



Phase 1 Environmental Site Assessment Precinct 2a (Bridge Inn Road and Cookes Road), Mernda, Victoria






Prepared for:
Bridge-Cookes Landowners Group Inc.
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Doreen Vic 3754

15 May 2020

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EXECUTIVE SUMMARY

Landserv Pty Limited ("Landserv") was engaged by Bridge-Cookes Landowners Group Inc. ("Bridge-Cookes") to complete a Preliminary Site Investigation at Precinct 2a of the Mernda Strategy Plan, Victoria, (referred to as "the site"). We understand that the site is part of a development plan.

The objective of the desktop Preliminary Site Investigation was to determine the potential for contamination at the site required as a part of a due diligence process. The following scope of works was implemented as part of the desktop Preliminary Site Investigation:

- A drive-by curbside inspection of the site, this will include an inspection for relevant site features, soil type, proximity to environmental receptors, characteristics of surface material, waste, staining and other indications of possible contamination (where visible from the curb).
- Assessment of the regional geological, hydrogeological and topographic conditions;
- Review of historical aerial photographs including review of 4 to 5 historical aerial photographs of the site and surrounds for indications of potentially contaminating land uses. We will provide copies of historical aerial photographs in our report;
- Review of Victorian EPA registers and databases including EPA Priority Sites Register, list of properties issues with an environmental audit and Groundwater Quality Restricted Use (GQRUZ) database;
- Preparation of this report detailing the findings of the Preliminary Site Investigation.

On the basis of the Preliminary Site Investigation completed at Cookes Road and Bridge Inn Road, Doreen, Victoria, Landserv make the following conclusions:

- The site is likely to be underlain by Silurian aged siltstone and sandstone which comprises of sandstone, laminated and current bedded, with interbedded siltstone and shale and hornfels in metamorphic aureoles near Quarry Hill. The southern portion of the site is underlain by quaternary aged alluvial sediments (Qra), consisting of river alluvium; sand, silt, clay and minor gravel;
- Groundwater is inferred to be present at depths of approximately 5 to 10 mbgl, <5 mbgl and 10-20 mbgl, within the underlying Mesozoic and Paleozoic Bedrock Aquifer and is inferred to be flowing in a southerly direction towards Plenty River;
- The site was historically used for residential purposes and some agricultural activities including grazing and cropping;
- The site inspection undertaken identified that the site is currently used for low-density residential and minor farming purposes (i.e. grazing);
- Rubbish (for example bottles, cans and plastic packaging) were scattered around the fringes of the site, which are expected to have come from passing vehicles or pedestrians;
- The site is separated from any surrounding land in all directions by roads, except for immediately west of site where a service station and construction site is noted, followed by road. On the eastern boundary, the road is followed by open grass land, presumably used for farming. To the north and south of site, general residential areas can be found following the roads. A small cluster of shops can be found towards the south-eastern end.

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- The areas to the north, south, east and west of the site have historically been occupied by residential and agricultural land uses similar to the subject site.
- The site history and our visual checks suggest the following areas of potential environmental interest:
 - 180 Cookes Rd;
 - Area A: Storage shed and area containing cars and other machinery.
 - 214 Cookes Rd;
 - Area B: Storage tank of unknown contents and barrels of unknown contents noted on multiple sites.
 - 290 Cookes Rd;
 - Area C: Storage area containing farming machinery.
 - 815 Bridge Inn Rd;
 - Area D: Storage area containing cars and other machinery.
 - 825 Bridge Inn Rd;
 - Area E: Storage area containing cars and other machinery.
 - 865-871 Bridge Inn Rd;
 - 875 Bridge Inn Rd;
 - Area F: The diffuse application of herbicides/pesticides and fertilisers from historical agricultural use specifically within the Plant Nursery and maintenance of machinery.
 - 901 Bridge Inn Rd;
 - Area G: Storage of trucks and significant soil disturbance.
 - 911 Bridge Inn Rd;
 - Area H: Identification of a stockpile of possible fill with an approximate volume of 30 m³ onsite in the front yard of the site.
 - 851 Bridge Inn Rd;
 - Area I: Large storage sheds and ground disturbance towards the rear of the site.

Recommendations

- Based on the findings of the Preliminary Site Investigation completed at Cookes Road and Bridge Inn Road, Doreen, Victoria, it is recommended that further investigation be undertaken across Areas A to H as noted in **Table 4.3**.
- Additionally, it is possible that the broad application of herbicides and pesticides were historically applied to the site. It is recommended, a limited grid-based sampling program is conducted across the entire precinct to assess possible impacts as a result.
- Given the age of the buildings and materials the buildings were observed to be constructed from, it is recommended that a Division 6 Asbestos Audit be completed prior to the commencement of any demolition works at the site to determine the potential for asbestos in the structures present on-site and

confirm an appropriate plan for safe removal and disposal of any identified ACM.

- Should future land use be planned that includes sensitive land uses (e.g. residential, or urban open space areas), environmental investigations (as detailed in Table 4.3.) of soil should be considered for the nominated areas of potential environmental interest. That investigation should be phased to minimise costs to achieve the overall objectives of a) enabling the need or otherwise for any contaminated soil or groundwater remediation or management to be assessed b) the scope and cost of any such remediation or management to be assessed and c) enabling the compliance of all areas of the properties with relevant State Environment Protection Policies and the Planning and Environment Act 1987 (Ministerial Direction No. 1 - Potentially Contaminated Land), considering the more sensitive land uses, to be demonstrated

1 INTRODUCTION

1.1 General

Landserv Pty Limited (“Landserv”) was engaged by Bridge-Cookes to complete a Phase 1 Environmental Site Assessment (ESA) for Precinct 2A of the Mernda Strategy Plan, Victoria. The precinct comprises approximately 45 different parcels of land and has a combined area of approximately 50 hectares.

1.2 Objectives

The objective of the Phase 1 ESA was to provide information on the potential for contamination at the site based on current and former site uses.

1.3 Scope of Works

The following scope of works was implemented as part of the Phase 1 ESA:

- Assessment of the regional geological, hydrogeological and topographic conditions;
- Review of historical aerial photographs including review of 4 to 5 historical aerial photographs of the site and surrounds for indications of potentially contaminating land uses. We have provided copies of historical aerial photographs in our report;
- Review of Victorian EPA registers and databases including EPA Priority Sites Register, list of properties issues with an environmental audit and Groundwater Quality Restricted Use (GQRUZ) database;
- A drive-by curb-side inspection of the site, this included a limited inspection for relevant site features, soil type, proximity to environmental receptors, characteristics of surface material, waste, staining and other indications of possible contamination (where visible from the curb) and;
- Preparation of this report outlining the potential for contamination at the site based on current and previous site uses.

2 SITE SETTING

Details regarding the site setting including site observations and environmental setting are presented in the following sections.

2.1 General Information

Key information regarding the site's location is presented in **Table 2.1** below.

Table 2.1 General Site Information

| Item | Details |
|---|--|
| Site Address | Precinct 2a, Bridges Inn Road and Cookes Road, Mernda |
| Locality Map | Refer to Figure 1. |
| Site Area | Approximately 50 hectares within a predominantly low-density, semi-rural area. |
| Current Zoning | General Residential Zone (GRZ) |
| Current Site Use | Low Density Residential |
| Standard Parcel Identifier (SPI) | See Table 2.2 below. |
| Geographical Coordinates ¹ (Approx. centre of Precinct 2A). | Easting: 334976.77 Northing: 4163350.57 |
| Notes: | |
| 1 | MGA Zone 55 |

Precinct 2A is comprised of 42 separate properties and has a combined area of approximately 50 hectares. The properties that make up Precinct 2A are detailed in the **Table 2.2** below.

Table 2.2 List of Standard Parcel Identifiers On-site

| Landserv Property ID | Property Address | Standard Parcel Identifier |
|----------------------|------------------|----------------------------|
| 1 | 174 Cookes Rd | 32\LP71327 |
| 2 | 180 Cookes Rd | 31\LP71327 |
| 3 | 184 Cookes Rd | 30\LP71327 |
| 4 | 190 Cookes Rd | 29\LP71327 |
| 5 | 194 Cookes Rd | 28\LP71327 |
| 6 | 200 Cookes Rd | 27\LP71327 |
| 7 | 204 Cookes Rd | 26\LP71327 |
| 8 | 210 Cookes Rd | 25\LP71327 |
| 9 | 214 Cookes Rd | 24\LP71327 |
| 10 | 220 Cookes Rd | 23\LP71327 |
| 11 | 224 Cookes Rd | 22\LP71327 |
| 12 | 230 Cookes Rd | 21\LP71327 |
| 13 | 234 Cookes Rd | 20\LP71327 |
| 14 | 240 Cookes Rd | 19\LP71327 |
| 15 | 244 Cookes Rd | 18\LP71327 |

| Landserv Property ID | Property Address | Standard Parcel Identifier |
|----------------------|-----------------------|----------------------------|
| 16 | 250 Cookes Rd | 17\LP71327 |
| 17 | 260 Cookes Rd | 1\LP52838 |
| 18 | 270 Cookes Rd | 2 \LP52838 |
| 19 | 274 Cookes Rd | 3 \LP52838 |
| 20 | 280 Cookes Rd | 4 \LP52838 |
| 21 | 290 Cookes Rd | 1\PS739374 |
| 22 | 945 Yan Yean Rd | 5\LP52838 6\LP52838 |
| 23 | 925 Bridge Inn Rd | 1D~4\PP3955 |
| 24 | 811 Bridge Inn Rd | 1\LP71327 |
| 25 | 815 Bridge Inn Rd | 2\LP71327 |
| 26 | 821 Bridge Inn Rd | 3\LP71327 |
| 27 | 825 Bridge Inn Rd | 4\LP71327 |
| 28 | 831 Bridge Inn Rd | 5\LP71327 |
| 29 | 835 Bridge Inn Rd | 6\LP71327 |
| 30 | 845 Bridge Inn Rd | 7\LP71327 |
| 31 | 851 Bridge Inn Rd | 8\LP71327 |
| 32 | 855 Bridge Inn Rd | 9\LP71327 |
| 33 | 861 Bridge Inn Rd | 10\LP71327 |
| 34 | 865-871 Bridge Inn Rd | 11\LP71327 12\LP71327 |
| 35 | 875 Bridge Inn Rd | 13\LP71327 |
| 36 | 881 Bridge Inn Rd | 1\TP104211 |
| 37 | 885 Bridge Inn Rd | 15\LP71327 |
| 38 | 891 Bridge Inn Rd | 1\TP168753 |
| 39 | 901 Bridge Inn Rd | 10\LP52838 |
| 40 | 905 Bridge Inn Rd | 9\LP52838 |
| 41 | 911 Bridge Inn Rd | 8\LP52838 |
| 42 | 915 Bridge Inn Rd | 7\LP52838 |

2.2 Site Layout and Site Inspection

2.2.1 Site Observations

An inspection of the precinct and surrounding area was undertaken on the 29 April 2020, with the resulting observations detailed below in **Table 2.3**.

At the time of inspection, the site comprised of 42 lots of residential and land used for low density residential or hobby farming purposes, with dense vegetation on most sites. The precinct was bounded by Bridge Inn Road to the south, Yan Yean Road to the east, Cookes Road to the north and Painted Hills Road to the west. The individual observations from the curb side inspection for each property are listed in the table below. Photos from the site inspection are presented in **Appendix B**.

Table 2.3 – Site Observations

| Landserv Property ID | Lot Number | Observations |
|----------------------|---------------|---|
| 1 | 174 Cookes Rd | An old tin work shed located on the property. |
| 2 | 180 Cookes Rd | A large bird cage was present on site. A large storage container and small truck was located to the rear of the property. |
| 3 | 184 Cookes Rd | An old car and large water tank situated on the ground towards the rear of the property. |
| 4 | 190 Cookes Rd | A brick work shed used to store farming machinery was located at the rear of the property. |
| 5 | 194 Cookes Rd | The property appeared to be in neat condition with well garden. |
| 6 | 200 Cookes Rd | The property appeared to be in neat condition with well garden. |
| 7 | 204 Cookes Rd | The property was predominantly covered by vegetation and established trees. |
| 8 | 210 Cookes Rd | The property was predominantly covered by vegetation and established trees. |
| 9 | 214 Cookes Rd | An old truck and a car and general rubbish are located in the front yard. A tin shed is located towards the rear of the front yard. Two stockpiles covered in vegetation are located in the front yard of the site. A rusted above ground storage tank was located in the front yard of the site – its previous/current contents are unknown. |
| 10 | 220 Cookes Rd | The property was predominantly covered by vegetation and established trees. |
| 11 | 224 Cookes Rd | The site was predominantly vacant with the exception of a caravan located in the front yard of the site. |
| 12 | 230 Cookes Rd | Waste material (i.e. wood, metal, bricks) is observed in the front yard of the site. A tin shed and multiple 45-gallon drums were located towards the eastern rear of the front yard of the site. Full manure fertiliser bags were clustered in the front western corner of the site. |
| 13 | 234 Cookes Rd | Piles of wood and brick observed across the site surface. A tin shed was observed in the western rear of the front yard of the site. |
| 14 | 240 Cookes Rd | The property was a residential dwelling predominantly covered by vegetation and established trees. |
| 15 | 244 Cookes Rd | A tin shed was observed towards the rear of the front yard of the site. Numerous car parts and rubbish was observed in the front yard of the site. |
| 16 | 250 Cookes Rd | A tin work shed was observed in the rear of the front yard of the site. Waste material (i.e. wooden sheets, metal, bricks) and car tyres were also noted in the rear of the front yard of the site. |
| 17 | 260 Cookes Rd | A storage container and two plastic storage barrels located immediately adjacent to the container – contents unknown. Waste material was observed across the site surface. . |
| 18 | 270 Cookes Rd | A tin work shed was located in the front yard of the property. Stockpiles of hard rubbish (glass and wood sheeting) were |

| Landserv Property ID | Lot Number | Observations |
|----------------------|-----------------------|---|
| | | noted. A small storage barrel was located on site, its contents were not known. |
| 19 | 274 Cookes Rd | Tin sheds a farming machinery were observed onsite. PVC piping was scattered across the site surface. |
| 20 | 280 Cookes Rd | The lot is mainly open grassland. There are a number of caravans and horses were noted on site. |
| 21 | 290 Cookes Rd | A large tin shed, rusting tractors and vehicles were observed in the front yard of the site. |
| 22 | 945 Yan Yean Rd | This block of land was predominantly vacant grassland. Traces of litter and general rubbish was observed at the front of the property. |
| 23 | 925 Bridge Inn Rd | This lot is Doreen Recreational Reserve, comprising of grassy parkland for recreational sporting use. There are public toilets located to the south of the property and a tennis court on the north-eastern corner. Traces of litter were observed around the tennis court. |
| 24 | 811 Bridge Inn Rd | A residential dwelling present onsite with a steel water storage tank adjacent. |
| 25 | 815 Bridge Inn Rd | A recently built brick work shed located towards the rear of the front yard on the property. |
| 26 | 821 Bridge Inn Rd | A tin work shed with a large gas bottle located towards the rear of the site. A delivery truck is located in the front yard of the property on the eastern side. |
| 27 | 825 Bridge Inn Rd | A tin shed and farm machinery located onsite. A number of horses appear to be kept onsite. |
| 28 | 831 Bridge Inn Rd | The property appears to be vacant. |
| 29 | 835 Bridge Inn Rd | The property appears to be vacant. |
| 30 | 845 Bridge Inn Rd | Dense vegetation was noted within the front of the property i.e. lots of trees and shrubs. |
| 31 | 851 Bridge Inn Rd | Dense vegetation and overgrown weeds within the front of the property, a small tin shed, and horses were observed on the property. |
| 32 | 855 Bridge Inn Rd | A drain transecting the site in an eastern direction was observed at the front of the property. |
| 33 | 861 Bridge Inn Rd | A small channel drain is located parallel to the front of the property. It is likely for catching stormwater run-off and continues along multiple properties in an eastern direction. Dense vegetation was present at the site. |
| 34 | 865-871 Bridge Inn Rd | This property appears to be a Plant Nursery. The property is predominantly fenced off with black plastic matting noted where plants were stored for prior to purchase. |
| 35 | 875 Bridge Inn Rd | Waste material (wooden/metal trailers, boulders) was noted in the front yard of the site. General rubbish and litter is present at the front of the property. |
| 36 | 881 Bridge Inn Rd | The property was covered in dense vegetation. |
| 37 | 885 Bridge Inn Rd | The site was predominantly vacant with the exception of an old painted rusty fence bordering the property and truck stored onsite in the front yard of the site. |

| Landserv Property ID | Lot Number | Observations |
|----------------------|-------------------|---|
| 38 | 891 Bridge Inn Rd | The site was predominantly vacant with the exception of a small stockpile of soil located in the front yard of the site. Waste material was noted on site. |
| 39 | 901 Bridge Inn Rd | A number of tin sheds were located onsite, one of which was noted as having vehicles stored inside was observed towards the rear of the front yard of the site. |
| 40 | 905 Bridge Inn Rd | A recently constructed tin shed was observed onsite in the rear of the front yard of the site. |
| 41 | 911 Bridge Inn Rd | A stockpile of soil with an approximate volume of 30 m ³ was observed onsite in the front yard of the site. |
| 42 | 915 Bridge Inn Rd | An old tin shed, a small truck and a pile of old car tyres were observed towards the rear if the site A small dam was observed towards the front of the property. Power line towers are situated on the property running in a southerly direction. The site appears to home horses. |

2.3 Surrounding Land Uses

A summary of the land uses surrounding the site have been determined from a review of recent aerial imagery and a site inspection of the property completed on 29 April 2020.

Table 2.4 Surrounding Land Uses

| Direction | Details |
|-----------|--|
| North | Cookes Road, followed by a general residential area. |
| East | Yan Yean Road, followed by farmland and open grassland. |
| South | Bridge Inn Road, followed by predominantly residential areas. There is a small cluster of shops towards the south-east end. |
| West | A service station and construction site is immediately south-west of site. North-east consists of general residential areas, followed by a road. |

2.4 Property Zoning

The precinct is currently zoned as General Residential Zone (GRZ) – Schedule 1 under the Whittlesea Planning Scheme. The land surrounding the site is zoned as follows:

- North: General Residential Zone (GRZ) – Schedule 1;
- South: General Residential (GRZ) – Schedule 1;
- East: Green Wedge Zone (GWZ); and
- West: Mixed Use Zone (MUZ1) – Schedule 1.

2.5 Planning Overlays

The precinct is subject to the following planning overlays under the local planning scheme:

- Development Contributions Plan Overlay (DCPO5) – Schedule 5;
- Development Plan Overlay (DPO5) – Schedule 5;

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- Incorporated Plan Overlay (IPO1) – Schedule 1; and
- Vegetation Protection Overlay (VPO1) – Schedule 1

None of the properties within the precinct are subject to an Environmental Audit Overlay (EAO).

Refer to **Appendix D** for a copy of the planning and property report located within the Lotsearch report.

2.6 Ecological Constraints

The site contains native vegetation with endangered conservation status. This includes the Plains Grassy Woodland of the sub-group Plains Woodlands or Forests. This native vegetation extends from the south-eastern corner and along the central area of site, over to the western boundary. The vegetation also extends off-site in a south-eastern direction. Further endangered vegetation exists nearby; Plains Grassland and Plains Grassy Wetland, 193 m and 572 m north west of site, respectively.

