



Preliminary Site Investigation

Proposed Braidwood Sand & Gravel Quarry –
Part Lots 332 & 333 DP755418,
552 Larbert Road,
Larbert NSW 2622

Report prepared for – Braidwood Sand and Gravel,
c/- Outline Planning Consultants

21 July 2025
BPE25056-R01

Quality information

Item	Description
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Description	Preliminary Site Investigation – Proposed Expansion Braidwood Sand & Gravel Quarry, 552 Larbert Road, Larbert NSW 2622
Date	21 July 2025
Report Authors	Joel Parkin & Andrew Ballard
Technical Reviewer	Andrew Ballard – Principal Environmental Scientist CEnvP



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21 July 2025

Our ref: BPE25056-R01

Your ref: PO-25-08-001



Braidwood Sand & Gravel,
c/- Outline Planning Consultants Pty Ltd,
[REDACTED]
[REDACTED]

Attention: Gary Peacock – Managing Director,
Outline Planning Consultants

Dear Gary,

RE: Preliminary Site Investigation – Proposed Expansion Braidwood Sand & Gravel Quarry, 552 Larbert Road, Larbert NSW 2622

Ballpark Environmental Pty Ltd is pleased to present the Preliminary Site Investigation (PSI) prepared for the proposed expansion of the Braidwood Sand & Gravel Quarry on part of Lots 332 & 333 DP755418, 552 Larbert Road, Larbert NSW 2622, the site.

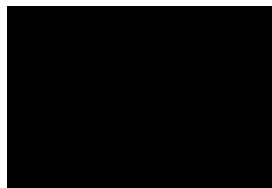
This report details the findings from the PSI, including a site history review and site walkover of the proposed quarry site.

I trust that this report meets with your requirements. If you require further information or assistance, please do not hesitate to contact us on (02) 6658 0585.

For and on behalf of Ballpark Environmental Pty Ltd



Andrew Ballard
Principal Environmental Scientist
Certified Environmental Practitioner



Joel Parkin
Principal Environmental Engineer



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Executive Summary

Braidwood Sand and Gravel is seeking development approval for the expansion of a sand and gravel quarry on the rural property at 552 Larberts Road, Larbert, to extract and process up to 200,000 tonnes per annum of quarry material.

Ballpark Environmental Pty Ltd was engaged to undertake a preliminary site investigation (PSI) for potential site contamination present at this site located on part of Lots 332 & 333 DP755418, at 552 Larbert Road, Larbert NSW 2622, the site, see Figure 1.

The objective of the PSI was to identify past or present potentially contaminating activities performed at this site, provide a preliminary assessment of site contamination and, if required, provide a basis for a more Detailed Site Investigation (DSI).

Based on the site history investigation and site walkover operations we conclude that:

- Disturbance from sand and gravel extractive activities adjacent to the southeast of this site is visible in the 2023 aerial photograph. Prior to this date the historical aerial photographs from the period 1960 to 2020 show no quarrying use and this site has been used for grazing purposes.
- No buildings or structures were constructed on this site and therefore it is unlikely that waste building materials, including asbestos, are present on this site.
- A review of the initial Conceptual Site Model (CSM) prepared for this PSI found no areas of environmental concern have been identified on this site.

As a precaution we recommend that an unexpected fines protocol should be included as part of the quarry Environment Management Plan or as a stand-alone document if potentially contaminated material or buried unexpected finds, are encountered during future quarry earthworks on this site.

In consideration of the results from this PSI we conclude that this site on part of Lots 332 & 333 DP755418, at 552 Larbert Road, Larbert, has an acceptable low level of risk for site contamination and is suitable for its proposed industrial use as a quarry.

The site is assessed to be suitable for its proposed industrial use, in accordance with Chapter 4 of the Resilience and Hazards SEPP (2021).

1. Introduction

Ballpark Environmental Pty Ltd was engaged by Total Project Construction Pty Ltd on behalf of Braidwood Sand & Gravel to undertake a preliminary site investigation (PSI) for the proposed quarry expansion to be developed on part of Lots 332 & 333 DP755418, at 552 Larbert Road, Larbert NSW 2622, the site, see Figure 1.

We understand that the new quarry will extract and process up to 200,000 tonnes per annum of sand and gravel quarry material from this site. The proposed quarry is a designated development under s.4.10 of the *Environmental Planning and Assessment Act 1979* and shall require the preparation of an Environmental Impact Statement (EIS).

This PSI has been undertaken to assess potential contamination issues present at this site and its findings will inform the EIS in preparation for this project.

The PSI was undertaken in general accordance with the proposal prepared by Ballpark Environmental (Ref: BPE25056-P01, dated 28 May 2025).

2. Objective and Scope of Works

The objective of the PSI was to identify past or present potentially contaminating activities performed at this site, provide a preliminary assessment of site contamination and, if required, provide a basis for a more Detailed Site Investigation (DSI).

The scope of works carried out to meet the above objective is summarised below.

- Desktop site history review was undertaken to establish the history of past uses on the site, including what buildings or potentially contaminating activities may have been present and which included:
 - Review of local geology, hydrogeology, topography, and acid sulfate soil risk maps.
 - Review of historical aerial imagery to assess changes in land use or activities on the site over time.
 - Review of registered groundwater bore information held in public registers.
 - Review of contaminated land records held by the NSW Environment Protection Authority.
- A site visit and walkover were undertaken to collect background information on past activities and previous use of the site.
- Preparation of the PSI report to assess potential risk to human health or the environment and if soil contamination was likely to be present and if a more detailed site investigation was recommended for this site.

The following sections of this PSI report present the information collected and findings for the site.

3. Site Identification

3.1. Site Details

The site location and site layout are shown on Figure 1. The site identification details are summarised in Table 1.

Table 1: Summary of Site Details

Detail	Description
Site Address	552 Larbert Road, Larbert NSW 2622, (see Figure 1)
Lot / DP	Part of Lots 332 & 333 DP755418
Easting / Northing	55H 752904 m E, 6087789 m S
Size (Ha)	Quarry site is ~16 ha (see Figure 1).
Quarry Resource	Approximately 1.2 million tonnes
Zoning	RU1 – Primary Production, objectives of RU1 zone are: • To encourage sustainable primary industry production by maintaining and enhancing the natural resource base. • To encourage diversity in primary industry enterprises and systems appropriate for the area. • To minimise the fragmentation and alienation of resource lands. • To minimise conflict between land uses within this zone and land uses within adjoining zones. • To minimise the impact of development on the natural environment. • To ensure development does not reasonably increase the demand for public services or public facilities. Source: Queanbeyan – Palerang Regional Local Environmental Plan 2022
Site Land Use	The proposed quarry site is currently used for grazing purposes and is located about 700 metres to the east of Larbert Road. Currently there is an approved sand & gravel quarry pit operated by Braidwood Sand & Gravel located adjacent to the southeast of this site. There is an internal gravel access road from Larbert Road to the site.
Surrounding Land Use	North, rural grazing land with bushland beyond. The nearest farm shed building is located ~260m to the north of the site on the adjacent Lot 334. East, rural grazing land with scattered trees and bushland beyond. South, rural grazing land and Durran Durra Creek located to the south. A rural residence is located south of this creek and is approximately ~500m from this site. West, rural grazing land and Durran Durra Creek located to the southwest. Larbert Road is located further to the west with the

Detail	Description
Sensitive Receptors	Shoalhaven River beyond and approximately ~1.2km to the west of the proposed quarry site.
	Durran Durra Creek is located ~200m to the south and southwest of the proposed quarry site.

4. Environmental Settings

4.1. Topography & Hydrology

Topographically the proposed quarry site is located on level cleared rural grazing land trending north to south at an elevation of ~590 to ~580m AHD, see photographs 1 & 2. Surface runoff will follow the contours of the site towards the south, and southwest and then to Durran Durra Creek, see photograph 5.

It is noted that the proposed quarry will be designed and constructed so that stormwater is diverted and captured within an onsite sediment basin which will act as a sump collecting and storing runoff. The quarry floor will be angled so that stormwater will drain into this sediment basin.

Durran Durra Creek is the closest permanent waterway and is located downgradient to the south and southwest (~200m) of the proposed quarry site.

Site topography is depicted on map 1.5, refer to Appendix A.

4.2. Geology

The quarry site geology is described as alluvium (mapped as Qa), comprising unconsolidated grey to brown to beige humic micaceous silty clay, quartz lithic silt, fine to medium grained quartz rich to quartz lithic sand, polymictic pebble to cobble gravel (as sporadic lenses), with sporadic palaeosol horizons.

Geology mapping is presented in map 1.5, refer to Appendix A.

No mapped occurrences of acid sulfate soils (ASS) are within the site and ASS are an extremely low probability of occurrence on the site, refer to map 1.4b in Appendix A. Similarly, no naturally occurring asbestos are identified for this site.

4.3. Hydrogeology and Groundwater Use

The hydrogeology within the site comprises of porous, extensive highly productive aquifer systems.

A search of the NSW Department of Primary Industries – Office of State Water records identified 1 licensed groundwater bore within ~2km of the site. Details for this groundwater bore is presented below in Table 2 and the location of this bore, relative to the site, is presented as map 2.1 Appendix A.

Table 2: Licensed Groundwater Bore

Bore ID	Map 2.1 – Bore Number	Authorised purpose	Distance (m)	Direction	Drilled Depth (m)	SWL (m bgs)
GW100322	1	Household	1154.5	S	17.4	NA

Notes:

S – south

SWL – standing water level

m - metres

bgs – below ground surface

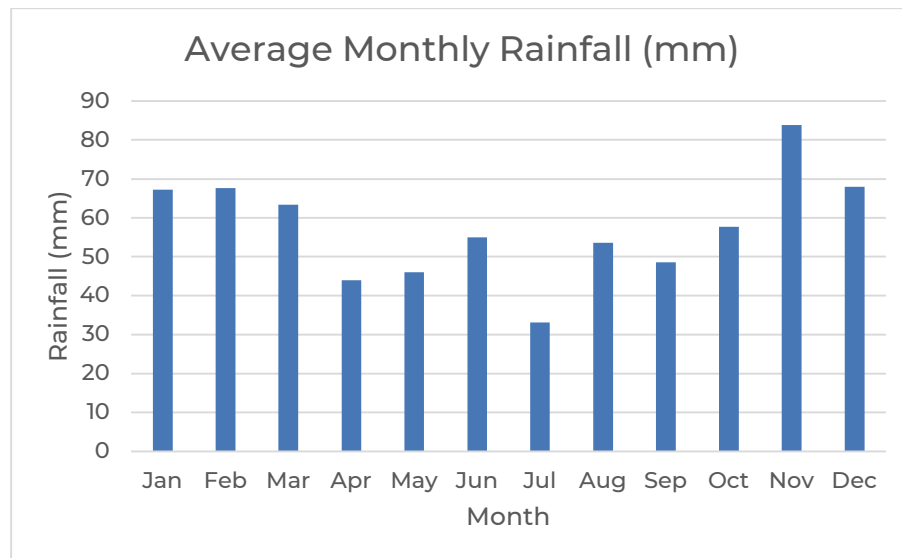
NA – Not applicable

4.4. Climate and Rainfall

The proposed quarry site is in the southern tablelands region approximately 60km east of Canberra and 200km southwest of Sydney. The site is in the Queanbeyan Palerang Regional Council local government area and the closest city is Queanbeyan to the west.

A review of available Bureau of Meteorology (BoM) data shows that the site location is in a cool temperate zone characterised by wetter cool winters, and warm to hot summers. Rainfall is greatest during the winter and spring months, however, may occur at any time of the year.

The local daily rainfall data records for this site were based on the nearby (~14km) BoM station at Braidwood Racecourse AWS (Station 069132) which opened in 1985. The long-term average rainfall data tabulating is shown below in Plot 1. Braidwood has an annual average rainfall of ~690mm.



Plot 1. Summary long-term average rainfall at Braidwood Racecourse AWS (BOM No. #69132)

5. Site History

5.1. NSW EPA Notices

A review of the NSW EPA Contaminated Land Record database revealed that no notices had been issued for the site under the *Environmentally Hazardous Chemicals Act (1985)* or the *Contaminated Land Management Act (1997)* (CLM). A search of the public register under section 308 of the *Protection of the Environment Operations Act (1997)* (POEO) found no licences, applications or notices for this area.

A review of the licences, approvals and assessments identified no notices for the site or within the 1km buffer area of the site.

Search records are provided in sections 3.1 and 3.2 of the environ-screen report provided in Appendix A.

5.2. Aerial photography

Selected publicly available historical aerial photography dating back to 1960 was reviewed for this site, see Appendix A. A summary of the aerial photography review is provided in Table 3.

All historical aerial images are presented in Appendix A with the findings of the review summarised in Table 3 below.

Table 3: Summary of available Aerial Photographs

Year of Photo	Site	Surrounding Area
1960 (Black & White)	No built structures visible within the site. Predominately cleared grazing land with scattered trees. An area of bushland is present to the southeast of the site.	Cleared grazing land with patches of trees surrounds the site, with semi-dense bushland to the northeast of the site. Larbert Road appears to be unsealed gravel and is located to the west of the site. There are several farm buildings about ~880m to the west of the site on Lot 329 DP755915 and west of Durran Durra Creek.
1985	No significant changes from the 1960 imagery.	A gravel farm track has been constructed from Larbert Road which crosses the site and continues to the east. No other significant changes from the 1960 imagery.

Year of Photo	Site	Surrounding Area
1998	No significant changes from the 1985 imagery.	A farm dam has been constructed in a low-lying area to the northwest of the site. An area of ground disturbance is visible to the southeast, possibly associated with the construction of a small farm dam. Additional farm buildings are present to the west on Lot 329. No other significant changes from the 1985 imagery.
2003	No significant changes from the 1998 imagery.	A small farm dam has been constructed to the north of the site. Denser bushland is present to the northeast of the site. No other significant changes to surrounding landuse from the 1998 imagery.
2014	No significant changes from the 2003 imagery.	No significant changes from the 2003 imagery.
2018	No significant changes from the 2014 imagery.	Vegetation appears to be sparser and drier than in the 2014 photograph. Some areas of ground disturbance are visible which may be associated with farm machinery wheel tracks are visible to the east and west of the site. No other significant changes to surrounding landuse from the 2014 imagery.
2020	Vegetation on site now appears to be greener than in the previous 2018 photograph. There are on other significant changes from the 2018 imagery.	No significant changes to surrounding landuse from the 2018 imagery.

Year of Photo	Site	Surrounding Area
2023	A gravel access road has been constructed from Larberts Road which traverses across the site to the current quarry pit. No other significant changes from the 2020 imagery.	A sand quarry pit is now present adjacent to the southeast of the site. Water is visible in the central base of this quarry pit. Earthmoving machinery and equipment are present on the southern side of the quarry. A farm building / shed has been constructed to the north of the site. No other significant changes from the 2020 imagery.

