DP750772
103	DP750740
4	DP132931
119	DP750740
22	DP750740
21	DP750740
6	DP750740
7005	DP1026530
106	DP750740
89	DP750740
90	DP750740
43	DP750768
43	DP750772
75	DP750772
1	DP596076
96	DP754966
81	DP754966
7006	DP1028362
50	DP754966
80	DP750745
98	DP750745
4	DP133873
81	DP750745
96	DP750745
97	DP750745
95	DP750745
7	DP750745
82	DP754966
19	DP754966

Lot	Deposited plan
88	DP754966
2	DP382987
31	DP750745
1	DP812579
58	DP750768
109	DP750745
22	DP750745
56	DP750745
62	DP750745
54	DP750745
55	DP750745
23	DP750768
24	DP750768
57	DP750745
128	DP750745
104	DP750745
A	DP430321
29	DP750745
99	DP750745
57	DP750768
61	DP750768
14	DP750768
28	DP750745
85	DP750745
86	DP750745
87	DP750745
111	DP750772
108	DP750772
116	DP750772
67	DP750745
68	DP750745
154	DP750772

Lot	Deposited plan
113	DP750768
2	DP132931
3	DP132931
2	DP876041
14	DP754967
115	DP750772
7007	DP1068801
7006	DP1068801
65	DP754966
76	DP754966
78	DP754966
10	DP754975
5	DP754975
115	DP750768
12	DP750768
35	DP750768
42	DP750768
1	DP876041

Lot	Deposited plan
45	DP750772
46	DP750772
108	DP750740
117	DP750740
118	DP750740
106	DP750745
30	DP750745
32	DP750745
2	DP746422
1	DP217788
1	DP1091571
58	DP1099077
1	DP1187452
1	DP1214808
20	DP750740
2	DP1227122
1	DP1227122
1	DP1214801

Lot	Deposited plan
5503	DP1244975
105	DP750745
108	DP750745
4	DP754975
2	DP1105831
2	DP1187452
1	DP1252803
90	DP750745
1	DP1253559
94	DP750745
100	DP750745
3	DP1253547
89	DP750745
88	DP750745
4	DP1256557
3	DP1257054

APPENDIX 3 – LAND INSIGHT REPORT

Land Insight

Due Diligence Insight Report

Valley of the Winds Windfarm
Coolah, NSW

23 Apr 2025

Report nº:

Understanding your report

Thank you for ordering your report from Land Insight. If you have any feedback, questions or queries, please get in touch with us at [redacted]

Your Report has been produced by Land Insight and contains information related to current and historical land use information, environmental risks and hazards.

The information presented in this report includes Land Insights' comprehensive research into current and historical land use derived from Land Insight's proprietary National Land Use Atlas (NLUA), environmental risk information and data available from public databases, third party providers, local and state authorities. The report also includes detailed property and soil setting information, hydrogeology, identification of potential pollution and contamination along with ground and natural hazards.The records identified are presented within a 200 to 2000m radius (buffer zone) from the boundaries of the Property searched, depending on the screened constraint. The report is separated and grouped into easy to navigate sections as per Summary below:

	**Section 1** **PROPERTY SETTING**	Sensitive Receptors, Planning Controls, Zoning, Heritage, Soil and Land Information, Geology and Topography
	**Section 2** **HYDROGEOLOGY AND GEOTECHNICAL**	Groundwater Bores and Other Borehole investigations, Groundwater Dependent Ecosystems (GDE), Aquifer and Wetland, Other Hydrogeology information.
	**Section 3** **ENVIRONMENTAL REGISTERS, LICENCES AND INCIDENTS**	Contaminated Land Public Register, Licences, Audits and Orders, Sites Regulated by Other Jurisdictional Body (Former Gaswork sites / PFAS sites, UXO Areas), Historical Landfills, Derelict Mines and National Pollutant Inventory (NPI).
	**Section 4** **POTENTIALLY CONTAMINATED AREAS**	Potentially Contaminating activities (Industries, businesses and activities that may cause contamination), Historical Potentially Contaminating activities and Historical Land Use.
	**Section 5** **NATURAL HAZARDS**	Erosion hazard, Flood hazards, Bushfire prone land and Bushfire history

This report includes data listed on page 4 (table of contents). All sources of data and definitions are provided in the Product Guide (Attached). For a full list of references, metadata, publications or additional information not provided in this report, please contact orders@landinsight.co

This report does not include information derived from a physical inspection. It is important to note that a site inspection can present information relevant to other risks and hazards that may not be identified by this Report.

Due to the ongoing nature of database development and frequency of updates provided by various state government regulators and data sources, the data displayed within this report is only current from date of production. While every effort is made to ensure the details in your Report are correct, Land Insight cannot guarantee the accuracy or completeness of the information and/or data provided.

This Report, and your use of it, is regulated by Land Insight's Terms and Conditions. For more information, see Land Insight's Product Guide.

Report Summary

	Dataset name	Onsite	On Buffer	Buffer Distance
Section 1 - Property Setting				
1.1	Sensitive Receptors	✓	✓	200m
1.2a	Planning Controls *(Zoning)*	✓	✓	500m
1.2b	Planning Overlays *(Environmental Planning Instruments)*	✓	✓	500m
	Planning Overlays *(Other Planning Information)*			500m
1.3	Heritage *(State and Local Heritage)*	✓	✓	200m
	Heritage *(Australian and World Heritage Database Register)*			200m
1.4a	Soil and Land Use Information *(Soil Landscape)*	✓	✓	500m
	Soil and Land Use Information *(Soil Salinity)*	✓	✓	500m
	Soil and Land Use Information *(Radon)*	✓	✓	500m
1.4b	Acid Sulfate Soil *(State and Local Acid Sulfate Soil Registers)*			500m
	Acid Sulfate Soil *(National Acid Sulfate Soil Registers)*	✓	✓	500m
1.5	Geology and Topography *(Geology)*	✓	✓	500m
	Geology and Topography *(Naturally Occurring Asbestos Potential NOA)*			500m
Section 2 – Hydrogeology and Geotechnical				
2.1	GDE & Hydrogeology Constraints *(Aquifer Type)*	✓	✓	2000m
	GDE & Hydrogeology Constraints *(Groundwater Protection Areas)*	✓	✓	2000m
	GDE & Hydrogeology Constraints *(Wetlands)*			2000m
	GDE & Hydrogeology Constraints *(GDE Surface)*	✓	✓	2000m
	GDE & Hydrogeology Constraints *(GDE Subsurface)*	✓	✓	2000m
	GDE & Hydrogeology Constraints *(Groundwater Licences)*			2000m
	GDE & Hydrogeology Constraints *(Groundwater Bores)*	✓	✓	2000m
2.2	Groundwater and Other Bores *(Groundwater Restricted Use Zones)*			2000m
	Groundwater and Other Bores *(Groundwater Salinity)*	✓	✓	2000m
	Groundwater and Other Bores *(Other Known Boreholes Investigations)*	✓	✓	2000m
Section 3 - Environmental Registers, Licences and Incidents				
3.1	Contaminated Land Public Register (Contaminated Sites)			1000m
3.2	Licences, Approvals & Assessments *(Licences)*		✓	1000m
	Licences, Approvals & Assessments *(Audits)*		✓	1000m
	Licences, Approvals & Assessments *(Clean up Notices, Penalty Notices and Orders)*			1000m
3.3a	Sites Regulated by other Jurisdictional Body *(Contaminated Legacy Areas)*			2000m
	Sites Regulated by other Jurisdictional Body *(Defence, Military Sites and UXO Areas)*			2000m
	Sites Regulated by other Jurisdictional Body *(Former Gasworks Sites)*			2000m
	Sites Regulated by other Jurisdictional Body *(PFAS Sites)*			2000m
3.3b	Other Potential Hazard Sources *(Mines and Quarries)*	✓	✓	500m
	Other Potential Hazard Sources *(Landfills)*			500m
	Other Potential Hazard Sources *(National Pollutant Inventory NPI)*			500m
Section 4 - Potentially Contaminated Areas				
4.1	Potentially Contaminating Activities (Liquid Fuel Facilities)			200m
4.2	Historical Business Directories	✓	✓	200m
Section 5 - Natural Hazards				
5.1	Fire Hazard *(Bushfire Prone Areas)*	✓	✓	500m
	Fire Hazard *(Bushfire History)*	✓	✓	500m
5.2	Flood Hazard *(Flood Planning Area)*			500m
	Flood Hazard *(Other Flood Studies)*			500m
	Flood Hazard *(Flood History)*			500m
5.3	Erosion Hazard	✓	✓	500m

Index

Section 1 Property Setting

1.1 Sensitive Receptors and Features of Interest

Map 1.1 (200m Buffer)

Sensitive receptor	Type	Distance (m)	Direction
Norman Horne Memorial Park	Parks	0.0	Onsite
Back Creek	Watercourse	0.0	Onsite
Bowenbong Creek	Watercourse Area	0.0	Onsite
Hobbins Gully	Connector	0.0	Onsite
Bowenbong Creek	Connector	0.0	Onsite
Wallaby Gully	Watercourse	0.0	Onsite
Merrygoen Creek	Watercourse	0.0	Onsite
Cainbil Creek	Connector	0.0	Onsite
Null	Connector	0.0	Onsite
Pine Creek	Watercourse	0.0	Onsite
Rock Gully	Watercourse	0.0	Onsite
Hobbins Gully	Watercourse	0.0	Onsite
Moreton Bay Creek	Watercourse	0.0	Onsite
Queensborough Creek	Watercourse	0.0	Onsite
Branch Creek	Watercourse	0.0	Onsite
Cainbil Creek	Watercourse	0.0	Onsite
Wallambriwang Creek	Watercourse	0.0	Onsite
	Watercourse Area	0.0	Onsite

Sensitive receptor	Type	Distance (m)	Direction
Mumbedah Creek	Watercourse	0.0	Onsite
Oliver Creek	Watercourse	0.0	Onsite
Deep Creek	Watercourse	0.0	Onsite
Collier Creek	Watercourse	0.0	Onsite
Bowenbong Creek	Watercourse	0.0	Onsite
Spring Creek	Watercourse	0.0	Onsite
Coolaburragundy River	Watercourse	0.0	Onsite
Null	Lake	0.0	Onsite
Miangulliah Creek	Watercourse	0.0	Onsite
Null	Farm Dam Area	0.0	Onsite
Null	Watercourse	0.0	Onsite
Paddys Knob	Other Features	0.0	Onsite
Branch Creek	Watercourse Area	13.7	South
Terraban Gap	Other Features	14.7	West
Collieblue Creek	Watercourse	34.8	North east
Leadville Rural Fire Brigade	Other Features	99.1	South
Old Heritage Cemetery	Other Features	169.7	East
Merrygoen Creek	Connector	173.0	North

Source: Sensitive Receptors

1.2a Planning Controls

Map 1.2a (500m Buffer)

Zoning

Zoning	Type	Details	Distance (m)	Direction
RU1	Primary Production	Warrumbungle Local Environmental Plan 2013	0.0	Onsite
RU5	Village	Warrumbungle Local Environmental Plan 2013	0.0	Onsite
SP2	Infrastructure	Warrumbungle Local Environmental Plan 2013	0.0	Onsite

Source: Zoning, Planning Overlays and Other Planning Information

1.2b Planning Overlays

Map 1.2b (500m Buffer)

Environmental Planning Instruments

Name	Type	Details	Distance (m)	Direction
Biodiversity	Biodiversity	Warrumbungle Local Environmental Plan 2013	0.0	Onsite
600 799.9	Minimum Lot Size (sq m)	Warrumbungle Local Environmental Plan 2013	0.0	Onsite
Land Application	SEPP Land Application	State Environmental Planning Policy (Resilience and Hazards) 2021	0.0	Onsite
Item General	Heritage	Warrumbungle Local Environmental Plan 2013	0.0	Onsite

Name	Type	Details	Distance (m)	Direction
Land Application	SEPP Land Application	State Environmental Planning Policy No 65—Design Quality of Residential Apartment Development	0.0	Onsite
100 199.9	Minimum Lot Size (sq m)	Warrumbungle Local Environmental Plan 2013	0.0	North east
3000 4999	Minimum Lot Size (sq m)	Warrumbungle Local Environmental Plan 2013	0.0	Onsite
Refer to Clause 4.2A	Former LEP Boundaries	Warrumbungle Local Environmental Plan 2013	0.0	Onsite
Land Application	SEPP Land Application	State Environmental Planning Policy (Biodiversity and Conservation) 2021	0.0	Onsite
Land Application	SEPP Land Application	State Environmental Planning Policy (Sustainable Buildings) 2022	0.0	Onsite
Allowable Clearing Area	Allowable Clearing	State Environmental Planning Policy (Biodiversity and Conservation) 2021	0.0	Onsite
Subject Land	SEPP Land Application	State Environmental Planning Policy (Biodiversity and Conservation) 2021	0.0	Onsite
Land Application	SEPP Land Application	State Environmental Planning Policy (Transport and Infrastructure) 2021	0.0	Onsite
Land Application	SEPP Land Application	State Environmental Planning Policy (Planning Systems) 2021	0.0	Onsite
Land Application	SEPP Land Application	State Environmental Planning Policy (Primary Production) 2021	0.0	Onsite
Land Application	SEPP Land Application	State Environmental Planning Policy (Industry and Employment) 2021	0.0	Onsite
Land Application	SEPP Land Application	State Environmental Planning Policy (Exempt and Complying Development Codes) 2008	0.0	Onsite
Land Application	SEPP Land Application	State Environmental Planning Policy (Resources and Energy) 2021	0.0	Onsite
Land Application	SEPP Land Application	State Environmental Planning Policy (Housing) 2021	0.0	Onsite
Included	Land Application	Warrumbungle Local Environmental Plan 2013	0.0	Onsite
Biophysical Strategic Agricultural Land	Strategic Agricultural Land	State Environmental Planning Policy (Resources and Energy) 2021	0.0	Onsite
30%	Minimum Water Use Standard (%)	State Environmental Planning Policy (Sustainable Buildings) 2022	0.0	Onsite
Watercourse	Riparian Lands and Watercourses	Warrumbungle Local Environmental Plan 2013	0.0	Onsite
Extent of Dark Sky Region	Extent of Dark Sky Region	State Environmental Planning Policy (Transport and Infrastructure) 2021	0.0	Onsite
Groundwater Vulnerable	Groundwater Vulnerable	Warrumbungle Local Environmental Plan 2013	0.0	Onsite
Buffer Area	Coal Seam Gas Exclusions	State Environmental Planning Policy (Resources and Energy) 2021	0.0	Onsite
Land Within a Residential Zone	Coal Seam Gas Exclusions	State Environmental Planning Policy (Resources and Energy) 2021	0.0	Onsite
50 99.9	Minimum Lot Size (sq m)	Warrumbungle Local Environmental Plan 2013	0.7	West
10 49.9	Minimum Lot Size (sq m)	Warrumbungle Local Environmental Plan 2013	0.7	West

Other Planning Information

Name	Type	Details	Distance (m)	Direction
Not identified				

Including Mining Subsidence Areas.

Source: Zoning, Planning Overlays and Other Planning Information

1.3 Heritage

State and Local Heritage Registers

Map 1.3 (200m Buffer)

Site ID	Site Name	Type	Details	Distance (m)	Direction
I24	Denison Town General Cemetery	Heritage Register	Item General	0.0	Onsite

Source: State and Local Heritage Registers

Australian Heritage Database Register

Site ID	Site Name	Type	Details	Distance (m)	Direction
Not identified					

Source: Commonwealth Heritage List, National Heritage List and World Heritage Area

1.4a Soil and Land Use Information

Map 1.4a (500m Buffer)

Soil Landscape

Code	Name	Soil Group	Description	Distance (m)	Direction
BEah	Ant Hill	Black earths	Landscape—rolling hills on Tertiary basalts of the Merriwa Plateau. Local relief to 150 m; moderately inclined slopes of 8 32%; elevation 400 700 m. Open forest and dense woodland, mostly cleared for grazing. Soils—moderately well drained, moderately deep Haplic Eutrophic Red Dermosols and Chromosols (Chocolate Soils). Subdominant soil types include Rudosols (Lithosols) on crests and rocky bench edges and a variety of generally moderately well drained Black and Red Vertosols (Black Earths and Red Clays) which range from shallow to moderately deep. Limitations—localised steep slopes on bench edges and upper slopes, high run on, water erosion hazard, localised shallow soil and localised rock outcrop. Soil materials with high plasticity, low wet bearing strength, high shrink swell potential, high organic content, localised stoniness and low permeability.	0.0	Onsite
ERsuu	Summerhill	Erosional	Landscape— Undulating to rolling rises and low hills on Jurassic sandstone often influenced by Tertiary basalt flows in the west of the catchment. Slopes 3 15%, typically <10%, local relief <30 m, elevation 230 570 m. Rock outcrop including ironstones generally <20%. Extensively cleared open forest and woodland. Soils— In areas dominated generally by Jurassic sandstones, shallow (<50 cm), well drained Leptic Tenosols and Rudosols (Lithosols) on crests and upper slopes with ironstones and ferruginsed regolith presents. Moderately deep to deep (50 150 cm), imperfectly drained Yellow Chromosols (Yellow Podzolics Soils) and Yellow Sodosols (Solodic Soils) and moderately deep (50 100 cm), moderately to well drained Yellow Kandosols (Yellow Earths) on hillslopes. In areas influenced by basalt flows, sandstone may have become friable on ridges and spurs resulting in very deep (>150 cm), rapidly drained Brown Orthic Tenosols (Earthy Sands). Moderately deep to deep (50 150 cm), moderately well drained to well drained Red Chromosols (Non calcic Brown Soils) also occur on hillslopes with high iron content.	0.0	Onsite

Code	Name	Soil Group	Description	Distance (m)	Direction
ERsuua	Summerhill Variant A	Erosional	Landscape— Rolling rises and low hills on Pilliga Sandstone beds in the west and north west of the Hunter catchment. Slopes typically 10 33%, local relief <30 m, elevation 230 570 m. Rock outcrop generally <20%. Partially cleared open forests for cattle grazing on native pastures. Soils— Shallow (<50 cm), well drained Leptic Tenosols and Rudosols (Lithosols), with moderately deep (50 100 cm), well drained Brown Orthic Tenosols (Earthy Sands) also on hillslopes. Where basalt flows have influenced the landscape, soils have higher iron content and are expected to be moderately deep (50 100 cm), well drained Red Kandosols (Red Earths).	0.0	Onsite
COmmz	Munmurra	Colluvial	Landscape— Steep to precipitous hillslopes and gorges of Jurassic quartz and lithic sandstone, conglomerate and siltstone of the Pilliga and Purlewaugh Beds. Slopes 25 150%, typically >33%, local relief 30 140 m, elevation 260 510 m. Uncleared open forests and shrubby woodland. Soils— Very shallow to shallow (<50 cm), rapidly drained Leptic Rudosols (Lithosols) grading into shallow (25 50 cm), well drained to rapidly drained Leptic Tenosols (Lithosols) in areas of minimal subsoil development.	0.0	Onsite
YE	Kandosols	Yellow Earths	GSG classification Massive, reddish sandy profiles with a gradual increase in clay content with depth.	0.0	Onsite
ALmwo	Merriwa River	Alluvial	Landscape— Broad floodplains, alluvial terraces, channels and small levees of major streams draining the southern Liverpool Ranges and the Merriwa Plateau. Slopes <3%, local relief <15 m, elevation 280 – 480 m. Extensively cleared riparian woodland. Soils— Very deep to giant (>300 cm), moderately well-drained Black Dermosol (Chernozems) on current floodplains with very deep to giant (>300 cm), imperfectly to moderately well drained Black Vertosols (Black Earths) on terraces and very deep to giant (>300cm) poorly drained Grey Vertosols (Grey Clays) in poorly drained areas.	0.0	Onsite
Am	Tenosols (Alluvial)	Alluvial Soils Medium Textured (Loams, Clay Loams)	GSG classification Soils developed from recently deposited alluvium, normally characterised by little or no modification of the deposited material by soil forming processes, particularly with respect to soil horizon development.	0.0	Onsite
BE	Vertosols	Black Earths	GSG classification Black, heavy clay, alkaline to neutral soil with wide, deep cracks when dry.	0.0	Onsite
C	Ferrosols	Chocolat e Soils	GSG classification Brownish, acid, friable, moderately pedal to fine blocky structured, clay loam soils with weak to moderate horizon differentiation. clay Soil particles less than 0.002 mm in diameter.	0.0	Onsite
ES	Rudosols and Tenosols	Earthy Sands	GSG classification A predominantly sandy soil with an earthy fabric and little texture differentiation from topsoil to subsoil.	0.0	Onsite
CG, BC_RC	Vertosols	Grey, Brown and Red Clays	GSG classification Black, heavy clay, alkaline to neutral soil with wide, deep cracks when dry.	0.0	Onsite
L	Rudosols and Tenosols	Lithosols	GSG classification A predominantly sandy soil with an earthy fabric and little texture differentiation from topsoil to subsoil.	0.0	Onsite
SC	Sodosols	Solodic Soils	ASC Soil Order classification Soils with strong texture contrast between A horizons and sodic B horizons, which are not strongly acid.	0.0	Onsite

Code	Name	Soil Group	Description	Distance (m)	Direction
TRcyq	Curryall	Transferral	Landscape— Gently inclined footslopes, drainage plains and alluvial fans on Jurassic Pilliga Sandstone (quartz and lithic sandstones). Slopes <5%, local relief <30 m, elevation 230 550 m. Mostly cleared open forests and woodlands for grazing on native and improved pastures. Soils— Deep to very deep (100 >150 cm), rapidly drained Brown Orthic Tenosols (Earthy Sands), with moderately deep to very deep (100 >150 cm), imperfectly to poorly-drained Yellow and Brown Chromosols and Sodosols (Noncalcic Brown Soils and Solodic Soils) on some lower slopes.	0.0	Onsite
ERahza	Ant Hill Variant A	Erosional	Landscape—rolling hills on Tertiary basalts of the Merriwa Plateau. Local relief to 150 m; moderately inclined slopes of 8 32%; elevation 400 700 m. Open forest and dense woodland, mostly cleared for grazing. Soils—moderately well drained, moderately deep Haplic Eutrophic Red Dermosols and Chromosols (Chocolate Soils). Subdominant soil types include Rudosols (Lithosols) on crests and rocky bench edges and a variety of generally moderately well drained Black and Red Vertosols (Black Earths and Red Clays) which range from shallow to moderately deep. Limitations—localised steep slopes on bench edges and upper slopes, high run on, water erosion hazard, localised shallow soil and localised rock outcrop. Soil materials with high plasticity, low wet bearing strength, high shrink swell potential, high organic content, localised stoniness and low permeability.	0.0	Onsite
TRwgp	Wagrobil	Transferral	Landscape— Footslopes, drainage plains and alluvial fans on Jurassic Purlewaugh Formation sandstones, siltstones and shales in the west of the Hunter catchment. Slopes <5%, local relief <20 m, elevation 340 680 m. Extensively cleared woodlands for grazing on unimproved and improved pasture. Soils— Moderately deep to deep (100 150 cm), imperfectly drained Brown Kurosols (Yellow Podzolic Soils) on upper footslopes, very deep (>150 cm), imperfectly to poorly drained Bleached Sodic Yellow Kurosols (Soloths) on lower slopes and drainage plains, grading to deep to very deep (>100 cm), poorly drained Yellow Sodosols (secondary Solonchaks) in areas with salt outbreaks, with deep to very deep (>100 cm), well drained Brown Orthic Tenosols (Earthy Sands) on transferral slopes dominated by sandstone derived colluvium.	0.0	Onsite
ALymz	Yarramoor	Alluvial	Landscape—high energy floodplains and low alluvial terraces of the Merriwa Plateau and southern Liverpool Ranges. Local relief <15 m; slopes less than 3%; elevation 320 600 m. Mostly cleared open forest and woodland. Soils—variations on moderately well-drained to welldrained, very deep Black Dermosols and Stratic Paralithic Tenosols (Chernozems) with some Endocalcareous Selfmulching Black Vertosols (Black Earths) occurring on high terraces. Limitations—flood hazard, episodic waterlogging, high run on, water erosion hazard and streambank erosion hazard. Soil materials with low wet bearing strength, high shrink swell potential, high organic content, localised stoniness and low permeability.	0.0	Onsite
ERahz	Ant Hill	Erosional	Landscape—rolling hills on Tertiary basalts of the Merriwa Plateau. Local relief to 150 m; moderately inclined slopes of 8 32%; elevation 400 700 m. Open forest and dense woodland, mostly cleared for grazing. Soils—moderately well drained, moderately deep Haplic Eutrophic Red	0.0	Onsite

Code	Name	Soil Group	Description	Distance (m)	Direction
			Dermosols and Chromosols (Chocolate Soils). Subdominant soil types include Rudosols (Lithosols) on crests and rocky bench edges and a variety of generally moderately well drained Black and Red Vertosols (Black Earths and Red Clays) which range from shallow to moderately deep. Limitations—localised steep slopes on bench edges and upper slopes, high run on, water erosion hazard, localised shallow soil and localised rock outcrop. Soil materials with high plasticity, low wet bearing strength, high shrink swell potential, high organic content, localised stoniness and low permeability.		
COggy	Galla Gilla	Colluvial	Landscape—steep colluvial hills and hillslopes on Tertiary basalt of the southern Liverpool Ranges and Merriwa Plateau. Local relief to 300 m; slopes are generally >33%; elevation 400 800 m. Drainage is erosional, continuous, convergent and tributary. Partially cleared woodland. Soils—moderately well drained, shallow to moderately deep Red and Black Chromosols and Dermosols (Chocolate Soils). Crests and some upper slope positions generally have moderately well drained, shallow Rudosols (Lithosols). Limitations—steep slopes, localised mass movement hazard, high run on, high water erosion hazard, shallow soil and rock outcrop on bench edges. Soil materials with low wet bearing strength, high shrink swell potential, high organic content, localised stoniness and low permeability.	0.0	Onsite
REbwt	Bow	Residual	Landscape—rolling to undulating hills and gently inclined erosional footslopes on Tertiary basalt and one Triassic sandstone bench on the Merriwa Plateau. Local relief to 70 m; gently inclined slopes of 1 8%; elevation 320 600 m. Drainage lines are continuous, erosional, convergent and tributary on upper slopes with non tributary drainage on the lower slopes. Mostly cleared woodland and open-forest for grazing and cropping. Soils—soil distribution is complex. Red, Brown and Black Dermosols with moderately well drained, very shallow Mesotrophic Red Dermosols (Lithosols) on crests and some hillslopes; moderately well drained, shallow Melanic Vertic Mesotrophic Brown and Black Dermosols (Chocolate Soils) on mid to upper hillslopes; and moderately welldrained Haplic Eutrophic Red Ferrosols (Euchrozems) and moderately well drained, giant Haplic Self mulching Red Vertosols on some lower slopes. Moderately well drained, very deep Manganic Mesotrophic Red Kandosols (Red Earths) occur on the single bench of Triassic sandstone. Limitations—high run on, localised dryland salinity hazard on lower slopes, exposed colluvium, water erosion hazard, localised shallow soil and localised rock outcrop. Soil materials with high plasticity, low wet bearing strength, high shrink swell potential, high organic content	0.0	Onsite
REcez	Cranbourne	Residual	Landscape—level to undulating Tertiary basalt plateaux and broad benches of the Merriwa Plateau and southern Liverpool Range. Local relief to 30 m; elevation 420 780 m. Open forests and woodland mostly cleared for grazing with some cropping on lower plateaux. Soils—moderately well drained, moderately deep Haplic Mesotrophic Black Dermosols (Chocolate Soils) and moderately well drained, moderately deep Haplic Mesotrophic Red Ferrosols (Euchrozems) are common across the plateau surfaces. Chernic Leptic Tenosols (Lithosols) are common on bench edges and rocky crests, with imperfectly drained,	0.0	Onsite

Code	Name	Soil Group	Description	Distance (m)	Direction
			moderately deep Haplic Selfmulching Red Vertosols (Red Clays) occurring on some lower slopes and in drainage depressions. Limitations—shallow soil (crests) and rock outcrop (crests and bench edges). Soil materials with low wet bearing strength, high shrink swell potential and low permeability.		
ESbn	Balladoran	Earthy sands	308 km2 undulating low hills with some steep rocky slopes and sandstone cliffs. Pilliga Sandstone. Relief 40 80 m; slopes 5 20%. Earthy Sands (Uc5.21), Red Earths (Gn2.11) and yellow leached earths (Gn2.34; Gn2.94) with rock outcrop common. Yellow Solodic Soils (Dy5.42; Dy5.32) in depressions. Shallow sandy soils (Uc1.23; Uc4.1) on crests and steeper slopes. LIMITATIONS Low fertility; acidification; low available waterholding capacity; too steep for cultivation; seasonal waterlogging and low subsoil permeability in lower slopes; some areas of rock outcrop.	0.0	Onsite
SLdx	Dexter	Shallow soils	Landscape— Steep dissected hills with narrow crests, steep slopes and occasional colluvial footslopes on metasediments of the Nambucca Beds (Pn). Relief 100 300 m; elevation 50 550 m; slopes 33 50%. Tall openforests, sometimes cleared for grazing and bananas. Landscape Variant dia— Rain shadow area west of Hickeys Creek. Soils— <70 cm Leptic Rudosols (Lithosols) with localised 100 180 cm well drained Brown Kurosols (Red Podzolic Soils) and 100 - 180 cm well-drained Red Dermosols (Brown Earths) on lower slopes. Significant Soil and Land Qualities— Stony soils with high erodibility, low subsoil permeability, organic topsoils, acidity and aluminium toxicity potential. Steep slopes; mass movement risk; sheet erosion risk; localised gully erosion hazard; shallow soils; complex soils; engineering hazards.	0.0	Onsite
ESgn	Goonoo	Earthy sands	1121 km2 undulating rises and low hills. Relief 10 50 m; slopes 2 10%. Pilliga Sandstone. Earthy Sands (Uc5.21; Uc5.22; Uc4.22), Siliceous Sands (Ucl.22; Ucl.23; Ucl.21; Uc5.11), sandy Red Earths (Gn2.11; Gn2.12) and Yellow and Grey Earths (Gn2.34; Gn2.94). Yellow Solodic Soils (Dy3.42; Dy5.42; Dy5.82) common on lower slopes and in drainage depressions. LIMITATIONS Low fertility; acidic surface soils; seasonal waterlogging with sodic subsoils on lower slopes; high permeability on upper to mid slopes.	0.0	Onsite
SShr	Home Rule	Siliceous sands	409 km2 undulating low hills. Sediment derived from the Gulgong and Rouse Granites. Relief 30 60 m; slopes 4 8%. Mainly Siliceous Sands (Uc1.42) and Earthy Sands (Uc4.21; Uc4.32) on upper and mid slopes. Bleached sands (Uc2.21; Uc2.22), Yellow Podzolic Soils (Dy2.41; Dy2.21) and yellow Solodic Soils (Dy3.13; Dy3.42) on lower slopes and flats. Layered Siliceous Sands in some larger drainage lines. LIMITATIONS Very low fertility; low available waterholding capacity; acidic surface soils; seasonal waterlogging; sodic subsoils in lower slopes; high permeability on mid to upper slopes; moderate to high erosion hazard under cultivation	0.0	Onsite
SLlp	Lees Pinch	Shallow soils	604 km2 rolling hills and low hills with steep rocky slopes and valley sides. Narrabeen sandstone, conglomerate sandstone, shale, conglomerate, mudstone, chert, coal and torbanite seams. Relief 60 240 m; slopes 15 40%. Shallow, sandy soils (Uc4.1; Uc1.43; Uc1; Uc2.21) with extensive rock outcrop, boulder debris slopes and sandstone cliffs. Other soils include grey or Yellow Earths (Gn2.84) and Yellow Podzolic Soils (Dy4.51) on lower	0.0	Onsite

Code	Name	Soil Group	Description	Distance (m)	Direction
			slopes, shallow acid loams (Um5.51) on coalbearing strata, and Podzols (Uc2.22) on lower slopes. LIMITATIONS Steep slopes; rock cliffs; very low fertility; very low waterholding capacity; high permeability.		
Ebh	Bald Hill	Euchrozems	SUMMARY: Narrow elongate crests, ridges and gently inclined sideslopes at Forbes and south and west of Forbes on predominately sandstones. Shallow (<30 cm), rapidly drained Lithosols (Uc1.23; Lithic Leptic Rudosols) are widespread. Shallow (<50 cm), welldrained Red Earths (Gn2.11, Gn2.14; Haplic Eutrophic Red Kandosols) and occasional shallow (<50 cm), welldrained Red Podzolic Soils (Dr4.21; Haplic Eutrophic Red Chromosols and Kurosols) occur on sideslopes. LIMITATIONS: Water erosion hazard; rock outcrop; shallow, strongly acid, highly permeable soils with low fertility, low available waterholding capacity and localised high organic matter. LOCATION: Parts of Forbes and surrounding lands. Also occurs at Parkes. Type location is at Bald Hill (Area reference 5 96***E, 63 12***N).	0.0	Onsite
SSrs	Rouse	Siliceous sands	335 km2 undulating hills and low hills with granite outcropping as tors and sloping pavements. Gulgong Granite, biotite granite, adamellite, granodiorite. Relief 50 90 m; slopes 5 15% and 500 1000 m long. Mainly shallow Siliceous Sands (Uc1.42) and Earthy Sands (Uc4.21) on mid slopes and upper slopes. Yellow Soloths (Dy3.41) and yellow Solodic Soils (Dy3.43, Dy3.32) on lower slopes and in depressions. Deeper A2 horizons on lower slopes adjacent to main drainage lines. Other soils include bleached sands (Uc2.21), and Non calcic Brown Soils and Red Earths on small areas of less siliceous rock. LIMITATIONS Very low fertility; acidic surface soils; low available waterholding capacity; seasonal waterlogging; sodic subsoils on lower slopes; high to very high erosion hazard under cultivation.	0.0	Onsite
Atb	Talbragar	Alluvial soils	157 km2 alluvial plains and terraces of the upper Talbragar River. Mainly Black Earths (Ug5.16) with other soils including Siliceous Sands (Ucl), loams (Um5) and Prairie Soils (Um6.11; Gn3.4; Gn4.4). Terraces have Red Earths (Gn2.1) on upper levels. Red-brown Earths (Dr2), Non-calcic Brown Soils (Dr2.42) and Yellow Podzolic Solodic Soils (Dy3) on middle and lower levels. LIMITATIONS High to moderate fertility; flooding hazard; high to moderate waterholding capacity; self mulching surface soils and soils with high shrink swell potential are common.	0.0	Onsite
ESti	Turill	Earthy sands	317 km2 undulating low hills with some sandstone outcrop. Narrabeen Sandstone, mudstone, and Jurassic shale and sandstone. Relief to 30 90 m; slopes 5 20%. Yellow and brown Earthy Sands (Uc5.11; Uc5.2) and Siliceous Sands (Uc4.2; Uc1.21) on upper and midslopes. Red Podzolic Soils (Dr3.21) on lower slopes and flats. Yellow and Grey Podzolic Soils (Dy3.21; Dy3.21; Dy3.81) along larger drainage lines. Grey duplex soils (grey Solodic Soils) (Dg1.33) were observed in isolated swampy areas. Lateritic type soils form ridges with gravelly Red Earths near junction with Goonoo (gn) Soil Landscape. LIMITATIONS Low fertility and waterholding capacity; high to very erosion hazard under cultivation; some steep slopes. Salinity common on lower slopes and in depressions.	0.0	Onsite
TRerx	Erin	Transferral	Landscape—long footslopes of Tertiary basalt hills of the Merriwa Plateau. Local relief to 70 m; slopes 1 8%;	0.0	Onsite

Code	Name	Soil Group	Description	Distance (m)	Direction
			elevation 380 500 m. Mostly cleared woodland to openwoodland. Soils— Black Vertosols (Black Earths) with moderately well drained, deep Epicalcareous Self mulching Black Vertosols (Black Earths) on upper slopes; and imperfectly drained, moderately deep to very deep Epicalcareous Self mulching Black Vertosols (Black Earths) on mid to lower slopes. Limitations—high run on and water erosion hazard. Soil materials with high plasticity, low wet bearing strength, high shrink swell potential and low permeability.		

Source: Soil Landscape

Salinity

Salinity Hazard	Type	Details	Distance (m)	Direction
Moderate	Hydrogeological Landscapes	Western Central West Hydrogeological Landscapes	0.0	Onsite
High hazard or risk	Australian Dryland Salinity Assessment (1:2,500,000) 2001	High hazard or risk in 2020, and 2050	0.0	Onsite
Very High	Hydrogeological Landscapes	Western Central West Hydrogeological Landscapes	0.0	Onsite
High hazard or risk	Australian Dryland Salinity Assessment (1:2,500,000) 2001	High hazard or risk in 2050	0.0	Onsite
Low	Hydrogeological Landscapes	Western Central West Hydrogeological Landscapes	0.0	Onsite
High hazard or risk	Australian Dryland Salinity Assessment (1:2,500,000) 2001	High hazard or risk in 2000, 2020, and 2050	0.0	Onsite
High	Hydrogeological Landscapes	Western Central West Hydrogeological Landscapes	0.0	Onsite

Source: Soil Salinity

Radon

Radon Level (Bq/m³)	Distance (m)	Direction
16	0.0	Onsite
10	0.0	Onsite

Typical radon levels in Australia are low and the values shown are the average values for each census district. For specific location, factors such as the local geology and house type could lead to different values. (ARPANSA).