The site is expected to contain groundwater dependent ecosystems (GDEs) with a high potential according to national assessment. The high potential GDEs are expected to be located in the central area of site tending towards the southern border. There is also moderate potential for GDEs expected around the south-eastern and central-western areas of site. Minor areas of low potential GDEs are also scattered around site.

Refer to **Appendix D** for further details and location of ecological constraints.

2.7 Cultural Heritage Sensitivity

The site is not listed as being an area of cultural heritage sensitivity. However, bordering the south-eastern area of site a cultural heritage sensitivity area does exist. Additionally there are five listed areas of cultural heritage sensitivity within 500 m of the site in north western and north eastern directions.

Refer to **Appendix D** for location of cultural heritage sensitive areas.

2.8 Topography

The site has a relatively uneven topography with contour levels ranging from 162 to 185 mAHD with a general slope towards the south.

2.9 Hydrology

The nearest surface water bodies to the site include:

- Laurimer Creek approximately 500 m north of the site;
- Groundwater is inferred to be flowing in a southerly direction (down-gradient based on topography) into Plenty River, located approximately 2 km south-east of site.

2.10 Geology

A review of the Geological Survey of Victoria 1:63,360 Yan Yean Sheet indicates that the site is predominantly underlain by Silurian aged siltstone and sandstone, part of the Melbourne Formation Group (Sud) which comprises of sandstone, laminated and current bedded, with interbedded siltstone and shale and hornfels in metamorphic aureoles near Quarry Hill. The southern portion of the site is underlain by quaternary aged alluvial sediments (Qra), consisting of river alluvium; sand, silt, clay and minor gravel. Refer to in **Figure 2.1** below for an excerpt of the geology map.

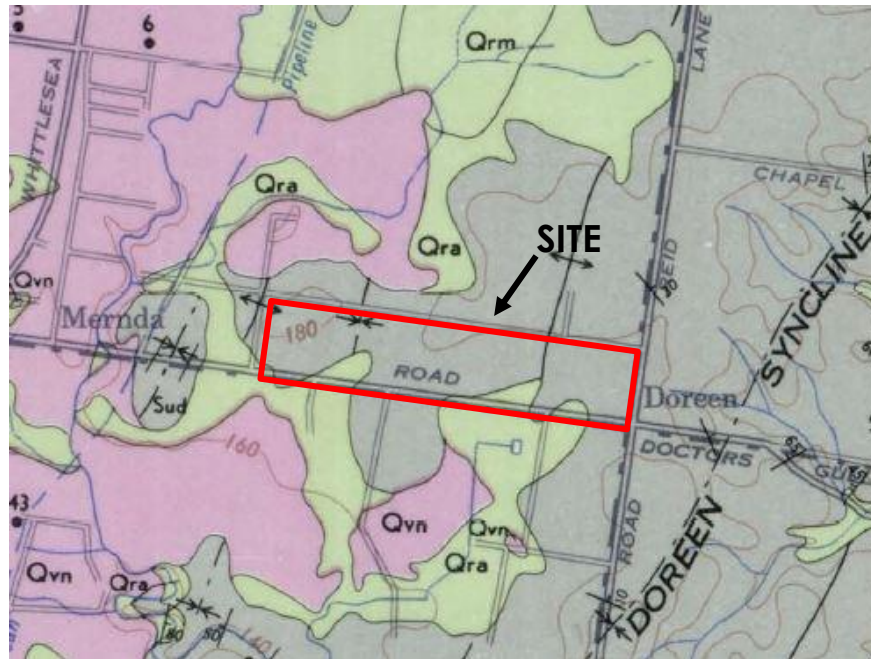


Figure 2.1 Local geology from the 1:63,360 Yan Yean Sheet 7822 (Source: Geological Survey of Victoria, 1974).

2.11 Hydrogeology

The hydrogeology on site closely aligns with the underlying geological sequence as described in **Section 2.10** above.

A review of the Visualising Victoria's Groundwater ('VVG') website in conjunction with the Groundwater Resource Report obtained from the Department of Environment, Land, Water and Planning (DELWP) website on 20 April 2020 indicates that the site has varying levels of groundwater salinity and water table depths. These ranging results are discussed further below with the aid of the Lotsearch report findings of the site:

Water Table Depth

A review of the Lotsearch report (2020) was conducted on 22 April 2020, the review indicated that the inferred depth to groundwater ranged from < 5 mbgl in the southern portion of the site to 10 mbgl across the remainder of the site. The exception being a small portion of site in the northeast quadrant where groundwater is inferred to be intercepted between 10 and 20 mbgl.

The inferred depth to groundwater is generally consistent with recorded topography at the site.

Salinity

A review of the VVG website, the DELWP groundwater resource and Lotsearch report indicated the site to have groundwater salinity levels range between 1,000 to 3,500 mg/L and between 3,500 to 7,000 mg/L (total dissolved solids, (TDS)).

According to the Lotsearch report the site predominantly consists of TDS concentrations between 3,500 and 7,000 mg/L which is consistent with the DELWP report which inferred that TDS concentrations of 1,100 to 3,500 mg/L occur within 10 – 20 m below ground level (mbgl) which, as noted above, makes up the smallest portion of the site. There is only one aquifer/aquitard present at the site listed below (from DELWP, 2019):

- 0 – 200 mbgl, Mesozoic and Paleozoic Bedrock Aquifer (BSE)

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The most relevant (and only) aquifer for this contamination assessment is the BSE aquifer which is further described as fractured rock, including sandstone, siltstone mudstone and shale. As such, the hydrogeology of the area is closely aligned with the underlying geology.

The water table at the site is expected to occur within the Mesozoic and Paleozoic Bedrock Aquifer with groundwater flowing through the fractures in the rocks in local and intermediate flow systems (Dahlhaus P.G, Heislars D.S, et al 2004). The aquifer is reported to be unconfined where the Palaeozoic rocks outcrop yet confined elsewhere by overlying Cainozoic rocks. The aquifer hydraulics are not well known (Leonard 2006).

Groundwater at the site is inferred to be present predominantly between 5 and 10 metres from the ground surface. Based on local topography and the location of the nearest surface water body, Laurimer Creek, it is expected that the groundwater flows to the south into Plenty River.

2.11.1 Groundwater Quality

A review of the Visualising Victoria's Groundwater Beneficial Uses Map (2020) and the DELWP (2019) Groundwater Resources Report indicates that groundwater is expected to be present within with Mesozoic and Paleozoic Bedrock Aquifer and, as noted above, the TDS concentration is likely to range between 3,500 and 7,000 mg/L, with a small portion of the site displaying TDS concentrations between 1,000 to 3,500 mg/L.

Under the State Environment Protection Policy (SEPP) Waters 2018, (the SEPP Waters), the groundwater at the site could be classified between Segment A2 to Segment D. For the purposes of this report, Segment C has been adopted in alignment with the generally inferred TDS concentrations at the site ranging between 3,500 to 7,000 mg/L. The beneficial uses of groundwater requiring protection beneath the site and surrounding region include:

- Water dependent ecosystems and species;
- Potable mineral water supply;
- Agriculture and irrigation (stock watering);
- Industrial and commercial;
- Water based recreation (primary contact recreation);
- Traditional Owner cultural values;
- Cultural and spiritual values;
- Buildings and structures and;
- Geothermal properties

3 SITE HISTORY

The following sources of information were reviewed as part of the site history review:

- Current and historical photography;
- Historical business directories;
- Victorian EPA databases and registries including:
 - Priority Sites Register (PSR);
 - List of sites issued with statements and certificates of environmental audit;
 - Groundwater Quality Restricted Use Zone (GQRUZ) database; and
 - Victorian Landfill Register.

3.1 Review of Current and Historical Aerial Photography

A review of current and historical aerial photography was undertaken on 22 April 2020 from aerial photography obtained by Lotsearch. Copies of the aerial photography reviewed are presented in the Lotsearch report in **Appendix D**.

Approximately one photo per decade was reviewed, dating back to 1963, to determine general land uses and any distinguishing features both on site and in the surrounding area, which may be pertinent in determining the potential for site contamination at the site. Key observations identified as part of the review are presented in **Table 3.1** below.

Table 3.1 Review of Aerial Photography

| Year | Observations | Source |
|------|--|-----------|
| 1963 | <p>Site</p> <p>The site appears to be vacant with the exception of a small cluster of large buildings near to the centre of the site. A small number of trees are scattered in and around the borders of the site, the rest of the site appears to be vacant land. The site is bordered by roads on all sides.</p> | Lotsearch |
| | <p>Surrounding Area</p> <p>Surrounding land appears to be vacant land, cleared of most trees, with the exception of some small buildings directly south of the site, along with a small number of buildings scattered around the northern and western edges of site. There is a small dam directly south of site.</p> | |
| 1966 | <p>Site</p> <p>The site does not appear to have undergone any significant changes.</p> | Lotsearch |
| | <p>Surrounding Area</p> <p>The surrounding areas of the site remain broadly unchanged.</p> | |
| 1974 | <p>Site</p> <p>The site does not appear to have undergone any significant changes with the exception of approximately ten additional building structures appearing along the north border of site and three additional structures towards the southern end of site.</p> | Lotsearch |
| | <p>Surrounding Area</p> <p>The surrounding areas of the site remain broadly unchanged.</p> | |

| Year | Observations | Source |
|------|---|-----------|
| 1982 | <p>Site</p> <p>The site appears much more established with an influx of presumed residential properties on the site. There is an increase in the number of trees on site.</p> | Lotsearch |
| | <p>Surrounding Area</p> <p>The surrounding area remains relatively unchanged, with the exception for a small increase in the number of buildings (presumed residential properties) across the road from the site on all borders. The land beyond this appears vacant.</p> | |
| 1991 | <p>Site</p> <p>The site does not appear to have undergone any significant changes with the exception of approximately three additional building structures appearing along the central northern border of site and approximately four new building structures towards the south-western border of site. There is also an increase in vegetation.</p> | Lotsearch |
| | <p>Surrounding Area</p> <p>The surrounding areas also remain relatively unchanged, with minor additional buildings appearing further offsite in the northern, southern and western directions.</p> | |
| 2005 | <p>Site</p> <p>The site does not appear to have undergone any significant changes with the exception of approximately three additional building structures appearing in the eastern area and five additional structures in the western area of site. There is also an increase in vegetation across the whole site.</p> | Lotsearch |
| | <p>Surrounding Area</p> <p>Again, the surrounding area appears relatively unchanged from the 1991 aerial, aside from a small increase in the number of surrounding buildings.</p> | |
| 2009 | <p>Site</p> <p>The site appears to have undergone construction of residential buildings, driveways, car parks and associated shedding consistent with the current site layout.</p> | Lotsearch |
| | <p>Surrounding Area</p> <p>The surrounding areas have been substantially developed with a new estate now visible south-west of site. Directly north of site is another area of residential houses that have increased quite significantly.</p> | |
| 2019 | <p>Site</p> <p>The site does not appear to have undergone any significant changes and is consistent with the current site layout.</p> | Lotsearch |
| | <p>Surrounding Area</p> <p>The surrounding areas are now vastly developed residential areas with most of the previously vacant land now occupied by dwellings in all areas.</p> | |

3.2 Review of Historical Business Directories

A review of the historical business directory records was undertaken on 22 April 2020 from records obtained by Lotsearch. Copies of the historical business directories reviewed are presented in the Lotsearch report in **Appendix D**.

The review of business activity indicated that no business have been noted on the subject site or within 500 m of the site.

Landserv also reviewed a list of historical dry cleaners, motor garages and service stations within 500 meters of the site obtained by Lotsearch. No such businesses have existed within the vicinity of the site, with the exception of a petrol station observed immediately west of the site during the site inspection.

3.3 EPA Priority Site Register

The Victorian EPA maintains a register of all priority site within Victoria, for which the EPA has issued Clean Up Notices pursuant to Section 62A or Pollution Abatement Notices pursuant to Section 31A or 31B of the Environment Protection Act 1970. The register is referred to as the EPA Priority Sites Register (PSR). A review of the EPA PSR was undertaken on 22 April 2020 to determine if the site or properties located within 500 m of the subject site are listed on the register.

The site was not listed on the Priority Sites Register nor were any properties within 500 m of the site. A copy of the EPA PSR reviewed is presented in **Appendix D**.

3.4 EPA Groundwater Quality Restricted Use Zones

The Victorian EPA maintains a database of all the Groundwater Quality Restricted Use Zones (GQRUZ) in Victoria. The database was reviewed on 21 April 2020 and it was concluded that neither the site nor any properties located within 500 m of the subject site were covered by a GQRUZ.

3.5 EPA Certificate and Statements of Environmental Audit

A review of the EPA list of issued Statements and Certificates of Statutory Environmental Audit was conducted on 22 April 2020. No audits were identified on or within 500 m of

3.6 Waste Disposal Sites

A review of the former waste disposal sites within 1,000 metres of the site was undertaken on 22 April 2020 from records obtained by Lotsearch, presented in **Appendix D**. The review identified two (2) EPA Prescribed Industrial Waste Sites approximately 600 metres to the north of the site. No waste was disposed of or treated at the listed business locations.

4 POTENTIAL SOURCES OF CONTAMINATION

4.1 On-site

Based on the available information, the main areas of environment concern and the associated potential contaminants of concern for the site are listed in **Table 4.1** below:

Table 4.1 Potential Sources of Contamination On-site

| Site Activities/ features | Potential contaminants of concern | Media |
|--|---|----------------------|
| Historical tin/timber sheds potentially used for storage and maintaining farming machinery. | Total Petroleum hydrocarbons (TPH), BTEX (benzene, toluene, ethylbenzene, xylene), lead, polycyclic aromatic hydrocarbons (PAH), organochlorine pesticides, | Soil and groundwater |
| Storage tank of unknown contents (located on 214 Cookes Rd) and barrels of unknown contents noted on multiple sites. | Total Petroleum hydrocarbons (TPH), BTEXN (benzene, toluene, ethylbenzene, xylene, naphthalene), lead, polycyclic aromatic hydrocarbons (PAH) | Soil and groundwater |
| Historical agricultural activity – grazing or cropping. Use of agricultural chemicals. | Heavy metals, organochlorine pesticides, organophosphate pesticides, herbicides | Soil |
| Potential uncontrolled filling | Total recoverable hydrocarbons (TRH), polycyclic aromatic hydrocarbons (PAH), metals and asbestos | Soil |
| Onsite Buildings (pre-1985) | Asbestos Containing Material | Soil |

4.2 Off-site

The areas surrounding the site have historically been used for agriculture and residential areas. More recently, the areas to the north, south and west have been developed into new estates. To the east remains farmland and open grassland. A summary of the potential off-site sources of contamination identified are presented in **Table 4.2** below.

Table 4.2 Potential Sources of Contamination Off-site

| Site Activities/ features | Potential contaminants of concern | Media |
|---|---|-------|
| Agricultural activity – grazing or cropping. Use of agricultural chemicals. | Heavy metals, organochlorine pesticides, organophosphate pesticides, herbicides | Soil |
| Potential uncontrolled filling | Total recoverable hydrocarbons (TRH), polycyclic aromatic hydrocarbons (PAH) and metals, asbestos | Soil |

The identified potential sources of contamination off-site are unlikely to represent a risk to the subject site given the lack of an identified pathway from the potential source to the subject site.

4.3 AREAS OF POTENTIAL ENVIRONMENTAL INTEREST

The site history and our visual checks suggest the following areas of potential environmental interest.

Table 4.3 – Areas of Potential Environmental Interest

| Landserv Property ID | Area I.D | Property Address | Areas of Potential Environmental Interest | Possible action If property is to be redeveloped. |
|----------------------|----------|------------------|---|--|
| 1 | - | 174 Cookes Rd | None | None |
| 2 | Area A | 180 Cookes Rd | Storage shed and area containing cars and other machinery | A Detailed Site Investigation (DSI) including but not limited to a targeted soil sampling within the vicinity of the storage area to assess for potential contaminants from the storage and maintenance of machinery. If soil contamination data suggests groundwater impacts are possible, then investigate this. |
| 3 | - | 184 Cookes Rd | None | None |
| 4 | - | 190 Cookes Rd | None | None |
| 5 | - | 194 Cookes Rd | None | None |
| 6 | - | 200 Cookes Rd | None | None |
| 7 | - | 204 Cookes Rd | None | None |
| 8 | - | 210 Cookes Rd | None | None |
| 9 | Area B | 214 Cookes Rd | Storage tank of unknown contents and barrels of unknown contents noted on multiple sites; | A Detailed Site Investigation (DSI) including but not limited to a targeted soil sampling in the vicinity of the AST and storage barrels below base of evident contamination (if present). If soil contamination data suggests groundwater impacts are possible, then investigate this. |
| 10 | - | 220 Cookes Rd | None | None |
| 11 | - | 224 Cookes Rd | None | None |

| Landserv Property ID | Area I.D | Property Address | Areas of Potential Environmental Interest | Possible action If property is to be redeveloped. |
|----------------------|----------|-------------------|--|--|
| 12 | - | 230 Cookes Rd | None | None |
| 13 | - | 234 Cookes Rd | None | None |
| 14 | - | 240 Cookes Rd | None | None |
| 15 | - | 244 Cookes Rd | None | None |
| 16 | - | 250 Cookes Rd | None | None |
| 17 | - | 260 Cookes Rd | None | None |
| 18 | - | 270 Cookes Rd | None | None |
| 19 | - | 274 Cookes Rd | None | None |
| 20 | - | 280 Cookes Rd | None | None |
| 21 | Area C | 290 Cookes Rd | Storage area containing farming machinery. | A Detailed Site Investigation (DSI) including but not limited to a targeted soil sampling within the vicinity of the storage area to assess for potential contaminants from the storage of farming machinery. If soil contamination data suggests groundwater impacts are possible, then investigate this. |
| 22 | - | 945 Yan Yean Rd | None | None |
| 23 | - | 925 Bridge Inn Rd | None | None |
| 24 | - | 811 Bridge Inn Rd | None | None |
| 25 | Area D | 815 Bridge Inn Rd | Storage area containing cars and other machinery | A Detailed Site Investigation (DSI) including but not limited to a targeted soil sampling within the vicinity of the storage area to assess for potential contaminants from the storage and |

| Landserv Property ID | Area I.D | Property Address | Areas of Potential Environmental Interest | Possible action If property is to be redeveloped. |
|----------------------|----------|-----------------------|--|--|
| | | | | maintenance of machinery. If soil contamination data suggests groundwater impacts are possible, then investigate this. |
| 26 | - | 821 Bridge Inn Rd | None | None |
| 27 | Area E | 825 Bridge Inn Rd | Storage area containing cars and other machinery | A Detailed Site Investigation (DSI) including but not limited to a targeted soil sampling within the vicinity of the storage area to assess for potential contaminants from the storage and maintenance of machinery. If soil contamination data suggests groundwater impacts are possible, then investigate this. |
| 28 | - | 831 Bridge Inn Rd | None | None |
| 29 | - | 835 Bridge Inn Rd | None | None |
| 30 | - | 845 Bridge Inn Rd | None | None |
| 31 | Area I | 851 Bridge Inn Rd | Large storage sheds and ground disturbance towards the rear of the site. | A Detailed Site Investigation (DSI) including a site inspection and potential targeted soil sampling within the vicinity of the storage area to assess for potential contaminants from storage. If soil contamination data suggests groundwater impacts are possible, then investigate this. |
| 32 | - | 855 Bridge Inn Rd | None | None |
| 33 | - | 861 Bridge Inn Rd | None | None |
| 34 | Area F | 865-871 Bridge Inn Rd | Plant Nursery | A Detailed Site Investigation (DSI) including but not limited to grid-based and targeted soil sampling to assess the potential for contamination from herbicides and pesticides and storage and maintenance of machinery. If soil contamination data suggests groundwater |

| Landserv Property ID | Area I.D | Property Address | Areas of Potential Environmental Interest | Possible action If property is to be redeveloped. |
|----------------------|----------|-------------------|--|---|
| | | | | impacts are possible, then investigate this. |
| 35 | | 875 Bridge Inn Rd | Plant Nursery | A Detailed Site Investigation (DSI) including but not limited to grid-based and targeted soil sampling to assess the potential for contamination from herbicides and pesticides and storage and maintenance of machinery. If soil contamination data suggests groundwater impacts are possible, then investigate this. |
| 36 | - | 881 Bridge Inn Rd | None | None |
| 37 | - | 885 Bridge Inn Rd | None | None |
| 38 | - | 891 Bridge Inn Rd | None | None |
| 39 | Area G | 901 Bridge Inn Rd | Storage of trucks and significant soil disturbance. | A Detailed Site Investigation (DSI) including but not limited to grid-based and targeted soil sampling to assess the potential for contamination from imported fill and potential for contamination from storage and maintenance of machinery. If soil contamination data suggests groundwater impacts are possible, then investigate this. |
| 40 | - | 905 Bridge Inn Rd | None | None |
| 41 | Area H | 911 Bridge Inn Rd | A stockpile of soil with an approximate volume of 30 m3 was observed onsite in the front yard of the site. | A limited investigation of identified stockpile onsite including a minimum of 3 samples to assess the soil in accordance with EPA IWRG 702 guidelines. |
| 42 | - | 915 Bridge Inn Rd | None | None |

In addition to the Areas of Potential Environmental Interest detailed in the table above, it is possible that the broad application of herbicides and pesticides were historically applied to the site. It is recommended, a limited grid based sampling program is conducted across the site surface to assess possible impacts as a result.

