
Appendix N

Contaminated land and acid sulfate soils

Part 3



Heritage



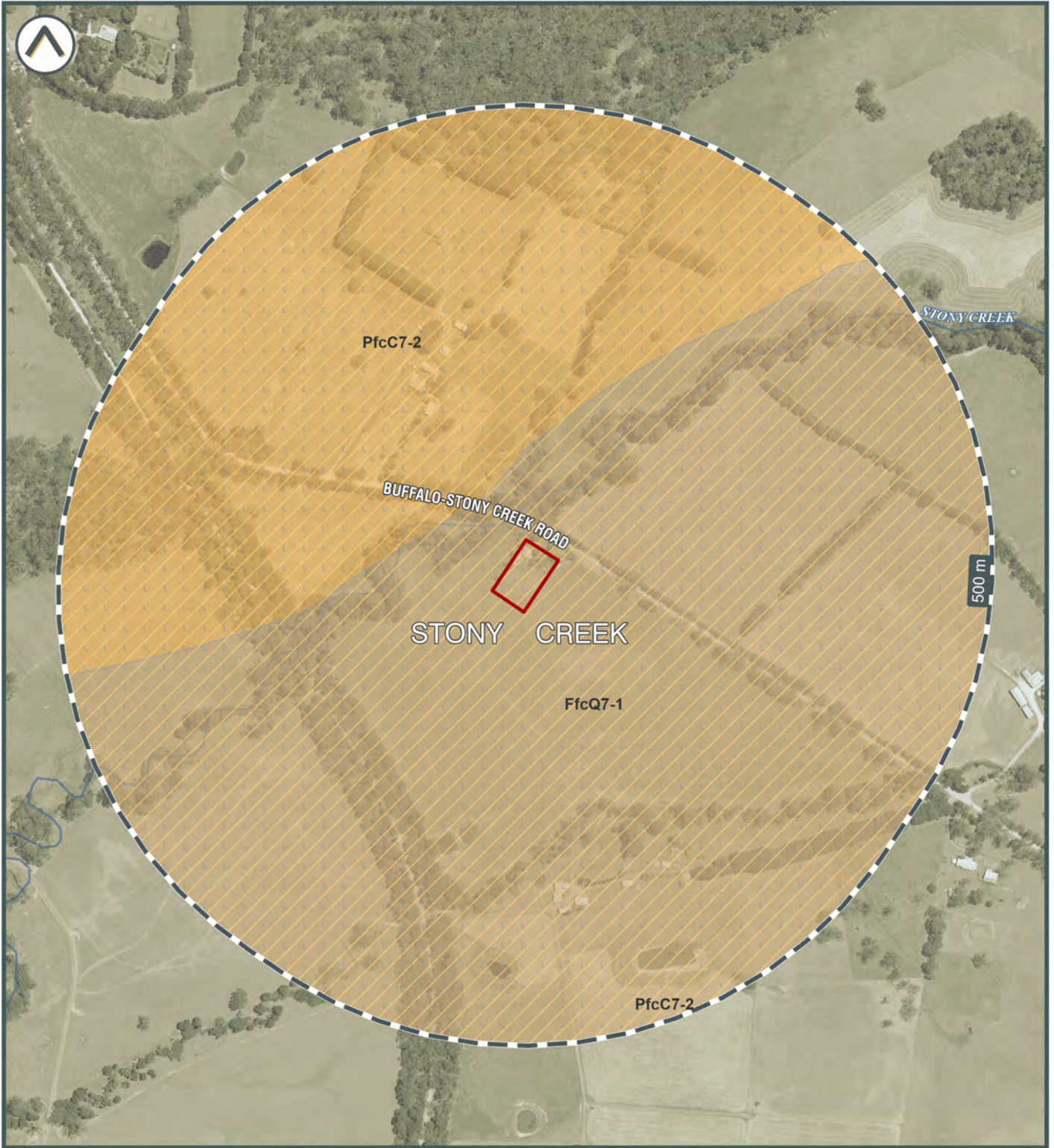
©2021 Land Insight (LU) www.landinsight.co | 27/09/2021 | Data source: 'Digital Data Sources' in the Product Guide

- Subject area
- Victorian Heritage Inventory (VHI)
- Areas of Cultural Heritage Sensitivity (CHS)
- Victorian Heritage Register (VHR)
- Commonwealth Heritage List (CHL)
- National Heritage List (NHL)
- World Heritage Area (WHA)

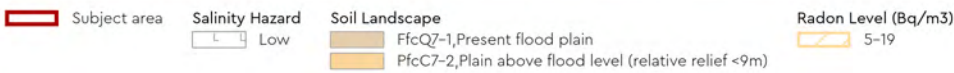




Soil Landscape and Salinity

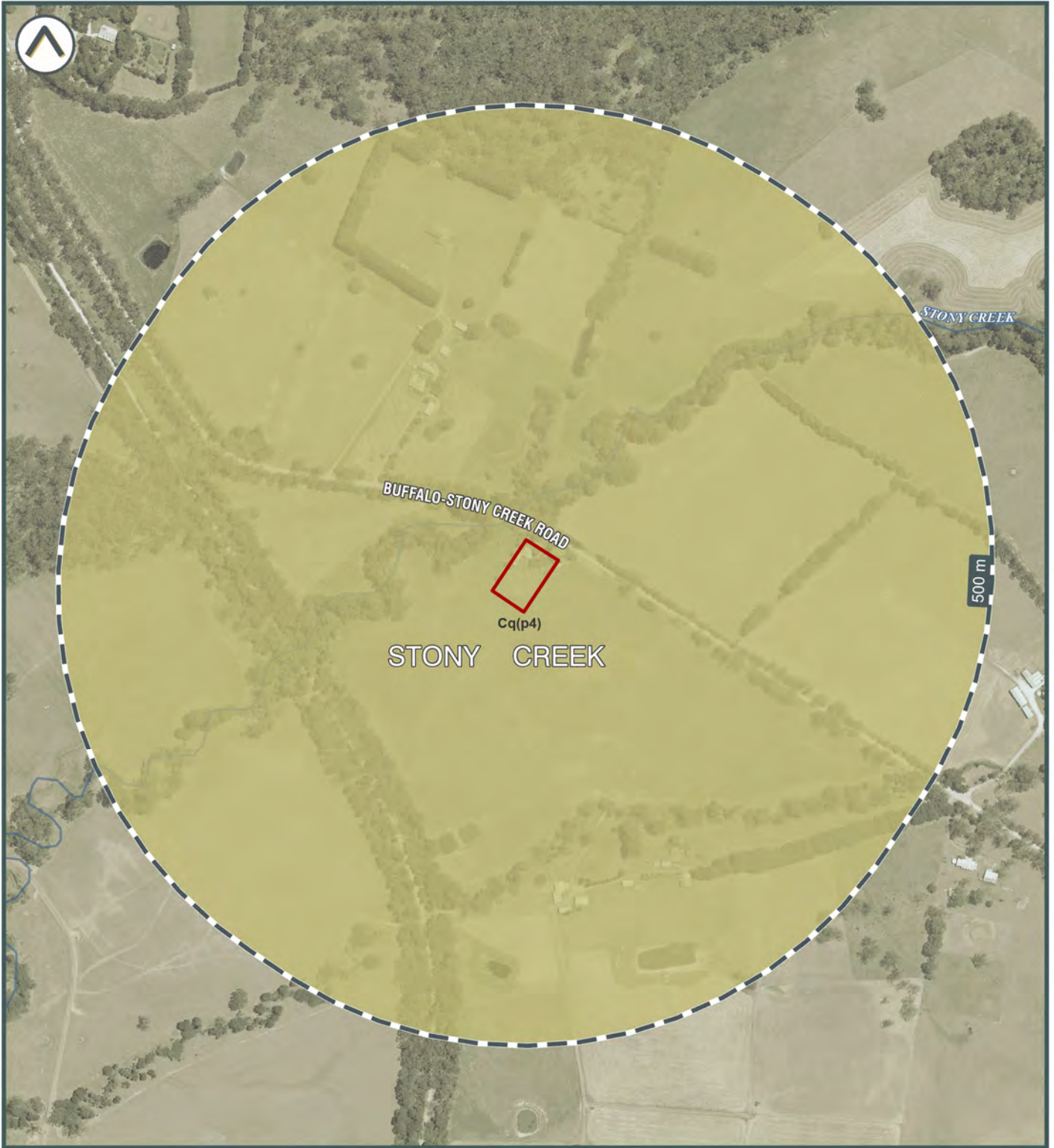


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Acid Sulfate Soils



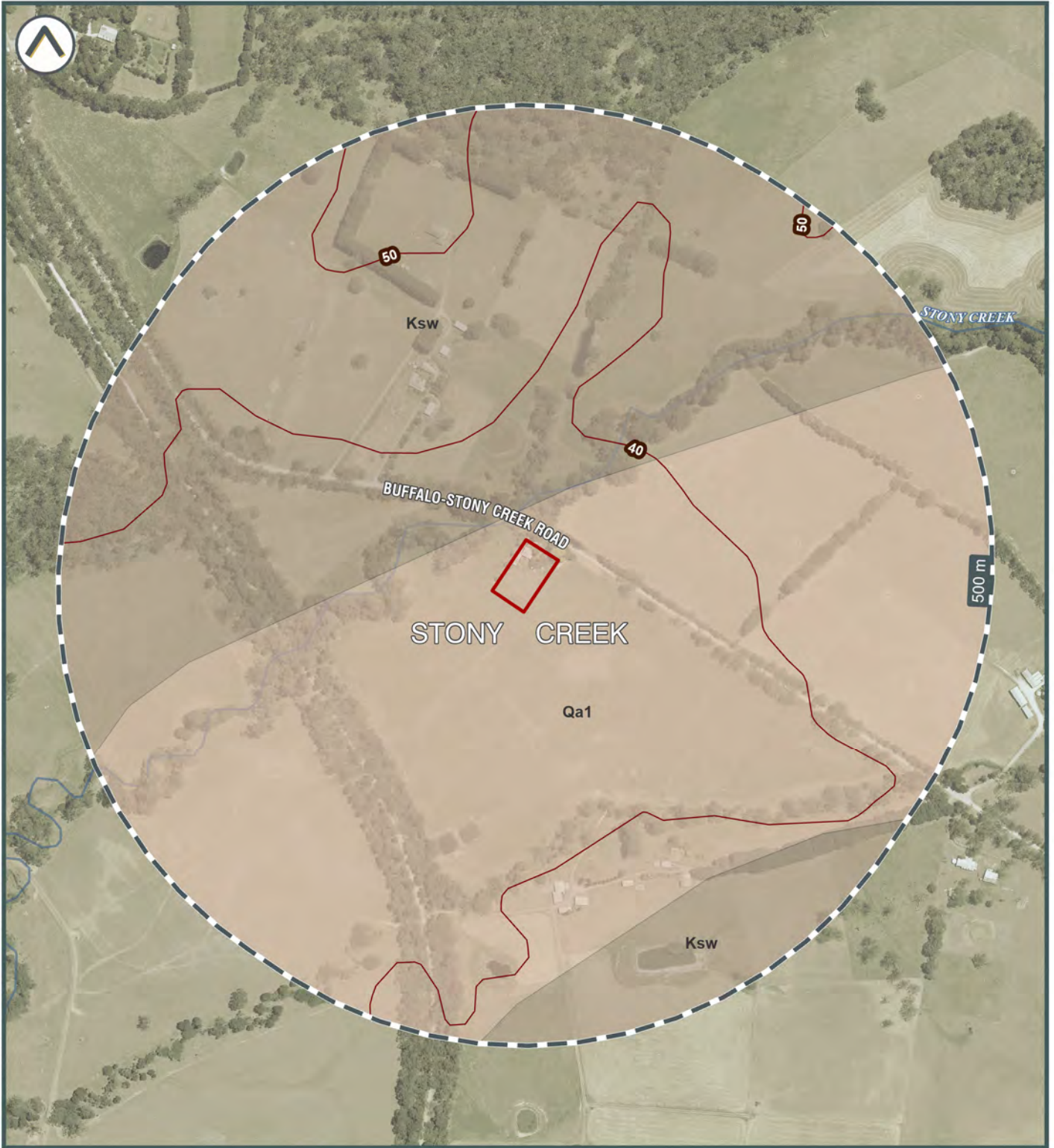
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- Subject area
- ASRIS Atlas of Australian Sulfate Soils
- Cq(p4) | ASS in inland lakes, waterways, wetlands and riparian zones









Geology and Topography



©2021 Land Insight (LU) www.landinsight.co | 27/09/2021 | Data source: Please refer to 'Digital Data Sources' in the Product Guide

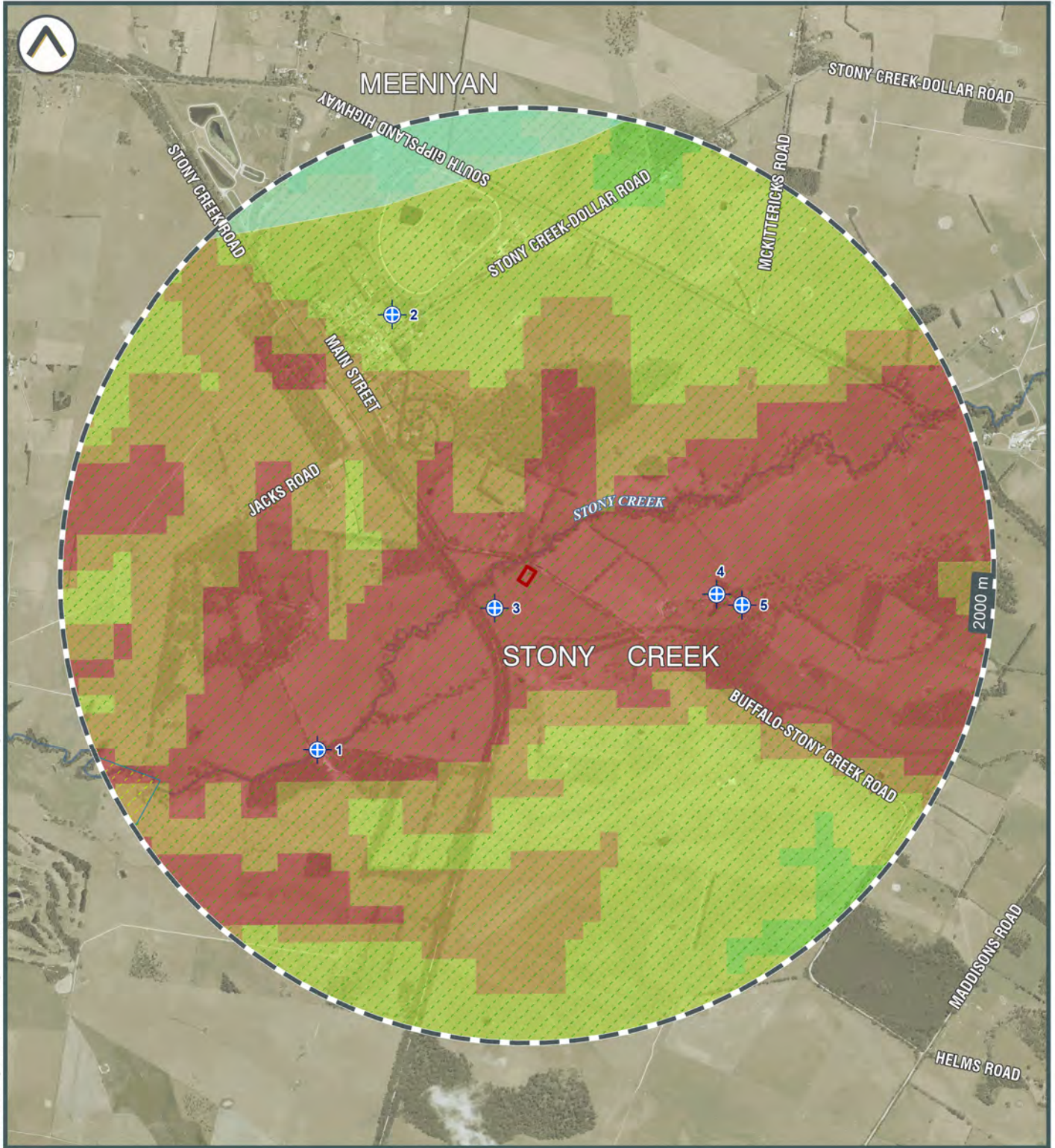
 Subject area
 Topographic contour (m)

1:250,000 Geological Units
 Ksw | Lithic volcanoclastic sandstone, arkose, siltstone, minor conglomerate and coal; fluvial
 Qa1 | Gravel, sand, silt: variably sorted and rounded; generally unconsolidated; includes deposits of low terraces; alluvial floodplain deposits





Hydrogeology and Groundwater Boreholes



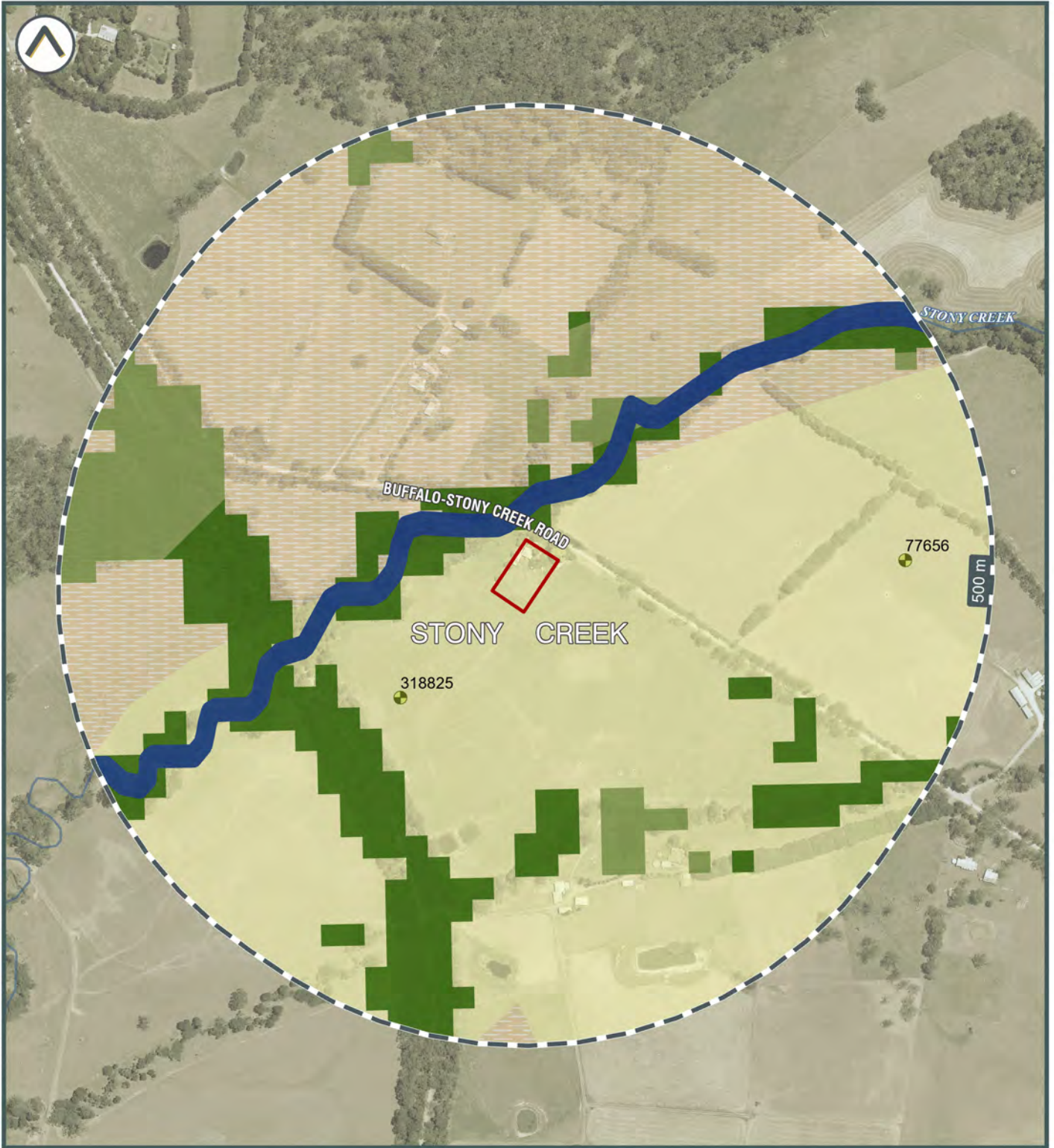
©2021 Land Insight (LU) www.landinsight.co | 27/09/2021 | Data source: Please refer to 'Digital Data Sources' in the Product Guide

- Subject area
- Groundwater bores
- Designated Water Supply Catchments
- Groundwater salinity (mg/l)**
- 500 - 1,000
- 1,100 - 5,000
- Depth to Watertable (m)**
- <5
- 5-10
- 10-20
- 20-50
- Aquifer type**
- Fractured or fissured, extensive aquifers of low to moderate productivity





Hydrogeology and Other Boreholes



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- Subject area
- Other boreholes
- Hydrogeologic Unit**
- Surficial Sediment Aquifer (porous media - unconsolidated)
- Upper Tertiary/Quaternary Aquitard (porous media - unconsolidated)
- Mesozoic Fractured Rock Aquifer
- Ecosystems that rely on the Surface expression of Groundwater**
- High potential for GW interaction
- Ecosystems that rely on Subsurface presence of Groundwater**
- High potential for GW interaction
- Moderate potential for GW interaction





Contaminated Land Public Register



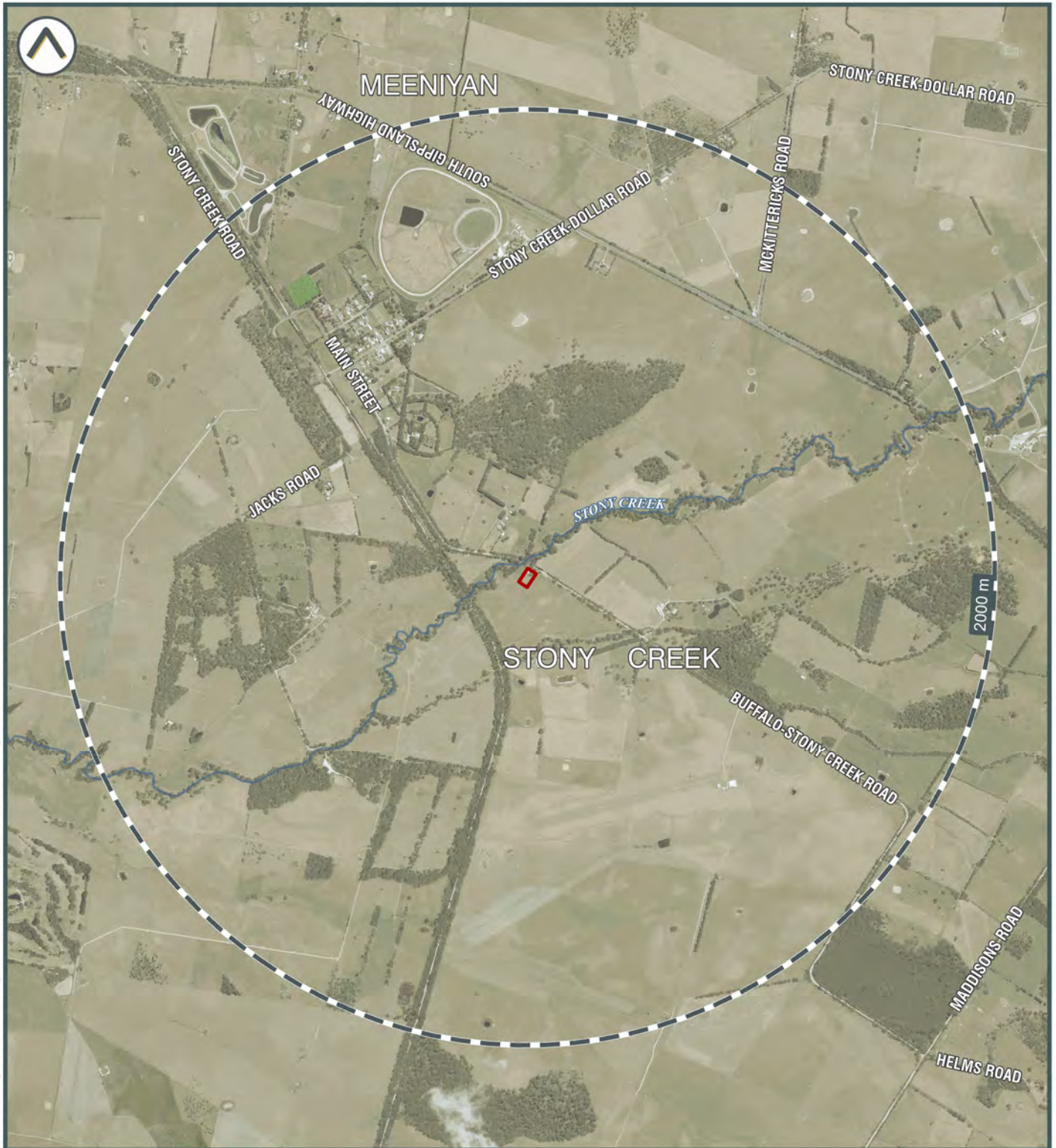
©2021 Land Insight (LI) www.landinsight.co | 9/12/2021 | Data source: Please refer to 'Digital Data Sources' in the Product Guide

- Subject area
- Contaminated Land Register (EPA)
- Priority Sites Register Audit Report





Sites Regulated by other Jurisdictional Body



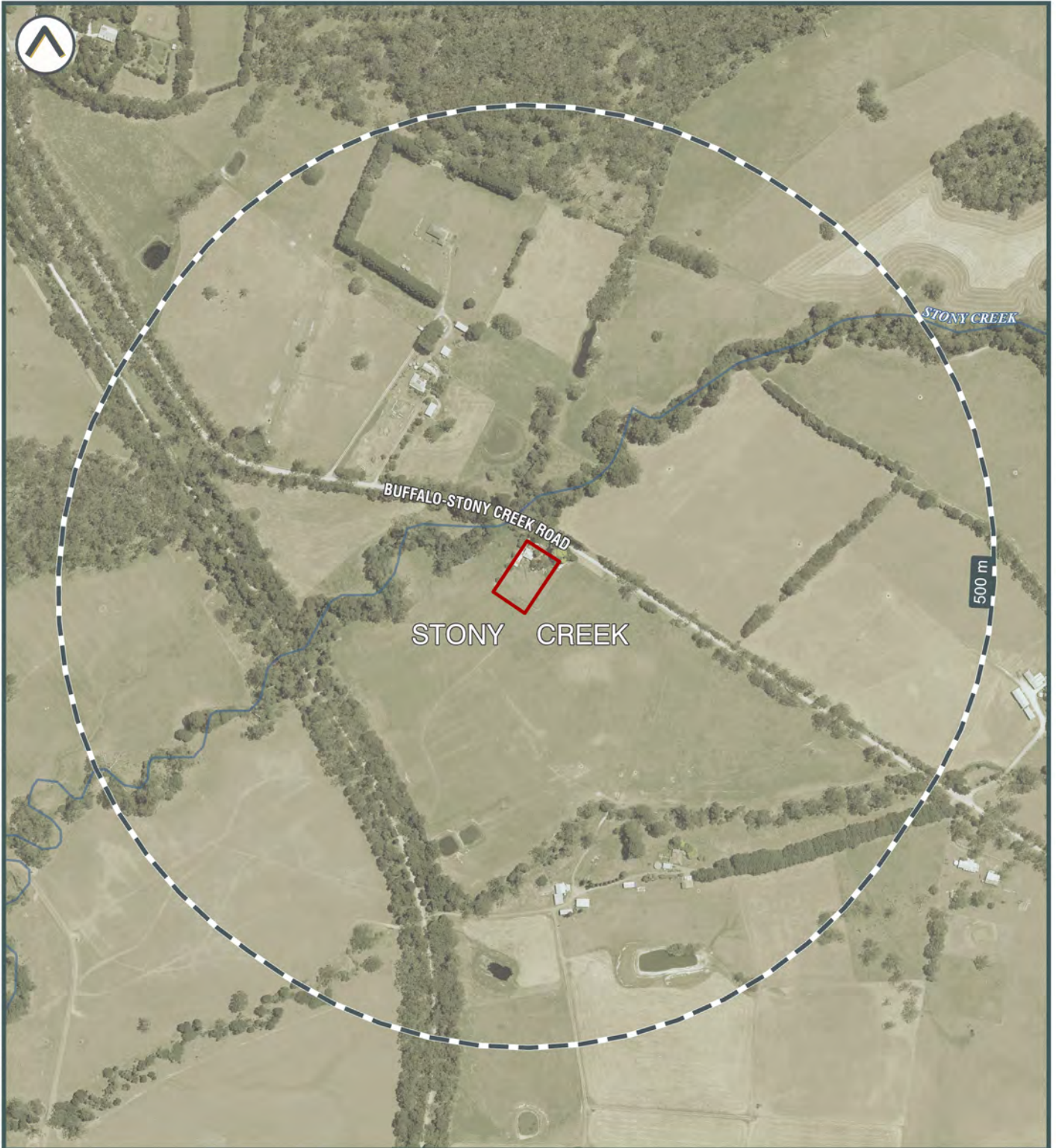
©2021 Land Insight (LU) www.landinsight.co | 27/09/2021 | Data source: Please refer to 'Digital Data Sources' in the Product Guide

-  Subject area
-  PFAS sites
-  Sea Dumping of Depth Charges
-  NPI Facilities
-  Former Gasworks Sites
-  Sea Dumping of Depth Charges (Chemical munitions sea dumping)
-  Unexploded Ordnance (UXO) Areas
-  Other Sea Dumping Sites
-  Substantial Potential
-  Other
-  Slight potential
-  Defence Area / Military Sites
-  Defence Controlled Area






Licences, Approvals & Notices



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 Subject area





Potentially Contaminating Activities (PCAs)



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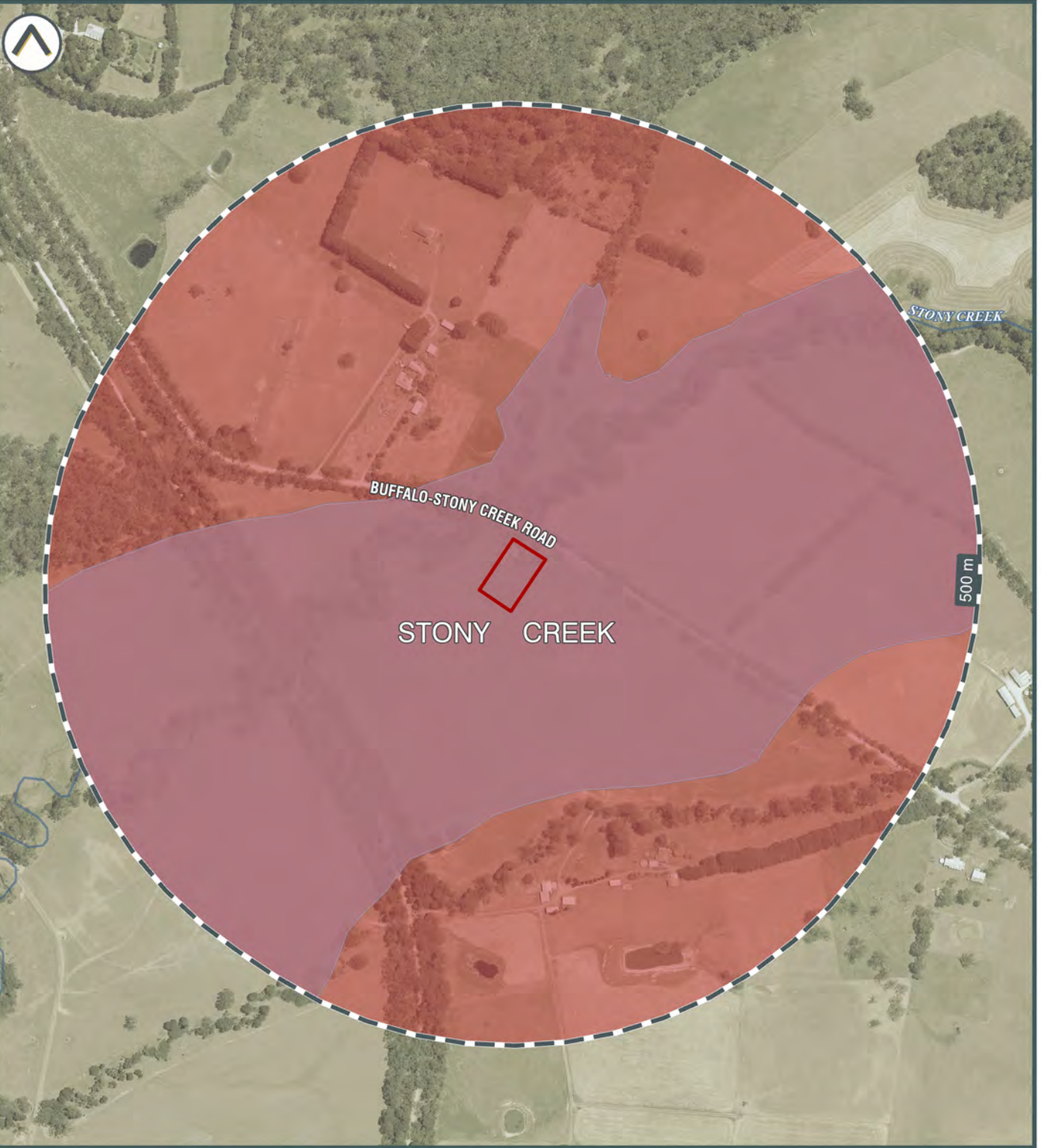
- Subject area
- Liquid Fuel Depots
- Operational Petrol Stations
- Waste Management Facilities
- Former Petrol Stations

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





Fire and Flood Hazards



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- Subject area
- Bush Fire Prone Land
- Flood Hazard
- 1 in 100 year flood extent
- Flood Planning Area
- Land Subject To Inundation Overlay

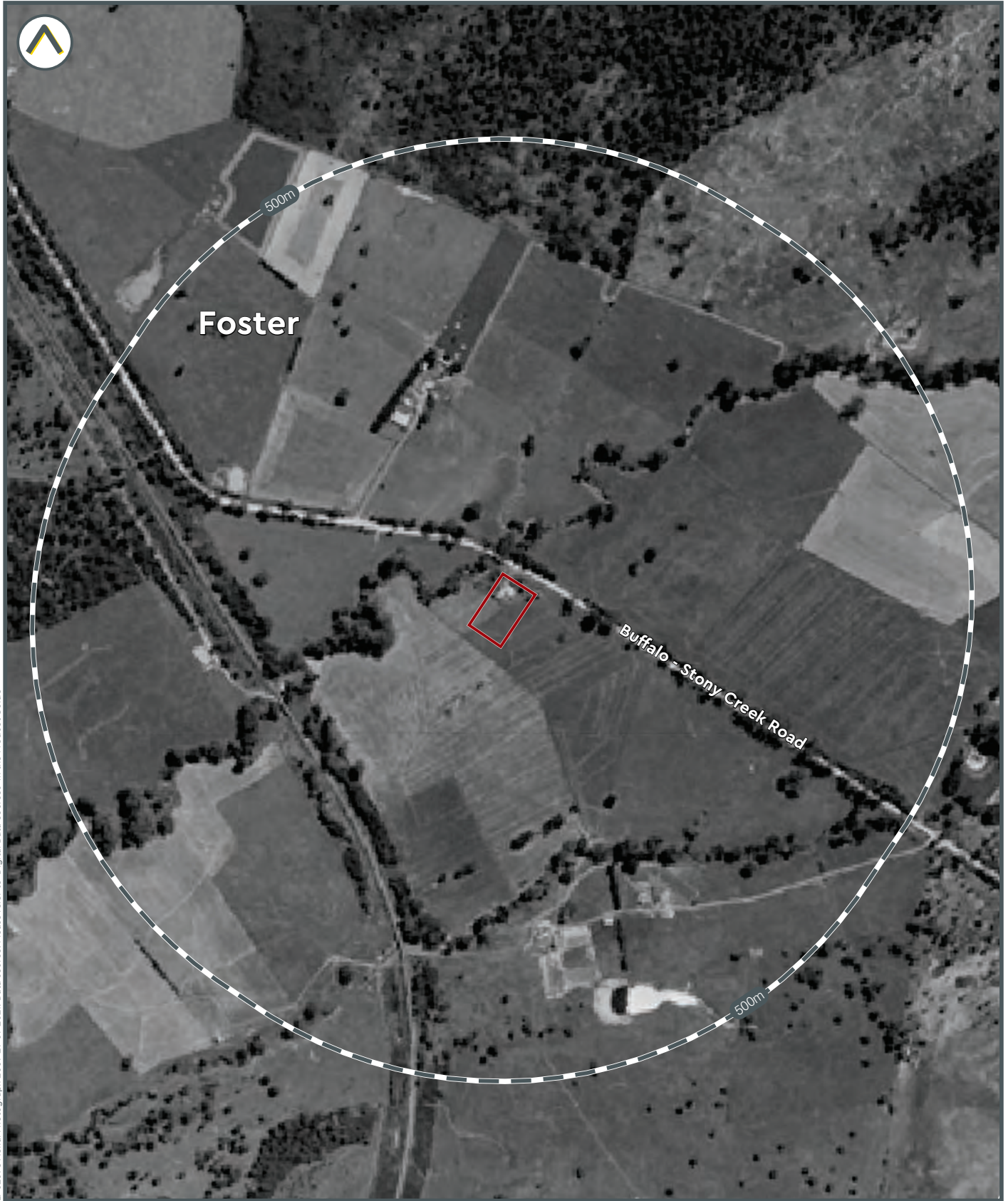


An aerial photograph of a vibrant turquoise river winding through a rugged, rocky landscape. The river is flanked by large, grey boulders and patches of dense, green and yellowish vegetation. The water's color is strikingly bright, contrasting with the natural tones of the surrounding environment. A yellow rectangular overlay is positioned in the center-right of the image, containing the text 'Appendix B' and 'HISTORIC IMAGERY'.