1.4b Acid Sulfate Soil

Map 1.4b (500m Buffer)

State and Local Acid Sulfate Soil Registers

Name	Classification	Description	Distance (m)	Direction
Not identified				

To ensure that development does not disturb, expose, or drain acid sulfate soils and cause environmental damage, development consent may be required for conducting works within areas and land shown on the Acid Sulfate Soils Map.
Source: National, State and Local Acid Sulfate Soils Registers

National Acid Sulfate Soil Register

Name	Classification	Description	Distance (m)	Direction
Atlas of Australian Acid Sulfate Soils	Low Probability of occurrence	Acid sulfate soil generally within upper 1m in wet / riparian areas.	0.0	Onsite

Name	Classification	Description	Distance (m)	Direction
Atlas of Australian Acid Sulfate Soils	Extremely low probability of occurrence	Acid sulfate soil generally within upper 1m in wet / riparian areas.	0.0	Onsite

Acid Sulfate Soils (ASS) are all those soils in which sulfuric acid may be produced, is being produced, or has been produced in amounts that have a lasting effect on main soil characteristics.
Source: National, State and Local Acid Sulfate Soils Registers

1.5 Geology and Topography

Map 1.5 (500m Buffer)

Geology

Map Sheet	Code	Formation	Age	Group	Dominant Lithology	Description	Distance (m)	Direction
Brigalow Belt South Bioregion - digital geology dataset	GOliw	Liverpool West Basalt	Priabonian (base) to Rupelian (top)	Liverpool Range Volcanic Complex	Dolerite	Olivine phyric tholeiitic to transitional basalt with common amygdales.	0.0	Onsite
Eastern Lachlan Orogen version 2 - digital dataset	GOlil_i	Liverpool Range Volcanics	Bartonian (base) to Rupelian (top)	Liverpool Range Volcanic Complex	Dolerite	Dolerite, syenite and trachyte.	0.0	Onsite
Eastern Lachlan Orogen version 2 - digital dataset	Jinp	Pilliga Sandstone	Callovian (base) to Kimmeridgian (top)	Injune Creek Group	Sandstone	Medium- to very coarse-grained, well sorted, angular to subangular quartzose sandstone and conglomerate. Minor interbeds of mudstone, siltstone and fine-grained sandstone and coal. Common carbonaceous fragments and iron staining. Rare lithic fragments.	0.0	Onsite
Eastern Lachlan Orogen version 2 - digital dataset	Q_avt	Alluvial valley deposits	Quaternary (base) to Now (top)	Alluvium	Clastic sediment	Fluvially-deposited clay, silt, sand, gravel.	0.0	Onsite
Brigalow Belt South Bioregion - digital geology dataset	J__p	Purlawaugh Formation	Pliensbachian (base) to Bathonian (top)	Null	Sandstone	Fine- to medium-grained, lithic to labile sandstone, thinly interbedded with siltstone, mudstone and thin coal seams. Abundant carbonaceous fragments, thin beds of flint clay.	0.0	Onsite
Leadville-Narangarie area upgrade	Stad_s	Dungeree Volcanics	Pridoli (base) to Pridoli (top)	Tannabutta Group	Shale	Shale, slate and minor volcanic-rich sandstone.	0.0	Onsite
Dubbo 1:250,000 Geological Sheet - extra	Q_cr	Colluvial and residual deposits	Quaternary (base) to Pleistocene (top)	Colluvium	Clastic sediment	Undifferentiated colluvial and residual deposits.	0.0	Onsite

Map Sheet	Code	Formation	Age	Group	Dominant Lithology	Description	Distance (m)	Direction
structure points								
Gulgong 1:100 000 Geological Map	Tna	Null	Induan (base) to Anisian (top)	Narrabeen Group	Sandstone	Quartz-lithic to quartzose sandstone, conglomerate, mudstone, siltstone, rare coal.	0.0	Onsite
Eastern Lachlan Orogen version 2 - digital dataset	J__p	Purlawaugh Formation	Pliensbachian (base) to Bathonian (top)	Null	Sandstone	Fine- to medium-grained, lithic to labile sandstone, thinly interbedded with siltstone, mudstone and thin coal seams. Abundant carbonaceous fragments, thin beds of flint clay.	0.0	Onsite
Eastern Lachlan Orogen version 2 - digital dataset	GOliw	Liverpool West Basalt	Priabonian (base) to Rupelian (top)	Liverpool Range Volcanic Complex	Dolerite	Olivine phyric tholeiitic to transitional basalt with common amygdales.	0.0	Onsite
Leadville-Narangarie area upgrade	Tutn	Napperby Formation	Early Triassic (base) to Middle Triassic (top)	Ungrouped Triassic units	Sandstone	Finely laminated quartzose sandstone, claystone and siltstone interbedded with thick, massive or cross-bedded sandstone; minor conglomerate. Common bioturbation and mudcracks.	0.0	Onsite
Dubbo 1:250,000 Geological Sheet - extra structure points	Stad_s	Dungeree Volcanics	Pridoli (base) to Pridoli (top)	Tannabutta Group	Shale	Shale, slate and minor volcanic-rich sandstone.	0.0	Onsite
Gulgong 1:100 000 Geological Map	Stad_s	Dungeree Volcanics	Pridoli (base) to Pridoli (top)	Tannabutta Group	Shale	Shale, slate and minor volcanic-rich sandstone.	0.0	Onsite
Gulgong 1:100 000 Geological Map	GOliw	Liverpool West Basalt	Priabonian (base) to Rupelian (top)	Liverpool Range Volcanic Complex	Dolerite	Olivine phyric tholeiitic to transitional basalt with common amygdales.	0.0	Onsite
Leadville-Narangarie area upgrade	Jinp	Pilliga Sandstone	Callovian (base) to Kimmeridgian (top)	Injune Creek Group	Sandstone	Medium- to very coarse-grained, well sorted, angular to subangular quartzose sandstone and conglomerate. Minor interbeds of mudstone, siltstone and fine-grained sandstone and coal. Common carbonaceous fragments and iron	0.0	Onsite

Map Sheet	Code	Formation	Age	Group	Dominant Lithology	Description	Distance (m)	Direction
						staining. Rare lithic fragments.		
Brigalow Belt South Bioregion - digital geology dataset	Q_cr	Colluvial and residual deposits	Quaternary (base) to Pleistocene (top)	Colluvium	Clastic sediment	Undifferentiated colluvial and residual deposits.	0.0	Onsite
Eastern Lachlan Orogen version 2 - digital dataset	Q_cr	Colluvial and residual deposits	Quaternary (base) to Pleistocene (top)	Colluvium	Clastic sediment	Undifferentiated colluvial and residual deposits.	0.0	Onsite
Gilgandra 1:250 000 Geological Map	Q_avt	Alluvial valley deposits	Quaternary (base) to Now (top)	Alluvium	Clastic sediment	Fluvially-deposited clay, silt, sand, gravel.	0.0	Onsite
Brigalow Belt South Bioregion - digital geology dataset	Q__m_c	Marra Creek Formation	Holocene (base) to Now (top)	Null	Clay	Unconsolidated pale to dark grey, in places pale brown-grey, silty clay. Some channels are lined with boulders and pebbles. Carbonate nodules present in places.	0.0	Onsite
Brigalow Belt South Bioregion - digital geology dataset	Q_avt	Alluvial valley deposits	Quaternary (base) to Now (top)	Alluvium	Clastic sediment	Fluvially-deposited clay, silt, sand, gravel.	0.0	Onsite
Gilgandra 1:250 000 Geological Map	J__l	Glenrowan Intrusives	Norian (base) to Bathonian (top)	Null	Dolerite	Sills and dykes of alkali dolerite and micro-syenodolerite.	0.0	Onsite
Brigalow Belt South Bioregion - digital geology dataset	Pil	Null	Lopingian (base) to Lopingian (top)	Illawarra Coal Measures	Shale	Shale, quartz-lithic sandstone, conglomerate, chert, sporadically carbonaceous mudstone, coal and torbanite seams.	0.0	Onsite
Gilgandra 1:250 000 Geological Map	GOliw	Liverpool West Basalt	Priabonian (base) to Rupelian (top)	Liverpool Range Volcanic Complex	Dolerite	Olivine phyric tholeiitic to transitional basalt with common amygdales.	0.0	Onsite
Gilgandra 1:250 000 Geological Map	J__p	Purlawaugh Formation	Pliensbachian (base) to Bathonian (top)	Null	Sandstone	Fine- to medium-grained, lithic to labile sandstone, thinly interbedded with siltstone, mudstone and thin coal seams. Abundant carbonaceous fragments, thin beds of flint clay.	0.0	Onsite
Brigalow Belt South Bioregion - digital geology dataset	Cgul	Leadville Quartz Monzonite	Tournaisian (base) to Visean (top)	Gulgong Suite	Monzonite	Porphyritic quartz monzonite.	0.0	Onsite
Brigalow Belt South	Stad	Dungeree Volcanics	Aeronian (base) to	Tannabutta Group	Rhyolite	Rhyolite to dacite lava, autobreccia	0.0	Onsite

Map Sheet	Code	Formation	Age	Group	Dominant Lithology	Description	Distance (m)	Direction
Bioregion - digital geology dataset			Ludfordian (top)			and fine- to coarse-grained silicic volcaniclastic sandstone to shale; rare latitic to trachytic lava.		
Dubbo 1:250,000 Geological Sheet - extra structure points	Stad	Dungeree Volcanics	Aeronian (base) to Ludfordian (top)	Tannabutta Group	Rhyolite	Rhyolite to dacite lava, autobreccia and fine- to coarse-grained silicic volcaniclastic sandstone to shale; rare latitic to trachytic lava.	0.0	Onsite
Eastern Lachlan Orogen version 2 - digital dataset	Pil	Null	Lopingian (base) to Lopingian (top)	Illawarra Coal Measures	Shale	Shale, quartz-lithic sandstone, conglomerate, chert, sporadically carbonaceous mudstone, coal and torbanite seams.	0.0	Onsite
Brigalow Belt South Bioregion - digital geology dataset	Tutn	Napperby Formation	Early Triassic (base) to Middle Triassic (top)	Ungrouped Triassic units	Sandstone	Finely laminated quartzose sandstone, claystone and siltstone interbedded with thick, massive or cross-bedded sandstone; minor conglomerate. Common bioturbation and mudcracks.	0.0	Onsite
Eastern Lachlan Orogen version 2 - digital dataset	Tna	Null	Induan (base) to Anisian (top)	Narrabeen Group	Sandstone	Quartz-lithic to quartzose sandstone, conglomerate, mudstone, siltstone, rare coal.	0.0	Onsite
Gilgandra 1:250 000 Geological Map	Jinp	Pilliga Sandstone	Callovian (base) to Kimmeridgian (top)	Injune Creek Group	Sandstone	Medium- to very coarse-grained, well sorted, angular to subangular quartzose sandstone and conglomerate. Minor interbeds of mudstone, siltstone and fine-grained sandstone and coal. Common carbonaceous fragments and iron staining. Rare lithic fragments.	0.0	Onsite
Gulgong 1:100 000 Geological Map	Jinp	Pilliga Sandstone	Callovian (base) to Kimmeridgian (top)	Injune Creek Group	Sandstone	Medium- to very coarse-grained, well sorted, angular to subangular quartzose sandstone and conglomerate. Minor interbeds of mudstone, siltstone and fine-grained sandstone and coal. Common carbonaceous	0.0	Onsite

Map Sheet	Code	Formation	Age	Group	Dominant Lithology	Description	Distance (m)	Direction
						fragments and iron staining. Rare lithic fragments.		
Dubbo 1:250,000 Geological Sheet - extra structure points	Tna	Null	Induan (base) to Anisian (top)	Narrabeen Group	Sandstone	Quartz-lithic to quartzose sandstone, conglomerate, mudstone, siltstone, rare coal.	0.0	Onsite
Brigalow Belt South Bioregion - digital geology dataset	Tna	Null	Induan (base) to Anisian (top)	Narrabeen Group	Sandstone	Quartz-lithic to quartzose sandstone, conglomerate, mudstone, siltstone, rare coal.	0.0	Onsite
Dubbo 1:250,000 Geological Sheet - extra structure points	J__p	Purlawaugh Formation	Pliensbachian (base) to Bathonian (top)	Null	Sandstone	Fine- to medium-grained, lithic to labile sandstone, thinly interbedded with siltstone, mudstone and thin coal seams. Abundant carbonaceous fragments, thin beds of flint clay.	0.0	Onsite
Eastern Lachlan Orogen version 2 - digital dataset	J__l	Glenrowan Intrusives	Norian (base) to Bathonian (top)	Null	Dolerite	Sills and dykes of alkali dolerite and micro-syenodolerite.	0.0	Onsite
Leadville-Narangarie area upgrade	Cgu	Null	Carboniferous (Mississippian) (base) to Carboniferous (Pennsylvanian) (top)	Gulgong Suite	Granite	Mostly I-type granites but some marginal S-type granites in eastern part of the suite. High magnetic responses	0.0	Onsite
Cobbora 1:100 000 Geological Map	Stad	Dungeree Volcanics	Aeronian (base) to Ludfordian (top)	Tannabutta Group	Rhyolite	Rhyolite to dacite lava, autobreccia and fine- to coarse-grained silicic volcaniclastic sandstone to shale; rare latitic to trachytic lava.	0.0	Onsite
Brigalow Belt South Bioregion - digital geology dataset	Stad_s	Dungeree Volcanics	Pridoli (base) to Pridoli (top)	Tannabutta Group	Shale	Shale, slate and minor volcanic-rich sandstone.	0.0	Onsite
Gulgong 1:100 000 Geological Map	J__p	Purlawaugh Formation	Pliensbachian (base) to Bathonian (top)	Null	Sandstone	Fine- to medium-grained, lithic to labile sandstone, thinly interbedded with siltstone, mudstone and thin coal seams. Abundant carbonaceous fragments, thin beds of flint clay.	0.0	Onsite
Leadville-Narangarie area upgrade	Cgul	Leadville Quartz Monzonite	Tournaisian (base) to Visean (top)	Gulgong Suite	Monzonite	Porphyritic quartz monzonite.	0.0	Onsite

Map Sheet	Code	Formation	Age	Group	Dominant Lithology	Description	Distance (m)	Direction
Brigalow Belt South Bioregion - digital geology dataset	J__l	Glenrowan Intrusives	Norian (base) to Bathonian (top)	Null	Dolerite	Sills and dykes of alkali dolerite and micro-syenodolerite.	0.0	Onsite
Eastern Lachlan Orogen version 2 - digital dataset	Stad_s	Dungeree Volcanics	Pridoli (base) to Pridoli (top)	Tannabutta Group	Shale	Shale, slate and minor volcanic-rich sandstone.	0.0	Onsite
Gilgandra 1:250 000 Geological Map	CZ_ag	Alluvial gravel deposits	Cenozoic (base) to Now (top)	Alluvium	Gravel	Unconsolidated alluvial gravel, sand, silt and clay with variable humic content. Gravels commonly clast-supported.	0.0	Onsite
Gulgong 1:100 000 Geological Map	Q_cr	Colluvial and residual deposits	Quaternary (base) to Pleistocene (top)	Colluvium	Clastic sediment	Undifferentiated colluvial and residual deposits.	0.0	Onsite
Eastern Lachlan Orogen version 2 - digital dataset	Cgul	Leadville Quartz Monzonite	Tournaisian (base) to Visean (top)	Gulgong Suite	Monzonite	Porphyritic quartz monzonite.	0.0	Onsite
Dubbo 1:250,000 Geological Sheet - extra structure points	GOliw	Liverpool West Basalt	Priabonian (base) to Rupelian (top)	Liverpool Range Volcanic Complex	Dolerite	Olivine phyric tholeiitic to transitional basalt with common amygdales.	0.0	Onsite
Dubbo 1:250,000 Geological Sheet - extra structure points	Cgul	Leadville Quartz Monzonite	Tournaisian (base) to Visean (top)	Gulgong Suite	Monzonite	Porphyritic quartz monzonite.	0.0	Onsite
Gilgandra 1:250 000 Geological Map	GOlil_i	Liverpool Range Volcanics	Bartonian (base) to Rupelian (top)	Liverpool Range Volcanic Complex	Dolerite	Dolerite, syenite and trachyte.	0.0	Onsite
Gilgandra 1:250 000 Geological Map	Stad_s	Dungeree Volcanics	Pridoli (base) to Pridoli (top)	Tannabutta Group	Shale	Shale, slate and minor volcanic-rich sandstone.	0.0	Onsite
Gilgandra 1:250 000 Geological Map	Tutn	Napperby Formation	Early Triassic (base) to Middle Triassic (top)	Ungrouped Triassic units	Sandstone	Finely laminated quartzose sandstone, claystone and siltstone interbedded with thick, massive or cross-bedded sandstone; minor conglomerate. Common bioturbation and mudcracks.	0.0	Onsite
Eastern Lachlan Orogen version 2 -	J__g	Garrawilla Volcanics	Norian (base) to Bathonian (top)	Null	Dolerite	Dolerite, basalt, trachyte, tuff, breccia.	0.0	Onsite

Map Sheet	Code	Formation	Age	Group	Dominant Lithology	Description	Distance (m)	Direction
digital dataset								
Eastern Lachlan Orogen version 2 - digital dataset	Stad	Dungeree Volcanics	Aeronian (base) to Ludfordian (top)	Tannabutta Group	Rhyolite	Rhyolite to dacite lava, autobreccia and fine- to coarse-grained silicic volcaniclastic sandstone to shale; rare latitic to trachytic lava.	0.0	Onsite
Brigalow Belt South Bioregion - digital geology dataset	GOlil_i	Liverpool Range Volcanics	Bartonian (base) to Rupelian (top)	Liverpool Range Volcanic Complex	Dolerite	Dolerite, syenite and trachyte.	0.0	Onsite
Gulgong 1:100 000 Geological Map	Pil	Null	Lopingian (base) to Lopingian (top)	Illawarra Coal Measures	Shale	Shale, quartz-lithic sandstone, conglomerate, chert, sporadically carbonaceous mudstone, coal and torbanite seams.	0.0	Onsite
Dubbo 1:250,000 Geological Sheet - extra structure points	Q_avt	Alluvial valley deposits	Quaternary (base) to Now (top)	Alluvium	Clastic sediment	Fluvially-deposited clay, silt, sand, gravel.	0.0	Onsite
Gulgong 1:100 000 Geological Map	Cgul	Leadville Quartz Monzonite	Tournaisian (base) to Visean (top)	Gulgong Suite	Monzonite	Porphyritic quartz monzonite.	0.0	Onsite
Gulgong 1:100 000 Geological Map	Q_avt	Alluvial valley deposits	Quaternary (base) to Now (top)	Alluvium	Clastic sediment	Fluvially-deposited clay, silt, sand, gravel.	0.0	Onsite
Brigalow Belt South Bioregion - digital geology dataset	Jinp	Pilliga Sandstone	Callovian (base) to Kimmeridgian (top)	Injune Creek Group	Sandstone	Medium- to very coarse-grained, well sorted, angular to subangular quartzose sandstone and conglomerate. Minor interbeds of mudstone, siltstone and fine-grained sandstone and coal. Common carbonaceous fragments and iron staining. Rare lithic fragments.	0.0	Onsite
Dubbo 1:250,000 Geological Sheet - extra structure points	Pil	Null	Lopingian (base) to Lopingian (top)	Illawarra Coal Measures	Shale	Shale, quartz-lithic sandstone, conglomerate, chert, sporadically carbonaceous mudstone, coal and torbanite seams.	0.0	Onsite
Gilgandra 1:250 000 Geological Map	J__g	Garrawilla Volcanics	Norian (base) to Bathonian (top)	Null	Dolerite	Dolerite, basalt, trachyte, tuff, breccia.	0.0	Onsite
Brigalow Belt South Bioregion - digital	Tutd	Digby Formation	Lopingian (base) to Early Triassic (top)	Ungrouped Triassic units	Conglomerate	Poorly sorted, pebble to boulder orthoconglomerate, rare sandstone.	0.0	Onsite

Map Sheet	Code	Formation	Age	Group	Dominant Lithology	Description	Distance (m)	Direction
geology dataset								
Gilgandra 1:250 000 Geological Map	Tna	Null	Induan (base) to Anisian (top)	Narrabeen Group	Sandstone	Quartz-lithic to quartzose sandstone, conglomerate, mudstone, siltstone, rare coal.	0.0	Onsite
Gilgandra 1:250 000 Geological Map	Q_cr	Colluvial and residual deposits	Quaternary (base) to Pleistocene (top)	Colluvium	Clastic sediment	Undifferentiated colluvial and residual deposits.	0.0	Onsite
Gulgong 1:100 000 Geological Map	Stad	Dungeree Volcanics	Aeronian (base) to Ludfordian (top)	Tannabutta Group	Rhyolite	Rhyolite to dacite lava, autobreccia and fine- to coarse-grained silicic volcaniclastic sandstone to shale; rare latitic to trachytic lava.	0.0	Onsite
Brigalow Belt South Bioregion - digital geology dataset	CZ_ag	Alluvial gravel deposits	Cenozoic (base) to Now (top)	Alluvium	Gravel	Unconsolidated alluvial gravel, sand, silt and clay with variable humic content. Gravels commonly clast-supported.	0.0	Onsite
Brigalow Belt South Bioregion - digital geology dataset	J__g	Garrawilla Volcanics	Norian (base) to Bathonian (top)	Null	Dolerite	Dolerite, basalt, trachyte, tuff, breccia.	0.0	Onsite
Gilgandra 1:250 000 Geological Map	Q__m_c	Marra Creek Formation	Holocene (base) to Now (top)	Null	Clay	Unconsolidated pale to dark grey, in places pale brown-grey, silty clay. Some channels are lined with boulders and pebbles. Carbonate nodules present in places.	0.0	Onsite
Leadville-Narangarie area upgrade	GOliw	Liverpool West Basalt	Priabonian (base) to Rupelian (top)	Liverpool Range Volcanic Complex	Dolerite	Olivine phyric tholeiitic to transitional basalt with common amygdales.	0.0	Onsite
Leadville-Narangarie area upgrade	Q_avt	Alluvial valley deposits	Quaternary (base) to Now (top)	Alluvium	Clastic sediment	Fluvially-deposited clay, silt, sand, gravel.	0.0	Onsite
Gilgandra 1:250 000 Geological Map	Cgul	Leadville Quartz Monzonite	Tournaisian (base) to Visean (top)	Gulgong Suite	Monzonite	Porphyritic quartz monzonite.	0.0	Onsite
Leadville-Narangarie area upgrade	J__p	Purlawaugh Formation	Pliensbachian (base) to Bathonian (top)	Null	Sandstone	Fine- to medium-grained, lithic to labile sandstone, thinly interbedded with siltstone, mudstone and thin coal seams. Abundant carbonaceous fragments, thin beds of flint clay.	0.0	Onsite

Map Sheet	Code	Formation	Age	Group	Dominant Lithology	Description	Distance (m)	Direction
Eastern Lachlan Orogen version 2 - digital dataset	Tutn	Napperby Formation	Early Triassic (base) to Middle Triassic (top)	Ungrouped Triassic units	Sandstone	Finely laminated quartzose sandstone, claystone and siltstone interbedded with thick, massive or cross-bedded sandstone; minor conglomerate. Common bioturbation and mudcracks.	0.0	Onsite
Gilgandra 1:250 000 Geological Map	Cgu	Null	Carboniferous (Mississippian) (base) to Carboniferous (Pennsylvanian) (top)	Gulgong Suite	Granite	Mostly I-type granites but some marginal S-type granites in eastern part of the suite. High magnetic responses	0.0	Onsite
Dubbo 1:250,000 Geological Sheet - extra structure points	Jinp	Pilliga Sandstone	Callovian (base) to Kimmeridgian (top)	Injune Creek Group	Sandstone	Medium- to very coarse-grained, well sorted, angular to subangular quartzose sandstone and conglomerate. Minor interbeds of mudstone, siltstone and fine-grained sandstone and coal. Common carbonaceous fragments and iron staining. Rare lithic fragments.	0.0	Onsite
Leadville-Narangarie area upgrade	CZ_ag	Alluvial gravel deposits	Cenozoic (base) to Now (top)	Alluvium	Gravel	Unconsolidated alluvial gravel, sand, silt and clay with variable humic content. Gravels commonly clast-supported.	0.0	Onsite
Brigalow Belt South Bioregion - digital geology dataset	Cgu	Null	Carboniferous (Mississippian) (base) to Carboniferous (Pennsylvanian) (top)	Gulgong Suite	Granite	Mostly I-type granites but some marginal S-type granites in eastern part of the suite. High magnetic responses	0.0	Onsite
Eastern Lachlan Orogen version 2 - digital dataset	CZ_ag	Alluvial gravel deposits	Cenozoic (base) to Now (top)	Alluvium	Gravel	Unconsolidated alluvial gravel, sand, silt and clay with variable humic content. Gravels commonly clast-supported.	0.0	Onsite
Eastern Lachlan Orogen version 2 - digital dataset	Q__m_c	Marra Creek Formation	Holocene (base) to Now (top)	Null	Clay	Unconsolidated pale to dark grey, in places pale brown-grey, silty clay. Some channels are lined with boulders and pebbles. Carbonate nodules present in places.	0.0	Onsite

Map Sheet	Code	Formation	Age	Group	Dominant Lithology	Description	Distance (m)	Direction
Eastern Lachlan Orogen version 2 - digital dataset	Tutd	Digby Formation	Lopingian (base) to Early Triassic (top)	Ungrouped Triassic units	Conglomerate	Poorly sorted, pebble to boulder orthoconglomerate, rare sandstone.	0.0	Onsite
Eastern Lachlan Orogen version 2 - digital dataset	Cgu	Null	Carboniferous (Mississippian) (base) to Carboniferous (Pennsylvanian) (top)	Gulgong Suite	Granite	Mostly I-type granites but some marginal S-type granites in eastern part of the suite. High magnetic responses	0.0	Onsite
Leadville-Narangarie area upgrade	Q_cr	Colluvial and residual deposits	Quaternary (base) to Pleistocene (top)	Colluvium	Clastic sediment	Undifferentiated colluvial and residual deposits.	0.0	Onsite
Gilgandra 1:250 000 Geological Map	Tutd	Digby Formation	Lopingian (base) to Early Triassic (top)	Ungrouped Triassic units	Conglomerate	Poorly sorted, pebble to boulder orthoconglomerate, rare sandstone.	0.0	Onsite
Cobbora 1:100 000 Geological Map	Q_avt	Alluvial valley deposits	Quaternary (base) to Now (top)	Alluvium	Clastic sediment	Fluvially-deposited clay, silt, sand, gravel.	15.4	West
Gulgong 1:100 000 Geological Map	Stad_c	Dungeree Volcanics	Pridoli (base) to Pridoli (top)	Tannabutta Group	Conglomerate	Polymictic conglomerate, lithic sandstone.	175.9	South-east
Dubbo 1:250,000 Geological Sheet - extra structure points	Stad_c	Dungeree Volcanics	Pridoli (base) to Pridoli (top)	Tannabutta Group	Conglomerate	Polymictic conglomerate, lithic sandstone.	175.9	South-east
Eastern Lachlan Orogen version 2 - digital dataset	Stad_c	Dungeree Volcanics	Pridoli (base) to Pridoli (top)	Tannabutta Group	Conglomerate	Polymictic conglomerate, lithic sandstone.	175.9	South-east
Brigalow Belt South Bioregion - digital geology dataset	Stad_c	Dungeree Volcanics	Pridoli (base) to Pridoli (top)	Tannabutta Group	Conglomerate	Polymictic conglomerate, lithic sandstone.	175.9	South-east
Eastern Lachlan Orogen version 2 - digital dataset	Stad_l	Dungeree Volcanics	Pridoli (base) to Pridoli (top)	Tannabutta Group	Limestone	Limestone and limestone breccia.	242.5	South-east
Brigalow Belt South Bioregion - digital geology dataset	Stad_l	Dungeree Volcanics	Pridoli (base) to Pridoli (top)	Tannabutta Group	Limestone	Limestone and limestone breccia.	242.5	South-east
Gulgong 1:100 000 Geological Map	Stad_l	Dungeree Volcanics	Pridoli (base) to Pridoli (top)	Tannabutta Group	Limestone	Limestone and limestone breccia.	242.5	South-east
Dubbo 1:250,000 Geological Sheet - extra	Stad_l	Dungeree Volcanics	Pridoli (base) to Pridoli (top)	Tannabutta Group	Limestone	Limestone and limestone breccia.	242.5	South-east

Map Sheet	Code	Formation	Age	Group	Dominant Lithology	Description	Distance (m)	Direction
structure points								
Leadville-Narangarie area upgrade	Tutd	Digby Formation	Lopingian (base) to Early Triassic (top)	Ungrouped Triassic units	Conglomerate	Poorly sorted, pebble to boulder orthoconglomerate, rare sandstone.	263.8	West
Cobbora 1:100 000 Geological Map	Q__m_c	Marra Creek Formation	Holocene (base) to Now (top)	Null	Clay	Unconsolidated pale to dark grey, in places pale brown-grey, silty clay. Some channels are lined with boulders and pebbles. Carbonate nodules present in places.	381.7	North-west
Dubbo 1:250,000 Geological Sheet - extra structure points	Q__m_c	Marra Creek Formation	Holocene (base) to Now (top)	Null	Clay	Unconsolidated pale to dark grey, in places pale brown-grey, silty clay. Some channels are lined with boulders and pebbles. Carbonate nodules present in places.	381.7	North-west
Gulgong 1:100 000 Geological Map	Q__m_c	Marra Creek Formation	Holocene (base) to Now (top)	Null	Clay	Unconsolidated pale to dark grey, in places pale brown-grey, silty clay. Some channels are lined with boulders and pebbles. Carbonate nodules present in places.	440.0	East
Eastern Lachlan Orogen version 2 - digital dataset	GOlil_g	Liverpool Range Volcanics	Bartonian (base) to Rupelian (top)	Liverpool Range Volcanic Complex	Unconsolidated material	Gravels, poorly consolidated sandstone, siltstone and carbonaceous claystone.	500.1	South-east
Gilgandra 1:250 000 Geological Map	GOlil_g	Liverpool Range Volcanics	Bartonian (base) to Rupelian (top)	Liverpool Range Volcanic Complex	Unconsolidated material	Gravels, poorly consolidated sandstone, siltstone and carbonaceous claystone.	500.1	South-east
Brigalow Belt South Bioregion - digital geology dataset	GOlil_g	Liverpool Range Volcanics	Bartonian (base) to Rupelian (top)	Liverpool Range Volcanic Complex	Unconsolidated material	Gravels, poorly consolidated sandstone, siltstone and carbonaceous claystone.	500.1	South-east

Source: Geology

Naturally Occurring Asbestos Potential (NOA)

Category	On the Property?	Within Buffer?
Not identified		

Source: Naturally Occurring Asbestos NOA

Topography

Topography (Onsite)	400 770 mAHD

Source: National, State and Local Acid Sulfate Soils Registers

Section 2 Hydrogeology and Geotechnical

2.1 GDE & Hydrogeology Constraints

Map 1.5 (500m Buffer)

Aquifer Type

Type	Distance (m)	Direction
Porous, extensive highly productive aquifers	0.0	Onsite
Fractured or fissured, extensive aquifers of low to moderate productivity	0.0	Onsite
Porous, extensive aquifers of low to moderate productivity	0.0	Onsite

Source: Groundwater Aquifers

Groundwater Protection Areas

Name	Water Plan Area	Distance (m)	Direction
Warrumbungle	Warrumbungle Local Environmental Plan 2013	0.0	Onsite

Source: Groundwater Protection Areas and Groundwater Restricted Use Zones

Wetlands

Name	Description	Distance (m)	Direction
Not identified			

Source: Wetlands

Groundwater Dependent Ecosystems (GDE) - Aquatic (Surface)

Potential	Distance (m)	Direction
Moderate potential GDE from national assessment	0.0	Onsite
Low potential GDE from national assessment	0.0	Onsite
High potential GDE from national assessment	370.7	East

Aquatic - Ecosystems that rely on the Surface expression of groundwater.
Source: Groundwater Dependent Ecosystems

Groundwater Dependent Ecosystems (GDE) - Terrestrial (Subsurface)

Potential	Distance (m)	Direction
Moderate potential GDE from regional studies	0.0	Onsite
Low potential GDE from regional studies	0.0	Onsite
High potential GDE from regional studies	0.0	Onsite

Terrestrial - Ecosystems that rely on the Subsurface expression of groundwater.
Source: Groundwater Dependent Ecosystems

Groundwater Licences (Western Australia)

Map ID	WRI number	Allocation (KL)	Address	All Parties	Distance (m)	Direction
Not identified						

Source: Groundwater Protection Areas and Groundwater Restricted Use Zones

Groundwater Bores

Map ID	Groundwater Bore ID	Authorised Purpose	Completion Date	Drilled Depth (m)	Final Depth (m)	SWL (m)	Salinity/ TDS (mg/l)	Yield (L/s)	Distance (m)	Direction
1	GW805423	Domestic,stock	15/05/2014	45.0	45.0	8.0	Null	1.0	0.0	Onsite
120	GW007460	Unknown	Null	Null	124.4	Null	Null	Null	0.0	Onsite
119	GW007461	Unknown	Null	Null	106.7	Null	Stock	Null	0.0	Onsite
118	GW804395	Household	29/03/2010	10.0	10.0	2.0	Null	1.0	0.0	Onsite
42	GW023339	Water supply for livestock	01/11/1965	12.2	12.1	6.0	Null	0.5	0.0	Onsite
91	GW066728	Household	20/09/1989	140.0	140.0	Null	Null	Null	0.0	Onsite
46	GW016398	Water supply for livestock	Null	16.5	16.5	6.1	Null	0.4	0.0	Onsite
47	GW016029	Water supply for livestock	01/02/1958	32.0	32.0	7.3	Brackish	1.0	0.0	Onsite
48	GW023370	Household	01/11/1965	13.4	13.4	Null	Null	Null	0.0	Onsite
49	GW023338	Water supply for livestock	01/11/1965	73.2	73.1	Null	Null	Null	0.0	Onsite
50	GW061313	Household	01/10/1985	38.5	38.5	Null	Fresh	0.9	0.0	Onsite
111	GW803615	Household	06/05/2008	42.0	42.0	Null	Null	1.2	0.0	Onsite
110	GW803829	Household	14/01/2009	161.0	161.0	60.0	Null	0.3	0.0	Onsite

Map ID	Groundwater Bore ID	Authorised Purpose	Completion Date	Drilled Depth (m)	Final Depth (m)	SWL (m)	Salinity/ TDS (mg/l)	Yield (L/s)	Distance (m)	Direction
54	GW029968	Water supply for livestock	01/01/1969	121.9	121.9	Null	Null	Null	0.0	Onsite
55	GW059494	Household	01/08/1983	17.0	17.0	5.0	Fair	Null	0.0	Onsite
121	GW013503	Irrigated agriculture	01/01/1958	Null	11.3	Null	501-1000 ppm	Null	0.0	Onsite
56	GW017339	Water supply for livestock	01/06/1958	67.1	67.0	52.4	Null	0.5	0.0	Onsite
59	GW050715	Water supply for livestock	01/04/1980	97.6	97.6	Null	Null	Null	0.0	Onsite
63	GW800119	Household	21/03/1996	27.8	27.8	6.1	Good	1.0	0.0	Onsite
67	GW048612	Water supply for livestock	01/12/1977	46.3	46.3	18.3	Fresh	2.3	0.0	Onsite
102	GW057062	Household	01/01/1983	45.7	45.7	18.0	Hard	1.0	0.0	Onsite
101	GW038387	Water supply	01/11/1972	9.8	9.7	Null	501-1000 ppm	3.4	0.0	Onsite
70	GW054115	Water supply for livestock	01/12/1980	41.9	41.9	26.8	Very Good	0.6	0.0	Onsite
71	GW054203	Household	01/02/1981	32.0	32.0	Null	Fresh	0.6	0.0	Onsite
74	GW800927	Household	27/07/1999	30.5	30.5	19.5	Null	1.0	0.0	Onsite
100	GW001866	Unknown	01/11/1926	240.8	240.8	231.6	Soft	0.3	0.0	Onsite
81	GW801508	Household	12/12/2001	17.7	17.7	Null	Good	0.4	0.0	Onsite
82	GW007280	Water supply for livestock	01/06/1946	17.7	17.7	13.1	Brackish	0.6	0.0	Onsite
83	GW007731	Water supply for livestock	01/05/1949	13.1	13.1	9.1	Brackish	0.5	0.0	Onsite
97	GW029636	Water supply for livestock	01/03/1969	18.0	18.0	Null	Null	Null	0.0	Onsite
93	GW043938	Water supply for livestock	01/01/1970	128.0	128.0	Null	Null	Null	0.0	Onsite
108	GW803055	Water supply for livestock	22/02/2006	64.0	64.0	Null	Null	1.5	0.0	Onsite
126	GW029480	Water supply for livestock	01/12/1968	Null	7.6	Null	Null	Null	0.0	Onsite
90	GW017211	Water supply for livestock	01/03/1958	17.2	17.2	5.8	Brackish	0.8	0.0	Onsite
26	GW032902	Water supply for livestock	01/09/1970	71.9	71.9	Null	Null	Null	0.0	Onsite
142	GW050157	Unknown	01/01/2025	Null	15.2	Null	Brackish	Null	0.0	Onsite
18	GW002015	Household	01/01/1927	60.4	60.4	32.9	Soft	0.8	0.0	Onsite
19	GW002041	Water supply for livestock	01/04/1927	78.3	78.3	62.0	Soft	0.6	0.0	Onsite

Map ID	Groundwater Bore ID	Authorised Purpose	Completion Date	Drilled Depth (m)	Final Depth (m)	SWL (m)	Salinity/ TDS (mg/l)	Yield (L/s)	Distance (m)	Direction
20	GW002142	Water supply for livestock	01/08/1927	12.2	12.1	4.8	Soft	Null	0.0	Onsite
8	GW030896	Household	01/03/1981	100.0	100.0	Null	Null	Null	0.0	Onsite
141	GW016399	Unknown	01/01/1957	Null	73.2	Null	Null	Null	0.0	Onsite
12	GW002104	Water supply for livestock	01/06/1927	12.0	12.0	Null	Hard	Null	0.0	Onsite
145	GW048983	Water supply for livestock	01/01/1930	Null	109.7	Null	Null	Null	0.0	Onsite
24	GW007729	Water supply	01/11/1948	84.7	84.7	Null	Brackish	0.4	0.0	Onsite
137	GW044139	Water supply for livestock	Null	Null	48.7	Null	Null	Null	0.0	Onsite
16	GW002067	Water supply for livestock	01/05/1927	102.1	102.1	44.2	Hard	0.5	0.0	Onsite
7	GW805627	Domestic,stock	10/04/2015	120.0	120.0	94.0	Null	1.5	0.0	Onsite
150	GW044138	Water supply for livestock	Null	Null	9.1	Null	Null	Null	0.0	Onsite
4	GW804998	Domestic,stock	08/01/2013	90.0	90.0	50.0	Null	1.5	0.0	Onsite
28	GW009320	Unknown	Null	45.7	45.7	Null	Null	Null	0.0	Onsite
29	GW006120	Water supply for livestock	01/09/1936	61.3	61.3	27.4	Soft	Null	0.0	Onsite
30	GW038386	Water supply	01/11/1972	21.3	21.3	Null	Null	Null	0.0	Onsite
3	GW805455	Domestic,stock	25/09/2014	0.0	59.5	46.8	Null	0.7	0.0	Onsite
135	GW044137	Water supply for livestock	Null	Null	96.0	Null	Null	Null	0.0	Onsite
2	GW805090	Stock	06/07/2013	60.0	60.0	22.0	Null	0.8	0.0	Onsite
148	GW050064	Unknown	Null	Null	7.9	Null	Null	Null	0.0	Onsite
107	GW802302	Water supply for livestock	03/05/2004	15.5	15.5	9.0	Null	1.0	63.0	South-east
65	GW055869	Water supply for livestock	01/12/1982	18.0	18.0	3.5	Hard	1.8	68.2	West
104	GW001960	Unknown	01/12/1926	32.0	32.0	2.4	Soft	0.3	71.6	North
38	GW013085	Water supply for livestock	01/10/1956	73.8	73.8	13.1	Good	0.4	84.9	South
75	GW801190	Water supply for livestock	24/07/1999	54.0	54.0	10.0	Null	0.8	87.0	South
144	GW052068	Water supply for livestock	Null	Null	48.8	Null	Null	Null	87.7	South
109	GW803655	Household	27/03/2008	50.0	50.0	6.0	Null	1.0	97.0	East
140	GW051138	Unknown	Null	Null	36.0	Null	Null	Null	97.1	South