5 CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

On the basis of the Preliminary Site Investigation completed at Present 2a (Bridges Inn Road and Cookes Road), Doreen, Victoria, Landserv make the following conclusions:

- The site is likely to be underlain by Silurian aged siltstone and sandstone, part of the Melbourne Formation Group, consisting of sandstone, laminated and current bedded, with interbedded siltstone and shale and hornfels in metamorphic aureoles near Quarry Hill. The southern portion of the site is underlain by quaternary aged alluvial sediments (Qra), consisting of river alluvium; sand, silt, clay and minor gravel;
- Groundwater is inferred to be found at < 5 mbgl in the southern portion of the site to 10 mbgl across the remainder of the site. The exception being a small portion of site in the northeast quadrant where groundwater is inferred to be intercepted between 10 and 20 mbgl. The groundwater is inferred to be found within the Mesozoic and Paleozoic Bedrock Aquifer and to be flowing south into Plenty River;
- The site was historically used for residential purposes and agricultural activities possibly including grazing and cropping;
- The site inspection undertaken identified that the site is currently occupied by general residential lots, with some evidence of small scale farming on site. The majority of lots on the site were heavily vegetated with lots of open space grassland;
- Rubbish (for example bottles, cans and plastic packaging) were scattered around the fringes of the site, which are expected to have come from passing pedestrians or vehicles;
- The site is bordered by roads in all directions, following farmland and open grassland to the east, and general residential areas in all other directions. Directly west of the site is a service station and a construction site;
- The areas to the north, south, east and west of the site have historically been occupied by agricultural and residential land uses similar to the subject site;
- The site history and our visual checks suggest the following areas of potential environmental interest:
 - 180 Cookes Rd;
 - o Area A: Storage shed and area containing cars and other machinery.
 - 214 Cookes Rd;
 - o Area B: Storage tank of unknown contents and barrels of unknown contents noted on multiple sites.
 - 290 Cookes Rd;
 - o Area C: Storage area containing farming machinery.
 - 815 Bridge Inn Rd;
 - o Area D: Storage area containing cars and other machinery.
 - 825 Bridge Inn Rd;

- Area E: Storage area containing cars and other machinery.
- 865-871 Bridge Inn Rd;
- 875 Bridge Inn Rd;
 - Area F: The diffuse application of herbicides/pesticides and fertilisers from historical agricultural use specifically within the Plant Nursery and maintenance of machinery.
- 901 Bridge Inn Rd;
 - Area G: Storage of trucks and significant soil disturbance.
- 911 Bridge Inn Rd;
 - Area H: Identification of a stockpile of possible fill with an approximate volume of 30 m³ onsite in the front yard of the site.
- 851 Bridge Inn Rd;
 - Large storage sheds and ground disturbance towards the rear of the site.

5.2 Recommendations

- Based on the findings of the Preliminary Site Investigation completed at Cookes Road and Bridge Inn Road, Doreen, Victoria, it is recommended that further investigation be undertaken across Areas A to H as noted in **Table 4.3**.
- Additionally, it is possible that the broad application of herbicides and pesticides were historically applied to the site. It is recommended, a limited grid-based sampling program is conducted across the site surface to assess possible impacts as a result.
- Given the age of the buildings and materials the buildings were observed to be constructed from, it is recommended that a Division 6 Asbestos Audit be completed prior to the commencement of any demolition works at the site to determine the potential for asbestos in the structures present on-site and confirm an appropriate plan for safe removal and disposal of any identified ACM.

6 REPORT LIMITATIONS

This report has been prepared by Landserv Pty Ltd (Landserv) only for the use of the Bridge-Cookes Landowners Group Inc. No other parties should rely on the information in this report without prior written consent from Landserv and Bridge-Cookes Landowners Group Inc.

Landserv has performed its services for this project in accordance with the scope of work commissioned by Bridge-Cookes Landowners Group Inc. and in a manner consistent with the level of quality and skill generally exercised by members of its profession.

It should be noted that geological, environmental and contamination conditions often vary from those observed at the locations where investigation data has been obtained. Limited data can therefore result in uncertainty in the interpretation of geological, environmental and contamination conditions. Geological, environmental and contamination conditions also often vary with the passing of time after the data is obtained, as do regulatory requirements, laws and guideline criteria.

Exposure to the sub-surface environment can potentially corrode or degrade underground services, building foundations and other below-ground man-made structures, whether contamination is present or not. This investigation does not warrant the design, installation, protection or longevity of any future infrastructure built on the subject site.

Despite Landserv's due professional care, all of these uncertainties should be considered in relying and acting on the information contained in our reports. This is particularly so if few locations have been sampled, if a report is used after a significant delay in time, if regulations and guideline criteria are known to have changed, or if a change is proposed to the land use for the site.

Opinions and recommendations in this report are based on the information available to Landserv at the time of undertaking the works, including the information gained during the project. The information in this report relating to the current condition of the Site is considered to be accurate at the time the report is issued. No warranty of site conditions is intended.

7 REFERENCES

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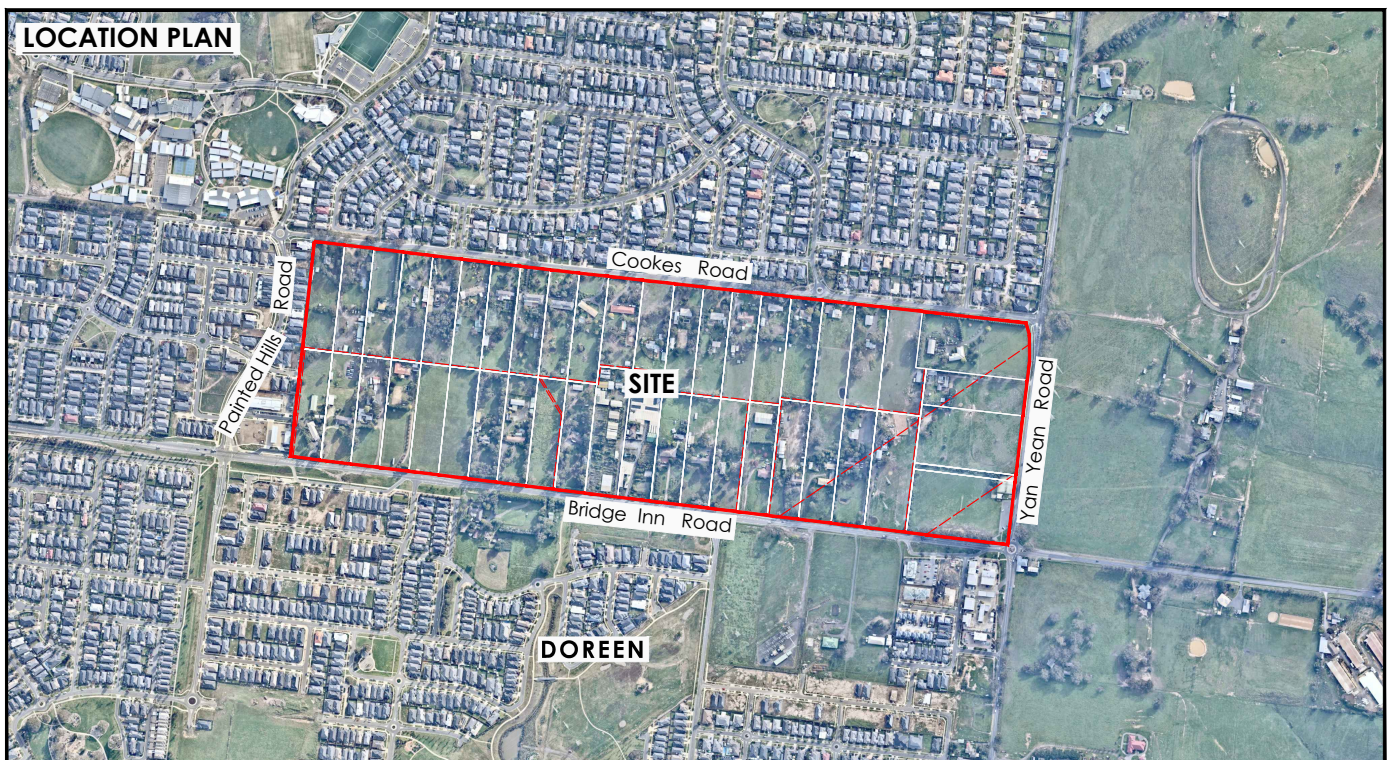
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State Environment Protection Policy (SEPP) Waters, 2018 (SEPP Waters).

8 ABBREVIATIONS

| | |
|-------|--|
| AHD | Australian Height Datum |
| bgl | Below Ground Level |
| BTEX | Benzene, Toluene, Ethylbenzene, Xylenes |
| COC | Chain of Custody |
| DBYD | Dial Before You Dig |
| DPI | Department of Primary Industries |
| DSE | Department of Sustainability and Environment |
| EIL | Ecological investigation Level |
| EPA | Environment Protection Authority |
| ESA | Environmental Site Assessment |
| ESL | Environmental Screening Levels |
| HIL | Health Investigation Levels |
| HSP | Health and Safety Plan |
| HSL | Health Screening Levels |
| LOR | Laboratory limits of reporting |
| MGA | Map Grid of Australia |
| NATA | National Authority of Testing Authorities |
| NEPM | National Environment Protection Measure |
| NES | National Environmental Significance |
| OC | Pesticides Organochlorine Pesticides |
| PAH | Polycyclic Aromatic Hydrocarbons |
| PCB | Polychlorinated Biphenyl |
| QA/QC | Quality Assurance/Quality Control |
| RPD | Relative Percent Differences |
| SEPP | State Environmental Protection Policies |
| SWL | Standing Water Level |
| SWMS | Safe Work Method Statement |
| TPH | Total Petroleum Hydrocarbons |
| TPH | Total Recoverable Hydrocarbons |
| VOC | Volatile Organic Compound |

APPENDIX A FIGURES



| | | | |
|---|---|--|---|
| Project Number : M0758 | Figure : 1 | Date : 7/5/2020 | LEGEND :  Site |
| Drawn By : P.Bazalicki | Revision : A | Vertical Datum : Australian Height Datum | |
| Checked By : E.McAsey | Horizontal Datum: MGA Zone 55 based on GDA2020 Datum | | |
| Data Sources : - Nearmap Aerial Photography, Apr 2020 - Vicmap Property Boundaries, May 2020 | | Scale :  Scale in metres |  Zone 55 MGA |



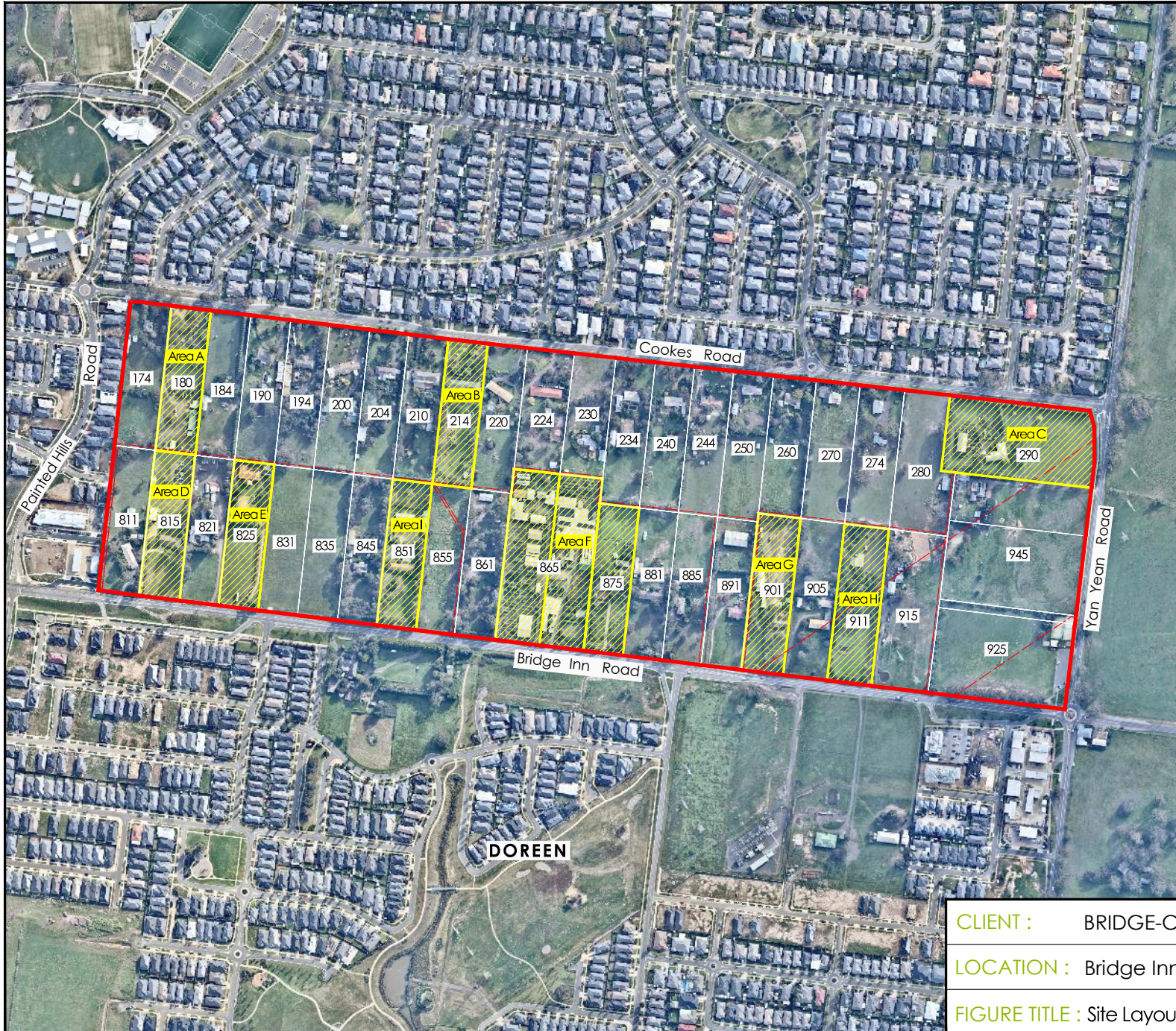
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CLIENT : BRIDGE-COOKES LANDOWNERS GROUP INC.

LOCATION : Bridge Inn & Cookes Rd, Doreen, VICTORIA


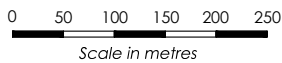
FIGURE TITLE : SITE LOCATION PLAN



LEGEND :

- Site
- Areas of Environmental Concern

| | |
|-------------------------|--|
| Project Number : | M0758 |
| Drawn By : | P.Bazalicki |
| Checked By : | E.McAsey |
| Data Sources : | - Nearmap Aerial Photography, Apr 2020 - VICMAP Property Boundaries, May 2020 |

| | |
|---|---|
| Figure : 2 | Date : 18/5/2020 |
| Revision : A | |
| Vertical Datum : Australian Height Datum | |
| Horizontal Datum : MGA Zone 55 based on GDA2020 Datum | |
|  | Scale : |
| |  |

CLIENT : BRIDGE-COOKES LANDOWNERS GROUP INC.
LOCATION : Bridge Inn & Cokes Rd, Doreen, VICTORIA
FIGURE TITLE : Site Layout Plan - Areas of Environmental Concern

APPENDIX B SITE INSPECTION PHOTOS



Landserv
Environment

Photograph 1

Vegetation along Cookes Road, looking west

Site inspection for PSI, 29 May 2020

Bridge-Cookes Road Landowner Group



Landserv
Environment

Photograph 2

Small pile of clay soils found on the eastern end of Cookes Road

Site inspection for PSI, 29 May 2020

Bridge-Cookes Road Landowner Group



Landserv
Environment

Photograph 3

Hard rubbish (glass and plaster/wood sheets) on lot 270 Cookes Road

Site inspection for PSI, 29 May 2020

Bridge-Cookes Road Landowner Group



Landserv
Environment

Photograph 4

Old tin/timber shed on lot 270 Cookes Road

Site inspection for PSI, 29 May 2020

Bridge-Cookes Road Landowner Group



Landserv
Environment

Photograph 5

Storage container and two blue barrels, contents unknown, on lot 260 Cookes Road

Site inspection for PSI, 29 May 2020

Bridge-Cookes Road Landowner Group



Landserv
Environment

Photograph 6

Old truck and an overgrown stockpile on lot 214 Cookes Road

Site inspection for PSI, 29 May 2020

Bridge-Cookes Road Landowner Group



Landserv
Environment

Photograph 7

Rusted old storage tank, previous contents unknown, on lot 214 Cookes Road

Site inspection for PSI, 29 May 2020

Bridge-Cookes Road Landowner Group



Landserv
Environment

Photograph 8

Small channel running along Bridge-Inn Road

Site inspection for PSI, 29 May 2020

Bridge-Cookes Road Landowner Group



Landserv
Environment

Photograph 9

Clayey soils found in the walls of the channel along Bridge-Inn Road

Site inspection for PSI, 29 May 2020

Bridge-Cookes Road Landowner Group



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Environment

Photograph 10

Old trailers and hard rubbish observed on lot 891 Bridge-Inn Road

Site inspection for PSI, 29 May 2020

Bridge-Cookes Road Landowner Group

APPENDIX C GROUNDWATER RESOURCES REPORT

Groundwater Resource Report

Groundwater catchment: East Port Phillip Bay

VICGRID94 Easting: 2511516 Northing: 2433127

Depth to water table: 5 - 10m

Water table salinity (mg/L): 3501 - 7000

| Groundwater layers (Aquifers and Aquitards) | Depth below surface (m) | Groundwater salinity (mg/L) |
|--|----------------------------|--------------------------------|
| BSE Mesozoic and Palaeozoic Bedrock (basement) sedimentary (fractured rock): Sandstone, siltstone, mudstone, shale. Igneous (fractured rock): includes volcanics, granites, granodiorites. | 0 - 200 | 1001 - 3500 |

There are no GMUs at this location

For further information about this report contact:

Department of Environment, Land, Water & Planning

Email: ground.water@delwp.vic.gov.au

For further information on groundwater licensing in this area contact:

Southern Rural Water Corporation

Phone: 1300 139 510

Email: srw@srw.com.au

Website: www.srw.com.au

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Printed: 27 April 2020

Date Updated: 11 January 2019



Environment,
Land, Water
and Planning

Introduction

Groundwater is part of the water cycle. When rain or snow falls on land, some of it evaporates, some flows to streams and rivers, and some seeps into the soil. Some of the water in the soil is used by plants but some continues to move down through the soil and rock until all the pores and cracks are full of water. This is known as the water table and this water is called groundwater.