Appendix B

HISTORIC IMAGERY

Historic Aerial Photograph - 1967



LI-02098 Aerial Photograph 2009 29 09 2021. Data source: Please refer to 'Digital Data Sources' in the Product Guide

 Subject area

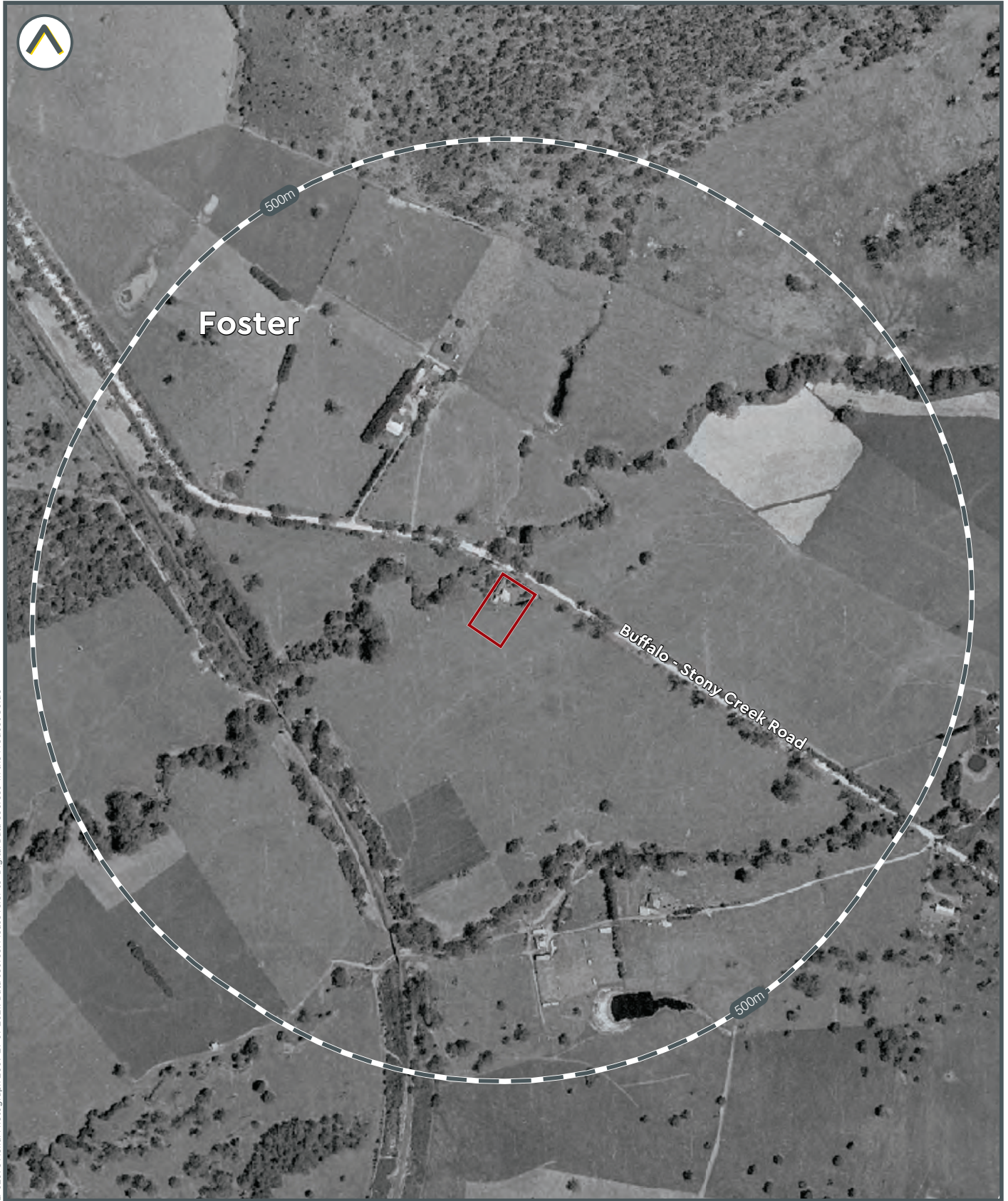
0 200m



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Historic Aerial Photograph - 1972



LI-02098 Aerial Photograph 2009 29 09 2021. Data source: Please refer to 'Digital Data Sources' in the Product Guide

 Subject area

0 200m



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Historic Aerial Photograph - 1975



LI-02098 Aerial Photograph 1975 29 09 2021. Data source: Please refer to 'Digital Data Sources' in the Product Guide

 Subject area

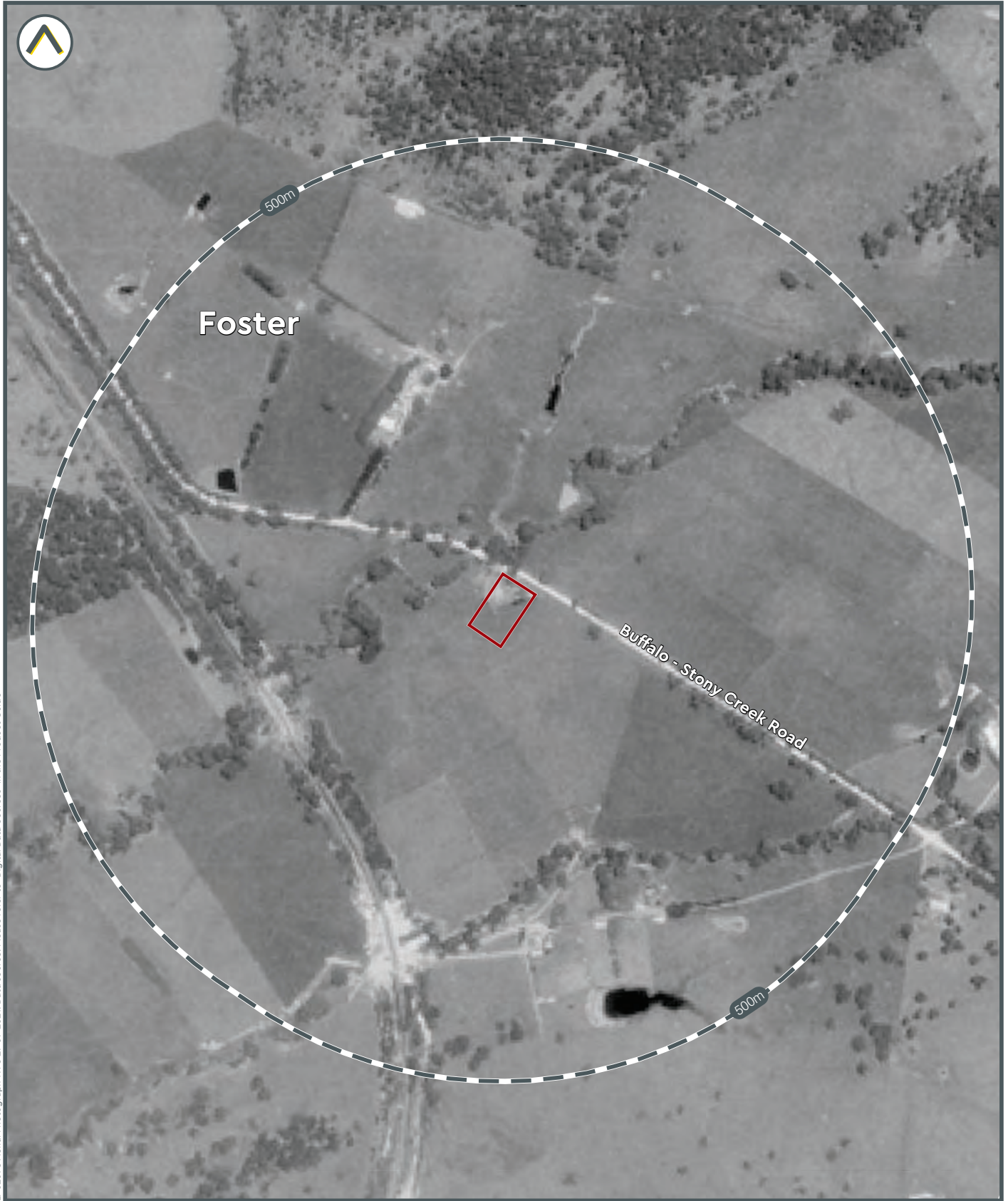
0 200m



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Historic Aerial Photograph - 1981



LI-02098 Aerial Photograph 1975-29-09 2021. Data source: Please refer to 'Digital Data Sources' in the Product Guide

 Subject area

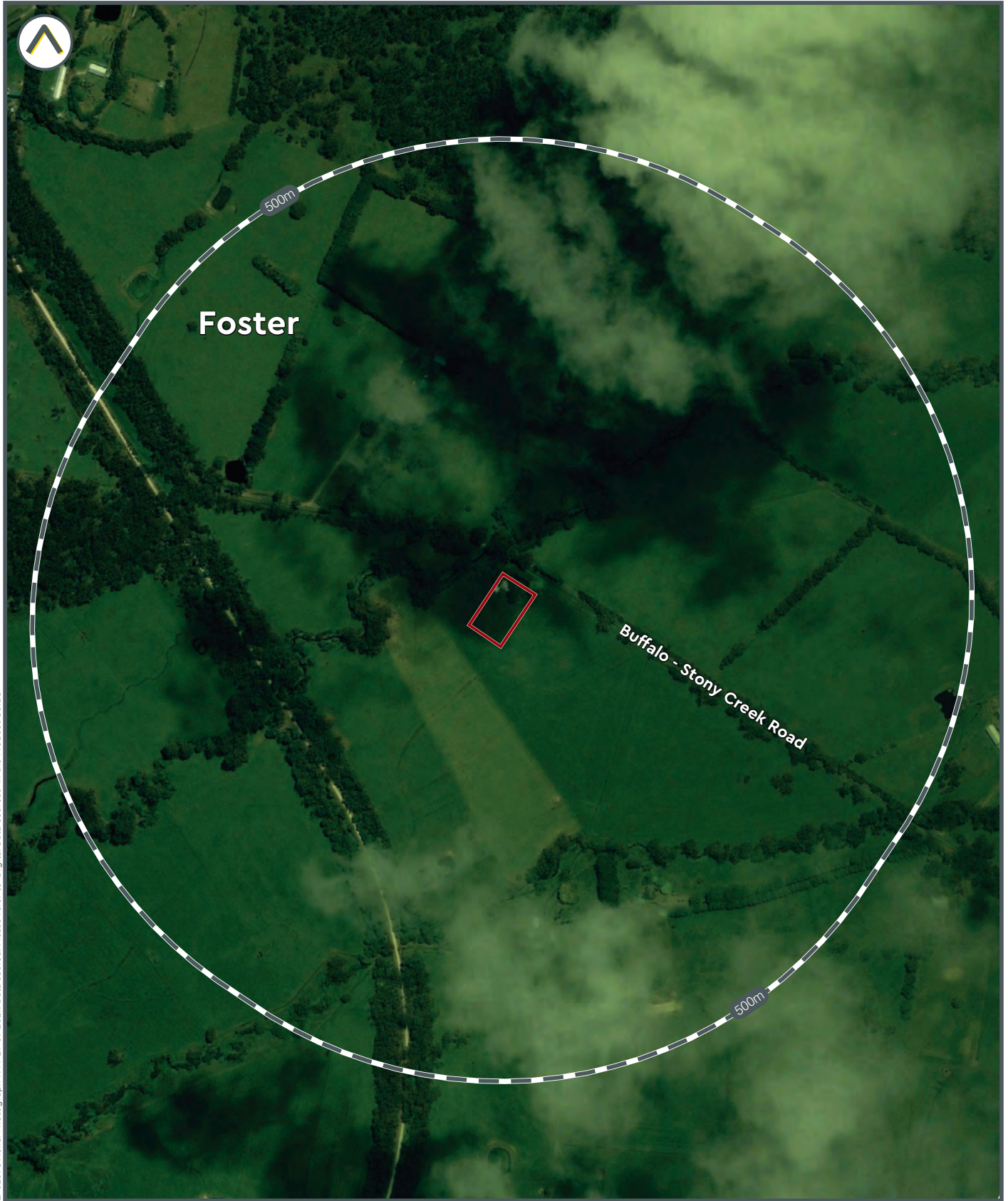
0 200m



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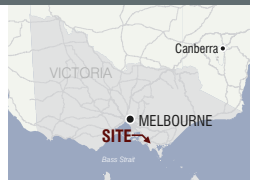
Historic Aerial Photograph - 1999



LI-02098 Aerial Photograph 1999: 29 09 2021. Data source: Please refer to 'Digital Data Sources' in the Product Guide

 Subject area

0 200m



Historic Aerial Photograph - 2009



LI-02098 Aerial Photograph 2009 29 09 2021. Data source: Please refer to 'Digital Data Sources' in the Product Guide

 Subject area

0 200m



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Historic Aerial Photograph - 2012



LI-02098 Aerial Photograph 1999-20 09 2021. Data source: Please refer to 'Digital Data Sources' in the Product Guide

 Subject area

0 200m



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Historic Aerial Photograph - 2015



LI-02098 Aerial Photograph 2015 29 09 2021. Data source: Please refer to 'Digital Data Sources' in the Product Guide

 Subject area

0 200m



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Historic Aerial Photograph - 2020



LI-02098 Aerial Photograph 2020 09 2021. Data source: Please refer to 'Digital Data Sources' in the Product Guide

 Subject area

0 200m



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Enviro-Screen

24 Stony Creek-Dollar Road
Foster, VIC

28 September 2021





Understanding your report

Your Report has been produced by Land Insight and Resources (Land Insight).

Your Report is based on information available from public databases and sources at the date of reporting. The information gathered relates to land that is within a 200 to 2000m radius (buffer zone) from the boundaries of the Property. A smaller or larger radius may be applied for certain records (as listed under records and as shown in report maps).

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 or data provided.

The report provided by Land Insight 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 info@liresources.com.au

The report does not include title searches; dangerous good searches or; property certificates (unless requested); or information derived from a physical inspection, such as hazardous building materials, areas of infilling or dumping/spilling of potentially contaminated materials. It is important to note that these documents and an inspection can contain information relevant to contamination 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 the data displayed within this report is only current from date of production.

This Report, and your use of it, is regulated by Land Insight's Terms and Conditions (See Land Insight's Product Guide).

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ATTACHMENTS

Attachment A - Report Maps

Attachment B - Historical Imagery

Land Insight Product Guide and Terms and Conditions

SUMMARY

 Section 1	PROPERTY SETTING	Identified
Sensitive Receptors Planning Control Heritage Soil and Land Information Geology and Topography		
 Section 2	HYDROGEOLOGY	Identified
Aquifer Groundwater Bores and Other Borehole investigations Groundwater Dependent Ecosystems (GDE) Hydrogeology Units Wetlands		
 Section 3	ENVIRONMENTAL REGISTERS LICENCES AND INCIDENTS	Not Identified
Contaminated Land Public Register Sites Regulate by Other Jurisdictional Body (Former Gaswork sites / PFAS sites) Licensing and Regulated Sites National Pollutant Inventory (NPI)		
 Section 4	POTENTIALLY CONTAMINATED AREAS	Identified
National Liquid Fuel Facilities National Waste Management Facilities		
 Section 5	NATURAL HAZARDS	Identified
Erosion risk Bushfire prone land Fire history Flood hazards		



Section 1 Property Setting



1.1 SENSITIVE RECEPTORS

Map 1.1 (200m Buffer)

Sensitive receptor	Category	Distance (m)	Direction
Not identified	-	-	-

1.2 PLANNING CONTROLS

Map 1.2 (onsite)

Zoning

Code	Zoning	Details
FZ	FARMING ZONE	-

Planning Overlay

Type	Category	Details
BMO	BMO	BUSHFIRE MANAGEMENT OVERLAY
ESO	ESO2	ENVIRONMENTAL SIGNIFICANCE OVERLAY - SCHEDULE 2
LSIO	LSIO	LAND SUBJECT TO INUNDATION OVERLAY

Other Planning Information

Type	Category	Details
Not identified	-	-

1.3 HERITAGE

Map 1.3 (200m Buffer)

State and Local Heritage

Site ID	Site Name	Type	Details	Distance (m)	Direction
4975	-	Areas of Cultural Heritage Sensitivity (CHS)	-	0.0	onsite

Australian Heritage Database

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

Commonwealth Heritage List, National Heritage List and World Heritage Area.

1.4 SOIL AND LAND USE INFORMATION

Map 1.4a/1.4b (onsite)

Soil Landscape

Soil Landscape	FfcQ7-1	fc	Soil Group	'Loams, Duplex soils'
Description	Intermediate Terraces - Gippsland			
Soil Landscape	PfcC7-2	fc	Soil Group	'Yellow duplex soils, Pale sands'
Description	Plain above flood level (relative relief <9m)			

Salinity

Salt Susceptibility	Low	Areas with yellow clayey soils but in which salt seeps have not been recorded
---------------------	-----	---

Radon

Radon Level	Bq/m ³	7
-------------	-------------------	---

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).

Acid Sulfate Soil

Coastal Acid Sulfate Soil Hazard (CASS) (Table 1.4.1)	On the Property?	Within Buffer?
Class	Not identified	Not identified

National Acid Sulfate Soils Atlas

Atlas of Australian ASS (Table 1.4.2)	Cq(p4)	ASS in inland lakes, waterways, wetlands and riparian zones	Probability of Occurrence	Extremely low probability of occurrence
	Bn(p4)	ASS in inland lakes, waterways, wetlands and riparian zones		Low Probability of occurrence

Table 1.4.1. Classification for Coastal Acid Sulfate Soils (CASS)

Class of Land as shown on ASS Planning Maps	
Prospective Land	Land that has the potential to contain Coastal Acid Sulfate Soils as indicated by geomorphology.
Made Land	Land that has been modified by human agency. Here, the geomorphic features that indicate the potential to contain Coastal Acid Sulfate Soil, no longer exist. Assessment of the potential depends on information such as geology maps or soil maps, that pre-dates modification.

Data represents Victorian coastal lands which have the potential to contain acid sulfate soil (CASS), i.e. it is prospective for CASS. The data is used for triggering an investigation of a site where proposed activities risk disturbing CASS. Department of Environment and Primary Industries.

Table 1.4.2. Atlas of Australian Acid Sulfate Soils¹ (ASRIS) (CSIRO/NatCASS)

Probability of Occurrence of ASS ¹	
A	High Probability of occurrence - (>70% chance of occurrence in mapping unit)
B	Low Probability of occurrence - (6-70% chance of occurrence in mapping unit)
C	Extremely low probability of occurrence - (1-5% chance of occurrence in mapping unit)
D	No probability of occurrence - (<1% chance of occurrence in mapping unit)
x	Disturbed ASS¹ terrain - (ASS ¹ material present below urban development).
u	Unclassified - (Insufficient information to classify map unit)
Zones	
a	Potential acid sulfate soil material and/or Monosulfidic Black Ooze (MBO).
b, c	Potential acid sulfate soil generally within upper 1 m.
c, d, e	ASS ¹ generally within upper 1 m.
f	ASS ¹ generally below 1 m from the surface
g	ASS ¹ , generally below 3 m from the surface.
h	ASS ¹ generally within 1 m of the surface.
i, j	ASS ¹ generally below 1 m of the surface.
k	ASS ¹ material and/or Monosulfidic Black Ooze (MBO).
l, m, n, o, p, q	ASS ¹ generally within upper 1 m in wet / riparian areas.
Subscripts to codes	
(a)	Actual acid sulfate soil (AASS) = sulfuric material.
(p)	Potential acid sulfate soil (PASS) = sulfidic material.
(q)	Monosulfidic Black Ooze (MBO) is organic ooze enriched by iron monosulfides.
Confidence levels	
(1)	All necessary analytical and morphological data are available
(2)	Analytical data are incomplete but are sufficient to classify the soil with a reasonable degree of confidence
(3)	No necessary analytical data are available, but confidence is fair, based on a knowledge of similar soils in similar environments
(4)	No necessary analytical data are available, and classifier has little knowledge or experience with ASS, hence classification is provisional

¹Acid 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 (Pons 1973). Acid sulfate soil (ASS) may include PASS or AASS + PASS. Potential acid sulfate soil (PASS) = sulfidic material. Actual acid sulfate soil (AASS) = sulfuric material.

1.5 GEOLOGY AND TOPOGRAPHY

Map 1.5 (onsite)

Geology

Map Sheet	Symbol	Name	Geologic History	Lithology	Description
1:50,000 Geological Units	Ksw	Wonthaggi Formation (Ksw): generic	Early Cretaceous to Early Cretaceous (channelled stream flow - fluvial [environment]; over-bank stream flow - fluvial [environment])	sandstone (major [proportion]); siltstone (minor [proportion]); conglomerate (minor [proportion]); coal (minor [proportion])	Lithic volcanoclastic sandstone, arkose, siltstone, minor conglomerate and coal; fluvial

Naturally Occurring Asbestos Potential (NOA)

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

Topography

Topography	50 – 60 mAHD
------------	--------------



Section 2 Hydrogeology



2.1 HYDROGEOLOGY AND GROUNDWATER BORES

Map 2.1 (2000m Buffer)

	On the Property?	Within Buffer?
Aquifer Type	Fractured or fissured, extensive aquifers of low to moderate productivity	Fractured or fissured, extensive aquifers of low to moderate productivity
Designated Water Supply Catchments	Not identified	TARWIN RIVER (MEENIYAN)
Depth to Watertable (m)	<5 - 20	<5 - 50
Wetlands	Not identified	Not identified
Groundwater Salinity (mg/L)	3500	3500

Groundwater Quality Restricted Use Zones

Number	Address	Site history	Restrictions on Use	Distance (m)	Direction
Not identified	-	-	-	-	-

Groundwater Bores

Map ID	Groundwater Bore ID	Authorised Purpose	Completion Date	Drilled Depth (m)	Final Depth (m)	SWL (m)	Salinity (mg/l)	Yield (L/s)	Distance (m)	Direction
11	85575	Stock and Domestic	7/05/1972	30.0	30.5	<Null>	<Null>	<Null>	95.7	North-west
6	318824	Unknown	31/12/3793	488.0	487.8	<Null>	<Null>	<Null>	137.8	North-west
9	318829	Unknown	23/05/1982	120.0	120.0	<Null>	<Null>	<Null>	453.7	South
10	77656	Stock and Domestic	4/02/1983	30.0	30.1	<Null>	<Null>	0.316	500.4	South

Map ID	Groundwater Bore ID	Authorised Purpose	Completion Date	Drilled Depth (m)	Final Depth (m)	SWL (m)	Salinity (mg/l)	Yield (L/s)	Distance (m)	Direction
7	318825	Unknown	31/12/1916	298.0	297.8	<Null>	<Null>	<Null>	593.8	South
8	85574	Stock and Domestic	7/05/1972	24.0	24.4	<Null>	1184 mg/L	0.441	1215.3	North-west
12	141978	Stock and Domestic	15/04/1999	25.0	25.1	<Null>	<Null>	1.2	1216.0	South-east
4	WRK986666	Unknown	<Null>	25.0	25.0	<Null>	<Null>	<Null>	1394.0	North-west
3	WRK986665	Unknown	<Null>	25.0	25.0	<Null>	<Null>	<Null>	1451.4	North-west
5	227271B	Unknown	<Null>	0.0	0.0	<Null>	<Null>	<Null>	1456.1	South-west
13	77650	Stock and Domestic	1/01/1975	0.0	0.0	<Null>	769 mg/L	<Null>	1463.6	South-east
2	WRK986664	Unknown	<Null>	25.0	25.0	<Null>	<Null>	<Null>	1508.8	North-west
1	77652	Stock and Domestic	29/06/1973	33.0	33.0	<Null>	<Null>	<Null>	1983.5	West

Groundwater Bores Driller Lithology Details

Groundwater Bore ID	From Depth – To Depth (m)	Lithology	Distance (m)	Direction
85575	#N/A		95.7	North-west
318824	#N/A		137.8	North-west
318829	#N/A		453.7	South
77656	#N/A		500.4	South
318825	#N/A		593.8	South
85574	#N/A		1215.3	North-west
141978		0m-1m Topsoil & Silty Clay 1m-5.8m Clay Orange & Grey 5.8m-7.5m Clay - Silty/Stiff 7.5m-25.1m Sandstone & Mudstone	1216.0	South-east
WRK986666	#N/A		1394.0	North-west
WRK986665	#N/A		1451.4	North-west
227271B	#N/A		1456.1	South-west
77650	#N/A		1463.6	South-east
WRK986664	#N/A		1508.8	North-west
77652	#N/A		1983.5	West

2.2 HYDROGEOLOGY AND OTHER BOREHOLES

Map 2.2 (500m Buffer)

	On the Property?	Within Buffer?
Groundwater Management Areas	Not identified	-
Hydrogeologic Unit	Upper Tertiary/Quaternary Aquitard (porous media - unconsolidated)	Upper Tertiary/Quaternary Aquitard (porous media - unconsolidated) Surficial Sediment Aquifer (porous media - unconsolidated) Mesozoic Fractured Rock Aquifer

Groundwater Dependent Ecosystems (GDE)

	On the Property?	Within Buffer?
Aquatic	High potential for GW interaction	High potential for GW interaction
Terrestrial	Low potential for GW interaction Moderate potential for GW interaction High potential for GW interaction	Low potential for GW interaction Moderate potential for GW interaction High potential for GW interaction

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

Terrestrial - Ecosystems that rely on the Subsurface expression of groundwater.

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
85575	Groundwater	Rural Water Commission	Private Individual/Corporation	07/05/1972	30.5	100.1	North-west
318824	Coal	Dept. Manufacturing & Industry	Department of Manufacturing & Industry Development	31/12/1893	487.8	143.1	North-west
318829	Coal	Dept. Manufacturing & Industry	Private Individual/Corporation	23/05/1982	120.0	449.5	South



Section 3 Environmental Registers, Licences and Incidents



3.1 CONTAMINATED LAND PUBLIC REGISTER

Map 3.1 (1000m Buffer)

Environmental Audit Reports

CARMS No.	Address	Audit Category	Distance (m)	Direction
Not identified	-	-	-	-

Priority Site Register

Notice No.	Address	Issue	Distance (m)	Direction
Not identified	-	-	-	-

Table 3.1.1 Sections 53X and 53V of the Environment Protection Act 1970

EPA Types of Environmental Audits	
53X Audits	A 53X ('condition of the environment') audit is most frequently used by the planning system and verifies that potentially contaminated land can be used for a specific use (industrial, commercial or residential). From a 53X audit comes either a certificate or statement of environmental audit.
53V Audits	A 53V ('risk of harm') audit is most commonly used by EPA to understand the risk to the environment posed by an industrial activity or to validate that cleanup of contaminated land or groundwater has occurred. The 53V audit assesses the risk of any possible harm to a site caused by an industrial process or activity, waste substance or noise. This includes audits associated with the construction and operation of landfills.

3.2 SITES REGULATED BY OTHER JURISDICTIONAL BODY

Map 3.2 (2000m Buffer)

Defence, Military Sites and UXO Areas

Site name	Type*	Description	Distance (m)	Direction
Not identified	-	-	-	-

*RCIP (Regional Contamination Investigation Program). UXO (Unexploded Ordnance Areas)

Former Gasworks Sites

Site name	Description	Distance (m)	Direction
Not identified	-	-	-

PFAS Sites

Site name	Description	Distance (m) *	Direction
Not identified	-	-	-

National Pollutant Inventory (NPI)

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

Licences

Licence No.	Type	Company Name	Address	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.

Approvals

Doc No.	Type	Company Name	Address	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.

Notices

Transaction No.	Type	Company Name	Address	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.

Table 3.3.1 EPA Regulatory Instruments Explanation

Approvals	
Works approval is required for industrial and waste management activities that have the potential for significant environmental impact.	
Works Approval	EPA's works approval process is designed to ensure the best and most cost-effective environmental outcomes on projects are achieved. Without works approvals there is an increased risk of industrial projects causing pollution issues and requiring expensive retrofitting.
30A Approval	Section 30A is an overriding provision of the Environment Protection Act 1970 (the Act) under which EPA can authorise discharges, emissions, storage, treatment, disposal and handling of waste in emergencies and other temporary situations that would otherwise be an offence under the Act. 30A approvals are not issued lightly, as they permit activities that would not normally be allowed.
Notices	
Remedial notices are served to prevent or remedy a range of non-compliances or likely non-compliances. Remedial notices are not punitive measures.	
Clean Up Notice	Clean up notices (CUN) are issued under section 62A of the <i>Environment Protection Act 1970</i> . They aim to prevent further contamination and impact on beneficial uses through removal of waste, undertaking clean-up activities, ongoing management of pollution, altered handling, storage or location of industrial or prescribed industrial waste.
Minor Works Pollution	Minor works pollution abatement notices (MWPANs) are issued under section 31B of the EP Act. They aim to prevent further occurrence of pollution or potential environmental risk through installation of risk controls and changes to onsite processes and practices in urgent situations.
Pollution Abatement Notice	Pollution abatement notices are issued under section 31A of the <i>Environment Protection Act 1970</i> . They aim to prevent further occurrence of pollution or potential environmental risk through installation of risk controls and changes to on-site processes and practices.
Post closure pollution abatement notices (PC PAN)	Post Closure Pollution Abatement Notices (PAN's) are formal legal enforceable Notices issued by EPA on former landfill sites. The environmental risks posed by landfill sites continue for a significant period of time after waste acceptance has ceased.

Table 3.3.1 EPA Regulatory Instruments Explanation

Licences	
EPA licence is required for all scheduled premises. It allows the licence-holder to operate and sets conditions that they must meet.	
Licence	Licences contain standard conditions that aim to control the operation of the premises so that there is no adverse effect on the environment. These conditions address areas such as waste acceptance and treatment, air and water discharges, and noise and odour.
Amalgamated Licence	An amalgamated licence is a legal document that contains standard conditions to control the operation of scheduled premises to minimise impacts on the environment. These conditions address areas such as waste acceptance and treatment, air and water discharges, noise and odour.



Section 4 Potentially Contaminated Areas



4.1 POTENTIALLY CONTAMINATING ACTIVITIES

Map 4.1 (500m Buffer)

Liquid Fuel Facilities

Site name	Category	Location	Status*	Distance (m)	Direction
Not identified	-	-	-	-	-

Waste Management Facilities & Recycling Centres

Site name	Category	Location	Status*	Distance (m)	Direction
Not identified	-	-	-	-	-

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.

***Status:**

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

Former: business that have been closed or discontinued 1 to 2 years prior from the day this report was issued. All former sites older than 2 years will be reported in the 'Historical Potentially Contaminating Activities' section 4.4 in this report.

4.2 HISTORICAL POTENTIALLY CONTAMINATING ACTIVITIES

(not mapped)

1900 Historical Business Data

Activity	Name	Address	Positional accuracy ¹	Distance (m)	Direction
Not identified	-	-	-	-	-

1905 Historical Business Data

Activity	Name	Address	Positional accuracy ¹	Distance (m)	Direction
Butter & Cheese Factories & Exporters Of Butter	Stoney Creek	Foster	Suburb	0.0	West

1915 Historical Business Data

Activity	Name	Address	Positional accuracy ¹	Distance (m)	Direction
Butter Factories	Sheehan. C. F.	Foster	Suburb	0.0	West
Clubs - Racing	-	Foster	Suburb	0.0	West
Eucalyptus Oil Distillers	Harden, Edwin.	Foster	Suburb	0.0	West
Mechanics Institutes & Free Libraries	M. I.-Mchutchison, T.	Foster	Suburb	0.0	West

1925 Historical Business Data

Activity	Name	Address	Positional accuracy ¹	Distance (m)	Direction
Coffee Palaces	Tobin, Mrs Mary	Foster	Suburb	0.0	West
Racing Clubs		Foster	Suburb	0.0	West
Merchants	Crutchfield, Wm. A.	Foster	Suburb	0.0	West
Eucalyptus Oil Distillers	Harden, Edwin	Foster	Suburb	0.0	West
Wood & Coal Merchants	Connolly, Wm.	Foster	Suburb	0.0	West
Butter Factories		Foster	Suburb	0.0	West

1935 Historical Business Data

Activity	Name	Address	Positional accuracy ¹	Distance (m)	Direction
Storekeepers	Farmers Club	Foster	Suburb	0.0	West
Storekeepers	Oconnor, J.	Foster	Suburb	0.0	West
Blacksmiths	Mooney, W.	Foster	Suburb	0.0	West
Coffee Palaces	Tobin, Mrs Margt.	Foster	Suburb	0.0	West

Activity	Name	Address	Positional accuracy ¹	Distance (m)	Direction
Mechanics Institutes & Free Libraries	-	Foster	Suburb	0.0	West
Butchers	Welsford, T.	Foster	Suburb	0.0	West

1940 Historical Business Data

Activity	Name	Address	Positional accuracy ¹	Distance (m)	Direction
Not identified	-	-	-	-	-

1945 Historical Business Data

Activity	Name	Address	Positional accuracy ¹	Distance (m)	Direction
Coffee Palaces	Tobin, Mrs M.	Foster	Suburb	0.0	West
Carriers & Cartage Contractors	Bengtsson, G.	Foster	Suburb	0.0	West
Storekeepers	Oconnor, J.	Foster	Suburb	0.0	West
Mechanics Institutes & Free Libraries	-	Foster	Suburb	0.0	West

1955 Historical Business Data

Activity	Name	Address	Positional accuracy ¹	Distance (m)	Direction
Carriers & Cartage Contractors	Bengtsson, G.	Foster	Suburb	0.0	West
Coffee Palaces	Ryan, Mrs M.	Foster	Suburb	0.0	West
Stock & Share Brokers	Oconnor, J.	Foster	Suburb	0.0	West
Mechanics Institutes & Free Libraries	-	Foster	Suburb	0.0	West

1965 Historical Business Data

Activity	Name	Address	Positional accuracy ¹	Distance (m)	Direction
Storekeepers	Oconnor, J.	Foster	Suburb	0.0	West
Coffee Palaces	Ryan, Mrs M.	Foster	Suburb	0.0	West

1970 Historical Business Data

Activity	Name	Address	Positional accuracy ¹	Distance (m)	Direction
Not identified	-	-	-	-	-

1975 Historical Business Data

Activity	Name	Address	Positional accuracy ¹	Distance (m)	Direction
Not identified	-	-	-	-	-

1980 Historical Business Data

Activity	Name	Address	Positional accuracy ¹	Distance (m)	Direction
Not identified	-	-	-	-	-

1990 Historical Business Data

Activity	Name	Address	Positional accuracy ¹	Distance (m)	Direction
Not identified	-	-	-	-	-

2005 Historical Business Data

Activity	Name	Address	Positional accuracy ¹	Distance (m)	Direction
Not identified	-	-	-	-	-

2010 Historical Business Data

Activity	Name	Address	Positional accuracy	Distance (m)	Direction
Glass Merchants & Installation Service Glaziers	South Gippsland Glass	21 Stony Creek-Dollar Rd STONY CREEK 3957 VIC	Address	83.1	North-west

2015 Historical Business Data

Activity	Name	Address	Positional accuracy	Distance (m)	Direction
Web Design & Development	Heaps & Lots Web Design & Publishing	43 Main St, Stony Creek, VIC, 3957	Address	194.8	South-west

Land Insight uses a number of address geocoding techniques and characterised them according to the following criteria: completeness (match rates) and positional accuracy. When a historical street address does not contain complete details 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. The positional accuracy of the records is listed below:

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

The data used in this section was extracted from range of historical commercial trade directories and historical business listing information. The business addresses were geocoded using historical information and cannot be relied upon as some of the addresses no longer exist. 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. For more information on how these records were geocoded and the methodology used by Land Insight, contact us at info@landinsight.co.

Historical Industries or business activities deemed to be of negligible or lesser risk are not reported. 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 Natural Hazards

Map 5.1 (500m Buffer)

Erosion Risk

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

Fire Hazard

Category	On the Property?	Within Buffer?
Bush Fire Prone Area (BLA)	Yes	Yes
Fire History	-	Not identified

Flood Hazard

Name	On the Property?	Within Buffer?
1 in 100 year flood extent	Yes	Yes



Tower Three, Level 24
300 Barangaroo Avenue
Sydney NSW 2000 Australia
02 8067 8870
info@liresources.com.au
www.liresources.com.au

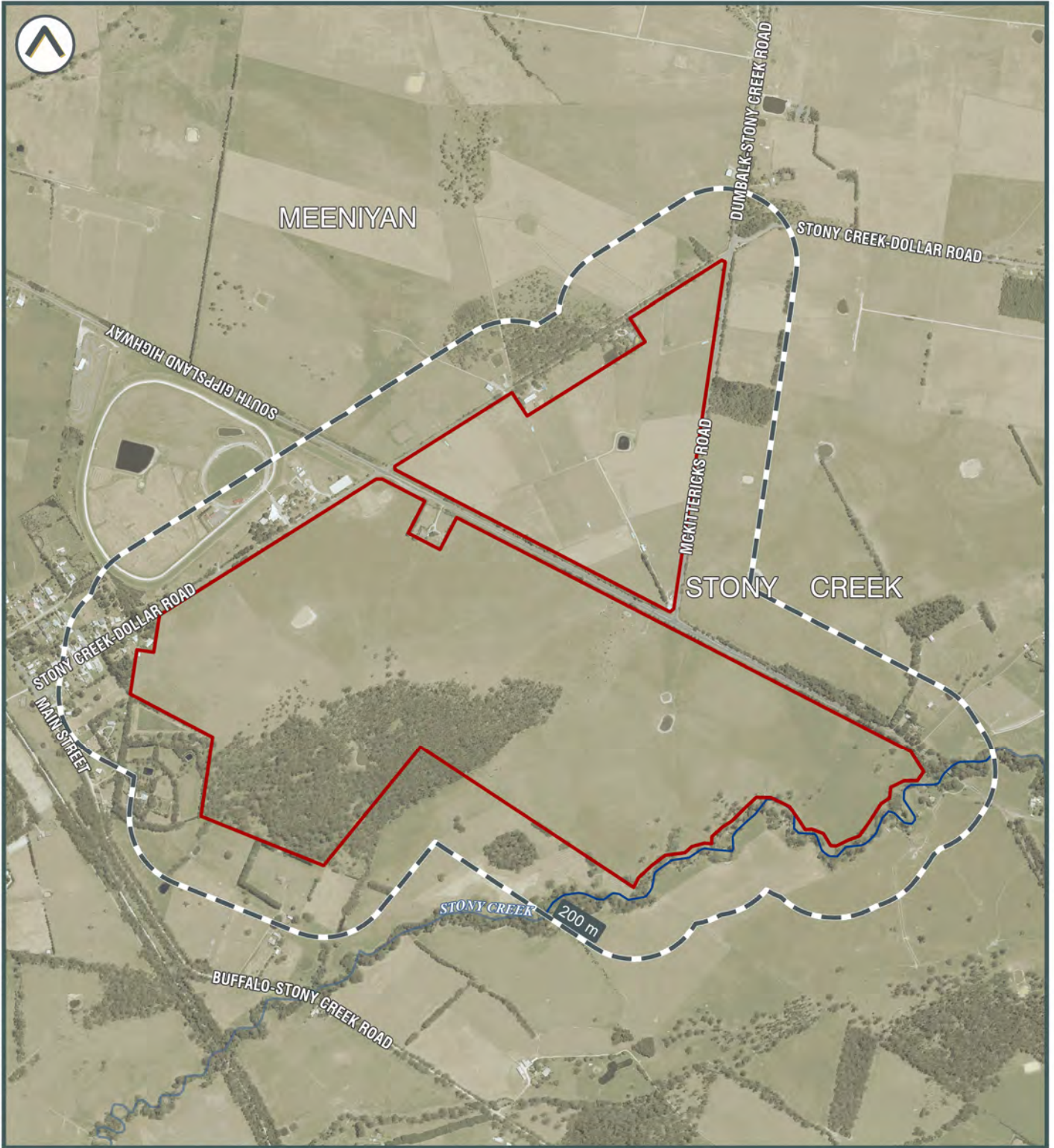


Appendix A

REPORT MAPS

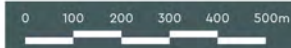


Subject Area and Sensitive Receptors



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Subject area <all other values>

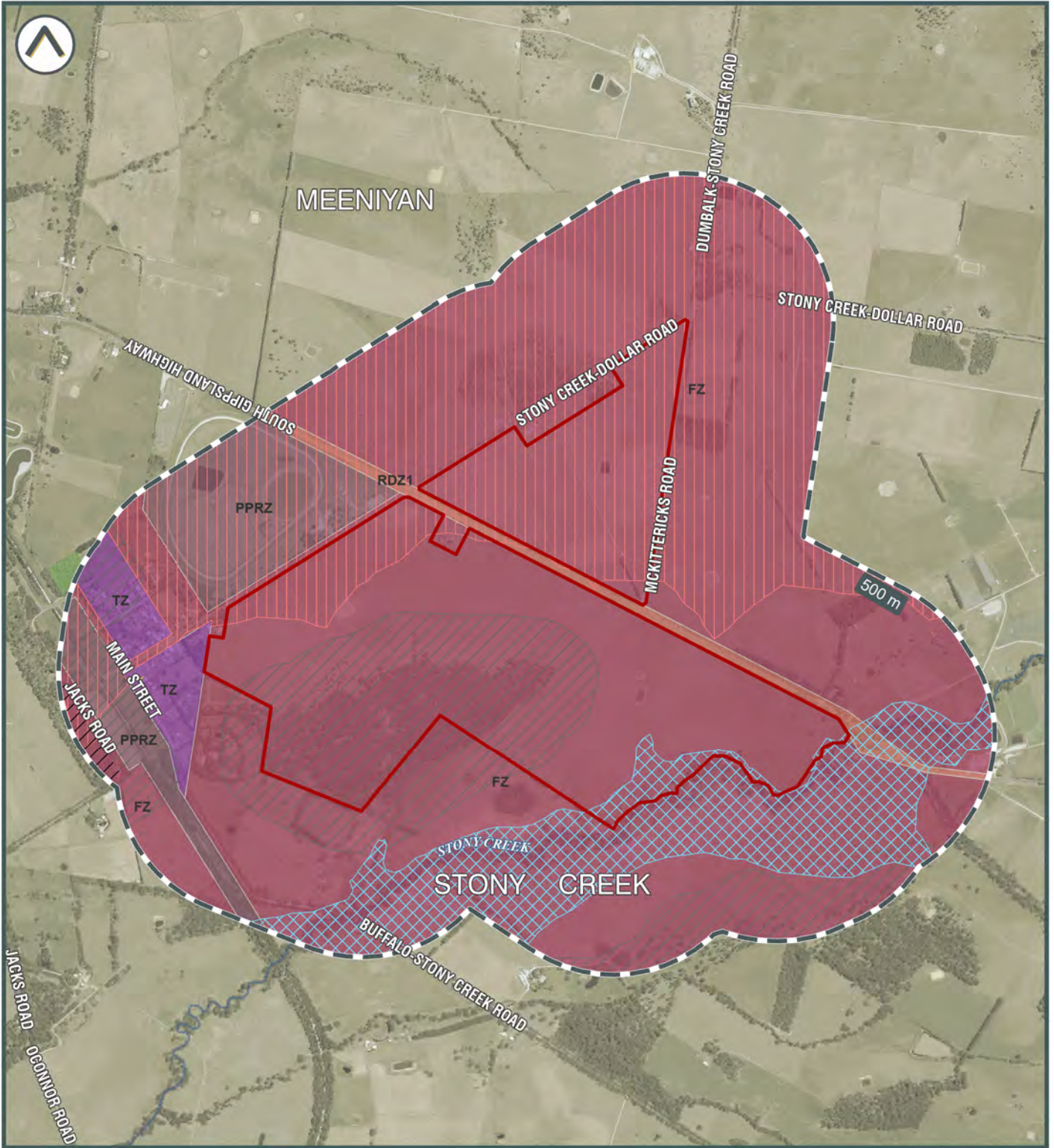


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Planning Controls



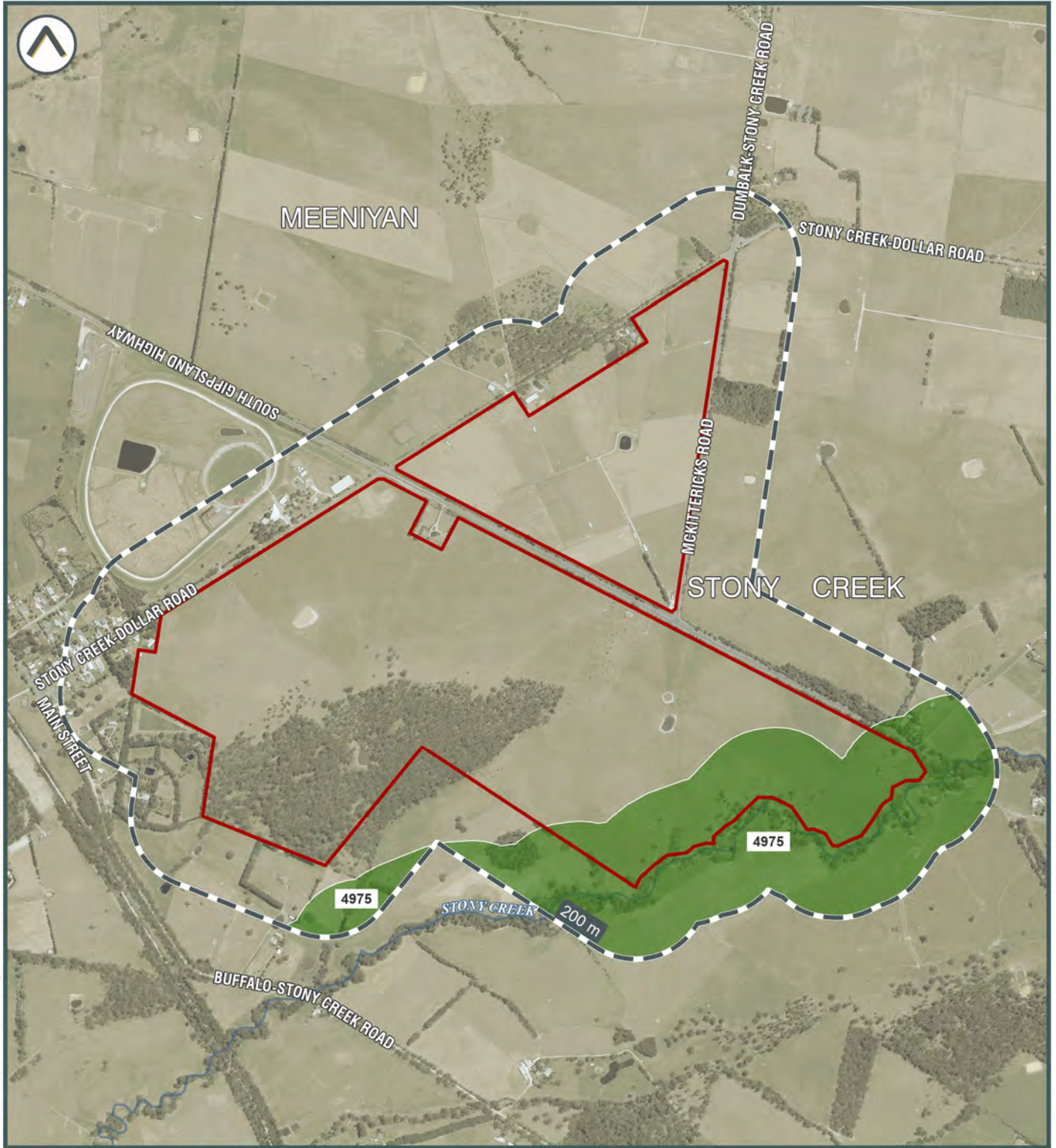
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Subject area	BMO	FZ Farming Zone
ESO	PPRZ Public Park And Recreation Zone	RDZ1 Road Zone - Category 1
HO	TZ Township Zone	
LSIO		
RO		