Map ID	Groundwater Bore ID	Authorised Purpose	Completion Date	Drilled Depth (m)	Final Depth (m)	SWL (m)	Salinity/ TDS (mg/l)	Yield (L/s)	Distance (m)	Direction
122	GW012558	Water supply for livestock	01/01/1956	Null	22.6	Null	Null	Null	106.4	West
117	GW804437	Household	31/01/2007	50.0	50.0	35.0	Null	0.4	134.2	West
105	GW802845	Household	17/01/1998	106.0	106.0	20.0	Null	1.0	150.4	South
76	GW800847	Water supply for livestock	21/05/1999	61.0	61.0	12.0	Null	1.9	169.1	South
73	GW010685	Household	01/03/1953	60.4	60.3	17.0	Good	0.6	184.9	South
72	GW043299	Water supply for livestock	01/11/1974	24.4	24.3	10.0	Null	Null	276.7	South-east
31	GW011490	Water supply for livestock	01/06/1956	155.5	155.4	Null	Null	0.0	278.7	North-west
116	GW804161	Household	12/01/2010	24.0	24.0	6.0	Good	3.0	283.2	North
138	GW045822	Water supply for livestock	Null	Null	18.3	Null	Null	Null	297.0	North-west
146	GW048651	Unknown	Null	Null	27.4	Null	Fair	Null	309.1	South-east
77	GW800881	Household	22/05/1999	12.0	12.0	2.3	Null	1.5	340.1	South-west
10	GW000865	Unknown	01/11/2021	39.9	39.9	Null	Good	Null	342.7	North
127	GW050375	Unknown	Null	Null	60.9	Null	Null	Null	348.0	South
78	GW801557	Irrigated agriculture	18/04/2002	136.0	136.0	62.0	Null	0.2	353.2	West
11	GW001996	Water supply for livestock	01/02/1927	43.6	43.6	29.6	Soft	0.7	365.1	East
60	GW055877	Household	01/01/1983	14.5	14.5	7.2	Null	1.2	368.0	North-west
36	GW015269	Water supply for livestock	01/07/1957	46.9	46.9	Null	Null	Null	368.2	North-west
113	421126	Unknown	Null	Null	Null	Null	Null	Null	373.8	South
98	GW057124	Household	01/05/1983	20.0	20.0	Null	Hard	0.1	376.9	North
66	GW057133	Household	01/05/1983	10.0	10.0	5.0	Hard	0.1	394.7	North-west
156	GW805611	Stock	01/10/2014	120.0	120.0	Null	Null	0.5	432.4	East
136	GW055220	Household	Null	Null	12.7	Null	1001-3000 ppm	Null	446.0	North-west
52	GW023565	Water supply for livestock	01/12/1965	12.2	12.1	Null	Null	Null	461.8	South-east
85	GW027604	Water supply for livestock	Null	43.3	43.3	3.0	Null	0.0	462.1	West
80	GW801461	COMS	15/06/1998	49.0	49.0	20.0	Null	Null	497.6	North-west
159	GW806022	Null	Null	0.0	17.0	Null	Good	Null	531.1	South-east
17	GW002023	Water supply for livestock	01/03/1927	44.2	44.2	26.8	Hard	0.6	555.0	South

Map ID	Groundwater Bore ID	Authorised Purpose	Completion Date	Drilled Depth (m)	Final Depth (m)	SWL (m)	Salinity/ TDS (mg/l)	Yield (L/s)	Distance (m)	Direction
87	GW009273	Household	01/01/1961	9.1	9.1	1.5	Brackish	Null	665.3	East
43	GW023563	Water supply for livestock	01/12/1965	12.8	12.8	Null	Null	Null	678.8	South-east
40	GW005696	Water supply for livestock	01/01/1932	67.1	67.1	0.8	Good	0.4	687.6	North-east
99	GW055850	Household	01/11/1982	36.5	36.5	25.9	Hard	1.5	702.0	South-east
96	GW029559	Water supply for livestock	01/03/1969	53.3	53.3	3.9	S.Salty	1.0	703.2	South
125	GW015856	Household	Null	Null	2.7	Null	Null	Null	709.4	West
92	GW023564	Water supply for livestock	01/12/1965	25.6	25.6	Null	Null	Null	713.9	South-east
155	GW805424	Domestic,stock	31/05/2014	180.0	180.0	Null	Null	Null	758.6	North
106	GW027126	Water supply for livestock	01/01/1967	47.6	47.5	Null	Hard	Null	772.5	East
123	GW015294	Unknown	Null	Null	27.4	Null	Brackish	Null	785.6	West
79	GW801462	COMS	15/06/1998	36.5	36.5	16.0	Null	Null	809.7	North-west
39	GW005697	Water supply for livestock	01/01/1932	50.3	50.3	0.6	Good	0.6	809.8	North
143	GW049198	Household	01/01/1970	Null	12.2	Null	Good	Null	812.0	North
133	GW024405	Unknown	01/01/1965	Null	15.2	Null	Soft	Null	817.0	North
139	GW049473	Unknown	01/11/1978	Null	15.2	Null	Null	Null	818.4	West
151	GW015073	Water supply for livestock	01/01/1951	Null	16.5	Null	Null	Null	842.6	West
22	GW002236	Water supply for livestock	01/11/1927	32.6	32.6	25.9	Hard	0.3	878.3	North
9	GW030929	Household	01/07/1981	37.0	18.0	4.4	0-500 ppm	1.9	880.5	West
95	GW027122	Water supply for livestock	01/01/1964	28.7	28.7	Null	Hard	Null	887.3	East
32	GW007599	Household	01/03/1948	88.4	88.4	Null	Null	0.0	894.8	North-east
57	GW055825	Household	01/10/1982	150.0	24.9	Null	Null	Null	897.0	East
14	GW002174	Household	01/10/1927	64.0	64.0	21.3	Soft	0.4	918.1	North
34	GW015552	Water supply for livestock	01/01/1958	42.7	42.7	36.6	Brackish	0.7	948.2	North-west
112	GW803894	Household	19/10/2006	66.0	66.0	14.0	Good	0.4	954.1	North-west
53	GW026695	Irrigated agriculture	01/11/1965	69.5	11.2	Null	Good	Null	1031.8	East
124	GW024403	Unknown	01/01/1965	Null	33.5	Null	Hard	Null	1032.8	East
64	GW026809	Irrigated agriculture	01/04/1966	13.3	13.2	4.5	Null	8.0	1041.5	East

Map ID	Groundwater Bore ID	Authorised Purpose	Completion Date	Drilled Depth (m)	Final Depth (m)	SWL (m)	Salinity/ TDS (mg/l)	Yield (L/s)	Distance (m)	Direction
5	GW805170	Domestic,stock	15/02/2013	84.0	84.0	66.0	Null	0.2	1108.6	West
15	GW002257	Household	01/11/1927	34.7	34.7	Null	Null	Null	1122.9	South-east
94	GW047115	Irrigated agriculture	01/05/1978	121.9	121.9	91.5	Fresh	0.5	1163.2	North-east
153	GW800618	Household	01/01/1968	Null	122.0	35.0	Null	0.6	1179.1	North-east
37	GW014658	Irrigated agriculture	01/07/1961	57.3	48.0	7.3	0-500 ppm	Null	1188.7	South-east
45	GW028242	Water supply for livestock	01/10/1966	9.0	8.9	4.5	Very Good	0.7	1197.6	North-west
103	GW801471	Household	15/01/2000	70.0	70.0	Null	Null	0.6	1211.2	West
132	GW016269	Water supply for livestock	01/01/1938	Null	21.3	Null	0-500 ppm	Null	1213.7	East
23	GW000960	Unknown	01/05/2022	7.9	7.9	3.6	Good	0.7	1232.6	South-east
128	GW016270	Household	01/01/1938	Null	22.5	Null	0-500 ppm	Null	1250.4	North-east
69	GW057102	Water supply for livestock	01/03/1983	29.0	29.0	Null	501-1000 ppm	1.0	1289.2	North-west
134	GW016272	Water supply for livestock	01/01/1928	Null	7.6	Null	Null	Null	1293.6	East
13	GW031933	Household	01/04/1969	14.3	14.3	Null	1001-3000 ppm	0.9	1320.7	North-west
68	GW052134	Household	01/05/1980	49.4	49.4	19.2	Good	0.4	1335.8	North
147	GW800619	Water supply for livestock	01/01/1970	Null	34.0	19.0	Null	0.0	1359.5	North-east
41	GW006145	Household	01/02/1937	57.0	57.0	45.7	Hard	0.6	1375.6	North
157	GW805829	Null	Null	0.0	102.0	67.0	Null	1.0	1388.9	East
25	GW002505	Water supply for livestock	01/10/1928	27.4	27.4	19.8	Hard	0.3	1394.5	South
6	GW805638	Domestic,stock	17/06/2015	102.0	102.0	67.0	Null	1.0	1410.2	East
130	GW015864	Household	02/01/2000	Null	17.0	Null	Potable	Null	1425.8	South-west
115	GW032909	Household	Null	Null	Null	Null	Null	Null	1442.4	South
61	GW027124	Water supply for livestock	01/01/1965	15.9	15.8	Null	Hard	0.8	1445.3	East
27	GW009275	Water supply for livestock	01/01/1961	9.4	9.4	Null	Brackish	Null	1495.7	North
152	GW016271	Water supply for livestock	01/01/1927	Null	16.4	Null	Null	Null	1496.2	East
51	GW024199	Water supply for livestock	01/12/1965	22.9	22.8	Null	Null	Null	1496.7	West
35	GW009272	Water supply for livestock	01/01/1961	30.5	30.5	Null	Brackish	Null	1509.2	East

Map ID	Groundwater Bore ID	Authorised Purpose	Completion Date	Drilled Depth (m)	Final Depth (m)	SWL (m)	Salinity/ TDS (mg/l)	Yield (L/s)	Distance (m)	Direction
154	GW016263	Water supply for livestock	01/01/1941	Null	38.4	Null	Null	Null	1553.9	East
33	GW009330	Water supply for livestock	Null	7.6	7.6	3.4	Soft	Null	1602.8	West
89	GW014076	Water supply for livestock	01/04/1958	105.5	105.5	Null	Null	Null	1639.6	North
149	GW017589	Unknown	01/01/1939	Null	109.7	Null	Null	Null	1688.4	North-east
84	GW054503	Household	01/04/1981	16.5	16.5	6.0	Good	0.5	1723.7	North-west
58	GW055734	Household	01/05/1981	22.2	22.2	Null	Null	Null	1726.4	East
88	GW024197	Water supply for livestock	01/12/1965	18.3	18.2	7.6	Null	0.3	1797.4	South-west
62	GW027123	Water supply for livestock	01/01/1960	29.0	29.0	Null	Hard	0.4	1818.3	East
86	GW027748	Water supply for livestock	01/03/1968	67.1	67.0	Null	Good	Null	1839.3	North-west
158	GW805984	Null	Null	0.0	127.0	29.6	Null	1.4	1848.2	East
131	GW016273	Household	01/01/2023	Null	26.8	Null	Null	Null	1882.0	East
129	GW024404	Unknown	01/01/1965	Null	16.5	Null	Good Stock	Null	1900.6	East
114	GW047048	Water supply	01/01/1974	Null	Null	Null	501-1000 ppm	Null	1939.5	North-west
21	GW038042	Water supply	01/04/1975	21.3	21.3	6.0	Good	2.3	1939.5	North-west
44	GW023734	Water supply for livestock	01/08/1965	35.4	35.3	3.0	Null	0.5	1993.0	North-west

Note: The use of the symbol "-" or "Null" indicates that no records were found.
SWL: Standing Water Level (the latest record is displayed). RWL: Rest Water Level (the latest record is displayed). TSS: Total Soluble Salts.
Source: Groundwater Bores & Lithology

Groundwater Bores Driller Lithology Details

Groundwater Bore ID	From Depth – To Depth (m) Lithology	Distance (m)	Direction
GW805423	Null	0.0	Onsite
GW007460	Null	0.0	Onsite
GW007461	Null	0.0	Onsite
GW804395	0m-0.5m Topsoil 0.5m-0.8m Clay 0.8m-10m Basalt, broken	0.0	Onsite
GW023339	0m-1.22m Clay 1.22m-5.79m Clay black 5.79m-10.97m Sand gravel water supply 10.97m-12.19m Sandstone	0.0	Onsite
GW066728	0m-2m Soil, black & floaters 2m-10m Basalt, broken 10m-15m Siltstone, red 15m-27m Siltstone, brown 27m-30m Basalt 30m-33m Mudstone, black 33m-67m Basalt, black 67m-69m Mudstone, yellow 69m-70m Clay, red 70m-81m Sandstone, soft	0.0	Onsite

Groundwater Bore ID	From Depth – To Depth (m) Lithology	Distance (m)	Direction
	81m-82m Mudstone, black 82m-140m Sandstone, grey		
GW016398	0m-4.27m Clay 4.27m-16.46m Sandstone water supply	0.0	Onsite
GW016029	0m-11.28m Clay sand 11.28m-13.11m Sandstone 13.11m-23.16m Sand 23.16m-32m Sandstone water supply	0.0	Onsite
GW023370	0m-1.52m Clay black 1.52m-9.45m Clay 9.45m-13.41m Granite hard	0.0	Onsite
GW023338	0m-0.91m Clay black 0.91m-2.44m Clay 2.44m-39.93m Sandstone 39.93m-45.72m Clay 45.72m-57.3m Shale red 57.3m-73.15m Shale black	0.0	Onsite
GW061313	0m-0.9m Clay boulder 0.9m-11m Clay 0.9m-11m Sandstone bands 11m-20m Sandstone water supply 20m-38.5m Basalt water supply	0.0	Onsite
GW803615	0m-1.5m Sand 1.5m-4m Sandstone, weathered 4m-42m Sandstone	0.0	Onsite
GW803829	0m-2m Topsoil, black 2m-81m Clay, various colouring, shale bands & sandy clay bands 81m-161m Sandstone, various colouring, coal bands	0.0	Onsite
GW029968	0m-18.29m Clay water bearing 18.29m-121.92m Sandstone water bearing	0.0	Onsite
GW059494	0m-1.5m Soil black 1.5m-9m Clay 9m-10m Gravel clay 10m-12m Gravel water bearing 12m-14m Gravel dirty 14m-16m Gravel water supply 16m-17.02m Silt	0.0	Onsite
GW013503	Null	0.0	Onsite
GW017339	0m-4.88m Boulders 4.88m-67.06m Sandstone water supply	0.0	Onsite
GW050715	0m-0.6m Topsoil 0.6m-12.2m Clay 12.2m-18.3m Clay red 18.3m-97.6m Sandstone	0.0	Onsite
GW800119	0m-6m Red clay 6m-12m Sandy clay 12m-14m Sands 14m-23.3m Grey clay bands 23.3m-27.8m Rotten sandstone	0.0	Onsite
GW048612	0m-0.1m Topsoil 0.1m-3.7m Clay 3.7m-34.2m Clay grey 34.2m-41.2m Granite water supply 41.2m-45.1m Sand gravel water supply 45.1m-46.3m Clay	0.0	Onsite
GW057062	0m-16m Clay silty 16m-20m Sandstone 20m-39m Mudstone grey 39m-45.72m Sandstone water supply	0.0	Onsite
GW038387	0m-4.57m Soil alluvium 4.57m-6.09m Gravel 6.09m-9.75m Sandstone water supply	0.0	Onsite
GW054115	0m-0.3m Topsoil sandy 0.3m-2.13m Clay yellow sandy 2.13m-3.66m Clay white sandy 3.66m-17.37m Clay yellow sandy 17.37m-20.12m Sandstone yellow coarse 20.12m-25.6m Clay yellow coarse sandy	0.0	Onsite

Groundwater Bore ID	From Depth – To Depth (m) Lithology	Distance (m)	Direction
	25.6m-26.21m Clay white fine sandy 26.21m-28.35m Clay red sandy 28.35m-29.57m Clay yellow sandy 29.57m-35.97m Sandstone yellow 35.97m-36.58m Sandstone water supply 36.58m-36.88m Clay yellow sandy 36.88m-41.15m Clay red sandy 41.15m-41.91m Sandstone yellow		
GW054203	0m-2.1m Topsoil 2.1m-14.6m Formation soft 14.6m-20.3m Formation hard water supply 20.3m-32m Formation soft water supply	0.0	Onsite
GW800927	0m-0.3m Topsol, black 0.3m-6m Clay, brown, basalt & quartz floaters 6m-15m Shale, light brown 15m-18m Clay, brown, washed gravels to 20mm diam. 18m-20m Clay, black 20m-25m Shale, brown 25m-29m Shale, broken brown 29m-30.5m Shale, brown	0.0	Onsite
GW001866	0m-91.44m Sandstone 91.44m-110.95m Shale 110.95m-119.48m Quartz white shale 119.48m-128.02m Quartz white 128.02m-129.54m Shale 129.54m-141.73m Shale 141.73m-166.12m Shale 166.12m-169.16m Shale sandstone 169.16m-170.99m Sandstone 170.99m-174.04m Sandstone shale 174.04m-179.83m Sandstone 179.83m-196.6m Shale 196.6m-228.6m Sandstone 228.6m-231.65m Shale orange sandstone 231.65m-240.79m Sandstone water supply	0.0	Onsite
GW801508	0m-0.61m Topsoil 0.61m-4.57m Clay 4.57m-5.49m Sand 5.49m-17.07m Clay 17.07m-17.68m Shale	0.0	Onsite
GW007280	0m-17.68m Soil black 17.68m-17.69m Gravel river	0.0	Onsite
GW007731	0m-2.74m Clay 2.74m-7.32m Boulders 7.32m-10.97m Clay 10.97m-13.11m Boulders gravel water supply	0.0	Onsite
GW029636	0m-4.27m Clay stones basalt 4.27m-17.07m Basalt decomposed clay water supply 17.07m-17.98m Clay	0.0	Onsite
GW043938	0m-18.29m Driller 18.29m-128.02m Sandstone	0.0	Onsite
GW803055	0m-2m Topsoil 2m-28m Clay & gravel 28m-47m Basalt 47m-47.5m Sandstone, white 47.5m-64m Sandstone, grey	0.0	Onsite
GW029480	Null	0.0	Onsite
GW017211	0m-11.28m Sand clay 11.28m-17.22m Sand river gravel water supply	0.0	Onsite
GW032902	0m-3.66m Clay 3.66m-7.92m Conglomerate sandstone 7.92m-71.93m Sandstone water supply	0.0	Onsite
GW050157	Null	0.0	Onsite
GW002015	0m-22.86m Driller 22.86m-26.82m Sandstone 26.82m-32m Shale ironstone 32m-47.24m Shale 47.24m-60.35m Shale ironstone water supply	0.0	Onsite

Groundwater Bore ID	From Depth – To Depth (m) Lithology	Distance (m)	Direction
GW002041	0m-12.19m Clay 12.19m-19.81m Clay sandstone 19.81m-44.81m Sandstone 44.81m-52.43m Sandstone shale 52.43m-58.52m Shale ironstone 58.52m-64.92m Shale sandstone 64.92m-70.1m Sandstone 70.1m-75.9m Sandstone water bearing shale 75.9m-78.33m Shale	0.0	Onsite
GW002142	0m-7.01m Clay sticky 7.01m-7.92m Sand drift 7.92m-8.53m Boulders basalt 8.53m-10.06m Boulders 8.53m-10.06m Drift cryptocrystalline 10.06m-10.67m Sand gravel 10.67m-12.21m Water supply	0.0	Onsite
GW030896	0m-0.6m Topsoil 0.6m-2.4m Rock fine sandy 2.4m-8.5m Basalt 8.5m-20.1m Basalt decomposed 20.1m-22.3m Sand dark brown fine 22.3m-24.4m Gravel coarse stones 24.4m-41.1m Shale grey soft hard bands 41.1m-48.8m Sandstone grey fine 48.8m-53.9m Shale grey sandstone hard bands 53.9m-68.9m Sandstone grey fine 68.9m-100m Sandstone light brown fine	0.0	Onsite
GW016399	Null	0.0	Onsite
GW002104	0m-8.84m Clay 8.84m-11.43m Basalt 11.43m-12.04m Sand water supply	0.0	Onsite
GW048983	Null	0.0	Onsite
GW007729	0m-1.83m Clay 1.83m-2.13m Gravel 2.13m-18.29m Clay 18.29m-22.86m Sandstone gravel 22.86m-28.35m Sandstone water supply 28.35m-29.57m Gravel 29.57m-32.31m Sandstone 32.31m-51.82m Clay 51.82m-60.96m Shale 60.96m-77.42m Clay 77.42m-80.47m Sandstone 80.47m-81.08m Water supply 81.08m-84.73m Sandstone	0.0	Onsite
GW044139	Null	0.0	Onsite
GW002067	0m-3.05m Clay 3.05m-21.64m Basalt 21.64m-25.6m Clay shale 25.6m-97.54m Shale 97.54m-102.11m Sandstone water supply	0.0	Onsite
GW805627	Null	0.0	Onsite
GW044138	Null	0.0	Onsite
GW804998	Null	0.0	Onsite
GW009320	0m-45.72m Basalt nominal 0m-45.72m Sandstone nominal	0.0	Onsite
GW006120	0m-33.53m Sandstone shale 33.53m-61.26m Sandstone solid	0.0	Onsite
GW038386	0m-6.09m Granite decomposed 0m-6.09m Soil gravel 6.09m-21.33m Granite rock	0.0	Onsite
GW805455	Null	0.0	Onsite
GW044137	Null	0.0	Onsite
GW805090	Null	0.0	Onsite

Groundwater Bore ID	From Depth – To Depth (m) Lithology	Distance (m)	Direction
GW050064	Null	0.0	Onsite
GW802302	0m-1m Topsoil 1m-2.5m Clay, brown 2.5m-9m Sandy clay, brown 9m-12.304m Sand clay, light brown 12.3m-14.8m Gravel & sand, wbz 14.8m-15.5m Clay, brown with gravel	63.0	South-east
GW055869	0m-18m Sandstone water supply	68.2	West
GW001960	0m-2.44m Clay 2.44m-10.67m Basalt 10.67m-28.96m Clay water supply 28.96m-32m Clay	71.6	North
GW013085	0m-0.61m Topsoil 0.61m-8.53m Clay stones 8.53m-16.76m Clay gravel 16.76m-19.2m Basalt 19.2m-25.91m Clay sandy 25.91m-48.77m Sandstone clay water supply 48.77m-54.86m Clay sandy silty water supply 54.86m-57.91m Silt 57.91m-70.41m Clay 70.41m-73.76m Clay rock	84.9	South
GW801190	0m-0.5m Topsoil, brown 0.5m-7m Clay, brown, jasper floaters 7m-18m Clay, brown 18m-21m Clay, brown, jasper & quartz reef 21m-40m Clay, brown 40m-42m Clay, grey , pug 42m-46m Sandstone, red 46m-49m Sandstone, grey 49m-53m Sandstone, cracky, grey 53m-54m Sandstone, grey	87.0	South
GW052068	Null	87.7	South
GW803655	0m-1m Topsoil 1m-11m Loam, sandy 11m-24m Gravel, cemented 24m-50m Sandstone	97.0	East
GW051138	Null	97.1	South
GW012558	Null	106.4	West
GW804437	0m-1m Topsoil 1m-3m Loam, brown 3m-50m Sandstone	134.2	West
GW802845	0m-2m Topsoil 2m-5m Clay 5m-40m Sandstone, coloured 40m-106m Shale, blue & brown	150.4	South
GW800847	0m-0.6m Topsoil, brown sandy 0.6m-8m Clay, brown 8m-11m Shale, brown weathered 11m-27m Clay, red 27m-32m Shale, weathered brown, reef quartz 32m-44m Clay, red 44m-48m Shale, weathered brown, reef quartz 48m-51m Clay, red 51m-55m Shale, brown 55m-60m Shale, brown, reef quartz 60m-61m Clay, brown	169.1	South
GW010685	0m-15.54m Clay 15.54m-44.81m Sandstone grey 44.81m-53.34m Shale 53.34m-59.44m Sandstone water supply 59.44m-60.35m Shale water supply	184.9	South
GW043299	0m-13.71m Clay 13.71m-16.76m Sand water supply 16.76m-19.2m Clay	276.7	South-east

Groundwater Bore ID	From Depth – To Depth (m) Lithology	Distance (m)	Direction
	19.2m-23.16m Gravel water supply 23.16m-24.38m Clay		
GW011490	0m-11.58m Clay 11.58m-18.29m Shale 18.29m-122.53m Sandstone 122.53m-132.89m Shale 132.89m-155.45m Sandstone shaley	278.7	North-west
GW804161	0m-0.4m Topsoil 0.4m-4m Clay 4m-9m Gravel, with clay bands 9m-12m Basalt, broken 12m-24m Clay	283.2	North
GW045822	Null	297.0	North-west
GW048651	Null	309.1	South-east
GW800881	0m-0.6m Topsoil, black 0.6m-8m Clay, black 8m-11m Sand and river gravels to 50mm 11m-12m Clay, grey	340.1	South-west
GW000865	0m-0.6m Loam red 0.6m-7.92m Clay yellow 7.92m-13.41m Gravel red clay 13.41m-26.21m Clay yellow 26.21m-26.82m Rock white 26.82m-39.92m Clay water supply	342.7	North
GW050375	Null	348.0	South
GW801557	0m-1m Topsoil 1m-5m Clay, brown 5m-136m Sandstone, with conglomerate bands	353.2	West
GW001996	0m-10.67m Clay basalt 10.67m-32m Sandstone 32m-36.58m Sandstone 36.58m-43.59m Sandstone water supply	365.1	East
GW055877	0m-0.4m Topsoil 0.4m-3.1m Clay some rubble 3.1m-12.3m Basalt broken 12.3m-14.5m Rubble grey basalt water supply	368.0	North-west
GW015269	0m-46.94m Sand rock	368.2	North-west
421126	Null	373.8	South
GW057124	0m-5m Gravel sandy 5m-8m Gravel 8m-9m Sand red fine 9m-10m Gravel sandstone water bearing 10m-14m Clay red 14m-15m Gravel 15m-18m Clay red some sand 18m-20m Rock hard dry 20m-20.01m Granite	376.9	North
GW057133	0m-6m Soil clayey 6m-8m Gravel sandstone 8m-10m Gravel water bearing 10m-10.01m Granite	394.7	North-west
GW805611	Null	432.4	East
GW055220	Null	446.0	North-west
GW023565	0m-1.22m Clay 1.22m-11.58m Basalt 11.58m-12.19m Basalt hard	461.8	South-east
GW027604	0m-5.18m Soil 5.18m-5.79m Sand 5.79m-9.45m Sand coarse 9.45m-15.85m Rock broken 15.85m-16.15m Sand 16.15m-17.37m Rock broken 17.37m-17.68m Coal 17.68m-21.03m Sand coarse 21.03m-34.14m Sandstone white	462.1	West

Groundwater Bore ID	From Depth – To Depth (m) Lithology	Distance (m)	Direction
	34.14m-40.54m Coal stones 40.54m-41.76m Rock grey coarse 41.76m-42.06m Coal 42.06m-43.28m Rock grey		
GW801461	0m-0.5m Loam 0.5m-3m Sand 3m-6m Clay 6m-10m Sandstone 10m-20m Shale 20m-30m Sandstone 30m-49m Shale	497.6	North-west
GW806022	Null	531.1	South-east
GW002023	0m-19.81m Clay sandstone 19.81m-30.48m Shale ironstone 30.48m-39.62m Shale 39.62m-44.2m Shale ironstone water supply	555.0	South
GW009273	0m-4.57m Clay 4.57m-9.14m Gravel water bearing sand	665.3	East
GW023563	0m-1.52m Clay red 1.52m-7.92m Clay 7.92m-10.67m Clay broken gravel 10.67m-12.8m Granite hard	678.8	South-east
GW005696	0m-12.19m Driller 12.19m-65.84m Sandstone coarse water supply 65.84m-67.06m Sandstone flakey	687.6	North-east
GW055850	0m-0.5m Loam sandy 0.5m-1m Clay 0.5m-1m Sandstone 1m-5m Shale red 5m-12m Sandstone bands 5m-12m Shale 12m-36.5m Sandstone water supply 12m-36.5m Shale red bands	702.0	South-east
GW029559	0m-0.91m Topsoil 0.91m-12.19m Clay 12.19m-12.8m Clay sandy 12.8m-16.15m Clay gravel 16.15m-24.69m Shale 24.69m-44.81m Sandstone black 44.81m-48.16m Granite 48.16m-53.34m Dolerite	703.2	South
GW015856	Null	709.4	West
GW023564	0m-0.61m Loam 0.61m-3.05m Clay white 3.05m-9.14m Sandstone 9.14m-16.76m Sandstone red 16.76m-22.56m Sandstone 22.56m-25.6m Stones hard	713.9	South-east
GW805424	Null	758.6	North
GW027126	0m-1.52m Soil sandy 1.52m-24.38m Sandstone white yellow 24.38m-27.43m Sandstone yellow 27.43m-40.23m Sandstone porous water supply 40.23m-47.55m Sandstone white yellow	772.5	East
GW015294	Null	785.6	West
GW801462	0m-2m Loam 2m-6m Clay 6m-12m Clay 12m-14m Sandstone 14m-36.5m Shale	809.7	North-west
GW005697	0m-2.44m Soil 2.44m-39.93m Sandstone coarse water supply 39.93m-40.23m Ironstone 40.23m-49.38m Sandstone fine 49.38m-50.29m Sandstone flakey	809.8	North
GW049198	Null	812.0	North

Groundwater Bore ID	From Depth – To Depth (m) Lithology	Distance (m)	Direction
GW024405	Null	817.0	North
GW049473	Null	818.4	West
GW015073	Null	842.6	West
GW002236	0m-6.1m Clay 6.1m-15.24m Clay sandstone 15.24m-22.86m Sandstone 22.86m-28.96m Sandstone clay 28.96m-31.09m Clay 31.09m-32.61m Rock water supply	878.3	North
GW030929	0m-13m Clay 13m-17.5m Gravel water supply 17.5m-35.5m Clay 35.5m-37m Granite	880.5	West
GW027122	0m-8.23m Clay yellow 8.23m-9.75m Rock white yellow soft water bearing 9.75m-10.97m Rock white soft 10.97m-28.65m Sandstone yellow soft	887.3	East
GW007599	0m-62.79m Clay 62.79m-64.62m Rock mixed formation 64.62m-79.25m Sandstone white 79.25m-88.39m Sandstone grey	894.8	North-east
GW055825	0m-1m Sand 1m-17m Mudstone red 17m-24.9m Mudstone 24.9m-150m Clay sandy	897.0	East
GW002174	0m-21.95m Clay 21.95m-32.61m Sandstone 32.61m-45.72m Shale 45.72m-50.29m Rock 50.29m-54.86m Shale 54.86m-58.83m Rock 58.83m-64.01m Sandstone water supply	918.1	North
GW015552	0m-0.61m Topsoil 0.61m-42.67m Sandstone water supply	948.2	North-west
GW803894	0m-0.1m Topsoil 0.1m-1m Clay 1m-4m Basalt, broken 4m-44m Sandstone 44m-66m Shale, grey	954.1	North-west
GW026695	0m-4.27m Soil black 4.27m-5.49m Silt fine 5.49m-7.01m Gravel water supply 7.01m-10.36m Clay water supply 10.36m-11.28m Gravel water supply 11.28m-12.5m Gravel clay 12.5m-14.33m Clay sandy gravel 14.33m-21.64m Clay yellow 21.64m-23.62m Clay 23.62m-29.26m Clay yellow 29.26m-32m Clay yellow sandy 32m-36.88m Clay sandy 36.88m-49.99m Clay yellow sandy 49.99m-53.04m Clay 53.04m-56.08m Clay yellow 56.08m-59.74m Clay shaley 59.74m-69.49m Shale	1031.8	East
GW024403	Null	1032.8	East
GW026809	0m-1.22m Soil black 1.22m-5.49m Soil loam 5.49m-11.89m Gravel water supply 11.89m-13.26m Gravel clay	1041.5	East
GW805170	Null	1108.6	West
GW002257	0m-10.66m Clay 10.66m-12.19m Clay basalt 12.19m-18.28m Basalt 18.28m-29.56m Boulders basalt	1122.9	South-east

Groundwater Bore ID	From Depth – To Depth (m) Lithology	Distance (m)	Direction
	29.56m-31.69m Basalt 31.69m-34.74m Bedrock		
GW047115	0m-0.3m Topsoil 0.3m-4.6m Clay 4.6m-38.1m Sandstone coloured 38.1m-39.6m Shale broken 39.6m-42.4m Shale 42.4m-43.3m Sandstone 43.3m-48.8m Shale broken 48.8m-121.9m Sandstone water supply	1163.2	North-east
GW800618	Null	1179.1	North-east
GW014658	0m-6.71m Clay black sticky 6.71m-8.53m Clay grey 8.53m-9.75m Clay grey 9.75m-12.19m Gravel water supply 12.19m-13.11m Sand yellow 13.11m-14.33m Gravel 14.33m-14.94m Clay yellow bands 14.94m-16.46m Clay silty 14.94m-16.46m Grey bands 16.46m-18.29m Clay bands 16.46m-18.29m Sand water supply 18.29m-26.21m Clay red 26.21m-28.35m Clay yellow 28.35m-31.39m Clay white sandy 31.39m-33.83m Water supply 33.83m-35.05m Clay grey sandy 35.05m-39.32m Clay white soft 39.32m-41.45m Clay sandy water supply 41.45m-43.89m Clay white 43.89m-48.01m Sand gravel water supply 48.01m-48.77m Clay yellow sandy 48.77m-50.29m Clay white 50.29m-51.82m Clay sandy water supply 51.82m-54.25m Clay yellow 54.25m-57.3m Clay red	1188.7	South-east
GW028242	0m-8.99m Driller 8.99m-9.01m Gravel river water supply	1197.6	North-west
GW801471	0m-1m Topsoil 1m-2m Sandy clay 2m-8m Sandstone 8m-9m Shale 9m-55m Sandstone 55m-60m Sandstone 60m-70m Sandstone	1211.2	West
GW016269	Null	1213.7	East
GW000960	0m-0.91m Soil black 0.91m-4.26m Clay gravel 4.26m-5.48m Drift water supply 5.48m-7.01m Gravel fine 7.01m-7.92m Boulders hard	1232.6	South-east
GW016270	Null	1250.4	North-east
GW057102	0m-4m Soil black 4m-8m Silt 8m-17m Clay red water supply 17m-29m Clay red gravel bands water supply	1289.2	North-west
GW016272	Null	1293.6	East
GW031933	0m-5.79m Soil black 5.79m-6.71m Clay sandy 6.71m-10.06m Gravel hard 10.06m-14.33m Gravel water supply	1320.7	North-west
GW052134	0m-0.9m Topsoil 0.9m-36.6m Clay basalt 36.6m-41.2m Basalt water supply 41.2m-43.3m Sandstone 43.3m-49.4m Clay	1335.8	North

Groundwater Bore ID	From Depth – To Depth (m) Lithology	Distance (m)	Direction
GW800619	Null	1359.5	North-east
GW006145	0m-0.91m Sand 0.91m-57m Sandstone water supply	1375.6	North
GW805829	Null	1388.9	East
GW002505	0m-10.67m Clay sandy 10.67m-20.42m Clay 20.42m-27.43m Rock water supply	1394.5	South
GW805638	Null	1410.2	East
GW015864	Null	1425.8	South-west
GW032909	Null	1442.4	South
GW027124	0m-3.05m Clay white yellow 3.05m-13.11m Clay yellow fine gravel mixed 13.11m-15.85m Gravel river water supply	1445.3	East
GW009275	0m-9.45m Alluvium sand drift	1495.7	North
GW016271	Null	1496.2	East
GW024199	0m-0.91m Loam red 0.91m-6.1m Clay red 6.1m-8.84m Clay 8.84m-10.67m Gravel 10.67m-22.86m Basalt	1496.7	West
GW009272	0m-30.48m Driller 30.48m-30.5m Boulders	1509.2	East
GW016263	Null	1553.9	East
GW009330	0m-7.62m Soil black sand drift	1602.8	West
GW014076	0m-7.92m Clay 7.92m-54.86m Sandstone yellow 54.86m-95.71m Shale sandstone 95.71m-104.55m Basalt 104.55m-105.46m Basalt very hard	1639.6	North
GW017589	Null	1688.4	North-east
GW054503	0m-6.4m Clay black 6.4m-10.7m Clay yellow 10.7m-16.5m Sand sloppy water supply	1723.7	North-west
GW055734	0m-2.1m Topsoil 2.1m-19.8m Clay sandy 19.8m-20.4m Granite 20.4m-21.9m Clay sandy 21.9m-22.2m Granite	1726.4	East
GW024197	0m-0.91m Loam 0.91m-3.05m Clay 3.05m-7.62m Clay white 7.62m-12.19m Sandstone 12.19m-14.94m Sand gravel water supply 14.94m-16.46m Sandstone hard water supply 16.46m-18.29m Shale	1797.4	South-west
GW027123	0m-15.24m Driller 15.24m-24.38m Sandstone yellow soft 24.38m-26.21m Sandstone water supply 26.21m-28.65m Sandstone white hard water supply	1818.3	East
GW027748	0m-13.72m Clay 13.72m-20.73m Sand gravel water supply 20.73m-48.77m Clay white 48.77m-67.06m Sandstone water supply	1839.3	North-west
GW805984	Null	1848.2	East
GW016273	Null	1882.0	East
GW024404	Null	1900.6	East
GW047048	Null	1939.5	North-west
GW038042	0m-0.3m Topsoil 0.3m-2.13m Clay black 2.13m-7.92m Clay 7.92m-21.33m Sand gravel water supply	1939.5	North-west

Groundwater Bore ID	From Depth – To Depth (m) Lithology	Distance (m)	Direction
GW023734	0m-7.62m Clay 7.62m-10.67m Sand gravel 10.67m-12.19m Gravel reddish 12.19m-18.29m Clay gravel 18.29m-25.91m Clay reddish gravel 25.91m-29.57m Sand gravel mixed water supply 29.57m-32.61m Sand yellowish clay rock brownish 32.61m-35.36m Sand coarse water supply	1993.0	North-west

Note: The use of the symbol "-" or "Null" indicates that no records were found.
Source: Groundwater Bores & Lithology

2.2 Groundwater and other Bores

Map 2.2 (2000m Buffer)

Groundwater Restricted Use Zones

Name / Number	Address	Site History	Description	Distance (m)	Direction
Not identified					