Groundwater is a finite resource that, like surface water, is allocated under the Water Act (1989). A Bore Construction Licence is required to drill for groundwater including for domestic and stock purposes. Taking and using groundwater for commercial or irrigation purposes requires an additional licence.

Purpose of this report

This report has been prepared to provide potential groundwater users with basic information about groundwater beneath their property. This includes the different geological layers, the depths of the layers and the salinity of groundwater in the layers. Information on the groundwater management units (GMU) and any associated caps on the volume that can be licensed (the PCV) are also provided.

Definitions and context

| Term | Description |
|--------------------------------------|--|
| Groundwater Catchment | An identified area of the State within which groundwater resources are connected. |
| Easting / Northing | The VICGRID 94 coordinates of the spot that was selected on the interactive map. |
| Groundwater Salinity | Indicates the possible concentration of salts within the groundwater. The salt content indicates the possible uses of the water (see the Beneficial Use Table below). Fertilisers and other contaminants can also enter groundwater and affect its use. It is up to you to make sure that the groundwater you use is suitable for your purpose. |
| Aquifer | An aquifer is a layer of soil or rock which stores usable volumes of groundwater. Aquifers are generally limestones, gravels and sands, as well as some fractured rocks where the cracks in the rock are open and connected (some basalts, sandstones and limestones). How much water can be pumped from an aquifer depends on how much water is stored in pores and cracks, how well connected the pores and cracks are, and how thick the layer is. It is more likely that volumes of water for irrigation and urban water supply will come from gravels, sands, limestones and basalts that are at least 30 metres thick. Low volumes of water for domestic and stock use are likely from any aquifer greater than 10 metres thick. The advice above is a guide only, as the amount of water available can be highly variable. Actual pumping volumes can only be determined from drilling, appropriate construction and testing of a bore. |
| Aquitard | An aquitard is a layer of rock or soil that does not allow water to move through it easily, limiting its capacity to supply water. Aquitards are generally silts, clays and fractured rocks (where there are few cracks in the rock or the cracks are poorly connected). |
| Groundwater Management Unit (GMU) | A collective term for groundwater management areas (GMAs) and water supply protection areas (WSPAs). GMAs and WSPAs are defined areas and depths below the surface where rules for groundwater use may apply. WSPAs often have caps on groundwater use and plans describing how the resource is managed. GMAs usually have caps on groundwater use and may have local plans and rules. All other areas are managed directly through the Water Act (1989). Always check with your local Rural Water Corporation to be sure that the information on the GMU is correct for your specific location. |
| Permissible Consumptive Volume (PCV) | A cap that is set under the Water Act (1989) declaring the total volume of groundwater that may be taken from the area. Once the PCV is reached, no additional extraction can be licensed for use within the area unless traded from another groundwater licence holder. |
| Depth to Water Table | This is an indication of the depth at which groundwater might first be encountered when drilling a bore. The depth can vary from year to year, and from place to place and may vary significantly from that indicated in this report. |

Beneficial Use Table

| Salinity range (mg/L TDS) | Beneficial use as described by State Environment Protection Policy (Groundwaters of Victoria) s160 | | | | | | | |
|---------------------------|--|----------------------------|-----------------------|------------|-------------|----------|----------------------|--------------------------|
| | Potable water - preferred | Potable water - acceptable | Potable mineral water | Irrigation | Stock water | Industry | Ecosystem protection | Buildings and structures |
| <500 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 501-1000 | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 1001-3500 | | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 3501-13000 | | | | | ✓ | ✓ | ✓ | ✓ |
| 13001+ | | | | | | ✓ | ✓ | ✓ |

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APPENDIX D LOTSEARCH REPORT



LOTSEARCH
LOTSEARCH ENVIRO PROFESSIONAL

Address: Bridge Inn and Cookes Roads, Mernda, VIC 3754

Date: 21 Apr 2020 16:02:10

Reference: LS012064 EP

Disclaimer:

The purpose of this report is to provide an overview of some of the site history, environmental risk and planning information available, affecting an individual address or geographical area in which the property is located. It is not a substitute for an on-site inspection or review of other available reports and records. It is not intended to be, and should not be taken to be, a rating or assessment of the desirability or market value of the property or its features.

You should obtain independent advice before you make any decision based on the information within the report.

The detailed terms applicable to use of this report are set out at the end of this report.

Dataset Listing

Datasets contained within this report, detailing their source and data currency:

| Dataset Name | Custodian | Supply Date | Currency Date | Update Frequency | Dataset Buffer (m) | No. Features Onsite | No. Features within 100m | No. Features in Buffer |
|--|---|-------------|---------------|------------------|--------------------|---------------------|--------------------------|------------------------|
| Topographic and Cadastre data | State Government Victoria - Department of Environment, Land, Water & Planning | 07/04/2020 | 07/04/2020 | Monthly | - | - | - | - |
| Current EPA Priority Sites | Environment Protection Authority (Vic) | 18/03/2020 | 18/03/2020 | Monthly | 1000 | 0 | 0 | 0 |
| Former EPA Priority Sites & other Remedial Notices | Environment Protection Authority (Vic) | 04/11/2019 | 04/11/2019 | Monthly | 1000 | 0 | 0 | 0 |
| EPA PFAS Site Investigations | Environment Protection Authority (Vic) | 20/03/2020 | 10/10/2019 | Monthly | 2000 | 0 | 0 | 0 |
| Defence PFAS Investigation & Management Program - Investigation Sites | Department of Defence | 12/02/2020 | 12/02/2020 | Monthly | 2000 | 0 | 0 | 0 |
| Defence PFAS Investigation & Management Program - Management Sites | Department of Defence | 12/02/2020 | 12/02/2020 | Monthly | 2000 | 0 | 0 | 0 |
| Airservices Australia National PFAS Management Program | Airservices Australia | 20/03/2020 | 20/03/2020 | Monthly | 2000 | 0 | 0 | 0 |
| Defence 3 Year Regional Contamination Investigation Program | Department of Defence | 03/04/2020 | 03/04/2020 | Monthly | 2000 | 0 | 0 | 0 |
| EPA Environmental Audit Reports | Environment Protection Authority (Vic) | 03/04/2020 | 03/04/2020 | Monthly | 1000 | 0 | 0 | 0 |
| EPA Groundwater Zones with Restricted Uses | Environment Protection Authority (Vic) | 03/04/2020 | 03/04/2020 | Monthly | 1000 | 0 | 0 | 0 |
| Current EPA Licensed Activities | Environment Protection Authority (Vic) | 18/03/2020 | 18/03/2020 | Monthly | 1000 | 0 | 0 | 0 |
| Former EPA Licensed Activities | Environment Protection Authority (Vic) | 18/03/2020 | 18/03/2020 | Monthly | 1000 | 0 | 0 | 0 |
| EPA Works Approvals | Environment Protection Authority (Vic) | 20/03/2020 | 20/03/2020 | Monthly | 1000 | 0 | 0 | 0 |
| National Waste Management Facilities Database | Geoscience Australia | 12/02/2020 | 07/03/2017 | Quarterly | 1000 | 0 | 0 | 0 |
| Statewide Waste and Resource Recovery Infrastructure Plan Facilities | State Government Victoria - Department of Sustainability | 27/11/2014 | 31/12/2012 | None planned | 1000 | 0 | 0 | 0 |
| EPA Prescribed Industrial Waste | Environment Protection Authority (Vic) | 31/07/2019 | 31/07/2019 | Quarterly | 1000 | 0 | 0 | 2 |
| EPA Victorian Landfill Register | Environment Protection Authority (Vic) | 09/04/2020 | 09/04/2020 | Quarterly | 1000 | 0 | 0 | 0 |
| Former Gasworks | Various historical sources collated by Lotsearch | 15/08/2017 | 15/08/2017 | Not required | 1000 | 0 | 0 | 0 |
| National Liquid Fuel Facilities | Geoscience Australia | 05/02/2020 | 15/03/2012 | Quarterly | 1000 | 0 | 0 | 0 |
| Historical Business Directories (Premise & Intersection Matches) | Hardie Grant; Sands & McDougall, State Library Victoria | | | Not required | 150 | 0 | 0 | 0 |
| Historical Business Directories (Road & Area Matches) | Hardie Grant; Sands & McDougall, State Library Victoria | | | Not required | 150 | - | 0 | 0 |
| Historical Business Directory Dry Cleaners & Motor Garages/Service Stations (Premise & Intersection Matches) | Hardie Grant; Sands & McDougall, State Library Victoria | | | Not required | 500 | 0 | 0 | 0 |
| Historical Business Directory Dry Cleaners & Motor Garages/Service Stations (Road & Area Matches) | Hardie Grant; Sands & McDougall, State Library Victoria | | | Not required | 500 | - | 0 | 0 |
| Features of Interest | State Government Victoria - Department of Environment, Land, Water & Planning | 05/02/2020 | 05/02/2020 | Quarterly | 1000 | 8 | 19 | 130 |
| Hydrogeology Map of Australia | Commonwealth of Australia (Geoscience Australia) | 08/10/2014 | 17/03/2000 | As required | 1000 | 1 | 1 | 1 |
| Groundwater Salinity | State Government Victoria - Department of Environment, Land, Water & Planning | 14/08/2015 | 29/08/2012 | Unknown | 0 | 2 | - | - |
| Depth to Watertable | State Government Victoria - Department of Environment, Land, Water & Planning | 14/08/2015 | 29/08/2012 | Unknown | 0 | 3 | - | - |

| Dataset Name | Custodian | Supply Date | Currency Date | Update Frequency | Dataset Buffer (m) | No. Features Onsite | No. Features within 100m | No. Features in Buffer |
|---|---|-------------|---------------|------------------|--------------------|---------------------|--------------------------|------------------------|
| Surface Elevation | State Government Victoria - Department of Environment, Land, Water & Planning | 14/08/2015 | 23/09/2013 | Unknown | 0 | 1 | - | - |
| Basement Elevation | State Government Victoria - Department of Environment, Land, Water & Planning | 14/08/2015 | 23/09/2013 | Unknown | 0 | 1 | - | - |
| Groundwater Boreholes WMIS | State Government Victoria - Department of Environment, Land, Water & Planning | 20/03/2020 | 20/03/2020 | Quarterly | 2000 | 1 | 2 | 5 |
| Groundwater Boreholes Earth Resources Database | State Government Victoria - Department of Economic Development, Jobs, Transport and Resources | 27/07/2018 | 17/02/2010 | As required | 2000 | 0 | 0 | 1 |
| Groundwater Boreholes Fed Uni | Federation University Australia | 21/12/2017 | 07/01/2014 | As required | 2000 | 0 | 0 | 0 |
| Historical Mining Activity - Shafts | State Government Victoria - Department of Economic Development, Jobs, Transport and Resources | 18/10/2018 | 20/07/2018 | As required | 1000 | 0 | 0 | 0 |
| Geological Units 1:250,000 | State Government Victoria - Department of Economic Development, Jobs, Transport and Resources | 13/01/2015 | 24/06/2014 | Unknown | 1000 | 1 | - | 3 |
| Geological Structures 1:250,000 | State Government Victoria - Department of Economic Development, Jobs, Transport and Resources | 13/01/2015 | 24/06/2014 | Unknown | 1000 | 0 | - | 0 |
| Shear zones 250k | State Government Victoria - Department of Economic Development, Jobs, Transport and Resources | 13/01/2015 | 24/06/2014 | Unknown | 1000 | 0 | - | 0 |
| Atlas of Australian Soils | ABARES | 19/05/2017 | 17/02/2011 | As required | 1000 | 1 | 2 | 3 |
| Victorian Soil Type Mapping | State Government Victoria - Department of Economic Development, Jobs, Transport and Resources | 24/08/2017 | 21/03/2016 | Unknown | 1000 | 4 | 4 | 7 |
| Atlas of Australian Acid Sulfate Soils | CSIRO | 19/01/2017 | 21/02/2013 | As required | 1000 | 1 | 1 | 2 |
| Coastal Acid Sulfate Soils | State Government Victoria - Department of Economic Development, Jobs, Transport and Resources | 28/03/2017 | 30/03/2011 | None planned | 1000 | 0 | 0 | 0 |
| Planning Scheme Zones | State Government Victoria - Department of Environment, Land, Water & Planning | 21/04/2020 | 17/04/2020 | Monthly | 1000 | 1 | 8 | 13 |
| Planning Scheme Overlay | State Government Victoria - Department of Environment, Land, Water & Planning | 21/04/2020 | 17/04/2020 | Monthly | 1000 | 4 | 12 | 26 |
| Commonwealth Heritage List | Australian Government Department of the Environment and Energy - Heritage Branch | 04/02/2020 | 31/07/2018 | Quarterly | 1000 | 0 | 0 | 0 |
| National Heritage List | Australian Government Department of the Environment and Energy - Heritage Branch | 04/02/2020 | 20/11/2019 | Quarterly | 1000 | 0 | 0 | 0 |
| Victorian Heritage Register | State Government Victoria - Department of Environment, Land, Water & Planning | 04/02/2020 | 04/02/2020 | Quarterly | 1000 | 0 | 0 | 0 |
| Cultural Heritage Sensitivity | State Government Victoria - Department of Premier and Cabinet | 12/02/2020 | 12/02/2020 | Quarterly | 1000 | 0 | 3 | 14 |
| Bushfire Prone Area | State Government Victoria - Department of Transport, Planning and Local Infrastructure | 21/04/2020 | 19/04/2020 | Quarterly | 1000 | 1 | 2 | 2 |
| Fire History | State Government Victoria - Department of Environment, Land, Water & Planning | 05/02/2020 | 31/08/2019 | Quarterly | 1000 | 0 | 0 | 0 |
| Flood - 1 in 100 Year Modelled Flood Extent | State Government Victoria - Department of Environment, Land, Water & Planning | 05/02/2020 | 31/12/2014 | Quarterly | 1000 | 0 | 0 | 0 |
| Victorian Coastal Inundation Sea Level Rise | State Government Victoria - Department of Environment, Land, Water & Planning | 10/04/2018 | 24/10/2017 | Unknown | 1000 | 0 | 0 | 0 |
| Native Vegetation (Modelled 2005 Ecological Vegetation Classes) | State Government Victoria - Department of Environment, Land, Water & Planning | 13/01/2015 | 31/12/2005 | None planned | 1000 | 4 | 4 | 8 |
| Ramsar Wetland Areas in Victoria | State Government Victoria - Department of Environment, Land, Water & Planning | 28/03/2017 | 24/06/2013 | None planned | 1000 | 0 | 0 | 0 |
| Groundwater Dependent Ecosystems Atlas | Bureau of Meteorology | 14/08/2017 | 15/05/2017 | Unknown | 1000 | 5 | 5 | 5 |
| Inflow Dependent Ecosystems Likelihood | Bureau of Meteorology | 14/08/2017 | 15/05/2017 | Unknown | 1000 | 5 | 5 | 8 |

Site Diagram

Bridge Inn and Cookes Roads, Mernda, VIC 3754



499036m²

Legend

- ▭ Site Boundary
- ▭ Internal Parcel Boundaries

Total Area: 499036m²

Total Perimeter: 3336m

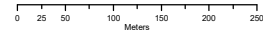
Disclaimers:

Measurements are approximate only and may have been simplified or smaller lengths removed for readability.

Where there are multiple lots of the same plan and parcel, a single label will be shown with an asterisk in front. Please use Lassi to verify which specific lots are associated with this parcel.

Parcels that make up a small percentage of the total site area have not been labelled for increased legibility.