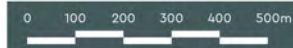


Heritage



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- Subject area
- Victorian Heritage Inventory (VHI)
- Areas of Cultural Heritage Sensitivity (CHS)
- Victorian Heritage Register (VHR)
- Commonwealth Heritage List (CHL)
- National Heritage List (NHL)
- World Heritage Area (WHA)

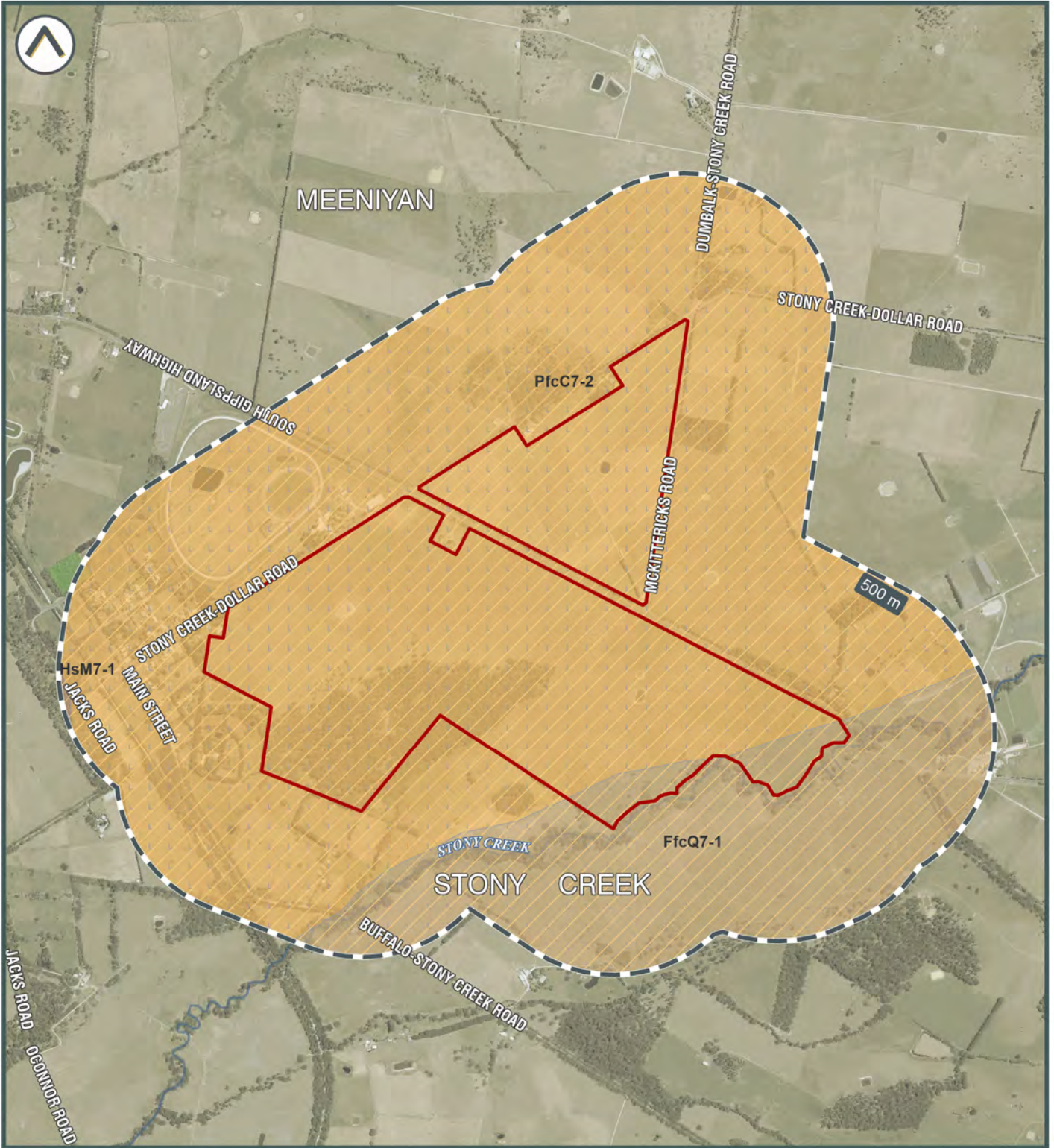


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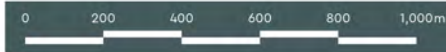
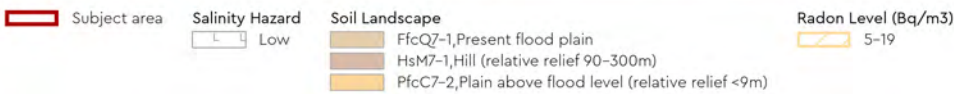




Soil Landscape and Salinity



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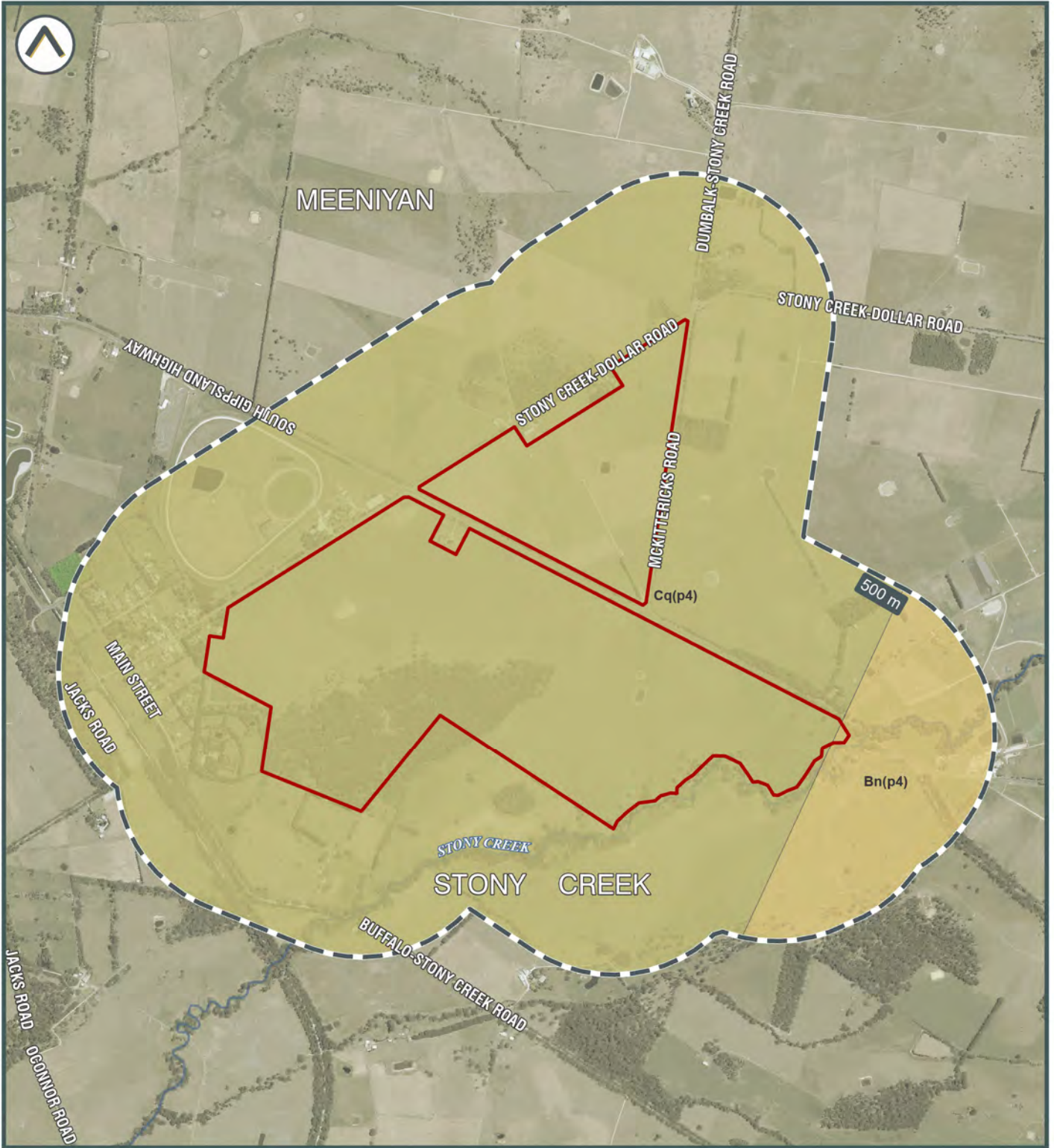


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Acid Sulfate Soils



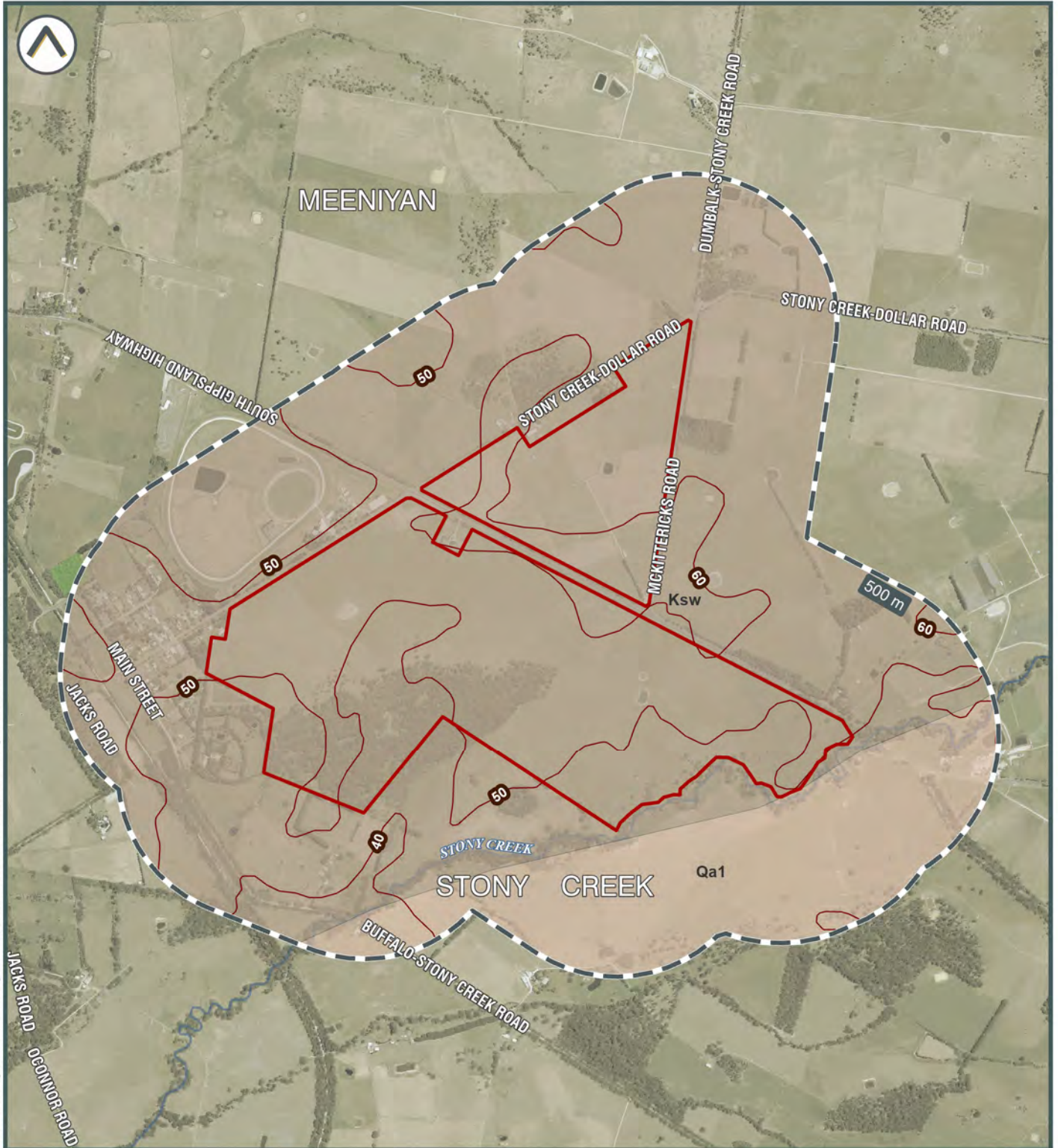
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- Subject area
- ASRIS Atlas of Australian Sulfate Soils**
- Bn(p4) | ASS in inland lakes, waterways, wetlands and riparian zones
- Cq(p4) | ASS in inland lakes, waterways, wetlands and riparian zones





Geology and Topography

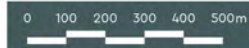


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Subject area
 Topographic contour (m)

1:250,000 Geological Units

- Ksw | Lithic volcanoclastic sandstone, arkose, siltstone, minor conglomerate and coal; fluvial
- Qa1 | Gravel, sand, silt; variably sorted and rounded; generally unconsolidated; includes deposits of low terraces; alluvial floodplain deposits

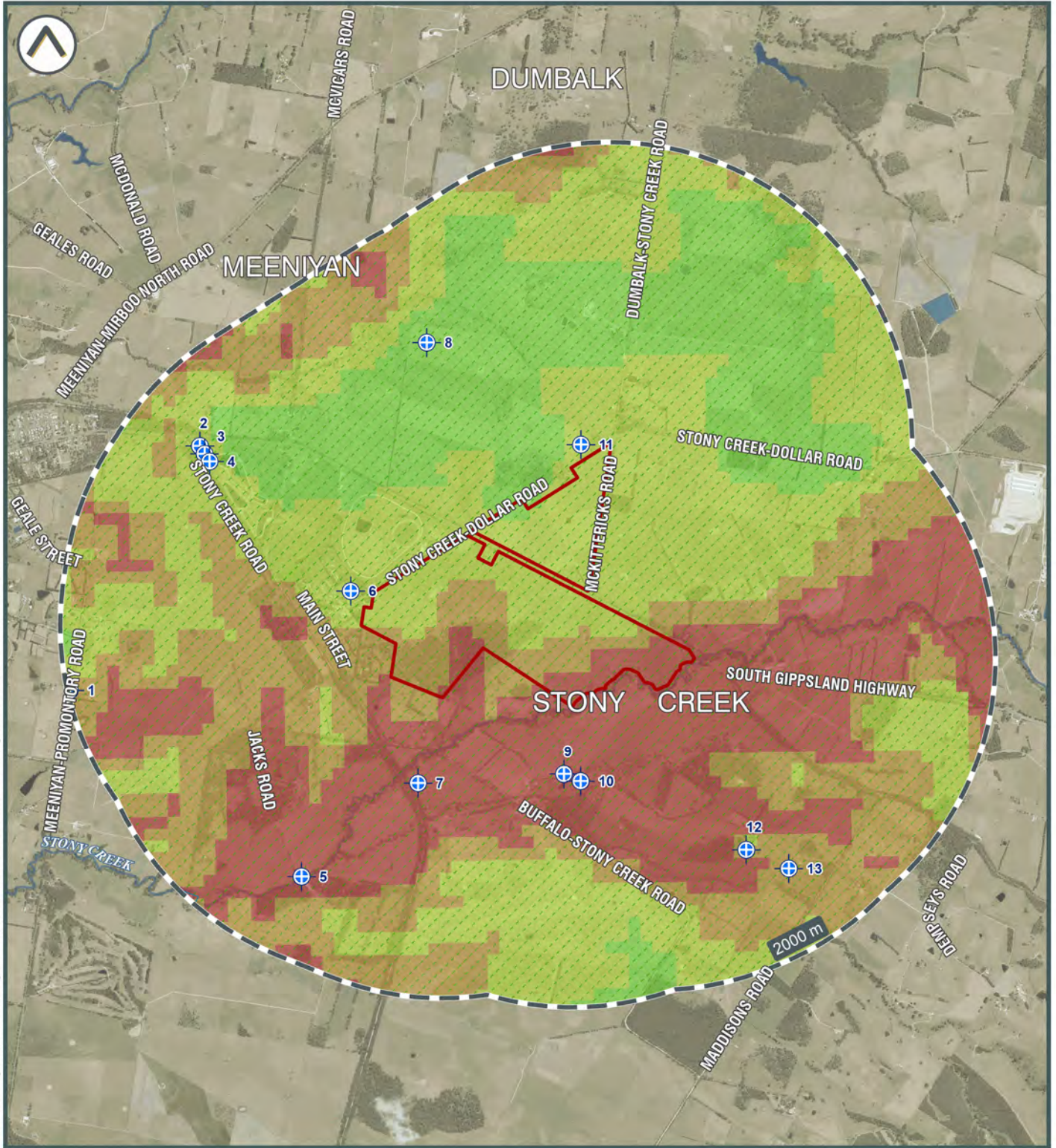


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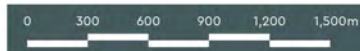
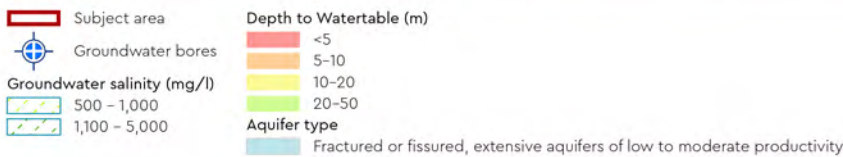




Hydrogeology and Groundwater Boreholes



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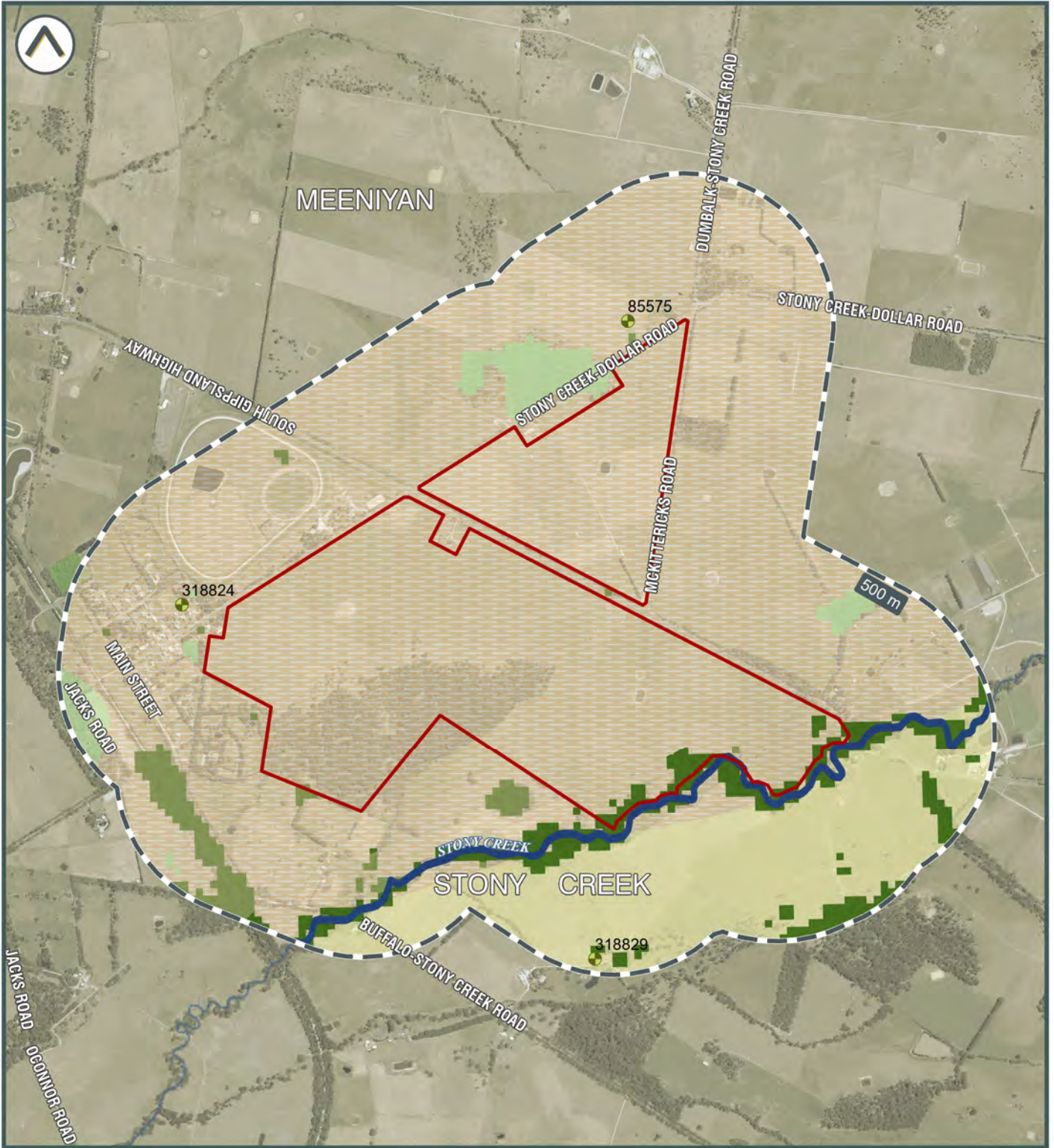


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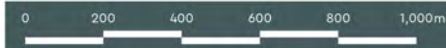
Hydrogeology and Other Boreholes



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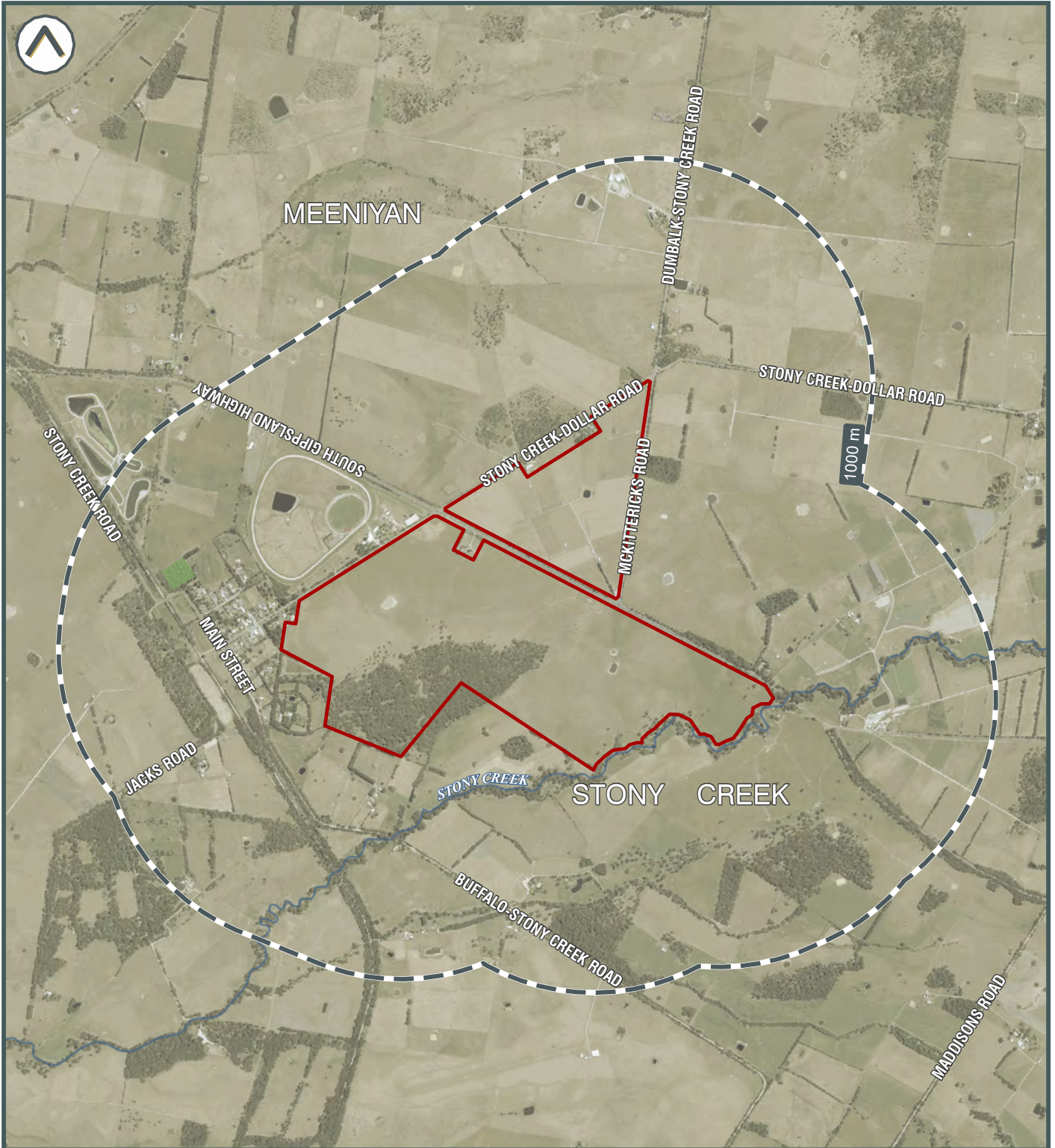
- Subject area
- Other boreholes
- Hydrogeologic Unit**
- Surficial Sediment Aquifer (porous media – unconsolidated)
- Upper Tertiary/Quaternary Aquitard (porous media – unconsolidated)
- Mesozoic Fractured Rock Aquifer

- Ecosystems that rely on the Surface expression of Groundwater**
- High potential for GW interaction
- Ecosystems that rely on Subsurface presence of Groundwater**
- High potential for GW interaction
- Moderate potential for GW interaction
- Low potential for GW interaction





Contaminated Land Public Register



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- Subject area
- Contaminated Land Register (EPA)
- Priority Sites Register Audit Report



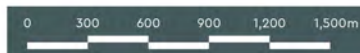


Sites Regulated by other Jurisdictional Body



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- Subject area
- PFAS sites
- NPI Facilities
- Former Gasworks Sites
- Unexploded Ordnance (UXO) Areas
- Substantial Potential
- Slight potential
- Sea Dumping of Depth Charges
- Sea Dumping of Depth Charges (Chemical munitions sea dumping)
- Other Sea Dumping Sites
- Other
- Defence Area / Military Sites
- Defence Controlled Area

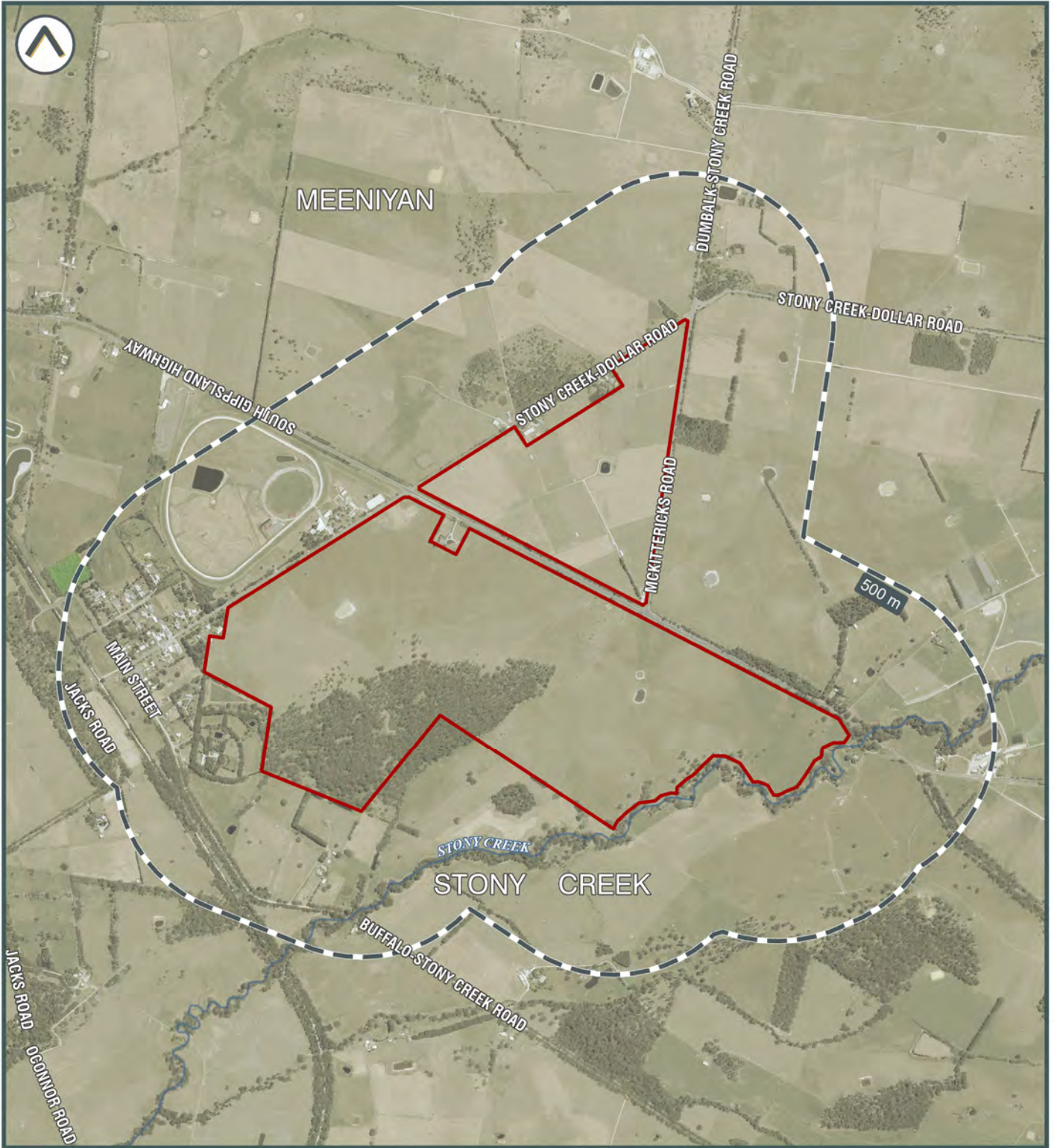


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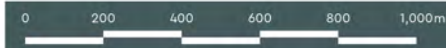


Licences, Approvals & Notices



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Subject area

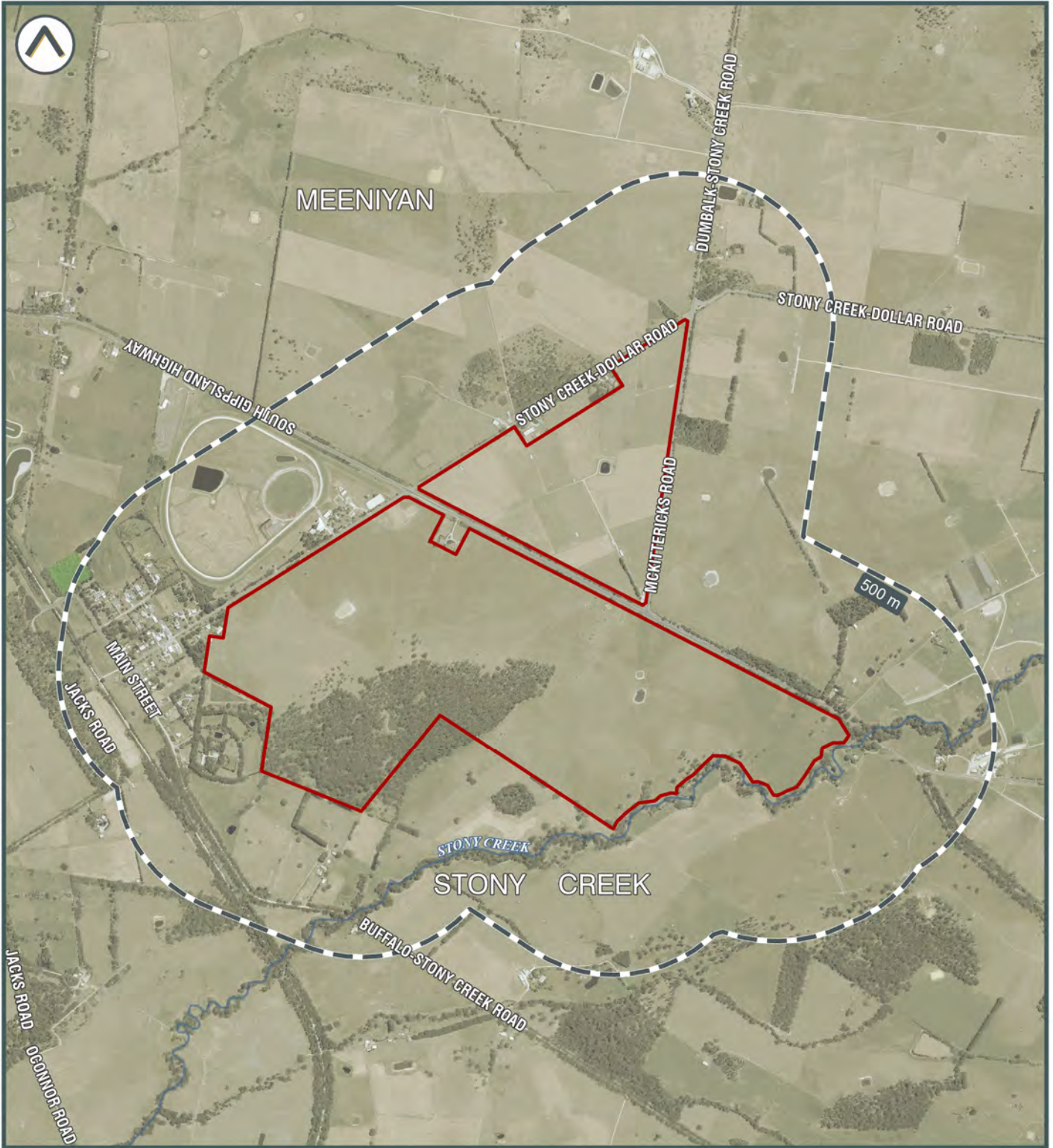


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Potentially Contaminating Activities (PCAs)



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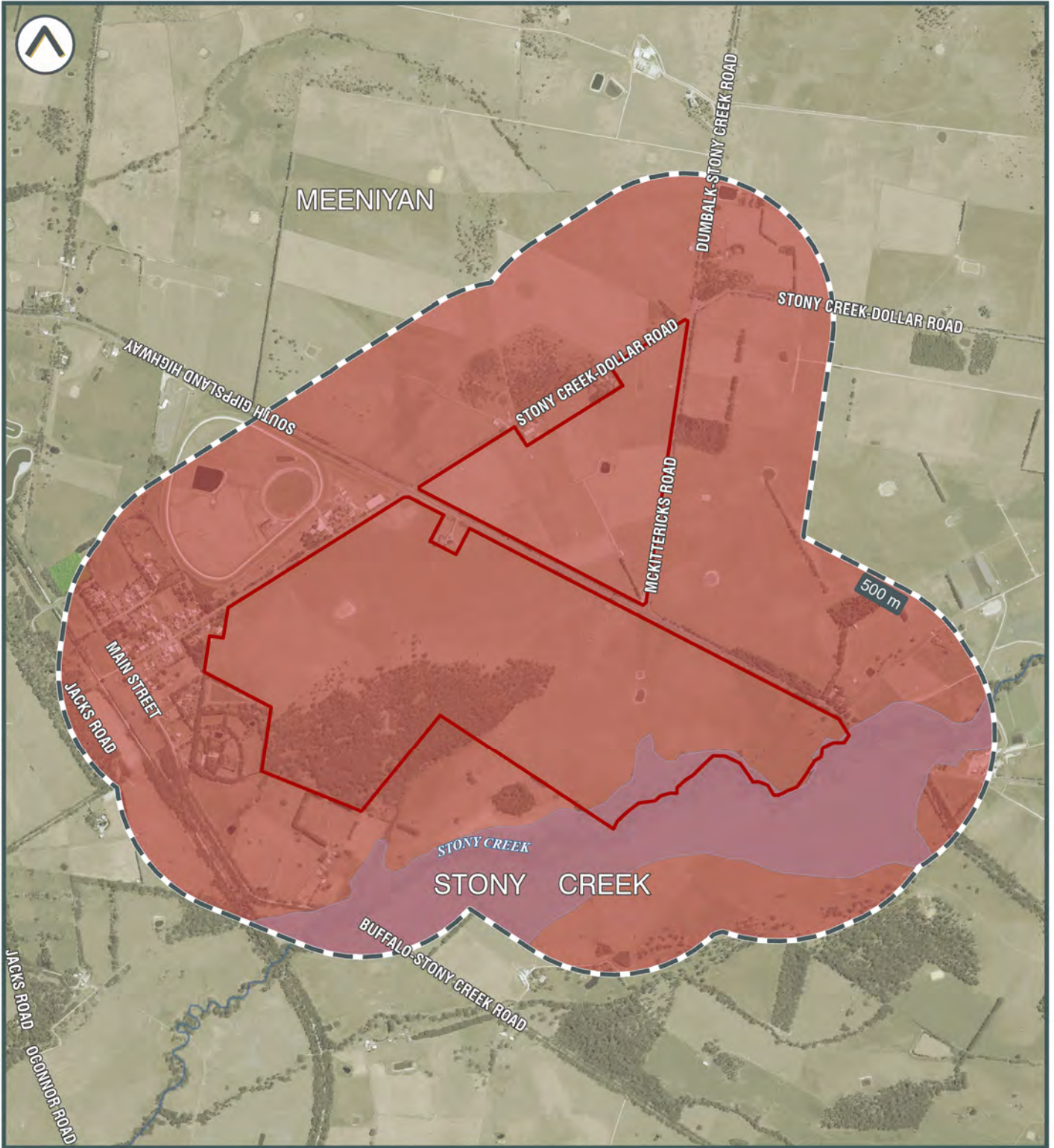
- Subject area
- Liquid Fuel Depots
- Operational Petrol Stations
- Waste Management Facilities
- Former Petrol Stations

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





Fire and Flood Hazards



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- Subject area
- Bush Fire Prone Land
- Flood Hazard**
- 1 in 100 year flood extent
- Flood Planning Area
- Land Subject To Inundation Overlay



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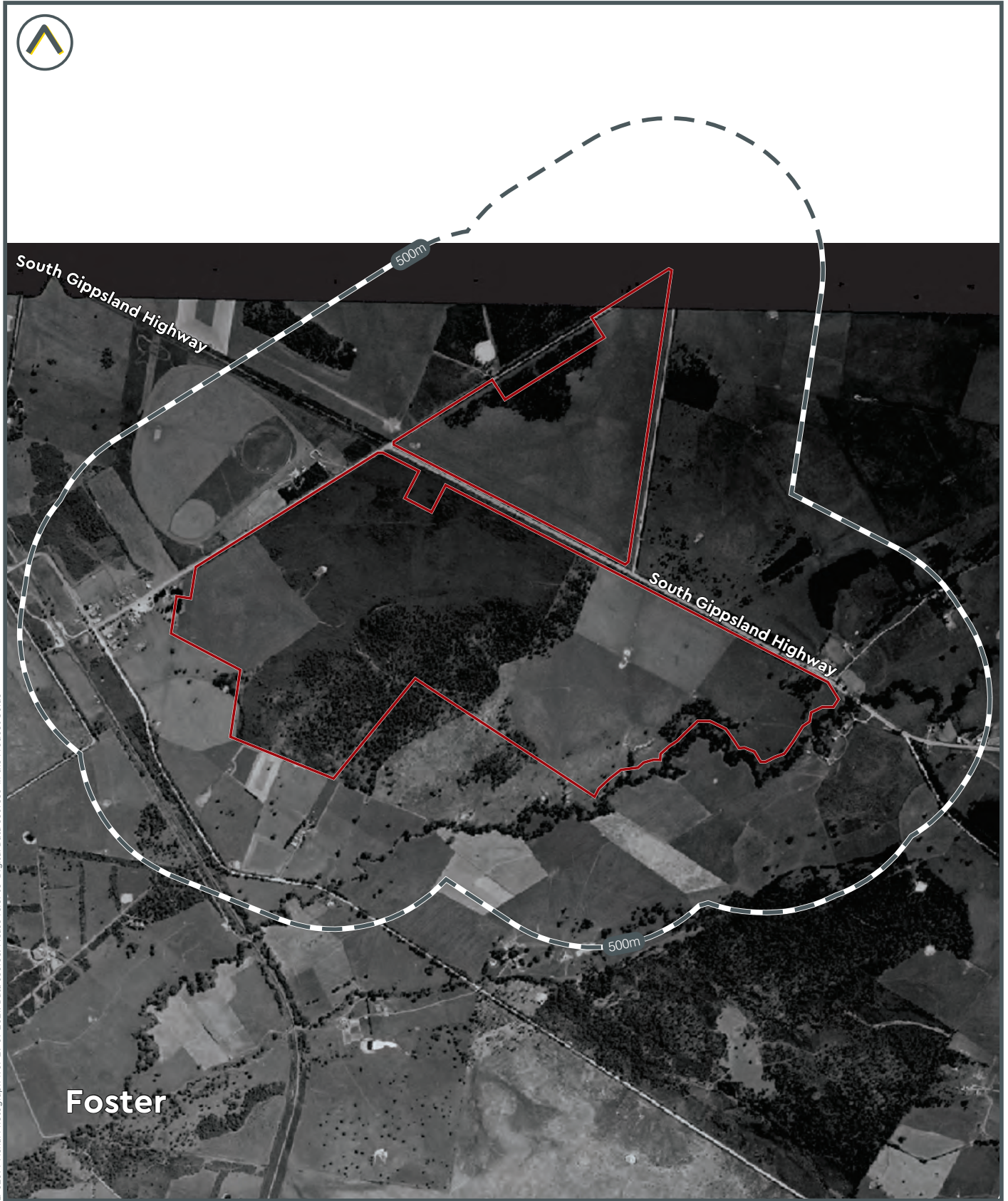


An aerial photograph of a vibrant turquoise river winding through a rugged, rocky landscape. The river is flanked by large, grey boulders and patches of reddish-brown earth. The surrounding terrain is covered in dense, green and yellowish vegetation, with some trees showing autumnal colors. The overall scene is a natural, scenic view of a river valley.