5.3. Interviews

An interview with the property owner, [REDACTED], was undertaken during the site walkover on Wednesday 16 July 2025. The following information was provided:

- [REDACTED] owned the property since circa ~1910 [REDACTED] inherited the property [REDACTED], circa 2008. The farm homestead was constructed about circa ~1920.
- The property has always been used for rural grazing purposes, initially sheep and now cattle.
- No waste materials have been disposed of or buried on this site. We note that this site is located to the north of Durran Durra Creek and the original farm homestead and associated buildings are located on the south side of the creek and nearby to Larbert Road.
- The current sand and gravel quarry located in the southeast of the site commenced recently around ~2022 and the quarry produces sand and gravel cobbles from the alluvial deposits located on this site. The access road from Larbert Road to the current quarry site was also upgraded at this time.

6. Site Walkover Observations

A site walkover was completed by Andrew Ballard, Ballpark Environmental, on the afternoon of Wednesday 16 July 2025, see Table 4 for site walkover photographs.

The site was observed to include the following features:

- No buildings or other structures were present within the site, see photographs 1 and 2.
- Sand & gravel quarrying activities were underway in the adjoining quarry pit to the southeast of the proposed expansion area at the time of the site walkover. An excavator and wheel loader were working in the quarry, and a screening plant was operating, see photograph 3. Several stockpiles of quarry material were present inside the quarry.
- A small area of bushland was present to the east of the proposed quarry site, see photograph 4.
- Durran Durra Creek is the closest permanent waterway to the proposed quarry site and is located to the south and southwest, see photograph 5.
- No evidence of waste disposal was observed on the site during the site walkover. A length of metal guard rail was present beneath a stand of eucalypt trees which are located to the east and outside the site, see photograph 6. [REDACTED] had used this guard rail as an animal feed trough to feed out molasses.
- No visible signs or indicators of contamination, such as oil staining, were observed during the walkover.
- Powerlines cross the site from the south to the north and to the west of the current quarry pit.
- The [REDACTED] homestead (property owner) is the nearest residence to the quarry site and is located ~500m to the west on the other side of Durran Durra Creek and adjacent to Larbert Road, see photograph 7. The nearest dwelling (~900m) that is not associated with the proposed quarry is located to the southwest and west of Larbert Road.
- Beyond the proposed quarry site ~700m to the north on the adjoining property there is a newer farm shed building, see photograph 8.
- The internal gravel access road from Larbert Road was recently upgraded in 2022 from the property boundary with Larbert Road then west to the current quarry location.

Table 4: Site Walkover Photographs

Site Photographs
 Photograph 1, shows the proposed quarry expansion site which is currently used for cattle grazing purposes. Bund walls associated with the current quarry pit are present in the right of the photograph. View is towards the north.

Site Photographs



Photograph 2, shows the proposed quarry expansion site. The current quarry pit is present in the background. View is towards to south east.

Site Photographs



Photograph 3, shows the current quarry operation with screening plant and sand stockpile.



Photograph 4, shows the open bushland area located in the northeast which is excluded from the proposed quarry expansion area, viewed towards the east.

Site Photographs



Photograph 5, shows Durran Durras Creek which is the closest permanent waterway located to the south and southwest of the site, view is towards the south.



Photograph 6, arrow shows a single length of metal guard rail observed beneath a tree in the small bushland area to the east of the site. No other inert waste was found during the site walkover.

Site Photographs



Photograph 7, shows nearest residence to the quarry site which is [REDACTED] residence located ~500m to the west on the other side of Durran Durra Creek and adjacent to Larbert Road, viewed towards the southwest.



Photograph 8, shows farm shed building located on the adjoining property to the north of the site. View is towards the north.

7. Integrity assessment of site history data

The following sources of data were relied upon for this assessment:

- Public registers maintained by the NSW EPA and NSW Department of Planning & Environment;
- Publicly available aerial photography imagery;
- Groundwater bore information maintained by Water NSW;
- Geological and topographical mappings provided by various government departments; and
- Observations made during site walkover.

The historical data assessed was found to be generally adequate, reliable, and suitable, regarding the PSI assessment objective.

8. Conceptual Site Model

A conceptual site model (CSM) is a representation of site related information regarding contamination sources, receptors and exposure pathways between those sources and receptors and is based on each of the elements defined in the *National Environment Protection (Assessment of Site Contamination) Measure 1999 (Amended April 2013)*, ASC NEPM (NEPC 2013).

Based on the findings of the site history review the known or suspected potential sources of soil contamination on this site include:

- Contamination from recent activities associated with the development and operation of the adjacent sand and gravel quarry, including the servicing and maintenance of machinery and equipment, collection and disposal of waste oils, spills and poor handling of waste products which may contribute to soil contamination.
- Contamination from historical poor waste disposal practices associated with rural activities, including on site disposal of inert waste, i.e., scrap metal, tyres, empty containers, glass and household rubbish.

Each of the above is identified as a potential Areas of Environmental Concern (AEC) and Table 5 discusses the plausible pollutant linkages identified between the AEC and any nearby sensitive receptors.

Table 5: Preliminary Conceptual Site Model

Source	Contaminant of Potential Concern & Known Location	Potential Transport Mechanisms	Exposure Pathway	Receptors
Contamination from nearby quarrying operations, servicing and maintenance of plant and equipment	Metals, petroleum hydrocarbons (TRH/BTEXN), and PAH. Affected Media – site soils, potentially groundwater (petroleum hydrocarbons)	Disturbance during future excavations and quarry development works Dispersion via wind Surface water runoff Leaching to groundwater	Dermal contact with soil Inhalation of dust Ingestion of soils	Primary human receptors of concern are future quarry workers during the development and operation of the proposed quarry. Other human receptors include future contractors and visitors to the site.
Contamination from historical poor waste disposal practices associated with rural activities	Inert waste, including disposal of scrap metal, tyres, empty containers, glass and household rubbish. Affected Media – site soils	Disturbance during future excavations and quarry works Surface water runoff Leaching to groundwater	Dermal contact with soil Inhalation of dust Ingestion of soils	Primary human receptors of concern are future quarry workers during the development and operation of the proposed quarry. Other human receptors include future contractors and visitors to the site.

Notes:

CoPC: Contaminants of Potential Concern include metals, including arsenic, cadmium, chromium, copper, lead, mercury, nickel, and zinc; and petroleum hydrocarbons (total recoverable hydrocarbons (TRH), benzene, toluene, ethylbenzene, xylene, naphthalene (BTEXN) compounds) and polycyclic aromatic hydrocarbons (PAH).

9. Site Characterisation

Ballpark Environmental understands based on the information provided by Outline Planning Consultants that the proposed quarry expansion will involve bulk earthworks to remove alluvial sand and gravel deposits using conventional earthmoving equipment at an extraction rate of up to 200,000 tonnes per annum. The quarry resource is estimated to be approximately 1.2 million tonnes.

Screening of the quarry resource will be undertaken to produce road making and construction material. The quarry development will use mobile plant and equipment which will be brought to the quarry when required based on market demand for the resource.

The quarry pit will initially be developed in a series of stages from a west to northwest direction from the existing quarry operation, see Figure 1. The quarry plan will involve excavation of the alluvial sand and gravel deposits to a maximum depth of 5-6m below ground surface.

No inert waste materials were observed during the site walkover of the proposed quarry site. A section of metal guard rail was present beneath a stand of eucalypt trees which are located to the east and outside the site. We understand from discussions with the property owner that this guard rail had previously been used as an animal feed trough.

No evidence of buried waste materials, including asbestos containing materials (ACM), or oil staining were observed on this site. Based on the limited recent development of the adjacent quarry since circa 2022 and that no buildings or structures have been constructed on this site it is unlikely that ACM or buried waste material are present.

The quarry operation on this site will have low ecological values as the site has historically been used for sheep and cattle grazing and has been extensively cleared. We have assumed that the quarry will involve construction of hardstand surfaces and roadways suitable for trucks to enter the quarry and then remove excavated materials. Materials excavated and produced from the quarry may also be stored in a series of temporary stockpiles. Based on this assumption ecological values are not considered relevant for this site.

A review of the initial Conceptual Site Model (CSM) prepared for the PSI identified the following potential risks.

- AEC 1 – potential for soil and groundwater contamination from current quarrying activities, including the servicing and maintenance of machinery and equipment, collection and disposal of waste oils, spills and poor handling of waste products which may contribute to soil contamination.

The current quarry operations only commenced recently, circa ~2022, and earthmoving plant and equipment are mobilised to site as needed on a campaign basis. This also minimise the need for servicing of plant on site due to a lack of suitable workshop facilities. Refuelling of plant and equipment will be undertaken using modern mobile fuel handling equipment. This will avoid the use of metal fuel drums and the requirement to store bulk fuel and oils on this site and minimise potential for spills.

- AEC 2 – Presence of inert waste from historical poor waste disposal practices associated with rural activities, including scrap metal, tyres, empty containers, glass and household rubbish.

No inert waste or evidence of historical disposal of waste materials associated with rural activities was observed on this site. It is unlikely that this site was ever used for waste disposal as it is distant from the property homestead and associated farm buildings which are located to the south and on the other side of Durran Durra Creek. It is noted that if the proposed quarrying expansion is approved the environment protection license to be issued for extractive activities will include enforceable conditions prohibiting the disposal of any waste generated by the quarry operations on this site.

The initial Conceptual Site Model (CSM) prepared for this PSI identified a potential risk from the presence of inert waste materials on this site. Based on the assessment of the risk provided above the CSM has been refined and there is an acceptable level of risk for the use of this site for proposed quarrying purposes.

10. Conclusions & Recommendations

This PSI was undertaken to provide a preliminary assessment of site contamination, and, if necessary, to provide a basis for a more Detailed Site Investigation (DSI) associated with the proposed quarry expansion on part of Lots 332 & 333 DP755418, at 552 Larbert Road, Larbert NSW 2622, the site, see Figure 1.

In summary, the site history investigation and site walkover operations completed for this PSI shows that potential sources of site contamination associated with past use include:

- Disturbance from sand and gravel extractive activities adjacent to the southeast of this site is visible in the 2023 aerial photograph. Prior to this date the historical aerial photographs from the period 1960 to 2020 show no quarrying use and this site has been used for grazing purposes.
- No buildings or structures were constructed on this site and therefore it is unlikely that waste building materials, including asbestos, are present on this site.
- A review of the initial Conceptual Site Model (CSM) prepared for this PSI found no areas of environmental concern have been identified on this site.

As a precaution we recommend that an unexpected fines protocol should be included as part of the quarry Environment Management Plan or as a stand-alone document if potentially contaminated material or buried unexpected finds, are encountered during future quarry earthworks on this site.

In consideration of the results from this PSI we conclude that this site on part of Lots 332 & 333 DP755418, at 552 Larbert Road, Larbert, has an acceptable low level of risk for site contamination and is suitable for its proposed industrial use as a quarry.

The site is assessed to be suitable for its proposed industrial use, in accordance with Chapter 4 of the Resilience and Hazards SEPP (2021).

11. References

Australian Standard (2005). *Guide to the Sampling and Investigation of Sites with Potentially Contaminated Soil. Part 1: Non volatile and Semi volatile Compounds.* AS4482.1-2005.

Queanbeyan–Palerang Regional Council (2022). *Queanbeyan-Palerang Regional Local Environmental Plan 2022.* Queanbeyan-Palerang Regional Council, Queanbeyan

NEPC (2013). *National Environmental Protection (Assessment of Site Contamination) Measure 1999 (amended 2013)* (ASC NEPM). National Environmental Protection Council, Canberra

NSW EPA (2017). *Contaminated Land Management: Guidelines for the NSW Site Auditor Scheme (3rd Edition).* Environment Protection Authority NSW, Sydney

NSW EPA. (2015). *Guidelines on the Duty to Report Contamination under the Contaminated Land Management Act 1997.* Environment Protection Authority NSW, Sydney

NSW EPA (2020). *Contaminated Sites: Guidelines for Consultants Reporting on Contaminated Sites.* Environmental Protection Authority NSW, Sydney
State Environmental Planning Policy (Resilience and Hazards) 2021

12. Limitations

Preliminary information is not readily available on the early history of the site and therefore, some site activities may not have been identified. We cannot preclude that potentially contaminating activities took place during these periods. Allowances for uncertainties and potential unexpected finds should be made during planning and development phases.

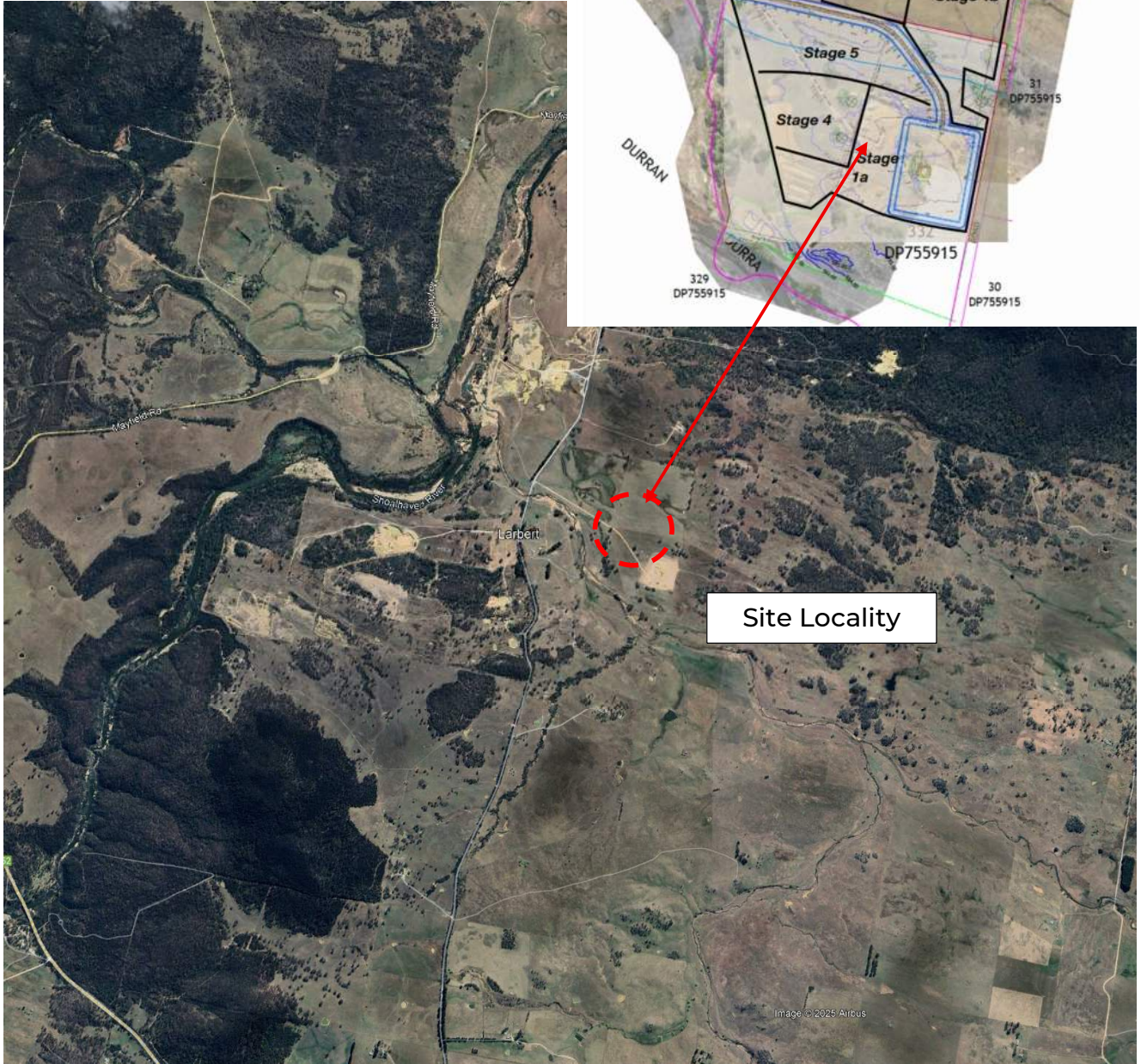
It is the nature of contaminated site investigations that the degree of variability in site conditions cannot be known completely, and no sampling and analysis program can eliminate all uncertainty concerning the condition of the site. Professional judgement must be exercised in the collection and interpretation of the data.