Scale:



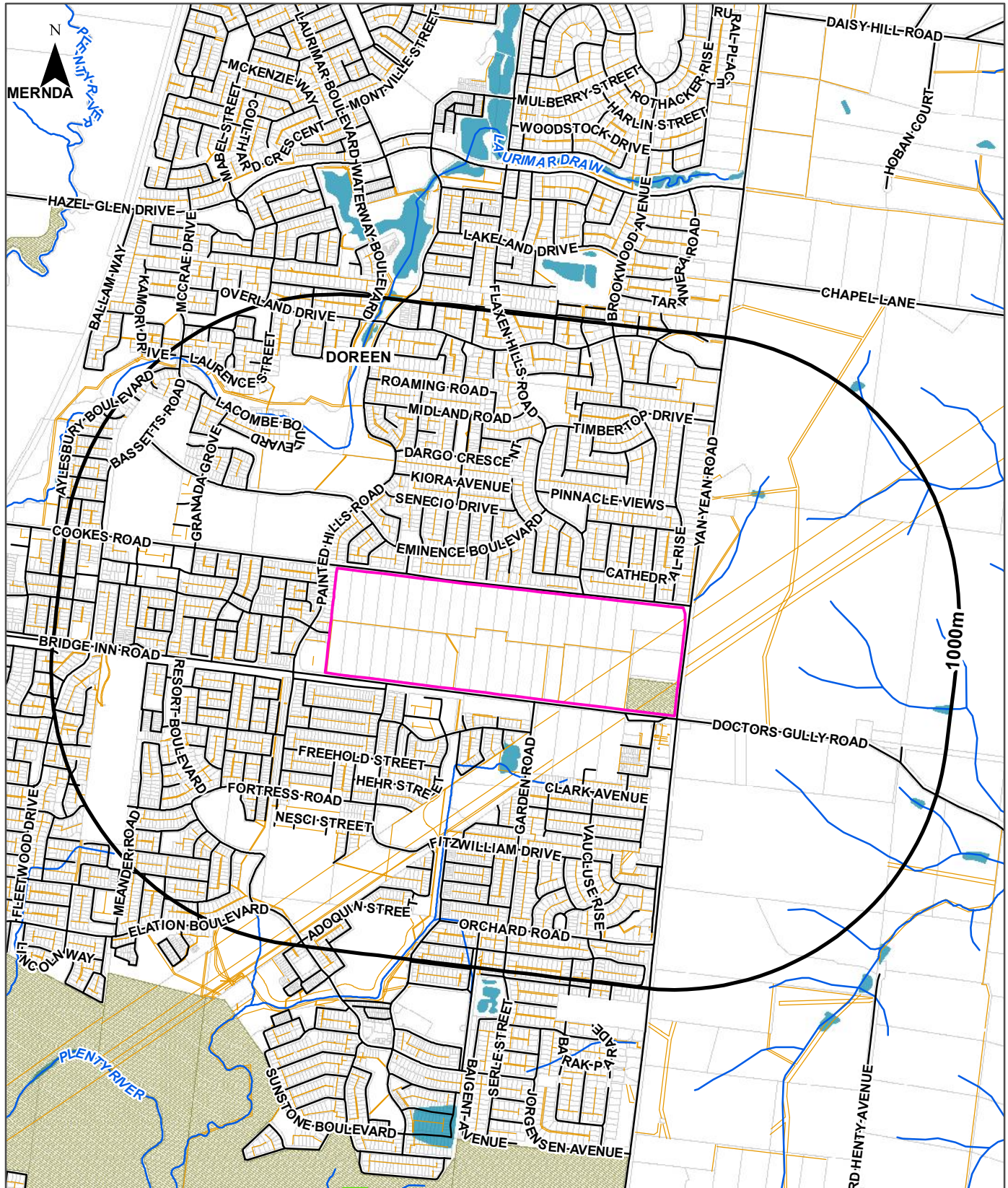
Data Sources: Aerial Imagery: © Aerometrex Pty Ltd

Coordinate System:
GDA 1994 MGA Zone 55

Date: 21 April 2020

Topographic Data

Bridge Inn and Cookes Roads, Mernda, VIC 3754



Legend

| | | | | |
|---------------------|----------------------------|---------------|---------------------------|-------------|
| Site Boundary | Water Area | Major Road | Railway | Watercourse |
| Report Buffer | Crown or Commonwealth Land | Road | Light Rail | Easement |
| Property Boundaries | Statewide Forest | Track/Pathway | Rail - Underground/Tunnel | |

| | | | |
|---------------|--|--|----------------------------|
| <p>Scale:</p> | <p>Data Sources: Property Boundaries - State Government Victoria - Department of Environment, Land, Water & Planning</p> | <p>Coordinate System: GDA 1994 MGA Zone 55</p> | <p>Date: 21 April 2020</p> |
|---------------|--|--|----------------------------|

Elevation Contours (m AHD)

Bridge Inn and Cookes Roads, Mernda, VIC 3754



EPA Priority Sites & Pollution Notices

Bridge Inn and Cookes Roads, Mernda, VIC 3754

Current EPA Priority Sites Register

Sites on the current EPA priority sites register that exist within the dataset buffer:

| Notice No | Address | Suburb | Issue | Loc Conf | Dist (m) | Direction |
|-----------|----------------------|--------|-------|----------|----------|-----------|
| N/A | No records in buffer | | | | | |

Priority Sites Data Custodian: State Government Victoria - Environment Protection Authority (EPA)

Former EPA Priority Sites & Other Pollution Notices

Sites within the dataset buffer that have been issued a Pollution Notice:

Note. Due to pollution notices being revoked and removed from published lists this is not an exhaustive list of all past pollution notices.

| Notice No | Notice Type | Company | Address | Suburb | Status | Issue | Date Issued | Loc Conf | Dist | Dir |
|-----------|----------------------|---------|---------|--------|--------|-------|-------------|----------|------|-----|
| N/A | No records in buffer | | | | | | | | | |

Pollution Notice Data Custodian: State Government Victoria - Environment Protection Authority (EPA)

PFAS Investigation & Management Programs

Bridge Inn and Cookes Roads, Mernda, VIC 3754

EPA PFAS Site Investigations

Sites being investigated by the EPA for PFAS contamination within the dataset buffer:

| Map ID | Site Name | Address | Location Confidence | Distance | Direction |
|--------|----------------------|---------|---------------------|----------|-----------|
| N/A | No records in buffer | | | | |

EPA PFAS Site Investigations Data Custodian: State Government Victoria - Environment Protection Authority (EPA)

Defence PFAS Investigation & Management Program Investigation Sites

Sites being investigated by the Department of Defence for PFAS contamination within the dataset buffer:

| Map ID | Base Name | Address | Location Confidence | Distance | Direction |
|--------|----------------------|---------|---------------------|----------|-----------|
| N/A | No records in buffer | | | | |

Defence PFAS Investigation & Management Program Data Custodian: Department of Defence, Australian Government

Defence PFAS Investigation & Management Program Management Sites

Sites being managed by the Department of Defence for PFAS contamination within the dataset buffer:

| Map ID | Base Name | Address | Location Confidence | Distance | Direction |
|--------|----------------------|---------|---------------------|----------|-----------|
| N/A | No records in buffer | | | | |

Defence PFAS Investigation & Management Program Data Custodian: Department of Defence, Australian Government

Airservices Australia National PFAS Management Program

Sites being investigated or managed by Airservices Australia for PFAS contamination within the dataset buffer:

| Map ID | Site Name | Impacts | Location Confidence | Distance | Direction |
|--------|----------------------|---------|---------------------|----------|-----------|
| N/A | No records in buffer | | | | |

Airservices Australia National PFAS Management Program Data Custodian: Airservices Australia

Defence Sites

Bridge Inn and Cookes Roads, Mernda, VIC 3754

Defence 3 Year Regional Contamination Investigation Program

Sites which have been assessed as part of the Defence 3 Year Regional Contamination Investigation Program within the dataset buffer:

| Property ID | Base Name | Address | Known Contamination | Loc Conf | Dist | Dir |
|-------------|----------------------|---------|---------------------|----------|------|-----|
| N/A | No records in buffer | | | | | |

Defence 3 Year Regional Contamination Investigation Program, Data Custodian: Department of Defence, Australian Government

EPA Records

Bridge Inn and Cookes Roads, Mernda, VIC 3754

EPA Environmental Audits

EPA environmental audit records that exist within the dataset buffer:

Note. Please click on CARMS No. to activate a hyperlink to online documentation. If link does not work, documentation may still be accessible via the EPA Interaction Portal.

| CARMS No | Transaction No | Site | Address | Suburb | Date Complete | Audit Category | Loc Conf | Distance | Direction |
|----------|----------------------|------|---------|--------|---------------|----------------|----------|----------|-----------|
| N/A | No records in buffer | | | | | | | | |

Environmental Audit Data Custodian: State Government Victoria - Environment Protection Authority (EPA)

EPA Records

Bridge Inn and Cookes Roads, Mernda, VIC 3754

EPA Groundwater Zones with Restricted Uses

EPA GQRUZ records that exist within the dataset buffer:

Note. Please click on CARMS No. to activate a hyperlink to online documentation.

| CARMS No | EPA Id | Site History | Site Address | Restricted Uses | Status | Loc Conf | Distance | Direction |
|----------|----------------------|--------------|--------------|-----------------|--------|----------|----------|-----------|
| N/A | No records in buffer | | | | | | | |

Environmental GQRUZ Data Custodian: State Government Victoria - Environment Protection Authority (EPA)

EPA Activities

Bridge Inn and Cookes Roads, Mernda, VIC 3754

EPA Licensed Activities

EPA licensed activities that exist within the dataset buffer:

| Trans No | Licence No | Licence Type | Organisation | Premise Ref | Premise Address 1 | Premise Address 2 | Activities | Loc Conf | Dist (m) | Direction |
|----------|----------------------|--------------|--------------|-------------|-------------------|-------------------|------------|----------|----------|-----------|
| N/A | No records in buffer | | | | | | | | | |

Licensed Activity Data Custodian: State Government Victoria - Environment Protection Authority (EPA)

Former EPA Licensed Activities

Former EPA licensed activities that exist within the dataset buffer:

| Licence No | Organisation | Premise Address | Suburb | Activities | Loc Conf | Dist (m) | Direction |
|------------|----------------------|-----------------|--------|------------|----------|----------|-----------|
| N/A | No records in buffer | | | | | | |

Former Licensed Activity Data Custodian: State Government Victoria - Environmental Protection Authority (EPA)

EPA Works Approvals

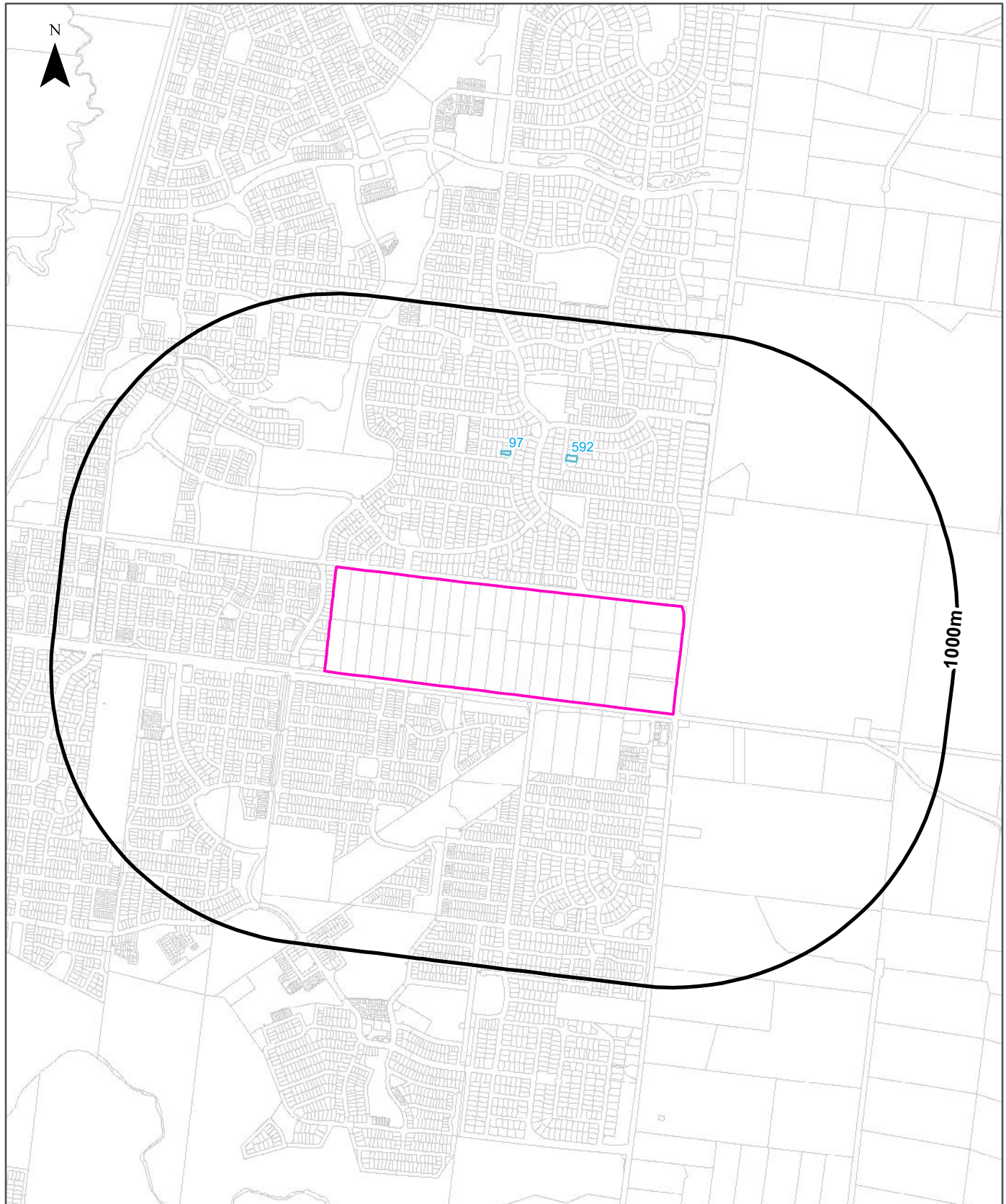
EPA works approvals that exist within the dataset buffer:

| Transaction No | Status | Approval No | Organisation | Premise Address | Suburb | Scheduled Categories | Loc Conf | Dist (m) | Direction |
|----------------|----------------------|-------------|--------------|-----------------|--------|----------------------|----------|----------|-----------|
| N/A | No records in buffer | | | | | | | | |

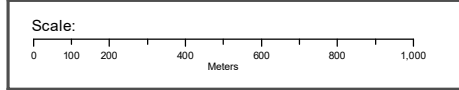
Works Approvals Data Custodian: State Government Victoria - Environment Protection Authority (EPA)

Waste Management Facilities & Landfills

Bridge Inn and Cookes Roads, Mernda, VIC 3754



| Legend | |
|---------------------|--|
| Site Boundary | National Waste Management Site |
| Report Buffer | Statewide Waste and Resource Recovery Infrastructure Plan Facility |
| Property Boundaries | EPA Prescribed Industrial Waste Site |
| | EPA Victorian Landfill Register |



Data Sources: Property Boundaries - State Government Victoria - Department of Environment, Land, Water & Planning

Coordinate System: GDA 1994 MGA Zone 55

Date: 21 April 2020

Waste Management Facilities & Landfills

Bridge Inn and Cookes Roads, Mernda, VIC 3754

National Waste Management Site Database

Sites on the National Waste Management Site Database within the dataset buffer:

| Site Id | Owner | Name | Address | Suburb | Class | Landfill | Reprocess | Transfer | Comments | Loc Conf | Dist (m) | Direction |
|---------|----------------------|------|---------|--------|-------|----------|-----------|----------|----------|----------|----------|-----------|
| N/A | No records in buffer | | | | | | | | | | | |

Waste Management Facilities Data Source: Australian Government Geoscience Australia

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Statewide Waste and Resource Recovery Infrastructure Plan Facilities

Statewide Waste and Resource Recovery Infrastructure Plan Facilities within the dataset buffer:

| Map Id | Owner | Site Name | Address | Suburb | Category | Sub Category | Loc Conf | Distance | Direction |
|--------|----------------------|-----------|---------|--------|----------|--------------|----------|----------|-----------|
| N/A | No records in buffer | | | | | | | | |

SWRRIPF Data Source: State Government Victoria - Department of Sustainability

EPA Prescribed Industrial Waste

EPA Prescribed Industrial Waste treaters, disposers and permitted transporters within the dataset buffer:

| Map Id | Company Name | Address | Suburb | Treatment/Disposal | Transport | Accredited Agent | EPA List Status | Loc Conf | Dist' (m) | Direct |
|--------|------------------------|-------------------|-----------------|--------------------|-----------|------------------|-------------------|---------------|-----------|--------|
| 97 | BURG TRANSPORT PTY LTD | 8 DARGO COURT | DOREEN VIC 3754 | No | Yes | No | Previous EPA List | Premise Match | 478m | North |
| 592 | SYNDICRETE PTY LTD | 11 TARA VALLEY CR | DOREEN VIC 3754 | No | Yes | No | Current EPA List | Premise Match | 481m | North |

Prescribed Industrial Waste Data Source: State Government Victoria - Environment Protection Authority (EPA)

EPA Victorian Landfill Register

EPA Victorian Landfill Register sites within the dataset buffer:

| Landfill Register No. | Site | Address | Operating Status | Est. Year Of Closure | Waste type | Loc Conf | Dist' (m) | Direction |
|-----------------------|------|---------|------------------|----------------------|------------|----------|-----------|-----------|
| No records in buffer | | | | | | | | |

EPA Victorian Landfill Register Data Source: State Government Victoria - Environment Protection Authority (EPA)

Former Gasworks and Liquid Fuel Facilities

Bridge Inn and Cookes Roads, Mernda, VIC 3754

Former Gasworks

Former Gasworks identified from various historical sources within the dataset buffer:

Note - As this is a dataset collated from various historical sources, it is not an exhaustive list of all former Gasworks

| Map Id | Site Name | Date Opened | Year Closed | Location Confidence | Distance | Direction |
|--------|----------------------|-------------|-------------|---------------------|----------|-----------|
| N/A | No records in buffer | | | | | |

Former Gasworks Data Source: Collated from various historical sources

National Liquid Fuel Facilities

National Liquid Fuel Facilities within the dataset buffer:

| Map Id | Owner | Name | Address | Suburb | Class | Operational Status | Operator | Revision Date | Loc Conf | Dist (m) | Direction |
|--------|----------------------|------|---------|--------|-------|--------------------|----------|---------------|----------|----------|-----------|
| N/A | No records in buffer | | | | | | | | | | |

National Liquid Fuel Facilities Data Source: Geoscience Australia

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Historical Business Directories

Bridge Inn and Cookes Roads, Mernda, VIC 3754

Business Directory Records 1905-1991 Premise or Road Intersection Matches

Universal Business Directory and Sands & McDougall Directory records, from years 1991, 1980, 1970, 1960, 1950, 1945, 1925 & 1905, mapped to a premise or road intersection within the dataset buffer:

| Map Id | Business Activity | Premise | Ref No. | Year | Location Confidence | Distance to Property Boundary or Road Intersection | Direction |
|--------|----------------------|---------|---------|------|---------------------|--|-----------|
| | No records in buffer | | | | | | |

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Business Directory Records 1905-1991 Road or Area Matches

Universal Business Directory and Sands & McDougall Directory records, from years 1991, 1980, 1970, 1960, 1950, 1945, 1925 & 1905, mapped to a road or an area, within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found, or the road has been renumbered since the directory was published:

| Map Id | Business Activity | Premise | Ref No. | Year | Location Confidence | Distance to Road Corridor or Area |
|--------|----------------------|---------|---------|------|---------------------|-----------------------------------|
| | No records in buffer | | | | | |

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Historical Business Directories

Bridge Inn and Cookes Roads, Mernda, VIC 3754

Dry Cleaners, Motor Garages & Service Stations Premise or Road Intersection Matches

Dry Cleaners, Motor Garages & Service Stations from Sands & McDougall's Directories and UBD Business Directories, mapped to a premise or road intersection within the dataset buffer.

| Map Id | Business Activity | Premise | Ref No. | Year | Location Confidence | Distance to Property Boundary or Road Intersection | Direction |
|--------|----------------------|---------|---------|------|---------------------|--|-----------|
| | No records in buffer | | | | | | |

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Dry Cleaners, Motor Garages & Service Stations Road or Area Matches

Dry Cleaners, Motor Garages & Service Stations from UBD Business Directories and Sands & McDougall's Directories, mapped to a road or an area within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found, or the road has been renumbered since the directory was published.

| Map Id | Business Activity | Premise | Ref No. | Year | Location Confidence | Distance to Road Corridor or Area |
|--------|----------------------|---------|---------|------|---------------------|-----------------------------------|
| | No records in buffer | | | | | |



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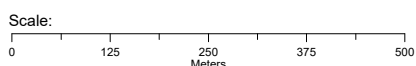
Aerial Imagery 2019