Appendix B

HISTORIC IMAGERY

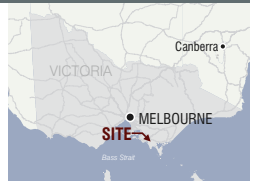
Historic Aerial Photograph - 1967



LI-02099 Aerial Photograph 1967 29 09 2021. Data source: Please refer to 'Digital Data Sources' in the Product Guide

Subject area

0 800m



Historic Aerial Photograph - 1972



LI-02099 Aerial Photograph 1972-29-09-2021. Data source: Please refer to 'Digital Data Sources' in the Product Guide

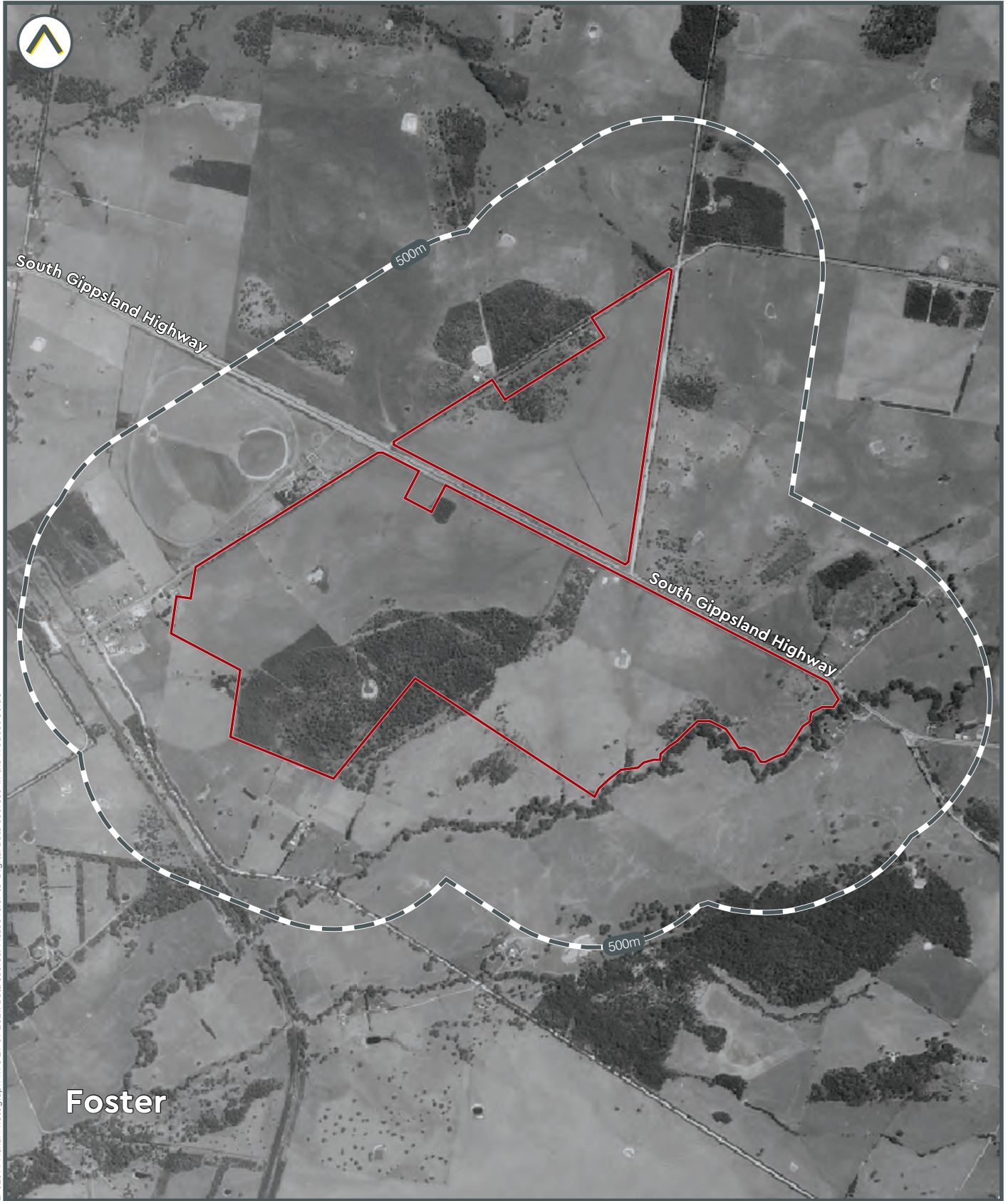
Subject area



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Historic Aerial Photograph - 1975



LI-02099 Aerial Photograph 1975 29 09 2021. Data source: Please refer to 'Digital Data Sources' in the Product Guide

 Subject area

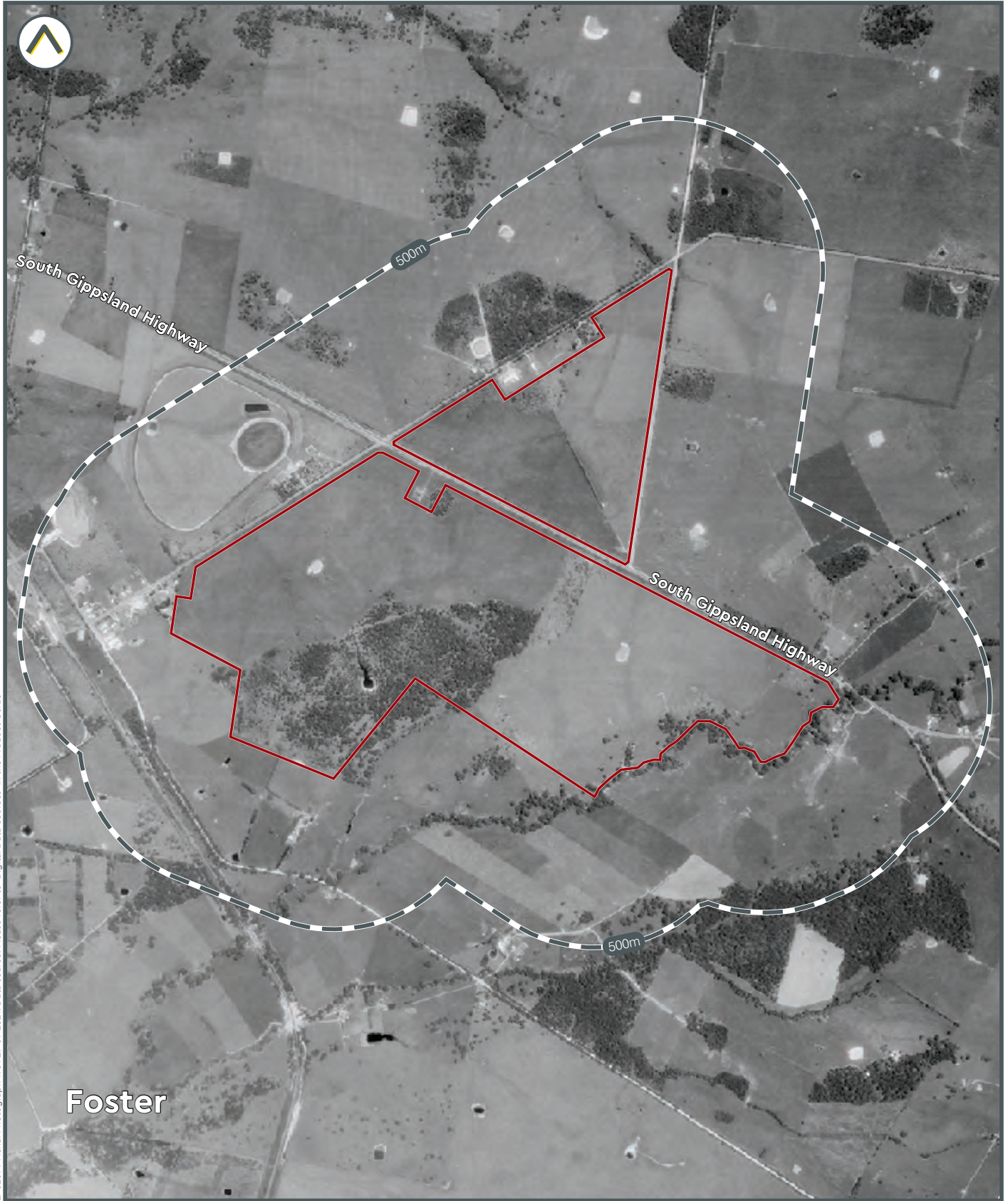
0 800m



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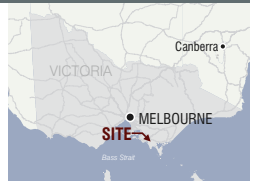
Historic Aerial Photograph - 1981



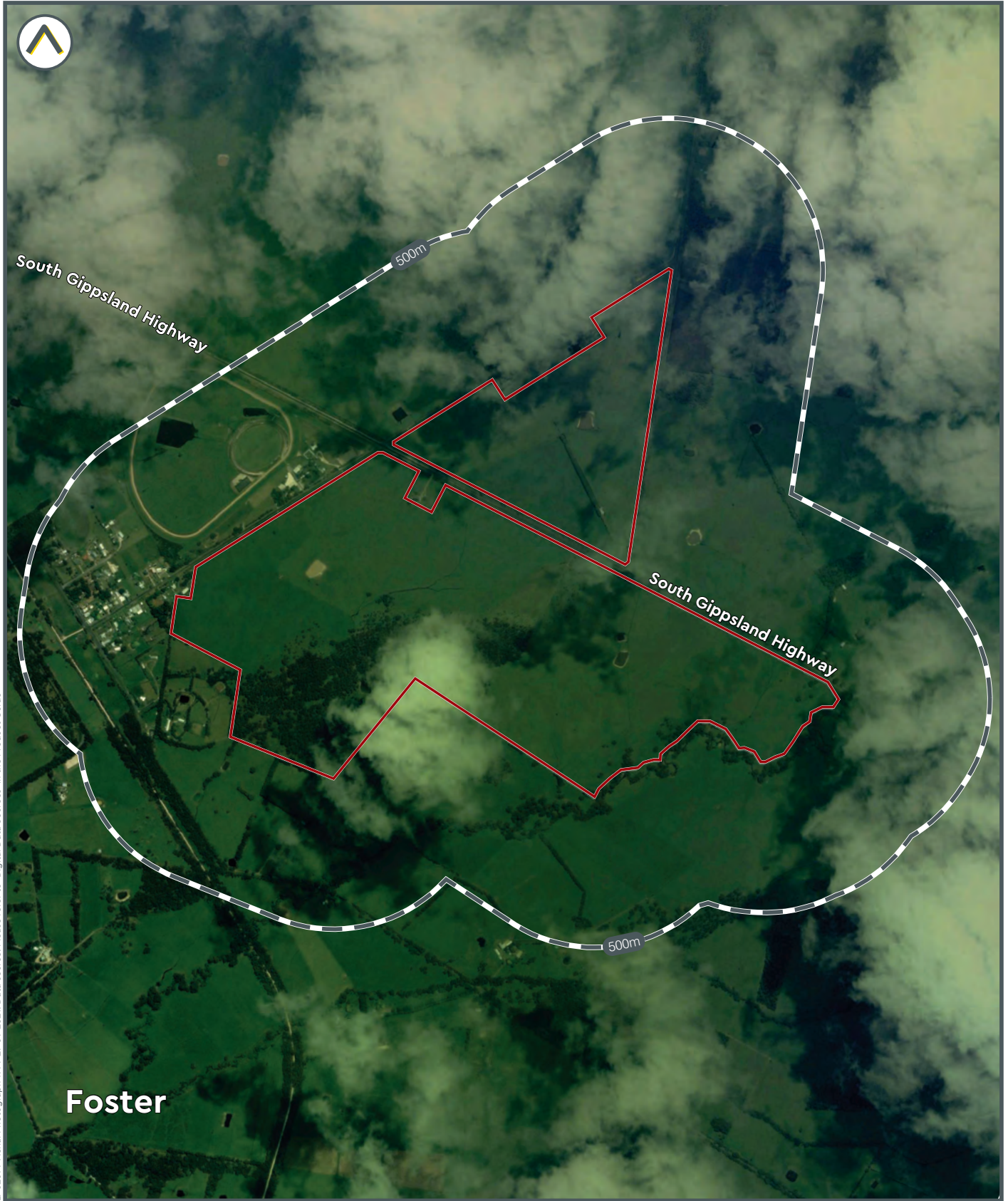
LI-02099 Aerial Photograph 1981.29. 09 2021. Data source: Please refer to 'Digital Data Sources' in the Product Guide

 Subject area

0 800m



Historic Aerial Photograph - 1999



LI-02099 Aerial Photograph 1999, 29 09 2021. Data source: Please refer to 'Digital Data Sources' in the Product Guide

Subject area



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Historic Aerial Photograph - 2009



LI-02099 Aerial Photograph 2009 29 09 2021. Data source: Please refer to 'Digital Data Sources' in the Product Guide

 Subject area

0 800m



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Historic Aerial Photograph - 2012



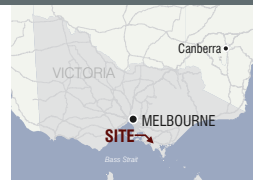
LI-02099 Aerial Photograph 1999-20 09 2021. Data source: Please refer to 'Digital Data Sources' in the Product Guide

 Subject area

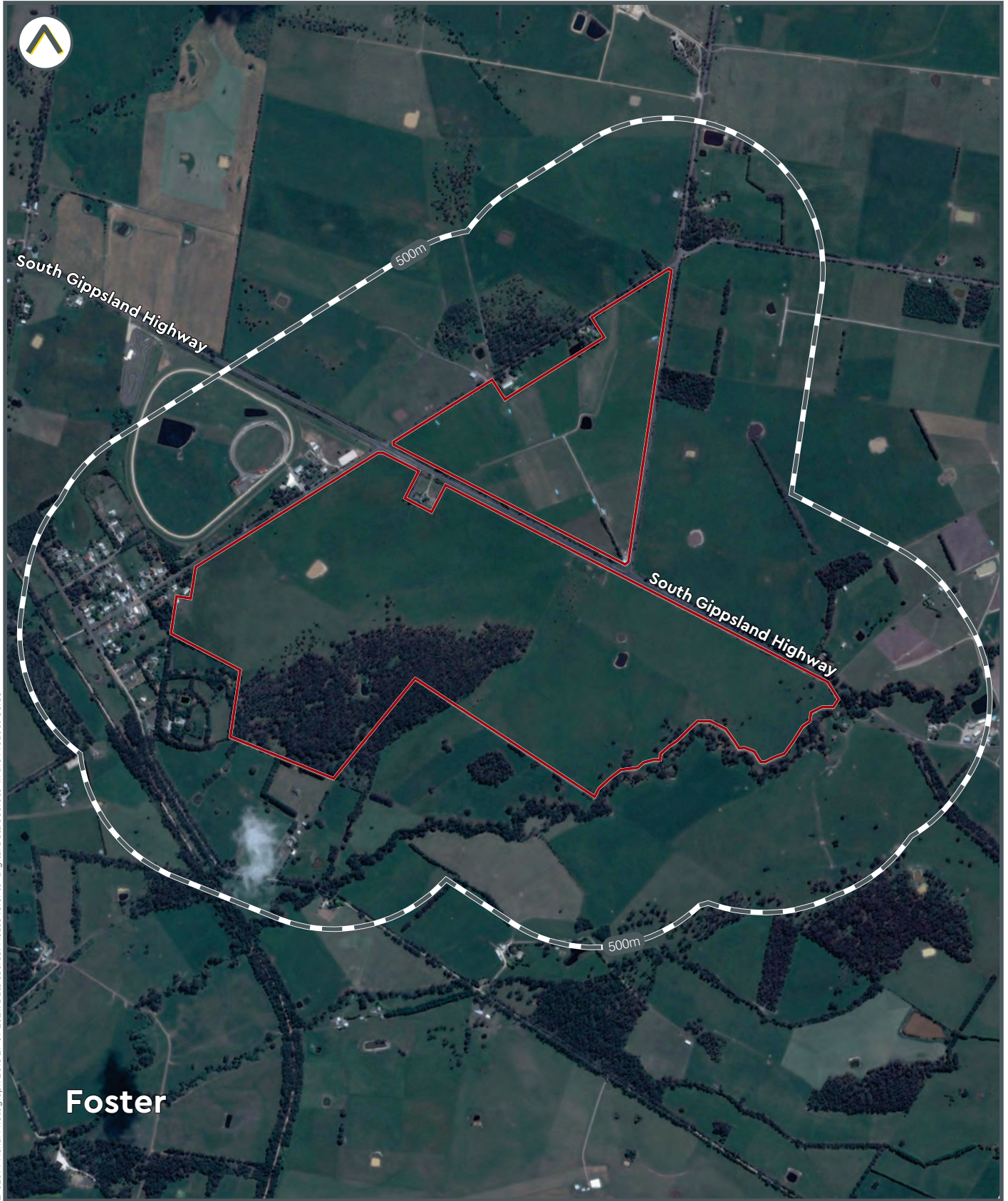
0 800m



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Historic Aerial Photograph - 2015



LI-02099 Aerial Photograph 2015 29 09 2021. Data source: Please refer to 'Digital Data Sources' in the Product Guide

Subject area

0 800m



Historic Aerial Photograph - 2020

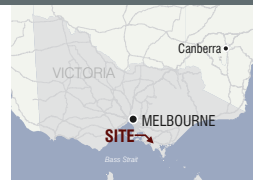


LI-02099 Aerial Photograph, 2020 29 09 2021. Data source: Please refer to 'Digital Data Sources' in the Product Guide

Subject area



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Enviro-Screen

90 Dumbalk-Stony Creek Road
Stony Creek, VIC

28 September 2021





Understanding your report

Your Report has been produced by Land Insight and Resources (Land Insight).

Your Report is based on information available from public databases and sources at the date of reporting. The information gathered relates to land that is within a 200 to 2000m radius (buffer zone) from the boundaries of the Property. A smaller or larger radius may be applied for certain records (as listed under records and as shown in report maps).

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 or data provided.

The report provided by Land Insight 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 info@liresources.com.au

The report does not include title searches; dangerous good searches or; property certificates (unless requested); or information derived from a physical inspection, such as hazardous building materials, areas of infilling or dumping/spilling of potentially contaminated materials. It is important to note that these documents and an inspection can contain information relevant to contamination 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 the data displayed within this report is only current from date of production.

This Report, and your use of it, is regulated by Land Insight's Terms and Conditions (See Land Insight's Product Guide).

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ATTACHMENTS

Attachment A - Report Maps

Attachment B - Historical Imagery

Land Insight Product Guide and Terms and Conditions

SUMMARY

 Section 1	PROPERTY SETTING	Identified
Sensitive Receptors Planning Control Heritage Soil and Land Information Geology and Topography		
 Section 2	HYDROGEOLOGY	Identified
Aquifer Groundwater Bores and Other Borehole investigations Groundwater Dependent Ecosystems (GDE) Hydrogeology Units Wetlands		
 Section 3	ENVIRONMENTAL REGISTERS LICENCES AND INCIDENTS	Not Identified
Contaminated Land Public Register Sites Regulate by Other Jurisdictional Body (Former Gaswork sites / PFAS sites) Licensing and Regulated Sites National Pollutant Inventory (NPI)		
 Section 4	POTENTIALLY CONTAMINATED AREAS	Not Identified
National Liquid Fuel Facilities National Waste Management Facilities		
 Section 5	NATURAL HAZARDS	Identified
Erosion risk Bushfire prone land Fire history Flood hazards		



Section 1 Property Setting



1.1 SENSITIVE RECEPTORS

Map 1.1 (200m Buffer)

Sensitive receptor	Category	Distance (m)	Direction
Not identified	-	-	-

1.2 PLANNING CONTROLS

Map 1.2 (onsite)

Zoning

Code	Zoning	Details
FZ	FARMING ZONE	-

Planning Overlay

Type	Category	Details
BMO	BMO	BUSHFIRE MANAGEMENT OVERLAY
ESO	ESO2	ENVIRONMENTAL SIGNIFICANCE OVERLAY - SCHEDULE 2

Other Planning Information

Type	Category	Details
Not identified	-	-

1.3 HERITAGE

Map 1.3 (200m Buffer)

State and Local Heritage

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

Australian Heritage Database

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

Commonwealth Heritage List, National Heritage List and World Heritage Area.

1.4 SOIL AND LAND USE INFORMATION

Map 1.4a/1.4b (onsite)

Soil Landscape

Soil Landscape	FfcQ7-1	fc	Soil Group	'Loams, Duplex soils'
Description	Intermediate Terraces - Gippsland			
Soil Landscape	PfcC7-2	fc	Soil Group	'Yellow duplex soils, Pale sands'
Description	Plain above flood level (relative relief <9m)			

Salinity

Salt Susceptibility	Low	Areas with yellow clayey soils but in which salt seeps have not been recorded
---------------------	-----	---

Radon

Radon Level	Bq/m ³	7
-------------	-------------------	---

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).

Acid Sulfate Soil

Coastal Acid Sulfate Soil Hazard (CASS) (Table 1.4.1)	On the Property?	Within Buffer?
Class	Not identified	Not identified

National Acid Sulfate Soils Atlas

Atlas of Australian ASS (Table 1.4.2)	Cq(p4)	ASS in inland lakes, waterways, wetlands and riparian zones	Probability of Occurrence	Extremely low probability of occurrence
	Bn(p4)	ASS in inland lakes, waterways, wetlands and riparian zones		Low Probability of occurrence

Table 1.4.1. Classification for Coastal Acid Sulfate Soils (CASS)

Class of Land as shown on ASS Planning Maps	
Prospective Land	Land that has the potential to contain Coastal Acid Sulfate Soils as indicated by geomorphology.
Made Land	Land that has been modified by human agency. Here, the geomorphic features that indicate the potential to contain Coastal Acid Sulfate Soil, no longer exist. Assessment of the potential depends on information such as geology maps or soil maps, that pre-dates modification.

Data represents Victorian coastal lands which have the potential to contain acid sulfate soil (CASS), i.e. it is prospective for CASS. The data is used for triggering an investigation of a site where proposed activities risk disturbing CASS. Department of Environment and Primary Industries.

Table 1.4.2. Atlas of Australian Acid Sulfate Soils¹ (ASRIS) (CSIRO/NatCASS)

Probability of Occurrence of ASS ¹	
A	High Probability of occurrence - (>70% chance of occurrence in mapping unit)
B	Low Probability of occurrence - (6-70% chance of occurrence in mapping unit)
C	Extremely low probability of occurrence - (1-5% chance of occurrence in mapping unit)
D	No probability of occurrence - (<1% chance of occurrence in mapping unit)
x	Disturbed ASS¹ terrain - (ASS ¹ material present below urban development).
u	Unclassified - (Insufficient information to classify map unit)
Zones	
a	Potential acid sulfate soil material and/or Monosulfidic Black Ooze (MBO).
b, c	Potential acid sulfate soil generally within upper 1 m.
c, d, e	ASS ¹ generally within upper 1 m.
f	ASS ¹ generally below 1 m from the surface
g	ASS ¹ , generally below 3 m from the surface.
h	ASS ¹ generally within 1 m of the surface.
i, j	ASS ¹ generally below 1 m of the surface.
k	ASS ¹ material and/or Monosulfidic Black Ooze (MBO).
l, m, n, o, p, q	ASS ¹ generally within upper 1 m in wet / riparian areas.
Subscripts to codes	
(a)	Actual acid sulfate soil (AASS) = sulfuric material.
(p)	Potential acid sulfate soil (PASS) = sulfidic material.
(q)	Monosulfidic Black Ooze (MBO) is organic ooze enriched by iron monosulfides.
Confidence levels	
(1)	All necessary analytical and morphological data are available
(2)	Analytical data are incomplete but are sufficient to classify the soil with a reasonable degree of confidence
(3)	No necessary analytical data are available, but confidence is fair, based on a knowledge of similar soils in similar environments
(4)	No necessary analytical data are available, and classifier has little knowledge or experience with ASS, hence classification is provisional

¹Acid 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 (Pons 1973). Acid sulfate soil (ASS) may include PASS or AASS + PASS. Potential acid sulfate soil (PASS) = sulfidic material. Actual acid sulfate soil (AASS) = sulfuric material.

1.5 GEOLOGY AND TOPOGRAPHY

Map 1.5 (onsite)

Geology

Map Sheet	Symbol	Name	Geologic History	Lithology	Description
1:50,000 Geological Units	Ksw	Wonthaggi Formation (Ksw): generic	Early Cretaceous to Early Cretaceous (channelled stream flow - fluvial [environment]; over- bank stream flow - fluvial [environment])	sandstone (major [proportion]); siltstone (minor [proportion]); conglomerate (minor [proportion]); coal (minor [proportion])	Lithic volcanoclastic sandstone, arkose, siltstone, minor conglomerate and coal; fluvial
	Qa1	Alluvium (Qa1): generic	Pleistocene to Holocene (channelled stream flow-fluvial [environment])	silt [material] (significant); sand (significant); gravel [material] (significant)	Gravel, sand, silt: variably sorted and rounded; generally unconsolidated; includes deposits of low terraces; alluvial floodplain deposits

Naturally Occurring Asbestos Potential (NOA)

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

Topography

Topography	50 – 70 mAHD
------------	--------------



Section 2 Hydrogeology



2.1 HYDROGEOLOGY AND GROUNDWATER BORES

Map 2.1 (2000m Buffer)

	On the Property?	Within Buffer?
Aquifer Type	Fractured or fissured, extensive aquifers of low to moderate productivity	Fractured or fissured, extensive aquifers of low to moderate productivity
Designated Water Supply Catchments	Not identified	Not identified
Depth to Watertable (m)	<5 - 50	<5 - 50
Wetlands	Not identified	Permanent freshwater lakes
Groundwater Salinity (mg/L)	3500	1000 - 3500

Groundwater Quality Restricted Use Zones

Number	Address	Site history	Restrictions on Use	Distance (m)	Direction
Not identified	-	-	-	-	-

Groundwater Bores

Map ID	Groundwater Bore ID	Authorised Purpose	Completion Date	Drilled Depth (m)	Final Depth (m)	SWL (m)	Salinity (mg/l)	Yield (L/s)	Distance (m)	Direction
3	85575	Stock and Domestic	7/05/1972	30.0	30.5	<Null>	<Null>	<Null>	817.4	South-west
4	WRK091852	Stock and Domestic	24/11/2016	30.0	30.0	<Null>	<Null>	<Null>	927.7	North-east
5	306501	Unknown	23/05/1982	72.0	72.0	<Null>	560 mg/L	<Null>	1169.2	South-east
1	85574	Stock and Domestic	7/05/1972	24.0	24.4	<Null>	1184 mg/L	0.441	1359.8	West

Map ID	Groundwater Bore ID	Authorised Purpose	Completion Date	Drilled Depth (m)	Final Depth (m)	SWL (m)	Salinity (mg/l)	Yield (L/s)	Distance (m)	Direction
2	85578	Stock and Domestic	24/06/1983	17.0	16.9	<Null>	<Null>	1.137	1377.1	West

Groundwater Bores Driller Lithology Details

Groundwater Bore ID	From Depth - To Depth (m)	Lithology	Distance (m)	Direction
85575	#N/A		817.4	South-west
WRK091852	0m-1m Topsoil 1m-14m Soft Bluestone 14m-30m Bluestone		927.7	North-east
306501	#N/A		1169.2	South-east
85574	#N/A		1359.8	West
85578	#N/A		1377.1	West

2.2 HYDROGEOLOGY AND OTHER BOREHOLES

Map 2.2 (500m Buffer)

	On the Property?	Within Buffer?
Groundwater Management Areas	Not identified	-
Hydrogeologic Unit	Upper Tertiary/Quaternary Aquitard (porous media - unconsolidated) Mesozoic Fractured Rock Aquifer	Upper Tertiary/Quaternary Aquitard (porous media - unconsolidated) Surficial Sediment Aquifer (porous media - unconsolidated) Mesozoic Fractured Rock Aquifer

Groundwater Dependent Ecosystems (GDE)

	On the Property?	Within Buffer?
Aquatic	Not identified	-
Terrestrial	Low potential for GW interaction Moderate potential for GW interaction	Low potential for GW interaction Moderate potential for GW interaction High potential for GW interaction

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

Terrestrial - Ecosystems that rely on the Subsurface expression of groundwater.

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

Borehole ID	Purpose	Project	Client/ Licence	Date Drilled	Depth (m)	Distance (m)	Direction
Not identified	-	-	-	-	-	-	-



Section 3 Environmental Registers, Licences and Incidents



3.1 CONTAMINATED LAND PUBLIC REGISTER

Map 3.1 (1000m Buffer)

Environmental Audit Reports

CARMS No.	Address	Audit Category	Distance (m)	Direction
Not identified	-	-	-	-

Priority Site Register

Notice No.	Address	Issue	Distance (m)	Direction
Not identified	-	-	-	-

Table 3.1.1 Sections 53X and 53V of the Environment Protection Act 1970

EPA Types of Environmental Audits	
53X Audits	A 53X ('condition of the environment') audit is most frequently used by the planning system and verifies that potentially contaminated land can be used for a specific use (industrial, commercial or residential). From a 53X audit comes either a certificate or statement of environmental audit.
53V Audits	A 53V ('risk of harm') audit is most commonly used by EPA to understand the risk to the environment posed by an industrial activity or to validate that cleanup of contaminated land or groundwater has occurred. The 53V audit assesses the risk of any possible harm to a site caused by an industrial process or activity, waste substance or noise. This includes audits associated with the construction and operation of landfills.

3.2 SITES REGULATED BY OTHER JURISDICTIONAL BODY

Map 3.2 (2000m Buffer)

Defence, Military Sites and UXO Areas

Site name	Type*	Description	Distance (m)	Direction
Not identified	-	-	-	-

*RCIP (Regional Contamination Investigation Program). UXO (Unexploded Ordnance Areas)

Former Gasworks Sites

Site name	Description	Distance (m)	Direction
Not identified	-	-	-

PFAS Sites

Site name	Description	Distance (m) *	Direction
Not identified	-	-	-

National Pollutant Inventory (NPI)

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

3.3 LICENCES, APPROVALS & NOTICES

Map 3.3 (500m Buffer)

Licences

Licence No.	Type	Company Name	Address	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.

Approvals

Doc No.	Type	Company Name	Address	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.

Notices

Transaction No.	Type	Company Name	Address	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.

Table 3.3.1 EPA Regulatory Instruments Explanation	
Approvals	
Works approval is required for industrial and waste management activities that have the potential for significant environmental impact.	
Works Approval	EPA's works approval process is designed to ensure the best and most cost-effective environmental outcomes on projects are achieved. Without works approvals there is an increased risk of industrial projects causing pollution issues and requiring expensive retrofitting.
30A Approval	Section 30A is an overriding provision of the Environment Protection Act 1970 (the Act) under which EPA can authorise discharges, emissions, storage, treatment, disposal and handling of waste in emergencies and other temporary situations that would otherwise be an offence under the Act. 30A approvals are not issued lightly, as they permit activities that would not normally be allowed.
Notices	
Remedial notices are served to prevent or remedy a range of non-compliances or likely non-compliances. Remedial notices are not punitive measures.	
Clean Up Notice	Clean up notices (CUN) are issued under section 62A of the <i>Environment Protection Act 1970</i> . They aim to prevent further contamination and impact on beneficial uses through removal of waste, undertaking clean-up activities, ongoing management of pollution, altered handling, storage or location of industrial or prescribed industrial waste.
Minor Works Pollution	Minor works pollution abatement notices (MWPANs) are issued under section 31B of the EP Act. They aim to prevent further occurrence of pollution or potential environmental risk through installation of risk controls and changes to onsite processes and practices in urgent situations.
Pollution Abatement Notice	Pollution abatement notices are issued under section 31A of the <i>Environment Protection Act 1970</i> . They aim to prevent further occurrence of pollution or potential environmental risk through installation of risk controls and changes to on-site processes and practices.
Post closure pollution abatement notices (PC PAN)	Post Closure Pollution Abatement Notices (PAN's) are formal legal enforceable Notices issued by EPA on former landfill sites. The environmental risks posed by landfill sites continue for a significant period of time after waste acceptance has ceased.
Licences	
EPA licence is required for all scheduled premises. It allows the licence-holder to operate and sets conditions that they must meet.	
Licence	Licences contain standard conditions that aim to control the operation of the premises so that there is no adverse effect on the environment. These conditions address areas such as waste acceptance and treatment, air and water discharges, and noise and odour.
Amalgamated Licence	An amalgamated licence is a legal document that contains standard conditions to control the operation of scheduled premises to minimise impacts on the environment. These conditions address areas such as waste acceptance and treatment, air and water discharges, noise and odour.



Section 4 Potentially Contaminated Areas



4.1 POTENTIALLY CONTAMINATING ACTIVITIES

Map 4.1 (500m Buffer)

Liquid Fuel Facilities

Site name	Category	Location	Status*	Distance (m)	Direction
Not identified	-	-	-	-	-

Waste Management Facilities & Recycling Centres

Site name	Category	Location	Status*	Distance (m)	Direction
Not identified	-	-	-	-	-

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.

***Status:**

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

Former: business that have been closed or discontinued 1 to 2 years prior from the day this report was issued. All former sites older than 2 years will be reported in the 'Historical Potentially Contaminating Activities' section 4.4 in this report.

4.2 HISTORICAL POTENTIALLY CONTAMINATING ACTIVITIES

(not mapped)

1900 Historical Business Data

Activity	Name	Address	Positional accuracy ¹	Distance (m)	Direction
Not identified	-	-	-	-	-

1905 Historical Business Data

Activity	Name	Address	Positional accuracy ¹	Distance (m)	Direction
Not identified	-	-	-	-	-

1915 Historical Business Data

Activity	Name	Address	Positional accuracy ¹	Distance (m)	Direction
Not identified	-	-	-	-	-

1925 Historical Business Data

Activity	Name	Address	Positional accuracy ¹	Distance (m)	Direction
Not identified	-	-	-	-	-

1935 Historical Business Data

Activity	Name	Address	Positional accuracy ¹	Distance (m)	Direction
Not identified	-	-	-	-	-

1940 Historical Business Data

Activity	Name	Address	Positional accuracy ¹	Distance (m)	Direction
Not identified	-	-	-	-	-

1945 Historical Business Data

Activity	Name	Address	Positional accuracy ¹	Distance (m)	Direction
Not identified	-	-	-	-	-

1955 Historical Business Data

Activity	Name	Address	Positional accuracy ¹	Distance (m)	Direction
Not identified	-	-	-	-	-

1965 Historical Business Data

Activity	Name	Address	Positional accuracy ¹	Distance (m)	Direction
Not identified	-	-	-	-	-

1970 Historical Business Data

Activity	Name	Address	Positional accuracy ¹	Distance (m)	Direction
Not identified	-	-	-	-	-

1975 Historical Business Data

Activity	Name	Address	Positional accuracy ¹	Distance (m)	Direction
Not identified	-	-	-	-	-

1980 Historical Business Data

Activity	Name	Address	Positional accuracy ¹	Distance (m)	Direction
Not identified	-	-	-	-	-

1990 Historical Business Data

Activity	Name	Address	Positional accuracy ¹	Distance (m)	Direction
Not identified	-	-	-	-	-

2005 Historical Business Data

Activity	Name	Address	Positional accuracy ¹	Distance (m)	Direction
Not identified	-	-	-	-	-

2010 Historical Business Data

Activity	Name	Address	Positional accuracy ¹	Distance (m)	Direction
Not identified	-	-	-	-	-

2015 Historical Business Data

Activity	Name	Address	Positional accuracy ¹	Distance (m)	Direction
Not identified	-	-	-	-	-

Land Insight uses a number of address geocoding techniques and characterised them according to the following criteria: completeness (match rates) and positional accuracy. When a historical street address does not contain complete details 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. The positional accuracy of the records is listed below:

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 historical business listing information. The business addresses were geocoded using historical information and cannot be relied upon as some of the addresses no longer exist. 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. For more information on how these records were geocoded and the methodology used by Land Insight, contact us at info@landinsight.co.