Source: Groundwater Protection Areas and Groundwater Restricted Use Zones

Groundwater Salinity

Class	Salinity Value	Source	Distance (m)	Direction
Non Saline (<3000mg/L)	500 1500	Office of Water, New South Wales	0.0	Onsite
Non Saline (<3000mg/L)	1500 3000	Office of Water, New South Wales	0.0	Onsite
Non Saline (<3000mg/L)	1000 1500	Murray Darling Basin Authority	0.0	Onsite
Non Saline (<3000mg/L)	< 500	Murray Darling Basin Authority	0.0	Onsite
Non Saline (<3000mg/L)	1500 3000	Murray Darling Basin Authority	0.0	Onsite

Source: Groundwater Salinity

Other Known Borehole Investigations (Coal Seam Gas (CSG), Petroleum Wells and Other Boreholes)

Borehole ID	Purpose	Project	Client/ License	Date Drilled	Depth (m)	Distance (m)	Direction
027414	Mineral Exploration	BOWMAN	Department Of Mineral Resources	01/01/1982	131.2	0.0	Onsite
028655	Mineral Exploration	UARBRY	Department Of Mineral Resources	01/01/1995	400.0	0.0	Onsite
COAL_DMBOWMAND1	Mineral Exploration	DPI Minerals Borehole Register - Department Of Mineral Resources,	Department Of Mineral Resources,	Null	131.2	0.0	Onsite
L32-14966	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R00011564, R00011565, R0001156	01/01/1979	2.0	3.4	South east
037823	Mineral Exploration	Old Castle-South Section	Mines Exploration Pty Ltd	01/01/1979	6.0	3.8	North west

Borehole ID	Purpose	Project	Client/ License	Date Drilled	Depth (m)	Distance (m)	Direction
MIN_37823	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	01/01/1979	6.0	4.1	North west
037819	Mineral Exploration	Old Castle-South Section	Mines Exploration Pty Ltd	01/01/1979	2.0	4.3	South east
MIN_37819	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	01/01/1979	2.0	4.6	South east
L36-14970	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R00011564, R00011565, R0001156	01/01/1979	6.0	4.7	North west
L29-14963	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R00011564, R00011565, R0001156	01/01/1979	9.0	9.3	South east
MIN_37816	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	01/01/1979	9.0	10.1	South east
037816	Mineral Exploration	Old Castle-South Section	Mines Exploration Pty Ltd	01/01/1979	9.0	10.2	South east
MIN_37822	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	01/01/1979	6.0	11.3	North west
037822	Mineral Exploration	Old Castle-South Section	Mines Exploration Pty Ltd	01/01/1979	6.0	11.6	North west
L35-14969	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R00011564, R00011565, R0001156	01/01/1979	6.0	12.4	North west
L31-14965	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R00011564, R00011565, R0001156	01/01/1979	3.0	27.3	South east
037818	Mineral Exploration	Old Castle-South Section	Mines Exploration Pty Ltd	01/01/1979	3.0	28.2	South east
MIN_37818	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	01/01/1979	3.0	28.6	South east

Borehole ID	Purpose	Project	Client/ License	Date Drilled	Depth (m)	Distance (m)	Direction
MIN_37821	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	01/01/1979	6.0	28.8	North west
037821	Mineral Exploration	Old Castle-South Section	Mines Exploration Pty Ltd	01/01/1979	6.0	28.8	North west
L34-14968	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R00011564, R00011565, R0001156	01/01/1979	6.0	29.7	North west
L28-14962	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R00011564, R00011565, R0001156	01/01/1979	9.0	32.1	South east
MIN_37815	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	01/01/1979	9.0	32.8	South east
037815	Mineral Exploration	Old Castle-South Section	Mines Exploration Pty Ltd	01/01/1979	9.0	32.9	South east
MIN_37820	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	01/01/1979	6.0	37.6	North west
037820	Mineral Exploration	Old Castle-South Section	Mines Exploration Pty Ltd	01/01/1979	6.0	37.6	North west
L33-14967	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R00011564, R00011565, R0001156	01/01/1979	6.0	38.5	North west
L30-14964	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R00011564, R00011565, R0001156	01/01/1979	3.0	53.5	South east
MIN_37817	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	01/01/1979	3.0	54.3	South east
037817	Mineral Exploration	Old Castle-South Section	Mines Exploration Pty Ltd	01/01/1979	3.0	54.4	South east
L27-14961	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the	R00011556, R00011557, R00011558, R00011559,	01/01/1979	6.0	57.1	South east

Borehole ID	Purpose	Project	Client/ License	Date Drilled	Depth (m)	Distance (m)	Direction
		DIGS (Digital Imaging of Geological Systems) Database.	R00011560, R00011561, R00011562, R00011563, R00011564, R00011565, R0001156				
037814	Mineral Exploration	Old Castle-South Section	Mines Exploration Pty Ltd	01/01/1979	6.0	57.9	South east
PET_ALLAM-1C	Production	DPI Minerals Borehole Register - Eastern Star Gas Ltd,Eastern Star Gas Ltd	Eastern Star Gas Ltd,Eastern Star Gas Ltd	Null	384.8	58.2	South
MIN_37814	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	01/01/1979	6.0	58.4	South east
Allambi-1C-2	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	RE0000292	01/01/2007	384.8	64.1	South
000003	Production	Allambi	Eastern Star Gas Ltd	01/01/2007	384.8	64.2	South
LV5-15008	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00000222, R00005374, R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R0001156	01/01/1979	548.2	110.9	South
MIN_37861	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	Null	548.2	111.1	South
037861	Mineral Exploration	Mount Stewart Workings - Leadville	Mines Exploration Pty Ltd	01/01/1979	548.2	111.3	South
MIN_37866	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	Null	523.0	233.3	South
LV10-15014	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00000222, R00005374, R00010654, R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R0001156	01/01/1980	523.0	233.6	South
037866	Mineral Exploration	Mount Stewart Workings - Leadville	Mines Exploration Pty Ltd	01/01/1980	523.0	233.8	South
LED001-58482	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00041859, R00079772	01/01/2005	255.3	274.1	South east
131762	Mineral Exploration	Leadville	SILVER STANDARD AUSTRALIA PTY LIMITED	01/01/2005	255.3	274.1	South east

Borehole ID	Purpose	Project	Client/ License	Date Drilled	Depth (m)	Distance (m)	Direction
DH-42-15082	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00000222, R00003378, R00003379, R00003380	01/01/1994	176.9	290.3	South east
037934	Mineral Exploration	Mount Stewart Workings - Leadville	United Nickel Ltd	01/01/1994	176.9	290.3	South east
037932	Mineral Exploration	Mount Stewart Workings - Leadville	United Nickel Ltd	01/01/1994	180.2	296.3	South
DH-40-15080	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00000222, R00003378, R00003379, R00003380	01/01/1994	180.2	296.3	South
037897	Mineral Exploration	G26 Grid - Leadville	United Nickel Ltd	01/01/1985	114.0	312.7	South
DH-6-15043	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00000222, R00008892, R00010325	01/01/1985	114.0	312.7	South
DH-23-15062	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00000222, R00005374, R00010325	01/01/1988	140.3	318.5	South east
037915	Mineral Exploration	Extended Workings - Leadville	United Nickel Ltd	01/01/1988	140.3	318.5	South east
037933	Mineral Exploration	Mount Stewart Workings - Leadville	United Nickel Ltd	01/01/1994	188.9	319.5	South east
DH-41-15081	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00000222, R00003378, R00003379, R00003380	01/01/1994	188.9	319.5	South east
MST-1-14930	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00013519	01/01/1975	171.2	321.5	South east
037784	Mineral Exploration	Mount Stewart	Esso Exploration And Production Australia Inc	01/01/1975	171.2	322.4	South east
MIN_37784	Borehole	DPI Minerals Borehole Register - Esso Exploration And Production Australia Inc,	Esso Exploration And Production Australia Inc,	01/01/1975	171.2	322.5	South east
037927	Mineral Exploration	Mount Stewart Workings - Leadville	United Nickel Ltd	01/01/1992	162.2	327.6	South east
DH-35-15075	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging	R00000222, R00003378	01/01/1992	162.2	327.6	South east

Borehole ID	Purpose	Project	Client/ License	Date Drilled	Depth (m)	Distance (m)	Direction
		of Geological Systems) Database.					
DH-39-15079	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00000222, R00003378, R00003379, R00003380	01/01/1994	173.7	331.5	South
037931	Mineral Exploration	Mount Stewart Workings - Leadville	United Nickel Ltd	01/01/1994	173.7	331.6	South
037928	Mineral Exploration	Mount Stewart Workings - Leadville	United Nickel Ltd	01/01/1992	113.3	339.7	South east
DH-36-15076	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00000222, R00003378	01/01/1992	113.3	339.7	South east
DH-34-15074	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00000222, R00003378, R00003379, R00003380, R00004882, R00005374	01/01/1990	122.8	344.3	South east
037926	Mineral Exploration	Mount Stewart Workings - Leadville	United Nickel Ltd	01/01/1990	122.8	344.4	South east
MIN_37932	Borehole	DPI Minerals Borehole Register - Plutonic Operations Ltd,	Plutonic Operations Ltd,	01/01/1994	180.2	352.3	South
DH-20-15059	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00000222, R00005374, R00008893, R00010325	01/01/1986	138.0	356.9	South
037912	Mineral Exploration	Mount Stewart Workings - Leadville	United Nickel Ltd	01/01/1986	138.0	357.0	South
DH-37-15077	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00000222, R00003378, R00003379, R00003380	01/01/1994	92.0	358.0	South
037929	Mineral Exploration	Mount Stewart Workings - Leadville	United Nickel Ltd	01/01/1994	92.0	358.1	South
MIN_37933	Borehole	DPI Minerals Borehole Register - Plutonic Operations Ltd,	Plutonic Operations Ltd,	01/01/1994	188.9	361.8	South east
DH-15-15053	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00000222, R00003378, R00005374, R00008892, R00010325	01/01/1985	157.9	363.0	South east
DH-8-15045	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00000222, R00005374, R00008892, R00010325	01/01/1985	138.0	363.7	South east

Borehole ID	Purpose	Project	Client/ License	Date Drilled	Depth (m)	Distance (m)	Direction
037899	Mineral Exploration	Mount Stewart Workings - Leadville	United Nickel Ltd	01/01/1985	138.0	363.7	South east
037906	Mineral Exploration	Mount Stewart Workings - Leadville	United Nickel Ltd	01/01/1985	157.9	363.7	South east
MIN_37906	Borehole	DPI Minerals Borehole Register - Plutonic Operations Ltd,	Plutonic Operations Ltd,	01/01/1985	157.9	364.1	South east
MIN_37934	Borehole	DPI Minerals Borehole Register - Plutonic Operations Ltd,	Plutonic Operations Ltd,	01/01/1994	176.9	364.7	South east
037925	Mineral Exploration	Mount Stewart Workings - Leadville	United Nickel Ltd	01/01/1988	45.0	375.2	South east
DH-33-15073	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00000222, R00003378, R00005374, R00010325	01/01/1988	45.0	375.2	South east
MIN_37912	Borehole	DPI Minerals Borehole Register - Plutonic Operations Ltd,	Plutonic Operations Ltd,	Null	0.0	380.5	South
MIN_37931	Borehole	DPI Minerals Borehole Register - Plutonic Operations Ltd,	Plutonic Operations Ltd,	01/01/1994	173.7	382.1	South
MIN_37927	Borehole	DPI Minerals Borehole Register - Plutonic Operations Ltd,	Plutonic Operations Ltd,	01/01/1992	162.2	386.3	South east
037923	Mineral Exploration	Mount Stewart Workings - Leadville	United Nickel Ltd	01/01/1988	54.0	386.5	South
DH-31-15071	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00000222, R00005374, R00010325	01/01/1988	54.0	386.6	South
037924	Mineral Exploration	Mount Stewart Workings - Leadville	United Nickel Ltd	01/01/1988	48.0	388.3	South east
DH-32-15072	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00000222, R00003378, R00005374, R00010325	01/01/1988	48.0	388.3	South east
MIN_37928	Borehole	DPI Minerals Borehole Register - Plutonic Operations Ltd,	Plutonic Operations Ltd,	01/01/1992	92.9	392.2	South east
DH-38-15078	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00000222, R00003378, R00003379, R00003380	01/01/1994	90.0	410.6	South
037930	Mineral Exploration	Mount Stewart Workings - Leadville	United Nickel Ltd	01/01/1994	90.0	410.9	South
MIN_37930	Borehole	DPI Minerals Borehole Register - Plutonic Operations Ltd,	Plutonic Operations Ltd,	Null	90.0	411.2	South
G26-2-14933	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging	R00013519	01/01/1975	182.1	412.9	South

Borehole ID	Purpose	Project	Client/ License	Date Drilled	Depth (m)	Distance (m)	Direction
		of Geological Systems) Database.					
037787	Mineral Exploration	Mount Stewart G26	Esso Exploration And Production Australia Inc	01/01/1975	182.1	412.9	South
MIN_37787	Borehole	DPI Minerals Borehole Register - Esso Exploration And Production Australia Inc,	Esso Exploration And Production Australia Inc,	01/01/1975	182.1	413.0	South
MIN_37929	Borehole	DPI Minerals Borehole Register - Plutonic Operations Ltd,	Plutonic Operations Ltd,	Null	92.0	413.4	South
L9-14943	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R00011564, R00011565, R0001156	01/01/1979	32.0	413.7	South east
037796	Mineral Exploration	Old Castle-Machine Section	Mines Exploration Pty Ltd	01/01/1979	32.0	414.6	South east
MIN_37796	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	01/01/1979	32.0	414.9	South east
MIN_37926	Borehole	DPI Minerals Borehole Register - Plutonic Operations Ltd,	Plutonic Operations Ltd,	01/01/1992	122.8	416.0	South east
MIN_37899	Borehole	DPI Minerals Borehole Register - Plutonic Operations Ltd,	Plutonic Operations Ltd,	01/01/1985	138.0	440.8	South east
MIN_37923	Borehole	DPI Minerals Borehole Register - Plutonic Operations Ltd,	Plutonic Operations Ltd,	Null	54.0	443.4	South
DH-9-15046	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00000222, R00005374, R00008892, R00010325	01/01/1985	142.0	452.0	South
037900	Mineral Exploration	Grosvenor Workings - Leadville	United Nickel Ltd	01/01/1985	142.0	452.1	South
MIN_37924	Borehole	DPI Minerals Borehole Register - Plutonic Operations Ltd,	Plutonic Operations Ltd,	01/01/1990	48.0	452.3	South east
MIN_37900	Borehole	DPI Minerals Borehole Register - Plutonic Operations Ltd,	Plutonic Operations Ltd,	01/01/1985	142.0	452.5	South
MIN_37925	Borehole	DPI Minerals Borehole Register - Plutonic Operations Ltd,	Plutonic Operations Ltd,	01/01/1990	45.0	457.8	South east
MIN_37760	Borehole	DPI Minerals Borehole Register - Gulliver, E,Occidental Minerals Corporation Of Australia	Gulliver, E,Occidental Minerals Corporation Of Australia	01/01/1971	238.0	464.0	South
DDHLK2-14906	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00005374, R00022876, R00022877, R00022878, R00022879, R00022880,	01/01/1971	238.0	464.0	South

Borehole ID	Purpose	Project	Client/ License	Date Drilled	Depth (m)	Distance (m)	Direction
			R00022881, R00023963				
037760	Mineral Exploration	Grosvenor Workings - Leadville	Gulliver, E	01/01/1971	238.0	464.1	South
L8-14942	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R00011564, R00011565, R0001156	01/01/1979	25.5	464.2	South east
MIN_37795	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	01/01/1979	25.5	464.7	South east
037795	Mineral Exploration	Old Castle-Machine Section	Mines Exploration Pty Ltd	01/01/1979	25.5	465.1	South east
MIN_37860	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	Null	710.0	502.3	South
LV4-15007	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00005374, R00010654, R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R0001156	01/01/1979	710.0	502.5	South
037860	Mineral Exploration	Grosvenor and Extended Workings - Leadville	Mines Exploration Pty Ltd	01/01/1979	710.0	502.6	South
L7-14941	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R00011564, R00011565, R0001156	01/01/1979	19.0	513.2	South east
037794	Mineral Exploration	Old Castle-Machine Section	Mines Exploration Pty Ltd	01/01/1979	19.0	514.1	South east
MIN_37794	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	01/01/1979	19.0	514.5	South east
G26-1-14931	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00005374, R00013519	01/01/1975	113.0	551.7	South east
MIN_37785	Borehole	DPI Minerals Borehole Register - Esso Exploration And Production Australia Inc,	Esso Exploration And Production Australia Inc,	01/01/1975	113.0	552.4	South east
G26-1A-14932	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience	R00013519	01/01/1975	184.2	552.4	South east

Borehole ID	Purpose	Project	Client/ License	Date Drilled	Depth (m)	Distance (m)	Direction
		catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.					
037785	Mineral Exploration	Mount Stewart G26	Esso Exploration And Production Australia Inc	01/01/1975	113.0	552.7	South east
MIN_37786	Borehole	DPI Minerals Borehole Register - Esso Exploration And Production Australia Inc,	Esso Exploration And Production Australia Inc,	01/01/1975	184.2	553.2	South east
037786	Mineral Exploration	Mount Stewart G26	Esso Exploration And Production Australia Inc	01/01/1975	184.2	553.4	South east
L6-14940	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R00011564, R00011565, R0001156	01/01/1979	8.0	563.6	South east
MIN_37793	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	01/01/1979	8.0	564.4	South east
037793	Mineral Exploration	Old Castle-Machine Section	Mines Exploration Pty Ltd	01/01/1979	8.0	564.5	South east
MIN_37805	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	01/01/1979	6.0	571.2	North west
037805	Mineral Exploration	Old Castle-North Section	Mines Exploration Pty Ltd	01/01/1979	6.0	571.6	North west
L18-14952	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R00011564, R00011565, R0001156	01/01/1979	6.0	572.5	North west
037902	Mineral Exploration	G26 Grid - Leadville	United Nickel Ltd	01/01/1985	149.2	579.2	South east
DH-11-15048	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00000222, R00008892, R00010325	01/01/1985	149.2	579.2	South east
DH-22-15061	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00000222, R00005374, R00010325	01/01/1988	227.8	584.3	South
037914	Mineral Exploration	Extended Workings - Leadville	United Nickel Ltd	01/01/1988	227.8	584.6	South
MIN_37914	Borehole	DPI Minerals Borehole Register - Plutonic Operations Ltd,	Plutonic Operations Ltd,	01/01/1988	227.8	584.9	South

Borehole ID	Purpose	Project	Client/ License	Date Drilled	Depth (m)	Distance (m)	Direction
037898	Mineral Exploration	Leadville South	United Nickel Ltd	01/01/1985	88.0	610.9	South east
DH-7-15044	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00000222, R00008892, R00010325	01/01/1985	88.0	610.9	South east
L5-14938	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R00011564, R00011565, R0001156	01/01/1979	12.5	612.7	South east
MIN_37792	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	01/01/1979	12.5	613.3	South east
037792	Mineral Exploration	Old Castle-Machine Section	Mines Exploration Pty Ltd	01/01/1979	12.5	613.4	South east
MIN_37806	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	01/01/1979	3.0	617.2	North west
037806	Mineral Exploration	Old Castle-North Section	Mines Exploration Pty Ltd	01/01/1979	3.0	617.6	North west
L19-14953	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R00011564, R00011565, R0001156	01/01/1979	3.0	618.4	North west
MIN_37903	Borehole	DPI Minerals Borehole Register - Plutonic Operations Ltd,	Plutonic Operations Ltd,	01/01/1985	176.2	642.9	South
DH-12-15050	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00000222, R00005374, R00008892, R00010325	01/01/1985	176.2	643.2	South
037903	Mineral Exploration	Extended Workings - Leadville	United Nickel Ltd	01/01/1985	176.2	643.4	South
LV9-15012	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00005374, R00010654, R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R0001156	01/01/1980	592.0	647.9	South
037865	Mineral Exploration	Grosvenor Workings - Leadville	Mines Exploration Pty Ltd	01/01/1980	592.0	647.9	South

Borehole ID	Purpose	Project	Client/ License	Date Drilled	Depth (m)	Distance (m)	Direction
MIN_37865	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	Null	592.0	648.1	South
DH-14-15052	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00000222, R00005374, R00008892, R00010325	01/01/1985	199.4	650.8	South
037905	Mineral Exploration	Extended Workings - Leadville	United Nickel Ltd	01/01/1985	199.4	651.1	South
MIN_37905	Borehole	DPI Minerals Borehole Register - Plutonic Operations Ltd,	Plutonic Operations Ltd,	01/01/1985	199.4	651.2	South
MIN_37902	Borehole	DPI Minerals Borehole Register - Plutonic Operations Ltd,	Plutonic Operations Ltd,	01/01/1985	149.2	659.8	South
L4-14937	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R00011564, R00011565, R0001156	01/01/1979	6.0	662.2	South east
037807	Mineral Exploration	Old Castle-North Section	Mines Exploration Pty Ltd	01/01/1979	3.0	662.7	North west
MIN_37807	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	01/01/1979	3.0	662.9	North west
037791	Mineral Exploration	Old Castle-Machine Section	Mines Exploration Pty Ltd	01/01/1979	6.0	663.1	South east
L20-14954	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R00011564, R00011565, R0001156	01/01/1979	3.0	663.6	North west
MIN_37791	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	01/01/1979	6.0	663.7	South east
DH-16-15054	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00000222, R00005374, R00008893, R00010325	01/01/1986	181.2	664.5	South
MIN_37907	Borehole	DPI Minerals Borehole Register - Plutonic Operations Ltd,	Plutonic Operations Ltd,	01/01/1985	181.2	664.6	South
037907	Mineral Exploration	Extended Workings - Leadville	United Nickel Ltd	01/01/1986	181.2	664.7	South
DDHLK1-14905	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging	R00001173, R00005374, R00022876, R00022877, R00022878, R00022879,	01/01/1971	245.0	668.1	South

Borehole ID	Purpose	Project	Client/ License	Date Drilled	Depth (m)	Distance (m)	Direction
		of Geological Systems) Database.	R00022880, R00022881, R00023963				
037759	Mineral Exploration	Extended Workings - Leadville	Gulliver, E	01/01/1971	245.0	668.3	South
MIN_37759	Borehole	DPI Minerals Borehole Register - Gulliver, E,Occidental Minerals Corporation Of Australia	Gulliver, E,Occidental Minerals Corporation Of Australia	01/01/1971	245.0	668.6	South
DH-17A-15056	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00000222, R00005374, R00008893, R00010325	01/01/1986	14.5	674.3	South
DH-17-15055	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00000222, R00005374, R00008893, R00010325	01/01/1986	158.6	674.3	South
037909	Mineral Exploration	Extended Workings - Leadville	United Nickel Ltd	01/01/1986	14.5	674.5	South
037908	Mineral Exploration	Extended Workings - Leadville	United Nickel Ltd	01/01/1986	158.6	674.5	South
MIN_37909	Borehole	DPI Minerals Borehole Register - Plutonic Operations Ltd,	Plutonic Operations Ltd,	01/01/1985	0.0	674.6	South
MIN_37908	Borehole	DPI Minerals Borehole Register - Plutonic Operations Ltd,	Plutonic Operations Ltd,	01/01/1985	158.6	674.6	South
MIN_37915	Borehole	DPI Minerals Borehole Register - Plutonic Operations Ltd,	Plutonic Operations Ltd,	01/01/1988	140.3	686.4	South
MIN_37910	Borehole	DPI Minerals Borehole Register - Plutonic Operations Ltd,	Plutonic Operations Ltd,	01/01/1985	131.1	695.2	South
DH-18-15057	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00000222, R00005374, R00008893, R00010325	01/01/1986	131.1	695.3	South
037910	Mineral Exploration	Extended Workings - Leadville	United Nickel Ltd	01/01/1986	131.1	695.5	South
MIN_37904	Borehole	DPI Minerals Borehole Register - Plutonic Operations Ltd,	Plutonic Operations Ltd,	01/01/1985	220.2	699.3	South
DH-13-15051	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00000222, R00005374, R00008892, R00010325	01/01/1985	220.2	699.4	South
037904	Mineral Exploration	Extended Workings - Leadville	United Nickel Ltd	01/01/1985	220.2	699.5	South
DDHLK8-14912	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00005374, R00022877, R00022881	01/01/1972	179.0	706.5	South

Borehole ID	Purpose	Project	Client/ License	Date Drilled	Depth (m)	Distance (m)	Direction
037766	Mineral Exploration	Extended Workings - Leadville	Gulliver, E	01/01/1972	179.0	706.6	South
MIN_37766	Borehole	DPI Minerals Borehole Register - Gulliver, E,Occidental Minerals Corporation Of Australia	Gulliver, E,Occidental Minerals Corporation Of Australia	01/01/1972	179.0	706.9	South
037808	Mineral Exploration	Old Castle-North Section	Mines Exploration Pty Ltd	01/01/1979	6.0	708.7	North west
MIN_37808	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	01/01/1979	6.0	708.9	North west
L21-14955	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R00011564, R00011565, R0001156	01/01/1979	6.0	709.7	North west
L3-14936	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R00011564, R00011565, R0001156	01/01/1979	6.0	711.3	South east
MIN_37790	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	01/01/1979	6.0	712.0	South east
037790	Mineral Exploration	Old Castle-Machine Section	Mines Exploration Pty Ltd	01/01/1979	6.0	712.1	South east
DH-19-15058	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00000222, R00005374, R00008893, R00010325	01/01/1986	108.0	712.2	South
MIN_37911	Borehole	DPI Minerals Borehole Register - Plutonic Operations Ltd,	Plutonic Operations Ltd,	Null	0.0	712.5	South
037911	Mineral Exploration	Extended Workings - Leadville	United Nickel Ltd	01/01/1986	108.0	712.5	South
MIN_37845	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	01/01/1979	12.5	724.4	North
MIN_37848	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	01/01/1979	17.0	726.2	North
MIN_37844	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	01/01/1979	12.5	727.0	North
MIN_37847	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	01/01/1979	19.0	729.0	North
MIN_37846	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	01/01/1979	15.0	732.7	North

Borehole ID	Purpose	Project	Client/ License	Date Drilled	Depth (m)	Distance (m)	Direction
MIN_37849	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	01/01/1979	17.0	734.4	North
MIN_37850	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	01/01/1979	23.0	744.6	North
MIN_37809	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	01/01/1979	8.0	753.2	North west
037809	Mineral Exploration	Old Castle-North Section	Mines Exploration Pty Ltd	01/01/1979	8.0	753.3	North west
MIN_37851	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	01/01/1979	32.0	754.0	North
L22-14956	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R00011564, R00011565, R0001156	01/01/1979	8.0	754.2	North west
L2-14935	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R00011564, R00011565, R0001156	01/01/1979	5.5	760.8	South east
MIN_37789	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	01/01/1979	5.5	761.5	South east
037789	Mineral Exploration	Old Castle-Machine Section	Mines Exploration Pty Ltd	01/01/1979	5.5	761.7	South east
037901	Mineral Exploration	Leadville South	United Nickel Ltd	01/01/1985	188.0	768.5	South
DH-10-15047	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00000222, R00005374, R00008892, R00010325	01/01/1985	188.0	768.5	South
DH-24-15063	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00000222, R00005374, R00010325	01/01/1988	90.0	769.2	South
037916	Mineral Exploration	Extended Workings - Leadville	United Nickel Ltd	01/01/1988	90.0	769.5	South
MIN_37916	Borehole	DPI Minerals Borehole Register - Plutonic Operations Ltd,	Plutonic Operations Ltd,	Null	90.0	769.9	South
MIN_37852	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	01/01/1979	32.0	777.4	North
MIN_37853	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	01/01/1979	29.0	787.6	North

Borehole ID	Purpose	Project	Client/ License	Date Drilled	Depth (m)	Distance (m)	Direction
MIN_37854	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	01/01/1979	46.0	795.8	North
MIN_37810	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	01/01/1979	9.5	799.2	North west
037810	Mineral Exploration	Old Castle-North Section	Mines Exploration Pty Ltd	01/01/1979	9.5	799.4	North west
L23-14957	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R00011564, R00011565, R0001156	01/01/1979	9.5	800.3	North west
MIN_37843	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	01/01/1979	9.0	803.6	North west
MIN_37917	Borehole	DPI Minerals Borehole Register - Plutonic Operations Ltd,	Plutonic Operations Ltd,	Null	90.0	806.4	South
DH-25-15064	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00000222, R00005374, R00010325	01/01/1988	90.0	806.6	South
037917	Mineral Exploration	Extended Workings - Leadville	United Nickel Ltd	01/01/1988	90.0	807.0	South
MIN_37761	Borehole	DPI Minerals Borehole Register - Gulliver, E,Occidental Minerals Corporation Of Australia	Gulliver, E,Occidental Minerals Corporation Of Australia	01/01/1971	162.0	807.3	South
DDHLK3-14907	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00005374, R00022876, R00022877, R00022878, R00022879, R00022880, R00022881, R00023963	01/01/1971	162.0	807.5	South
037761	Mineral Exploration	Latimer Group Gosans - Leadville	Gulliver, E	01/01/1971	162.0	807.5	South
L1-14934	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R00011564, R00011565, R0001156	01/01/1979	7.0	809.9	South east
037788	Mineral Exploration	Old Castle-Machine Section	Mines Exploration Pty Ltd	01/01/1979	7.0	810.8	South east
MIN_37788	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	01/01/1979	7.0	811.3	South east
MIN_37842	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	01/01/1979	12.5	831.6	North west

Borehole ID	Purpose	Project	Client/ License	Date Drilled	Depth (m)	Distance (m)	Direction
037811	Mineral Exploration	Old Castle-North Section	Mines Exploration Pty Ltd	01/01/1979	5.5	844.6	North west
MIN_37811	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	01/01/1979	5.5	844.9	North west
L24-14958	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R00011564, R00011565, R0001156	01/01/1979	5.5	845.5	North west
MIN_37841	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	01/01/1979	19.0	849.1	North west
027413	Mineral Exploration	BOWMAN	Department Of Mineral Resources	01/01/1992	213.0	855.8	South
COAL_DMBOWD2	Mineral Exploration	DPI Minerals Borehole Register - Department Of Mineral Resources,	Department Of Mineral Resources,	Null	213.0	856.0	South
LV12-15016	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00005374, R00010654, R00011804, R00011805, R00011806, R00011807, R00015431, R00015432, R00015833, R00015834, R0001583	01/01/1980	686.4	881.0	South east
037868	Mineral Exploration	Mount Scott - Leadville	Mines Exploration Pty Ltd	01/01/1980	686.4	882.0	South east
MIN_37868	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	Null	686.4	882.4	South east
MIN_37840	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	01/01/1979	19.0	884.2	North west
037812	Mineral Exploration	Old Castle-North Section	Mines Exploration Pty Ltd	01/01/1979	3.0	890.0	North west
028653	Mineral Exploration	UARBRY	Department Of Mineral Resources	01/01/1995	262.7	890.1	South east
MIN_37812	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	01/01/1979	3.0	890.4	North west
L25-14959	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R00011564, R00011565, R0001156	01/01/1979	3.0	890.9	North west
MIN_37913	Borehole	DPI Minerals Borehole Register - Plutonic Operations Ltd,	Plutonic Operations Ltd,	Null	78.0	897.7	North west

Borehole ID	Purpose	Project	Client/ License	Date Drilled	Depth (m)	Distance (m)	Direction
MIN_37839	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	01/01/1979	12.5	902.1	North west
028651	Mineral Exploration	UARBRY	Department Of Mineral Resources	01/01/1992	223.1	911.3	East
COAL_DMUARB1	Mineral Exploration	DPI Minerals Borehole Register - Department Of Mineral Resources,	Department Of Mineral Resources,	Null	223.1	911.8	East
MIN_37838	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	01/01/1979	12.5	920.3	North west
MIN_37813	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	01/01/1979	5.5	934.1	North west
037813	Mineral Exploration	Old Castle-North Section	Mines Exploration Pty Ltd	01/01/1979	5.5	934.6	North west
L26-14960	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R00011564, R00011565, R0001156	01/01/1979	5.5	935.5	North west
MIN_37869	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	Null	503.3	947.4	South
LV13-15017	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00005374, R00010654, R00011804, R00011805, R00011806, R00011807, R00015431, R00015432, R00015833, R00015834, R0001583	01/01/1981	503.3	947.6	South
037869	Mineral Exploration	Latimer Group Gosans - Leadville	Mines Exploration Pty Ltd	01/01/1981	503.3	947.7	South
MIN_37837	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	01/01/1979	19.0	948.2	North west
MIN_37836	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	01/01/1979	15.5	976.1	North west
MIN_37835	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	01/01/1979	21.0	994.0	North west
MIN_37834	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	01/01/1979	19.0	1005.4	North
DDHLK4-14908	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00005374, R00022876, R00022877, R00022878, R00022879, R00022880, R00022881, R00023963	01/01/1971	174.0	1018.0	South
037762	Mineral Exploration	Latimer Group Gosans - Leadville	Gulliver, E	01/01/1971	174.0	1018.1	South

Borehole ID	Purpose	Project	Client/ License	Date Drilled	Depth (m)	Distance (m)	Direction
MIN_37762	Borehole	DPI Minerals Borehole Register - Gulliver, E,Occidental Minerals Corporation Of Australia	Gulliver, E,Occidental Minerals Corporation Of Australia	01/01/1971	174.0	1018.1	South
LV11-15015	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00005374, R00010654, R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R0001156	01/01/1980	327.1	1026.6	South east
037867	Mineral Exploration	Mount Scott - Leadville	Mines Exploration Pty Ltd	01/01/1980	327.1	1027.5	South east
MIN_37867	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	Null	327.1	1027.9	South east
MIN_37833	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	01/01/1979	17.0	1028.8	North
MIN_37832	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	01/01/1979	15.5	1052.1	North
LV3-15006	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00005374, R00010654, R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R0001156	01/01/1979	565.6	1061.4	South east
MIN_37831	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	01/01/1979	19.5	1061.6	North
MIN_37859	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	Null	565.6	1062.0	South east
037859	Mineral Exploration	Mount Scott - Leadville	Mines Exploration Pty Ltd	01/01/1979	565.6	1062.3	South east
DH-4-15041	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00000222, R00005374, R00008892, R00010325	01/01/1985	150.0	1070.4	South east
037895	Mineral Exploration	Mount Scott - Leadville	United Nickel Ltd	01/01/1985	150.0	1070.5	South east
037894	Mineral Exploration	Mount Scott - Leadville	United Nickel Ltd	01/01/1985	171.0	1072.4	South east
DH-3-15040	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00000222, R00005374, R00008892, R00010325	01/01/1985	171.0	1072.4	South east
MIN_37830	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	01/01/1979	22.0	1083.7	North

Borehole ID	Purpose	Project	Client/ License	Date Drilled	Depth (m)	Distance (m)	Direction
MIN_37895	Borehole	DPI Minerals Borehole Register - Plutonic Operations Ltd,	Plutonic Operations Ltd,	01/01/1985	150.0	1094.4	South east
LV6-15009	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00005374, R00010654, R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R0001156	01/01/1979	349.6	1099.7	South east
MIN_37862	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	Null	349.6	1100.0	South east
037862	Mineral Exploration	Mount Scott - Leadville	Mines Exploration Pty Ltd	01/01/1979	349.6	1100.6	South east
037797	Mineral Exploration	Old Castle-North Section	Mines Exploration Pty Ltd	01/01/1979	3.0	1106.6	West
MIN_37797	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	01/01/1979	3.0	1106.9	West
MIN_37829	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	01/01/1979	32.0	1107.2	North
L10-14944	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R00011564, R00011565, R0001156	01/01/1979	3.0	1107.7	West
037798	Mineral Exploration	Old Castle-North Section	Mines Exploration Pty Ltd	01/01/1979	4.5	1114.6	West
MIN_37798	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	01/01/1979	4.5	1114.9	West
L11-14945	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R00011564, R00011565, R0001156	01/01/1979	4.5	1115.8	West
MIN_37828	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	01/01/1979	32.0	1118.4	North
037799	Mineral Exploration	Old Castle-North Section	Mines Exploration Pty Ltd	01/01/1979	8.0	1120.1	West
MIN_37799	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	01/01/1979	8.0	1120.1	West
L12-14946	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging	R00011556, R00011557, R00011558, R00011559, R00011560, R00011561,	01/01/1979	8.0	1121.3	West

Borehole ID	Purpose	Project	Client/ License	Date Drilled	Depth (m)	Distance (m)	Direction
		of Geological Systems) Database.	R00011562, R00011563, R00011564, R00011565, R0001156				
DH-2-15039	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00000222, R00005374, R00008892, R00010325	01/01/1985	97.0	1125.5	South east
037893	Mineral Exploration	Mount Scott - Leadville	United Nickel Ltd	01/01/1985	97.0	1126.5	South east
MIN_37893	Borehole	DPI Minerals Borehole Register - Plutonic Operations Ltd,	Plutonic Operations Ltd,	01/01/1985	97.0	1126.6	South east
037800	Mineral Exploration	Old Castle-North Section	Mines Exploration Pty Ltd	01/01/1979	19.0	1128.2	West
MIN_37800	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	01/01/1979	19.0	1128.5	West
L13-14947	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R00011564, R00011565, R0001156	01/01/1979	19.0	1129.3	West
L17-14951	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R00011564, R00011565, R0001156	01/01/1979	8.0	1132.7	South east
037804	Mineral Exploration	Old Castle-North Section	Mines Exploration Pty Ltd	01/01/1979	8.0	1133.6	South east
MIN_37804	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	01/01/1979	8.0	1134.0	South east
MIN_37801	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	01/01/1979	8.0	1134.6	West
037801	Mineral Exploration	Old Castle-North Section	Mines Exploration Pty Ltd	01/01/1979	8.0	1134.7	West
L14-14948	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R00011564, R00011565, R0001156	01/01/1979	8.0	1135.8	West
MIN_37827	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	01/01/1979	38.5	1141.8	North