Bridge Inn and Cookes Roads, Mernda, VIC 3754



Legend

-  Site Boundary
-  Buffer 150m



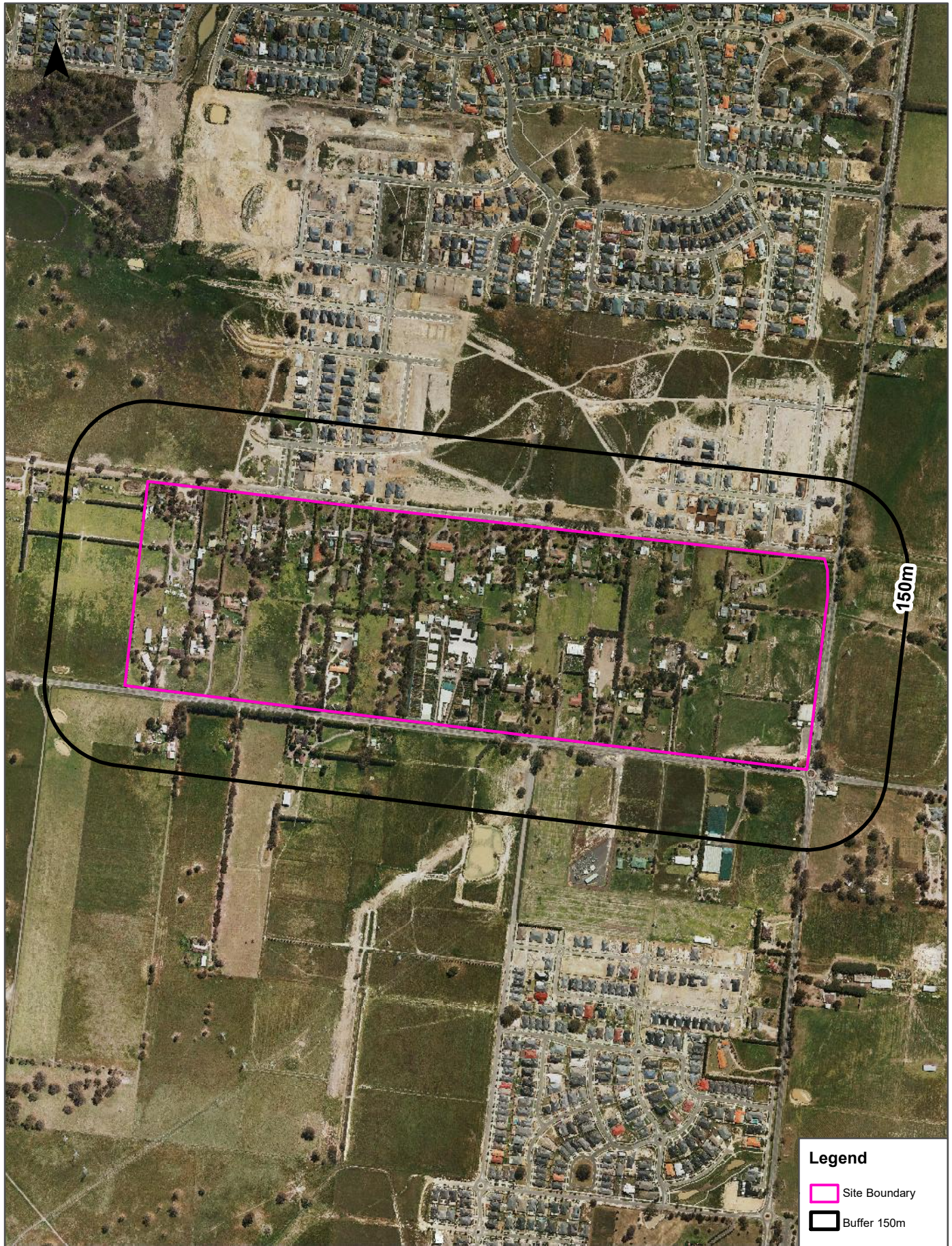
Data Sources: Aerial Imagery © Aerometrex Pty Ltd

Coordinate System:
GDA 1994 MGA Zone 55

Date: 21 April 2020



Aerial Imagery 2009

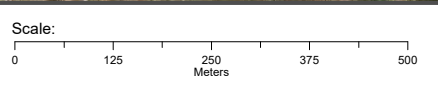
Bridge Inn and Cookes Roads, Mernda, VIC 3754



150m

Legend

-  Site Boundary
-  Buffer 150m



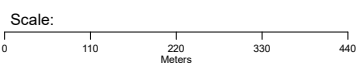
Data Sources: Aerial Imagery © Aerometrex Pty Ltd

Coordinate System:
GDA 1994 MGA Zone 55

Date: 21 April 2020

Aerial Imagery 2005

Bridge Inn and Cookes Roads, Mernda, VIC 3754



Data Source Aerial Imagery: © 2020 Google Inc, used with permission. Google and the Google logo are registered trademarks of Google Inc.

Coordinate System:
GDA 1994 MGA Zone 55

Date: 21 April 2020

Aerial Imagery 1991

Bridge Inn and Cookes Roads, Mernda, VIC 3754



Scale:
0 110 220 330 440
Meters

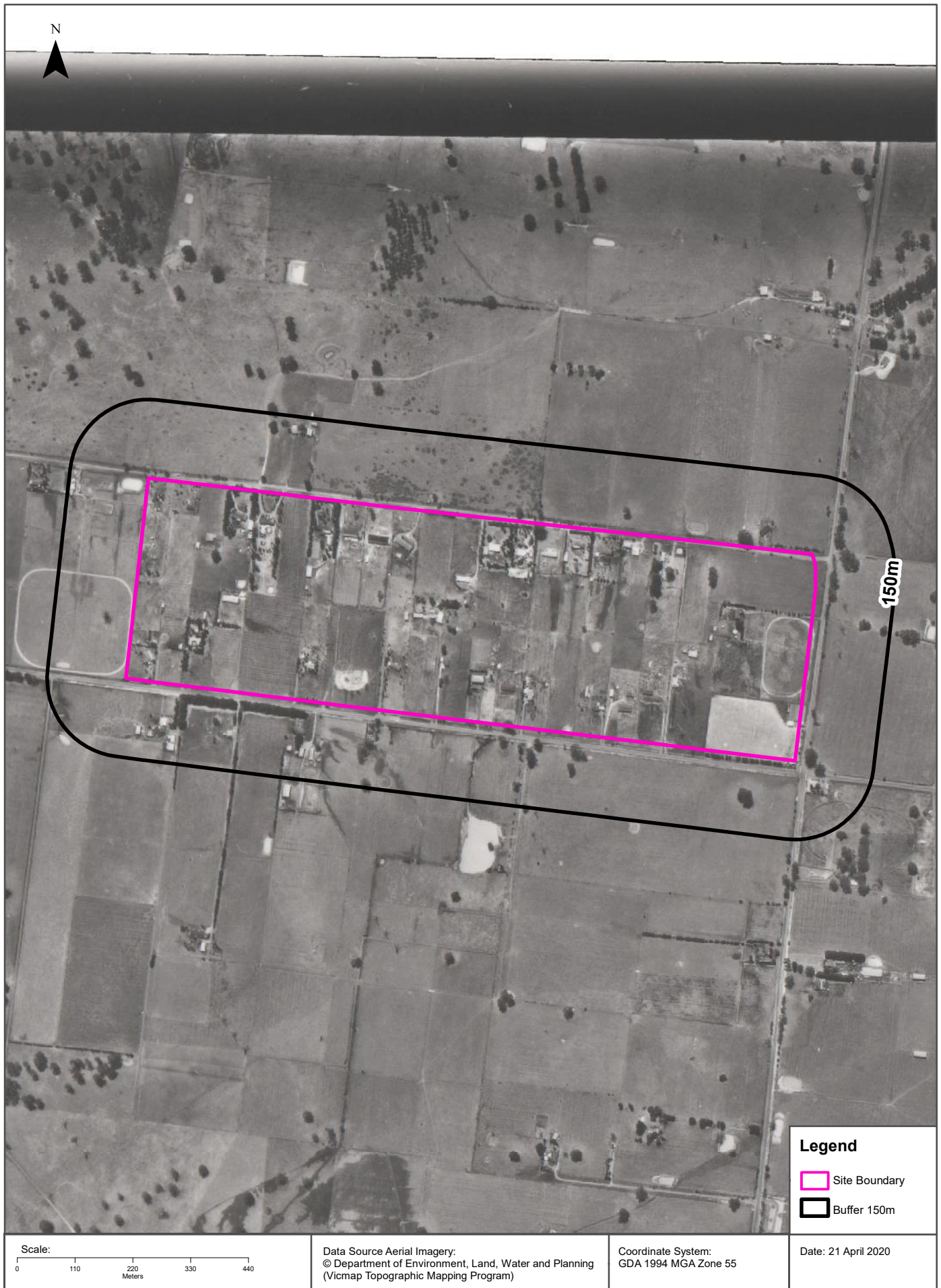
Data Source Aerial Imagery:
© Department of Environment, Land, Water and Planning
(Vicmap Topographic Mapping Program)

Coordinate System:
GDA 1994 MGA Zone 55

Date: 21 April 2020

Aerial Imagery 1982

Bridge Inn and Cookes Roads, Mernda, VIC 3754





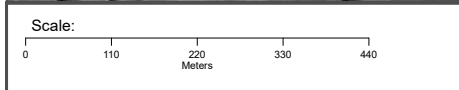
Aerial Imagery 1974

Bridge Inn and Cookes Roads, Mernda, VIC 3754



Legend

-  Site Boundary
-  Buffer 150m



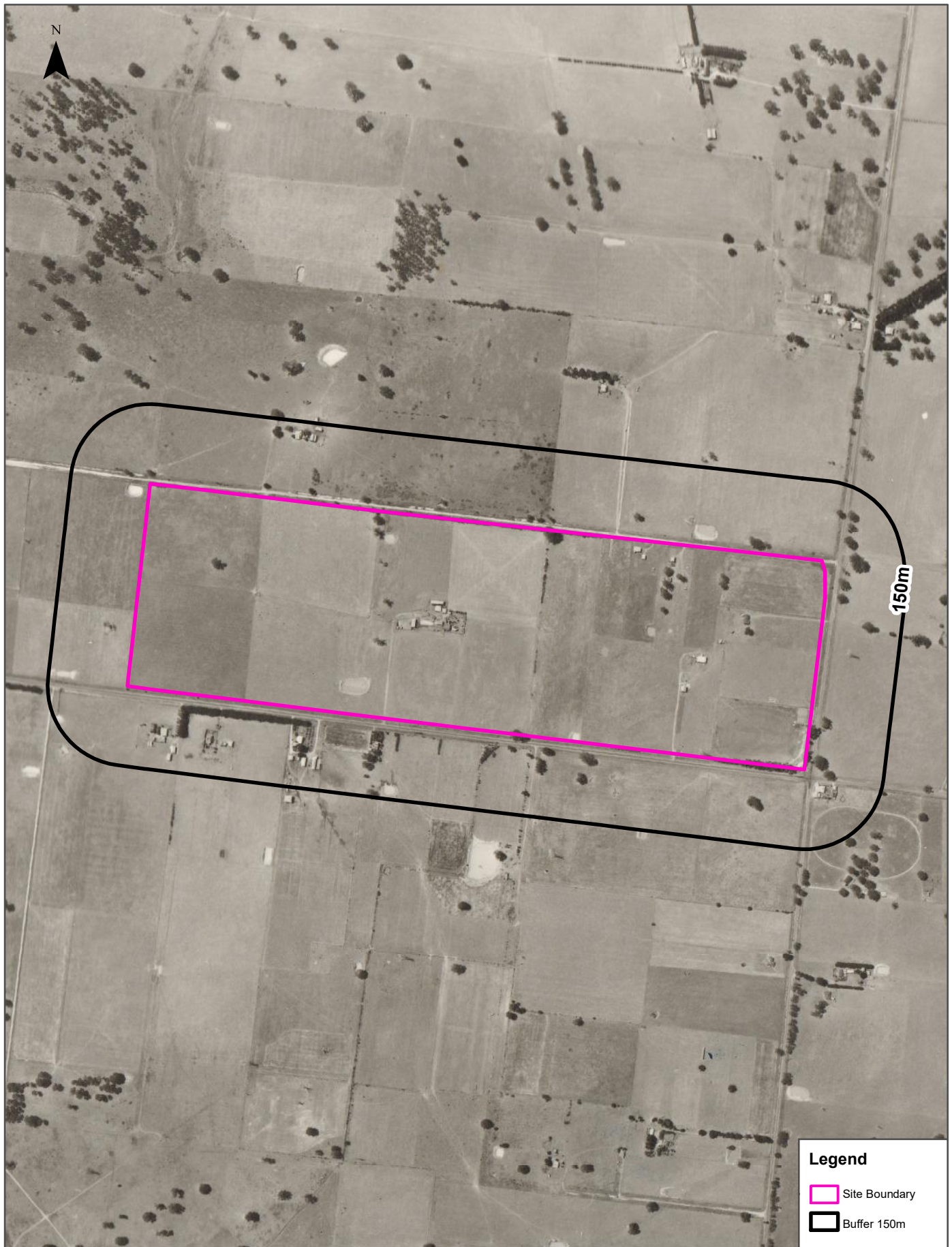
Data Source Aerial Imagery:
© Department of Environment, Land, Water and Planning
(Vicmap Topographic Mapping Program)

Coordinate System:
GDA 1994 MGA Zone 55



Date: 21 April 2020

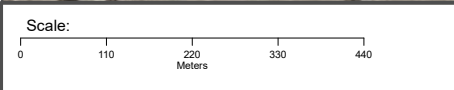
Aerial Imagery 1966

Bridge Inn and Cookes Roads, Mernda, VIC 3754



Legend

-  Site Boundary
-  Buffer 150m



Data Source Aerial Imagery:
© Department of Environment, Land, Water and Planning
(Vicmap Topographic Mapping Program)