Historical Industries or business activities deemed to be of negligible or lesser risk are not reported. 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 Natural Hazards

Map 5.1 (500m Buffer)

Erosion Risk

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

Fire Hazard

Category	On the Property?	Within Buffer?
Bush Fire Prone Area (BLA)	Yes	Yes
Fire History	-	Not identified

Flood Hazard

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



Tower Three, Level 24
300 Barangaroo Avenue
Sydney NSW 2000 Australia
02 8067 8870
info@liresources.com.au
www.liresources.com.au

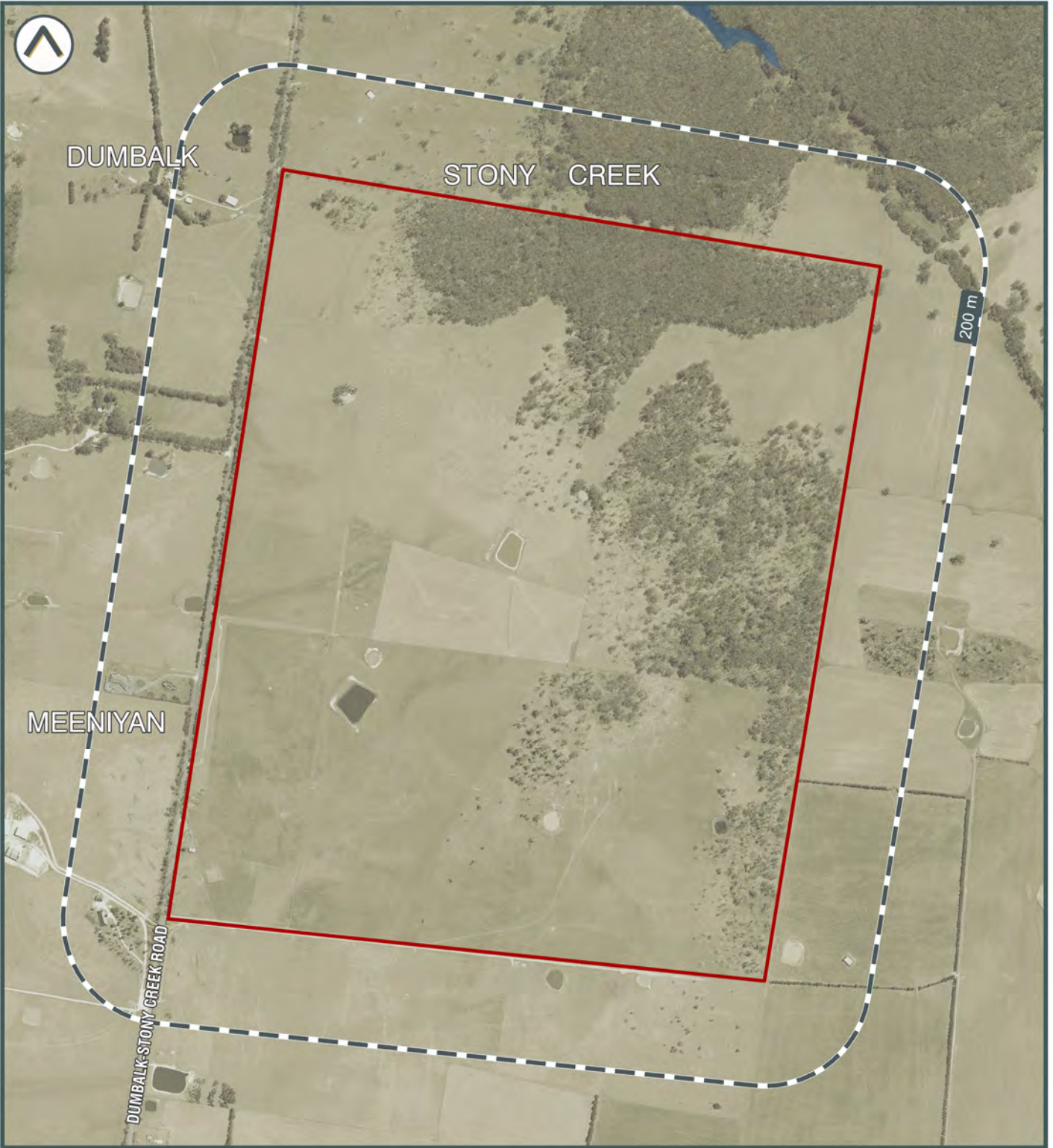


Appendix A

REPORT MAPS

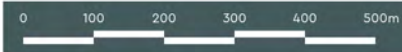


Subject Area and Sensitive Receptors



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Subject area

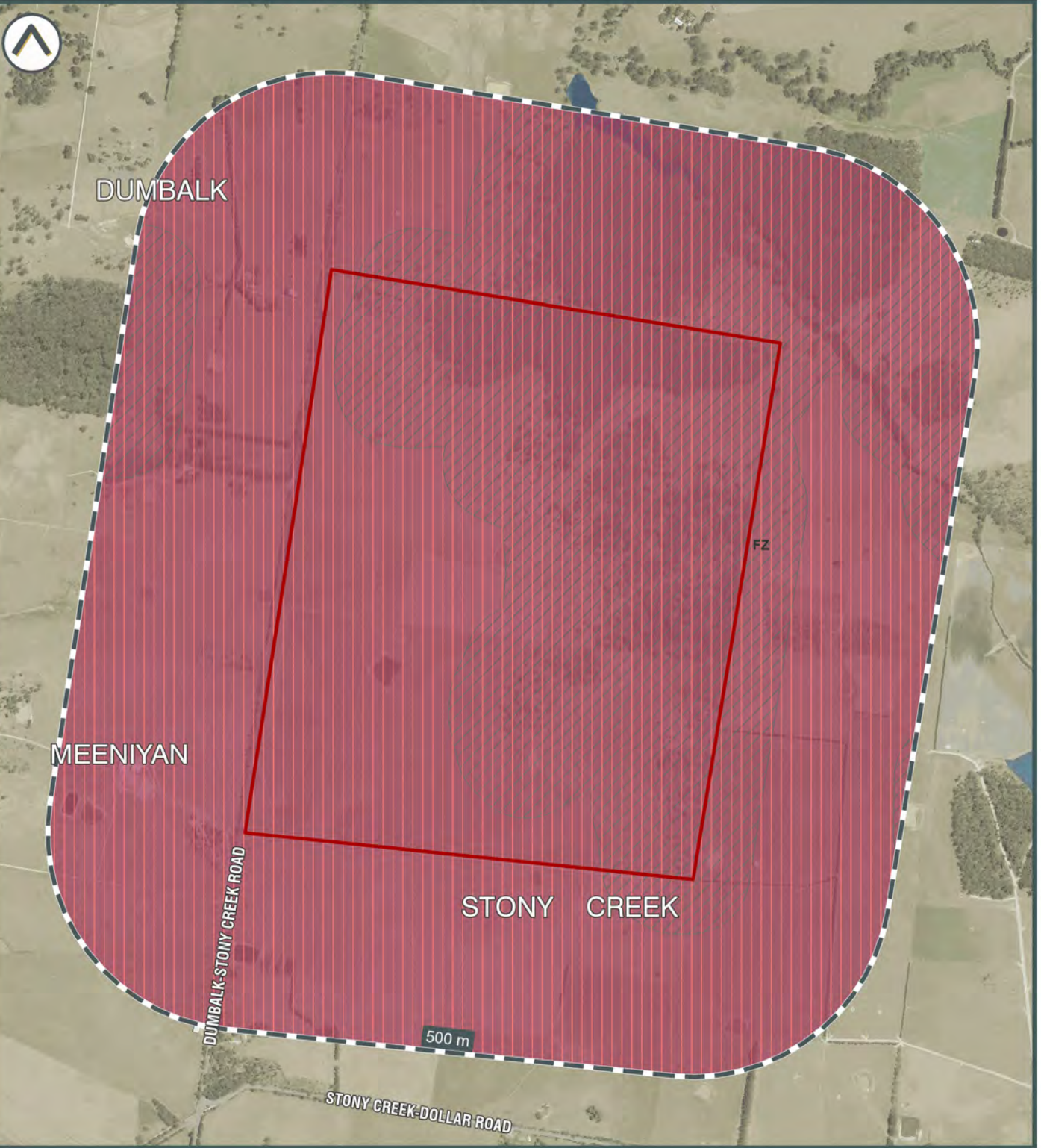


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Planning Controls



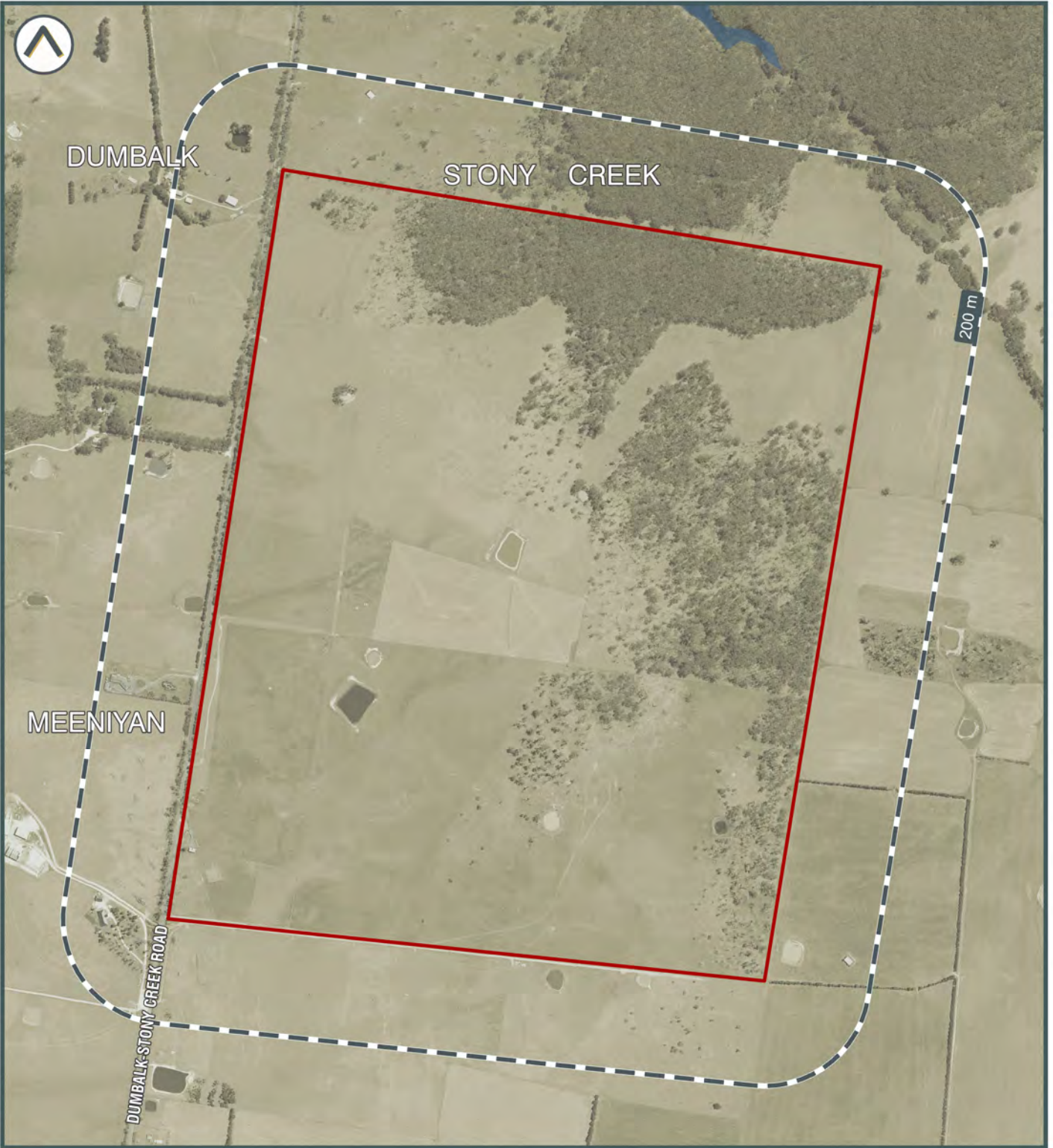
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- Subject area
- BMO
- ESO
- Zoning
- FZ | Farming Zone



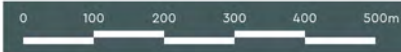


Heritage



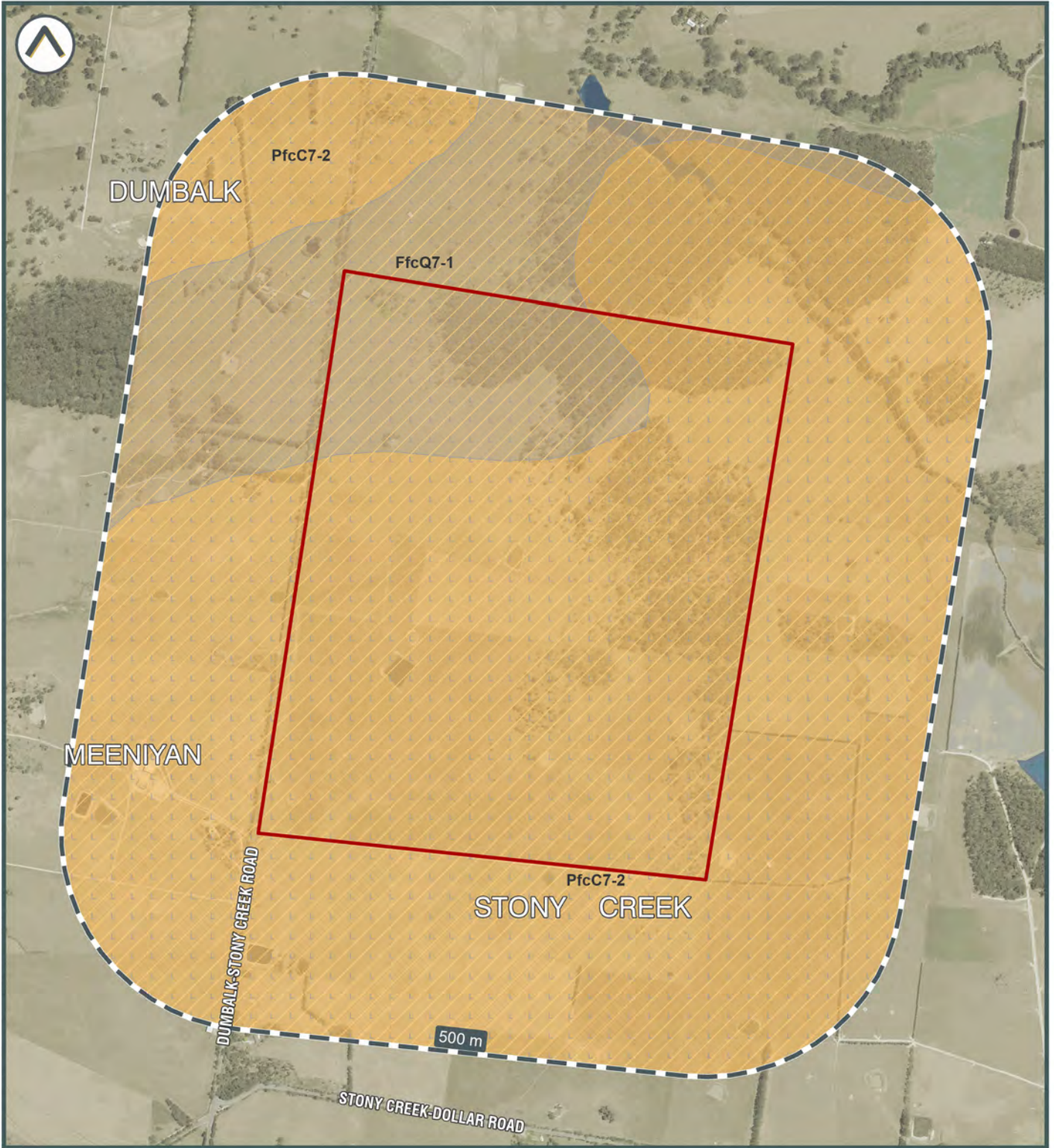
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- Subject area
- Victorian Heritage Inventory (VHI)
- Areas of Cultural Heritage Sensitivity (CHS)
- Commonwealth Heritage List (CHL)
- National Heritage List (NHL)
- World Heritage Area (WHA)
- Victorian Heritage Register (VHR)





Soil Landscape and Salinity



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- Subject area
- Salinity Hazard
- Low
- Soil Landscape
- FfcQ7-1, Present flood plain
- PfcC7-2, Plain above flood level (relative relief <9m)
- Radon Level (Bq/m³)
- 5-19

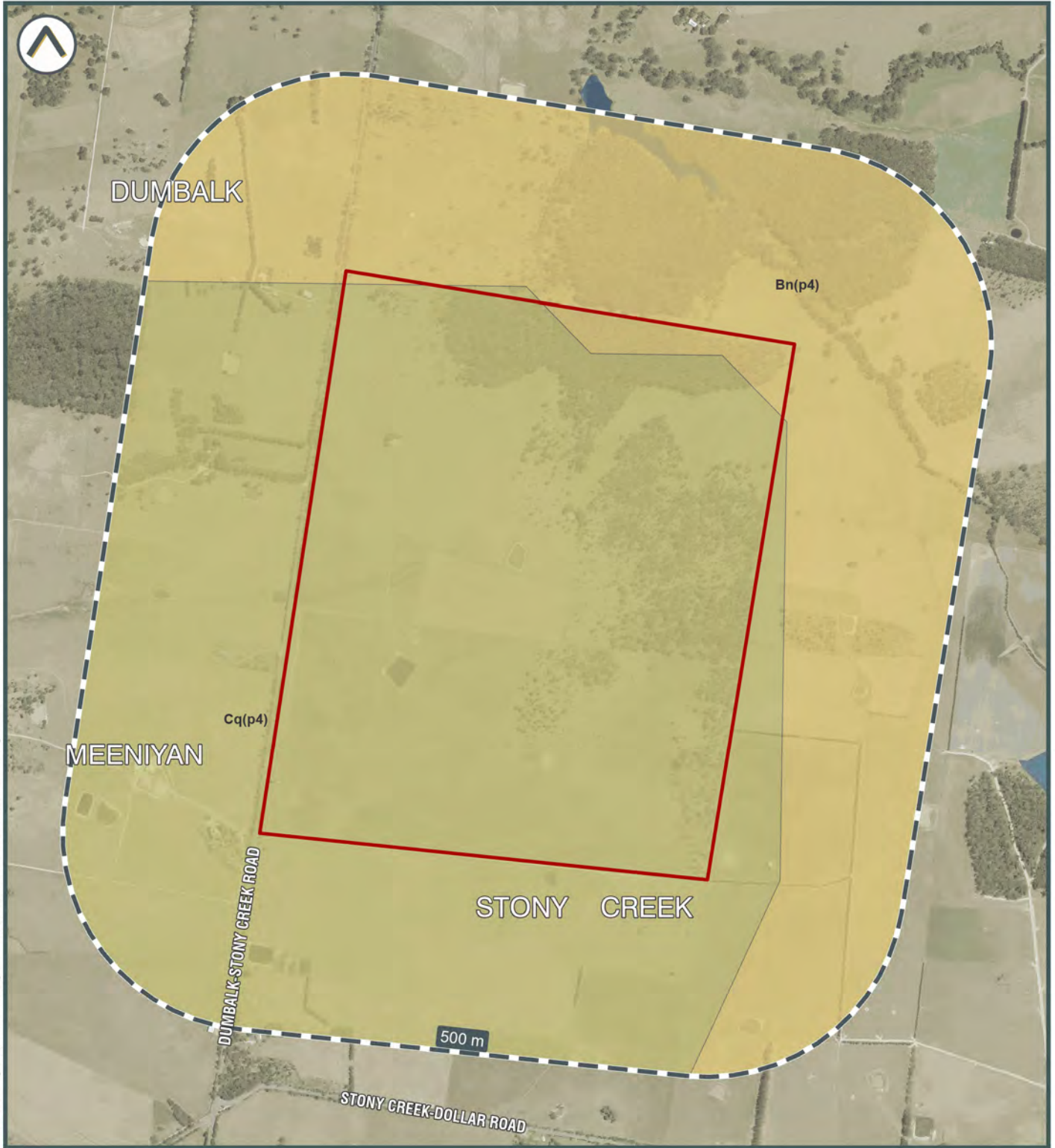


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Acid Sulfate Soils



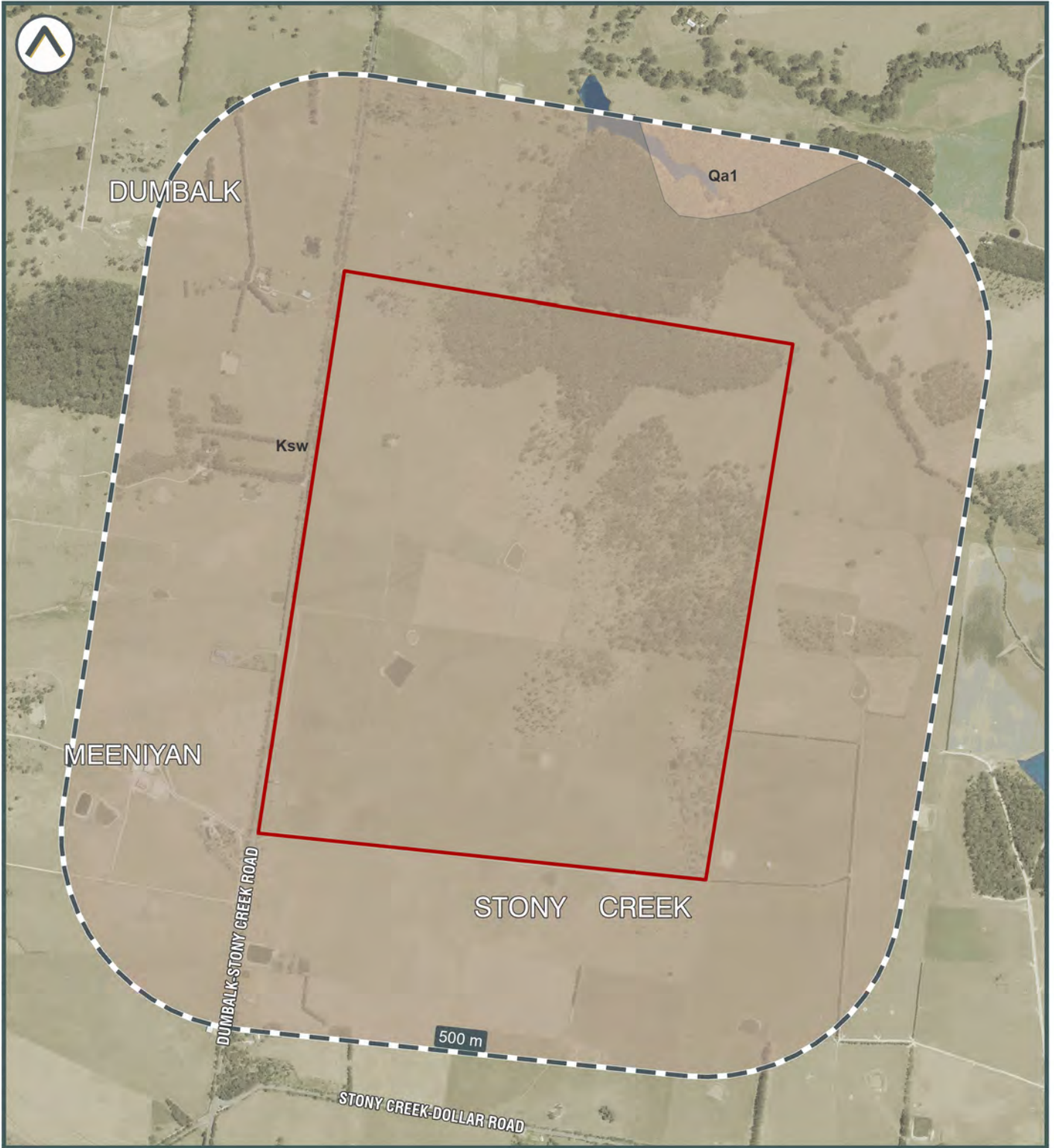
©2021 Land Insight (LU) www.landinsight.co | 27/09/2021 | Data source: Please refer to 'Digital Data Sources' in the Product Guide

- Subject area
- Bn(p4) | ASS in inland lakes, waterways, wetlands and riparian zones
- Cq(p4) | ASS in inland lakes, waterways, wetlands and riparian zones





Geology and Topography



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Subject area

1:250,000 Geological Units

- Ksw | Lithic volcanoclastic sandstone, arkose, siltstone, minor conglomerate and coal; fluvial
- Qa1 | Gravel, sand, silt: variably sorted and rounded; generally unconsolidated; includes deposits of low terraces; alluvial floodplain deposits

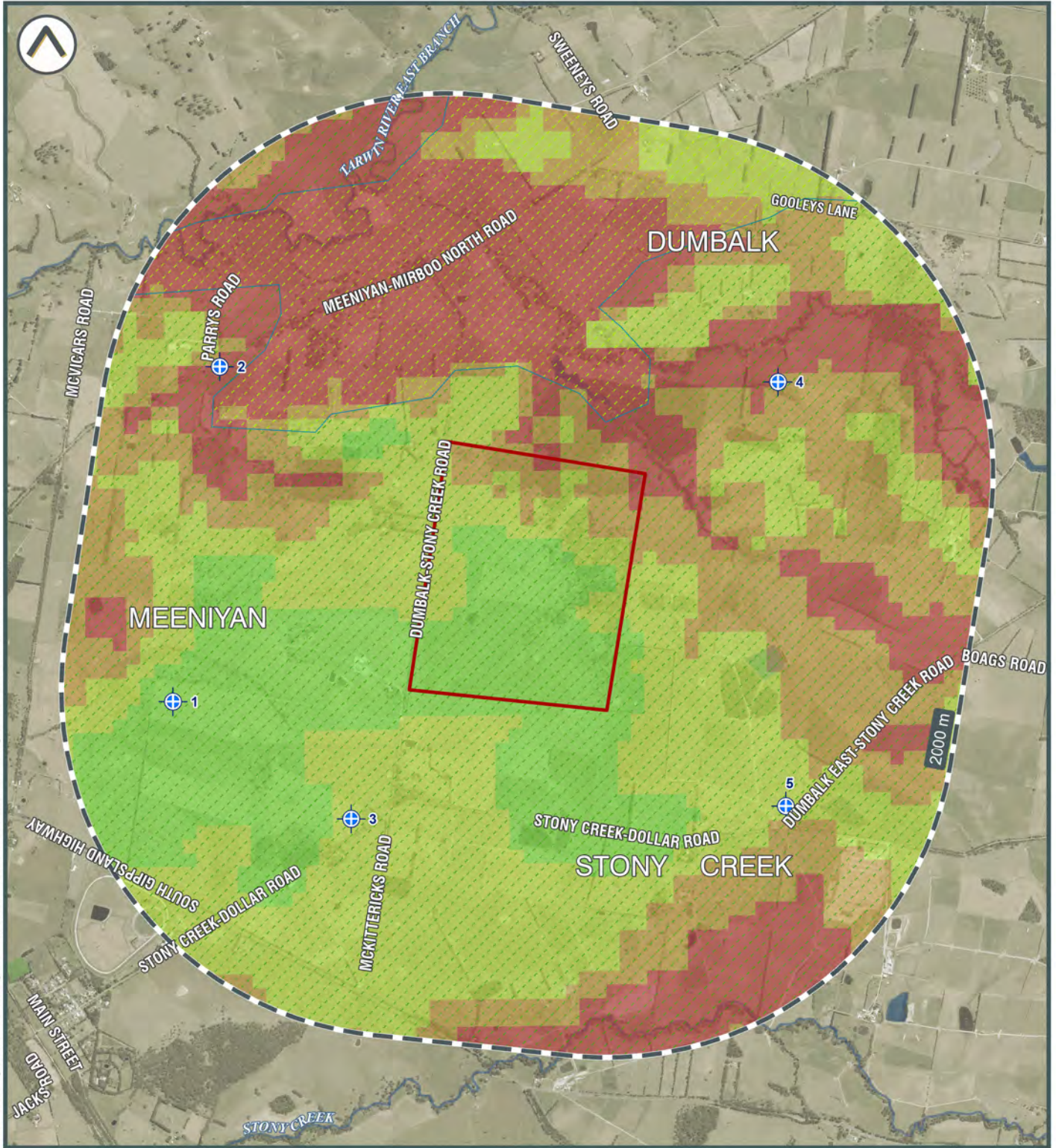


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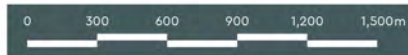
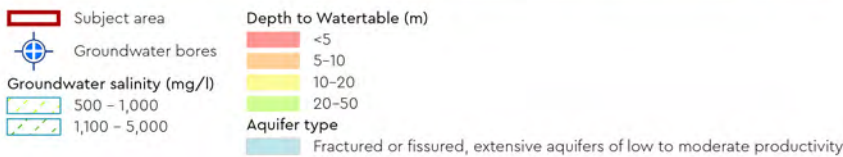




Hydrogeology and Groundwater Boreholes

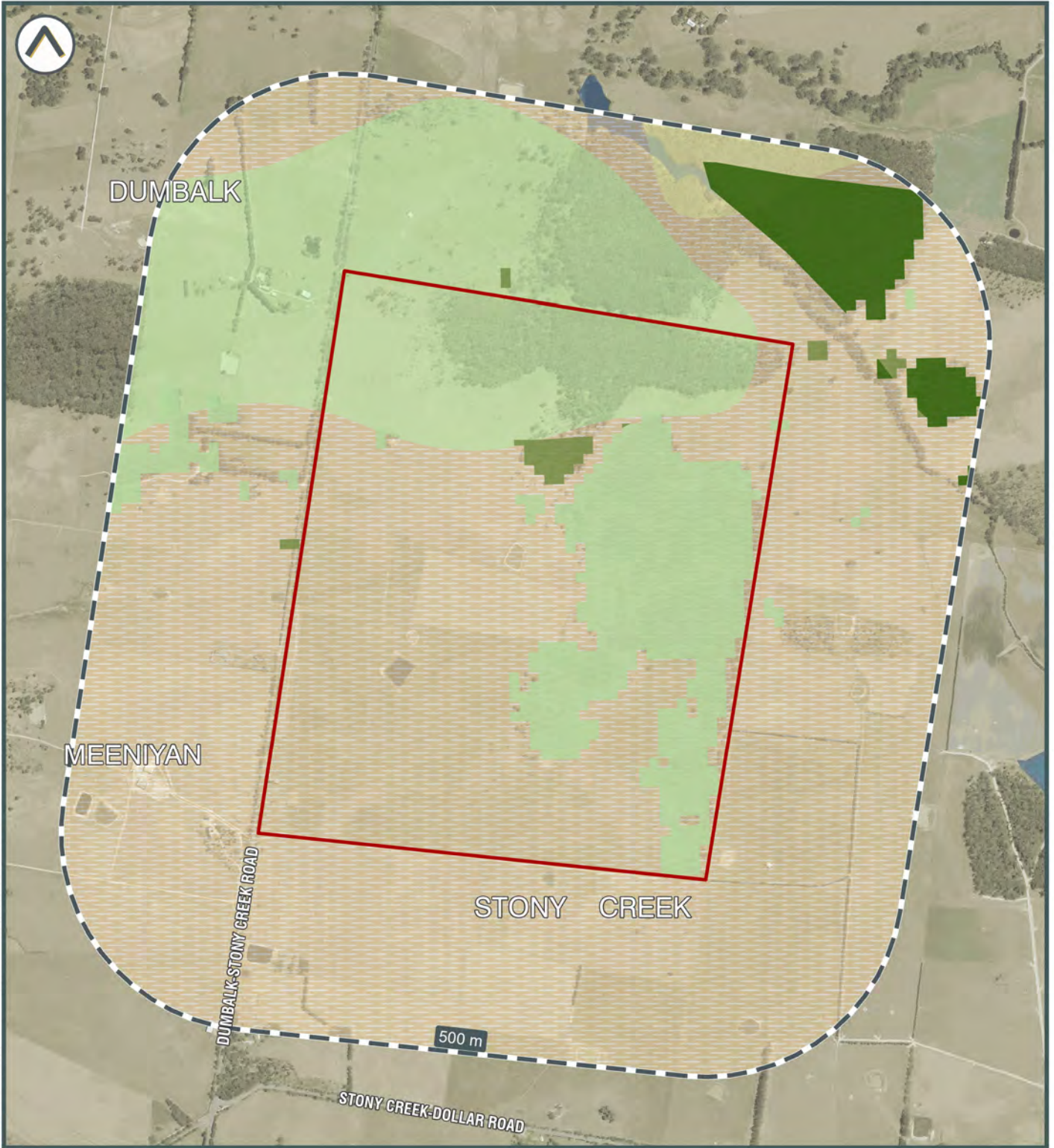


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Hydrogeology and Other Boreholes



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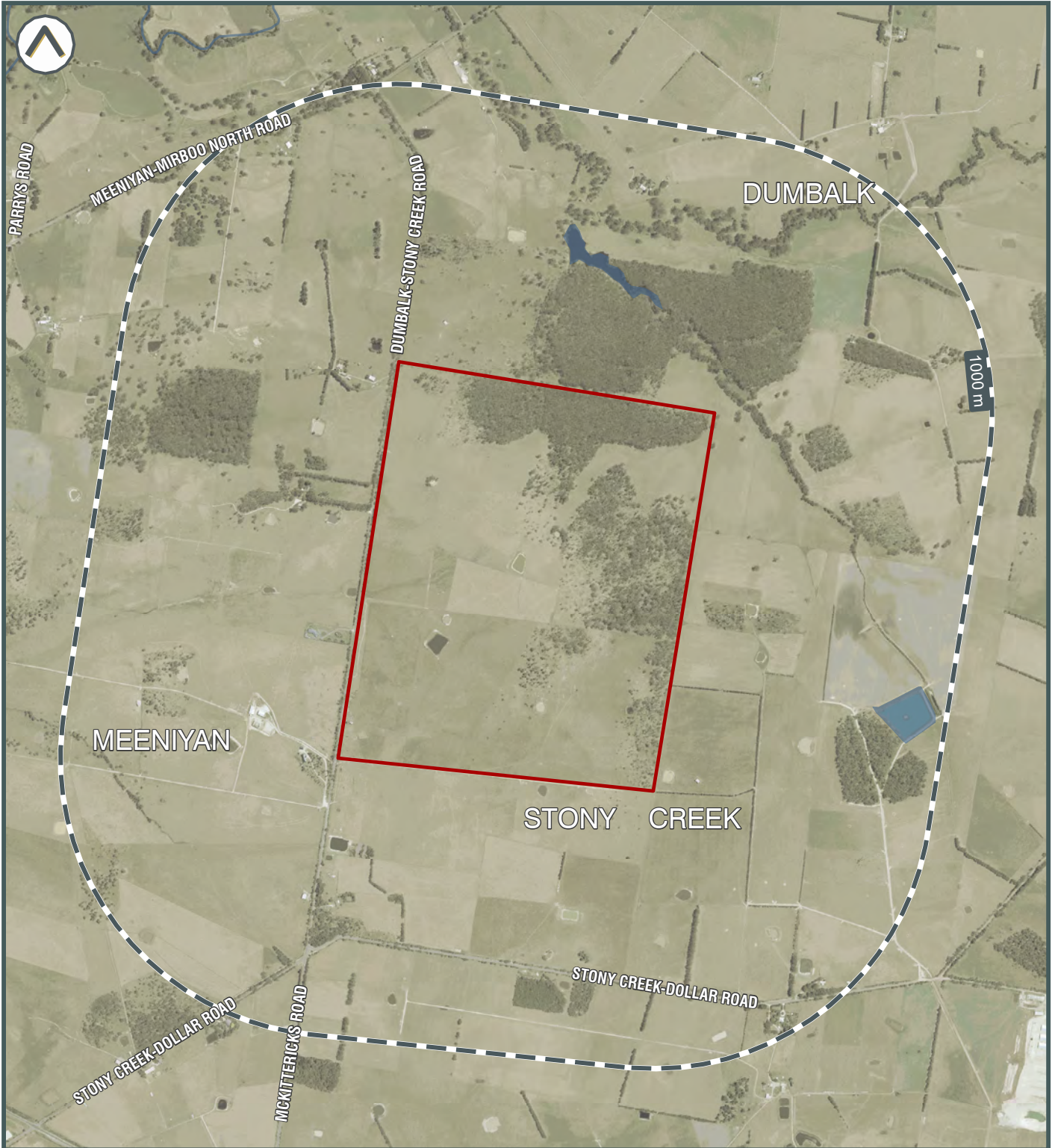
- Subject area
- Other boreholes
- Hydrogeologic Unit**
- Surficial Sediment Aquifer (porous media – unconsolidated)
- Upper Tertiary/Quaternary Aquitard (porous media – unconsolidated)
- Mesozoic Fractured Rock Aquifer

- Ecosystems that rely on Subsurface presence of Groundwater**
- High potential for GW interaction
 - Moderate potential for GW interaction
 - Low potential for GW interaction





Contaminated Land Public Register



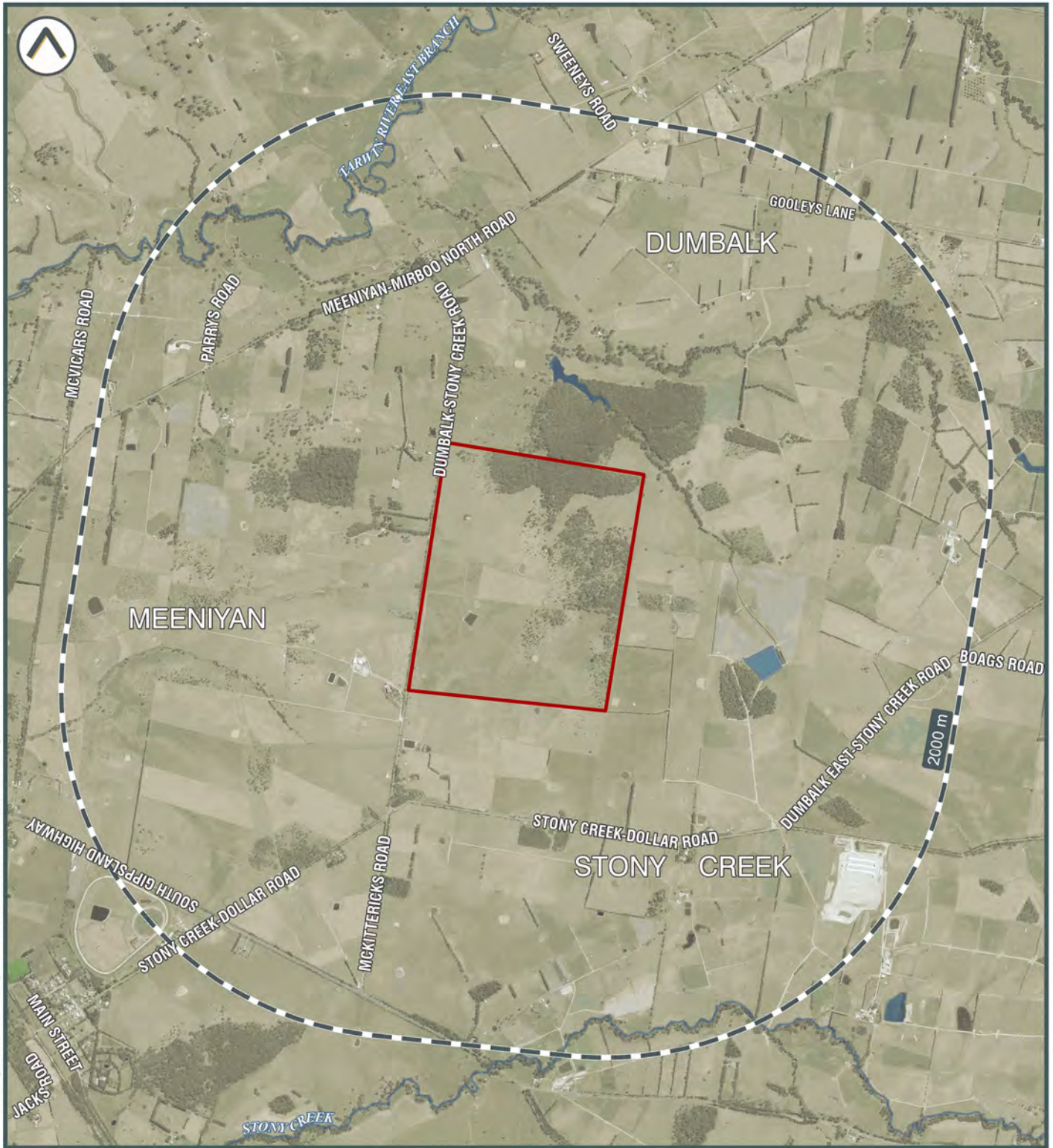
©2021 Land Insight (LU) www.landinsight.co | 9/12/2021 | Data source: Please refer to 'Digital Data Sources' in the Product Guide

- Subject area
- Contaminated Land Register (EPA)
- Priority Sites Register Audit Report



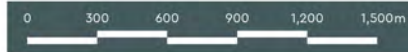


Sites Regulated by other Jurisdictional Body



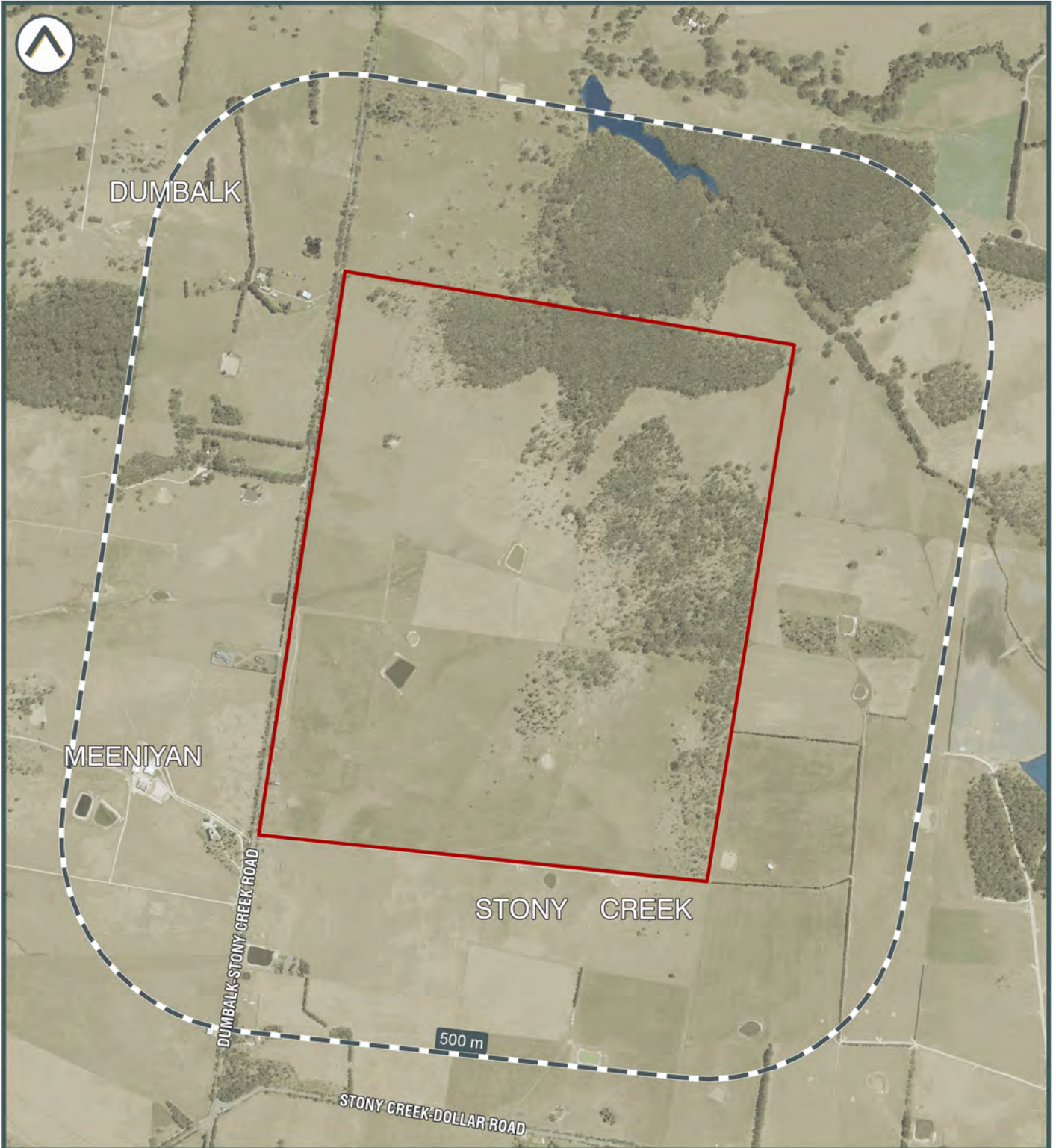
©2021 Land Insight (LU) www.landinsight.co | 27/09/2021 | Data source: Please refer to 'Digital Data Sources' in the Product Guide

- Subject area
- PFAS sites
- NPI Facilities
- Former Gasworks Sites
- Sea Dumping of Depth Charges
- Sea Dumping of Depth Charges (Chemical munitions sea dumping)
- Other Sea Dumping Sites
- Other
- Unexploded Ordnance (UXO) Areas
- Defence Area / Military Sites
- Substantial Potential
- Defence Controlled Area
- Slight potential






Licences, Approvals & Notices



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 Subject area

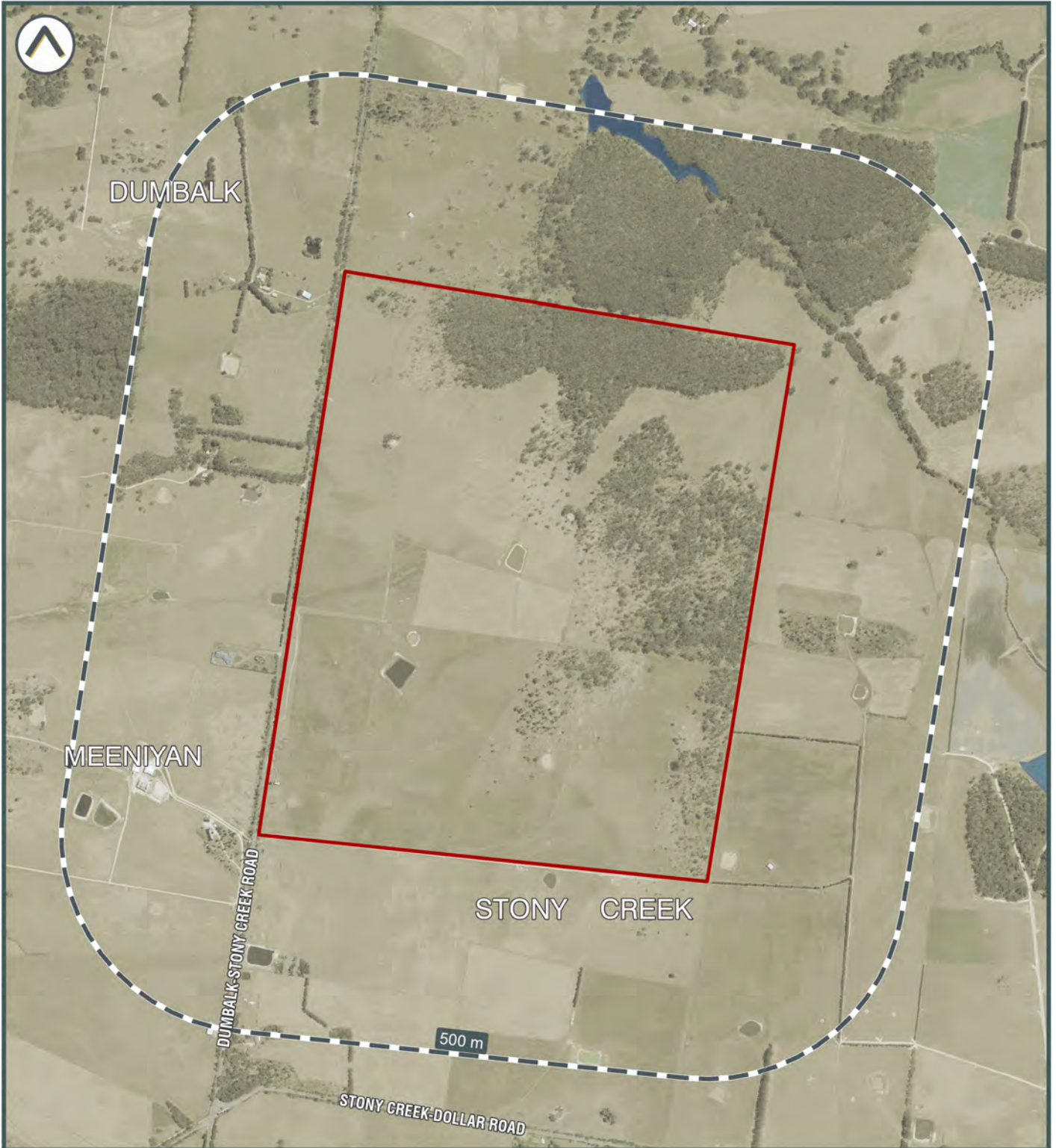


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Potentially Contaminating Activities (PCAs)



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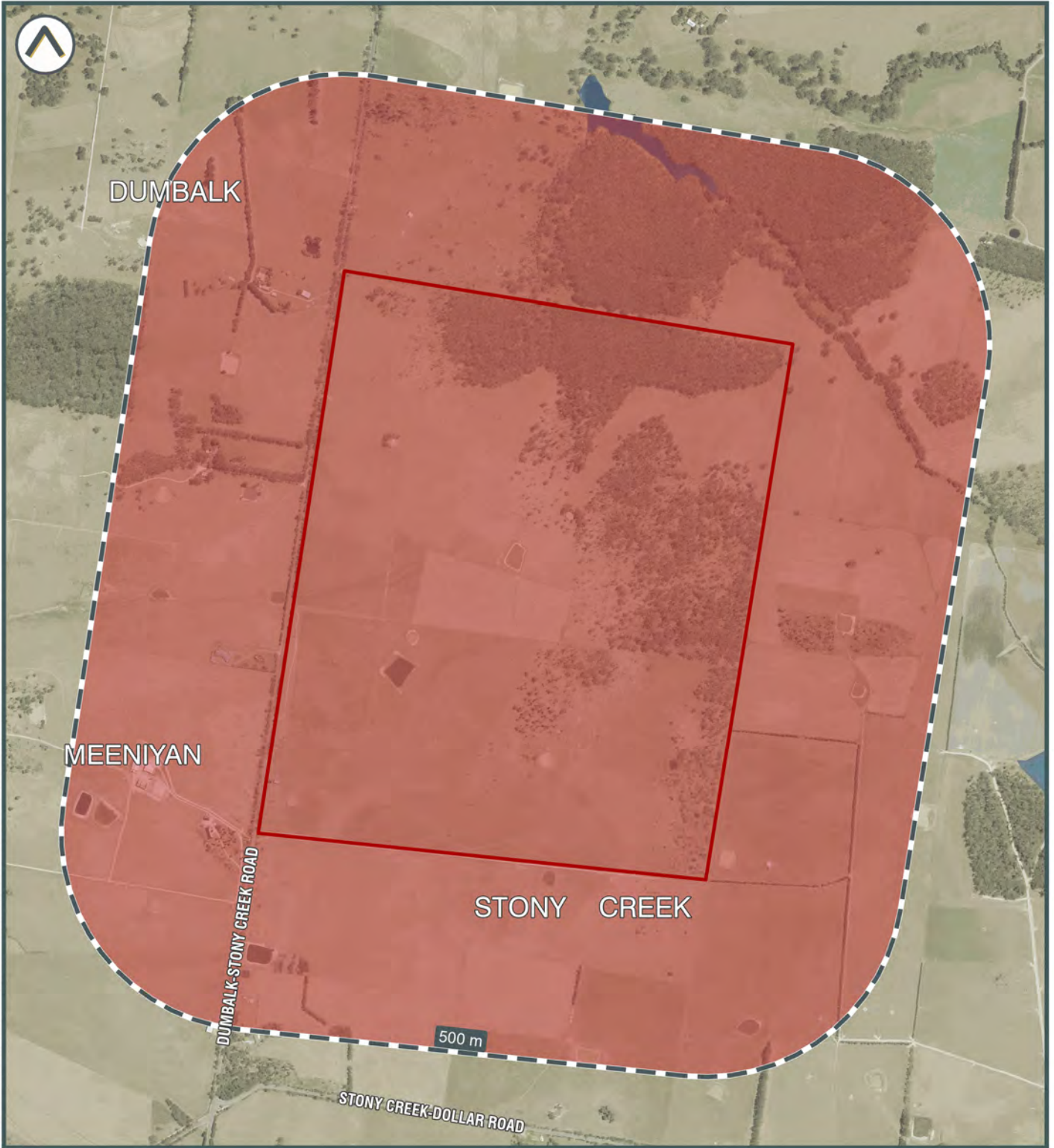
- Subject area
- Liquid Fuel Depots
- Operational Petrol Stations
- Waste Management Facilities
- Former Petrol Stations

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





Fire and Flood Hazards



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Subject area Bush Fire Prone Land



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An aerial photograph of a vibrant turquoise river winding through a rugged, rocky landscape. The river is flanked by large, grey boulders and patches of dense, green and yellowish vegetation. The water's color is strikingly bright, contrasting with the natural tones of the surrounding environment. A yellow rectangular overlay is positioned in the center-right of the image, containing the text 'Appendix B' and 'HISTORIC IMAGERY'.