Borehole ID	Purpose	Project	Client/ License	Date Drilled	Depth (m)	Distance (m)	Direction
DH-1-15038	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00000222, R00008892, R00010325, R00015431	01/01/1985	161.2	1148.8	South east
037892	Mineral Exploration	Mount Scott - Leadville	United Nickel Ltd	01/01/1985	161.2	1149.8	South east
MIN_37892	Borehole	DPI Minerals Borehole Register - Plutonic Operations Ltd,	Plutonic Operations Ltd,	01/01/1985	161.2	1150.0	South east
037802	Mineral Exploration	Old Castle-North Section	Mines Exploration Pty Ltd	01/01/1979	8.5	1150.3	West
MIN_37802	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	01/01/1979	8.5	1150.5	West
L15-14949	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R00011564, R00011565, R0001156	01/01/1979	8.5	1151.6	West
MIN_37826	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	01/01/1979	38.5	1152.0	North
DH-5-15042	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00000222, R00008892, R00010325	01/01/1985	138.0	1162.1	South east
037896	Mineral Exploration	G26 Grid - Leadville	United Nickel Ltd	01/01/1985	138.0	1162.1	South east
MIN_37803	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	01/01/1979	9.0	1163.2	West
037803	Mineral Exploration	Old Castle-North Section	Mines Exploration Pty Ltd	01/01/1979	9.0	1163.6	West
L16-14950	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R00011564, R00011565, R0001156	01/01/1979	9.0	1164.7	West
037857	Mineral Exploration	Leadville	Mines Exploration Pty Ltd	01/01/1966	242.6	1166.3	South
LV1-15004	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00003667, R00027746, R00027747, R00031027	01/01/1966	242.6	1166.3	South
MIN_37825	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	01/01/1979	51.5	1185.4	North

Borehole ID	Purpose	Project	Client/ License	Date Drilled	Depth (m)	Distance (m)	Direction
MIN_37894	Borehole	DPI Minerals Borehole Register - Plutonic Operations Ltd,	Plutonic Operations Ltd,	01/01/1985	171.0	1198.1	South east
LV7-15010	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00005374, R00010654, R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R0001156	01/01/1979	401.0	1210.1	South east
MIN_37863	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	Null	401.0	1211.0	South east
037863	Mineral Exploration	Mount Scott - Leadville	Mines Exploration Pty Ltd	01/01/1979	401.0	1211.1	South east
DH-30-15070	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00000222, R00005374, R00010325	01/01/1988	114.0	1212.1	South east
MIN_37922	Borehole	DPI Minerals Borehole Register - Plutonic Operations Ltd,	Plutonic Operations Ltd,	Null	114.0	1212.7	South east
037922	Mineral Exploration	Mount Scott - Leadville	United Nickel Ltd	01/01/1988	114.0	1213.1	South east
MIN_37824	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	01/01/1979	38.5	1217.0	North
DDHLK6-14910	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00005374, R00022877, R00022881	01/01/1972	197.0	1236.4	South east
037764	Mineral Exploration	Mount Scott - Leadville	Gulliver, E	01/01/1972	197.0	1237.4	South east
MIN_37764	Borehole	DPI Minerals Borehole Register - Gulliver, E,Occidental Minerals Corporation Of Australia	Gulliver, E,Occidental Minerals Corporation Of Australia	01/01/1972	197.0	1237.6	South east
DH-29-15069	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00000222, R00005374, R00010325	01/01/1988	167.7	1263.2	South east
MIN_37921	Borehole	DPI Minerals Borehole Register - Plutonic Operations Ltd,	Plutonic Operations Ltd,	01/01/1988	167.7	1264.0	South east
037921	Mineral Exploration	Mount Scott - Leadville	United Nickel Ltd	01/01/1988	167.7	1264.1	South east
DH-27-15066	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00000222, R00005374, R00010325	01/01/1988	114.0	1275.6	South east

Borehole ID	Purpose	Project	Client/ License	Date Drilled	Depth (m)	Distance (m)	Direction
037919	Mineral Exploration	Mount Scott - Leadville	United Nickel Ltd	01/01/1988	114.0	1276.6	South east
MIN_37919	Borehole	DPI Minerals Borehole Register - Plutonic Operations Ltd,	Plutonic Operations Ltd,	Null	114.0	1276.8	South east
MIN_37870	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	01/01/1980	171.0	1281.0	South east
LV8-15011	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00005374, R00010654, R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R0001156	01/01/1979	415.8	1297.9	East
MIN_37864	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	Null	415.8	1298.8	East
037864	Mineral Exploration	Mount Scott - Leadville	Mines Exploration Pty Ltd	01/01/1979	415.8	1299.1	East
DDHLK5-14909	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00022876, R00022877, R00022878, R00022879, R00022880, R00022881, R00023963	01/01/1971	228.6	1315.2	South
037763	Mineral Exploration	Latimer West	Gulliver, E	01/01/1971	228.6	1315.2	South
DH-26-15065	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00000222, R00005374, R00010325	01/01/1988	112.0	1327.5	South east
MIN_37918	Borehole	DPI Minerals Borehole Register - Plutonic Operations Ltd,	Plutonic Operations Ltd,	Null	112.0	1328.1	South east
037918	Mineral Exploration	Mount Scott - Leadville	United Nickel Ltd	01/01/1988	112.0	1328.5	South east
MS-1-14929	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00005374, R00013519, R00013590	01/01/1974	324.2	1329.2	South east
MIN_37783	Borehole	DPI Minerals Borehole Register - Esso Exploration And Production Australia Inc,	Esso Exploration And Production Australia Inc,	01/01/1974	324.2	1329.8	South east
037783	Mineral Exploration	Mount Scott - Leadville	Esso Exploration And Production Australia Inc	01/01/1974	324.2	1330.1	South east
DDHLK7-14911	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00005374, R00022877, R00022881	01/01/1972	181.0	1373.4	South east

Borehole ID	Purpose	Project	Client/ License	Date Drilled	Depth (m)	Distance (m)	Direction
L70-15018	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R00011564, R00011565, R0001156	01/01/1979	5.6	1374.0	East
037870	Borehole	Mount Scott	Mines Exploration Pty Ltd	01/01/1980	171.0	1374.0	East
MIN_37765	Borehole	DPI Minerals Borehole Register - Gulliver, E,Occidental Minerals Corporation Of Australia	Gulliver, E,Occidental Minerals Corporation Of Australia	01/01/1972	181.0	1374.1	South east
037765	Mineral Exploration	Mount Scott - Leadville	Gulliver, E	01/01/1972	181.0	1374.4	South east
DH-28-15068	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00000222, R00005374, R00010325	01/01/1988	114.0	1378.4	South east
037920	Mineral Exploration	Mount Scott - Leadville	United Nickel Ltd	01/01/1988	114.0	1379.4	South east
MIN_37920	Borehole	DPI Minerals Borehole Register - Plutonic Operations Ltd,	Plutonic Operations Ltd,	Null	114.0	1379.5	South east
L71-15019	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R00011564, R00011565, R0001156	01/01/1979	12.5	1399.2	East
037871	Borehole	Mount Scott	Mines Exploration Pty Ltd	Null	-9999.0	1399.2	East
L72-15020	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R00011564, R00011565, R0001156	01/01/1979	10.0	1423.2	East
037872	Borehole	Mount Scott	Mines Exploration Pty Ltd	Null	-9999.0	1423.2	East
L79-15027	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R00011564,	01/01/1979	12.5	1448.2	East

Borehole ID	Purpose	Project	Client/ License	Date Drilled	Depth (m)	Distance (m)	Direction
			R00011565, R0001156				
037879	Borehole	Mount Scott	Mines Exploration Pty Ltd	Null	-9999.0	1448.2	East
L80-15028	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R00011564, R00011565, R0001156	01/01/1979	12.5	1474.2	East
037880	Borehole	Mount Scott	Mines Exploration Pty Ltd	Null	-9999.0	1474.2	East
037881	Borehole	Mount Scott	Mines Exploration Pty Ltd	Null	-9999.0	1498.8	East
L81-15029	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R00011564, R00011565, R0001156	01/01/1979	12.5	1498.8	East
037873	Borehole	Mount Scott	Mines Exploration Pty Ltd	Null	-9999.0	1501.0	East
L73-15021	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R00011564, R00011565, R0001156	01/01/1979	6.0	1501.0	East
L82-15030	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R00011564, R00011565, R0001156	01/01/1979	12.5	1523.1	East
037882	Borehole	Mount Scott	Mines Exploration Pty Ltd	Null	-9999.0	1523.1	East
L74-15022	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R00011564, R00011565, R0001156	01/01/1979	6.0	1526.6	East

Borehole ID	Purpose	Project	Client/ License	Date Drilled	Depth (m)	Distance (m)	Direction
037874	Borehole	Mount Scott	Mines Exploration Pty Ltd	Null	-9999.0	1526.6	East
Coolahville-1C-114	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	RE0000293	01/01/2007	396.1	1546.9	East
000185	Production	Coolahville	Eastern Star Gas Ltd	01/01/2007	396.1	1546.9	East
L83-14939	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R00011564, R00011565, R0001156	01/01/1979	8.0	1550.2	East
037883	Borehole	Mount Scott	Mines Exploration Pty Ltd	Null	-9999.0	1550.2	East
037875	Borehole	Mount Scott	Mines Exploration Pty Ltd	Null	-9999.0	1554.7	East
L75-15023	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R00011564, R00011565, R0001156	01/01/1979	9.5	1554.7	East
037884	Borehole	Mount Scott	Mines Exploration Pty Ltd	Null	-9999.0	1573.4	East
L84-15013	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R00011564, R00011565, R0001156	01/01/1979	5.0	1573.4	East
037876	Borehole	Mount Scott	Mines Exploration Pty Ltd	Null	-9999.0	1579.9	East
L76-15024	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R00011564, R00011565, R0001156	01/01/1979	11.0	1579.9	East
L85-15031	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging	R00011556, R00011557, R00011558, R00011559, R00011560,	01/01/1979	5.0	1592.7	East

Borehole ID	Purpose	Project	Client/ License	Date Drilled	Depth (m)	Distance (m)	Direction
		of Geological Systems) Database.	R00011561, R00011562, R00011563, R00011564, R00011565, R0001156				
037885	Borehole	Mount Scott	Mines Exploration Pty Ltd	Null	-9999.0	1592.8	East
037877	Borehole	Mount Scott	Mines Exploration Pty Ltd	Null	-9999.0	1603.0	East
L77-15025	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R00011564, R00011565, R0001156	01/01/1979	8.0	1603.0	East
LV2-15005	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00005374, R00027746, R00027747, R00031027	01/01/1967	403.8	1608.0	South
037858	Mineral Exploration	Leadville South	Mines Exploration Pty Ltd	01/01/1967	403.8	1608.3	South
MIN_37858	Borehole	DPI Minerals Borehole Register - Mines Exploration Pty Ltd,	Mines Exploration Pty Ltd,	01/01/1967	403.8	1608.4	South
L78-15026	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R00011564, R00011565, R0001156	01/01/1979	6.0	1626.5	South east
037878	Borehole	Mount Scott	Mines Exploration Pty Ltd	Null	-9999.0	1626.5	South east
037886	Borehole	Mount Scott	Mines Exploration Pty Ltd	Null	-9999.0	1631.9	East
L86-15032	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R00011564, R00011565, R0001156	01/01/1979	4.0	1631.9	East
PET_COOLA-1C	Production	DPI Minerals Borehole Register - Eastern Star Gas Ltd,	Eastern Star Gas Ltd,	Null	396.1	1634.8	East
037888	Borehole	Mount Scott	Mines Exploration Pty Ltd	Null	-9999.0	1647.8	South east
L88-15034	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the	R00011556, R00011557, R00011558, R00011559,	01/01/1979	6.0	1647.8	South east

Borehole ID	Purpose	Project	Client/ License	Date Drilled	Depth (m)	Distance (m)	Direction
		DIGS (Digital Imaging of Geological Systems) Database.	R00011560, R00011561, R00011562, R00011563, R00011564, R00011565, R0001156				
028652	Mineral Exploration	UARBRY	Department Of Mineral Resources	01/01/1995	356.7	1654.7	South east
037887	Borehole	Mount Scott	Mines Exploration Pty Ltd	Null	-9999.0	1655.0	East
L87-15033	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R00011564, R00011565, R0001156	01/01/1979	3.0	1655.0	East
037889	Borehole	Mount Scott	Mines Exploration Pty Ltd	Null	-9999.0	1669.1	South east
L89-15035	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R00011564, R00011565, R0001156	01/01/1979	6.0	1669.1	South east
L90-15036	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R00011564, R00011565, R0001156	01/01/1979	6.0	1693.2	South east
037890	Borehole	Mount Scott	Mines Exploration Pty Ltd	Null	-9999.0	1693.2	South east
L91-15037	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R00011564, R00011565, R0001156	01/01/1979	6.0	1713.6	South east
037891	Borehole	Mount Scott	Mines Exploration Pty Ltd	Null	-9999.0	1713.7	South east
037824	Mineral Exploration	Leadville South	Mines Exploration Pty Ltd	01/01/1979	38.5	1723.4	South
L37-14971	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the	R00011556, R00011557, R00011558, R00011559,	01/01/1979	38.5	1723.5	South

Borehole ID	Purpose	Project	Client/ License	Date Drilled	Depth (m)	Distance (m)	Direction
		DIGS (Digital Imaging of Geological Systems) Database.	R00011560, R00011561, R00011562, R00011563, R00011564, R00011565, R0001156				
L38-14972	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R00011564, R00011565, R0001156	01/01/1979	51.5	1755.7	South
037825	Mineral Exploration	Leadville South	Mines Exploration Pty Ltd	01/01/1979	51.5	1755.7	South
037826	Mineral Exploration	Leadville South	Mines Exploration Pty Ltd	01/01/1979	38.5	1789.8	South
L39-14973	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R00011564, R00011565, R0001156	01/01/1979	38.5	1789.8	South
L40-14974	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R00011564, R00011565, R0001156	01/01/1979	38.5	1800.9	South
037827	Mineral Exploration	Leadville South	Mines Exploration Pty Ltd	01/01/1979	38.5	1800.9	South
L41-14975	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R00011564, R00011565, R0001156	01/01/1979	32.0	1824.9	South
037828	Mineral Exploration	Leadville South	Mines Exploration Pty Ltd	01/01/1979	32.0	1824.9	South
PDH5-15067	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00000209	01/01/1994	13.0	1835.4	South
PDH6-13668	Borehole	Dataset of the 2019 Geological Survey of	R00000209	01/01/1994	55.0	1835.4	South

Borehole ID	Purpose	Project	Client/ License	Date Drilled	Depth (m)	Distance (m)	Direction
		NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.					
MIN_37940	Borehole	DPI Minerals Borehole Register - Savage, Leslie,	Savage, Leslie,	01/01/1995	55.0	1835.6	South
MIN_37939	Borehole	DPI Minerals Borehole Register - Savage, Leslie,	Savage, Leslie,	01/01/1995	13.0	1835.6	South
037939	Mineral Exploration	Leadville South	Savage, Leslie	01/01/1994	13.0	1835.7	South
037940	Mineral Exploration	Leadville South	Savage, Leslie	01/01/1994	55.0	1835.7	South
037829	Mineral Exploration	Leadville South	Mines Exploration Pty Ltd	01/01/1979	32.0	1836.0	South
L42-14976	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R00011564, R00011565, R0001156	01/01/1979	32.0	1836.1	South
037830	Mineral Exploration	Leadville South	Mines Exploration Pty Ltd	01/01/1979	22.0	1860.4	South
L43-14977	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R00011564, R00011565, R0001156	01/01/1979	22.0	1860.4	South
L44-14978	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R00011564, R00011565, R0001156	01/01/1979	19.5	1883.7	South
037831	Mineral Exploration	Leadville South	Mines Exploration Pty Ltd	01/01/1979	19.5	1883.7	South
L45-14979	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R00011564, R00011565, R0001156	01/01/1979	15.5	1894.8	South
037832	Mineral Exploration	Leadville South	Mines Exploration Pty Ltd	01/01/1979	15.5	1894.8	South

Borehole ID	Purpose	Project	Client/ License	Date Drilled	Depth (m)	Distance (m)	Direction
L46-14980	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R00011564, R00011565, R0001156	01/01/1979	17.0	1918.4	South
037833	Mineral Exploration	Leadville South	Mines Exploration Pty Ltd	01/01/1979	17.0	1918.4	South
037834	Mineral Exploration	Leadville South	Mines Exploration Pty Ltd	01/01/1979	19.0	1943.1	South
L47-14981	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R00011564, R00011565, R0001156	01/01/1979	19.0	1943.1	South
037835	Mineral Exploration	Leadville South	Mines Exploration Pty Ltd	01/01/1979	21.0	1953.8	South
L48-14982	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R00011564, R00011565, R0001156	01/01/1979	21.0	1953.8	South
DDH1-15083	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00000209, R00015303	01/01/1994	65.6	1958.1	South
037935	Mineral Exploration	Leadville South	Savage, Leslie	01/01/1994	65.6	1958.3	South
MIN_37935	Borehole	DPI Minerals Borehole Register - Savage, Leslie,	Savage, Leslie,	01/01/1995	65.6	1958.8	South
L49-14983	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R00011564, R00011565, R0001156	01/01/1979	15.5	1965.7	South
037836	Mineral Exploration	Leadville South	Mines Exploration Pty Ltd	01/01/1979	15.5	1965.8	South
PDH9-13872	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the	R00000209	01/01/1994	48.0	1981.7	South

Borehole ID	Purpose	Project	Client/ License	Date Drilled	Depth (m)	Distance (m)	Direction
		DIGS (Digital Imaging of Geological Systems) Database.					
MIN_37943	Borehole	DPI Minerals Borehole Register - Savage, Leslie,	Savage, Leslie,	01/01/1995	48.0	1982.0	South
037943	Mineral Exploration	Leadville South	Savage, Leslie	01/01/1994	48.0	1982.0	South
L50-14984	Borehole	Dataset of the 2019 Geological Survey of NSW Geoscience catalogue held in the DIGS (Digital Imaging of Geological Systems) Database.	R00011556, R00011557, R00011558, R00011559, R00011560, R00011561, R00011562, R00011563, R00011564, R00011565, R0001156	01/01/1979	19.0	1990.7	South
037837	Mineral Exploration	Leadville South	Mines Exploration Pty Ltd	01/01/1979	19.0	1990.7	South

Note: The use of the symbol "-" or "Null" indicates that no records were found.
Source: Other Known Borehole Investigations (Coal Seam Gas (CSG), Petroleum Wells and Other Boreholes)

Section 3 Environmental Registers, Licences and Incidents

3.1 Contaminated Land Public Register

Map 3.1 (1000m Buffer)

Contaminated Sites

Register Type	Site Name	Address	Description	Details	Distance (m)	Direction
Not identified						

If the record does not contain a complete street address and/or cannot be located, the records' geographic location will be approximated and reported as being within the surrounding area.
Source: Contaminated Land Public Register

Table 3.1.1 Contaminated Land Public Register		
State	**Regulatory Body**	**Information included in this search (by state)**
ACT	EPA (Environment Protection Authority)	Contaminated Land Search Register of Contaminated Sites* (on request)
NSW	EPA (Environment Protection Authority)	Sites Notified as Contaminated Records of Notices
NT	EPA (Environment Protection Authority)	Contaminated Land Audit Pollution Abatement Notice
QLD	DES (Department of Environment and Science)	Contaminated Land Search (Environmental Management and Contaminated Land Registers)* (per lot)
SA	EPA (Environment Protection Authority)	Site Contamination Index Assessment Areas
TAS	EPA (Environment Protection Authority)	Regulated Sites and Premises Lutana and Parts of Hobarts Eastern Shore
VIC	EPA (Environment Protection Authority)	Priority Sites Register Pollution Abatement Notice
WA	DWER (Department of Water and Environmental Regulation)	Contaminated Sites Database

This search contains information retrieved from the relevant state authority, agency/department, or government authority that notifies and identifies contaminated land. The list only contains contaminated sites that the regulatory body is aware of or that have been notified by owners or occupiers as contaminated land. The sites are recorded on the register at various stages of the assessment and/or remediation process. If a site is not on the list, it does not necessarily mean the site is not contaminated.

3.2 Licences, Approvals & Assessments

Map 3.2 (1000m Buffer)

Licences

Licence N°	Type	Licence holder	Location Name	Premise Address	Activity	Dist. (m)*	Direct
12981	No longer in force	FORESTRY CORPORATION OF NEW SOUTH WALES	FORESTRY CORPORATION OF NEW SOUTH WALES	Brigalow and Nandewar Community Conservation Area, DUBBO, NSW 2830	Logging operations	Not mapped	Not mapped
3142	Issued	AUSTRALIAN RAIL TRACK CORPORATION LIMITED	AUSTRALIAN RAIL TRACK CORPORATION LIMITED	AUSTRALIAN RAIL TRACK CORPORATION (ARTC) NETWORK, SYDNEY, NSW 2001	Railway infrastructure operations	Not mapped	Not mapped

If the record does not contain a complete street address and/or cannot be located, the records' geographic location will be approximated and reported as being within the surrounding area.
**Results that appear as "not mapped" refer to licences that are applied to larger areas and/or without specific definition, such as waterways, forests etc. These are still identified in the search results but will not be shown within the map.*
Source: Licences, Approvals & Assessments

Audits, PRSA

N°	Type	Licence holder	Location Name	Premise Address	Activity	Dist. (m)*	Direction
1529150	Compliance Audit	FORESTRY CORPORATION OF NEW SOUTH WALES	FORESTRY CORPORATION OF NEW SOUTH WALES	Brigalow and Nandewar Community Conservation Area, DUBBO, NSW 2830	Logging operations	Not mapped	Not mapped
1529152	Compliance Audit	FORESTRY CORPORATION OF NEW SOUTH WALES	FORESTRY CORPORATION OF NEW SOUTH WALES	Brigalow and Nandewar Community Conservation Area, DUBBO, NSW 2830	Logging operations	Not mapped	Not mapped
1529151	Compliance Audit	FORESTRY CORPORATION OF NEW SOUTH WALES	FORESTRY CORPORATION OF NEW SOUTH WALES	Brigalow and Nandewar Community Conservation Area, DUBBO, NSW 2830	Logging operations	Not mapped	Not mapped
1548774	Compliance Audit	FORESTRY CORPORATION OF NEW SOUTH WALES	FORESTRY CORPORATION OF NEW SOUTH WALES	Brigalow and Nandewar Community Conservation Area, DUBBO, NSW 2830	Logging operations	Not mapped	Not mapped

N°	Type	Licence holder	Location Name	Premise Address	Activity	Dist. (m)*	Direction
1548776	Compliance Audit	FORESTRY CORPORATION OF NEW SOUTH WALES	FORESTRY CORPORATION OF NEW SOUTH WALES	Brigalow and Nandewar Community Conservation Area, DUBBO, NSW 2830	Logging operations	Not mapped	Not mapped

**If the record does not contain a complete street address and/or cannot be located, the records' geographic location will be approximated and reported as being within the surrounding area.*
Source: Licences, Approvals & Assessments

Clean Up, Penalty Notices and Orders

N°	Type	Licence holder	Location Name	Premise Address	Details	Dist. (m)*	Direction
Not identified							

**If the record does not contain a complete street address and/or cannot be located, the records' geographic location will be approximated and reported as being within the surrounding area.*
Source: Licences, Approvals & Assessments

Table 3.2.1 Licences, Approvals & Assessments		
State	**Regulatory Body**	**Information included in this search (by state)**
ACT	EPA (Environment Protection Authority)	Environment Protection Authorisation Search Environment Protection Agreement Search
NSW	EPA (Environment Protection Authority)	POEO Public Register (Environment Protection licences, Applications, Notices, Audits or Pollution studies and Reduction Programs)
NT	EPA (Environment Protection Authority)	Environment Protection Licences and Approvals
QLD	DES (Department of Environment and Science)	Environmental Authorities
SA	EPA (Environment Protection Authority)	Licences or Authorisations (Licences, Exemptions and Works Approvals) Environment Protection Orders (EPO) and Clean Up Orders (CUO)
TAS	EPA (Environment Protection Authority)	Regulated Sites and Premises
VIC	EPA (Environment Protection Authority)	Permissions Register (Operating Licence, Permit and Registration) Audit Reports
WA	DWER (Department of Water and Environmental Regulation)	Licences and Works Approvals

3.3a Sites Regulated by other Jurisdictional Body

Contaminated Legacy Areas

Site Name	Description	Distance (m)	Direction
Not identified			

Includes known contaminated areas such as James Hardies Asbestos waste legacy areas, Pasminco Smelter and Uranium processing site.
Source: Contaminated Legacy Areas

Defence, Military Sites and UXO Areas

Site name	Type*	Details	Distance (m)	Direction
Not identified				

*RCIP (Regional Contamination Investigation Program). UXO (Unexploded Ordnance Areas) .
Source: Defence, Military Sites, and UXO Areas

Former Gasworks Sites

Site name	Description	Distance (m)	Direction
Not identified			

Source: Former Gasworks Sites

PFAS Sites

Site name	Type	Details	Distance (m)	Direction
Not identified				

Source: PFAS Sites

3.3b Other Potential Hazard Sources

Map 3.3b (500m Buffer)

Mines and Quarries (current and historical)

Site name	Description	Status	Distance (m)	Direction
Melrose Pit	Construction Materials Pit in rippable quartzose sandstone. Large potential reserves. Pit not used in years. Pit in rippable quartzose sandstone. Large potential reserves. Field work 2009, Council data. Approximate location. (Monash; The Geological Survey of New South Wales, Department of Primary Industries (Mineral Resources))	Former	0.0	Onsite
The Rock Pit	Construction Materials Pit 32 in gravel & sand derived from weathered conglomerate (GS1969/081). Major commodities: unprocessed construction. Approximate location. (Monash; The Geological Survey of New South Wales, Department of Primary Industries (Mineral Resources))	Current	0.0	Onsite
Pound Gully Pit	Major commodities: unprocessed construction. Construction Materials Pit 45 in gravel & sand derived from weathered conglomerate (GS1969/081). (Monash; The Geological Survey of New South Wales, Department of Primary Industries (Mineral Resources))	Current	0.0	Onsite
Glencoe Pit	Major commodities: unprocessed construction. Construction Materials Pit 46 in GS1969/081. Approximate location. (Monash; The Geological Survey of New South Wales, Department of Primary Industries (Mineral Resources))	Current	0.0	Onsite
Mumbedah Pit	Major commodities: unprocessed construction. Construction Materials Pit on topo map beside Mt Hope road, Coolah. Liverpool Range Volcanics. (Monash; The Geological Survey of New South Wales, Department of Primary Industries (Mineral Resources))	Current	0.0	Onsite
Mount Hope Road	Major commodities: unprocessed construction. Construction Materials Pit on topo map & Landsat, abt 105m dia. Liverpool Range Volcanics. (Monash; The	Current	0.0	Onsite

Site name	Description	Status	Distance (m)	Direction
	Geological Survey of New South Wales, Department of Primary Industries (Mineral Resources))			
East Leadville Limestone	Major commodities: Limestone, marble, calich. Industrial Minerals Small quarry operated 1890 92 to produce limestone for smelting at the Mount Stewart Mine at Leadville (Lishmund 1986). The limestone is actually a marble. The unit occurs as massive beds intercalated with flaggy limestone and sandy shale, discontinuous outcrops over 149m by 79m. Number of small pits and a quarry operated between 1890 and 1892. No 19 on Dubbo metallogenic map. Locality 138 in Lishmund et al. (Monash; The Geological Survey of New South Wales, Department of Primary Industries (Mineral Resources))	Former	2.9	North west
Moorfield Road Pit	Construction Materials Pilliga Sandstone. Major commodities: unprocessed construction. (Monash; The Geological Survey of New South Wales, Department of Primary Industries (Mineral Resources))	Current	8.7	South
Cossington Pit	Construction Materials 6 m deep pit in sandstone and shale. Not used recently. Large potential reserves. 6 m deep pit in sandstone and shale. Large potential reserves. Field work 2009, Council data. (Monash; The Geological Survey of New South Wales, Department of Primary Industries (Mineral Resources))	Former	12.5	South west
Talbragar River Moss Agate Occurrences, Leadville Moss Agate Occurrence	Major commodities: silica gems cryptocryst. Gemstones Moss agate occurs as pebbles in holocene alluvial gravels in a tributary of the Talbragar River. MacNevin & Holmes (1980) p88. Moss agate occurs as pebbles in holocene alluvial gravels in a tributary of the Talbragar River.Grid reference may be inaccurate. Approximate location. (Monash; The Geological Survey of New South Wales, Department of Primary Industries (Mineral Resources))	Unknown	74.6	North
Mount Stewart Mines; Leadville Mines	Major commodities: Pb, Ag, Sulphur. Metallic Minerals Willot (1989) identified that the mineralization is in a metasomatic Zn Pb skarn. Lead isotopes indicate an Early Permian age. The mineralisation occur as lenses of up to 70 100m in length, 19.8m in width, & 79.2m in depth. Underground. Only fragmentary production data is available. Drilling in 1991 beneath Mount Stewart Mine intersected massive pyrite beneath an unexpected stope. More drilling in 1994 gave the best result of 3.68% Pb, 10.64% Zn, 450g/t Ag, & 0.13g/t Au. Approximate location. (Register of Australian Mining 1995; Monash; The Geological Survey of New South Wales, Department of Primary Industries (Mineral Resources))	Former	339.6	South
G 26 Prospect	Major commodities: Zn, Ag, Pb. Metallic Minerals The mineralization is present as pyrite, sphalerite with minor galena and quartz chlorite veins in the coarser grained units and pyrite, sphalerite, galena, chlorite in the finer grained units. Approximate location. (Monash; The Geological Survey of New South Wales, Department of Primary Industries (Mineral Resources))	Former	380.2	South
Grosvenor Workings	Major commodities: Pb. Metallic Minerals Significant mineralization was intersected along strike from the Grosvenor Workings by Mines Administration Pty Ltd in drill hole LV9 (1.2m assaying 0.26% Cu, 0.27% Pb, 6.4% Zn and 56ppm Ag). Approximate location. (Monash; The Geological Survey of New South Wales, Department of Primary Industries (Mineral Resources))	Former	435.2	South

Source: Mines and Quarries

Landfills (current and historical)

Site name	Description	Status	Distance (m)	Direction
Not identified				

National Pollutant Inventory (NPI)

Facility name	Address	Primary ANZSIC Class	Latest report	Distance (m)	Direction
Not identified					

Source: Contaminated Legacy Areas

Section 4 Potentially Contaminated Areas

4.1 Potentially Contaminating Activities

Map 4.1 (200m Buffer)

Industries, businesses and activities that may cause contamination

Map ID	Site name	Category	Description	Address	Status*	Dist. (m)	Direction
Not identified	-	-	-	-			-

**Status: Information is current as when this report was created.*
The operational status of the business is determined using the available data sources and does not indicate real-time conditions at the site.
Current: business is operating on the day this report was issued.
Former: business that have been closed or discontinued within 2 years from the date of this report.
Source: Potentially Contaminated Areas, Activities (PCA)

Categories included in this search. (Notifiable activities)		
Abattoirs	Explosives and Dangerous Goods	Paint Industries
Abrasive Blasting	Extractive Industries	Petrol Stations
Agriculture / Horticulture	Fire and Rescue	Pharmaceuticals
Airports	Food Manufacturing	Port and Marina Operations
Asbestos	Foundry, Smelting or Refining	Power Plants
Asphalt or Bitumen	Fuel Terminals & Depots	Printing and Photography
Batteries	Glass, Ceramics and Plastic	Rail Industry and Associated Activities
Breweries / Distilleries	Gun, Pistol or Rifle Ranges	Rubber and Tyre
Cement, Concrete or Lime	Hospitals and Research Facilities	Storage Tanks
Cemeteries	Landfill Sites	Substations and Switching Stations
Chemicals	Livestock Dips	Textiles and Tannery
Coal Yards	Mechanical and Automotive	Timber, Pulp and Paper Works
Depots and Storage Yards	Metal Fabrication and Treatments	Waste and Recycling Facilities
Dry Cleaners	Oil and Gas	Wastewater Treatment Facilities
Electrical or Electrical Components	Other Infrastructure Facilities	

Industries, businesses, and activities identified as having an increased likelihood of causing contamination.

The industries and business activities listed above have been identified as having an increased likelihood of causing contamination and have been identified through published state and national guidelines and regulations. These industries are noted due to their potential to store or use substances that could cause contamination to the surrounding environment if not managed appropriately. The identification of these activities does not imply the presence of contamination at the site.

The records identified are based on the reported business activity and have not been assessed based on any current or previous site inspection. Please note that records not identified within this section (due to error or unforeseen omission) does not necessarily mean that the screened area is not potentially contaminated or free of any risks.

4.2 Historical Business Directories

(not mapped)

YEAR	Activity	Name	Address	Positional accuracy	Distance (m)	Direction
1965	Motor Mechanics	Mulligan J R	5,MoorefieldsRd,NSW	Address	3.9	North
1980	Graziers	Yeo D B & M	Yooralla Street,Leadville,NSW	Street		Onsite
1980	Graziers	Wesley A V	Terraban Street,Leadville,NSW	Street		Onsite
1980	Farmers	Dhu Robin Pty Ltd	Weeraman Street,Leadville,NSW	Street		Onsite
1980	Graziers	Stanford N S	Narangari Street,Leadville,NSW	Street		Onsite
1980	Graziers	Heath J H	Gildry Street,Leadville,NSW	Street		Onsite
1980	Graziers	Heath J H	Rosemead Street,Leadville,NSW	Street		Onsite
1980	Farmers	Sullivan R & M	Enfield Street,Leadville,NSW	Street		Onsite
1980	Farmers	Fitzwilliam Pty Ltd	Dalestar Street,Leadville,NSW	Street		Onsite
1980	Farmers	Coe N A & G E	Ewendale Street,Leadville,NSW	Street		Onsite
1980	Graziers	Collins D & M	Koolyn Street,Leadville,NSW	Street		Onsite
2005	Grain & Produce--W'sale	Hardie D M & T L	Weeraman,LEADVILLE,NSW,2844	Street		Onsite
2015	Farmers & Agriculturalists	J W Inder	Nestle Down Miangulliah Rd Leadville NSW 2831	Street		Onsite
2015	Graziers	Francis S G	Berowra Leadville NSW 2831	Street		Onsite
2015	Graziers	M F Fergusson	Moreton Bay Leadville NSW 2831	Street		Onsite
2015	Grain & Produce Packers & W/Salers	Hardie D M & T L	Weeraman Leadville NSW 2831	Street		Onsite
1980	Stud Breeders---Horses	McMaster W D	Deep Creek,Coolah,NSW	Place		Onsite
1980	Graziers	Rowbotham K V	Box Valley,Leadville,NSW	Place		Onsite
1980	Farmers	Hookway K C	Byatta Downs,Leadville,NSW	Place		Onsite
1980	Graziers	Rowbotham W K	Box Valley,Dunedoo,NSW	Place		Onsite
2005	Graziers	Lennon Robert	'Gundooee',LEADVILLE,NSW,2844	Place		Onsite
2010	Graziers	Lennon Robert	Gundooee LEADVILLE 2844 NSW	Place		Onsite
1980	Graziers	Henderson P S	Leadville,NSW	Suburb		Onsite
1980	Graziers	Henderson P L & P	Leadville,NSW	Suburb		Onsite
1980	Graziers	Armstrong H	Leadville,NSW	Suburb		Onsite
1980	Farmers	Rootyard E C	Leadville,NSW	Suburb		Onsite
1980	Farmers	Inder J W	Leadville,NSW	Suburb		Onsite
1980	Farmers	Dhu Robin Pty Ltd	Leadville,NSW	Suburb		Onsite

YEAR	Activity	Name	Address	Positional accuracy	Distance (m)	Direction
1980	Farmers	Bowman D R	Leadville,NSW	Suburb		Onsite
2005	Transport Services	Dunedoo Transport, Leadville	LEADVILLE,NSW,2844	Suburb		Onsite

Land Insight uses a number of address geocoding techniques and has characterised them based on completeness (match rates) and positional accuracy. When a historical street address is incomplete or a match is not found, a record identified as being in the surrounding area will be included for reference and the accuracy of the data is approximate only. An explanation of the positional accuracy records is defined in the table below.

Source: Historical Business Directories

Historical data positional accuracy and georeferencing results explanation		
Positional accuracy	**Georeferenced**	**Description**
Address	Located to the address level	*When street address and names fully match.*
Street	Located to the street centroid	*When street names match but no exact address was found. Location is approximate.*
Place	Located to the structure, building or complex	*When building, residential complex or structure name match but no exact address was found. Location is approximate.*
Suburb	Located to the suburb area	*When suburb name match but no exact address was found. Location is approximate.*

The data used in this section was extracted from range of historical commercial trade directories and business listings. The business addresses were geocoded using historical information and the accuracy of the data may vary due to changes to the physical address at a given locality over time or the quality of the original records. From 2005, the historical business records in this section are considered more accurate as information was extracted from digital directories with geographic coordinate location information available. On this basis, reliance on the historic listing data should be considered when assessing the risk of contamination from an activity at the site. The presence of a business listing does not definitively confirm the actual activity that has occurred at the site. For more information on how these records were geocoded and the methodology used by Land Insight, contact us at info@landinsight.co.

Historical business directory listings have been filtered to match activities and industries identified as PCAs in Section 4.1. Please note that any record not identified within this section (due to error or unforeseen omission) does not necessarily mean that the screened area is not potentially contaminated or free of any risks.

Section 5 Natural Hazards

5.1 Fire Hazard

Map 5.1 (500m Buffer)

Bushfire Prone Areas

Category	Type	Details	Distance (m)	Direction
Bushfire Prone Area	Vegetation Category 2	This vegetation category indicate lower bushfire risk than Category 1 and Category 3 but higher than the excluded areas. Vegetation category consists of rainforests and lower risk vegetation parcels.	0.0	Onsite
Bushfire Prone Area	Vegetation Category 1	This vegetation category indicates the highest risk for bush fire. It consists of areas of forest, woodlands, heaths (tall and short), forested wetlands and timber plantations.	0.0	Onsite

Source: Fire Hazards

Bushfire History

Type	Season	Details	Distance (m)	Direction
Prescribed Bur	2009 10	Leadville Old Cemetry	0.0	Onsite
Wildfire	2016 17	Sir Ivan Fire	0.0	Onsite
Prescribed Bur	2008 09	Leadville Town Boundary	9.5	South

Source: Fire Hazards

5.2 Flood Hazard

Map 5.2 (500m Buffer)

Flood Planning Area

Type	Name	Details	Distance (m)	Direction
Not identified				

Source: Flood Hazard

Other Flood Studies

Type	Name	Details	Distance (m)	Direction
Not identified				

Source: Flood Hazard

Flood History

Type	Season	Details	Distance (m)	Direction
Not identified				

The list provided is not comprehensive and does not consider all flood history. It only includes the information that is currently available.
Source: Flood Hazard

5.3 Erosion Hazard

Map 5.3 (500m Buffer)

Erosion Hazard

Category	Type	Details	Distance (m)	Direction
Landslip Erosion Risk	Very slight to negligible limitations	Very Low	0.0	Onsite
	Extremely severe limitations	Very High	0.0	Onsite
	Very severe limitations	Very High	0.0	Onsite
Water Erosion Risk	Extremely severe limitations	Very High	0.0	Onsite
	Very severe limitations	Very High	0.0	Onsite
	Severe limitations	High	0.0	Onsite
	Moderate to severe limitations	Moderate	0.0	Onsite
	Moderate limitations	Moderate	0.0	Onsite
	Slight but significant limitations	Low	0.0	Onsite
	Very slight to negligible limitations	Very Low	0.0	Onsite
Wind Erosion Risk	Very slight to negligible limitations	Very Low	0.0	Onsite
	Slight but significant limitations	Low	0.0	Onsite
	Moderate limitations	Moderate	0.0	Onsite

Source: Erosion Hazard

Land Insight

[redacted]

www.landinsight.co

Product Guide

Due Diligence Insight Report

23 Apr 2025

Data Sources

NLUA - The Land Insight National Land Use Atlas (NLUA)

Land Insights' NLUA is a unique, proprietary database, meticulously curated from over a decade's worth of research and hundreds of thousands of diverse information sources. NLUA provides a comprehensive overview of land usage and potential hazards, drawing from a wide array of reliable sources. These include verified Council Records, Historic Zoning Maps, Topographic and Parish Maps, and technically published reports.