In preparing this report, current guidelines for assessment and management of contaminated land were followed. This work has been conducted in good faith in accordance with Ballpark Environmental understanding of the client's brief and general accepted practice for environmental consulting.

The PSI report was prepared for Braidwood Sand & Gravel with the objectives to identify past or present potentially contaminating activities performed at this site, provide a preliminary assessment of site contamination and, if required, provide a basis for a more Detailed Site Investigation (DSI). The site for the PSI was part of Lots 332 & 333 DP755418, at 552 Larbert Road, Larbert NSW 2622, the site, see Figure 1.

No warranty, expressed or implied, is made as to the information and professional advice included in this report. Anyone relying on this document with reference to a particular development concept does so at their own risk and should satisfy themselves concerning its applicability and, where necessary, should seek expert advice in relation to the particular situation.

Figure



Source: Google Earth 2025 &
Outline Planning Consultants 2025

Client:	Braidwood Sand & Gravel	BALLPARK ENVIRONMENTAL	Drawn:	JP
Project:	Preliminary Site Investigation – Proposed Braidwood Sand & Gravel Quarry		Approved:	AB
Title:	Site Locality Plan		Date:	21 July 2025
project no:	BPE25056-R01		Scale:	NTS
Figure no:		Figure 1	Original Size:	A4

Appendix A

Site History



Enviro-Screen Report

Larbert Rd
Larbert, NSW

23 Jun 2025

Report n°:
LI-4878 ESR

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 [REDACTED]

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.

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Report Summary

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

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ATTACHMENTS

- Appendix A - Report Maps
- Appendix B - Historical Imagery



Section 1 Property Setting

1.1 Sensitive Receptors and Features of Interest

Map 1.1 (200m Buffer)

Sensitive receptor	Type	Distance (m)	Direction
Watercourse	Watercourse	0.0	Onsite
Durran Durra Creek	Watercourse	115.6	South-west

Source: [Sensitive Receptors](#)

1.2a Planning Controls

Map 1.2a (500m Buffer)

Zoning

Zoning	Type	Details	Distance (m)	Direction
RU1	Primary Production	Queanbeyan-Palerang Regional Local Environmental Plan 2022	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
Drinking Water Catchment	Drinking Water	Queanbeyan-Palerang Regional Local Environmental Plan 2022	0.0	Onsite
10-10.9	Maximum Building Height (m)	Queanbeyan-Palerang Regional Local Environmental Plan 2022	0.0	Onsite
Land Application	SEPP Land Application	State Environmental Planning Policy (Resilience and Hazards) 2021	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
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 (Transport and Infrastructure) 2021	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 (Exempt and Complying Development Codes) 2008	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 (Primary Production) 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 (Housing) 2021	0.0	Onsite
Excluded	Allowable Clearing	State Environmental Planning Policy (Biodiversity and Conservation) 2021	0.0	Onsite
Included	Land Application	Queanbeyan-Palerang Regional Local Environmental Plan 2022	0.0	Onsite
Land Application	SEPP Land Application	State Environmental Planning Policy (Sustainable Buildings) 2022	0.0	Onsite
Biodiversity	Biodiversity	Queanbeyan-Palerang Regional Local Environmental Plan 2022	0.0	Onsite
Dual Occupancy, 20000 m2	Secondary Dwelling and Dual Occupancy	Queanbeyan-Palerang Regional Local Environmental Plan 2022	0.0	Onsite
10-49.9	Minimum Lot Size (sq m)	Queanbeyan-Palerang Regional Local Environmental Plan 2022	0.0	Onsite
40%	Minimum Water Use Standard (%)	State Environmental Planning Policy (Sustainable Buildings) 2022	0.0	Onsite
Watercourse	Watercourses	Queanbeyan-Palerang Regional Local Environmental Plan 2022	75.8	South-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

Map 1.3 (200m Buffer)

State and Local Heritage Registers

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

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
AEoo	Oorong	Aeolian	Landscape—undulating aeolian sand dunes and sheets overlying granitic rock. Local relief 10–40 m between 580 and 720 m elevation. Dunes are 1–10 m high, up to 60 m long and orientated WNW. Extensively cleared open-forest to woodland. Soils—moderately deep (approx. 120 cm), rapidly drained Siliceous Sands (Uc1.21, Uc1.23) on dunes, midslopes and lower slopes. Shallow (<40 cm), rapidly drained Earthy Sands (Uc5.23) near granitic rock outcrops. Moderately deep (<120 cm), moderately well to imperfectly drained Yellow Podzolic Soils (Dy2.41) on upper slopes. Moderately deep to deep, poorly to very poorly drained Alluvial Soils (NSG), Gleyed Podzolic Soils (Dg1.42, Dg2.42, Dy3.42) and Humic Gleys (Dg2.82, Dy5.82) on drainage lines. Qualities and Limitations—wind erosion hazard and non-cohesive soils with localised waterlogging. Soil limitations include acidity, low wet bearing strength, infertility, sodicity and moderate shrink-swell.	0.0	Onsite
ALlab	Larbert Variant B	Alluvial	Landscape—flat to gently undulating floodplain on Quaternary alluvium. Local relief <20 cm, usually <10 m between 550 and 600 m elevation. Extensively cleared woodland. Landscape Variant—laa—less frequently flooded and higher rural land capability (Class III). Landscape Variant—lab—loose sand and some gravel. Landscape Variant—lac—swamp. Soils—moderately deep to deep (80–150 cm), poorly drained Solodic Soils (Dy2.43) on old terraces. Moderately deep to deep (70–100 cm), moderately well-drained Non-calcic Brown Soils (Db1.42, Dr2.22) and Prairie Soils (Gn3.45) on younger terraces. Moderately deep to very deep (>100 cm), poorly to very poorly drained Alluvial Soils (NSG) along drainage depressions and backswamps. Deep to very deep (>120 cm), well-drained Alluvial Soils (NSG) on floodplain. Qualities and Limitations—flood hazard, seasonal waterlogging, wind erosion hazard, foundation hazard and run-on with localised non-cohesive soils and waterlogging.	0.0	Onsite
REbw	Braidwood	Residual	Landscape—undulating rises on granites. Local relief up to 30 m between 600 and 750 m elevation. Slopes are long (>300 m), waning and have inclinations of 0–15%. Occasional rock outcrops as tors. Cleared woodland. Landscape Variant—bwa—areas with more than 30% rock outcrop as tors. Soils—shallow (<15 cm), rapidly drained Earthy Sands (Uc5.22), Lithosols (Uc1.13) and Siliceous Sands (Uc2.21) and shallow to moderately deep, moderately well-drained Non-calcic Brown Soils (Dr2.22, Dr3.22) on crests and upper slopes. Moderately deep (<100 cm), moderately well to poorly drained Yellow Podzolic Soils (Dy3.22, Dy3.21, Dy2.22, Db2.22) on	407.3	South

Code	Name	Soil Group	Description	Distance (m)	Direction
			sideslopes. Moderately deep to deep (>80 cm), poorly drained Solodic Soils (Dy3.43, Dy3.42, Dy3.22) on lower slopes. Poorly drained Black Earths (Ug5.14), Solodic Soils (Dy3.43) and Alluvial Soils (NSG) of variable depth on drainage lines. Qualities and Limitations—localised waterlogging, permanently high watertables, seasonal waterlogging, water erosion hazard, low wet bearing strength, wind erosion hazard, seepage scalds, rock outcrop and run-on. Soils are infertile and locally shallow and non-cohesive. Topsoils are acid with high potential aluminium toxicity and high permeability. Subsoils are sodic and highly erodible.		
ALla	Larbert	Alluvial	Landscape— flat to gently undulating floodplain on Quaternary alluvium. Local relief <20 (usually <10 m); elevation 550 - 600 m. Extensively cleared woodland. Soils— moderately deep to deep (80 - 150 cm), moderately well-drained Red Kandosols (Red Earths) and poorly drained Sodosols (Solodic Soils) on old terraces. Moderately deep to deep (70 - 100 cm), moderately well-drained Brown Chromosols (Noncalcic Brown Soils) and Dermosols (Prairie Soils) on younger terraces. Moderately deep to very deep (>100 cm), poorly to very poorly drained Stratic Rudosols (Alluvial Soils) along drainage depressions and back swamps. Deep to very deep (>120 cm), well-drained Stratic Rudosols (Alluvial Soils) on floodplain. Limitations— flood hazard; wind erosion hazard; foundation hazard; run-on; localised non-cohesive soils; waterlogging.	498.9	West

Source: [Soil Landscape](#)

Salinity

Salinity Hazard	Type	Details	Distance (m)	Direction
Low	Hydrogeological Landscapes	Braidwood 1:100 000 Hydrogeological Landscapes	0.0	Onsite
Very Low	Hydrogeological Landscapes	Braidwood 1:100 000 Hydrogeological Landscapes	59.0	South-east

Source: [Soil Salinity](#)

Radon

Radon Level (Bq/m ³)	Distance (m)	Direction
21	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	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
Braidwood 1:100 000 Geological Sheet (2nd edition)	Dabb_h	Braidwood Granodiorite	Pragian (base) to Pragian (top)	Braidwood Suite	Granodiorite	Grey, white to pink, medium-grained, massive, hornblende-phyric, hornblende ± pyroxene granodiorite High magnetic susceptibility, high potassium response.	0.0	Onsite
Eastern Lachlan Orogen version 2 - digital dataset	Dabb_h	Braidwood Granodiorite	Pragian (base) to Pragian (top)	Braidwood Suite	Granodiorite	Grey, white to pink, medium-grained, massive, hornblende-phyric, hornblende ± pyroxene granodiorite High magnetic susceptibility, high potassium response.	0.0	Onsite
Braidwood 1:100 000 Geological Sheet (2nd edition)	Q_a	Null	Quaternary (base) to Now (top)	Alluvium	Clastic sediment	Unconsolidated grey to brown to beige humic (±)micaceous silty clay, quartz-(±)lithic silt, fine- to medium-grained quartz-rich to quartz-lithic sand, polymictic pebble to cobble gravel (as sporadic lenses); sporadic palaeosol horizons.	0.0	Onsite
Eastern Lachlan Orogen version 2 - digital dataset	Q_a	Null	Quaternary (base) to Now (top)	Alluvium	Clastic sediment	Unconsolidated grey to brown to beige humic (±)micaceous silty clay, quartz-(±)lithic silt, fine- to	0.0	Onsite

Map Sheet	Code	Formation	Age	Group	Dominant Lithology	Description	Distance (m)	Direction
						medium-grained quartz-rich to quartz-lithic sand, polymictic pebble to cobble gravel (as sporadic lenses); sporadic palaeosol horizons.		
Braidwood 1:100 000 Geological Sheet (2nd edition)	GN_aa	Alluvial sediments	Paleogene (base) to Pleistocene (top)	Alluvium	Clastic sediment	Alluvial deposits, dominantly sand & gravel; friable to unconsolidated, or cemented to sandstone or conglomerate. Massive to bedded, ranging from thin to very thick; horizontal to cross bedded. Includes some lacustrine deposits & sub-basaltic sediments.	302.0	South-west
Eastern Lachlan Orogen version 2 - digital dataset	GN_aa	Alluvial sediments	Paleogene (base) to Pleistocene (top)	Alluvium	Clastic sediment	Alluvial deposits, dominantly sand & gravel; friable to unconsolidated, or cemented to sandstone or conglomerate. Massive to bedded, ranging from thin to very thick; horizontal to cross bedded. Includes some lacustrine deposits & sub-basaltic sediments.	302.0	South-west
Braidwood 1:100 000 Geological Sheet (2nd edition)	Q_c	Null	Quaternary (base) to Now (top)	Colluvium	Clastic sediment	Poorly sorted, weakly cemented to unconsolidated colluvial lenses of polymictic conglomerate with medium-to very coarse-grained sand matrix; interspersed with unconsolidated clayey and silty	435.6	South

Map Sheet	Code	Formation	Age	Group	Dominant Lithology	Description	Distance (m)	Direction
						red-brown (aeolian) sand layers, modified by pedogenesis.		
Eastern Lachlan Orogen version 2 - digital dataset	Q_c	Null	Quaternary (base) to Now (top)	Colluvium	Clastic sediment	Poorly sorted, weakly cemented to unconsolidated colluvial lenses of polymictic conglomerate with medium- to very coarse-grained sand matrix; interspersed with unconsolidated clayey and silty red-brown (aeolian) sand layers, modified by pedogenesis.	435.6	South

Source: [Geology](#)

Naturally Occurring Asbestos Potential (NOA)

Category	On the Property?	Within Buffer?
Not identified	-	-

Source: [Naturally Occurring Asbestos NOA](#)

Topography

Topography (Onsite)	580 mAHD
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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	643.1	South-east

Source: [Groundwater Aquifers](#)

Groundwater Protection Areas

Name	Water Plan Area	Distance (m)	Direction
Not identified	-	-	-

Source: [Groundwater Protection Areas and Groundwater Restricted Use Zones](#)

Wetlands

Name	Description	Distance (m)	Direction
Shoalhaven River	Floodplain water body	1701.1	West

Source: [Wetlands](#)

Groundwater Dependent Ecosystems (GDE) - Aquatic (Surface)

Potential	Distance (m)	Direction
High potential GDE - from national assessment	104.3	South-west

Potential	Distance (m)	Direction
Moderate potential GDE - from national assessment	846.7	North
Low potential GDE - from national assessment	1701.4	West

Aquatic - Ecosystems that rely on the Surface expression of groundwater.

Source: [Groundwater Dependent Ecosystems](#)

Groundwater Dependent Ecosystems (GDE) - Terrestrial (Subsurface)

Potential	Distance (m)	Direction
Low potential GDE - from regional studies	256.2	East
Moderate potential GDE - from regional studies	291.3	South-east
High potential GDE - from regional studies	739.3	South

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	Yield (L/s)	Distance (m)	Direction
1	GW100322	Household	09/02/1993	17.4	17.4	Null	Good	0.4	1154.5	South

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
GW100322	0m-0.9m Loam sand 0.9m-3m Clay 3m-11m Decomposed granite 11m-17.4m Granite		1154.5	South

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
No Data	No Data	Sinclair Knight Merz	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
Not identified	-	-	-	-	-	-	-

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
4022	No longer in force	FORESTRY CORPORATION OF NEW SOUTH WALES	FORESTRY CORPORATION OF NEW SOUTH WALES	WITHIN THE SOUTHERN REGION DEPICTED ON FIGURE 3 , BATEMANS BAY, NSW 2536	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.