Appendix B

HISTORIC IMAGERY

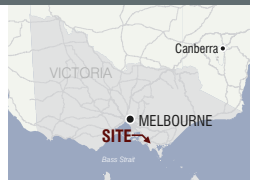
Historic Aerial Photograph - 1972



LI-02100 Aerial Photograph 1972-29-09 2021. Data source: Please refer to 'Digital Data Sources' in the Product Guide

Subject area

0 400m



Historic Aerial Photograph - 1975



LI-02100 Aerial Photograph 1975 29 09 2021. Data source: Please refer to 'Digital Data Sources' in the Product Guide

 Subject area

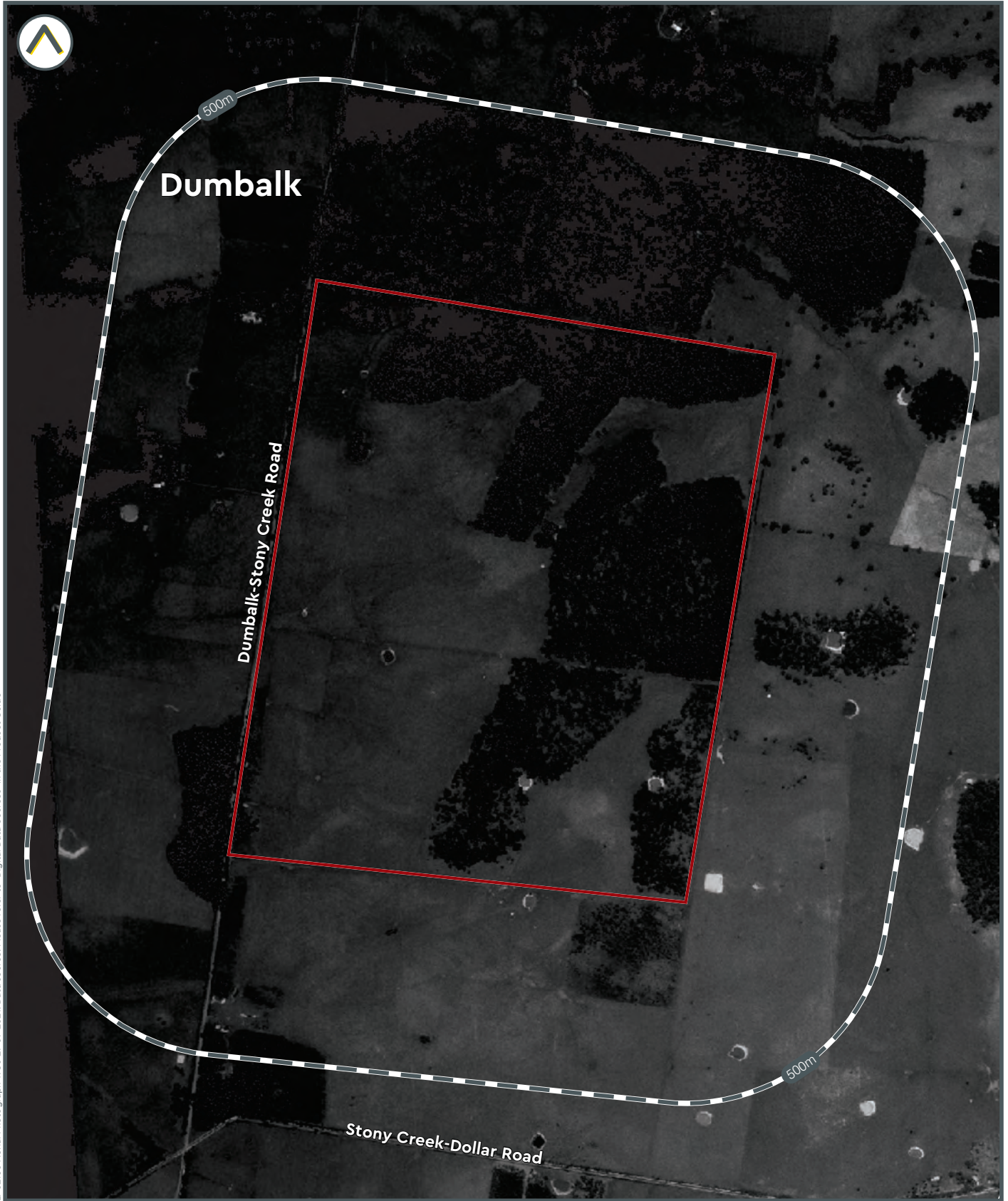
0 400m



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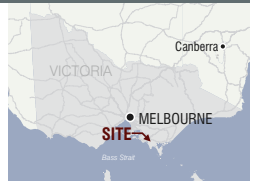
Historic Aerial Photograph - 1980



LI-02100 Aerial Photograph 1980. 29. 09. 2021. Data source: Please refer to 'Digital Data Sources' in the Product Guide



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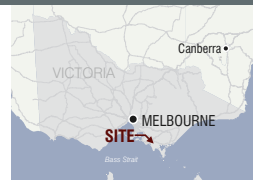
Historic Aerial Photograph - 1985



LI-02100 Aerial Photograph 1985 29 09 2021. Data source: Please refer to 'Digital Data Sources' in the Product Guide



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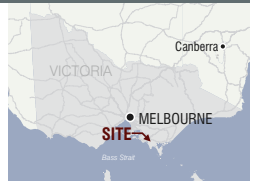
Historic Aerial Photograph - 1991



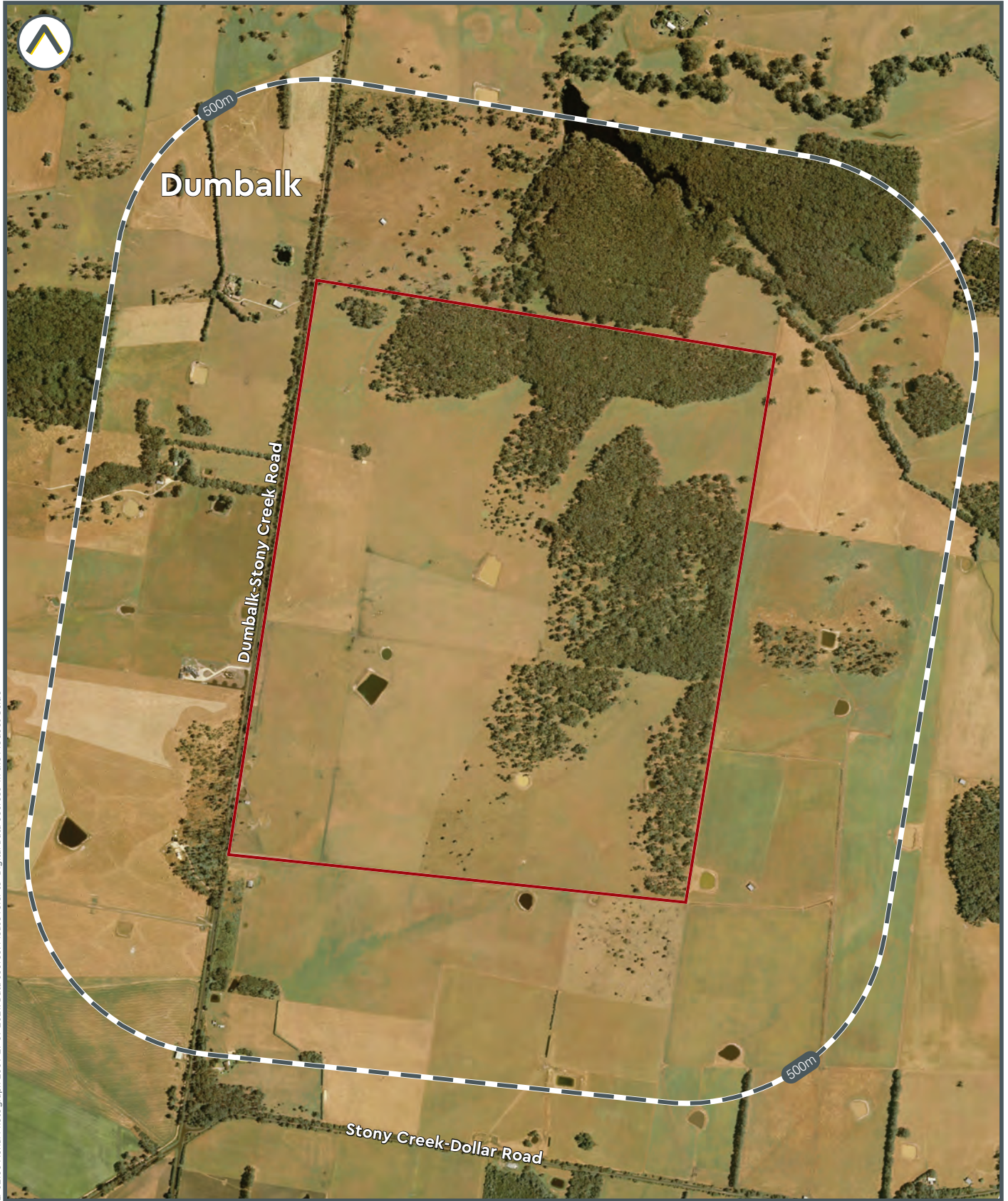
LI-02100 Aerial Photograph 1991 29 09 2021. Data source: Please refer to 'Digital Data Sources' in the Product Guide



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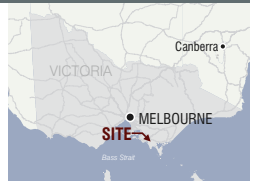
Historic Aerial Photograph - 2009



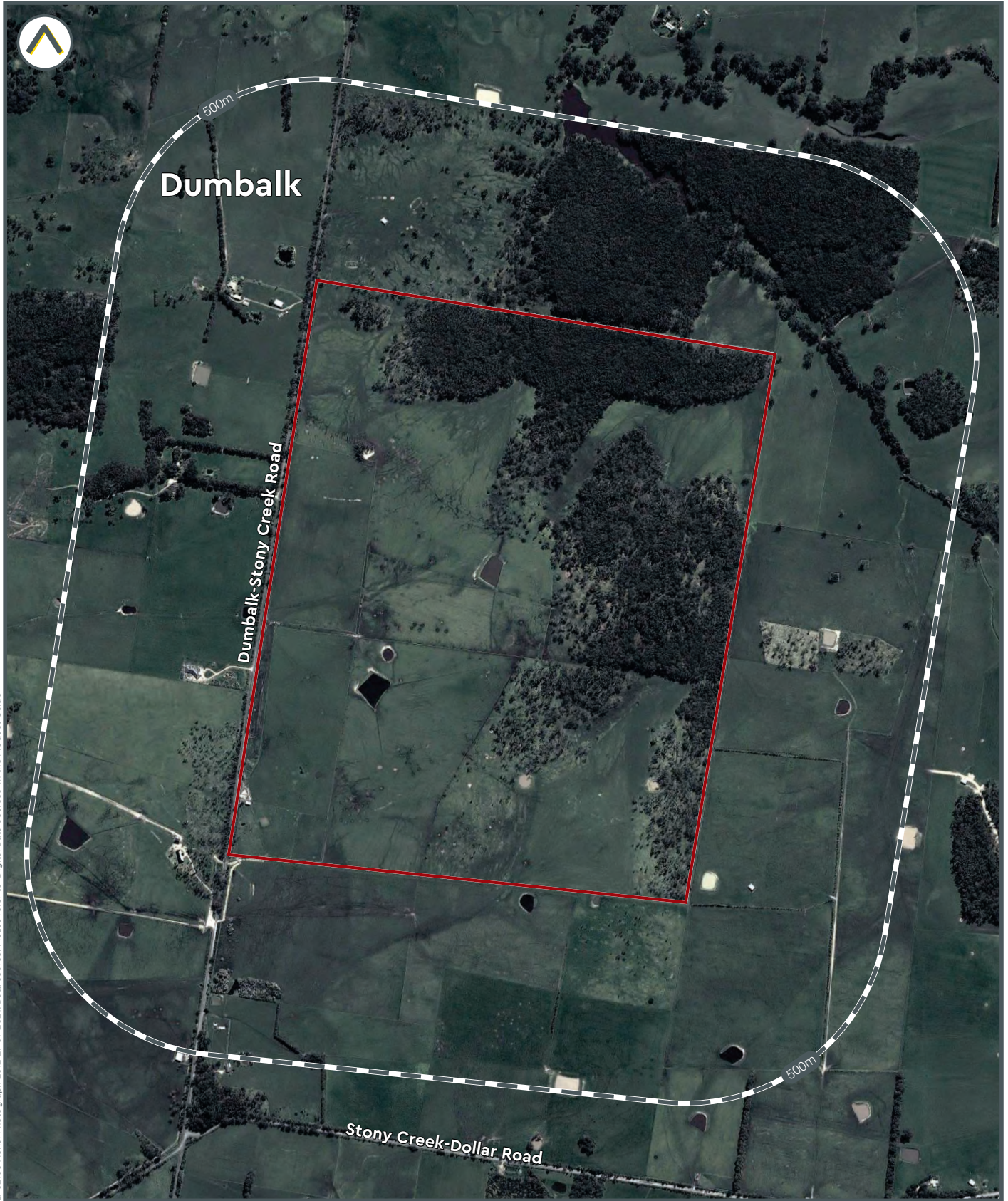
LI-02100 Aerial Photograph 2009 29 09 2021. Data source: Please refer to 'Digital Data Sources' in the Product Guide




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Historic Aerial Photograph - 2012



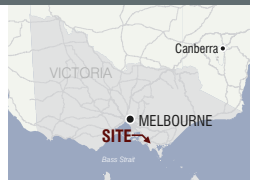
LI-02100 Aerial Photograph 2012, 29.09.2021. Data source: Please refer to 'Digital Data Sources' in the Product Guide

 Subject area

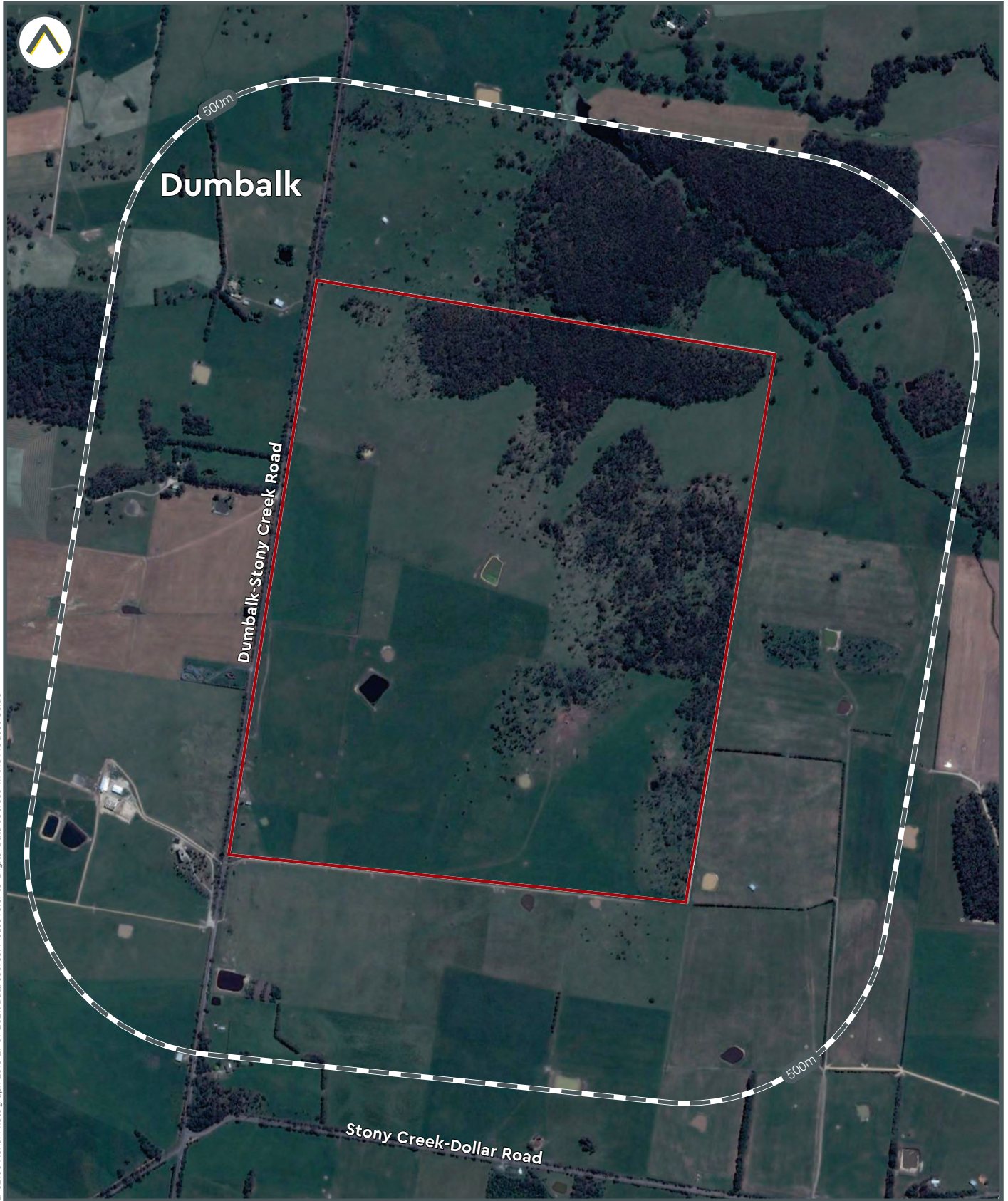




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Historic Aerial Photograph - 2015

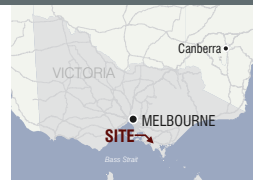


LI-02100 Aerial Photograph 2015 29 09 2021. Data source: Please refer to 'Digital Data Sources' in the Product Guide

Subject area



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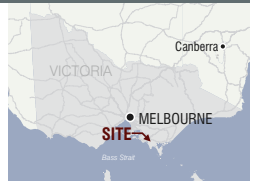
Historic Aerial Photograph - 2020



LI-02100 Aerial Photograph 2020 29 09 2021. Data source: Please refer to 'Digital Data Sources' in the Product Guide



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Enviro-Screen

Dumbalk Township
Dumbalk, VIC

28 September 2021





Understanding your report

Your Report has been produced by Land Insight and Resources (Land Insight).

Your Report is based on information available from public databases and sources at the date of reporting. The information gathered relates to land that is within a 200 to 2000m radius (buffer zone) from the boundaries of the Property. A smaller or larger radius may be applied for certain records (as listed under records and as shown in report maps).

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 or data provided.

The report provided by Land Insight 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 info@liresources.com.au

The report does not include title searches; dangerous good searches or; property certificates (unless requested); or information derived from a physical inspection, such as hazardous building materials, areas of infilling or dumping/spilling of potentially contaminated materials. It is important to note that these documents and an inspection can contain information relevant to contamination 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 the data displayed within this report is only current from date of production.

This Report, and your use of it, is regulated by Land Insight's Terms and Conditions (See Land Insight's Product Guide).

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ATTACHMENTS

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Attachment B - Historical Imagery

Land Insight Product Guide and Terms and Conditions

SUMMARY

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Sensitive Receptors Planning Control Heritage Soil and Land Information Geology and Topography		
 Section 2	HYDROGEOLOGY	Identified
Aquifer Groundwater Bores and Other Borehole investigations Groundwater Dependent Ecosystems (GDE) Hydrogeology Units Wetlands		
 Section 3	ENVIRONMENTAL REGISTERS LICENCES AND INCIDENTS	Not Identified
Contaminated Land Public Register Sites Regulate by Other Jurisdictional Body (Former Gaswork sites / PFAS sites) Licensing and Regulated Sites National Pollutant Inventory (NPI)		
 Section 4	POTENTIALLY CONTAMINATED AREAS	Identified
National Liquid Fuel Facilities National Waste Management Facilities		
 Section 5	NATURAL HAZARDS	Identified
Erosion risk Bushfire prone land Fire history Flood hazards		



Section 1 Property Setting



1.1 SENSITIVE RECEPTORS

Map 1.1 (200m Buffer)

Sensitive receptor	Category	Distance (m)	Direction
Dumbalk Fire Station	Fire Station	0.0	onsite
Dumbalk Memorial Park	Park	0.0	onsite
Saint Andrew's Anglican Church	Places of Worship & Religious Organisations	0.0	onsite
Dumbalk Recreational Reserve	Park	80.0	East

1.2 PLANNING CONTROLS

Map 1.2 (onsite)

Zoning

Code	Zoning	Details
LDRZ	LOW DENSITY RESIDENTIAL ZONE	-
PUZ1	PUBLIC USE ZONE - SERVICE AND UTILITY	-
TZ	TOWNSHIP ZONE	-
FZ	FARMING ZONE	-
RDZ1	ROAD ZONE - CATEGORY 1	-

Planning Overlay

Type	Category	Details
ESO	ESO2	ENVIRONMENTAL SIGNIFICANCE OVERLAY - SCHEDULE 2
ESO	ESO5	ENVIRONMENTAL SIGNIFICANCE OVERLAY - SCHEDULE 5

Other Planning Information

Type	Category	Details
Not identified	-	-

1.3 HERITAGE

Map 1.3 (200m Buffer)

State and Local Heritage

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

Australian Heritage Database

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

Commonwealth Heritage List, National Heritage List and World Heritage Area.

1.4 SOIL AND LAND USE INFORMATION

Map 1.4a/1.4b (onsite)

Soil Landscape

Soil Landscape	FfcQ7-1	fc	Soil Group	'Duplex soils, Sands'
Description	Quaternary material <1.4my			
Soil Landscape	LbT7-1	b	Soil Group	Tertiary material 1.4-65my
Description	Tertiary material 1.4-65my			

Salinity

Salt Susceptibility	Low	Areas with yellow clayey soils but in which salt seeps have not been recorded
---------------------	-----	---

Radon

Radon Level	Bq/m ³	7
-------------	-------------------	---

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).

Acid Sulfate Soil

Coastal Acid Sulfate Soil Hazard (CASS) (Table 1.4.1)	On the Property?	Within Buffer?
Class	Not identified	Not identified

National Acid Sulfate Soils Atlas

Atlas of Australian ASS (Table 1.4.2)	Cq(p4)	ASS in inland lakes, waterways, wetlands and riparian zones	Probability of Occurrence	Extremely low probability of occurrence
	Bn(p4)	ASS in inland lakes, waterways, wetlands and riparian zones		Low Probability of occurrence

Table 1.4.1. Classification for Coastal Acid Sulfate Soils (CASS)

Class of Land as shown on ASS Planning Maps	
Prospective Land	Land that has the potential to contain Coastal Acid Sulfate Soils as indicated by geomorphology.
Made Land	Land that has been modified by human agency. Here, the geomorphic features that indicate the potential to contain Coastal Acid Sulfate Soil, no longer exist. Assessment of the potential depends on information such as geology maps or soil maps, that pre-dates modification.

Data represents Victorian coastal lands which have the potential to contain acid sulfate soil (CASS), i.e. it is prospective for CASS. The data is used for triggering an investigation of a site where proposed activities risk disturbing CASS. Department of Environment and Primary Industries.

Table 1.4.2. Atlas of Australian Acid Sulfate Soils¹ (ASRIS) (CSIRO/NatCASS)

Probability of Occurrence of ASS ¹	
A	High Probability of occurrence - (>70% chance of occurrence in mapping unit)
B	Low Probability of occurrence - (6-70% chance of occurrence in mapping unit)
C	Extremely low probability of occurrence - (1-5% chance of occurrence in mapping unit)
D	No probability of occurrence - (<1% chance of occurrence in mapping unit)
x	Disturbed ASS¹ terrain - (ASS ¹ material present below urban development).
u	Unclassified - (Insufficient information to classify map unit)
Zones	
a	Potential acid sulfate soil material and/or Monosulfidic Black Ooze (MBO).
b, c	Potential acid sulfate soil generally within upper 1 m.
c, d, e	ASS ¹ generally within upper 1 m.
f	ASS ¹ generally below 1 m from the surface
g	ASS ¹ , generally below 3 m from the surface.
h	ASS ¹ generally within 1 m of the surface.
i, j	ASS ¹ generally below 1 m of the surface.
k	ASS ¹ material and/or Monosulfidic Black Ooze (MBO).
l, m, n, o, p, q	ASS ¹ generally within upper 1 m in wet / riparian areas.
Subscripts to codes	
(a)	Actual acid sulfate soil (AASS) = sulfuric material.
(p)	Potential acid sulfate soil (PASS) = sulfidic material.
(q)	Monosulfidic Black Ooze (MBO) is organic ooze enriched by iron monosulfides.
Confidence levels	
(1)	All necessary analytical and morphological data are available
(2)	Analytical data are incomplete but are sufficient to classify the soil with a reasonable degree of confidence
(3)	No necessary analytical data are available, but confidence is fair, based on a knowledge of similar soils in similar environments
(4)	No necessary analytical data are available, and classifier has little knowledge or experience with ASS, hence classification is provisional

¹Acid 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 (Pons 1973). Acid sulfate soil (ASS) may include PASS or AASS + PASS. Potential acid sulfate soil (PASS) = sulfidic material. Actual acid sulfate soil (AASS) = sulfuric material.

1.5 GEOLOGY AND TOPOGRAPHY

Map 1.5 (onsite)

Geology

Map Sheet	Symbol	Name	Geologic History	Lithology	Description
1:50,000 Geological Units	Qa1	Alluvium (Qa1): generic	Pleistocene to Holocene (channelled stream flow-fluvial [environment])	silt [material] (significant); sand (significant); gravel [material] (significant)	Gravel, sand, silt: variably sorted and rounded; generally unconsolidated; includes deposits of low terraces; alluvial floodplain deposits
	Put	Thorpdale Volcanic Group (Put): Generic	Paleocene to Miocene (eruption - lava flow [environment])	alkali basalt (significant); tholeiitic basalt (significant); basanite (minor [proportion]); silcrete (minor [proportion]); nephelinite (minor [proportion]); hawaiite (minor [proportion]); tuff (minor [proportion]); sandstone (minor [proportion]); mugea	Tholeiitic and alkalic basalt; minor nephelinite, basanite, nepheline hawaiite, hawaiite, mugearite, nepheline mugearite, tuff, interbedded sandstone and silcrete.

Naturally Occurring Asbestos Potential (NOA)

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

Topography

Topography	40 – 60 mAHD
------------	--------------



Section 2 Hydrogeology



2.1 HYDROGEOLOGY AND GROUNDWATER BORES

Map 2.1 (2000m Buffer)

	On the Property?	Within Buffer?
Aquifer Type	Fractured or fissured, extensive aquifers of low to moderate productivity	Fractured or fissured, extensive aquifers of low to moderate productivity
Designated Water Supply Catchments	TARWIN RIVER (MEENIYAN)	TARWIN RIVER (MEENIYAN)
Depth to Watertable (m)	5 - 50	<5 - 50
Wetlands	Not identified	Temporary freshwater swamps
Groundwater Salinity (mg/L)	1000	1000 - 3500

Groundwater Quality Restricted Use Zones

Number	Address	Site history	Restrictions on Use	Distance (m)	Direction
Not identified	-	-	-	-	-

Groundwater Bores

Map ID	Groundwater Bore ID	Authorised Purpose	Completion Date	Drilled Depth (m)	Final Depth (m)	SWL (m)	Salinity (mg/l)	Yield (L/s)	Distance (m)	Direction
3	61664	Unknown	27/06/1968	47.0	46.9		560 mg/L		0.0	Onsite
2	WRK976115	Stock and Domestic	25/11/2006	60.0	60.0				737.1	South
4	61672	Unknown	15/07/1983	101.0	101.1				790.4	South-east
5	61673	Stock and Domestic	21/07/1983	59.0	59.4			1.01	790.4	South-east

Map ID	Groundwater Bore ID	Authorised Purpose	Completion Date	Drilled Depth (m)	Final Depth (m)	SWL (m)	Salinity (mg/l)	Yield (L/s)	Distance (m)	Direction
1	85572	Stock and Domestic	31/12/1919	141.0	141.1				1186.2	North-west

Groundwater Bores Driller Lithology Details

Groundwater Bore ID	From Depth - To Depth (m)	Lithology	Distance (m)	Direction
61664	#N/A		0.0	Onsite
WRK976115	#N/A		737.1	South
61672	#N/A		790.4	South-east
61673	#N/A		790.4	South-east
85572	#N/A		1186.2	North-west

2.2 HYDROGEOLOGY AND OTHER BOREHOLES

Map 2.2 (500m Buffer)

	On the Property?	Within Buffer?
Groundwater Management Areas	Not identified	-
Hydrogeologic Unit	Tertiary Basalt Aquifer (fractured rock) Surficial Sediment Aquifer (porous media - unconsolidated)	Tertiary Basalt Aquifer (fractured rock) Surficial Sediment Aquifer (porous media - unconsolidated) Upper Tertiary/Quaternary Aquitard (porous media - unconsolidated)

Groundwater Dependent Ecosystems (GDE)

	On the Property?	Within Buffer?
Aquatic	Not identified	-
Terrestrial	Low potential for GW interaction Moderate potential for GW interaction	Low potential for GW interaction Moderate potential for GW interaction

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

Terrestrial - Ecosystems that rely on the Subsurface expression of groundwater.

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
61664	Groundwater	Rural Water Commission	Private Individual/Corporation	27/06/1968	46.9	0.0	Onsite



Section 3 Environmental Registers, Licences and Incidents



3.1 CONTAMINATED LAND PUBLIC REGISTER

Map 3.1 (1000m Buffer)

Environmental Audit Reports

CARMS No.	Address	Audit Category	Distance (m)	Direction
Not identified	-	-	-	-

Priority Site Register

Notice No.	Address	Issue	Distance (m)	Direction
Not identified	-	-	-	-

Table 3.1.1 Sections 53X and 53V of the Environment Protection Act 1970

EPA Types of Environmental Audits	
53X Audits	A 53X ('condition of the environment') audit is most frequently used by the planning system and verifies that potentially contaminated land can be used for a specific use (industrial, commercial or residential). From a 53X audit comes either a certificate or statement of environmental audit.
53V Audits	A 53V ('risk of harm') audit is most commonly used by EPA to understand the risk to the environment posed by an industrial activity or to validate that cleanup of contaminated land or groundwater has occurred. The 53V audit assesses the risk of any possible harm to a site caused by an industrial process or activity, waste substance or noise. This includes audits associated with the construction and operation of landfills.

3.2 SITES REGULATED BY OTHER JURISDICTIONAL BODY

Map 3.2 (2000m Buffer)

Defence, Military Sites and UXO Areas

Site name	Type*	Description	Distance (m)	Direction
Not identified	-	-	-	-

*RCIP (Regional Contamination Investigation Program), UXO (Unexploded Ordnance Areas)

Former Gasworks Sites

Site name	Description	Distance (m)	Direction
Not identified	-	-	-

PFAS Sites

Site name	Description	Distance (m)*	Direction
Not identified	-	-	-

National Pollutant Inventory (NPI)

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

3.3 LICENCES, APPROVALS & NOTICES

Map 3.3 (500m Buffer)

Licences

Licence No.	Type	Company Name	Address	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.

Approvals

Doc No.	Type	Company Name	Address	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.

Notices

Transaction No.	Type	Company Name	Address	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.

Table 3.3.1 EPA Regulatory Instruments Explanation	
Approvals	
Works approval is required for industrial and waste management activities that have the potential for significant environmental impact.	
Works Approval	EPA's works approval process is designed to ensure the best and most cost-effective environmental outcomes on projects are achieved. Without works approvals there is an increased risk of industrial projects causing pollution issues and requiring expensive retrofitting.
30A Approval	Section 30A is an overriding provision of the Environment Protection Act 1970 (the Act) under which EPA can authorise discharges, emissions, storage, treatment, disposal and handling of waste in emergencies and other temporary situations that would otherwise be an offence under the Act. 30A approvals are not issued lightly, as they permit activities that would not normally be allowed.
Notices	
Remedial notices are served to prevent or remedy a range of non-compliances or likely non-compliances. Remedial notices are not punitive measures.	
Clean Up Notice	Clean up notices (CUN) are issued under section 62A of the <i>Environment Protection Act 1970</i> . They aim to prevent further contamination and impact on beneficial uses through removal of waste, undertaking clean-up activities, ongoing management of pollution, altered handling, storage or location of industrial or prescribed industrial waste.
Minor Works Pollution	Minor works pollution abatement notices (MWPANs) are issued under section 31B of the EP Act. They aim to prevent further occurrence of pollution or potential environmental risk through installation of risk controls and changes to onsite processes and practices in urgent situations.
Pollution Abatement Notice	Pollution abatement notices are issued under section 31A of the <i>Environment Protection Act 1970</i> . They aim to prevent further occurrence of pollution or potential environmental risk through installation of risk controls and changes to on-site processes and practices.
Post closure pollution abatement notices (PC PAN)	Post Closure Pollution Abatement Notices (PAN's) are formal legal enforceable Notices issued by EPA on former landfill sites. The environmental risks posed by landfill sites continue for a significant period of time after waste acceptance has ceased.
Licences	
EPA licence is required for all scheduled premises. It allows the licence-holder to operate and sets conditions that they must meet.	
Licence	Licences contain standard conditions that aim to control the operation of the premises so that there is no adverse effect on the environment. These conditions address areas such as waste acceptance and treatment, air and water discharges, and noise and odour.
Amalgamated Licence	An amalgamated licence is a legal document that contains standard conditions to control the operation of scheduled premises to minimise impacts on the environment. These conditions address areas such as waste acceptance and treatment, air and water discharges, noise and odour.



Section 4 Potentially Contaminated Areas



4.1 POTENTIALLY CONTAMINATING ACTIVITIES

Map 4.1 (500m Buffer)

Liquid Fuel Facilities

Site name	Category	Location	Status*	Distance (m)	Direction
Murray Goulburn Dumbalk	Petrol Station	1 Nerrena Road, Dumbalk	Operational	0.0	onsite

Waste Management Facilities & Recycling Centres

Site name	Category	Location	Status*	Distance (m)	Direction
Not identified	-	-	-	-	-

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.

***Status:**

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

Former: business that have been closed or discontinued 1 to 2 years prior from the day this report was issued. All former sites older than 2 years will be reported in the 'Historical Potentially Contaminating Activities' section 4.4 in this report.