NLUA integrates thoroughly researched information extracted from published reports, publications, and technical studies. It also incorporates Land Insight's proprietary machine learning process, which identifies land anomalies, patterns, and changes through aerial imagery interpretations.

Leveraging advanced technologies, NLUA verifies the provenance, authenticity, and precision of its data. This database undergoes rigorous validation procedures carried out by scientists, quality assurance teams, and technical experts. This ensures its accuracy and reliability before publication. For more information on methodologies and further inquiries, please contact the Land Insight teams at [redacted]

Section 1 - Property Setting

Sensitive Receptors

National – Google. Nearmap. @ Land Insight National Land Use Atlas (NLUA). Points of Interest - © OpenStreetMap. Australian Business Datalist, Australian Schools Database - @ Australian Business Datalist ABDL (with permission). Cadastre. National - The digital cadastral boundaries and their legal identifiers have been derived from the relevant bodies from each Australian State and Territory jurisdiction combined by Land Insight & Resources.

Topographic data and Contours. National - The digital contours data and elevation information have been derived from the relevant bodies from each Australian State and Territory jurisdiction combined by Land Insight & Resources. National - Catchments, Streams, Aquifers, Storages, Wetlands and Man-made Structures that make up the hydrological system - © Geoscience Australia. Parks and National and State Forest Data © Department of Agriculture, Fisheries and Forestry.

Planning Controls and Overlays

Zoning, Planning Overlays and Other Planning Information

The digital planning information have been derived from the relevant bodies from each Australian State and Territory jurisdiction combined by Land Insight & Resources.

Mine subsidence districts - © DFSI Subsidence Advisory NSW. ACT - ACT Territory Plan and Land Use Zones and ovleryas © ACT Government Environment, Planning and Sustainable Development Directorate – Environment. NSW – NSW Environmental Planning Instruments, Land Use Zoning, Local Environmental Plan - © State Government of NSW and NSW Department of Planning, Housing, and Infrastructure. NT - NT Planning Scheme, Land Use Zones © NT Government Department of Infrastructure, Planning and Logistics. QLD - Land use mapping series, Land Use in QLD @ QLD Environment, Science, and Innovation. QLD zoning information, various LGA Councils. SA - Land Development Zones, Planning and Design Code Zones and Overlays – © SA Government Department for Trade and Investment. TAS - Tasmania Planning Scheme, Zoning and Overlays, theLIST ©State of Tasmania. @ Department of Natural Resources and Environment Tasmania. VIC - Tasmania Planning Scheme, Zoning and Overlays, theLIST ©State of Tasmania. @ Department of Natural Resources and Environment Tasmania. WA - Local Planning Scheme and Region Scheme, Zones, and Reserves, © WA Government Department of Planning, Lands and Heritage.

Heritage

Commonwealth Heritage List, National Heritage List and World Heritage Area

AUS - World, Commonwealth, and National Heritage Areas – World Heritage List, UNESCO. Australia's World Heritage List, © Australian Government Department of Sustainability, Environment, Water, Population and Communities. @ Department of Climate Change, Energy, the Environment and Water.

State and Local Heritage Registers

ACT - ACT Heritage Sites © ACT Government Environment, Planning and Sustainable Development Directorate – Environment. NSW - NSW EPI Heritage, NSW Heritage State Curtilage @ NSW Department of Premier and Cabinet, Heritage Council of NSW. NT - Heritage Register in NT, NT Town Planning Zones Heritage - © NT Government of Australia through Department of Tourism, Sport, and Culture. QLD - Queensland Heritage register boundaries, Queensland Local Heritage. © QLD Government Department of Environment and Science. Data from various local councils compiled by Land Insight Research Team (LIRT). SA - SA Heritage Places, SA Conservation State Hertiage Areas, SA Conservation State Heritage Areas, Aboriginal Heritage in SA @Governemtn of South Australia © SA Government Department for Trade and Investment, Department for Environment and Water. TAS - Heritage Tasmania Features theLIST ©State of Tasmania. VIC - VIC Heritage Inventory, VIC Sensitivity Public, VIC Heritage Register © VIC Government Department of Energy, Environment and Climate Action; Department of Premier and Cabinet. WA - WA Heritage Areas, WA Heritage Council Local Heritage Survey, WA Heritage Council State Heritage Survey, WA Aboriginal Heritage Places © WA Government Department of Planning, Lands and Heritage.

Soil and Land Use Information

Soil landscape

Soil Mapping, Information & Landscape - Digital Atlas of Australian Soils, Bureau of Rural Sciences (BRS); Commonwealth Scientific and Industrial Research Organisation (CSIRO) Australian Soil Resource Information System (ASRIS). CSIRO (2024): Australian Soil Resource Information System Website. v1. CSIRO. Data Collection. https://doi.org/10.25919/pdct-9a97

Australian Soil Resource Information System - Australian Soil Classification @ Geoscience Australia, ASRIS Australian Soil Classification @ CSIRO Soil and Landscape Information of Australia @ CSIRO. Australian national map layers, Atlas of Australian Soils - @ ABARES Australian Bureau of Agricultural and Resource Economics and Sciences.

ACT Soil Landscapes, Soil Landscapes of the Canberra 1:100,000 © Australian Capital Territory Government, @ State Government of NSW and NSW Department of Climate Change, Energy, the Environment and Water. NSW Great Soil Group (GSG) Soil Type, Australian Soil Classification (ASC) soil type, Strategic Regional Land Use and Soil Profiles, 1:100 000 Soil Landscape Series, 1:250 000 Soil Landscape Series © State Government of NSW and NSW Department of Climate Change, Energy, the Environment and Water. NT Northern Territory Land Systems compilation 1:1 000 000, 1:250 000 @ Environment, Parks, and Water Security. QLD Land systems series, Soil Series and Soil and land resource information © The State of Queensland. SA Land Systems & Soil Types, Soils of South Australia @ Department for Environment and Water. TAS Soil Maps of Tasmania 1:100 000 various regions. Dominant Soil Order TAS @ Department of Natural Resources and Environment Tasmania. VIC Victorian Soil type mapping, VIC Land units (various regions), Victorian Land Use Information System, Land Systems of Victoria at 1:100 000 and 1:250 000 @ Department of Energy, Environment and Climate Action. WA Soil Landscape Mapping - Best Available, Soil Landscape Mapping – Systems, WA Soil Group @ Department of Primary Industries and Regional Development.

Soil salinity

ACT - Hydrogeological Landscapes, Soil Landscapes of the Australian Capital Territory @ actmapi ACT gov. NSW – Hydrogeological landscapes mapping, Sydney Metropolitan Western Study Area Hydrogeological Landscapes; New South Wales – Dryland Salinity Assessment 2000 – Assessment of Dryland salinity extent 2020 - © State Government of NSW and NSW Department of Climate Change, Energy, the Environment and Water; Australian Bureau of Agricultural and Resource Economics and Sciences. NT - Land Suitability Guidelines @ Department of Infrastructure, Planning and Logistics NT. QLD - Salinity in Queensland @ Environment, land, and water QLD. SA - Land salinity, Dryland salinity, Watertable and non-watertable @ Department for Environment and water SA. TAS - Vulnerable Soils: Salinity Hazard @ thelist Land Tasmania. VIC - Victorian Dryland Salinity Assessment 2000 - Australian Bureau of Agricultural and Resource Economics and Sciences. WA - Dryland salinity in Western Australia - © Department of Primary Industries and Regional Development's Agriculture and Food.

Acid Sulfate Soils

National, State and Local Acid Sulfate Soils Registers

AUS - Acid sulfate Soils - Atlas of Australian Acid Sulphate Soils @ CSIRO (2024): Australian Soil Resource Information System Website. v1. CSIRO. ACT - Environmental Planning Instrument (Acid Sulfate Soils) - © State Government of NSW and NSW Department of Planning, Housing, and Infrastructure. NSW - Environmental Planning Instrument (Acid Sulfate Soils); Land and Soil Capability Mapping for NSW - © State Government of NSW and NSW Department of Planning, Housing, and Infrastructure; © State Government of NSW and NSW Department of Climate Change, Energy, the Environment and Water. NT – Acid Sulfate Soils of the Darwin Region; Northern Territory Land Systems (compilation of north_250 and south_1M) - © Northern Territory Government of Australia Environment, Parks, and Water Security. QLD – Acid sulfate soils series - © The State of Queensland Environment and Science. SA – Acid Sulfate Soil Potential - @ Government of South Australia Department for Environment and Water. TAS – Marine Acid Sulfate Soils; Inland Acid Sulfate Soils; Coastal Acid Sulfate Soils; Acid Sulfate Soils - Resource Management and Conservation. VIC - Coastal Acid Sulphate Soils - Department of Jobs, Skills, Industry and Regions. WA - Acid Sulfate Soil Risk Map 100K; Soil landscape land quality - Subsurface Acidification Risk - @ Department of Water and Environmental Regulation; Department of Primary Industries and Regional Development.

Geology and Topography

Naturally Occurring Asbestos NOA

Naturally Occurring Asbestos in NSW © State of New South Wales and Department of Planning and Environment; WA Management of Asbestos In Mining Operations Department of Industry and Resources; SA Carbonate-hosted asbestos occurrences in South Australia: review of geology and implications for mesothelioma [Hendrickx, M.]; Mapping of naturally occurring asbestos in NSW [NSW Trade & Investment, Division of Resources & Energy]

Geology

ACT - New South Wales Seamless Geology dataset (latest version 2.3), various geology data sources 1:25K to 1:100K - © Department of Regional NSW. NSW - New South Wales Seamless Geology dataset (latest version 2.3) - © Department of Regional NSW. NT - Geological digital data 1:100 000 sheet - © Commonwealth of Australia (Geoscience Australia). QLD - Queensland geology detailed surface geology 1:100K and Queensland geology state surface geology 1:2M - © State of Queensland (Department of Resources). SA - 1:100K Geology (surface geology) - © SA Government Department of Energy and Mining, Customer Services. TAS - 1:25K and 1:250K Geology Data and Maps - © TAS Government Department of Infrastructure, Energy, and Resources (Mineral Resources Tasmania). VIC – Geological units represented as two dimensional polygons (1:50,000), and Geological units represented as two dimensional polygons (1:250,000) - © VIC Government Department of Jobs, Skills, Industry and Regions. WA - 1:50K Geological series map, 1:100K Geological series map, and 1:500K State interpreted bedrock geology - © WA Government Department of Mines, Industry Regulation and Safety.

Section 2 - Hydrogeology

GDE & Hydrogeology Constraints

Groundwater Aquifers

Groundwater Aquifers - The National Hydrogeological Inventory, Commonwealth of Australia (Geoscience Australia). Australian Hydrological Geospatial Fabric @ Department of Climate Change, Energy, the Environment and Water, National Aquifer Network © Commonwealth of Australia (Bureau of Meteorology)

Groundwater Protection Areas and Groundwater Restricted Use Zones

Groundwater Protection Areas – © State of New South Wales and Department of Planning and Environment, NT Environment, Parks and Water Security, QLD Department of Resources, SA Environment Protection Authority (EPA), TAS TasWater, VIC Department of Environment, Land, Water & Planning; WA Department of Water and Environmental Regulation. Groundwater Licences - The Perth Groundwater Atlas and Department of Water (DoW) database © State of Western Australia. NSW - Groundwater Restricted Use Zones: EPI Groundwater Vulnerability, Botany Groundwater Management Zone, Williamtown Management Area, UPSS Environmentally Sensitive Zone, EPI Drinking Water Catchments – EPA NSW; NSW Department of Planning, Industry and Environment. NSW Temporary Water Restrictions Order Botany Sands groundwater - @ The NSW Department of Industry—Lands & Water. NT - Groundwater Restricted Use Zones: NT Water Protection Areas - Department of Environment, Parks, and Water Security. QLD - Groundwater Restricted Use Zones: Water Licences, Groundwater Management Areas, Surface Water Management Areas, Water Plan Catchments - Department of Resources. SA - Groundwater Restricted Use Zones: EPA Groundwater Prohibition Area – EPA SA. TAS - Groundwater Restricted Use Zones: Drinking Catchments, Water Management Plan Areas, Water Districts. VIC - Groundwater Restricted Use Zones: GMA, Groundwater Resources, Water Supply Protection Areas, Water Asset Database, Groundwater Catchments – © EPA Victoria. WA -Groundwater Restricted Use Zones: Gnangara Groundwater Protection, Jandakot Groundwater Protection, Groundwater Areas, PDWSA, Water Licences – Department of Water and Environmental Regulation.

Wetlands

Ramsar Wetlands of Australia - Directory of Important Wetlands in Australia (DIWA) – DCCEEW Department of Climate Change, Energy, the Environment and Water. ACT - Wetland Mapping - © State of New South Wales and Department of Planning and Environment. Important Wetlands - © Australian Capital Territory. NSW - Wetlands, Ramsar Sites, and various sources – © State of New South Wales and Department of Planning and Environment. NSW Environmental Planning Instruments (Wetlands, Coastal Wetlands), © State Government of NSW and NSW Department of Planning, Housing, and Infrastructure NT - Wetlands and Ramsar Sites - @ Department of Environment, Parks, and Water Security. QLD - Local Significant Wetlands and Ramsar Sites - @ Department of Environment and Science. SA - Ramsar Wetlands - @ Department for Environment and Water. TAS - Ramsar Wetlands - @ Land Tasmania. VIC - Victoria Wetlands and Ramsar Sites, @ Department of Energy, Environment and Climate Action. WA - Geomorphic Wetlands (various), Consanguineous Wetlands Suites, Ramsar Sites, @ Department of Biodiversity, Conservation and Attractions.

Groundwater Dependent Ecosystems

Groundwater Dependent Ecosystems (GDE) – Terrestrial (subsurface) and Aquatic (surface) - © Commonwealth of Australia (Bureau of Meteorology).

Groundwater Bores & Lithology details

Groundwater bores and lithology - National Groundwater Information System (NGIS) Dataset. - © Australian Government Bureau of Meteorology. © Water NSW. Groundwater Bores – © Australian Capital Territory. VIC Groundwater Sites, Domestic and stock groundwater bores @ DELWP. WA GW Bores, @ Department of Agriculture Resource Management. SA WaterConnect @ State of South Australia.

Groundwater Salinity

AUS - Groundwater Salinity © Commonwealth of Australia, Bureau of Meteorology. Groundwater Salinity - ACT - Canberra Hydrogeological Landscape, Hydrogeological Landscape Reports, Salinity, ACTmapi @ ACT gov. NSW – Salinity locations and mapping, Hydrogeological landscapes, @ NSW Environment and Heritage. NT - Dryland Salinity Hazard of the Northern Territory, @ Environment, Parks, and Water Security NT. QLD - Salinity in Queensland, @ QLD gov. SA - Annual ground water salinity sampling, @ Landscape South Australia. TAS - Groundwater Salinity - © Department of Natural Resources and Environment Tasmania. VIC - Groundwater Salinity - © State Government of Victoria. Groundwater Salinity - Department of Water and Environmental Regulation. WA – Salinity & Dryland salinity in Western Australia, @ Department of Agriculture and Food WA.

Other Known Borehole Investigations (Coal Seam Gas (CSG), Petroleum Wells and Other Boreholes)

Other Known Borehole Investigations (Coal Seam Gas (CSG), Petroleum Wells and Other Boreholes) – NSW Planning & Environment (Resources & Energy); Department of Energy, Environment and Climate Action. Other Known Borehole Investigations (Coal Seam Gas (CSG), Petroleum Wells and Other Boreholes) – © The State of Queensland, © Commonwealth of Australia (Geoscience Australia), Other Known Borehole Investigations (Coal Seam Gas (CSG), Petroleum Wells and Other Boreholes, Drillholes within South Australia, Mineral Drillholes) - @ SA Government Department for Environment and Water; Department for Energy and Mining. Other Known Borehole Investigations (Coal Seam Gas (CSG), Petroleum Wells and Other Boreholes) - Department of Water and Environmental Regulation, © Government of Western Australia Department of Mines, Industry Regulation and Safety. Other Known Borehole Investigations (Coal Seam Gas (CSG), Petroleum Wells and Other Boreholes), various sources @ Land Insight National Land Use Atlas (NLUA).

Section 3 - Environmental Registers, Licences and Incidents

Contaminated Land Public Register

ACT - Register of Contaminated Sites, Contaminated Land Search (per request) - © Australian Capital Territory, Environment Protection Authority. NSW - Sites Notified as Contaminated, Records of Notices - © State of NSW and the NSW Environment Protection Authority. NT - Contaminated Land Audit, Pollution Abatement Notice - Northern Territory Environment Protection Authority. QLD - Contaminated Land Search (Environmental Management and Contaminated Land Registers – per lot) - © The State of Queensland (Department of Environment, Science, and Innovation). SA - Site Contamination Index, Assessment Areas - © Government of South Australia Environment Protection Authority. TAS - Regulated Sites and Premises, Lutana, and Parts of Hobarts Eastern Shore - © The Crown of Tasmania, Environment Protection Authority. VIC - Priority Sites Register, Pollution Abatement Notice - © EPA Victoria. WA - Contaminated Sites Database - © Government of Western Australia, Department of Water and Environmental Regulation.

Licences, Approvals, & Assessments

ACT - Environment Protection Authorisation Search, Environment Protection Agreement Search - © Australian Capital Territory, Environment Protection Authority. NSW - POEO Public Register - © 2023 State of NSW and the NSW Environment Protection Authority. NT - Environment Protection Licences - © Northern Territory Environment Protection Authority. QLD - Environmental Authorities - © The State of Queensland (Department of Environment, Science, and Innovation). SA - Licences or Authorisations, Environment Protection Orders (EPO), Clean-Up Orders (CUO), Assessment Areas - © Government of South Australia Environment Protection Authority. TAS - Regulated Premises - © The Crown of Tasmania, Environment Protection Authority. VIC - Permissions Register, Audit Reports - © EPA Victoria. WA - Licences and Works Approvals - © Government of Western Australia, Department of Water and Environmental Regulation.

Sites Regulated by Other Jurisdictional Body

Contaminated Legacy Areas

Contaminated Legacy Areas mapped by Land Insight Research team @ Land Insight National Land Use Atlas (NLUA). James Hardie Asbestos Waste Contamination Legacy @ The Australian Asbestos Network, Loose-fill Asbestos register @NSW Department of Climate Change & Water. Loose Fill Asbestos @ ACT Government. Asbestos Register @NT Government. Asbestos Register @ QLD Government. Asbestos Safework @ Government of South Australia. Asbestos Safety WorkSafe @Tasmania Government. Asbestos in Victoria @State Government of Victoria. Asbestos – contaminated sites @ Government of Western Australia Department of Health. National Pollutant Inventory - © Commonwealth of Australia, Department of Agriculture, Water, and the Environment. Parramatta River Catchment Land Use Areas - Compiled by Land Insight derived from Parramatta River Estuary Processes Study (2010); and @ Land Insight National Land Use Atlas (NLUA).

Mines and Quarries (current locations, derelict and abandoned mines and quarries, mine shaft)

Current and Historical location of mines and quarries, derelict mine locations mapped by Land Insight Research team @ Land Insight National Land Use Atlas (NLUA). Australia's abandoned mines: rehabilitated @Australian Geographic. List of mines, List of open-pit mines @ Wikipedia. Goldfields places & Maps- National Library of Australia and State Libraries. A Geospatial Database for Effective Mine Rehabilitation in Australia – Monash University, various authors. Inventory of abandoned mines in Australia @ Australian Government AusIndustry. National Heritage Places - Coal Mines Historic Site @Department of Climate Change, Energy, the Environment and Water. Legacy Mines Program © State of New South Wales through Regional NSW. Map of NSW Mines @NSW Minerals Council. Legacy Mines @ Northern Territory Government. Abandoned mine remediation projects - @ The State of Queensland Government. Map of abandoned mines in Queensland. Queensland's quarry operations @ QLD Government Department of Resources. South Australian Mining History @ Mining Heritage, Former Mines, SARIG @ Government of South Australia @ EPA SA. Mineral Resources Tasmania @ Department of State Growth Mineral Resources Tasmania, Abandoned Mines Rehabilitation in Tasmania @ Department of Infrastructure, Energy and Resources. Tasmania Goldfields dataset. Mineral Occurrences Data @ Tasmania Government. Rehabilitating Mines @ Copyright Victorian Auditor-General's Office, @ Mining Legacies. Historical Mining Activities @ VIC Department of Jobs, Skills, Industry and Regions. Heritage Victoria. Mineral Assessment @ VIC Department of Natural Resources and Environment. Abandoned Mines, Inactive And Abandoned Mine Land Reports - @ WA Department of Mines, Industry Regulation and Safety. Abandoned Mines Program @ WA Department of Energy, Mines, Industry Regulation and Safety. Mines and Mineral Deposits (MINEDEX) - @ WA Department of Energy, Mines, Industry Regulation and Safety

Defence, Military Sites, and UXO Areas

Current and Historical Defence and Military sites mapped by Land Insight Research team @ Land Insight National Land Use Atlas (NLUA). Department of Defence 3 Year Regional Contamination Investigation Program (RCIP) © Commonwealth of Australia, Department of Defence. Defence Sites © Australian Government - Various sources and Department of Defence © Commonwealth of Australia. @ Land Insight National Land Use Atlas (NLUA). National Unexploded Ordnance Program (UXO) @ Australian Government Defence.

Former Gasworks Sites

AUS – Gasworks sites (Various), @ National Trust of Australia, @ National Library of Australia, @ Pocket Oz Sydney Guide, @ wikipedia. Former gasworks site locations mapped by Land Insight Research team @ Land Insight National Land Use Atlas (NLUA). Archaeological database and records © New England Archaeology. Images, Wikipedia, @Flickr images. The historical marker database. ACT – Gaswork sites @ ACT gov. NSW – Former gasworks sites @ EPA NSW, @ NSW Department of Environment and Conservation, Heritage NSW. NT - Gaswork sites @ EPA NT. QLD - Gaswork sites @ DES QLD. SA - Gaswork sites @ EPA SA, @ SA Heritage Places Database Search (maps SA). TAS - Gaswork sites @ EPA TAS, @ Ligthscape Tasmania. VIC – Gasworks sites,

@EPA VIC, @ Development Victoria. WA - Gasworks sites, @EPA WA, @ Department of Water and Environmental Regulation WA.

PFAS sites

AUS – National PFAS Investigation Program – State-wide PFAS Investigation Program @Australian Government, Department of Infrastructure, Transport, Regional Development, Communications and The Arts. PFAS research @ Land Insight National Land Use Atlas (NLUA).

PFAS Investigation and Management Program - PFAS contamination at Department of Defence sites, @ Defence Government. @ Australian Government Defence. Metropolitan Fire Brigade stations. Potential historical use of PFAS @ Australian Government.

PFAS Taskforce. Airservices Australia National & PFAS Management Program, Airservices Australia.

ACT - Potential PFAS contaminated sites in the ACT - © ACT Environment Protection Authority. NSW - The NSW Government PFAS Investigation Program, © State of NSW and the NSW Environment Protection Authority. NT – PFAS National Environmental Management Plan (NEMP) @ NT EPA. QLD - PFAS site investigations, PFAS in QLD, @ QLD government. SA - Per- and poly-fluoroalkyl substances (PFAS), @SA EPA. TAS - PFAS Contamination, @ TAS EPA. VIC - PFAS management sites, PFAS contamination at Department of Defence sites @ VIC EPA. WA - PFAS Investigations in Western Australia, @ WA government, @ WA DWER.

Section 4 - Potentially Contaminated Areas

Potentially Contaminated Areas, Activities (PCA) – Notifiable Activities Locations and Description

The research database includes Potentially Contaminating Activities or businesses, industries, and activities that have been identified as having an increased likelihood of causing contamination. Many of these are considered notifiable activities, or activities that require regulation to operate. This database is meticulously curated from a variety of information sources and undergoes rigorous validation procedures carried out by our team of scientists, quality assurance professionals, and technical experts, ensuring its accuracy and reliability. The PCA database systematically identifies and classifies site locations into fifty differing categories, including:

Abattoirs, Abrasive Blasting, Agriculture/Horticulture, Airports, Asbestos, Asphalt or Bitumen, Batteries, Breweries/Distilleries, Cement, Concrete or Lime, Cemeteries, Chemicals, Coal Yards, Depots and Storage Yards, Dry Cleaners, Electrical or Electrical Components, Explosives and Dangerous Goods, Extractive Industries, Fire and Rescue, Food Manufacturing, Foundry, Smelting or Refining, Fuel Terminals & Depots, Glass, Ceramics and Plastic, Gun, Pistol or Rifle Ranges, Hospitals and Research Facilities, Landfill Sites, Livestock Dips, Mechanical and Automotive, Metal Fabrication and Treatments, Oil and Gas, Other Infrastructure Facilities, Paint Industries, Petrol Stations, Pharmaceuticals, Port and Marina Operations, Power Plants, Printing and Photography, Rail Industry and Associated Activities, Rubber and Tyre, Storage Tanks, Substations and Switching Stations, Textiles and Tannery, Timber, Pulp and Paper Works, Waste and Recycling Facilities, Wastewater Treatment Facilities.

Potentially Contaminating Activities and Locations (PCA) - © Google; Nearmap data; @ Datajet Australia Pty Ltd – with permission and @ Land Insight National Land Use Atlas (NLUA).

The Potentially Contaminating Activities (PCA) is a unique database proprietary to Land Insights. Please note that <u>not all</u> sources are included; only the most significant or larger databases are referenced for brevity. Individual research on each of these sources has not been included due to the comprehensive nature of the list.

Airports – Designated international airports in Australia @ Department of Infrastructure, Transport, Regional Development, Communities, and the Arts Australian Gov. List of airports Australia @ Wikipedia. Australia Airports Map @ Sydney-australia biz

Catte Dips: Cattle Dip Site Locator Northern Rivers Region - © State of New South Wales through NSW Department of Industry; and @ Land Insight National Land Use Atlas (NLUA).

Dry cleaners: Dry cleaners @ Drycleaning Institute of Australia; Lawrence Dry Cleaners Locations @ Lawrence Dry Cleaners, and @ Land Insight National Land Use Atlas (NLUA).

Landfill Sites: NSW – Landfill sites @ EPA NSW. QLD - Location of waste sites | Environment, land and water, Closed landfill sites @ QLD gov. SA - Landfill map, EPA SA. TAS – Landfills @ EPA TAS. VIC – Victorian Landfill Register - © EPA Victoria. Waste and Recycling Facilities: National Waste Management Facilities - © Commonwealth of Australia (Geoscience Australia), Australia's waste and resource recovery infrastructure @ DCCEEW @ Land Insight National Land Use Atlas (NLUA).

Petrol Stations: National Liquid Fuel Refineries and Facilities, Liquid Fuel & Aviation Fuel Depots/Terminals, National Liquid Fuel Refineries - © Commonwealth of Australia (Geoscience Australia), Petrol Stations @ Digital Atlas of Australia. Fuelcheck @ Fair Trading NSW gov. @ Land Insight National Land Use Atlas (NLUA).

Power Plants: AUS @ Powerplants Australia. QLD Power Plants map of Queensland @Department of Energy and Climate. Various sources. @ Land Insight National Land Use Atlas (NLUA).

Waste and Recycling Facilities: National Waste Management Facilities - © Commonwealth of Australia (Geoscience Australia), Australia's waste and resource recovery infrastructure @ DCCEEW. @ Land Insight National Land Use Atlas (NLUA). NSW – Waste facilities @ NSW EPA. NT - Waste & Recycling NT, City of Darwin. QLD - Public waste and recycling facilities in Queensland @ Queensland Government Open Data Portal. SA - Waste disposal, Waste depots @ EPA SA. TAS – Waste Centres, Waste Disposal Facilities @ EPA TAS. VIC - Victoria's waste and resource recovery infrastructure, Waste Facility Locations Victoria's Waste and Recycling Infrastructure Map © Recycling Victoria. WA @ VIC Gov. WA – Waste locations and recycling centres @ DEW WA. @ Land Insight National Land Use Atlas (NLUA).

Historical Business Directories

AUS - AUS Historical Commercial & Trade Directory Data – various sources, see below. UBD business & street directory, Sands & McDougall directories, @ Australian Business Datalist ABDL (with permission)
ACT - 1971, 1981 & 1991 Telecom Australia Yellow Pages Country NSW Directories – Permission for use Sensis 2017.
2005 - 2022 - @ Australian Business Datalist ABDL – with permission
NSW – Sydney Metropolitan Area: 1932-1933 John Sands Sydney Trades Directory
1940 & 1950 Commonwealth of Australia Telephone Directory Sydney
1960-1961 Telecom Australia Pink Pages Sydney – Permission for use Sensis
1970-1971 United Business Directories Sydney – Licenced under Hardie Grant
1974-1975 NSW Post Office Yellow Pages Sydney Buying Guide and Commercial/Industrial Directories – Permission for use Sensis
1980-1981 & 1990-1991 Telecom Australia Yellow Pages Sydney – Permission for use Sensis. 2005 – 2022 @ Australian Business Datalist ABDL
NT - 2005 - 2022 @ Australian Business Datalist ABDL – with permission
QLD - 1865, 1890, 1900, 1906, 1916, 1919, 1924, 1925, 1970 – Pugh's Almanac (copyright expired)
1970-1971 - Brisbane Telephone Directory (copyright expired)
2005 - 2022 - @ Australian Business Datalist ABDL – with permission
SA - 1930, 1935, 1944-45, 1950, 1955, 1960, 1965, 1970, 1973 - Sands & McDougall Melbourne Trade Directory (copyright expired)
2005 - 2022 @ Australian Business Datalist ABDL – with permission
TAS - 1896-1897, 1900, 1905, 1910, 1915, 1920, 1925, 1930, 1935, 1940-41, 1945-46, 1948 - Wises Post Office Directory (copyright expired)
2005 - 2022 @ Australian Business Datalist ABDL – with permission
VIC - 1900, 1905, 1915, 1925, 1935, 1945, 1955, 1965, 1975 - Sands & McDougall Melbourne Trade Directory (copyright expired)
1960-1961, 1970-1971 - Post Office Pink Pages Melbourne – Permission for use Sensis 2017
1981-1982, 1990-1991 - Telstra Yellow Pages Melbourne - Permission for use Sensis 2017
Telstra Yellow Pages Melbourne - Permission for use Sensis 2017
2005 - 2022 @ Australian Business Datalist ABDL – with permission
WA -2005 - 2022 @ Australian Business Datalist ABDL – with permission

Section 5 – Natural Hazards

Fire Hazards

AUS - Bushfire Prone Areas – © Australian Government Department of Climate Change, Energy, the Environment and Water. Bushfire History - © Commonwealth of Australia (Geoscience Australia). ACT - Bushfire Prone Areas – © ACT Government Environment, Planning and Sustainable Development Directorate. Bushfire History - NPWS Fire History - Wildfires and Prescribed Burns © State Government of NSW and Department of Planning, Industry and Environment. NSW - Bushfire Prone Areas – © State of New South Wales (NSW Rural Fire Service). Bushfire History - © State Government of NSW and NSW Department of Climate Change, Energy, the Environment and Water, Wildfires and Prescribed Burns - © State of New South Wales, National Parks, and Wildlife Management Unit. NT - Bushfire Prone Areas – © NT Government of Australia through Department of Environment and Natural Resources. Bushfire History - ©The Commonwealth of Australia through the Department of the Environment and Energy. QLD - Bushfire Prone Areas – © Commonwealth Scientific and Industrial Research Organisation (CSIRO) in conjunction with the State of Queensland (Queensland Fire and Emergency Services). Bushfire History - © State of Queensland (Department of Environment and Science). SA - Bushfire Prone Areas – © SA Government Country Fire Service (CFS), Department of Planning, Transport, and Infrastructure. Bushfire History - © SA Government Department for Environment and Water. TAS - Bushfire Prone Areas – © Tasmania Fire Service. Bushfire History - © Department of Environment, Parks, and Water Security. VIC - Bushfire Prone Areas – © VIC Government Department of Environment, Land, Water and Planning; Department of Transport, Planning and Local Infrastructure. Bushfire History - © VIC Government Department of Transport, Planning and Local Infrastructure. WA - Bushfire Prone Areas – © WA Government Department of Fire and Emergency Services. Bushfire History - © WA Government Department of Fire and Emergency Services.

Flood Hazard

AUS - Flood Planning Area, Other Flood Studies, and Flood History - @ Commonwealth of Australia, @ Bureau of Meteorology. This dataset is digitised and/or aggregated from various verified Council Records, Aerial Photography Interpretation, Flood Imagery Maps, Topographic Maps, Historic Parish Maps, publicly available technical reports, and information digitised by the Land Insight Research team. @Land Insight Research. ACT - Flood Risk and Flood map information © ACT Government Environment, Planning and Sustainable Development Directorate – Environment. NSW - NSW Flood Data Portal @NSW State Emergency Service, © State Government of NSW, NSW Department of Climate Change, Energy, the Environment and Water; and NSW Department of Planning, Housing, and Infrastructure; @ NSW Government Spatial Services. NT - Floodplain maps, Flood monitoring © NT Government of Australia through Department of Environment and Natural Resources, Department of Lands, Planning, and the Environment. QLD - QLD Flood mapping, Historical flood mapping © The State of Queensland, Department of Resources, Queensland Reconstruction Authority. Flood data series and Flood data overlays (various) Queensland Open Data portal. SA - Flood Awareness map, Flood Risk © Crown in right of the State of South Australia, @ Government of South Australia, Department for Environment and Water. Flood mapping (various) SA Data Directory portal. TAS - Tasmania Flood Mapping Projects Reports @ Tasmania State Emergency Services. Floodplain Mapping in Tasmania, Flood Inundation Extent models. © Department of Natural Resources and Environment Tasmania. TAS TheList dataset portal. VIC - Victoria Flood mapping and overlays. © Copyright State Government of Victoria various datasets, Victoria State Emergency Service; Department of Energy, Environment and Climate Action, Department of Environment, Land, Water & Planning. Flood data (various) VIC data portal (data.vic). WA - Floodplain mapping tool, Landgate Flood Map. © Government of Western Australia, @ Department of Water and Environmental Regulation. Flood data (various) WA data portal.

Erosion Hazard

AUS - Soil Erosion Hazards, © Commonwealth of Australia (Geoscience Australia), @ Agriculture DAFF @Australian Government. ACT - Soil and Land Resources of the Australian Capital Territory, © State of New South Wales and Department of Planning and Environment. NSW – Land Soil Capability, Vulnerable lands, © State of New South Wales and Department of Planning and Environment NT - Land System, Soil Conservation, © Department of Environment, Parks, and Water Security. QLD - QLD Erosion prone areas, Coastal and Inland erosion areas, © The State of Queensland. SA - Landscape salad, Mass movement and soil Attributes, Water and Wind Erosion, © Department for Environment and Water. TAS - Coastal Erosion Hazard, Landslide Planning Map, Water and Wind Erosion Statewide map, © Department of Natural Resources and Environment Tasmania. VIC - Geomorphology of Victoria, © VIC Government Department of Jobs, Skills, Industry and Regions. WA - Soil Landscape Land Quality, Land capability assessment, Land instability Risk, Water Erosion Riks, Wind Erosion Risk, © WA Government Department of Primary Industries and Regional Development.

For more information visit www.landinsight.co or contact orders@landinsight.co.

Terms and Conditions

Terms and Conditions
1. Land Insight & Resources (Land Insight) will perform the Services in accordance with these terms and conditions
2. By submitting the Application Form, the User acknowledges that it has read and understood these terms and conditions and agrees to be bound by them.
3.Land Insight reserves the right to change these terms and conditions. Any change shall be effective upon notice, which may be given by Land Insight posting such change on the Website, or by direct communication with the User.

Services
4.Land Insight agrees to undertake the Services using due skill, care, and diligence.
5.The User assumes the sole risk of making use of, and/or relying on, the report and the Services. Land Insight makes no representations about the suitability, completeness, timeliness, reliability, legality, or accuracy of the Services.
6.Unless Land Insight agrees expressly otherwise:
(A) The Services are solely for the use and benefit of the User; and
(B) Land Insight does not accept any liability, whether directly or indirectly, for any liability or loss suffered or incurred by any third par ty placing any reliance on the performance of the Services or any Documents or material arising from or in connection with the Services.
7. The User warrants to Land Insight that it will not use the Services for any purpose that is unlawful or is otherwise inconsistent with these terms and conditions.
8. The User will not alter in any way or provide a copy of the report, or any Document prepared by Land Insight to any other person without Land Insight's prior written consent.

Payment Terms
9. The Fee will be payable at the time of submitting the Application Form unless invoicing payment terms have been negotiated prior to purchase with Land Insight.
10. The User and Land Insight may agree in writing to vary the Services. The fee for each variation shall be agreed between Land Insight and the User.
11. The User agrees to pay Land Insight the Fee, including the fee for any variation requested in accordance with clause 12.
12. If the User's rights are terminated and the User has made an advance payment, Land Insight will refund the User a reasonable proportion of the balance as determined by Land Insight in relation to the value of Services already provided.
13. GST at the prevailing rate is payable in addition to the Fee. The User agrees to pay any other applicable taxes, duties or government-imposed fees related to the User's use of the Services.

Intellectual Property
14. Land Insight owns all intellectual proper ty in the Report and arising from or in connection with the Services.
15.Land Insight grants the User a royalty free licence to use Land Insight's intellectual proper ty for that User's personal assessment of its Proper ty(s) only.

Privacy Policy
16. Upon submitting the Application Form the User consents to Land Insight's use of the personal data provided by the User for the purposes of providing the Services.
17. The Reliance on the report, the use of the Services and the use of Land Insight's Website is at the User's own risk. The User accepts that Land Insight does not guarantee the confidentiality of any communication or information transmitted through the use of the Website.
18. Land Insight will not provide to any third par ty any personal data provided by a User without the User's permission.
19. The User acknowledges that any feedback provided to Land Insight over the Website is not confidential and that Land Insight has the right to publish, reproduce, disseminate, transmit, distribute and copy (in whole or in part) any such feedback without the approval of the User.
20. Land Insight assumes no responsibility or liability for any content, communications or feedback submitted by a User over the Website. If a User has submitted objectionable content, communications or Feedback, Land Insight may, in its sole discretion, terminate that User's account, take legal action, or notify the appropriate authorities or par ties, without prior notice.