Coordinate System:
GDA 1994 MGA Zone 55

Date: 21 April 2020

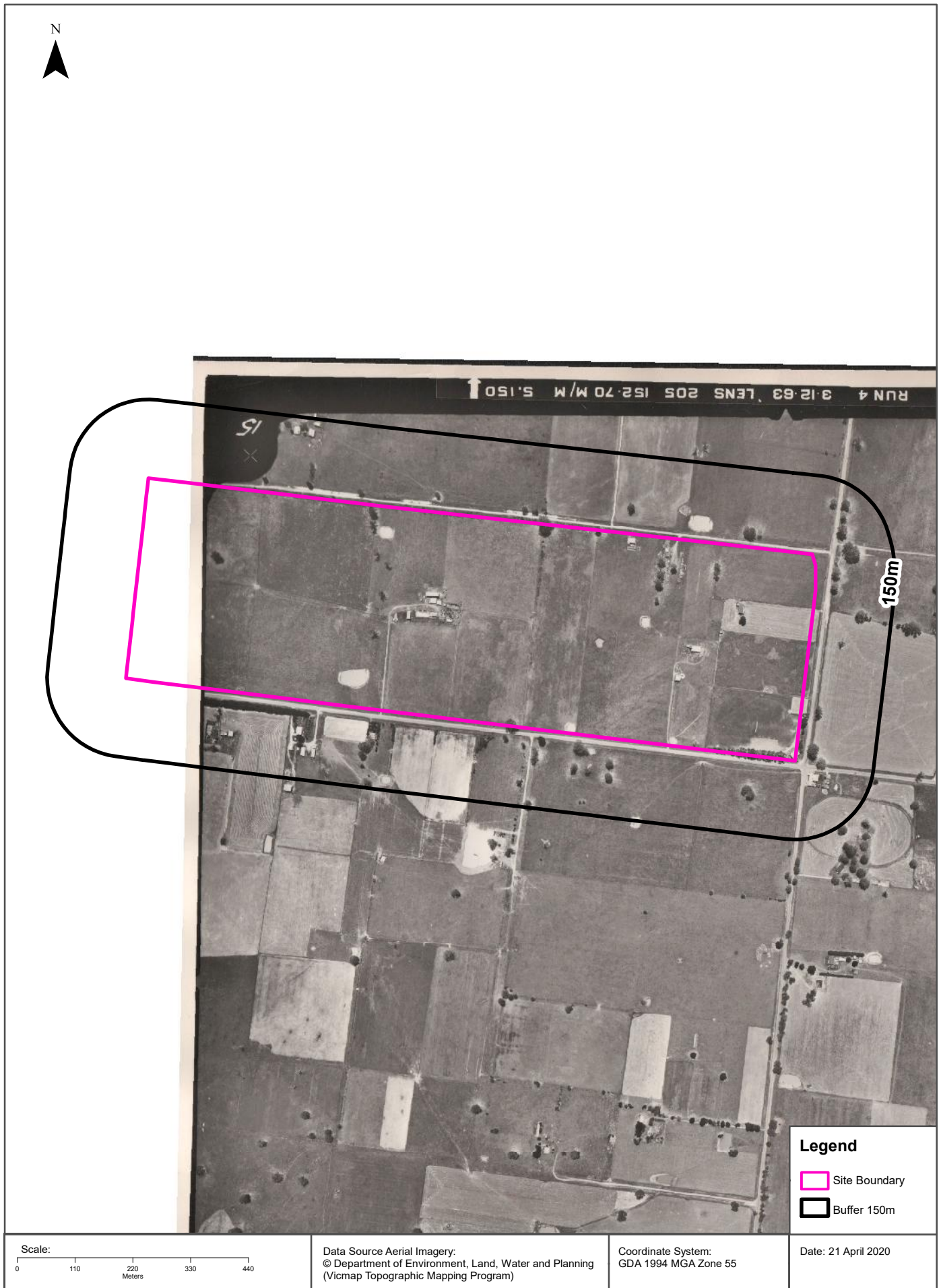
Aerial Imagery 1963

Bridge Inn and Cookes Roads, Mernda, VIC 3754



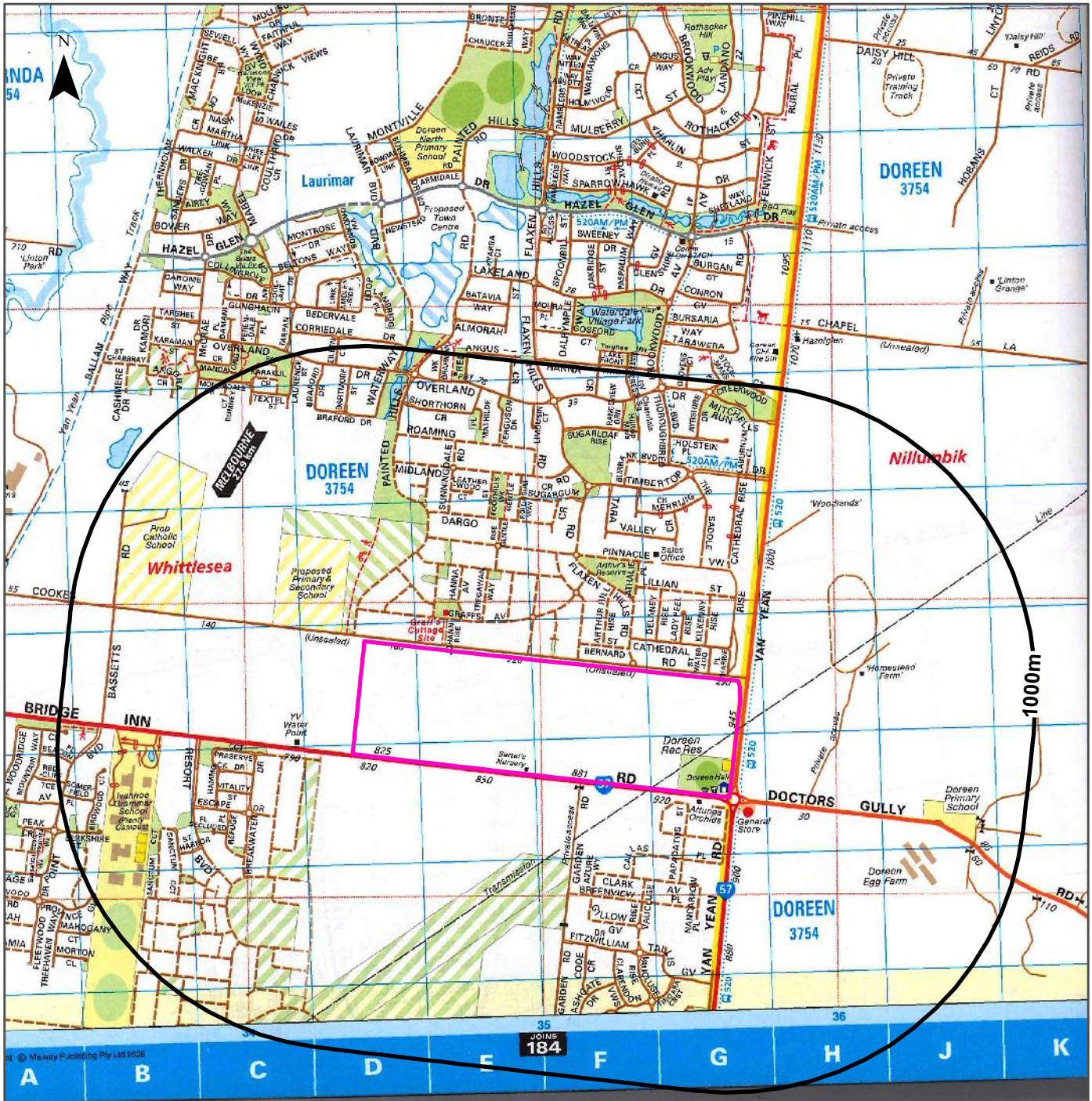
Aerial Imagery 1963

Bridge Inn and Cookes Roads, Mernda, VIC 3754



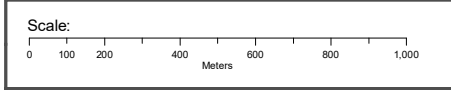
Historical Map 2009

Bridge Inn and Cookes Roads, Mernda, VIC 3754



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| Legend | |
|--------|---------------|
| | Site Boundary |
| | Buffer 1000m |



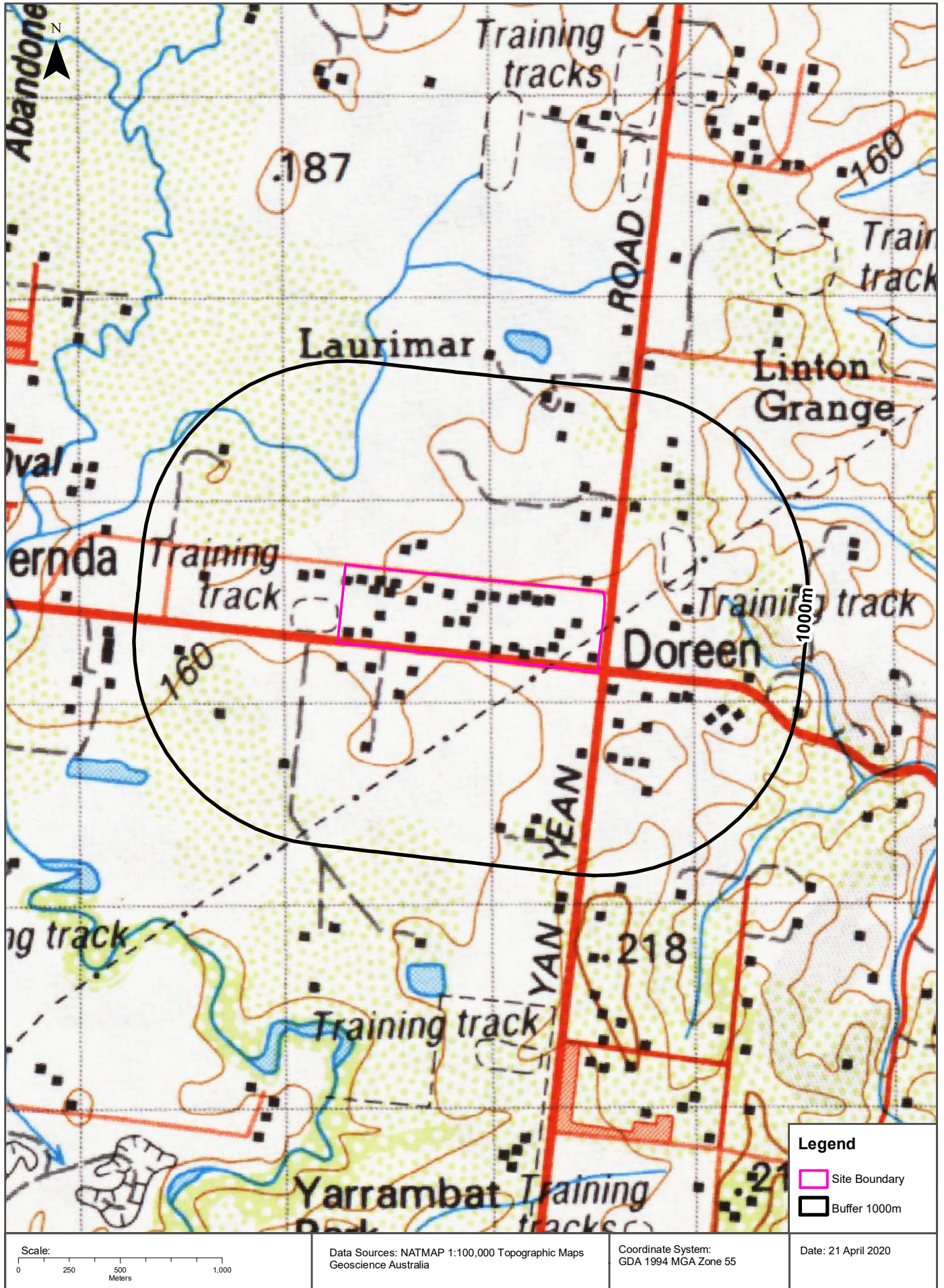
Data Sources: Maps reproduced from 2009, Edition 36 of the Melway Street Directory

Coordinate System: GDA 1994 MGA Zone 55

Date: 21 April 2020

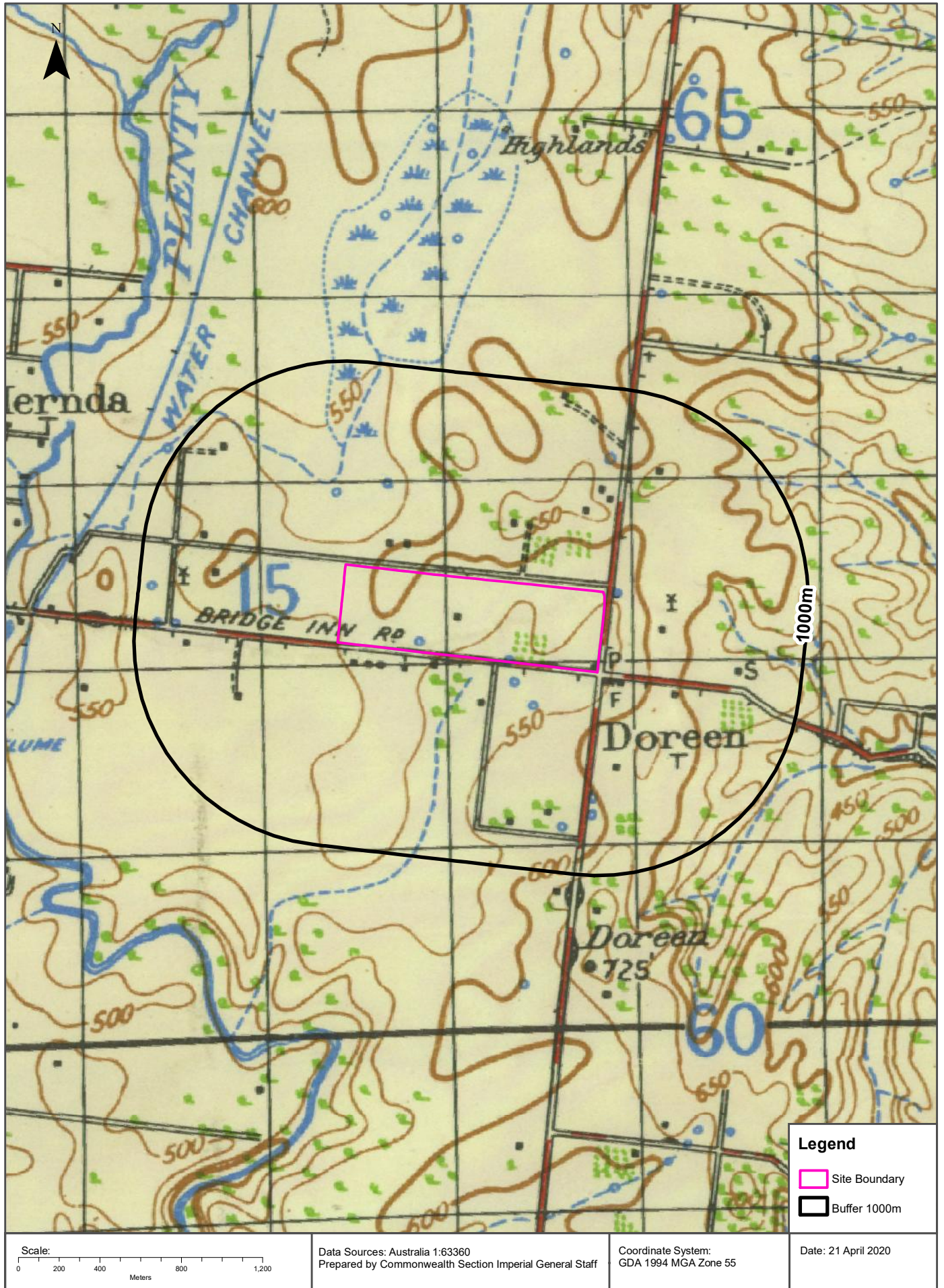
Historical Map 1982

Bridge Inn and Cookes Roads, Mernda, VIC 3754



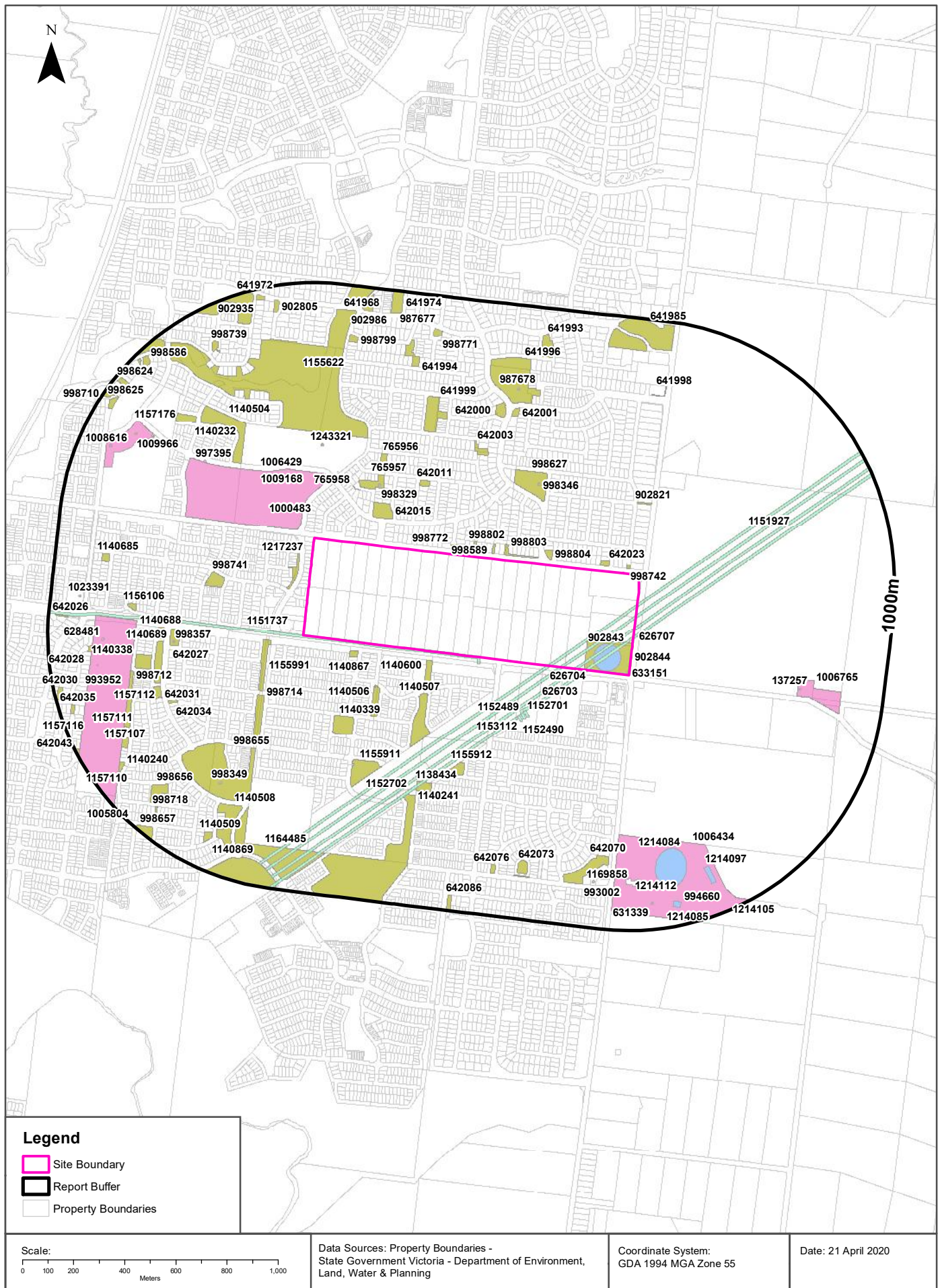
Historical Map c.1930

Bridge Inn and Cookes Roads, Mernda, VIC 3754



Features of Interest

Bridge Inn and Cookes Roads, Mernda, VIC 3754



Features of Interest

Bridge Inn and Cookes Roads, Mernda, VIC 3754

Features of Interest

Features of Interest within the dataset buffer:

| Feature Id | Feature Type | Feature Sub Type | Name | Distance | Direction |
|------------|------------------|------------------------|---------------------------------------|----------|------------|
| 626703 | power line | power transmission | Dederang-South Morang 1st | 0m | Onsite |
| 626704 | power line | power transmission | Dederang-South Morang 2nd | 0m | Onsite |
| 626707 | power line | power transmission | Eildon-South Morang | 0m | Onsite |
| 633151 | community venue | hall | | 0m | Onsite |
| 902843 | sport facility | sports ground | Doreen - Sportsfield | 0m | Onsite |
| 902844 | reserve | park | Doreen Recreation Reserve | 0m | Onsite |
| 1151737 | power line | power sub transmission | | 0m | Onsite |
| 1151927 | power line | power sub transmission | | 0m | Onsite |
| 998802 | reserve | park | Vitae Walkway | 20m | North |
| 998803 | reserve | park | Bernard Tree Reserve | 20m | North East |
| 998804 | reserve | park | Flaxen Hills Tree Reserve | 20m | North East |
| 998772 | reserve | park | Dendron Walkway | 20m | North |
| 998589 | reserve | park | Bernard Walkway | 20m | North |
| 998742 | reserve | park | Harrie Reserve | 20m | East |
| 642023 | reserve | park | Waterloo Tree Reserve | 20m | East |
| 1140867 | reserve | park | | 37m | West |
| 1140600 | reserve | park | | 37m | South West |
| 1217237 | reserve | park | | 52m | West |
| 1006429 | education centre | education complex | | 75m | North West |
| 642015 | reserve | park | Graffs Cottage Park | 109m | North West |
| 1155991 | reserve | park | | 131m | West |
| 1000483 | care facility | child care | Hazel Glen College Childrens Programs | 149m | North West |
| 1140506 | reserve | park | | 161m | South West |
| 1140507 | reserve | park | | 165m | South West |
| 1152701 | power line | power sub transmission | | 189m | South East |
| 1153112 | power line | power sub transmission | | 198m | South East |
| 1152489 | power line | power sub transmission | | 198m | South East |
| 1152490 | power line | power sub transmission | | 208m | South |
| 1152702 | power line | power sub transmission | | 208m | South West |
| 765958 | reserve | park | | 208m | North West |

| Feature Id | Feature Type | Feature Sub Type | Name | Distance | Direction |
|------------|-----------------------|------------------------------|-----------------------------------|----------|------------|
| 765957 | reserve | park | | 215m | North West |
| 998329 | recreational resource | playground | Senecio Park Playground | 230m | North West |
| 1009168 | health facility | maternal/child health centre | Hazel Glen Mch | 231m | North West |
| 998627 | reserve | park | Pinnacle Park | 245m | North East |
| 642011 | reserve | park | Dilwynia Tree Reserve | 253m | North |
| 902821 | reserve | park | Cathedral Walkway | 278m | North East |
| 998714 | reserve | park | Flicker Verge | 284m | South West |
| 765956 | reserve | park | | 292m | North West |
| 1140339 | reserve | park | | 296m | South West |
| 998346 | recreational resource | playground | Pinnacle Park Playground | 304m | North East |
| 998741 | reserve | park | | 333m | West |
| 1243321 | community venue | hall | Painted Hills Community Pavilion | 360m | North West |
| 642003 | reserve | park | Dargo Park | 398m | North |
| 1140504 | reserve | park | | 410m | North West |
| 641968 | reserve | park | Laurimar Creek Reserve | 411m | North West |
| 1155912 | reserve | park | | 416m | South |
| 1155911 | reserve | park | | 458m | South West |
| 641999 | reserve | park | Midland Park | 465m | North |
| 998655 | reserve | park | Fortress Park | 483m | South West |
| 642027 | reserve | park | Preserve Park | 484m | West |
| 998357 | recreational resource | playground | Preserve Park Playground | 506m | West |
| 1138434 | reserve | park | Fitzwilliam Park | 514m | South |
| 997395 | education centre | primary/secondary school | Hazel Glen College | 519m | North West |
| 1140688 | reserve | park | | 544m | West |
| 1140689 | reserve | park | | 550m | West |
| 642000 | reserve | park | Sugargum Tree Reserve | 554m | North |
| 642034 | reserve | park | | 557m | West |
| 642001 | reserve | park | Timbertop Tree Reserve | 564m | North |
| 1140241 | reserve | park | | 569m | South |
| 642031 | reserve | park | Resort Tree Reserve | 597m | West |
| 1140338 | reserve | park | | 601m | West |
| 641996 | reserve | park | Timbertop Park | 614m | North |
| 1006434 | education centre | education complex | | 625m | South East |
| 1155622 | recreational resource | playground | Laurimar Creek Reserve Playground | 648m | North West |
| 1140232 | reserve | park | | 649m | North West |
| 1005804 | education centre | education complex | | 657m | South West |
| 1006765 | education centre | education complex | | 658m | East |