4.2 HISTORICAL POTENTIALLY CONTAMINATING ACTIVITIES

(not mapped)

1900 Historical Business Data

Activity	Name	Address	Positional accuracy ¹	Distance (m)	Direction
Not identified	-	-	-	-	-

1905 Historical Business Data

Activity	Name	Address	Positional accuracy ¹	Distance (m)	Direction
Butter & Cheese Factories & Exporters Of Butter	Dumbalk	Dumbalk	Suburb	0.0	onsite

1915 Historical Business Data

Activity	Name	Address	Positional accuracy ¹	Distance (m)	Direction
Butter Factories	Kelso, R. Wooryl	Dumbalk	Suburb	0.0	onsite
Mechanics Institutes & Free Libraries	Dumbalk M. I.	Dumbalk	Suburb	0.0	onsite

1925 Historical Business Data

Activity	Name	Address	Positional accuracy ¹	Distance (m)	Direction
Storekeepers	Seers, Ernest	Dumbalk	Suburb	0.0	onsite
Storekeepers	Black, Francis W.	Dumbalk	Suburb	0.0	onsite
Storekeepers	Fielden, E. J., & G. B.	Dumbalk	Suburb	0.0	onsite
Butter Factories	-	Dumbalk	Suburb	0.0	onsite

1935 Historical Business Data

Activity	Name	Address	Positional accuracy ¹	Distance (m)	Direction
Storekeepers	Fielden, G. B.	Dumbalk	Suburb	0.0	onsite
Storekeepers	Black, Francis W.	Dumbalk	Suburb	0.0	onsite
Mechanics Institutes & Free Libraries	-	Dumbalk	Suburb	0.0	onsite

1940 Historical Business Data

Activity	Name	Address	Positional accuracy ¹	Distance (m)	Direction
Not identified	-	-	-	-	-

1945 Historical Business Data

Activity	Name	Address	Positional accuracy ¹	Distance (m)	Direction
Halls	Public	Dumbalk	Suburb	0.0	onsite
Butchers	Richards & Pearson Py Ld	Dumbalk	Suburb	0.0	onsite
Butter Factories	Dumbalk Co-Op Btr & Cheese Co Ld	Dumbalk	Suburb	0.0	onsite
Mechanics Institutes & Free Libraries	-	Dumbalk	Suburb	0.0	onsite
Storekeepers	Cross, C. L. & Co	Dumbalk	Suburb	0.0	onsite

1955 Historical Business Data

Activity	Name	Address	Positional accuracy ¹	Distance (m)	Direction
Grocers - Retail	Dumbalk Co-Op Store.	Dumbalk	Suburb	0.0	onsite
Fruiterers & Green Grocers	Mckitterick, J. J.	Dumbalk	Suburb	0.0	onsite
Grocers - Retail	Mcconville. Leslie M.	Dumbalk	Suburb	0.0	onsite
Carriers & Cartage Contractors	Watson, Hector R.	Dumbalk	Suburb	0.0	onsite
Carriers & Cartage Contractors	Richards, Edwd. J.	Dumbalk	Suburb	0.0	onsite
Carriers & Cartage Contractors	Rowland, Eric	Dumbalk	Suburb	0.0	onsite
Butter Factories	Dumbalk Co-Op Btr & Cheese Co Ld	Dumbalk	Suburb	0.0	onsite
Motor Garages	Ham G.	Dumbalk	Suburb	0.0	onsite
Halls	Public	Dumbalk	Suburb	0.0	onsite
Butchers	Mckitterick, D. P.	Dumbalk	Suburb	0.0	onsite
Banks	The Commercial Banking Company Of Sydney Limited	Dumbalk	Suburb	0.0	onsite
Stock & Share Brokers	Richards & Farmer	Dumbalk	Suburb	0.0	onsite

1965 Historical Business Data

Activity	Name	Address	Positional accuracy ¹	Distance (m)	Direction
Butter	Dumbalk Co-Op Btr & Cheese Co Ld	Dumbalk	Suburb	0.0	onsite
Carriers	Richards, Edwd. J.	Dumbalk	Suburb	0.0	onsite
Motor Garages	Demarte, M. R.	Dumbalk	Suburb	0.0	onsite
Builders & Contractors	Nicholls, J.	Dumbalk	Suburb	0.0	onsite
Plumbers Supplies	Sly, F. W.	Dumbalk	Suburb	0.0	onsite

Activity	Name	Address	Positional accuracy ¹	Distance (m)	Direction
Motor Garages	Ham, G.	Dumbalk	Suburb	0.0	onsite
Carriers	Watson. Hector R	Dumbalk	Suburb	0.0	onsite
Grocers - Retail	Dnmbalk Co-Op Stor.	Dumbalk	Suburb	0.0	onsite
Carriers	Bright, R. & M.	Dumbalk	Suburb	0.0	onsite
Grocers - Retail	Mcconvil. Leslie M.	Dumbalk	Suburb	0.0	onsite
Halls	Public	Dumbalk	Suburb	0.0	onsite
Fruiterers & Green Grocers	Mckitterick, J. J.	Dumbalk	Suburb	0.0	onsite
Butchers	Mckitterick, D. P.	Dumbalk	Suburb	0.0	onsite
Plumbers, Gasfitters, & Tinsmiths	Arnott, J. V.	Dumbalk	Suburb	0.0	onsite
Storekeepers	Greenwood. A. & B.	Dumbalk	Suburb	0.0	onsite
Storekeepers	Richards & Farmer	Dumbalk	Suburb	0.0	onsite
Carriers	Rowland, Eric	Dumbalk	Suburb	0.0	onsite

1970 Historical Business Data

Activity	Name	Address	Positional accuracy ¹	Distance (m)	Direction
Not identified	-	-	-	-	-

1975 Historical Business Data

Activity	Name	Address	Positional accuracy ¹	Distance (m)	Direction
Not identified	-	-	-	-	-

1980 Historical Business Data

Activity	Name	Address	Positional accuracy ¹	Distance (m)	Direction
Not identified	-	-	-	-	-

1990 Historical Business Data

Activity	Name	Address	Positional accuracy ¹	Distance (m)	Direction
Not identified	-	-	-	-	-

2005 Historical Business Data

Activity	Name	Address	Positional accuracy	Distance (m)	Direction
Sand Soil & Gravel - Retailers	Bright R G & N E Pty Ltd	61 Farmers Rd, DUMBALK 3956, VIC, Australia	Address	0.0	Onsite

Activity	Name	Address	Positional accuracy	Distance (m)	Direction
Carpet Furniture & Upholstery Cleaning	South Gippy Carpet Cleaning	4 Farmers Rd,DUMBALK 3956,VIC,Australia	Address	0.0	Onsite
Wedding Services	Liteweld Steel Fabrication	10 Nerrena Rd,DUMBALK 3956,VIC,Australia	Address	0.0	Onsite
Wedding Services	Liteweld Steel Fabrication	10 Nerrena Rd,DUMBALK 3956,VIC,Australia	Address	0.0	Onsite
Supermarket & Grocer	Dumbalk General Store & Supermarket	25 Farmers Rd, DUMBALK,VIC,3956	Address	0.0	Onsite
Carpet - Laying & Planners	Riley Steve	4 Farmers Rd, DUMBALK,VIC,3956	Address	0.0	Onsite
Carpet Furniture & Upholstery Cleaning	South Gippy Carpet Cleaning	4 Farmers Rd, DUMBALK,VIC,3956	Address	0.0	Onsite
Electrical Contractors & Consultants	Strzelectrics Doug Bovill	1470 Loves La, DUMBALK,VIC,3956	Address	0.0	Onsite
Schools - State	Tarwin Valley Primary School	DUMBALK,VIC,3956	Suburb	0.0	Onsite
Electrical Contractors & Consultants	Bovill Doug	1470 Loves La, DUMBALK,VIC,3956	Address	0.0	Onsite
Sand Soil & Gravel - Retailers	Bright R G & N E Pty Ltd	61 Farmers Rd, DUMBALK,VIC,3956	Address	0.0	Onsite
Farmers & Agriculturalists	N Chambers	DUMBALK,VIC,3956	Suburb	0.0	Onsite
Wedding Services	Liteweld Steel Fabrication	10 Nerrena Rd, DUMBALK,VIC,3956	Address	0.0	Onsite
Farmers & Agriculturalists	R K Thorson	DUMBALK,VIC,3956	Suburb	0.0	Onsite
Wedding Services	Liteweld Steel Fabrication	10 Nerrena Rd, DUMBALK,VIC,3956	Address	0.0	Onsite

2010 Historical Business Data

Activity	Name	Address	Positional accuracy	Distance (m)	Direction
Sand Soil & Gravel - Retailers	Bright R G & N E Pty Ltd	61 Farmers Rd DUMBALK 3956 VIC	Address	0.0	Onsite

2015 Historical Business Data

Activity	Name	Address	Positional accuracy	Distance (m)	Direction
Sand Soil & Gravel - Retailers	Bright M R & M J & Son Pty Ltd	570 Meenijan Birboo Nth Rd, Dumbalk,VIC,3956	Address	0.0	Onsite
Farmers & Agriculturalists	Giliam J E & S A	Farmers Rd, Dumbalk,VIC,3956	Street	0.0	Onsite
Pest Control Services	Martins Pest Control & Window Cleaning	29 Nerrena Rd, Dumbalk,VIC,3956	Address	0.0	Onsite
Merchants - General	Murray Goulburn Farm & Hardware Supplies	Farmers Rd, Dumbalk,VIC,3956	Street	0.0	Onsite
Farm & Agricultural Equipment & Suppliers	Murray Goulburn Trading Pty Ltd	Farmers Rd, Dumbalk,VIC,3956	Street	0.0	Onsite
Quarries	Pakenham Blue Metal	Dumbalk Quarry Farmers Rd, Dumbalk,VIC,3956	Place	0.0	Onsite
Publishing - Books	Two Moon Press	40 Farmers Rd, Dumbalk,VIC,3956	Address	0.0	Onsite

Land Insight uses a number of address geocoding techniques and characterised them according to the following criteria: completeness (match rates) and positional accuracy. When a historical street address does not contain complete details

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. The positional accuracy of the records is listed below:

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 historical business listing information. The business addresses were geocoded using historical information and cannot be relied upon as some of the addresses no longer exist. 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. For more information on how these records were geocoded and the methodology used by Land Insight, contact us at info@landinsight.co.

Historical Industries or business activities deemed to be of negligible or lesser risk are not reported. 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 Natural Hazards

Map 5.1 (500m Buffer)

Erosion Risk

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

Fire Hazard

Category	On the Property?	Within Buffer?
Bush Fire Prone Area (BLA)	Yes	Yes
Fire History	-	Not identified

Flood Hazard

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



Tower Three, Level 24
300 Barangaroo Avenue
Sydney NSW 2000 Australia
02 8067 8870
info@liresources.com.au
www.liresources.com.au



Appendix A

REPORT MAPS

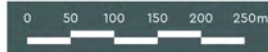


Subject Area and Sensitive Receptors



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- Subject area
- Sensitive receptors
- Community Centres & Services
- Parks
- Places of Worship & Religious Organisations

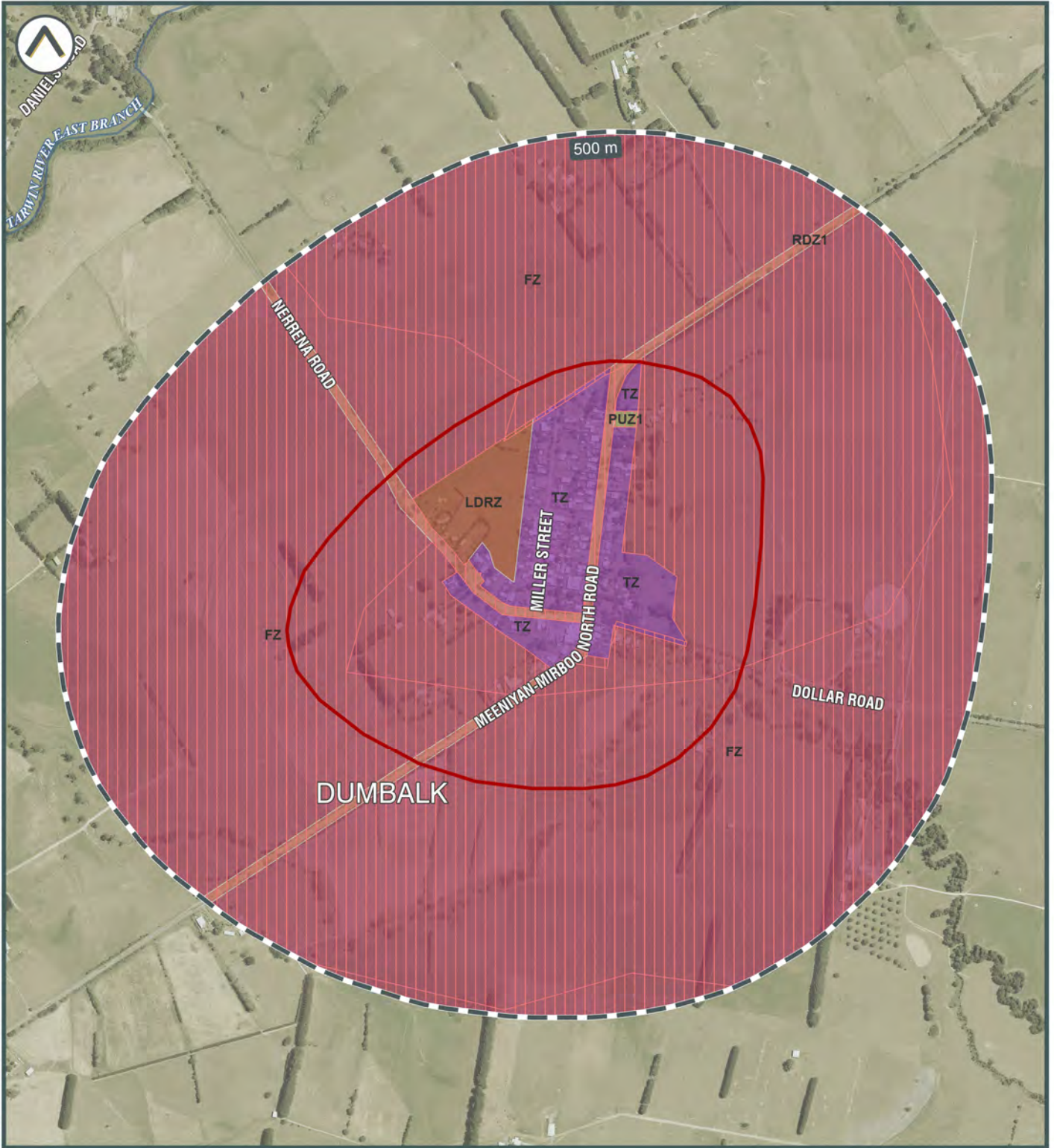


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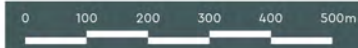


Planning Controls



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- | | | |
|--------------|-----------------|--|
| Subject area | Planning Scheme | Zoning |
| | ESO | FZ Farming Zone |
| | | LDRZ Low Density Residential Zone |
| | | PUZ1 Public Use Zone - Service And Utility |
| | | RDZ1 Road Zone - Category 1 |
| | | TZ Township Zone |



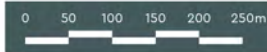


Heritage



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- Subject area
- Victorian Heritage Inventory (VHI)
- Areas of Cultural Heritage Sensitivity (CHS)
- Commonwealth Heritage List (CHL)
- National Heritage List (NHL)
- World Heritage Area (WHA)
- Victorian Heritage Register (VHR)

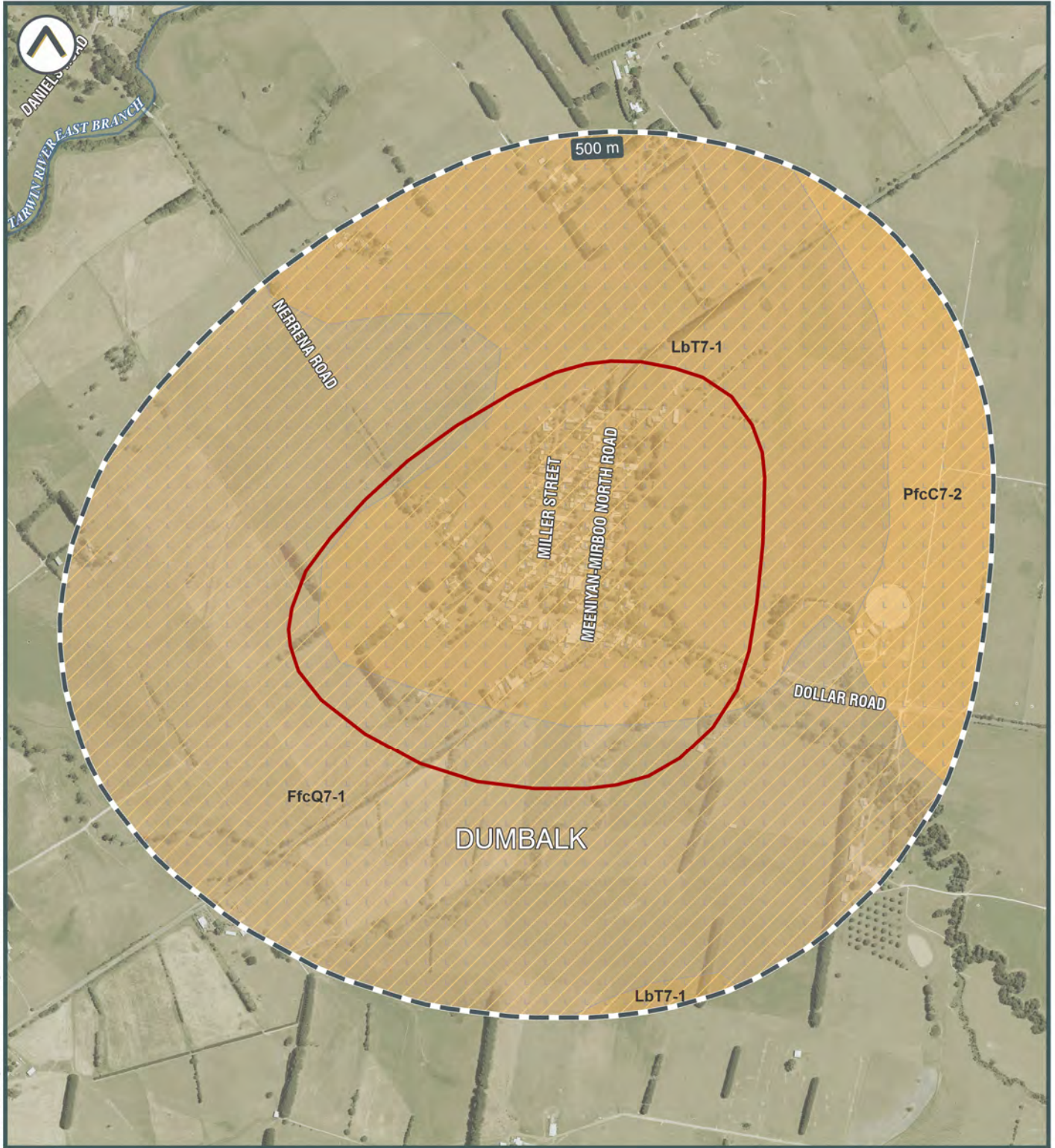


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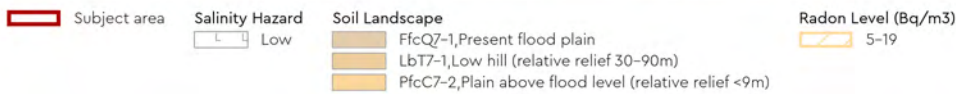




Soil Landscape and Salinity



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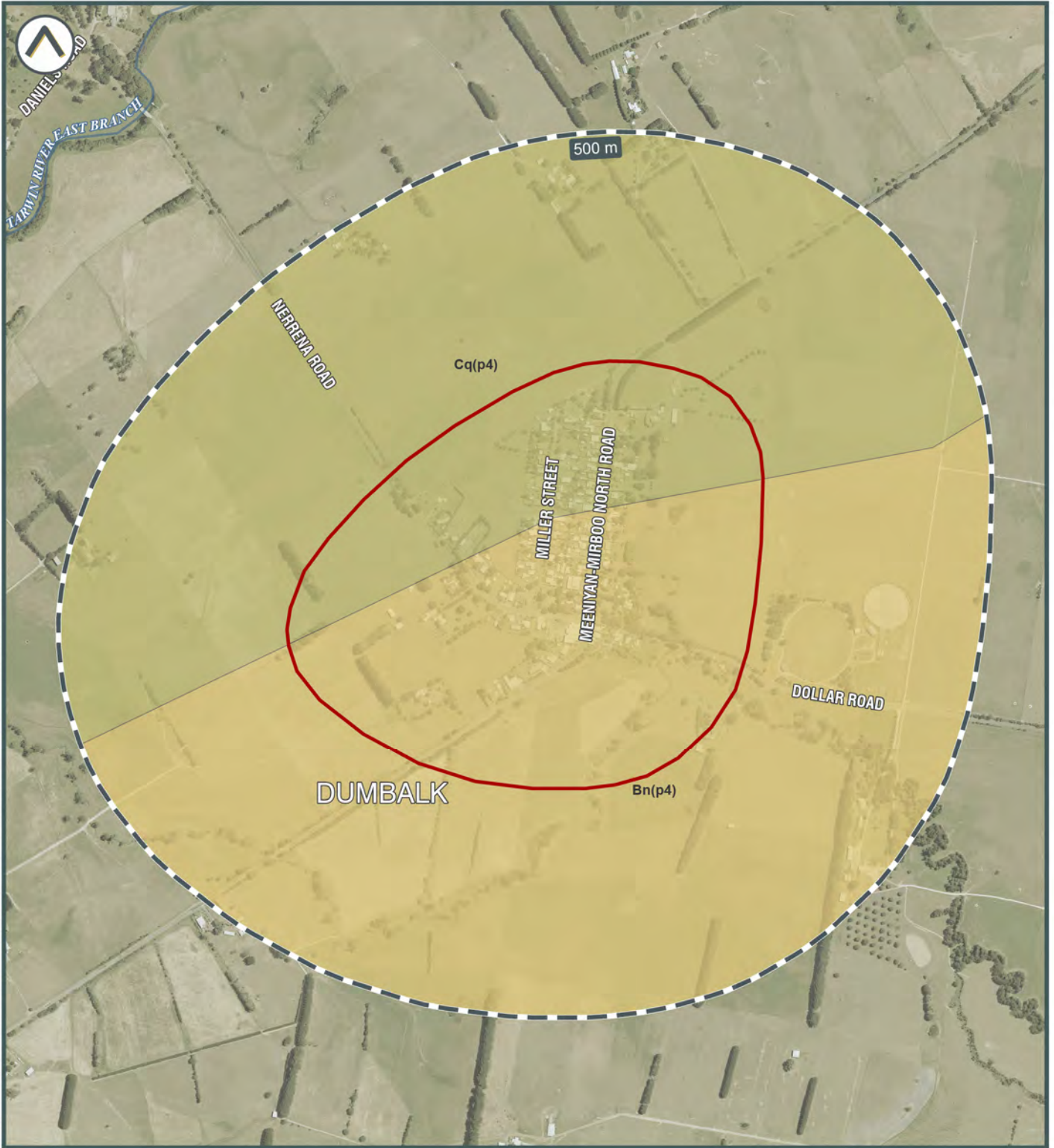


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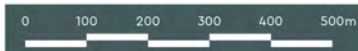


Acid Sulfate Soils



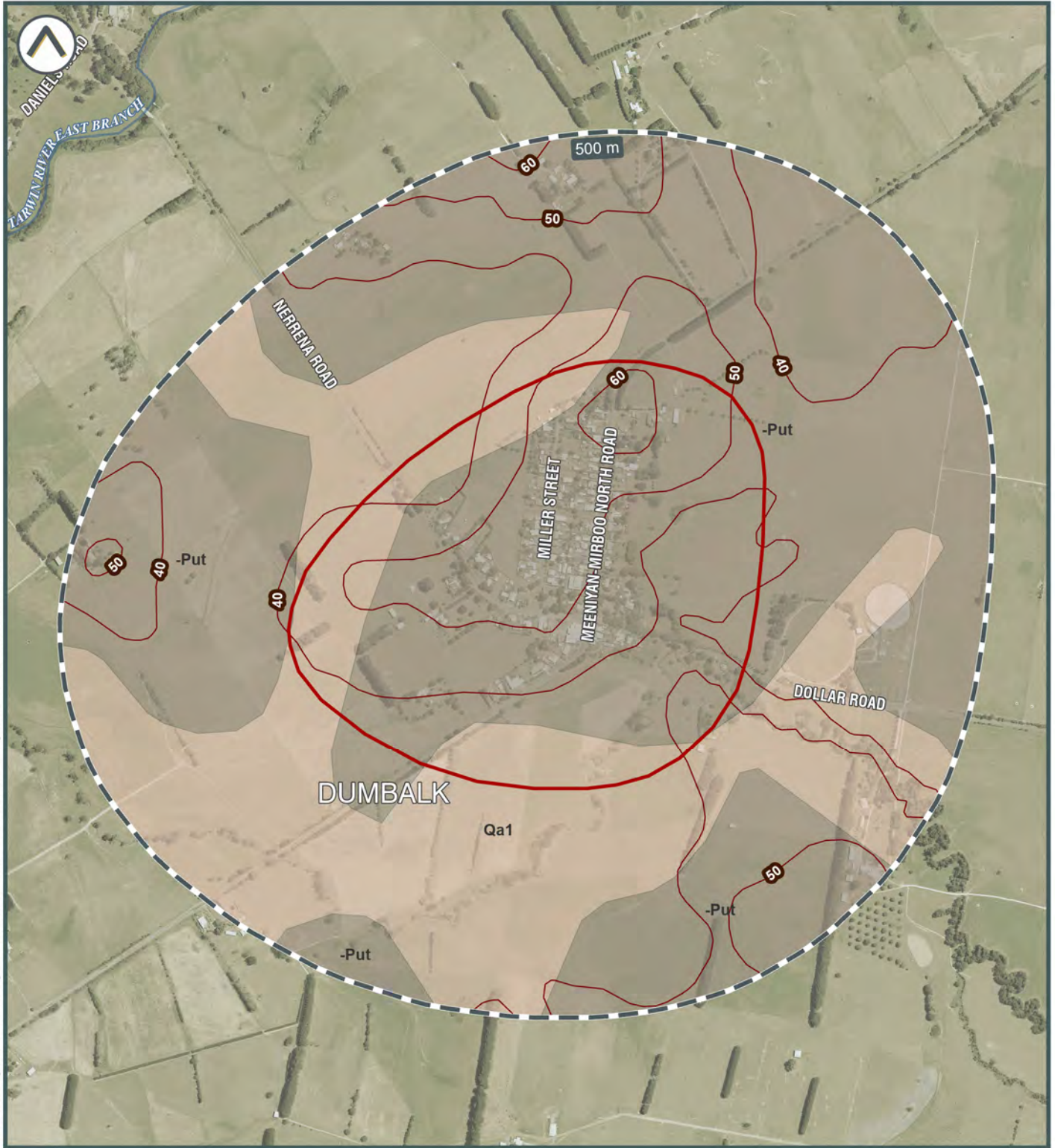
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- Subject area
- ASRIS Atlas of Australian Sulfate Soils**
- Bn(p4) | ASS in inland lakes, waterways, wetlands and riparian zones
- Cq(p4) | ASS in inland lakes, waterways, wetlands and riparian zones





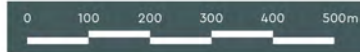
Geology and Topography



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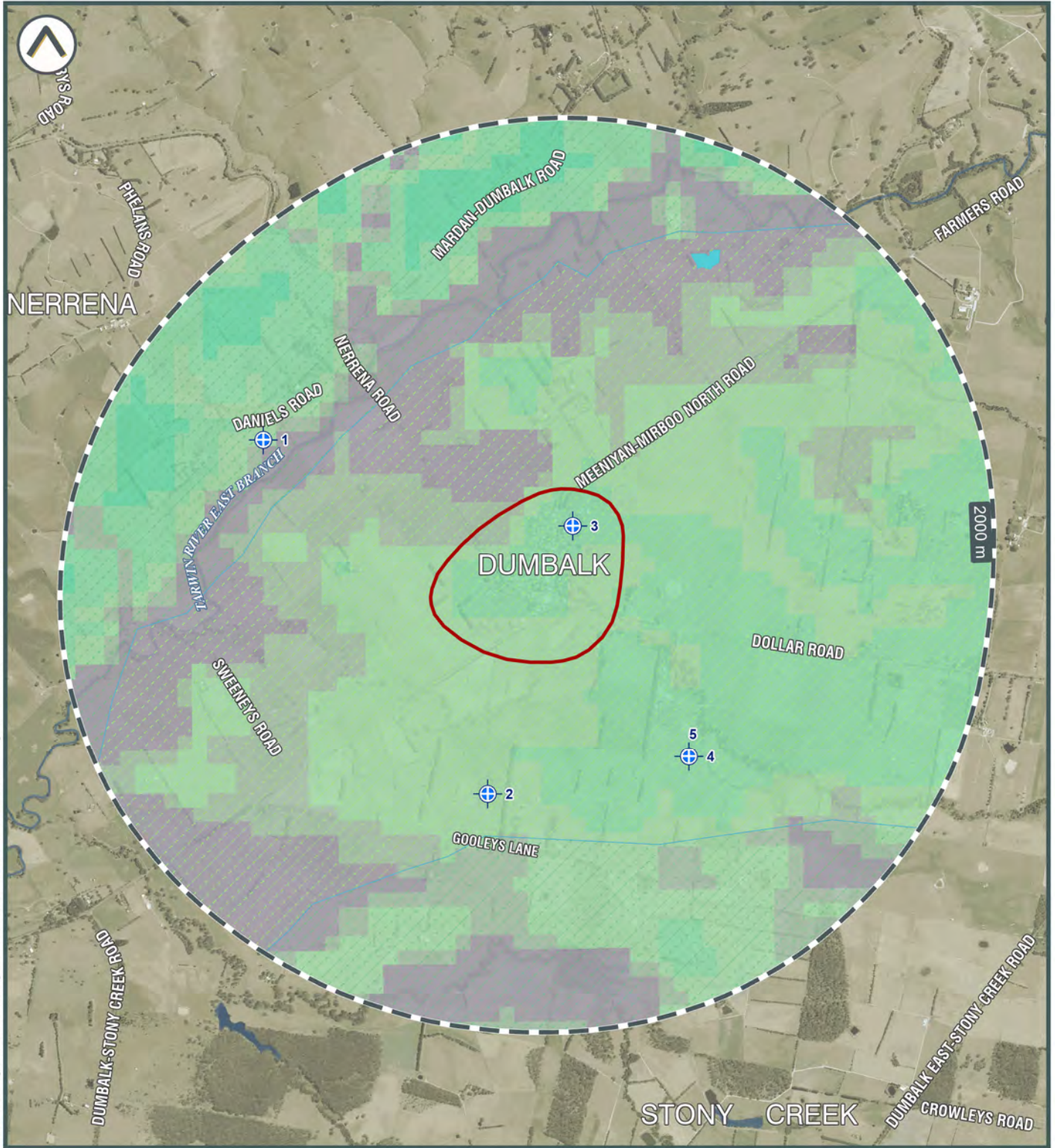
Subject area
 Topographic contour (m)

1:250,000 Geological Units
 -Put | Tholeiitic and alkalic basalt; minor nephelinite, basanite, nepheline hawaiite, hawaiite, mugearite, nepheline mugearite, tuff, interbedded sandstone and silcrete.
 Qa1 | Gravel, sand, silt; variably sorted and rounded; generally unconsolidated; includes deposits of low terraces; alluvial floodplain deposits





Hydrogeology and Groundwater Boreholes



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- Subject area
- Groundwater bores
- Wetlands
- Designated Water Supply Catchments

- Depth to Watertable (m)
- <5
 - 5-10
 - 10-20
 - 20-50
 - >50

- Aquifer type
- Fractured or fissured, extensive aquifers of low to moderate productivity
- Groundwater salinity (mg/l)
- 500 - 1,000
 - 1,100 - 5,000

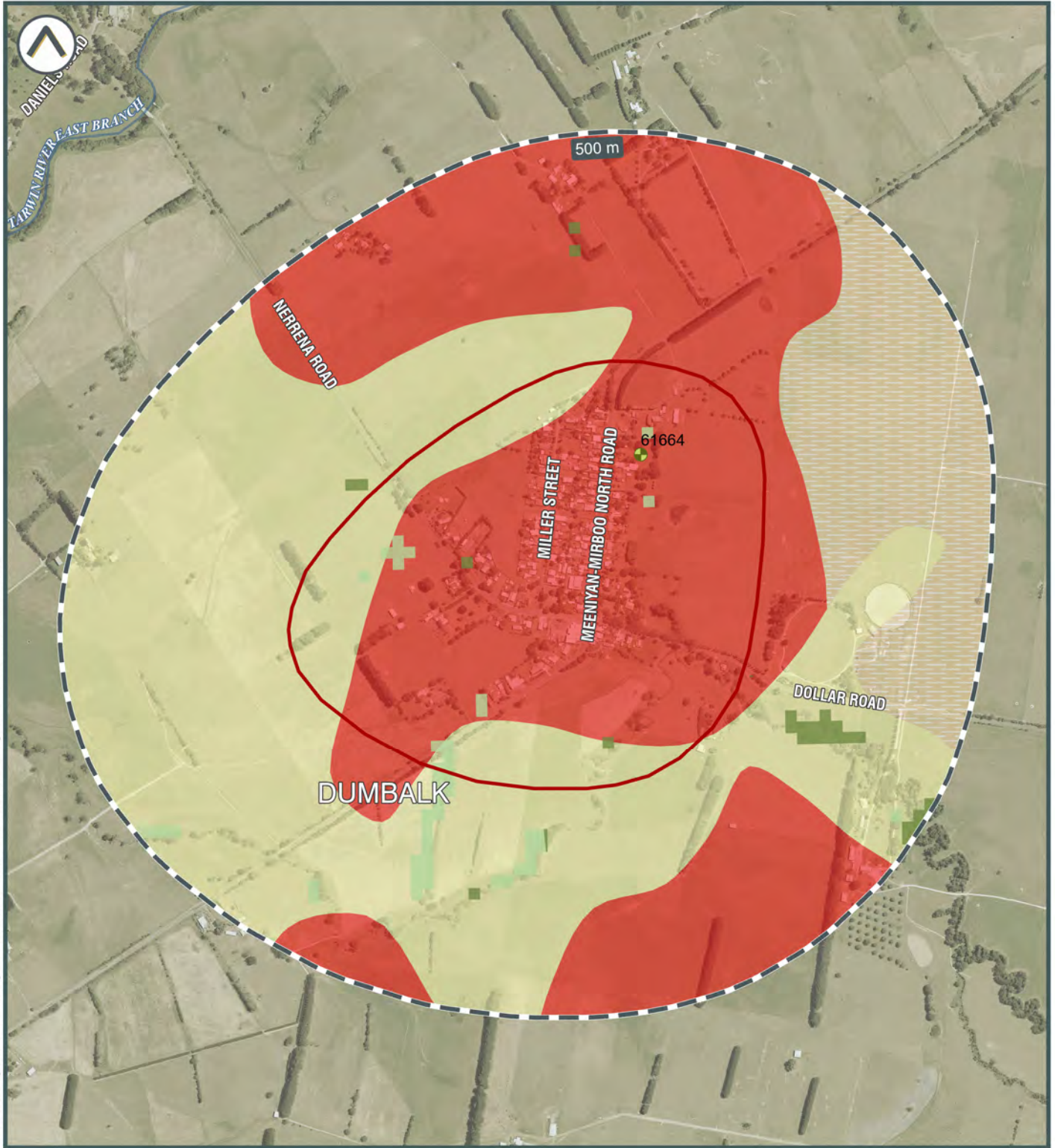


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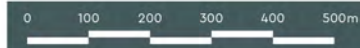
Hydrogeology and Other Boreholes



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- Subject area
- Other boreholes
- Hydrogeologic Unit**
- Surficial Sediment Aquifer (porous media – unconsolidated)
- Upper Tertiary/Quaternary Aquitard (porous media – unconsolidated)
- Tertiary Basalt Aquifer (fractured rock)

- Ecosystems that rely on Subsurface presence of Groundwater**
- Moderate potential for GW interaction
- Low potential for GW interaction





Contaminated Land Public Register



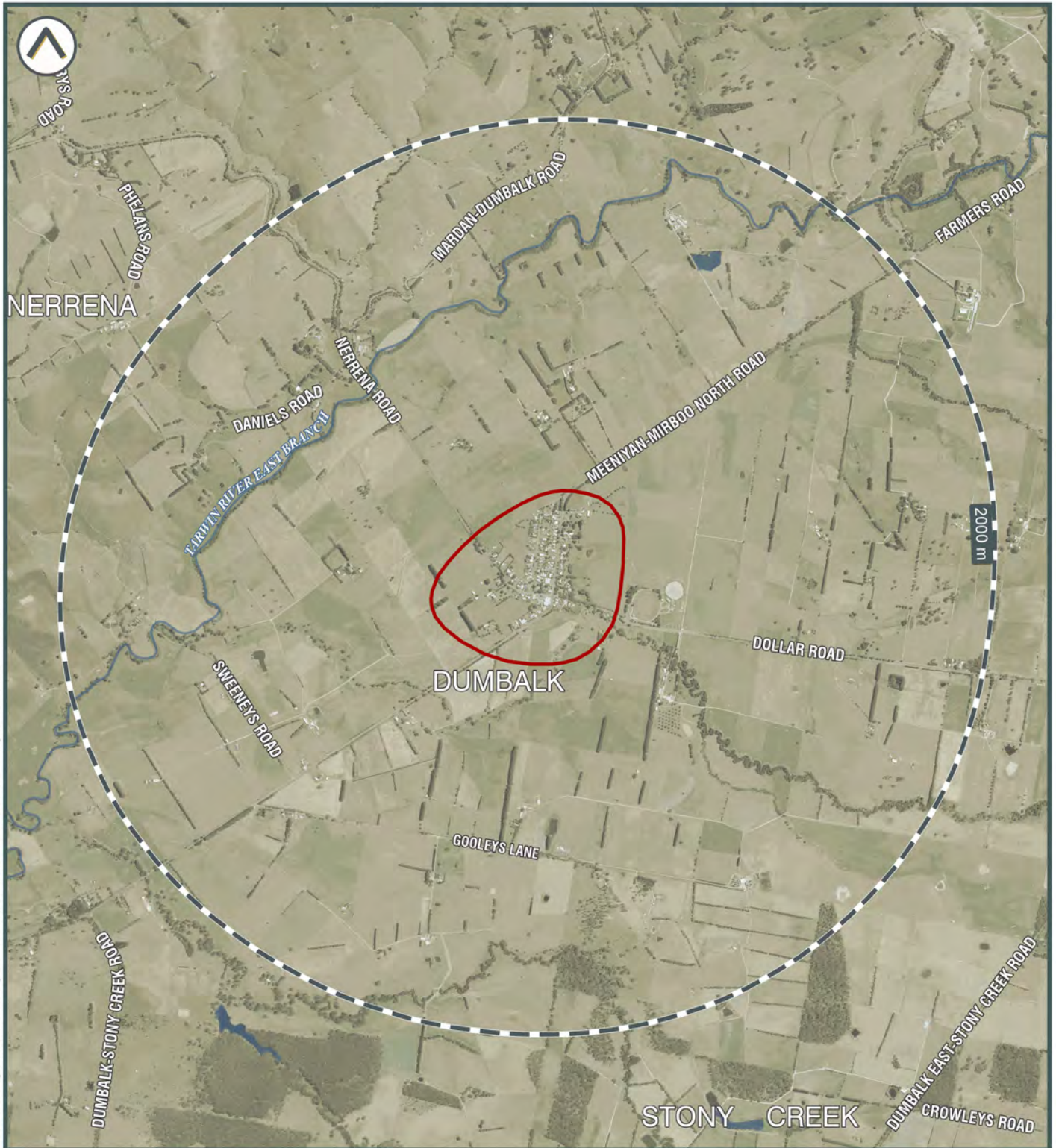
©2021 Land Insight (LU) www.landinsight.co | 9/12/2021 | Data source: Please refer to 'Digital Data Sources' in the Product Guide

- Subject area
- Contaminated Land Register (EPA)
- Priority Sites Register Audit Report



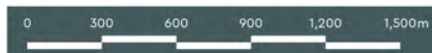


Sites Regulated by other Jurisdictional Body



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- | | | |
|---------------------------------|-------------------------------|---|
| Subject area | PFAS sites | Sea Dumping of Depth Charges |
| NPI Facilities | Former Gasworks Sites | Sea Dumping of Depth Charges (Chemical munitions sea dumping) |
| Unexploded Ordnance (UXO) Areas | Other | Other Sea Dumping Sites |
| Substantial Potential | Defence Area / Military Sites | Defence Controlled Area |
| Slight potential | | |



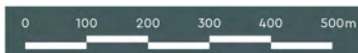


Licences, Approvals & Notices



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Subject area

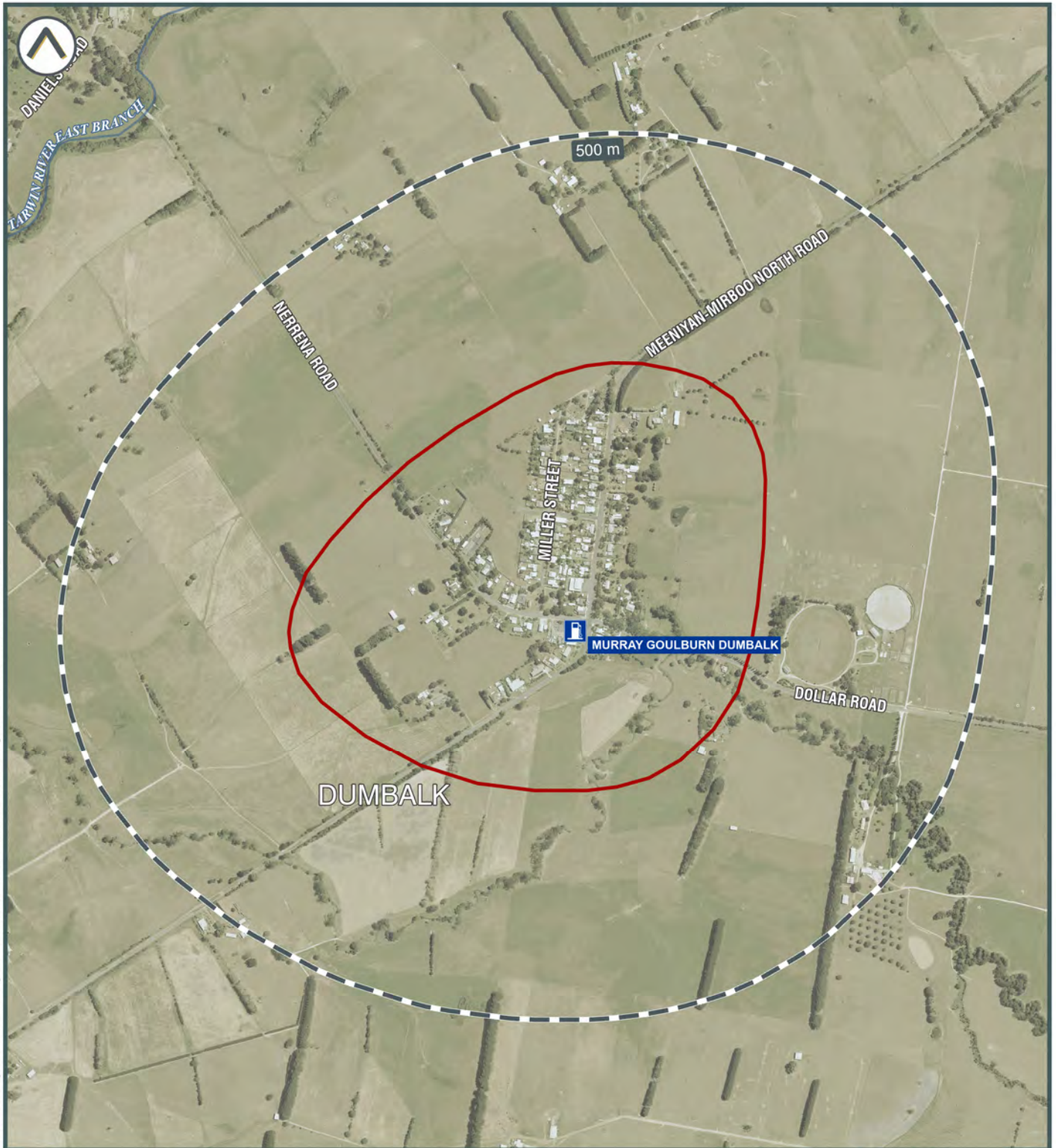


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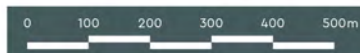
Potentially Contaminating Activities (PCAs)



©2021 Land Insight (LU) www.landinsight.co | 28/09/2021 | Data source: Please refer to 'Digital Data Sources' in the Product Guide