Third Party Services
21. The User accepts that, although the Website may contain or provide information regarding applications, products and/or services provided or offered by third par ties, Land Insight does not recommend or endorse any such third par ty applications, products, and/or services.
22. The report contains content provided to Land Insight by other par ties (Third Par ty Content). Land Insight is not responsible for, does not endorse and makes no representations either expressly or impliedly concerning the accuracy or completeness of any Third Par ty Content. You rely on the Third Par ty Content completely at your own risk.

Limit and Extent of Liability
23. Land Insight's liability is limited to the amount of the Fee. Liability arising in the provision of the Services is reduced to the extent that it arises out of or in connection with any negligent act or omission by the User.
24. Neither par ty is liable to the other for loss of actual or anticipated revenue or profits, increased capital, or financing costs, increased operational or borrowing costs, pure economic loss, exemplary or punitive damages or indirect or consequential damages or loss.
25. In no event shall Land Insight or any directors, officers, employees or agents be liable for any indirect, punitive, incidental, special, or consequential damages arising out of or in any way connected with the use of the Website, any delay or inability to use the Website, any information available on the Website, or otherwise arising out of the utilisation of the Website, whether based in contract, tor t, strict liability, or otherwise, even if Land Insight has been advised of the possibility of such damages. The negation of damages set forth herein is a fundamental element of the basis of the bargain between Land Insight and the User. The Services would not be provided without such limitations.

Property Verification

26. The User accepts that the Services provided do not take into account any information relating to the actual state or condition of the Property.
27. The User acknowledges that the Services are not to be interpreted as commenting on the physical characteristics or condition of the Proper ty, any particular purpose or use of that Proper ty or the saleability or value of the Property.

Termination and Modification

28. Land Insight reserves the right in its sole discretion to terminate, block or restrict the User's use of the Services or any portion thereof, for any reason, and without notice. In addition, Land Insight reserves the right in its sole discretion to terminate or modify any part of the Website without notice, for any reason.

Anti-Hacking

29. The User agrees not to directly or indirectly, attempt to or disrupt, impair, interfere with, alter, or modify the Website or any of its content.
30. The User agrees not to allow, aid or abet third par ties to directly or indirectly, attempt to or disrupt, impair, interfere with, alter or modify the Website or any of its content, or obtain access to any information regarding any User or any other report issued to a User.

Complaints

31. Any complaints in relation to the Services should, in the first instance, be in writing and addressed to Land Insight Customer Service at: info@landinsight.co. Land Insight will respond to any such complaints in writing as soon as practicably possible.

General Matters

32. These terms and conditions are governed by and will be construed and enforced in accordance with the laws of the State of New South Wales, Australia. If any dispute, controversy, or claim arises out of or relating to these terms and conditions, whether sounding in contract, tor t or otherwise, it shall be resolved by use of an alternative dispute resolution procedure acceptable to both par ties with the assistance of a mediator. If the dispute has not been resolved to the satisfaction of either par ty within 60 days of initiation of the procedure or if either par ty fails or refuses to participate in or withdraws from participating in the procedure, then either par ty may refer the dispute to the court.
33. These terms and conditions apply to all Services provided by Land Insight.
34. If there is any inconsistency between these terms and conditions and any other document or agreement between the par ties, these terms and conditions will prevail.
35. These terms and conditions represent the entire agreement between the par ties.
36. The User authorises Land Insight to destroy Documents which Land Insight has prepared or holds in connection with the Services 7 years after the last date on which the Services were provided.
37. If any of the terms of the Application Form or the terms and conditions are invalid, unenforceable, or void, the relevant term must be read down to the maximum extent possible or severed from the rest of the Application Form or these terms and conditions.
38. These terms and conditions can only be amended or varied by a written document signed by both par ties.
39. Neither par ty may assign or transfer any rights or obligations arising in the provision of the Services or these terms and conditions without the other party's written consent.

Defined Terms

Application Form	Means the form and accompanying information provided on the Website, completed, and submitted by the User to request the Services.
Document	Includes a report, and any other written or electronic document.
Fee	Means the amount set out in the Application Form or confirmed via an invoice.
Property	Means the proper ty to which the Services and the report relate.
Report	Means the Document prepared by Land Insight and provided to the User which contains the environmental and development data which is relevant to the Proper ty.
Services	Means the review of data and information on which the report is based, and the preparation and provision to the User of the report.
Website	Means Land Insight's online site, which is: www.landinsight.co
User	Means the person(s) set out in the Application Form including that person's permitted successors.

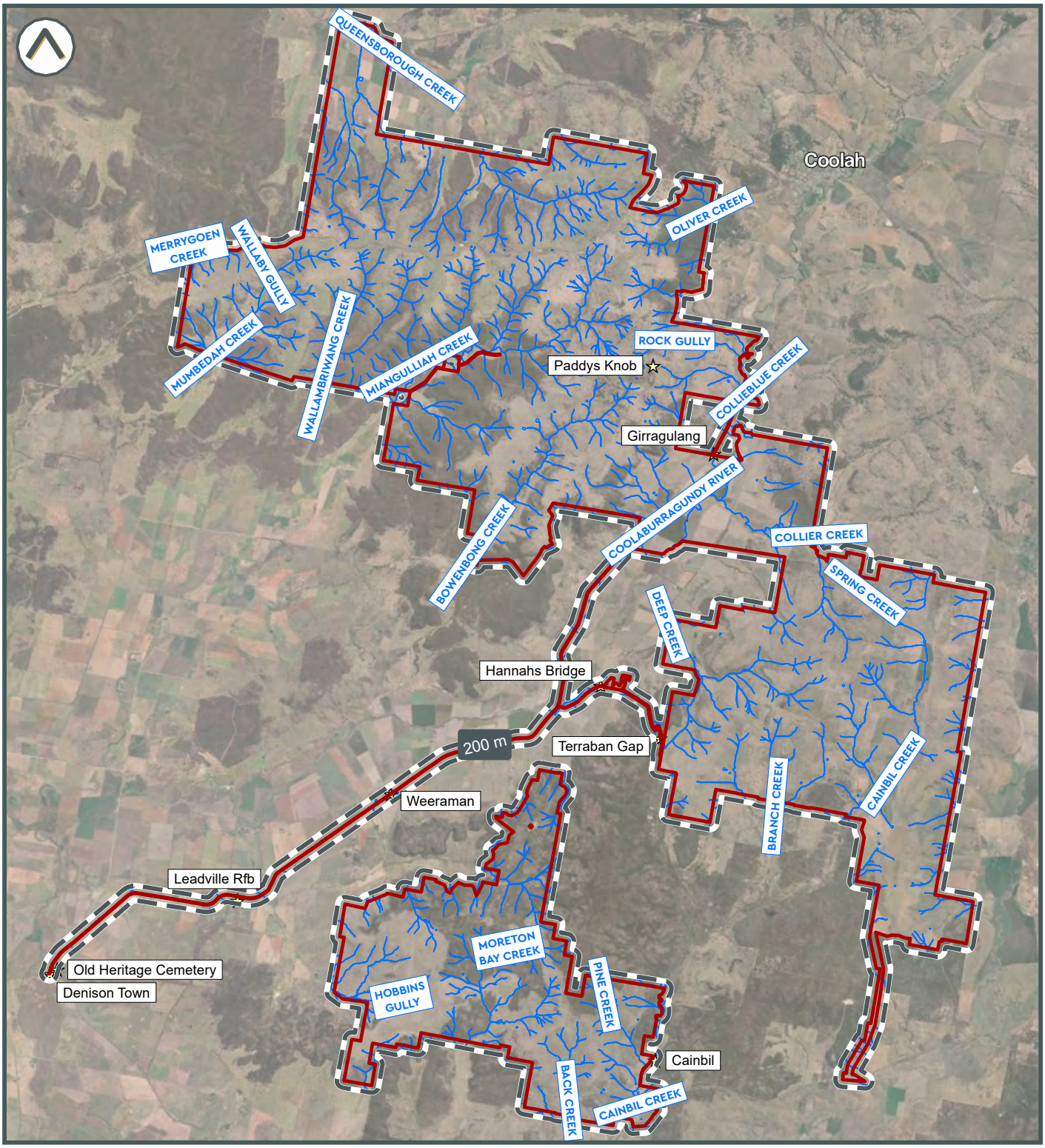
Land
Insight

Appendix A

REPORT MAPS

MAP 1.1

Sensitive Receptors and Features of Interest



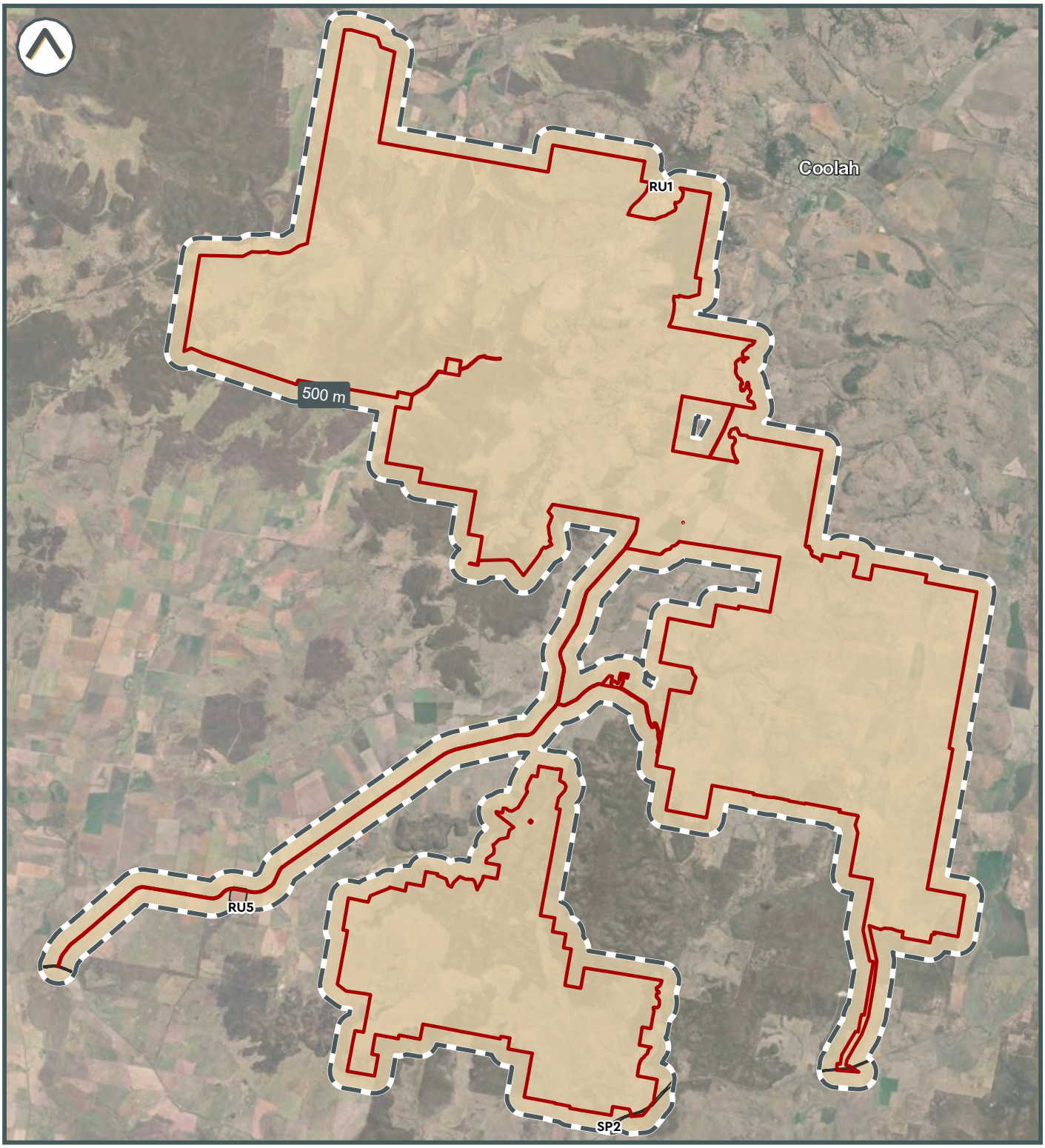
Subject area
Other Feature
Parks
Water Bodies

0 1,000 2,000 3,000 4,000 5,000m

Land Insight

Zoning

MAP 1.2a



Subject area

Zone

RU1 – Primary Production

RU5 – Village

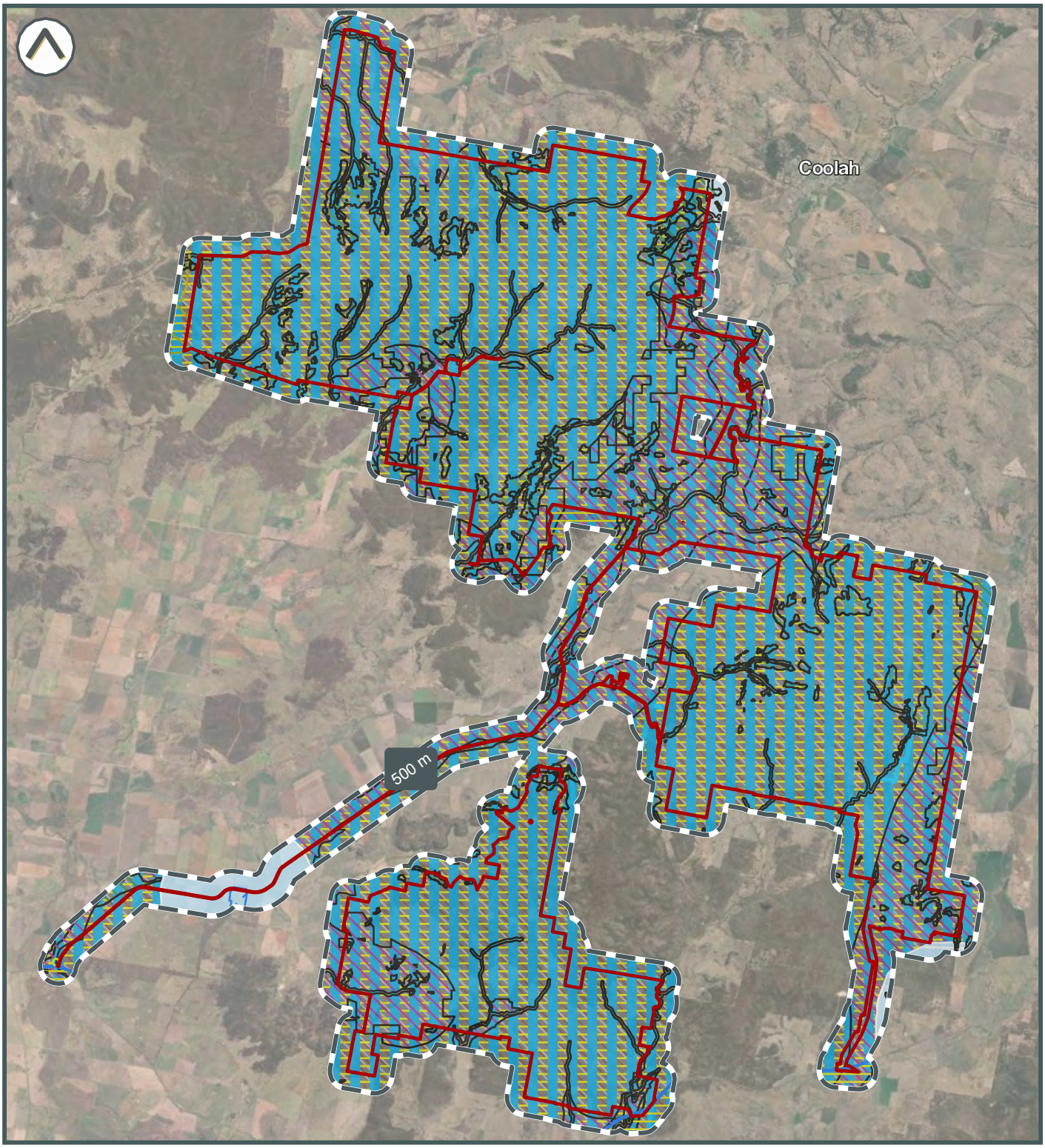
SP2 – Infrastructure

0 1,000 2,000 3,000 4,000 5,000m

Land Insight

Planning Overlays

MAP 1.2b



Subject area

Overlays

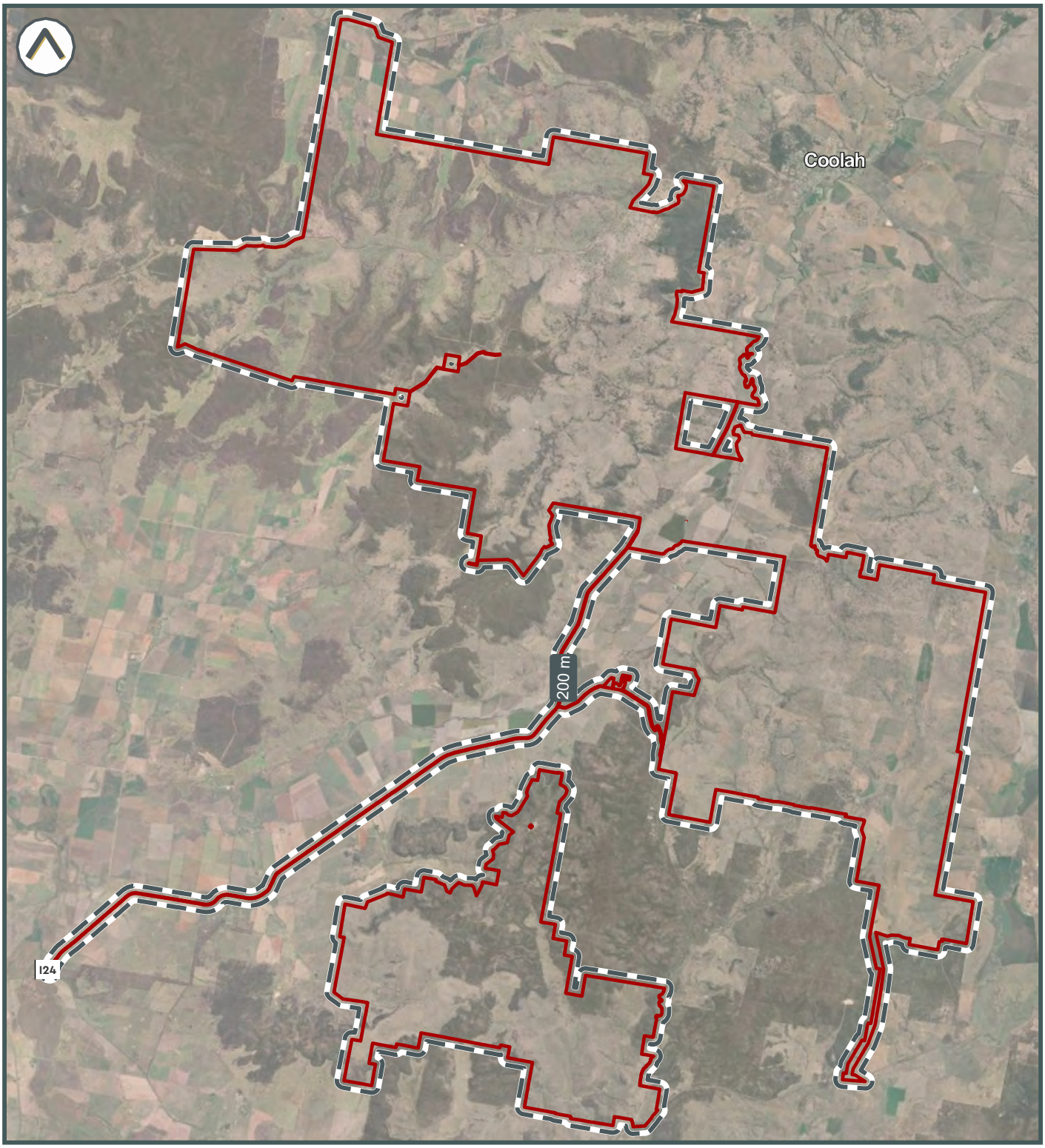
- Allowable Clearing
- Biodiversity
- Coal Seam Gas Exclusions
- Extent of Dark Sky Region
- Former LEP Boundaries
- Groundwater Vulnerable
- Heritage
- Land Application
- Minimum Lot Size (sq m)
- Minimum Water Use Standard (%)
- Riparian Lands and Watercourses
- SEPP Land Application
- Strategic Agricultural Land

0 1,000 2,000 3,000 4,000 5,000m

Land Insight

Heritage

MAP 1.3



Subject area

State and Local Heritage Registers

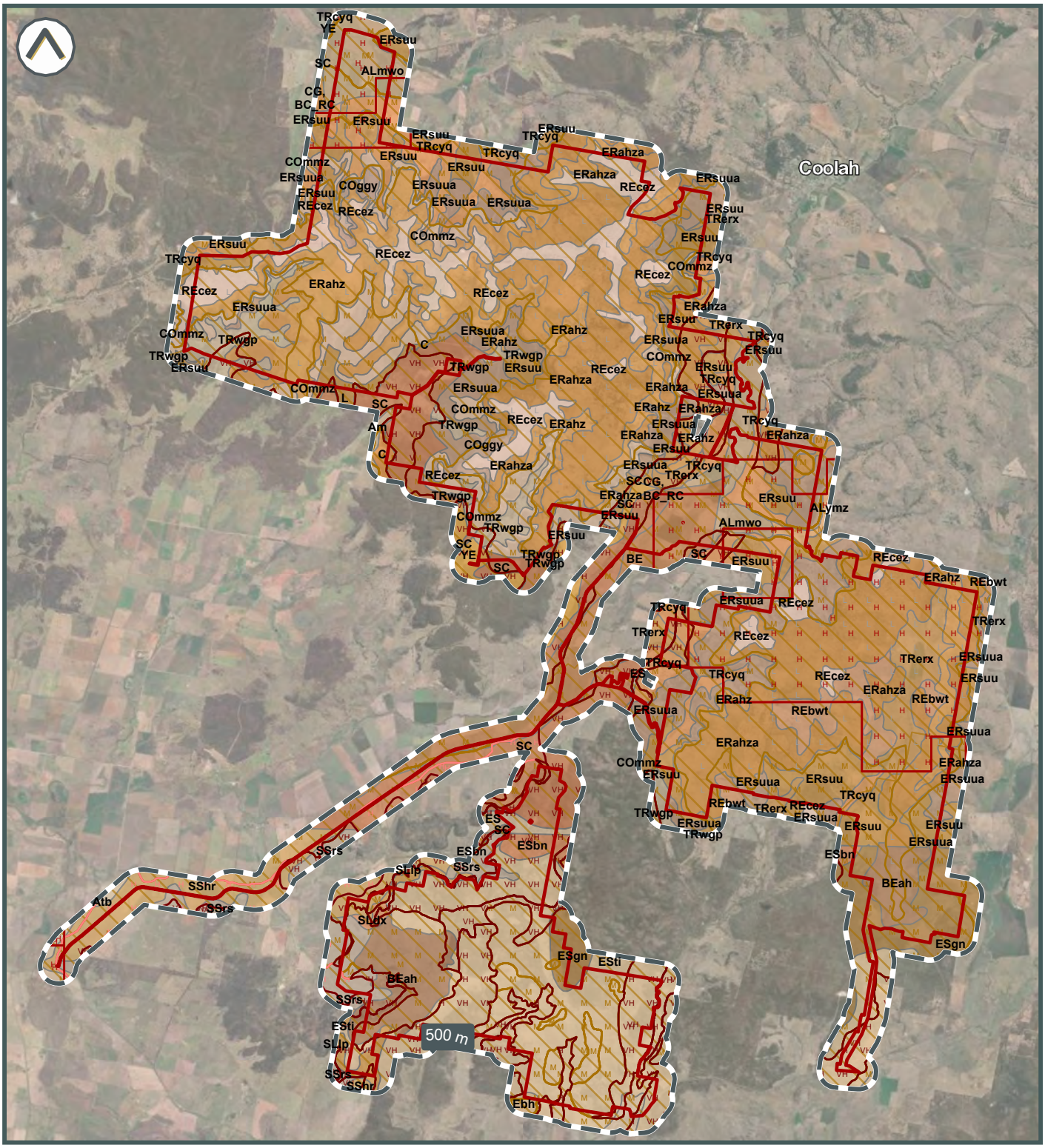
Heritage Register

0 1,000 2,000 3,000 4,000 5,000m

Land Insight

Soil Landscape and Salinity

MAP 1.4a



Subject area

Radon Level (Bq/m3)
- 5–19
- Moderate
- High
- High hazard or risk

Soil Salinity
- Low
- Very High

Code

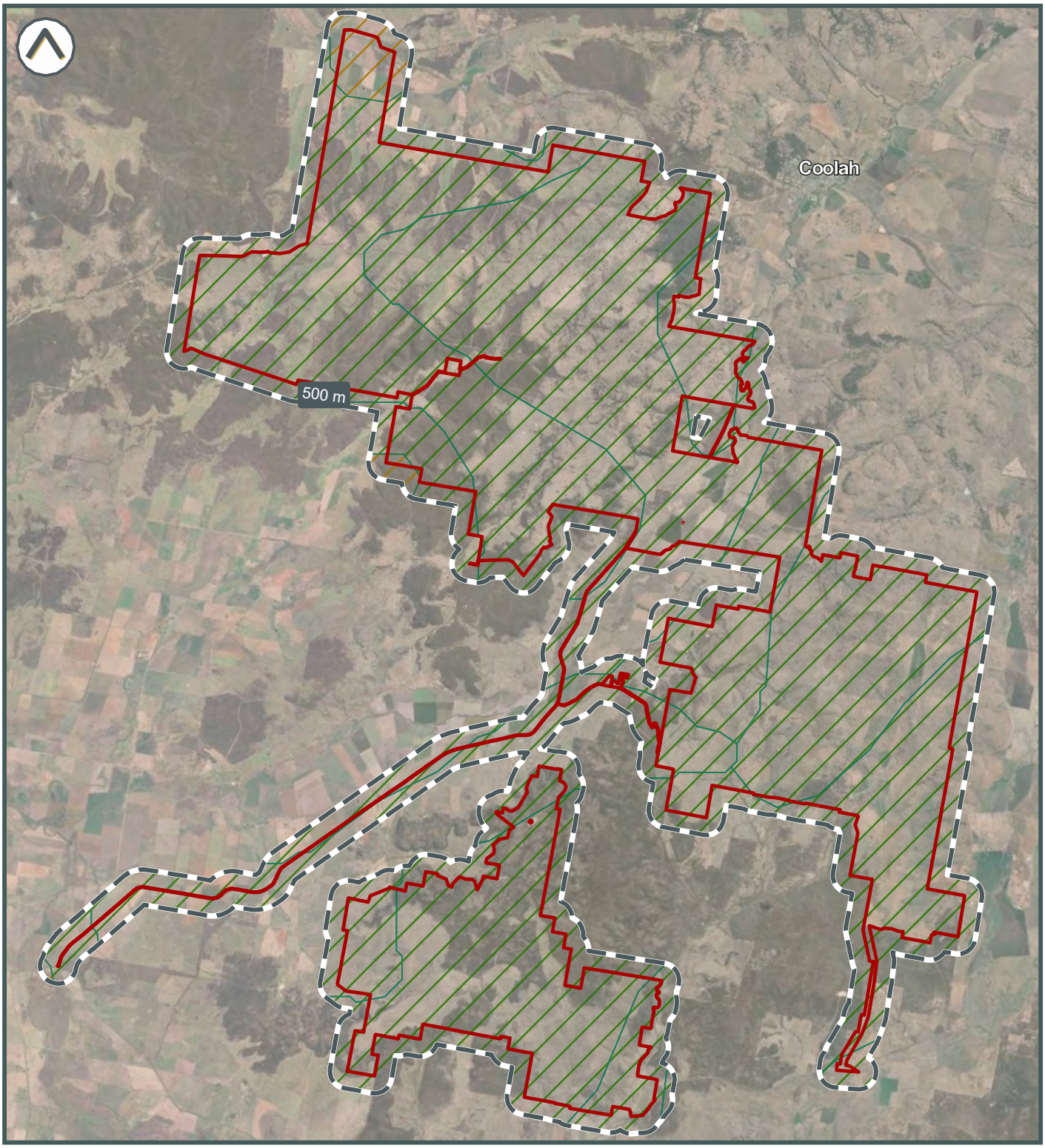
ALmwo	BE	COmmz	ES	L		
ALymz	BEah	ERahz	ESbn	REbwt		
Am	C	ERahza	ESgn	REcez		
Atb	CG, BC_RC	ERsuu	ESti	SC		
	COggy	ERsuua	Ebh	SLdx		

0 1,000 2,000 3,000 4,000 5,000m

Land Insight

Acid Sulfate Soils

MAP 1.4b



Subject area

Atlas of Australian Acid Sulfate Soils

Low Probability of occurrence

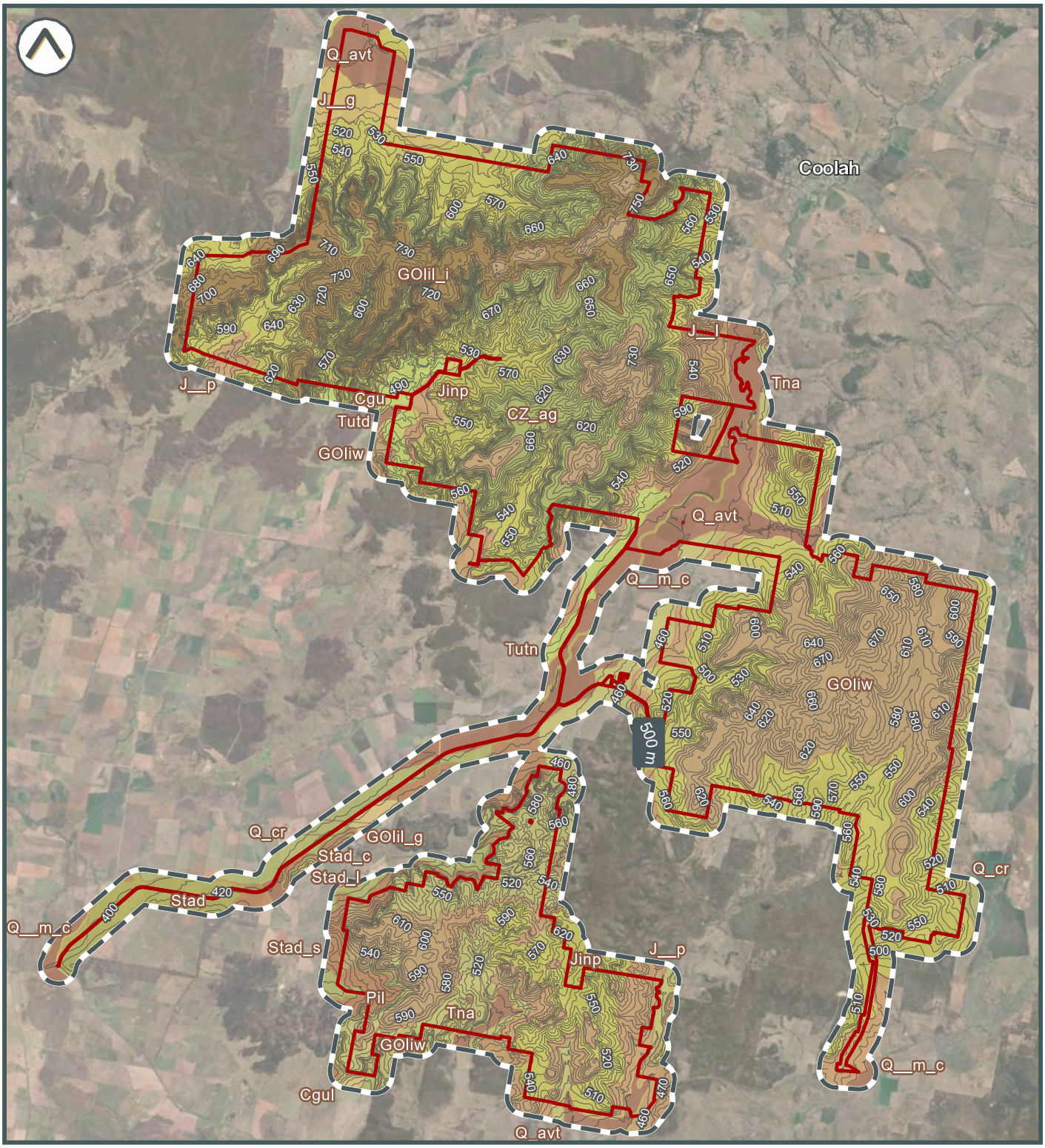
Extremely low probability of occurrence

0 1,000 2,000 3,000 4,000 5,000m

Land Insight

MAP 1.5

Geology and Topography



Subject area
Topographic Contour (m)

Geology Code
CZ_ag
Cgu
Cgul
GOlil_g
GOlil_i
GOliw
J__g
J__l
J__p
Jinp
Pil
Q__m_c
Q_avt
Q_cr
Stad
Stad_c
Stad_l
Stad_s
Tna
Tutd
Tutn