*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
1532683	Compliance Audit	FORESTRY CORPORATION OF NEW SOUTH WALES	SOUTHERN REGION (S.R.) MEANS THE STATE FORESTS AND CROWN - TIMBER LANDS (EXCLUDING PLANTATIONS)	SOUTHERN REGION (S.R.) MEANS THE STATE FORESTS AND CROWN - TIMBER LANDS (EXCLUDING PLANTATIONS)	Logging operations	Not mapped	Not mapped
1532684	Compliance Audit	FORESTRY CORPORATION OF NEW SOUTH WALES	SOUTHERN REGION (S.R.) MEANS THE STATE FORESTS AND CROWN - TIMBER LANDS (EXCLUDING PLANTATIONS)	SOUTHERN REGION (S.R.) MEANS THE STATE FORESTS AND CROWN - TIMBER LANDS (EXCLUDING PLANTATIONS)	Logging operations	Not mapped	Not mapped
1532686	Compliance Audit	FORESTRY CORPORATION OF NEW SOUTH WALES	SOUTHERN REGION (S.R.) MEANS THE STATE FORESTS AND CROWN - TIMBER LANDS (EXCLUDING PLANTATIONS)	SOUTHERN REGION (S.R.) MEANS THE STATE FORESTS AND CROWN - TIMBER LANDS (EXCLUDING PLANTATIONS)	Logging operations	Not mapped	Not mapped
1532687	Compliance Audit	FORESTRY CORPORATION OF NEW SOUTH WALES	SOUTHERN REGION (S.R.) MEANS THE STATE FORESTS AND CROWN - TIMBER LANDS (EXCLUDING PLANTATIONS)	SOUTHERN REGION (S.R.) MEANS THE STATE FORESTS AND CROWN - TIMBER LANDS (EXCLUDING PLANTATIONS)	Logging operations	Not mapped	Not mapped

Nº	Type	Licence holder	Location Name	Premise Address	Activity	Dist. (m)*	Direction
1533556	Compliance Audit	FORESTRY CORPORATION OF NEW SOUTH WALES	SOUTHERN REGION (S.R.) MEANS THE STATE FORESTS AND CROWN - TIMBER LANDS (EXCLUDING PLANTATIONS)	SOUTHERN REGION (S.R.) MEANS THE STATE FORESTS AND CROWN - TIMBER LANDS (EXCLUDING PLANTATIONS)	Logging operations	Not mapped	Not mapped
1539518	Compliance Audit	FORESTRY CORPORATION OF NEW SOUTH WALES	SOUTHERN REGION (S.R.) MEANS THE STATE FORESTS AND CROWN - TIMBER LANDS (EXCLUDING PLANTATIONS)	SOUTHERN REGION (S.R.) MEANS THE STATE FORESTS AND CROWN - TIMBER LANDS (EXCLUDING PLANTATIONS)	Logging operations	Not mapped	Not mapped
1550763	Compliance Audit	FORESTRY CORPORATION OF NEW SOUTH WALES	SOUTHERN REGION (S.R.) MEANS THE STATE FORESTS AND CROWN - TIMBER LANDS (EXCLUDING PLANTATIONS)	SOUTHERN REGION (S.R.) MEANS THE STATE FORESTS AND CROWN - TIMBER LANDS (EXCLUDING PLANTATIONS)	Logging operations	Not mapped	Not mapped
1550761	Compliance Audit	FORESTRY CORPORATION OF NEW SOUTH WALES	SOUTHERN REGION (S.R.) MEANS THE STATE FORESTS AND CROWN - TIMBER LANDS (EXCLUDING PLANTATIONS)	SOUTHERN REGION (S.R.) MEANS THE STATE FORESTS AND CROWN - TIMBER LANDS (EXCLUDING PLANTATIONS)	Logging operations	Not mapped	Not mapped
1568274	Compliance Audit	FORESTRY CORPORATION OF NEW SOUTH WALES	SOUTHERN REGION (S.R.) MEANS THE STATE FORESTS AND CROWN - TIMBER LANDS (EXCLUDING PLANTATIONS)	SOUTHERN REGION (S.R.) MEANS THE STATE FORESTS AND CROWN - TIMBER LANDS (EXCLUDING PLANTATIONS)	Logging operations	Not mapped	Not mapped
1568275	Compliance Audit	FORESTRY CORPORATION OF NEW SOUTH WALES	SOUTHERN REGION (S.R.) MEANS THE STATE FORESTS AND CROWN - TIMBER LANDS (EXCLUDING PLANTATIONS)	SOUTHERN REGION (S.R.) MEANS THE STATE FORESTS AND CROWN - TIMBER LANDS (EXCLUDING PLANTATIONS)	Logging operations	Not mapped	Not mapped
1583925	Compliance Audit	FORESTRY CORPORATION OF NEW SOUTH WALES	SOUTHERN REGION (S.R.) MEANS THE STATE FORESTS AND CROWN - TIMBER LANDS	SOUTHERN REGION (S.R.) MEANS THE STATE FORESTS AND CROWN - TIMBER LANDS (EXCLUDING PLANTATIONS)	Logging operations	Not mapped	Not mapped

N°	Type	Licence holder	Location Name	Premise Address	Activity	Dist. (m)*	Direction
			(EXCLUDING PLANTATIONS)				

*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
1528991	Clean Up Notice	FORESTRY CORPORATION OF NEW SOUTH WALES	SOUTHERN REGION (S.R.) MEANS THE STATE FORESTS AND CROWN - TIMBER LANDS (EXCLUDING PLANTATIONS)	SOUTHERN REGION (S.R.) MEANS THE STATE FORESTS AND CROWN - TIMBER LANDS (EXCLUDING PLANTATIONS)	s.91 Clean Up Notice	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](#)

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
Braidwood Sand and Gravel	Sand, Soil & Gravel Supplies	Current	0.0	Onsite

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)

Liquid Fuel Facilities

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

Waste Management Facilities & Recycling Centres

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 \(PCA\)](#)

Liquid Fuel Facilities Datasets, representing the spatial locations of liquid fuel depots, refineries, terminals and petrol stations present in the Australian Government National Liquid Fuel Facilities Dataset and Petrol stations identified by Land Insights. Waste Management Facilities, representing the spatial locations of reprocessing facilities, transfer stations and landfills present in the Australian Government National Waste Management Facilities Dataset and Waste/Recycling facilities identified by Land Insights.

A more comprehensive list of all Potentially Contaminating Activities is available in the Due Diligence Insight report.

4.2 Historical Business Directories

(not mapped)

YEAR	Activity	Name	Address	Positional accuracy	Distance (m)	Direction
Not identified	-	-	-	-	-	-

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	<i>When street address and names fully match.</i>
Street	Located to the street centroid	<i>When street names match but no exact address was found. Location is approximate.</i>
Place	Located to the structure, building or complex	<i>When building, residential complex or structure name match but no exact address was found. Location is approximate.</i>
Suburb	Located to the suburb area	<i>When suburb name match but no exact address was found. Location is approximate.</i>

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 3	This vegetation category indicates medium bushfire risk vegetation (higher than category 2, and the excluded areas, but lower than Category 1). Vegetation category consists of grasslands, freshwater wetlands, semi-arid woodlands, alpine complex and arid shrublands.	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.	118.5	North-east

Source: [Fire Hazards](#)

Bushfire History

Type	Season	Details	Distance (m)	Direction
Not identified	-	-	-	-

Source: [Fire Hazards](#)

5.2 Flood Hazard

Flood Planning Area

Map 5.2 (500m Buffer)

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
Water Erosion Risk	Very slight to negligible limitations	Very Low	0.0	Onsite
	Severe limitations	High	0.0	Onsite
	Moderate limitations	Moderate	407.3	South
	Moderate to severe limitations	Moderate	498.9	West
Wind Erosion Risk	Moderate limitations	Moderate	0.0	Onsite
	Severe limitations	High	0.0	Onsite
	Moderate to severe limitations	Moderate	407.3	South

Source: [Erosion Hazard](#)



The Commons
388 George Street
Sydney NSW 2000 Australia
info@landinsight.co
www.landinsight.co

An aerial photograph of a coastal area. The top half shows deep blue water with some green algae or seaweed patches. The middle section features a large, irregularly shaped rock formation covered in bright green algae. The bottom half shows a lighter-colored, more textured rock surface, also with green algae, and a small area of reddish-brown vegetation in the bottom right corner.

Product Guide

Enviro-Screen Report

23 Jun 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 support@landinsight.co.

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 overlays @ 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 Heritage Areas, SA Conservation State Heritage Areas, Aboriginal Heritage in SA @Government 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 @ actmap 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.

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, Williamstown 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: Gnamptara 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) – DCCEE 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, @ Lighscape 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 not all 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

Cattle 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 [REDACTED]

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 party 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 property 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 property for that User's personal assessment of its Property(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 party 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 parties, 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 parties, Land Insight does not recommend or endorse any such third party applications, products, and/or services.
22. The report contains content provided to Land Insight by other parties (Third Party 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 Party Content. You rely on the Third Party 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 party 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, tort, 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 Property, any particular purpose or use of that Property 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 parties 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: [REDACTED]. 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, tort or otherwise, it shall be resolved by use of an alternative dispute resolution procedure acceptable to both parties with the assistance of a mediator. If the dispute has not been resolved to the satisfaction of either party within 60 days of initiation of the procedure or if either party fails or refuses to participate in or withdraws from participating in the procedure, then either party 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 parties, these terms and conditions will prevail.
35. These terms and conditions represent the entire agreement between the parties.
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 parties.
39. Neither party 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 property 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 Property.
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.

A low-angle photograph of a bridge structure, likely the Sydney Harbour Bridge, against a clear blue sky. The bridge's steel lattice and cables are visible, creating a strong geometric pattern. In the background, a modern building with a glass facade is partially visible. A yellow rectangular box is overlaid on the right side of the image, containing the title and location information.