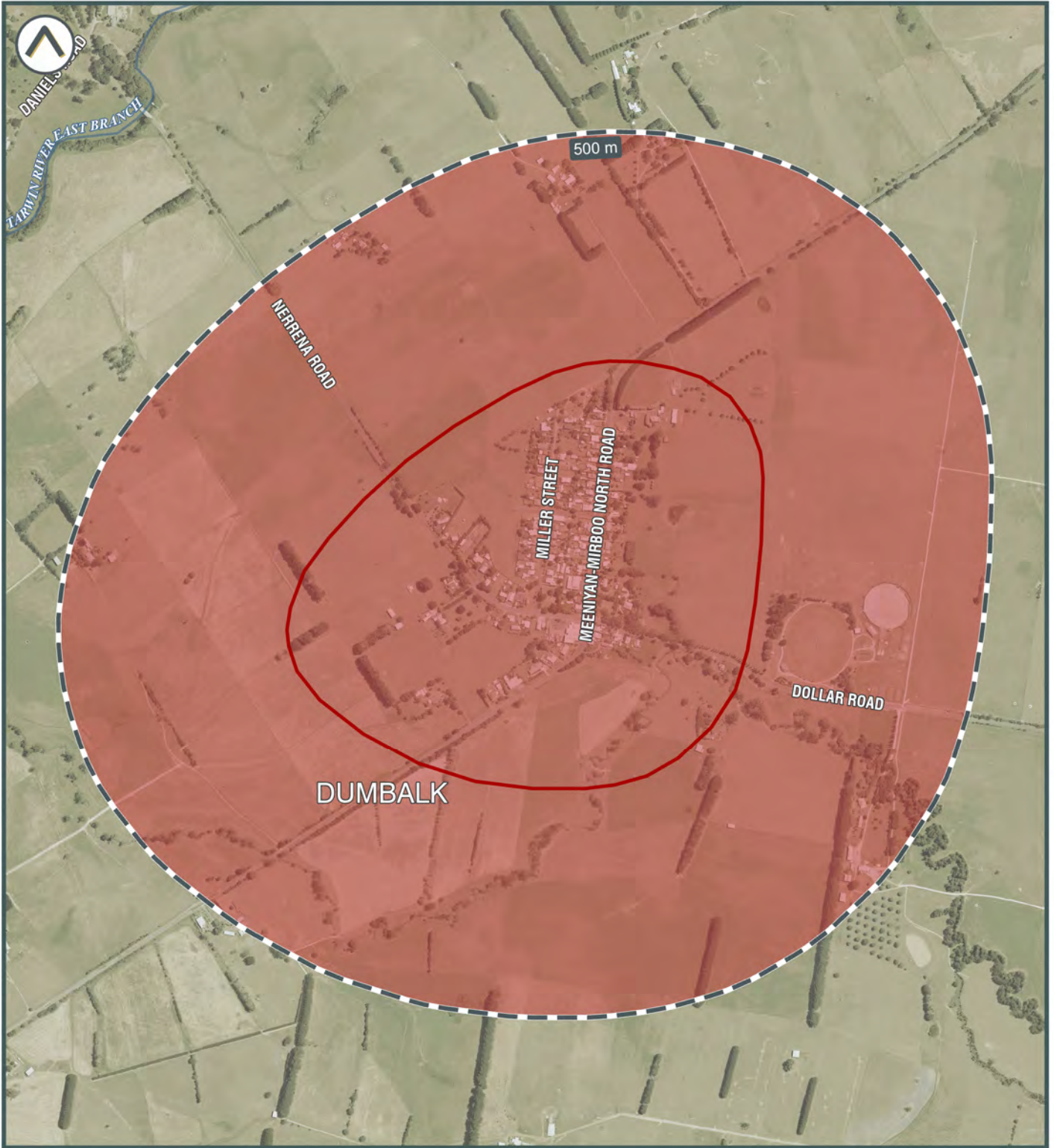
- Subject area
- Liquid Fuel Depots
- Operational Petrol Stations
- Waste Management Facilities
- Former Petrol Stations

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



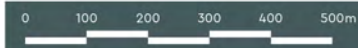


Fire and Flood Hazards



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Subject area Bush Fire Prone Land



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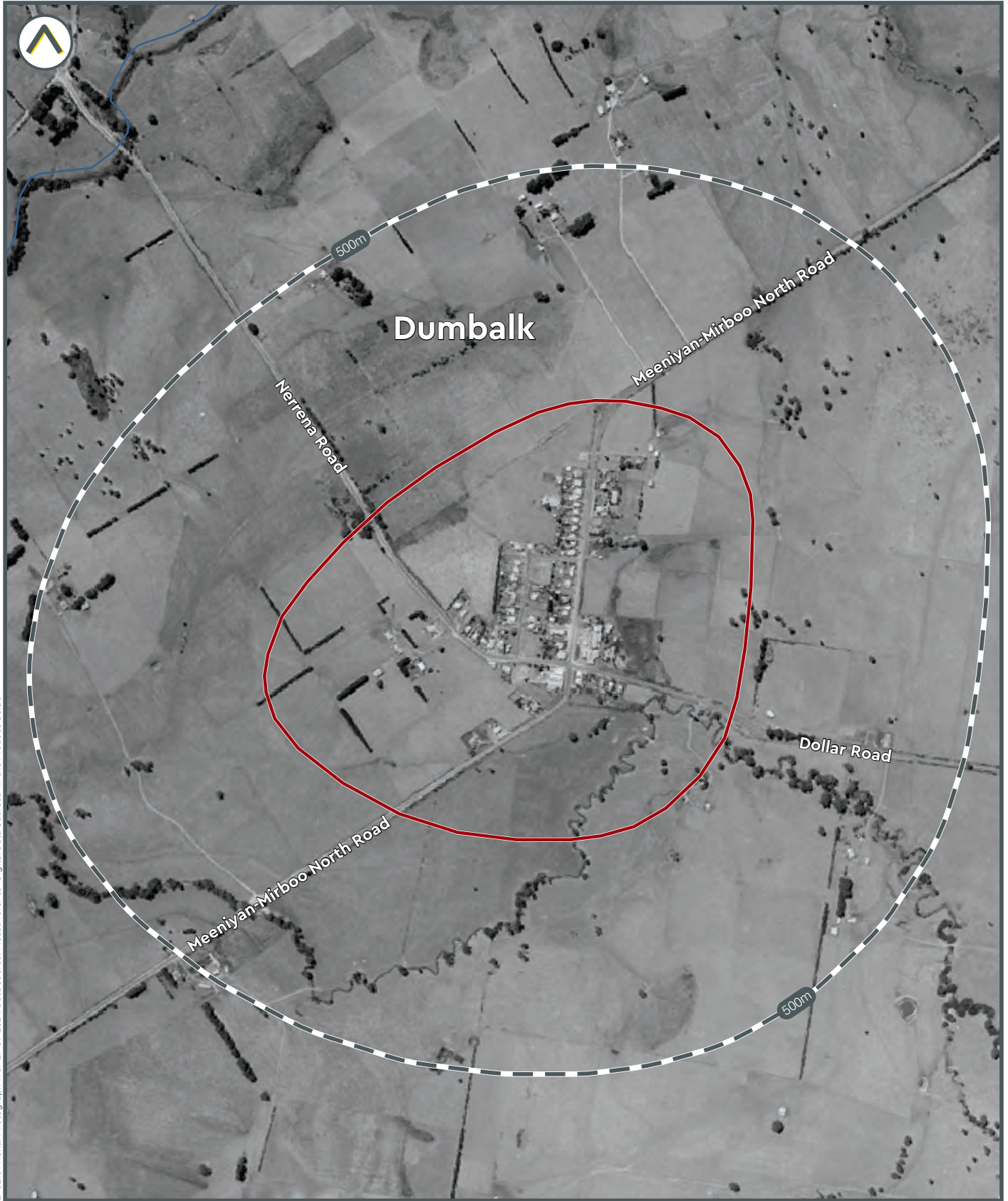


An aerial photograph of a vibrant turquoise river winding through a rugged, rocky landscape. The river is flanked by large, grey boulders and patches of dense, green and yellowish vegetation. The water's color is strikingly bright, contrasting with the natural tones of the surrounding environment. A yellow rectangular overlay is positioned in the center-right of the image, containing the text 'Appendix B' and 'HISTORIC IMAGERY'.

Appendix B

HISTORIC IMAGERY

Historic Aerial Photograph - 1967



LI-02101 Aerial Photograph 1967 29 09 2021. Data source: Please refer to 'Digital Data Sources' in the Product Guide

Subject area

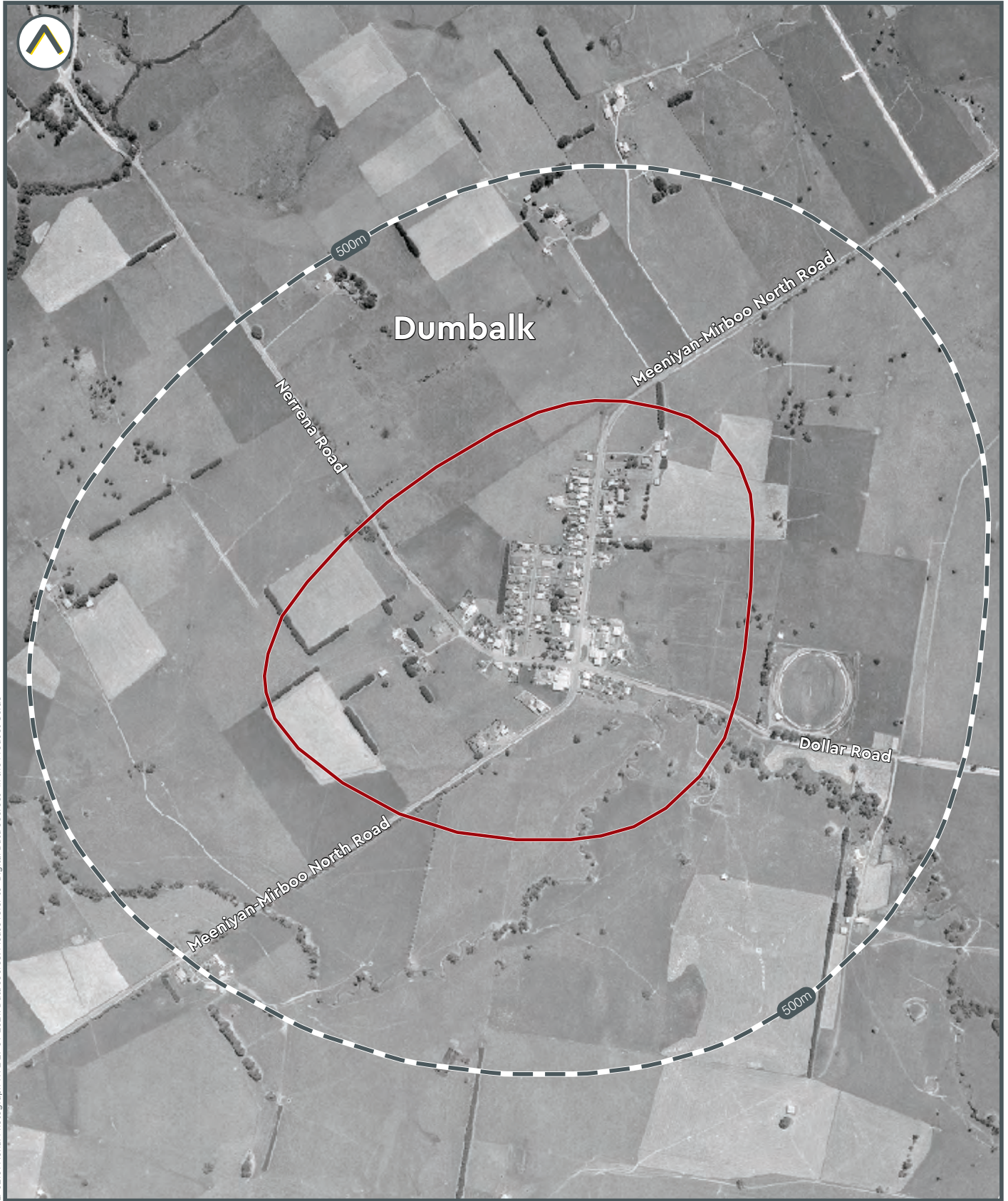
0 400m



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Historic Aerial Photograph - 1972



LI-02101 Aerial Photograph 1972 29 09 2021. Data source: Please refer to 'Digital Data Sources' in the Product Guide

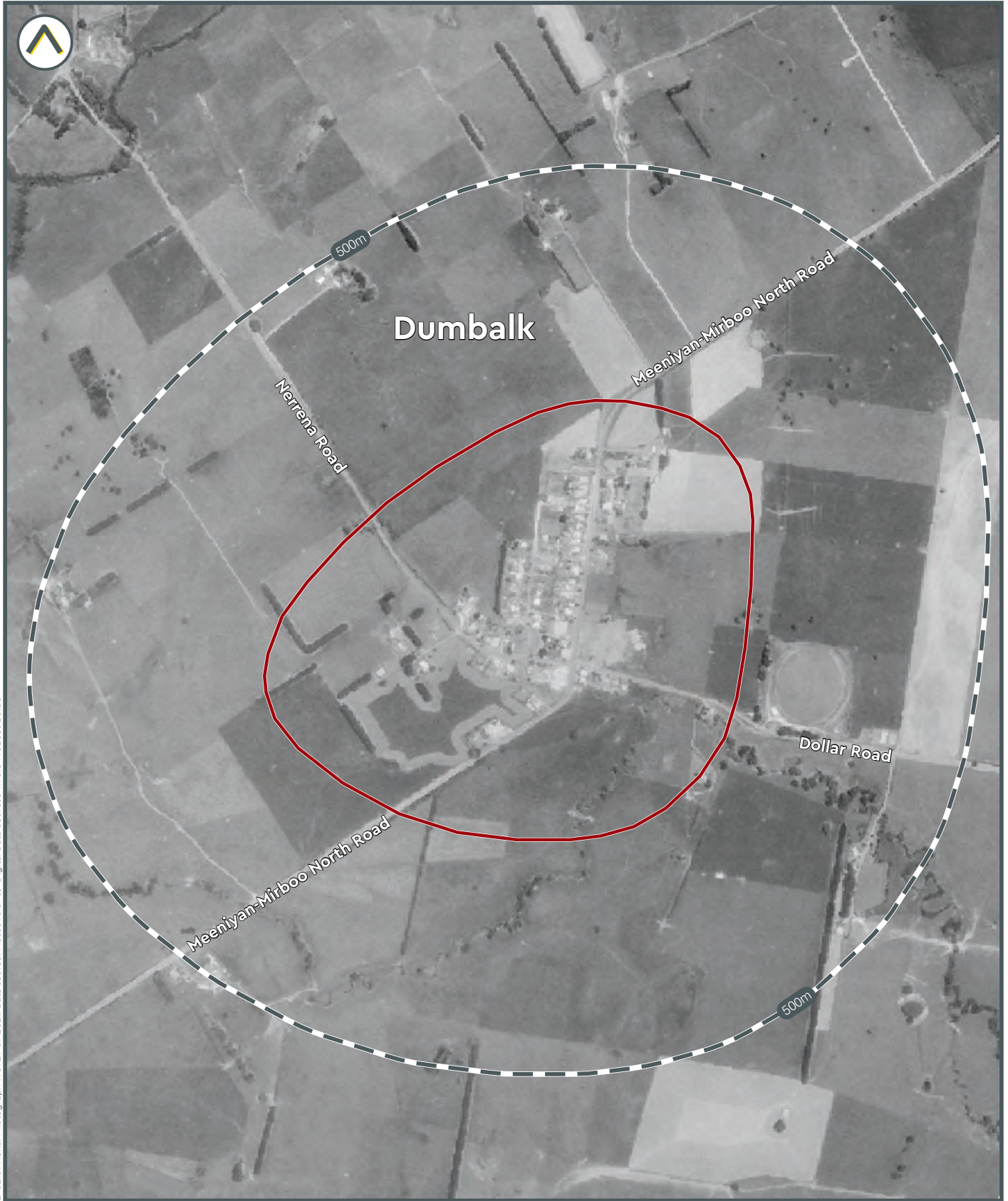
Subject area



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Historic Aerial Photograph - 1981



LI-02101 Aerial Photograph 1981 29 09 2021. Data source: Please refer to 'Digital Data Sources' in the Product Guide

Subject area



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Historic Aerial Photograph - 1991



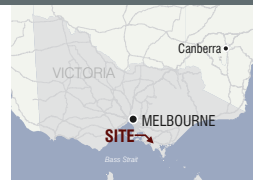
LI-02101 Aerial Photograph 1981/29/09/2021. Data source: Please refer to 'Digital Data Sources' in the Product Guide

 Subject area

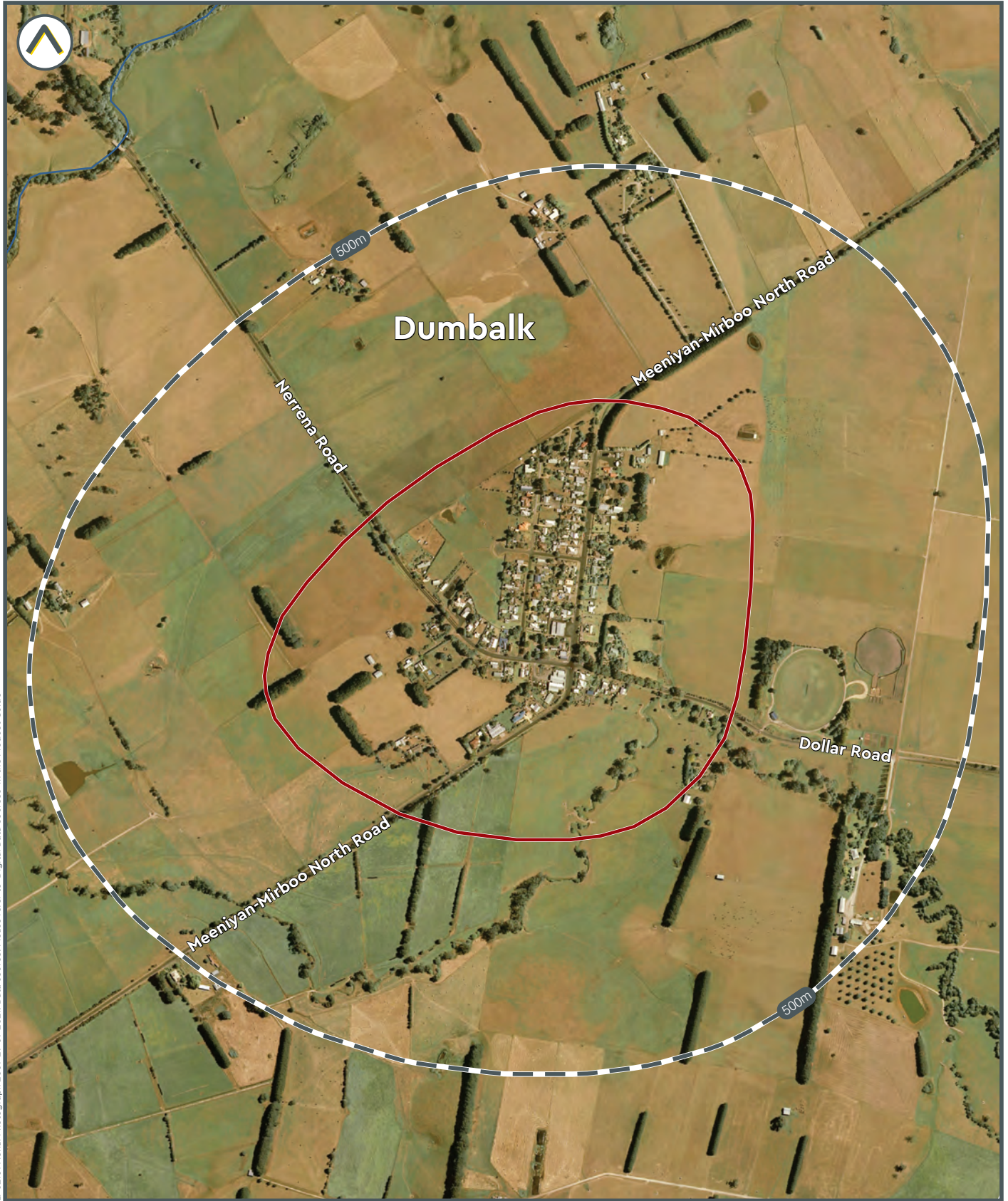
0 400m



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Historic Aerial Photograph - 2009



LI-02101 Aerial Photograph 2009-29-09 2021. Data source: Please refer to 'Digital Data Sources' in the Product Guide

 Subject area

0 400m



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Historic Aerial Photograph - 2011



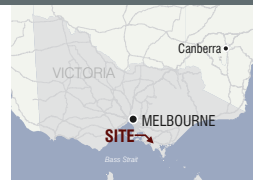
LI-02101 Aerial Photograph 2011 29 09 2021. Data source: 'Digital Data Sources' in the Product Guide

 Subject area

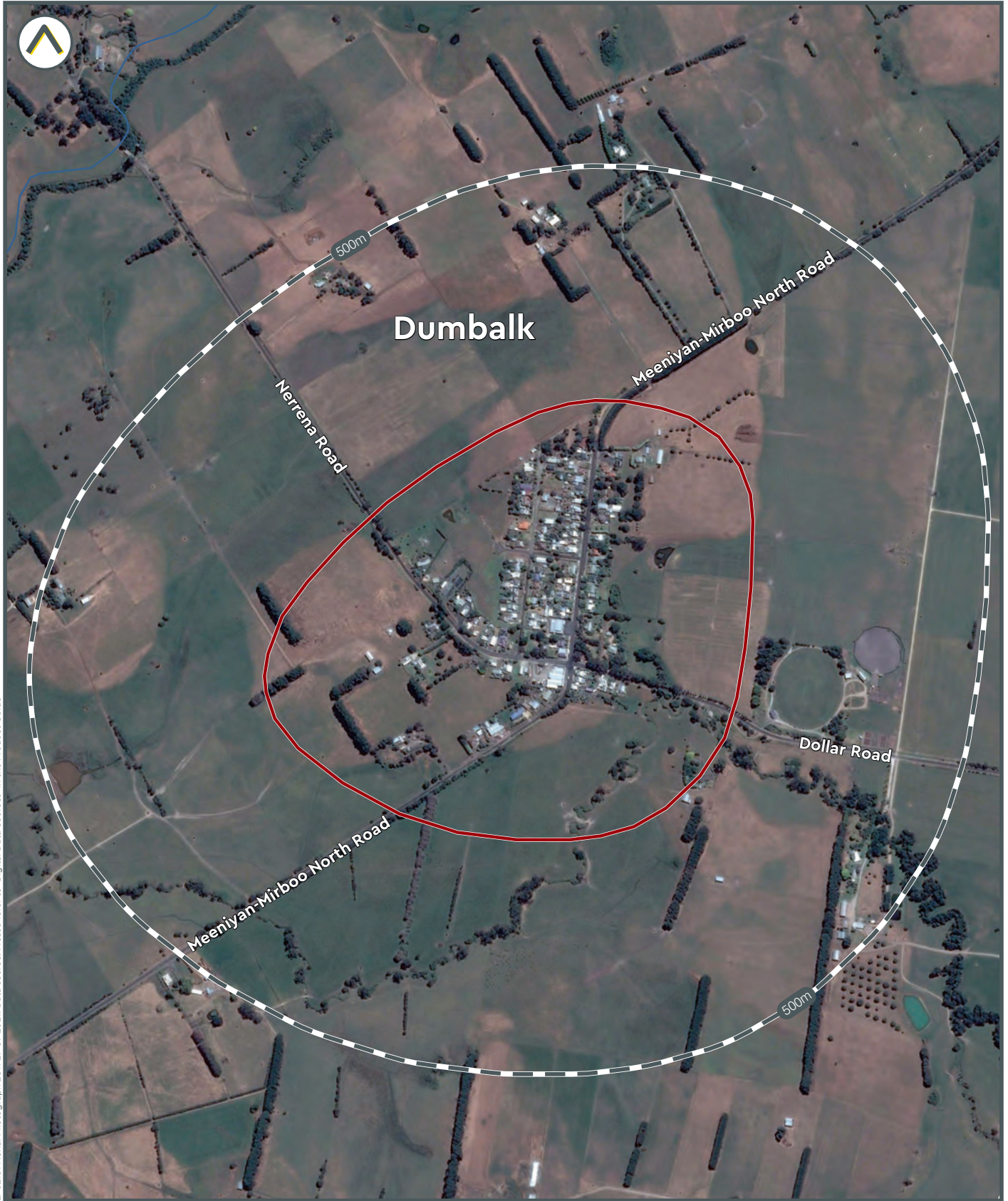
0  400m



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Historic Aerial Photograph - 2014



LI-02101 Aerial Photograph 2011-29-09-2021. Data source: Please refer to 'Digital Data Sources' in the Product Guide

 Subject area

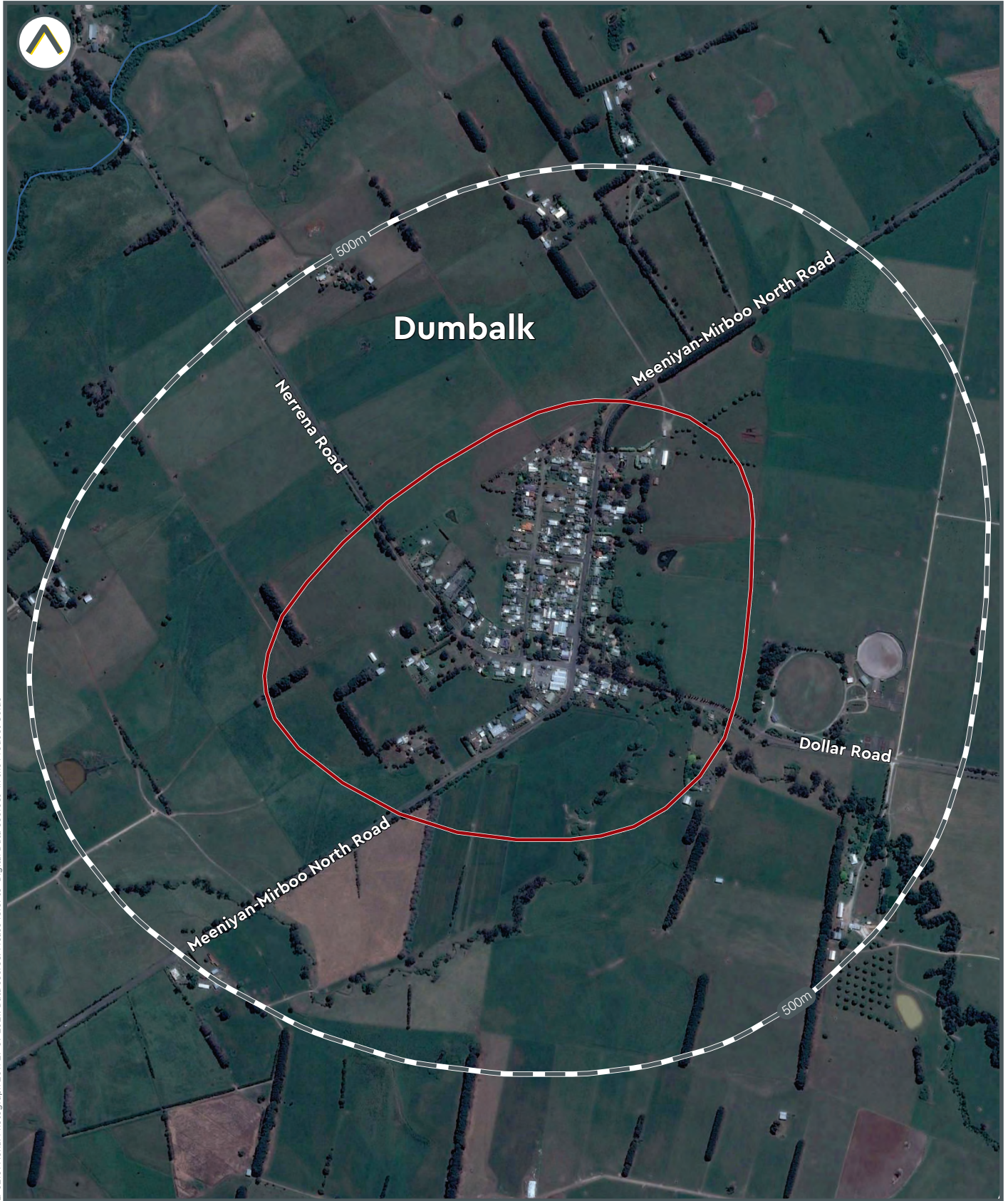
0 400m



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Historic Aerial Photograph - 2015



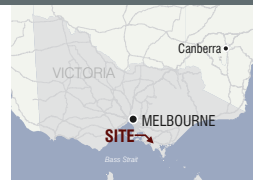
LI-02101 Aerial Photograph 2011-29-09-2021. Data source: Please refer to 'Digital Data Sources' in the Product Guide

Subject area

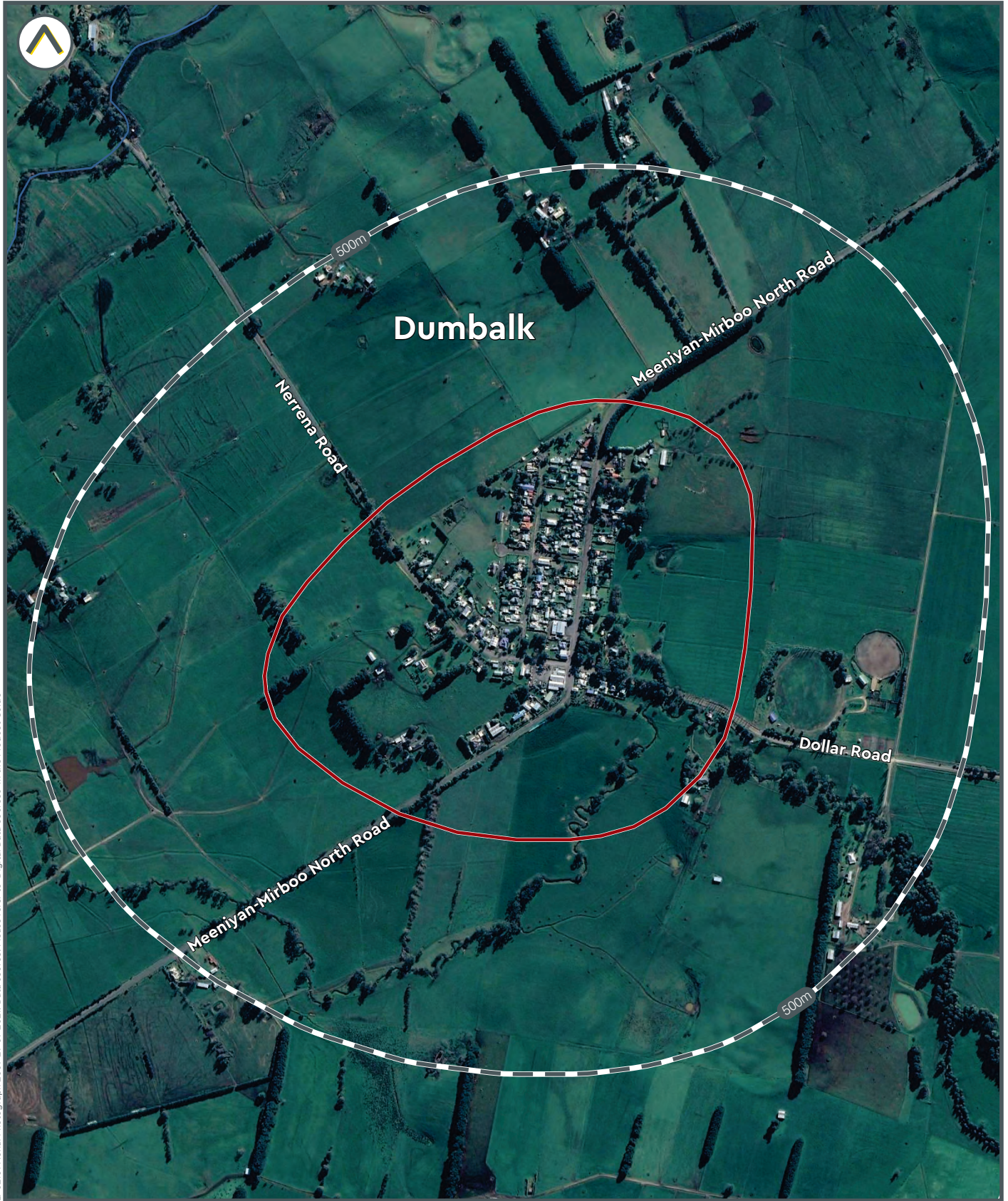
0 400m



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Historic Aerial Photograph - 2020



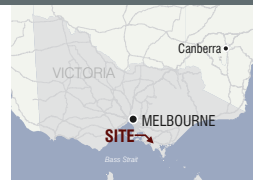
LI-02101 Aerial Photograph 2009-29-09-2021. Data source: Please refer to 'Digital Data Sources' in the Product Guide

Subject area

0 400m



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Enviro-Screen

1315 Meenyian-Mirboo North Road
Dumbalk, VIC

28 September 2021





Understanding your report

Your Report has been produced by Land Insight and Resources (Land Insight).

Your Report is based on information available from public databases and sources at the date of reporting. The information gathered relates to land that is within a 200 to 2000m radius (buffer zone) from the boundaries of the Property. A smaller or larger radius may be applied for certain records (as listed under records and as shown in report maps).

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 or data provided.

The report provided by Land Insight 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 info@liresources.com.au

The report does not include title searches; dangerous good searches or; property certificates (unless requested); or information derived from a physical inspection, such as hazardous building materials, areas of infilling or dumping/spilling of potentially contaminated materials. It is important to note that these documents and an inspection can contain information relevant to contamination 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 the data displayed within this report is only current from date of production.

This Report, and your use of it, is regulated by Land Insight's Terms and Conditions (See Land Insight's Product Guide).

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Attachment A - Report Maps

Attachment B - Historical Imagery

Land Insight Product Guide and Terms and Conditions

SUMMARY

 Section 1	PROPERTY SETTING	Identified
Sensitive Receptors Planning Control Heritage Soil and Land Information Geology and Topography		
 Section 2	HYDROGEOLOGY	Identified
Aquifer Groundwater Bores and Other Borehole investigations Groundwater Dependent Ecosystems (GDE) Hydrogeology Units Wetlands		
 Section 3	ENVIRONMENTAL REGISTERS LICENCES AND INCIDENTS	Not Identified
Contaminated Land Public Register Sites Regulate by Other Jurisdictional Body (Former Gaswork sites / PFAS sites) Licensing and Regulated Sites National Pollutant Inventory (NPI)		
 Section 4	POTENTIALLY CONTAMINATED AREAS	Not Identified
National Liquid Fuel Facilities National Waste Management Facilities		
 Section 5	NATURAL HAZARDS	Identified
Erosion risk Bushfire prone land Fire history Flood hazards		



Section 1 Property Setting



1.1 SENSITIVE RECEPTORS

Map 1.1 (200m Buffer)

Sensitive receptor	Category	Distance (m)	Direction
Not identified	-	-	-

1.2 PLANNING CONTROLS

Map 1.2 (onsite)

Zoning

Code	Zoning	Details
FZ	FARMING ZONE	-

Planning Overlay

Type	Category	Details
ESO	ESO2	ENVIRONMENTAL SIGNIFICANCE OVERLAY - SCHEDULE 2
ESO	ESO5	ENVIRONMENTAL SIGNIFICANCE OVERLAY - SCHEDULE 5

Other Planning Information

Type	Category	Details
Not identified	-	-

1.3 HERITAGE

Map 1.3 (200m Buffer)

State and Local Heritage

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

Australian Heritage Database

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

Commonwealth Heritage List, National Heritage List and World Heritage Area.

1.4 SOIL AND LAND USE INFORMATION

Map 1.4a/1.4b (onsite)

Soil Landscape

Soil Landscape	MsM7-1	s	Soil Group	Yellow earths
Description	Mountain (relative relief >300m)			

Salinity

Salt Susceptibility	Not identified	-
---------------------	----------------	---

Radon

Radon Level	Bq/m ³	7
-------------	-------------------	---

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).

Acid Sulfate Soil

Coastal Acid Sulfate Soil Hazard (CASS) (Table 1.4.1)	On the Property?	Within Buffer?
Class	Not identified	Not identified

National Acid Sulfate Soils Atlas

Atlas of Australian ASS (Table 1.4.2)	Cq(p4)	ASS in inland lakes, waterways, wetlands and riparian zones	Probability of Occurrence	Extremely low probability of occurrence
---------------------------------------	--------	---	---------------------------	---

Table 1.4.1. Classification for Coastal Acid Sulfate Soils (CASS)

Class of Land as shown on ASS Planning Maps	
Prospective Land	Land that has the potential to contain Coastal Acid Sulfate Soils as indicated by geomorphology.
Made Land	Land that has been modified by human agency. Here, the geomorphic features that indicate the potential to contain Coastal Acid Sulfate Soil, no longer exist. Assessment of the potential depends on information such as geology maps or soil maps, that pre-dates modification.

Data represents Victorian coastal lands which have the potential to contain acid sulfate soil (CASS), i.e. it is prospective for CASS. The data is used for triggering an investigation of a site where proposed activities risk disturbing CASS. Department of Environment and Primary Industries.

Table 1.4.2. Atlas of Australian Acid Sulfate Soils¹ (ASRIS) (CSIRO/NatCASS)

Probability of Occurrence of ASS¹	
A	High Probability of occurrence - (>70% chance of occurrence in mapping unit)
B	Low Probability of occurrence - (6-70% chance of occurrence in mapping unit)
C	Extremely low probability of occurrence - (1-5% chance of occurrence in mapping unit)
D	No probability of occurrence - (<1% chance of occurrence in mapping unit)
x	Disturbed ASS¹ terrain - (ASS ¹ material present below urban development).
u	Unclassified - (Insufficient information to classify map unit)
Zones	
a	Potential acid sulfate soil material and/or Monosulfidic Black Ooze (MBO).
b, c	Potential acid sulfate soil generally within upper 1 m.
c, d, e	ASS ¹ generally within upper 1 m.
f	ASS ¹ generally below 1 m from the surface
g	ASS ¹ , generally below 3 m from the surface.
h	ASS ¹ generally within 1 m of the surface.
i, j	ASS ¹ generally below 1 m of the surface.
k	ASS ¹ material and/or Monosulfidic Black Ooze (MBO).
l, m, n, o, p, q	ASS ¹ generally within upper 1 m in wet / riparian areas.
Subscripts to codes	
(a)	Actual acid sulfate soil (AASS) = sulfuric material.
(p)	Potential acid sulfate soil (PASS) = sulfidic material.
(q)	Monosulfidic Black Ooze (MBO) is organic ooze enriched by iron monosulfides.
Confidence levels	
(1)	All necessary analytical and morphological data are available
(2)	Analytical data are incomplete but are sufficient to classify the soil with a reasonable degree of confidence
(3)	No necessary analytical data are available, but confidence is fair, based on a knowledge of similar soils in similar environments
(4)	No necessary analytical data are available, and classifier has little knowledge or experience with ASS, hence classification is provisional

¹Acid 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 (Pons 1973). Acid sulfate soil (ASS) may include PASS or AASS + PASS. Potential acid sulfate soil (PASS) = sulfidic material. Actual acid sulfate soil (AASS) = sulfuric material.

1.5 GEOLOGY AND TOPOGRAPHY

Map 1.5 (onsite)

Geology

Map Sheet	Symbol	Name	Geologic History	Lithology	Description
1:50,000 Geological Units	Ksw	Wonthaggi Formation (Ksw): generic	Early Cretaceous to Early Cretaceous (channelled stream flow - fluvial [environment]; over-bank stream flow - fluvial [environment])	sandstone (major [proportion]); siltstone (minor [proportion]); conglomerate (minor [proportion]); coal (minor [proportion])	Lithic volcanoclastic sandstone, arkose, siltstone, minor conglomerate and coal; fluvial

Naturally Occurring Asbestos Potential (NOA)

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

Topography

Topography	60 – 130 mAHD
------------	---------------



Section 2 Hydrogeology



2.1 HYDROGEOLOGY AND GROUNDWATER BORES

Map 2.1 (2000m Buffer)

	On the Property?	Within Buffer?
Aquifer Type	Fractured or fissured, extensive aquifers of low to moderate productivity	Fractured or fissured, extensive aquifers of low to moderate productivity
Designated Water Supply Catchments	TARWIN RIVER (MEENIYAN)	TARWIN RIVER (MEENIYAN)
Depth to Watertable (m)	5 - >50	<5 - >50
Wetlands	Not identified	Temporary freshwater swamps Permanent freshwater swamps
Groundwater Salinity (mg/L)	3500	1000 - 3500

Groundwater Quality Restricted Use Zones

Number	Address	Site history	Restrictions on Use	Distance (m)	Direction
Not identified	-	-	-	-	-

Groundwater Bores

Map ID	Groundwater Bore ID	Authorised Purpose	Completion Date	Drilled Depth (m)	Final Depth (m)	SWL (m)	Salinity (mg/l)	Yield (L/s)	Distance (m)	Direction
1	61662	Stock and Domestic	31/12/1919	208.0	208.5	<Null>	<Null>	<Null>	708.4	South-east

Groundwater Bores Driller Lithology Details

Groundwater Bore ID	From Depth – To Depth (m)	Lithology	Distance (m)	Direction
61662	#N/A		708.4	South-east

2.2 HYDROGEOLOGY AND OTHER BOREHOLES

Map 2.2 (500m Buffer)

	On the Property?	Within Buffer?
Groundwater Management Areas	Not identified	-
Hydrogeologic Unit	Mesozoic Fractured Rock Aquifer	Mesozoic Fractured Rock Aquifer

Groundwater Dependent Ecosystems (GDE)

	On the Property?	Within Buffer?
Aquatic	Not identified	High potential for GW interaction
Terrestrial	Not identified	Low potential for GW interaction Moderate potential for GW interaction

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

Terrestrial - Ecosystems that rely on the Subsurface expression of groundwater.

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

Borehole ID	Purpose	Project	Client/ Licence	Date Drilled	Depth (m)	Distance (m)	Direction
Not identified	-	-	-	-	-	-	-