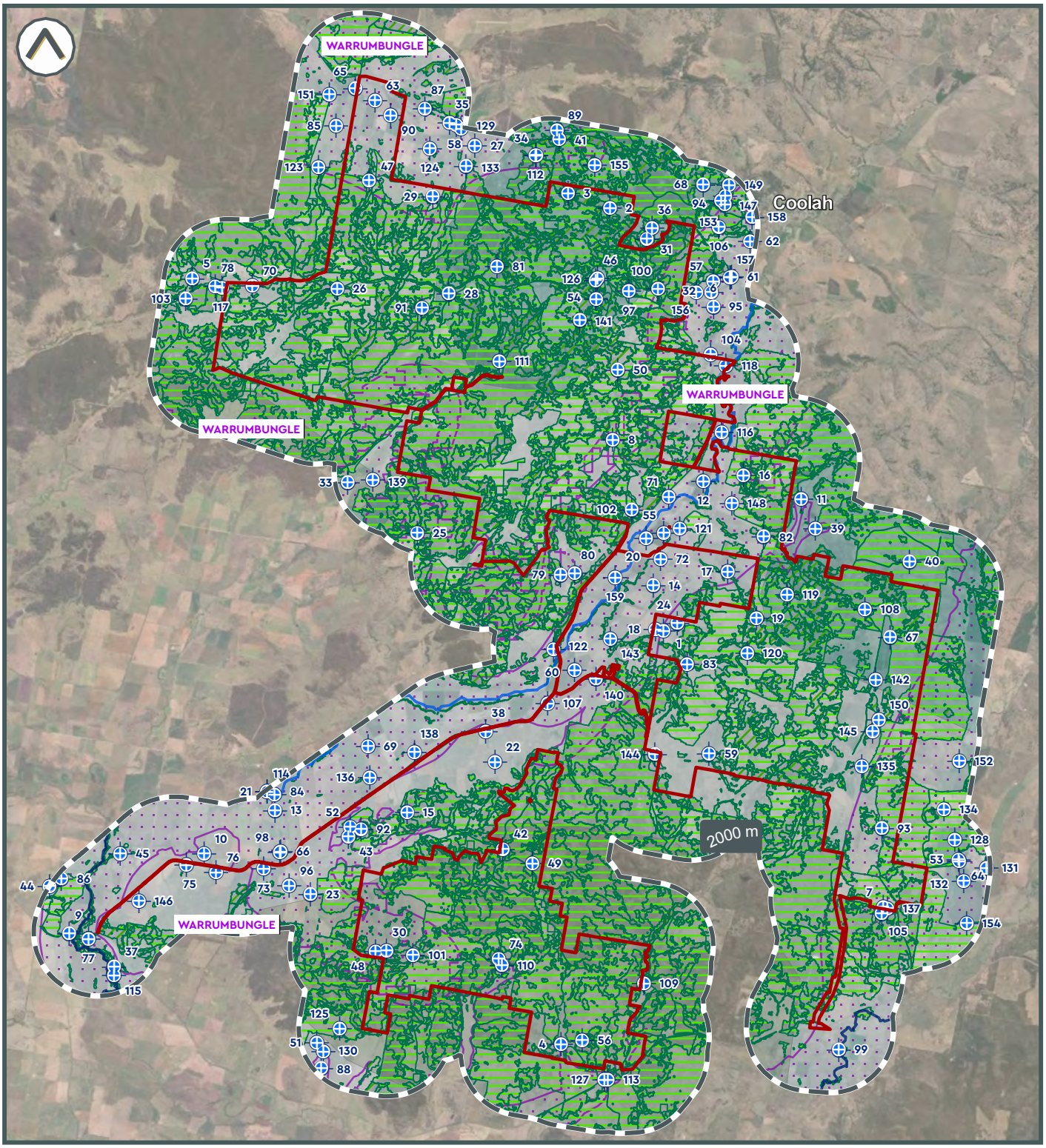
0 1,000 2,000 3,000 4,000 5,000m

Land Insight

HYDROGEOLOGY

MAP 2.1

Groundwater Dependent Ecosystems & Hydrogeology Constraints



Subject area

Groundwater bores

Ecosystems that rely on the Surface expression of Groundwater

High potential GDE – from national assessment

Moderate potential GDE – from national assessment

Low potential GDE – from national assessment

Ecosystems that rely on Subsurface presence of Groundwater

High potential GDE – from regional studies

Moderate potential GDE – from regional studies

Low potential GDE – from regional studies

Groundwater Protection Areas

Aquifer

F
o

P
e

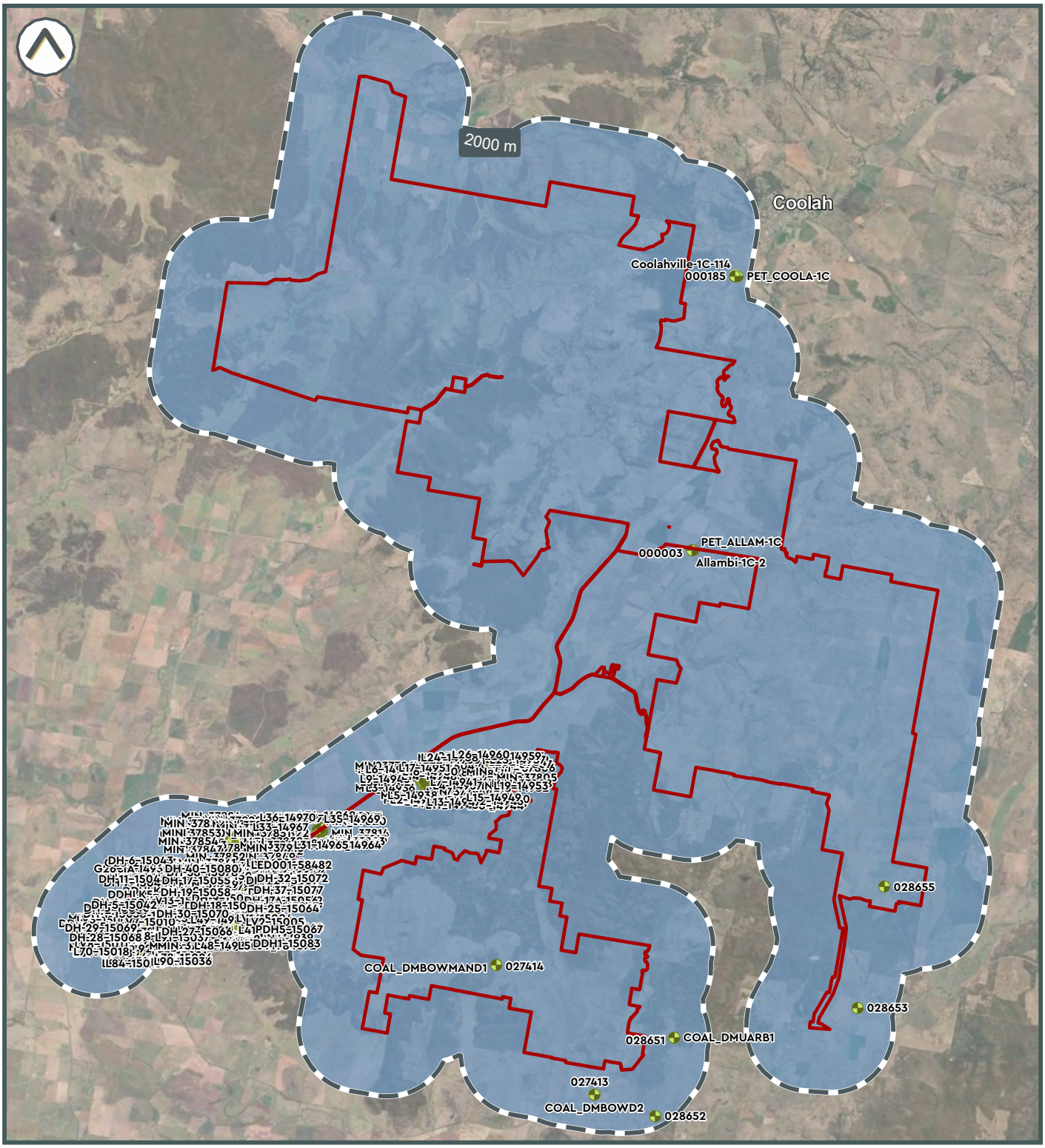
P

0 1,000 2,000 3,000 4,000 5,000m

Land Insight

MAP 2.2

Groundwater and Other Bores



Subject area

Other borehole/monitoring well location

Salinity Class

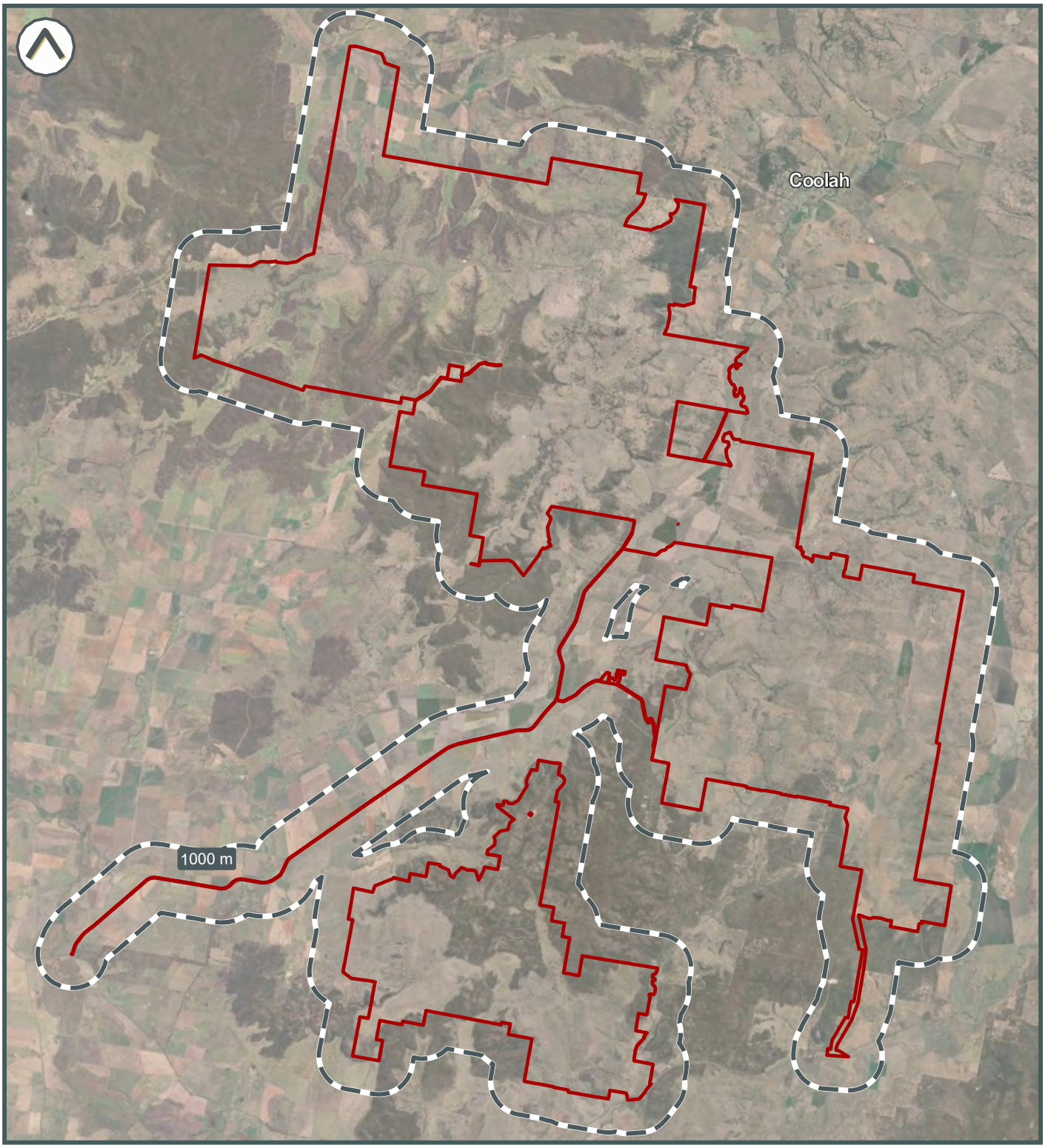
Non-Saline (<3000mg/L)

0 1,000 2,000 3,000 4,000 5,000m

Land Insight

Contaminated Land Public Register

MAP 3.1

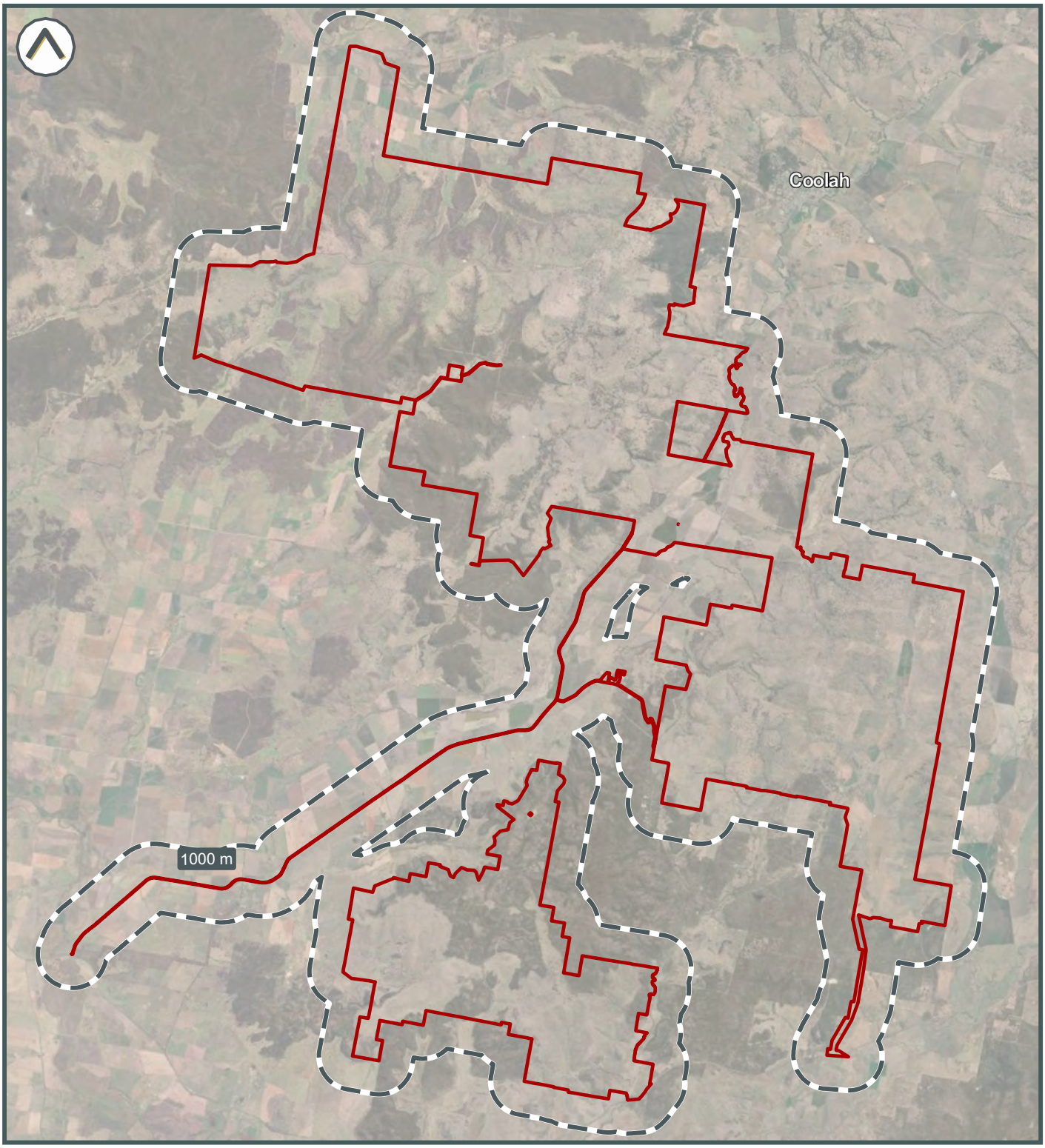


Subject area

0 1,000 2,000 3,000 4,000 5,000m

Land Insight

Licences, Approvals & Assessments



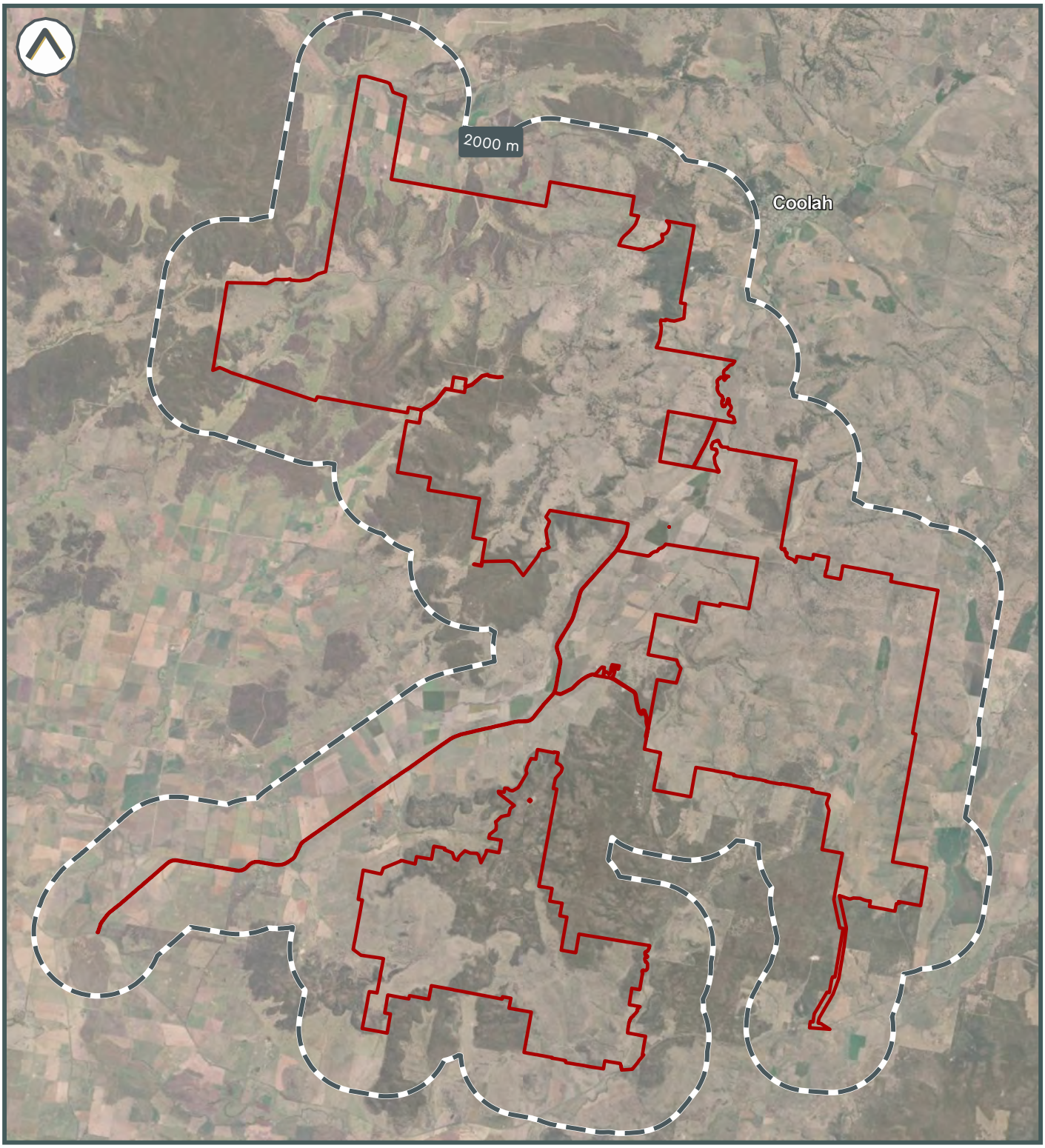
Subject area

0 1,000 2,000 3,000 4,000 5,000m

Land Insight

MAP 3.3a

Sites Regulated by Other Jurisdictional Body



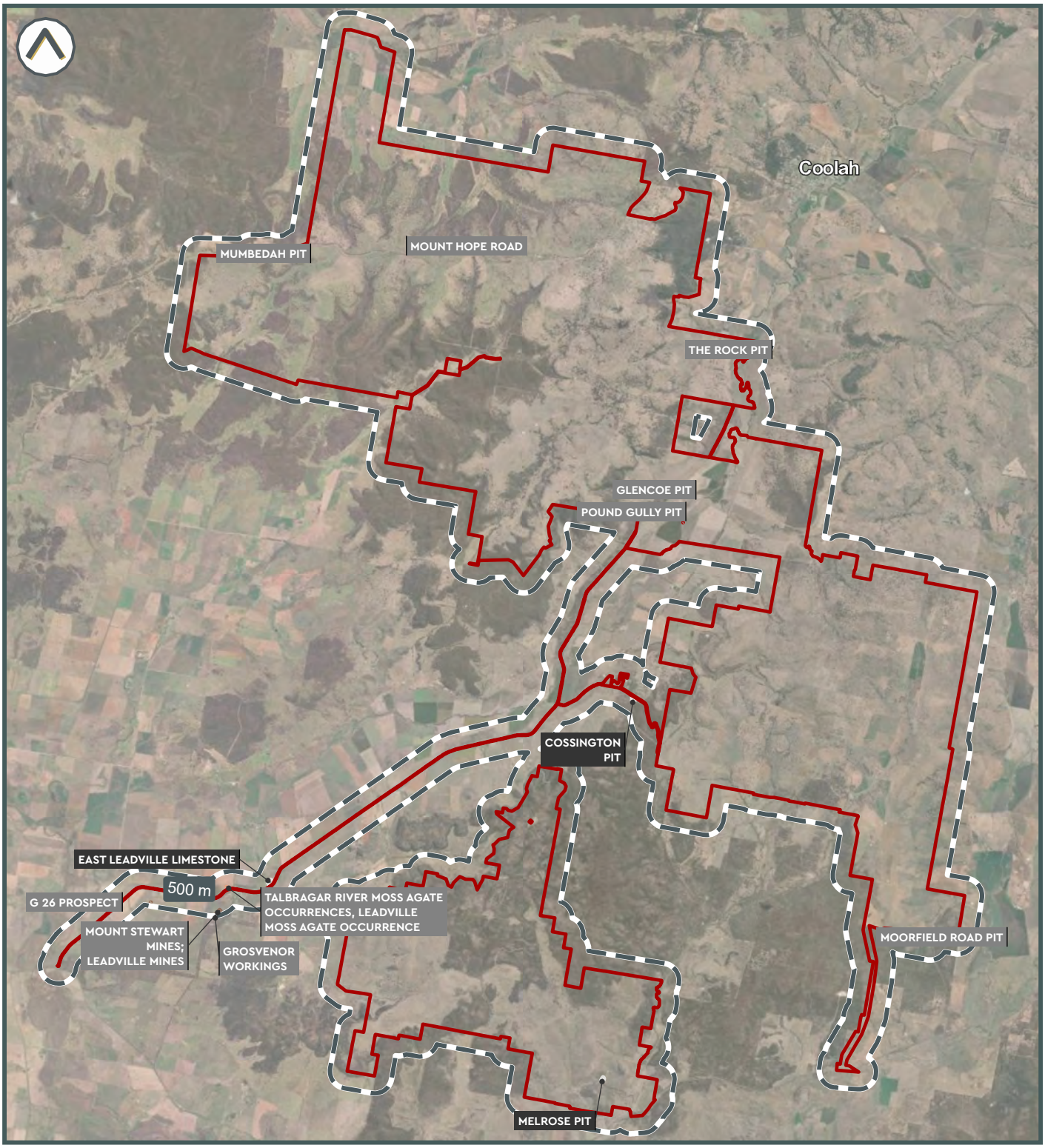
Subject area

0 1,000 2,000 3,000 4,000 5,000m

Land Insight

MAP 3.3b

Other Potential Hazard Sources



Subject area
Mine
Derelict/Abandoned Mines
Quarries
Derelict/Former Quarries

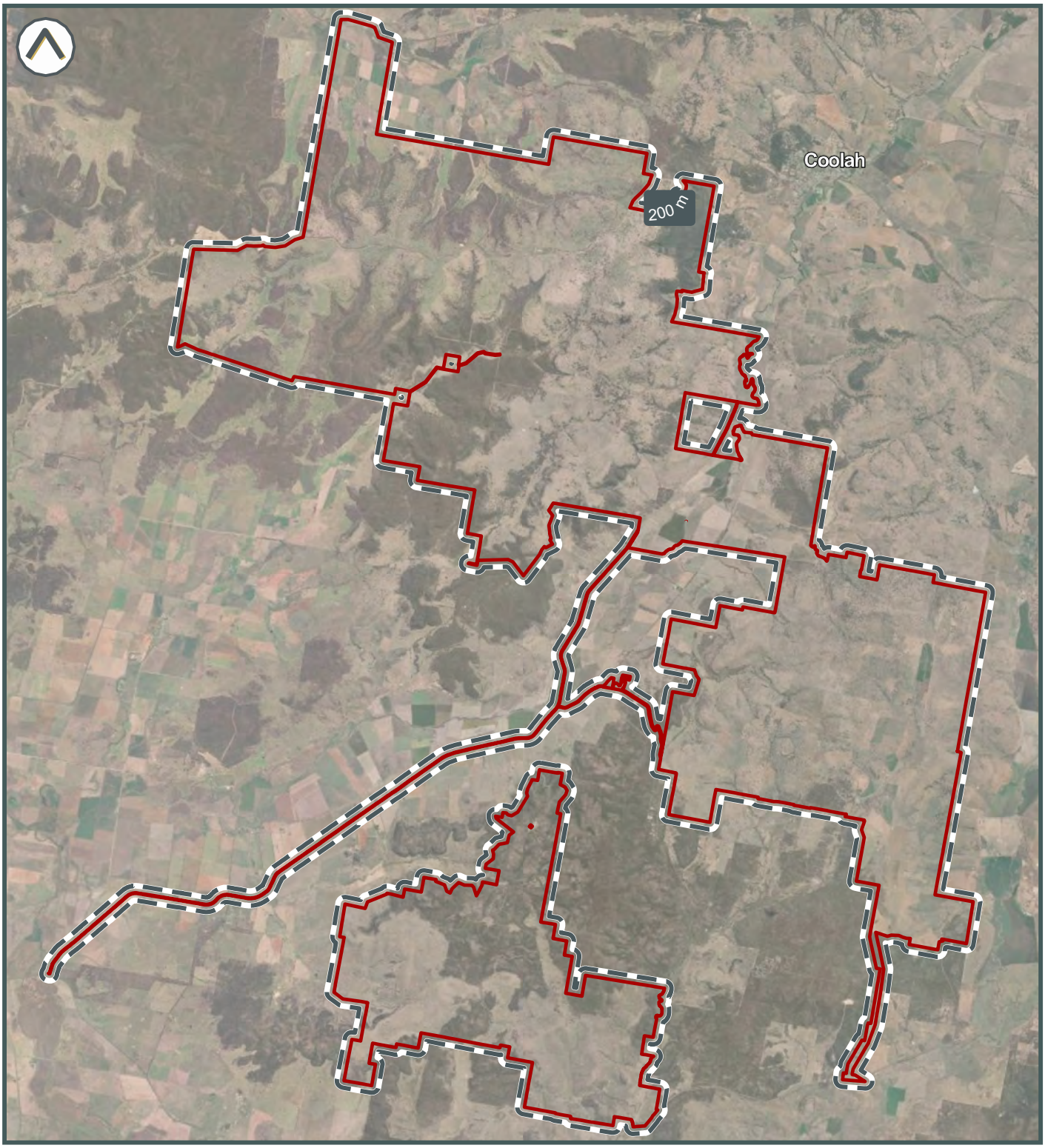
0 1,000 2,000 3,000 4,000 5,000m

Land Insight

POTENTIALLY CONTAMINATED AREAS

Current Potentially Contaminating Activities (PCAs)

MAP 4.1



Subject area

Data is current as when this report was created. However due to the turnover of business locations, some addresses may be former.

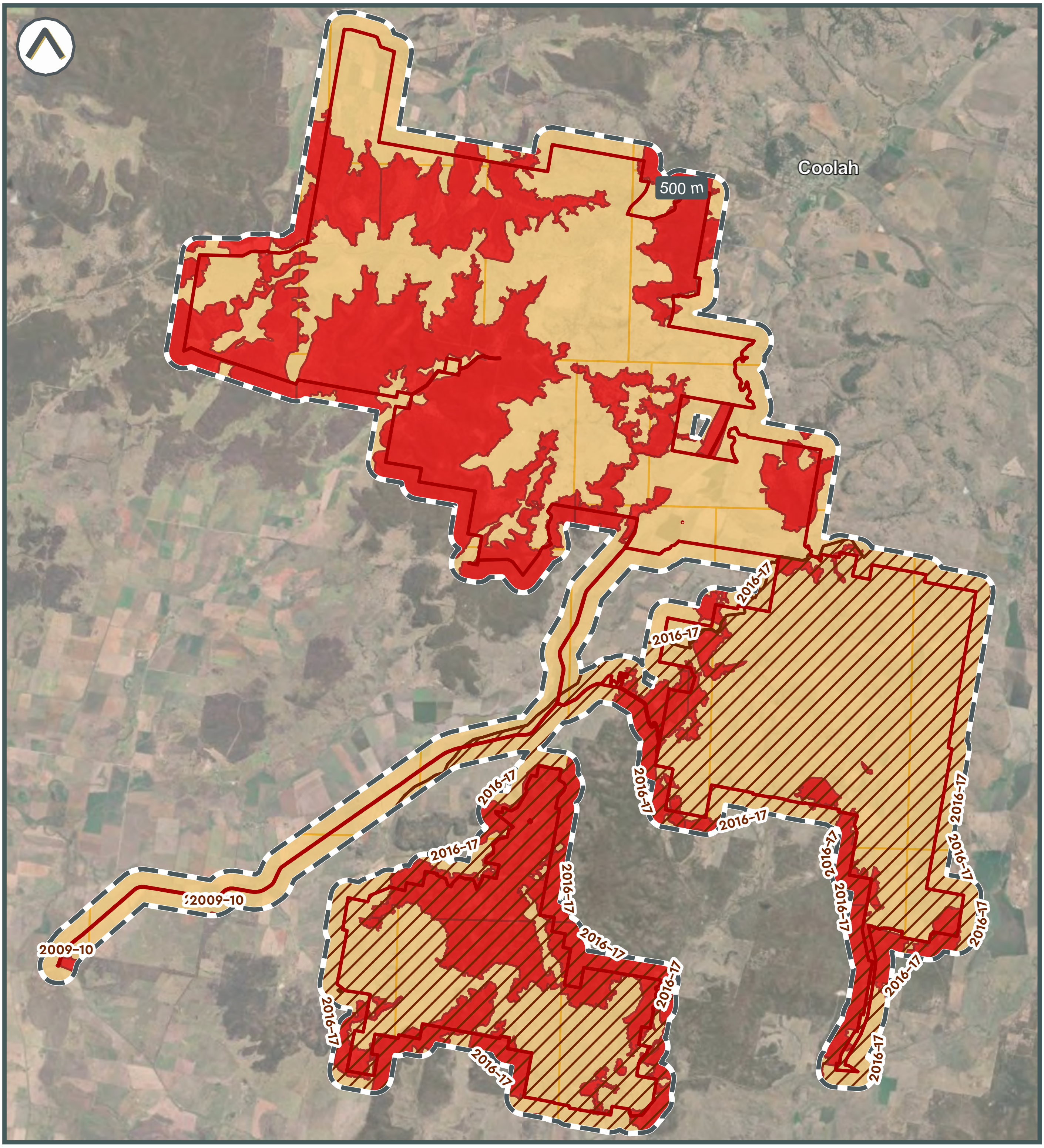
0 1,000 2,000 3,000 4,000 5,000m

Land Insight

NATURAL HAZARDS

Fire Hazards

MAP 5.1



©2025 Land Insight (LI) www.landinsight.co | 23/04/2025 | Data source: Please refer to 'Digital Data Sources' in the Product Guide

Subject area

Fire History

Bushfire Prone Areas

Vegetation Category 1

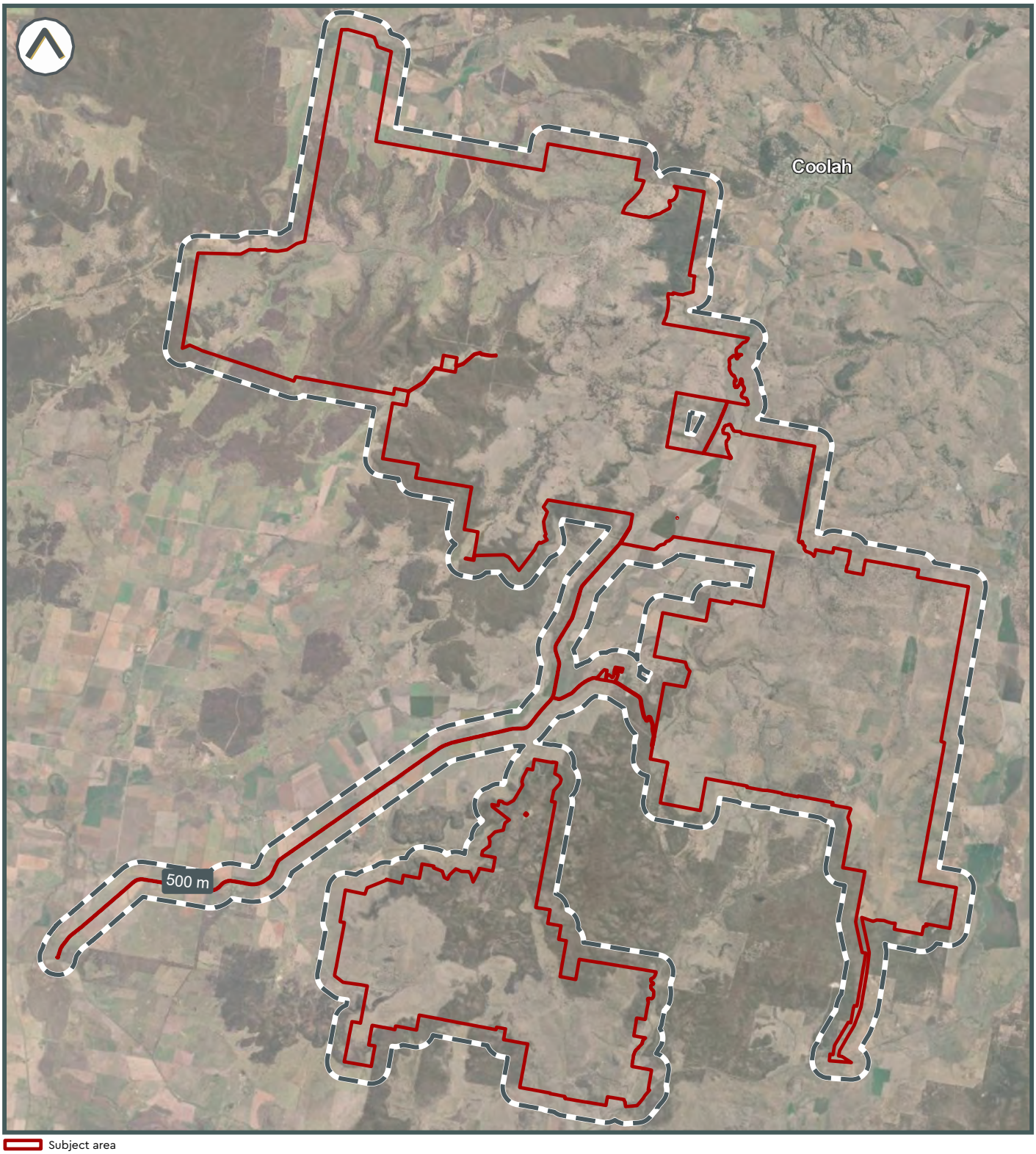
Vegetation Category 2

0 1,000 2,000 3,000 4,000 5,000m

Land Insight

Flood Hazard

MAP 5.2



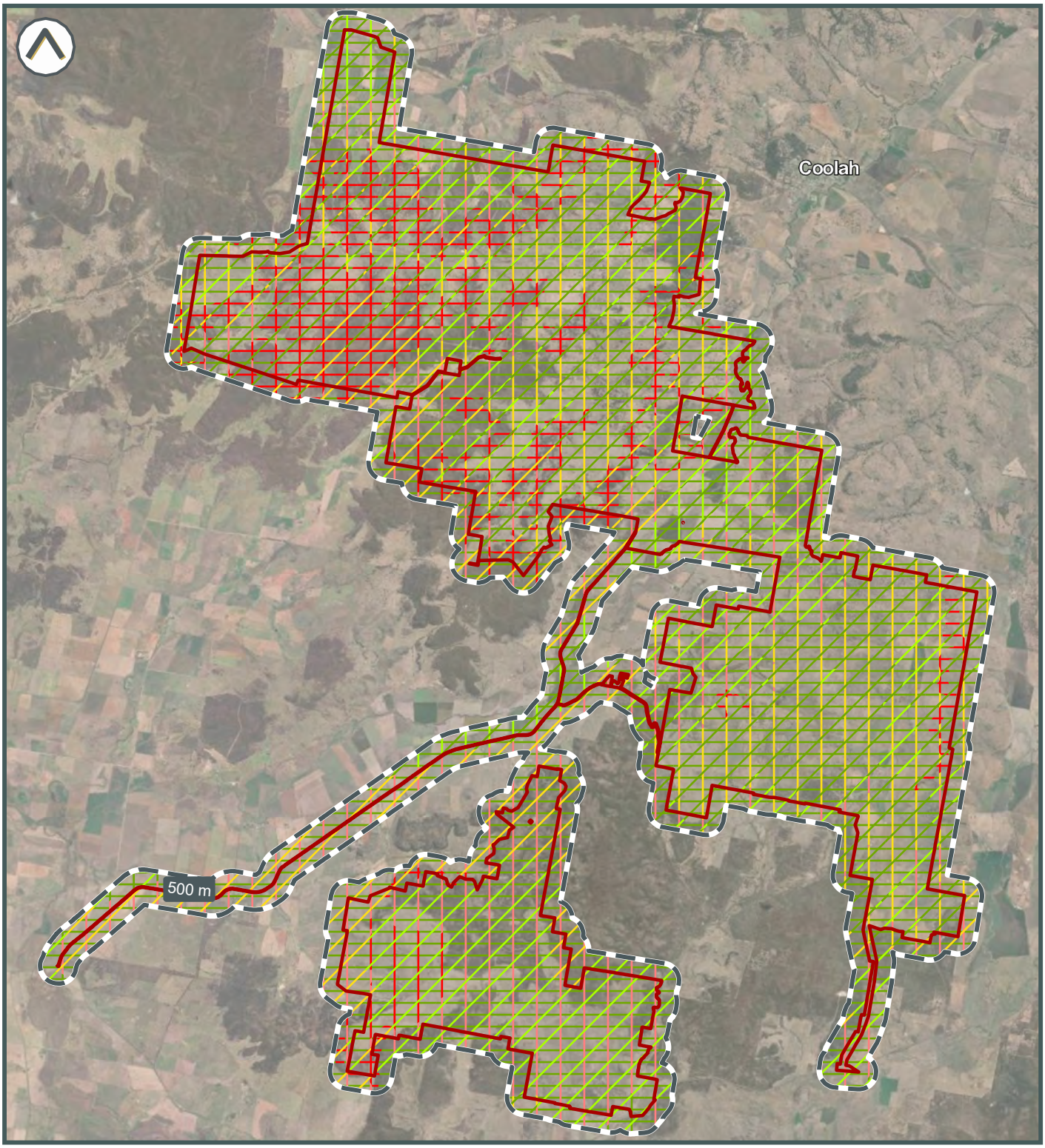
Subject area

0 1,000 2,000 3,000 4,000 5,000m

Land Insight

Erosion Hazard

MAP 5.3



Subject area

Wind Erosion Risk
- Moderate
- Low
- Very Low

Water Erosion Risk
- Very High
- High
- Moderate
- Low
- Very Low

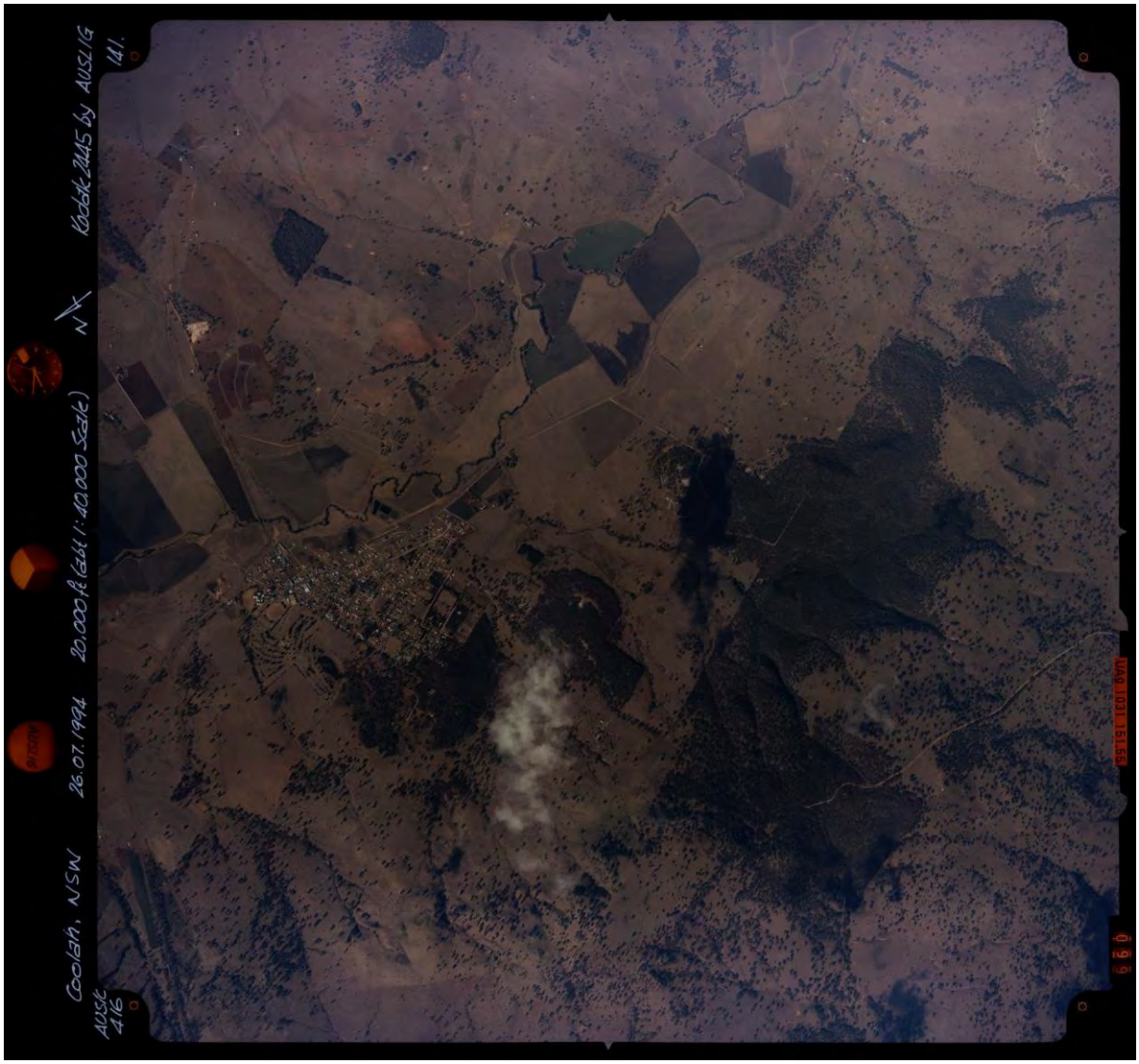
Landslip Erosion Risk
- Very High
- Very Low

0 1,000 2,000 3,000 4,000 5,000m

Land Insight

Land Insight RESOURCES

APPENDIX 4 – HISTORICAL AERIAL PHOTOGRAPHS



1. Historical Aerial Photograph dated 1994 (Australian Government Geoscience Australia, 2024)

2. Historical Aerial Photograph dated 1967 (Australian Government Geoscience Australia, 2024)

3. Historical Aerial Photograph dated 2017 (Australian Government Geoscience Australia, 2024)