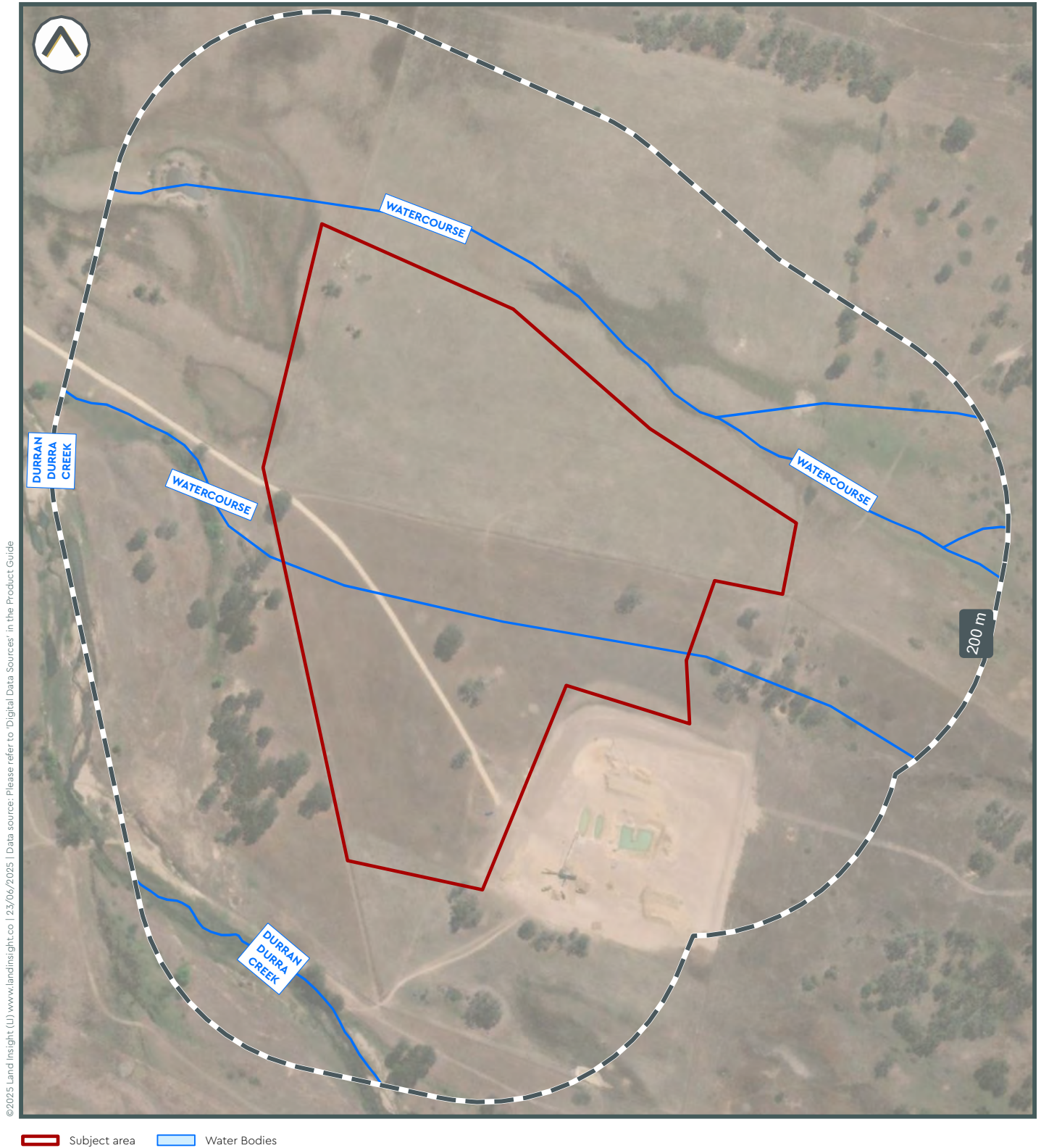
Appendix A

REPORT MAPS

Larbert Rd
Larbert, NSW

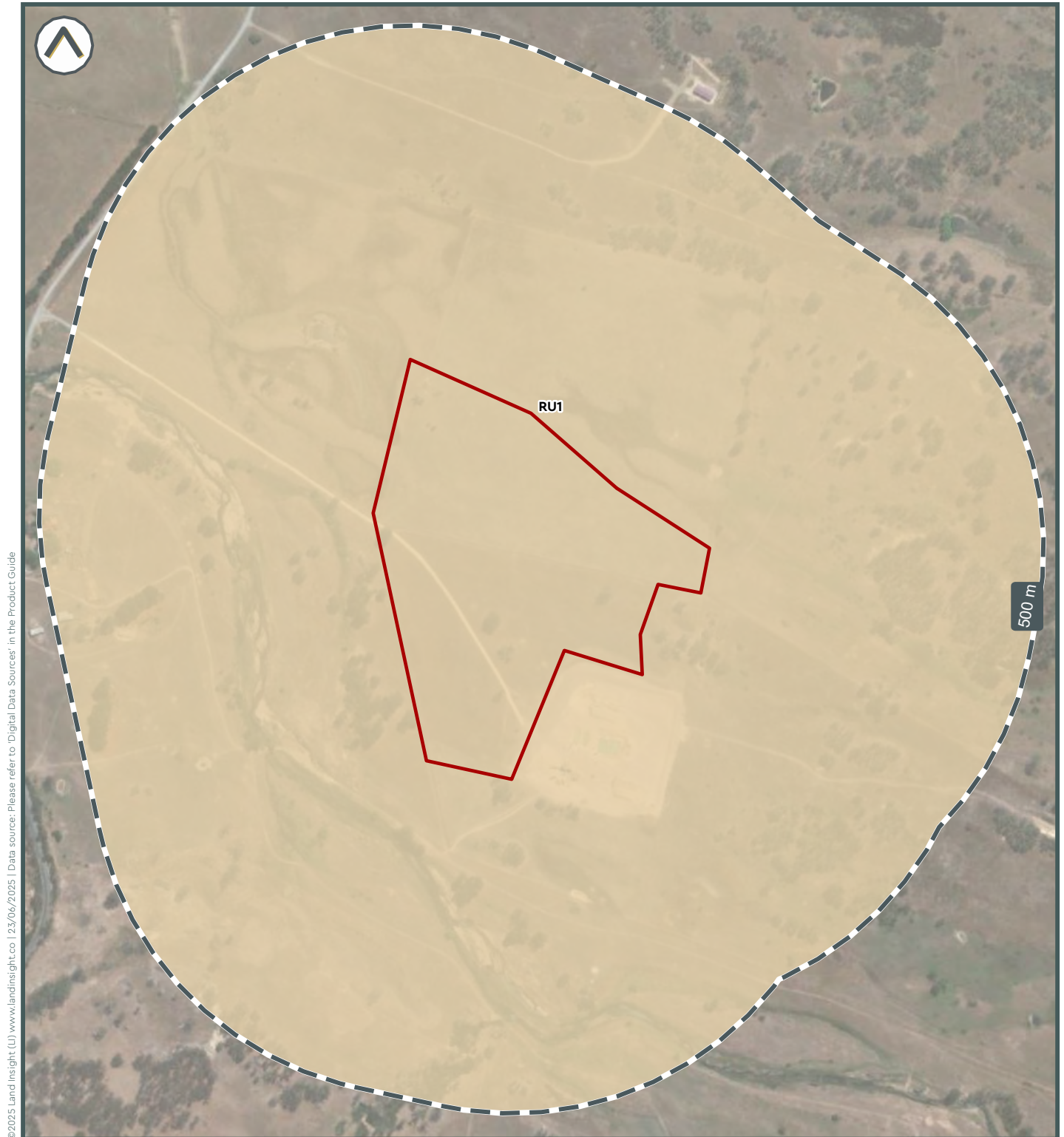


Sensitive Receptors and Features of Interest





Zoning



©2025 Land Insight (U) www.landinsight.co | 23/06/2025 | Data source: Please refer to 'Digital Data Sources' in the Product Guide

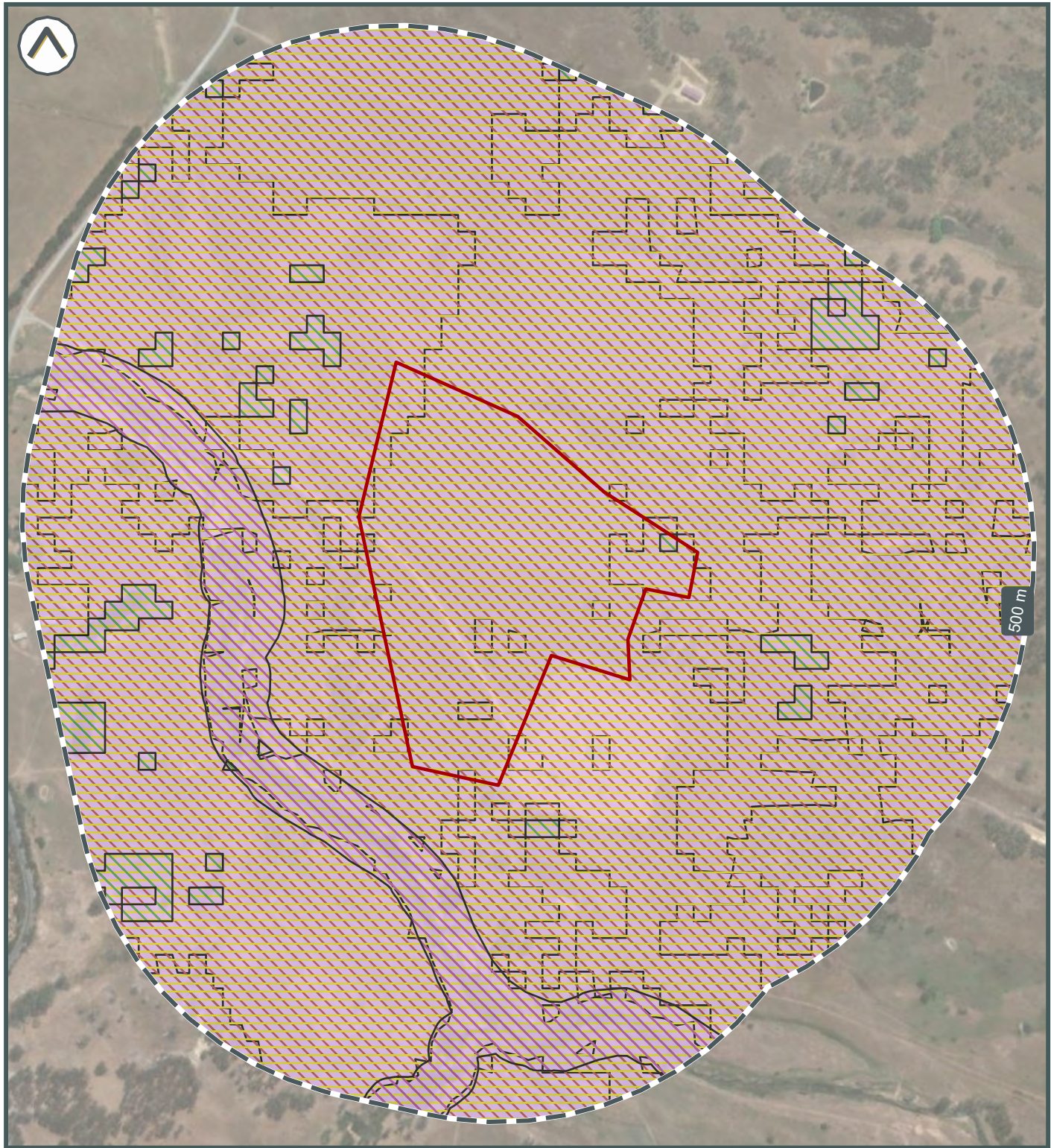
-  Subject area
- Zone**
-  RU1 – Primary Production





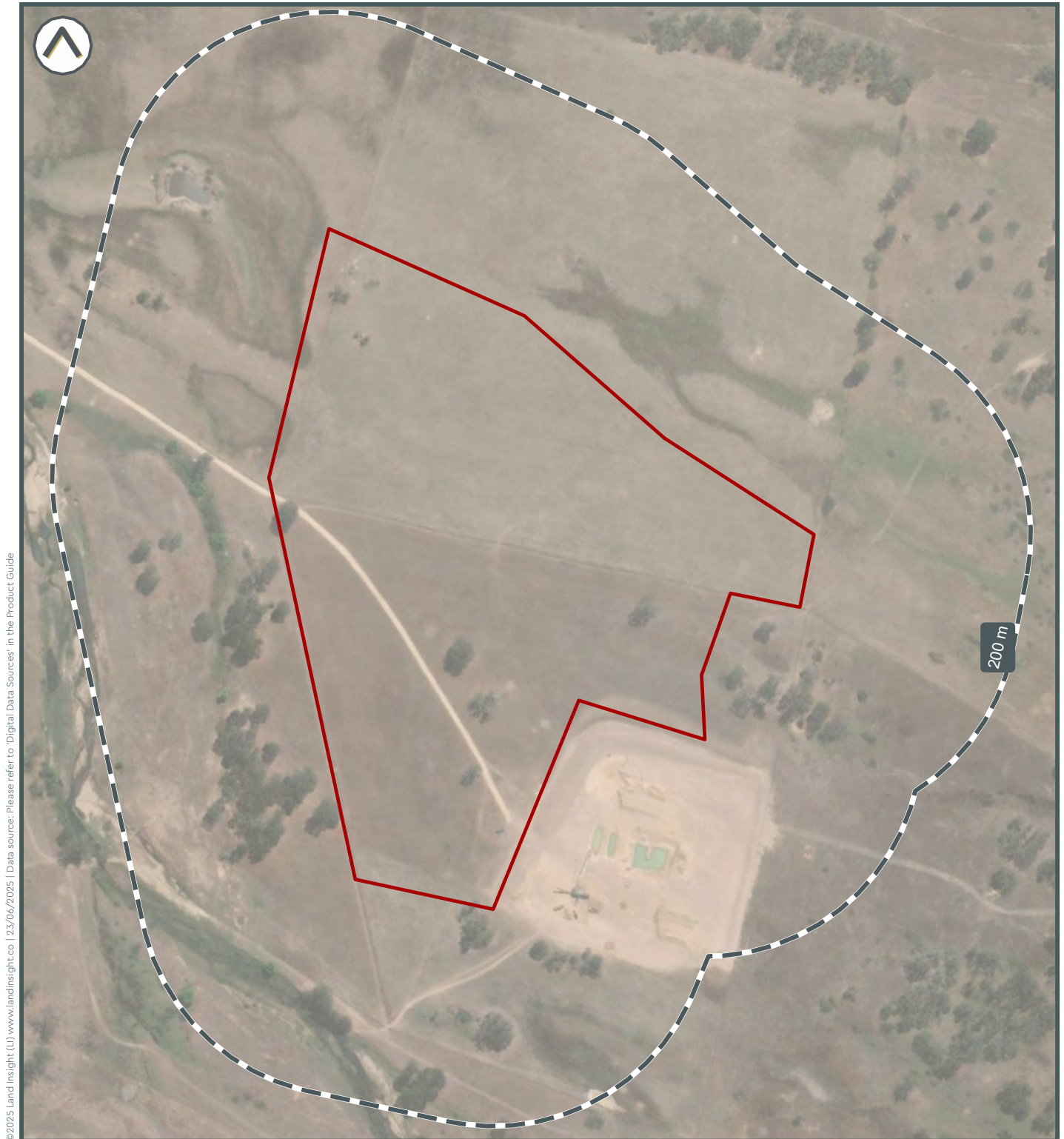
Planning Overlays

©2025 Land Insight (U) www.landinsight.co | R:\LI\4878 ESR Larbert NSW\Working\GIS\Project\LI-XXXXX XXX\ 23/06/2025 | Data source: Please refer to 'Digital Data Sources' in the Product Guide



- | | | |
|--------------------|-----------------------------|---------------------------------------|
| Subject area | Drinking Water | Minimum Water Use Standard (%) |
| Overlays | Land Application | Secondary Dwelling and Dual Occupancy |
| Allowable Clearing | Maximum Building Height (m) | SEPP Land Application |
| Biodiversity | Minimum Lot Size (sq m) | Watercourses |



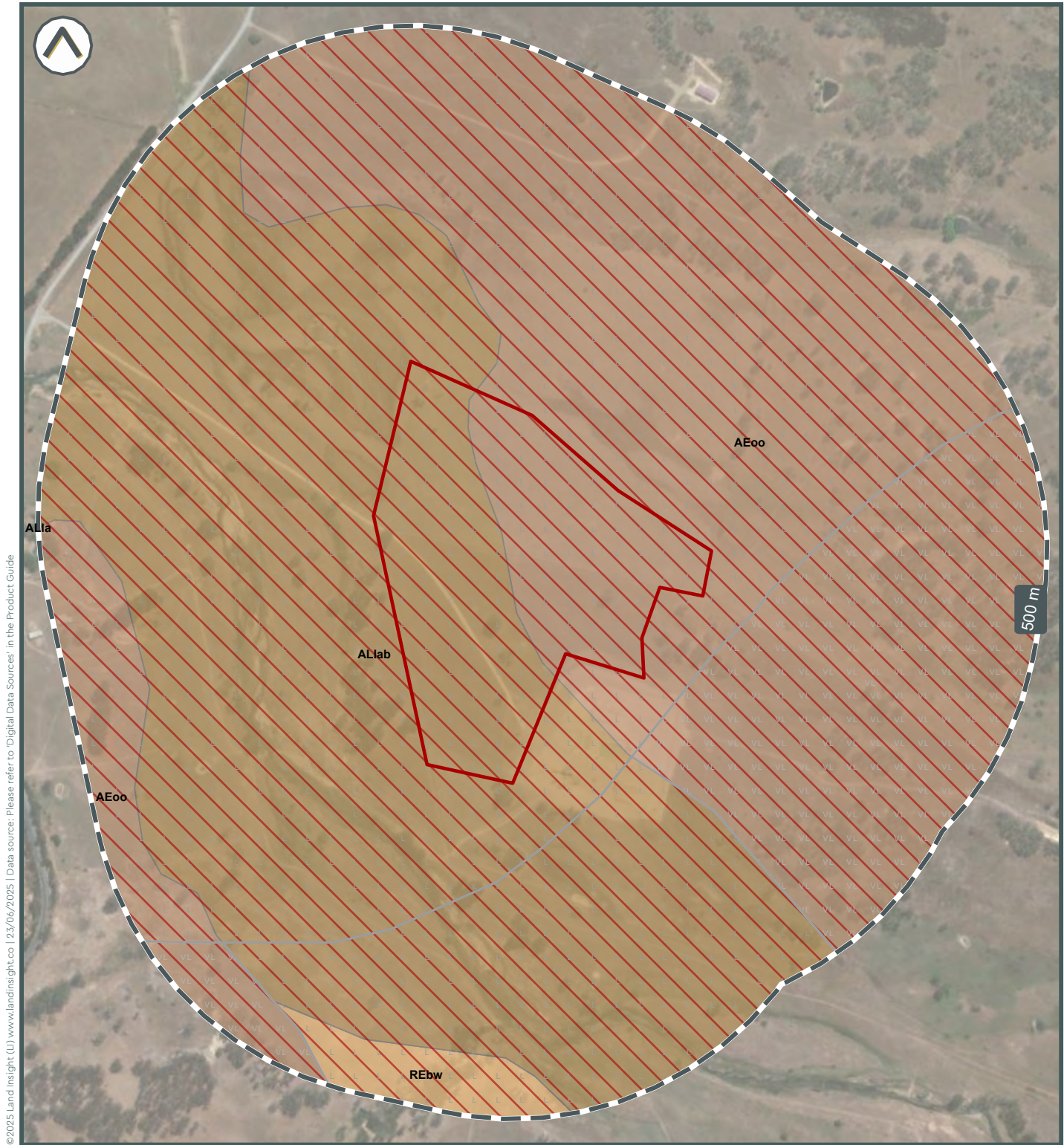


 Subject area





Soil Landscape and Salinity



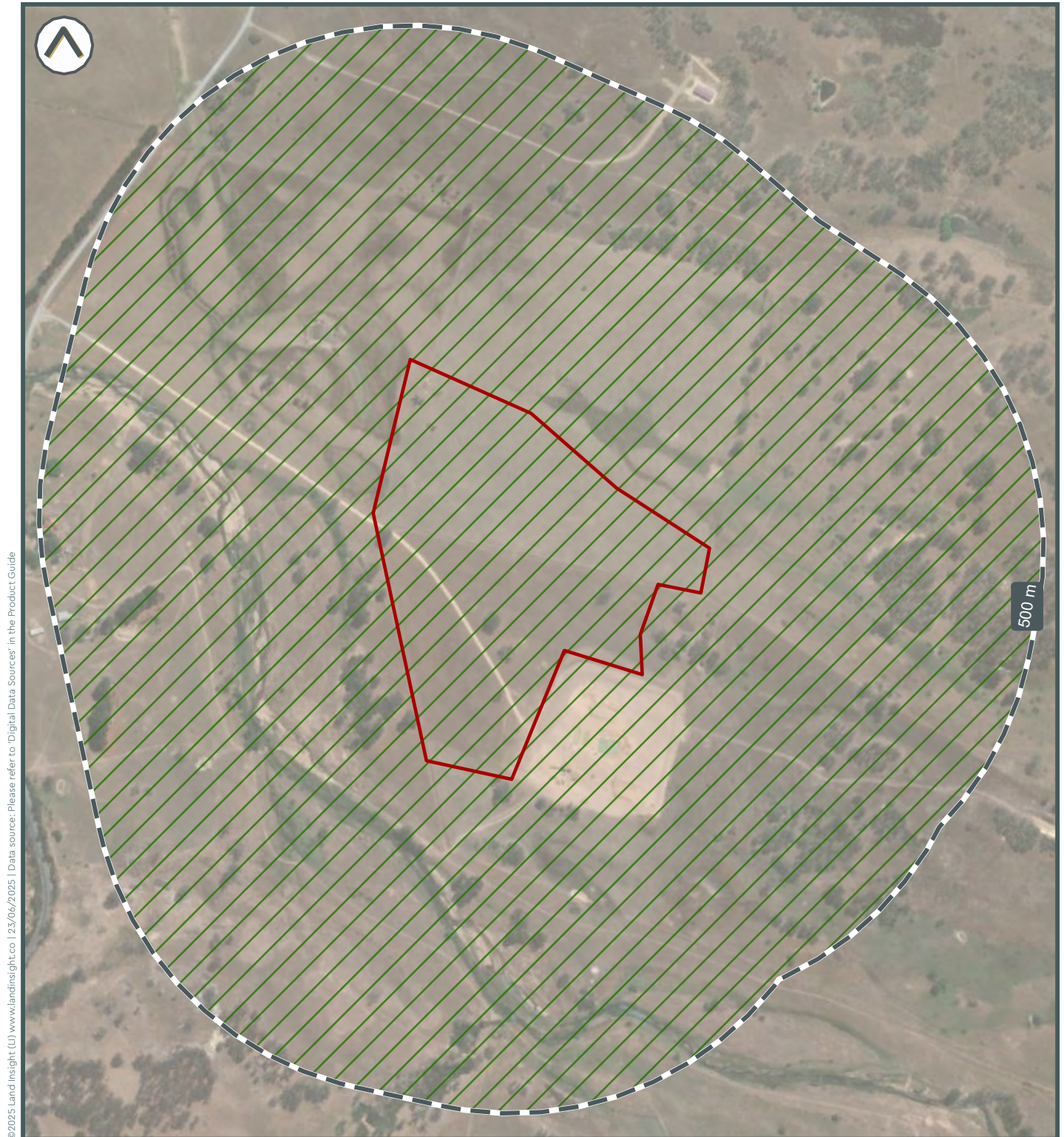
©2025 Land Insight (U) www.landinsight.co | 23/06/2025 | Data source: Please refer to 'Digital Data Sources' in the Product Guide

 Subject area	Soil Salinity	Code	 ALElab
Radon Level (Bq/m3)	 Very Low	 ALEoo	 REbw
 20-24	 Low	 ALEla	





Acid Sulfate Soils



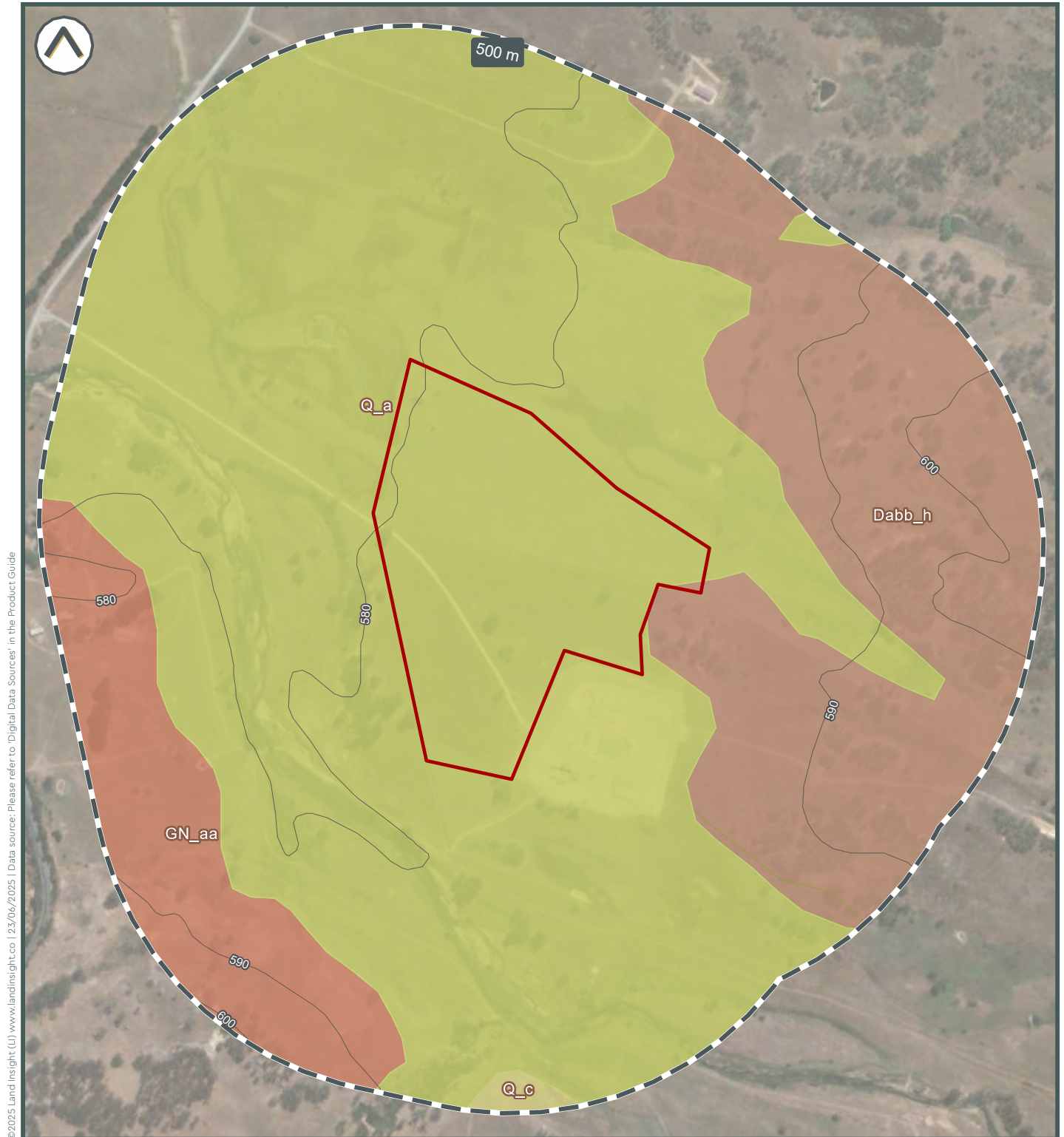
©2025 Land Insight (U) www.landinsight.co | 23/06/2025 | Data source: Please refer to 'Digital Data Sources' in the Product Guide

- Subject area
- Atlas of Australian Acid Sulfate Soils
- Extremely low probability of occurrence





Geology and Topography



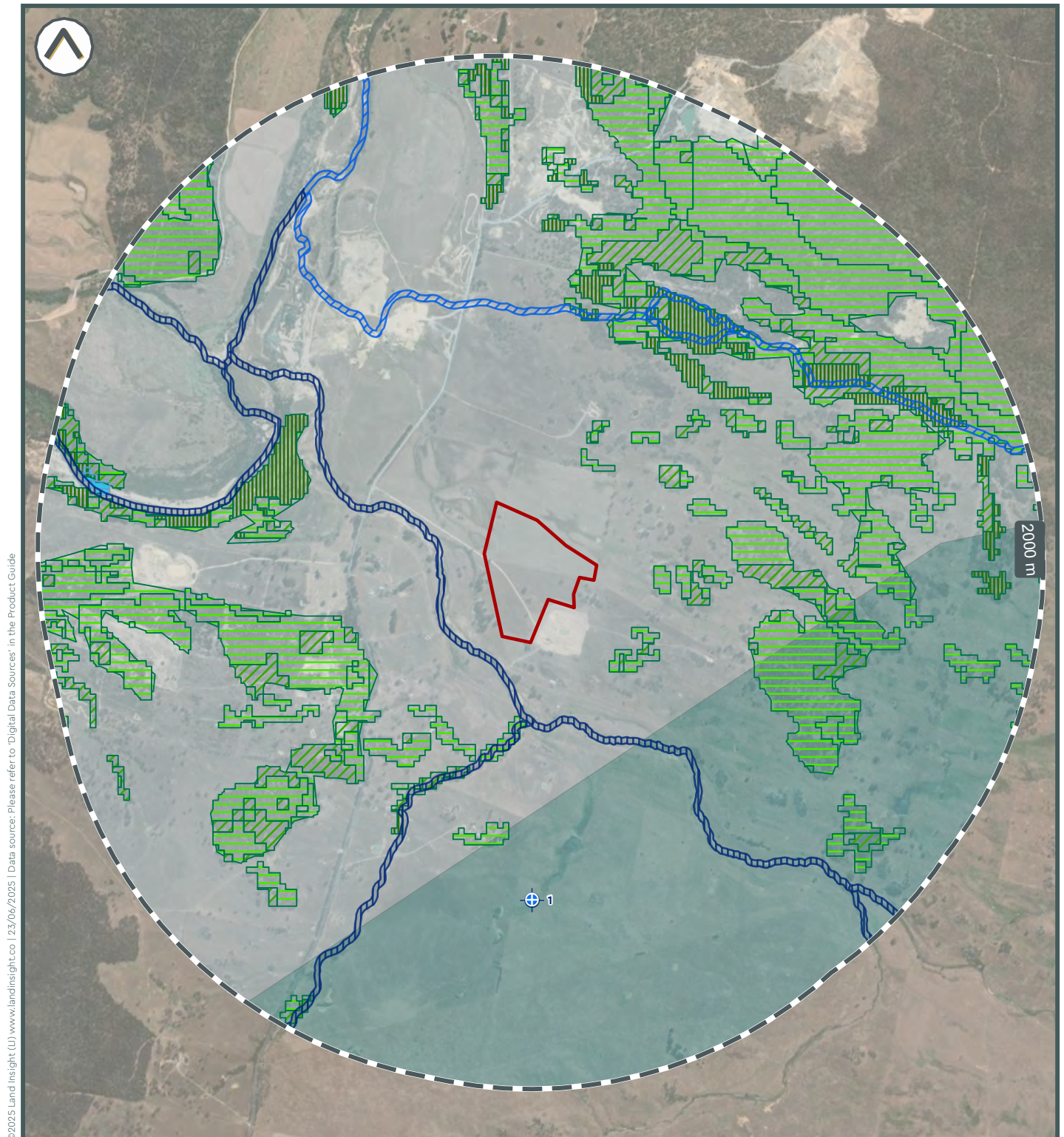
©2025 Land Insight (U) www.landinsight.co | 23/06/2025 | Data source: Please refer to 'Digital Data Sources' in the Product Guide

-  Subject area
-  Topographic Contour (m)
- Geology Code**
-  GN_aa
-  Q_a
-  Dabb_h
-  Q_c





Groundwater Dependent Ecosystems & Hydrogeology Constraints



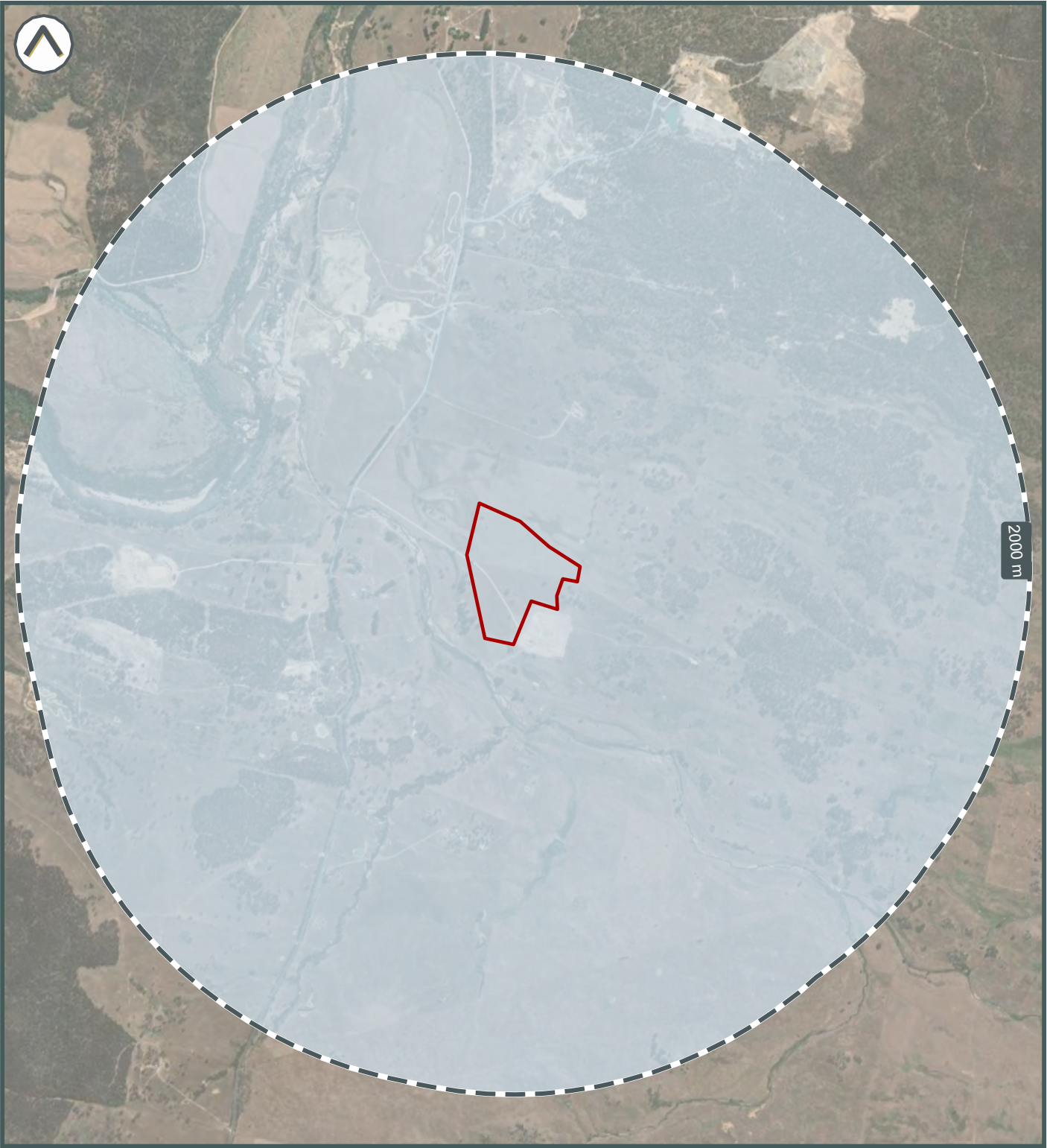
©2025 Land Insight (U) www.landinsight.co | 23/06/2025 | Data source: Please refer to 'Digital Data Sources' in the Product Guide

- | | | |
|--|---|--|
| Subject area | Moderate potential GDE – from national assessment | Moderate potential GDE – from regional studies |
| Groundwater bores | Low potential GDE – from national assessment | Low potential GDE – from regional studies |
| Ecosystems that rely on the Surface expression of Groundwater | | |
| High potential GDE – from national assessment | Ecosystems that rely on Subsurface presence of Groundwater | |
| | High potential GDE – from regional studies | Wetlands |
| | | Aquifer type |
| | | Fractured or fissured, extensive aquifers of low |





Groundwater and Other Bores



Subject area Salinity Class
No Data





Contaminated Land Public Register



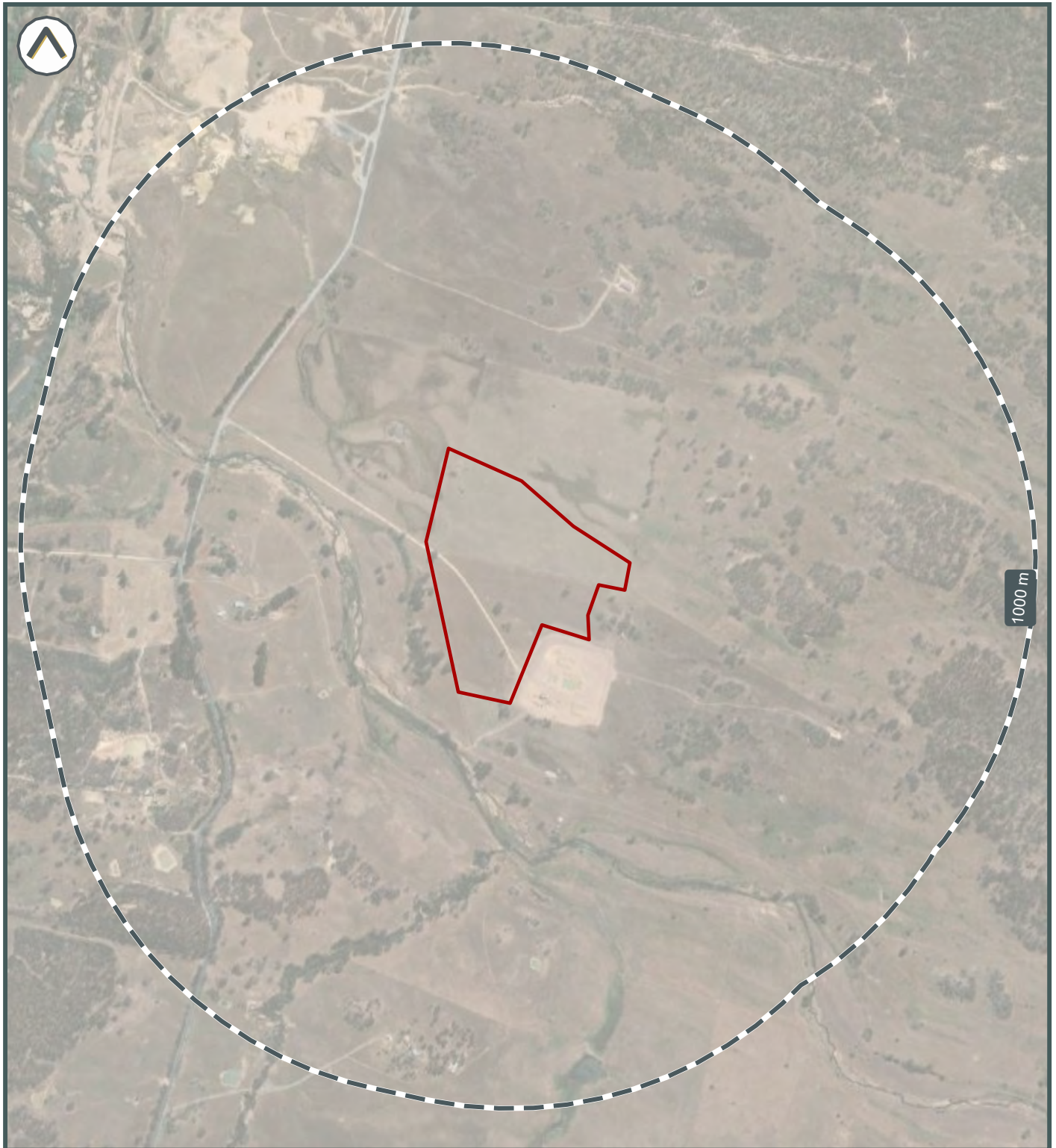
©2025 Land Insight (U) www.landinsight.co | 23/06/2025 | Data source: Please refer to 'Digital Data Sources' in the Product Guide

 Subject area





Licences, Approvals & Assessments



 Subject area





Sites Regulated by Other Jurisdictional Body

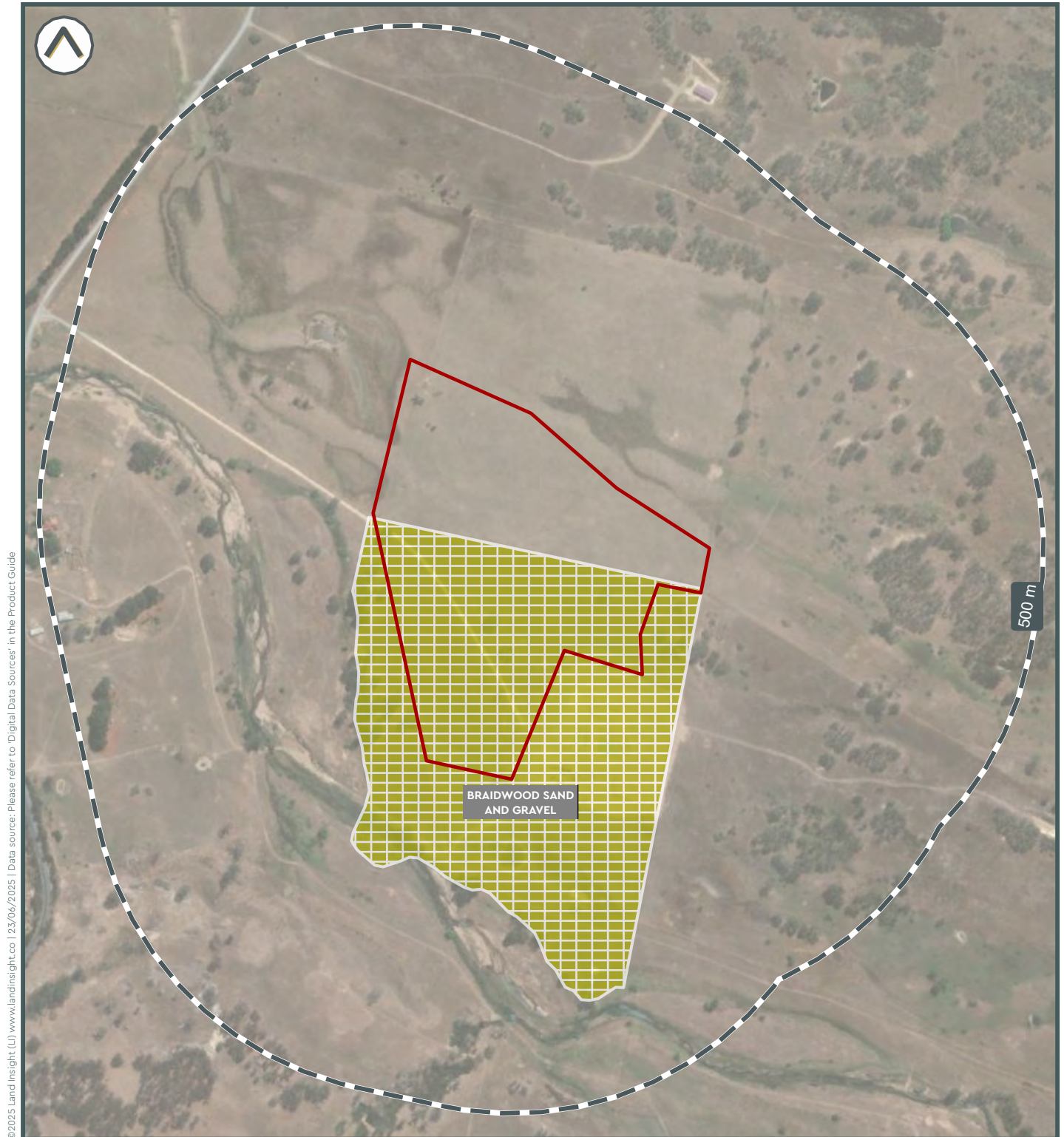


 Subject area





Other Potential Hazard Sources



Subject area Quarries

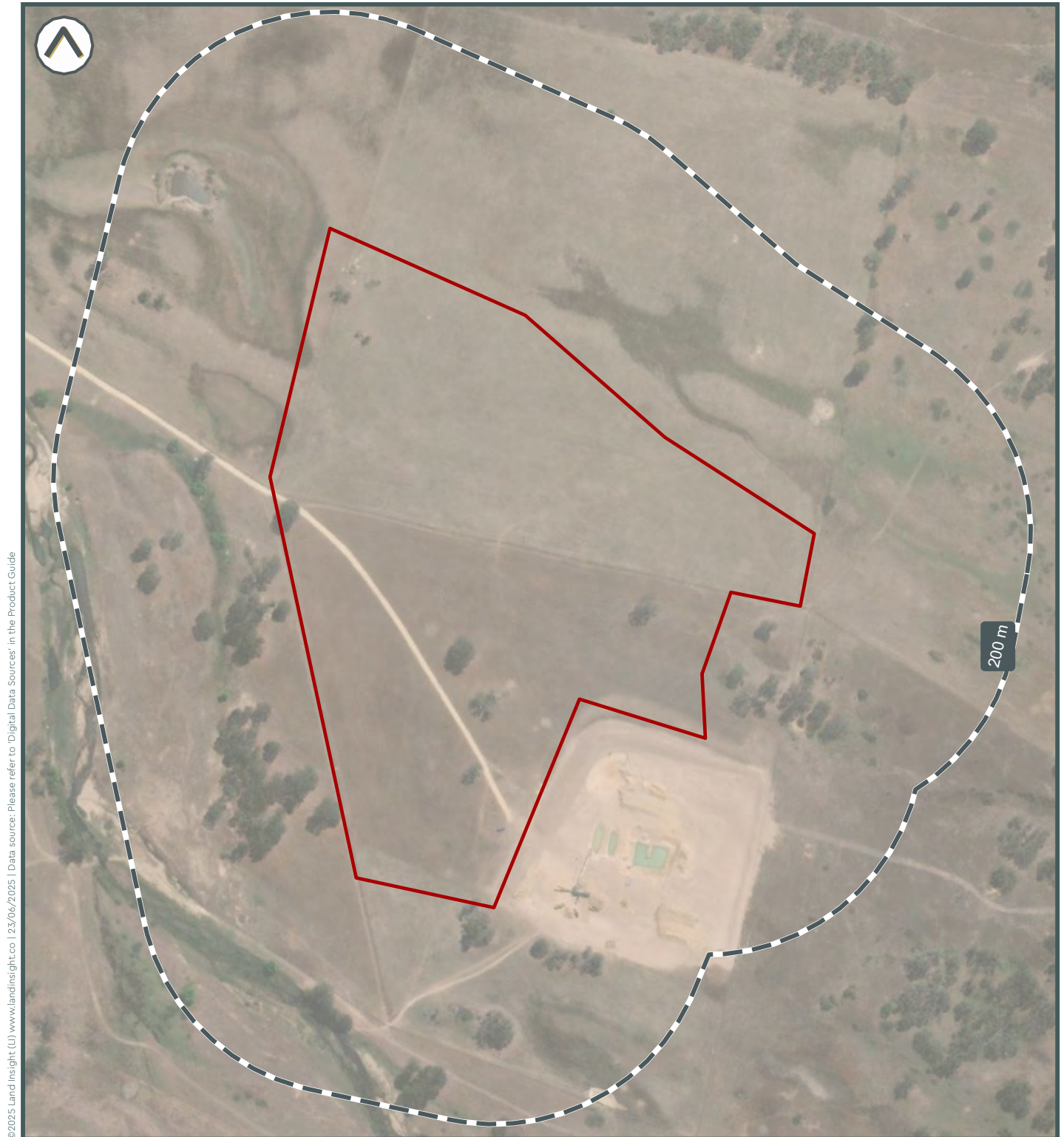




POTENTIALLY CONTAMINATED AREAS

MAP 4.1

Potentially Contaminating Activities (PCAs)

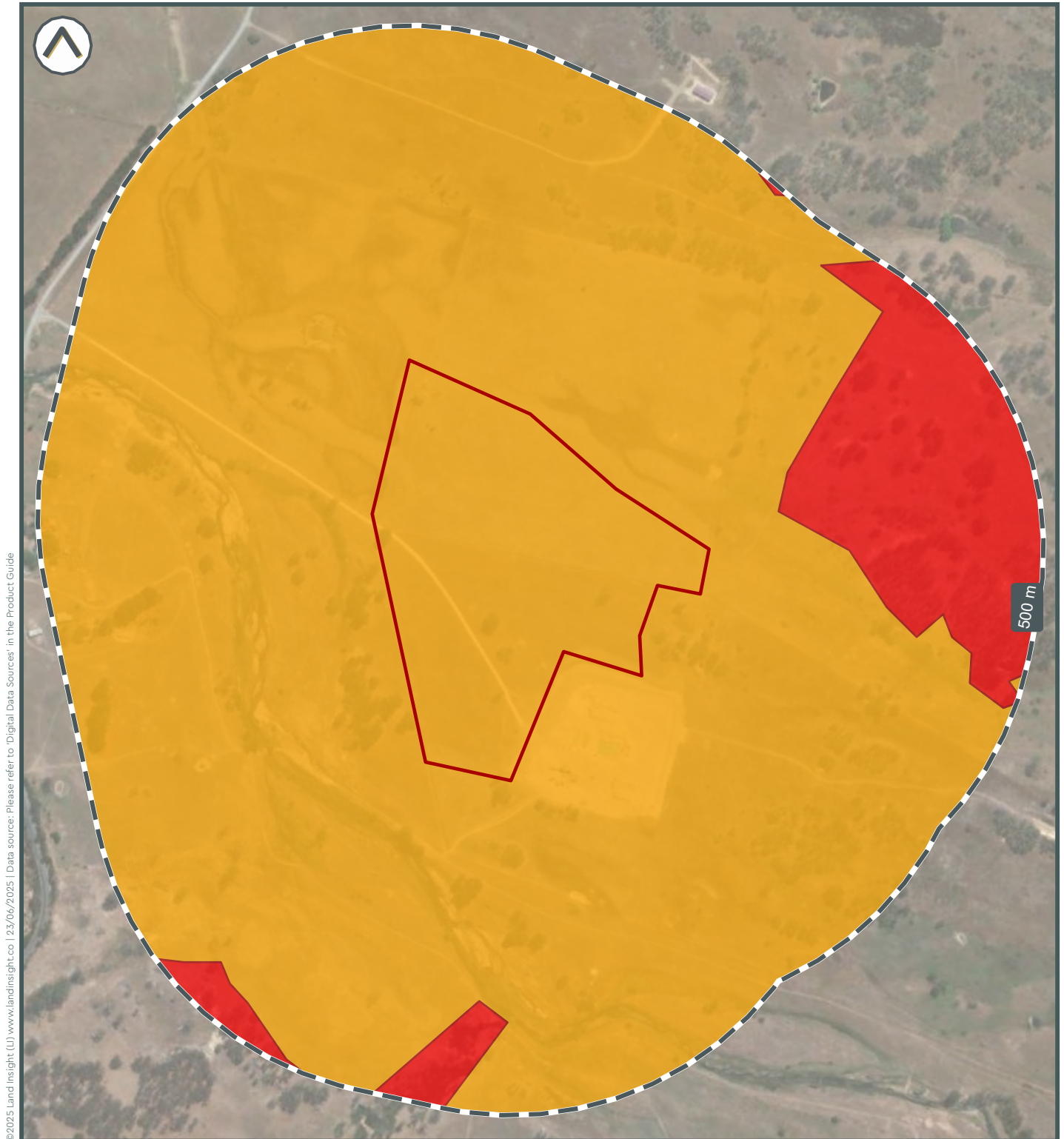


- Subject area
- Petrol Stations and Fuel Terminals
- Waste and Recycling Facilities





Fire Hazards



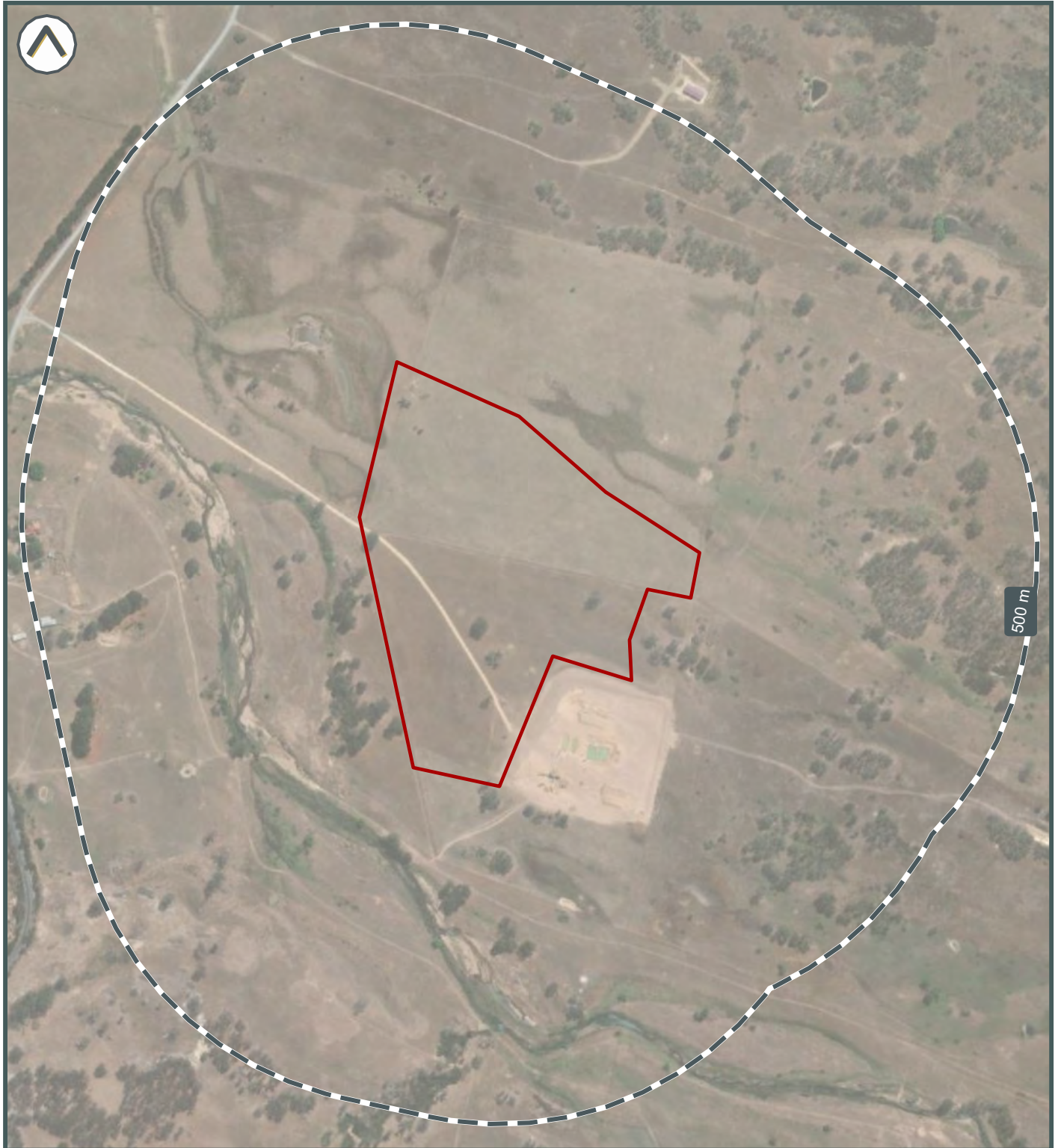
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-  Subject area
-  Vegetation Category 3
- Bushfire Prone Areas**
-  Vegetation Category 1





Flood Hazard



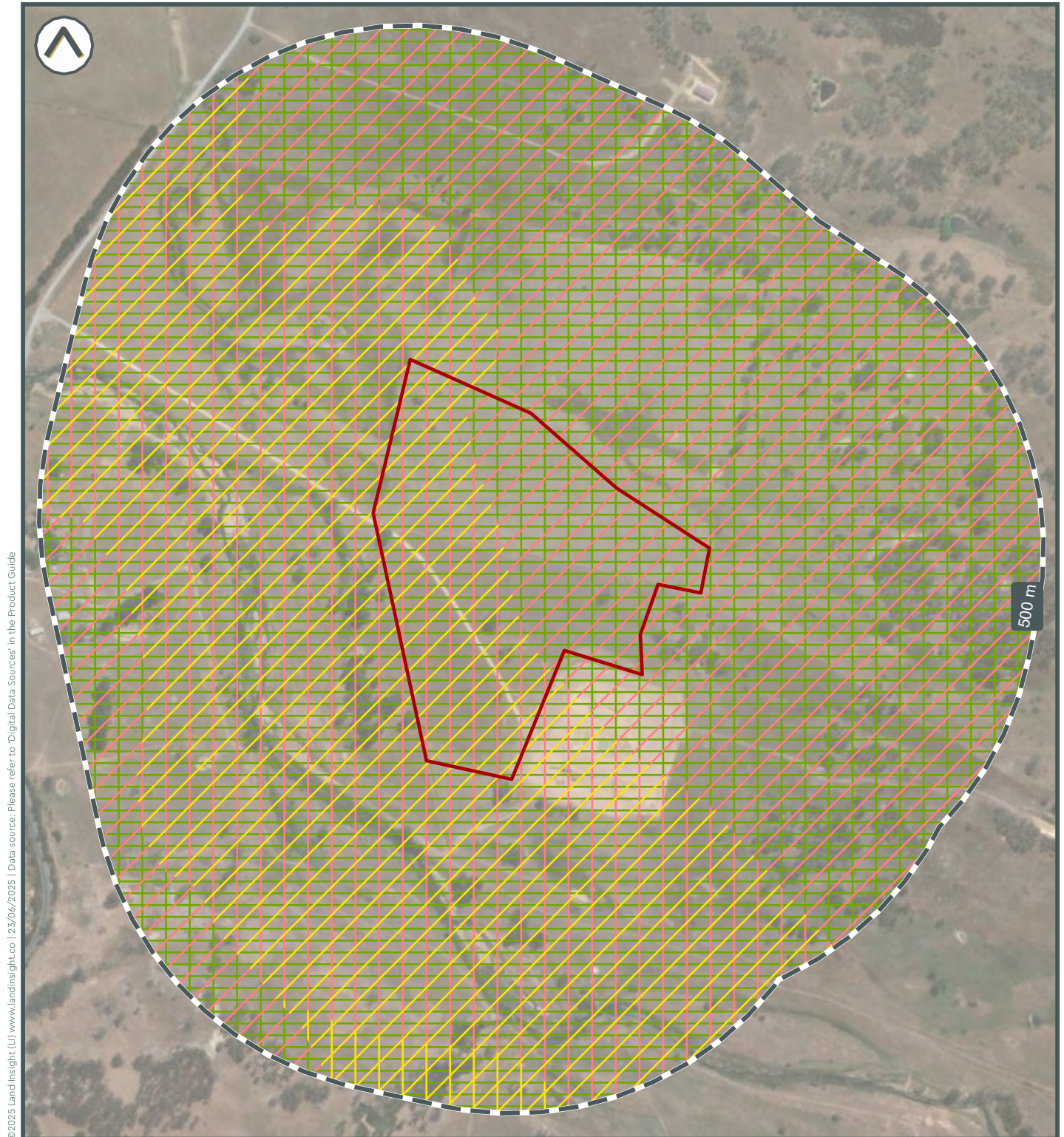
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 Subject area





Erosion Hazard



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- | | | |
|--|--|--|
|  Subject area | Water Erosion Risk | Landslip Erosion Risk |
| Wind Erosion Risk |  High |  Very Low |
|  High |  Moderate | |
|  Moderate |  Very Low | |

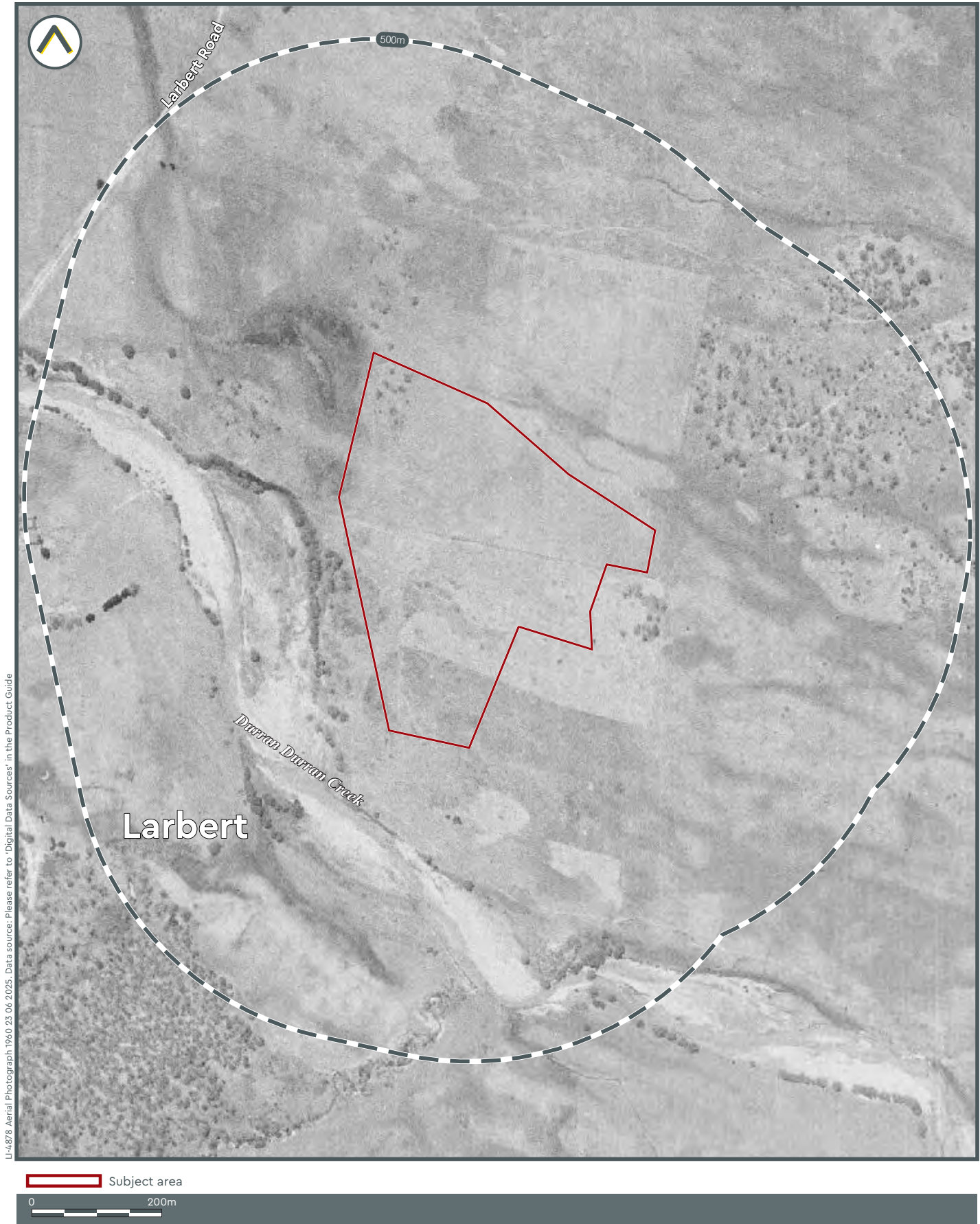


An aerial photograph of a vibrant turquoise river winding through a rugged landscape. The river is bordered by steep, rocky banks and dense, dry vegetation in shades of yellow and brown. The water's color is a striking contrast to the surrounding terrain.

Appendix B

HISTORIC IMAGERY

Larbert Rd
Larbert, NSW





LI-4878 Aerial Photograph 1991 23 06 2025. Data source: Please refer to 'Digital Data Sources' in the Product Guide



LI-4878 Aerial Photograph 1998 23 06 2025. Data source: Please refer to 'Digital Data Sources' in the Product Guide



LI-4878 Aerial Photograph 1998 23 06 2025. Data source: Please refer to 'Digital Data Sources' in the Product Guide



LI-4878 Aerial Photograph 2014, 23 06 2025. Data source: Please refer to 'Digital Data Sources' in the Product Guide



LI-4878 Aerial Photograph 2018 23 06 2025. Data source: Please refer to 'Digital Data Sources' in the Product Guide





LI-4878 Aerial Photograph 2023 23 06 2025. Data source: Please refer to 'Digital Data Sources' in the Product Guide