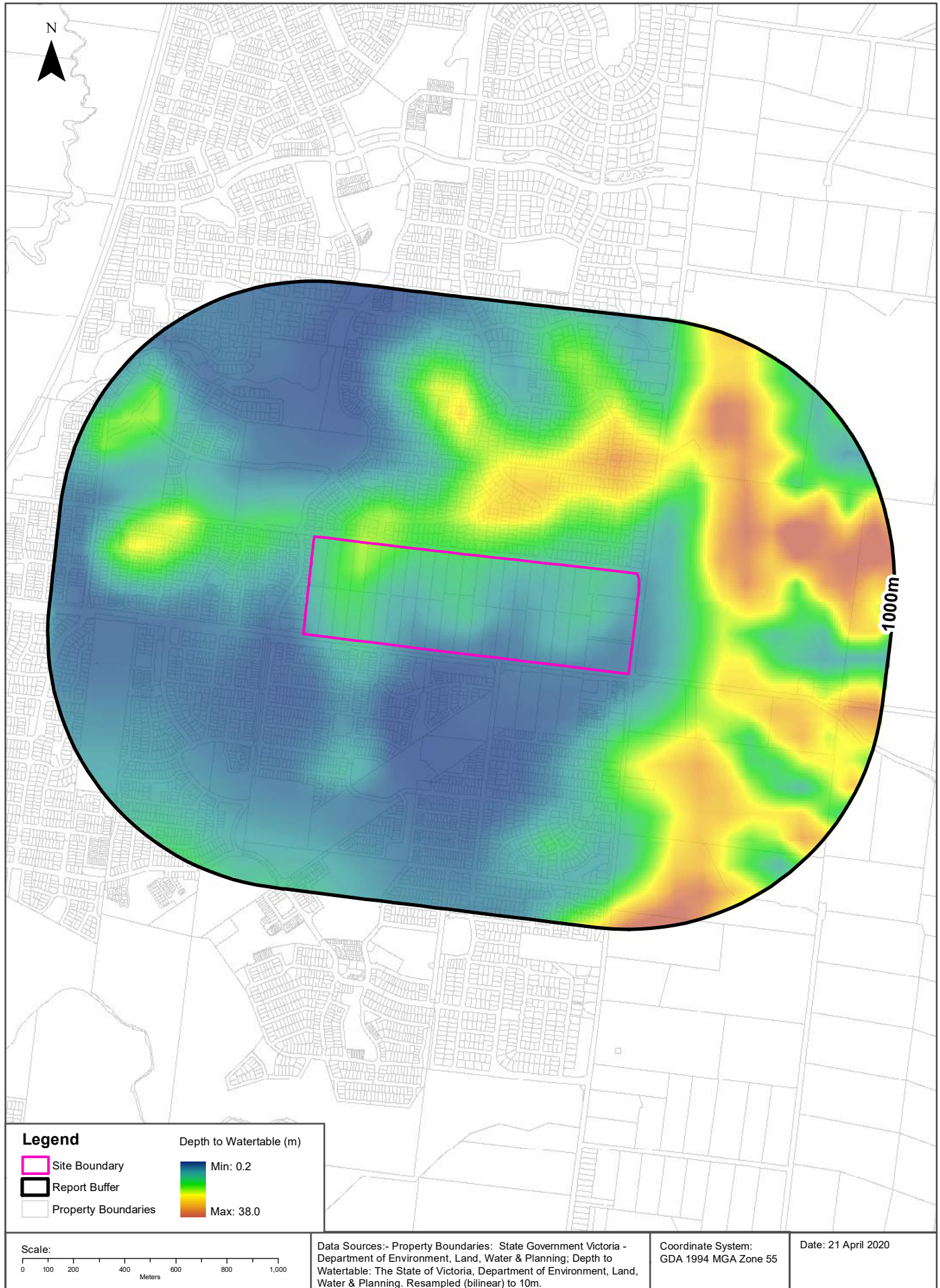
| Feature Id | Feature Type | Feature Sub Type | Name | Distance | Direction |
|------------|-----------------------|--------------------------|---|----------|------------|
| 998349 | recreational resource | playground | Fortress Park Playground | 660m | South West |
| 137257 | education centre | primary school | Doreen Primary School | 664m | East |
| 1156106 | reserve | park | | 664m | West |
| 987678 | recreational resource | playground | Timbertop Park Playground | 667m | North |
| 998712 | reserve | park | Sanctum Tree Reserve | 681m | West |
| 1214084 | sport facility | sports ground | | 697m | South East |
| 641998 | reserve | park | | 704m | North East |
| 1164485 | reserve | park | | 706m | South West |
| 1157112 | sport facility | sports ground | | 712m | West |
| 641994 | reserve | park | Shorthorn Red Gum Reserve | 712m | North |
| 1140508 | reserve | park | | 713m | South West |
| 642070 | reserve | park | Orchard Park | 716m | South East |
| 1157176 | education centre | education complex | | 743m | North West |
| 993952 | care facility | child care | Camp Australia - Ivanhoe Grammar Plenty Valley Campus Oshc | 754m | West |
| 1157105 | sport facility | sports ground | | 759m | West |
| 642073 | reserve | park | Smokey Park | 771m | South |
| 998799 | reserve | park | Painted Hills Red Gum | 778m | North West |
| 763464 | education centre | primary/secondary school | Ivanhoe Grammar School | 782m | South West |
| 628481 | education centre | primary/secondary school | Ivanhoe Grammar School - Plenty Campus | 782m | West |
| 998656 | reserve | park | Succession Tree Reserve | 787m | South West |
| 1140685 | reserve | park | | 789m | West |
| 642076 | reserve | park | Ashgate Red Gum Reserve | 800m | South |
| 1009966 | care facility | child care | Camp Australia - St Paul The Apostle Catholic Primary School Oshc | 804m | North West |
| 1157116 | sport facility | sports ground | | 806m | West |
| 641993 | reserve | park | Rangeview Park | 807m | North |
| 1214097 | sport facility | sports ground | | 808m | South East |
| 1169858 | care facility | child care | Plenty Kids Early Learning Centre | 809m | South East |
| 998739 | reserve | park | Mondadale Tree Reserve | 814m | North West |
| 993002 | care facility | child care | Butterflies Child Care Centre Pty Ltd | 815m | South East |
| 642028 | reserve | park | Birdwood Reserve | 829m | West |
| 998771 | reserve | park | | 837m | North |
| 1157111 | sport facility | sports ground | | 847m | West |
| 1140509 | reserve | park | | 851m | South West |
| 1214112 | sport facility | sports ground | | 860m | South East |
| 1140240 | reserve | park | | 861m | South West |
| 1157107 | sport facility | sports ground | | 870m | West |
| 1008616 | education centre | primary school | St Paul The Apostle Catholic Primary School | 871m | North West |

| Feature Id | Feature Type | Feature Sub Type | Name | Distance | Direction |
|------------|-----------------------|--------------------------|---|----------|------------|
| 641985 | reserve | park | Mitchells Run Park | 874m | North East |
| 641972 | reserve | park | Overland Park | 874m | North West |
| 998718 | reserve | park | Succession Walkway | 882m | South West |
| 1023391 | care facility | child care | Mcm Early Years Hub Doreen | 883m | West |
| 631339 | education centre | primary/secondary school | Plenty Valley Christian College | 894m | South East |
| 902805 | reserve | park | Braford Red Gum Reserve | 898m | North West |
| 642032 | reserve | park | Birdwood Red Gum Reserve | 899m | West |
| 1214085 | sport facility | sports ground | | 900m | South East |
| 1140869 | reserve | park | | 901m | South West |
| 902986 | reserve | park | Painted Hills Park | 907m | North |
| 641974 | reserve | park | Red Angus Park | 910m | North |
| 987677 | recreational resource | playground | Red Angus Park Playground | 922m | North |
| 642026 | reserve | park | | 923m | West |
| 994660 | care facility | child care | Camp Australia - Plenty Valley Christian College Oshc | 929m | South East |
| 642035 | reserve | park | Berkshire Walkway | 935m | West |
| 998586 | reserve | park | Aylesbury Tree Reserve | 939m | North West |
| 642086 | reserve | park | Serle Wetland Park | 940m | South |
| 998625 | reserve | park | Tagama Walkway | 941m | North West |
| 998624 | reserve | park | Polly Tree Reserve | 945m | North West |
| 902935 | reserve | park | Laurence Reserve | 951m | North West |
| 998657 | reserve | park | Spirit Tree Reserve | 957m | South West |
| 998710 | reserve | park | Aylesbury Walkway | 961m | North West |
| 642030 | reserve | park | Berkshire Red Gum Reserve | 965m | West |
| 1214105 | sport facility | sports ground | | 974m | South East |
| 642043 | reserve | park | Province Redgum Reserve | 985m | West |
| 1157110 | sport facility | equestrian facility | | 996m | South West |

Features of Interest Data Custodian: State Government Victoria - Dept of Environment, Land, Water & Planning
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Depth to Watertable

Bridge Inn and Cookes Roads, Mernda, VIC 3754



Hydrogeology & Groundwater

Bridge Inn and Cookes Roads, Mernda, VIC 3754

Hydrogeology

Description of aquifers within the dataset buffer:

| Description | Distance | Direction |
|---|----------|-----------|
| Fractured or fissured, extensive aquifers of low to moderate productivity | 0m | Onsite |

Hydrogeology Map of Australia: Commonwealth of Australia (Geoscience Australia)
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Groundwater Salinity

On-site Groundwater Salinity:

| Groundwater Salinity | Percent Of Site Area |
|----------------------|----------------------|
| 3,500 - 7,000 mg/l | 96 |
| 1,000 - 3,500 mg/l | 4 |

Depth to Watertable

On-site Depth to Watertable:

| Depth to Watertable | Percent Of Site Area |
|---------------------|----------------------|
| 5 to 10 metres | 58 |
| Less than 5 metres | 25 |
| 10 to 20 metres | 18 |

Surface Elevation

Approximate on-site Surface Elevation:

| Surface Elevation |
|----------------------|
| 162 AHDm to 185 AHDm |

Basement Elevation

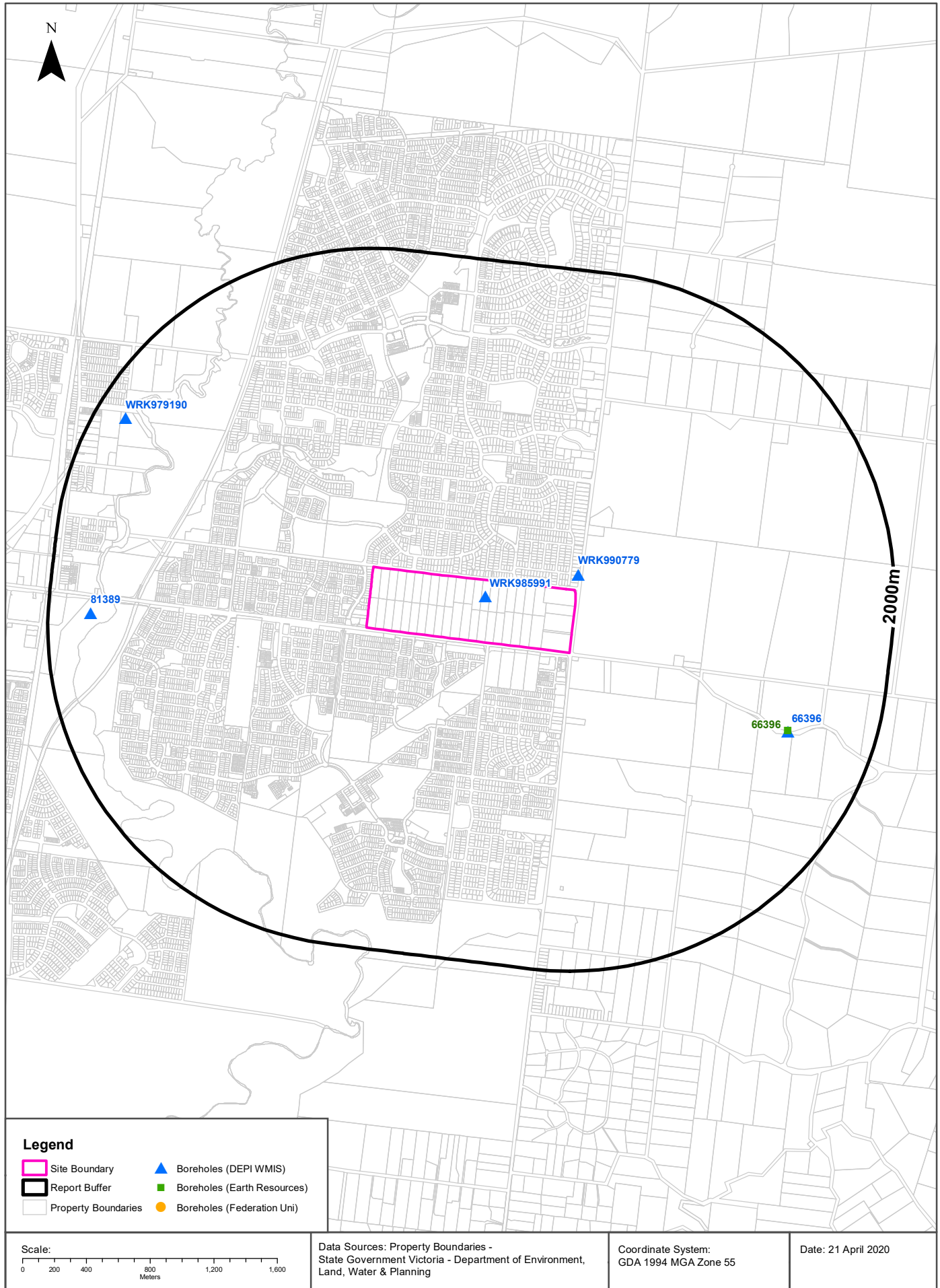
Approximate on-site Basement Elevation:

| Basement Elevation - Basement Rocks comprise Lower Palaeozoic basement rocks that form the highlands and the crystalline basement; and Mesozoic rocks of the Otway and Gippsland basins both outcropping and subsurface |
|---|
| 155 AHDm to 186 AHDm |

Groundwater Data Custodian: State Government Victoria - Dept of Environment, Land, Water & Planning
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Groundwater Boreholes

Bridge Inn and Cookes Roads, Mernda, VIC 3754



Groundwater Boreholes

Bridge Inn and Cookes Roads, Mernda, VIC 3754

Boreholes (DEPI WMIS)

Boreholes from the Department of Environment and Primary Industries' Water Measurement Information System, within the dataset buffer:

| Bore Id | Use Type | Drillers Log | Construction | Latest Water Levels | Geology | Completed Date | Dist (m) | Dir |
|-----------|------------------|---|---|---------------------|---------------------|----------------|----------|------------|
| WRK985991 | | | | | | | 0 | Onsite |
| WRK990779 | Domestic & Stock | 0.00m-1.50m clay firm orange grey 1.50m-38.00m siltstone 38.00m-44.00m siltstone grey 44.00m-59.00m siltstone grey fractured | 0.00m-53.00m INNER LINING - CASING = Pvc 53.00m-59.00m INNER LINING - SCREEN = Pvc 0.00m-37.00m OUTER LINING - GRAVEL = Cement 37.00m-38.00m OUTER LINING - GRAVEL = Bentonite 38.00m-39.00m OUTER LINING - GRAVEL = Seal | | | 2009-05-08 | 98 | East |
| 66396 | Domestic, Stock | 0.00m-1.10m TOP SOIL 1.10m-3.20m BROWN SHALE 3.20m-7.70m LIGHT BROWN SHALE 7.70m-9.10m BROWN SHALE 9.10m-15.90m GREY SHALE 15.90m-23.70m HARD DARK GREY SHALE 23.70m-37.80m HARD FISSURED DARK GREY SHALE | -0.30m-17.30m INNER LINING - CASING = Pvc 17.30m-37.80m INNER LINING - SCREEN = Pvc 17.10m-0.00m OUTER LINING - GRAVEL = Seal | | 17.30m-37.80m Shale | 1984-04-26 | 1457 | East |
| 81389 | Domestic, Stock | 0.00m-0.10m TOPSOIL 0.10m-0.90m GREY CLAY 0.90m-21.00m HARD GREY/BLUE BASALT 21.00m-30.00m BROKEN BASALT 30.00m-36.50m BLUE/GREEN SOFT CLAY | 0.00m-9.00m INNER LINING - CASING = Pvc 9.00m-30.00m INNER LINING - SCREEN = Pvc | | 9.00m-30.00m Basalt | 1989-02-25 | 1731 | West |
| WRK979190 | Domestic & Stock | | 17.00m-17.00m OUTER LINING - GRAVEL = Cement | | | 2007-03-30 | 1812 | North West |

Boreholes WMIS Data Custodian: State Government Victoria - Dept of Environment, Land, Water & Planning
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Groundwater Boreholes

Bridge Inn and Cookes Roads, Mernda, VIC 3754

Boreholes (Earth Resources Database)

Boreholes from the Earth Resources dataset, within the dataset buffer:

| Bore Id | Bore Type | Company | Usage | Method | Status | Drill Date | Depth | Elevation | Accuracy (m) | Dist (m) | Direct |
|---------|-----------|--------------------------------|-------------------------------|---------------------------|--------|------------|-------|-----------|--------------|----------|--------|
| 66396 | | Private Individual/Corporation | Domestic & Stock water supply | Air Percussion/Air Rotary | | 26/04/1984 | 37.80 | | 100 | 1455 | East |

Boreholes Earth Resources Data Source: © The State of Victoria, Department of Economic Development, Jobs, Transport and Resources 2015. Creative Commons Attribution 3.0 Australia

Boreholes (Federation University)

Boreholes from the Federation University Australia dataset, within the dataset buffer:

| Bore Id | Authority | Type | Uses | Initial TD | Log | Dist (m) | Direct |
|---------|--------------------------|------|------|------------|-----|----------|--------|
| N/A | No records within buffer | | | | | | |

Boreholes FedUni Data Source: © Federation University Australia

Historical Mining Activity - Shafts

Bridge Inn and Cookes Roads, Mernda, VIC 3754

Historical Mining Activity - Shafts

Mine Shaft Locations were collected by a variety of methods from 1869 in some areas of the state, mainly concentrating in Ballarat and Bendigo. In places a shaft may be recorded multiple times with a different source. In cases where several shaft locations are shown close together (generally with separations less than stated position errors) and they have different sources, it is possible that one shaft has been mapped several times. In cases where several shaft locations are shown close together but they have the same information source, it is possible that each shaft location represents a different shaft on the ground.

Historical Mine Shafts within the dataset buffer:

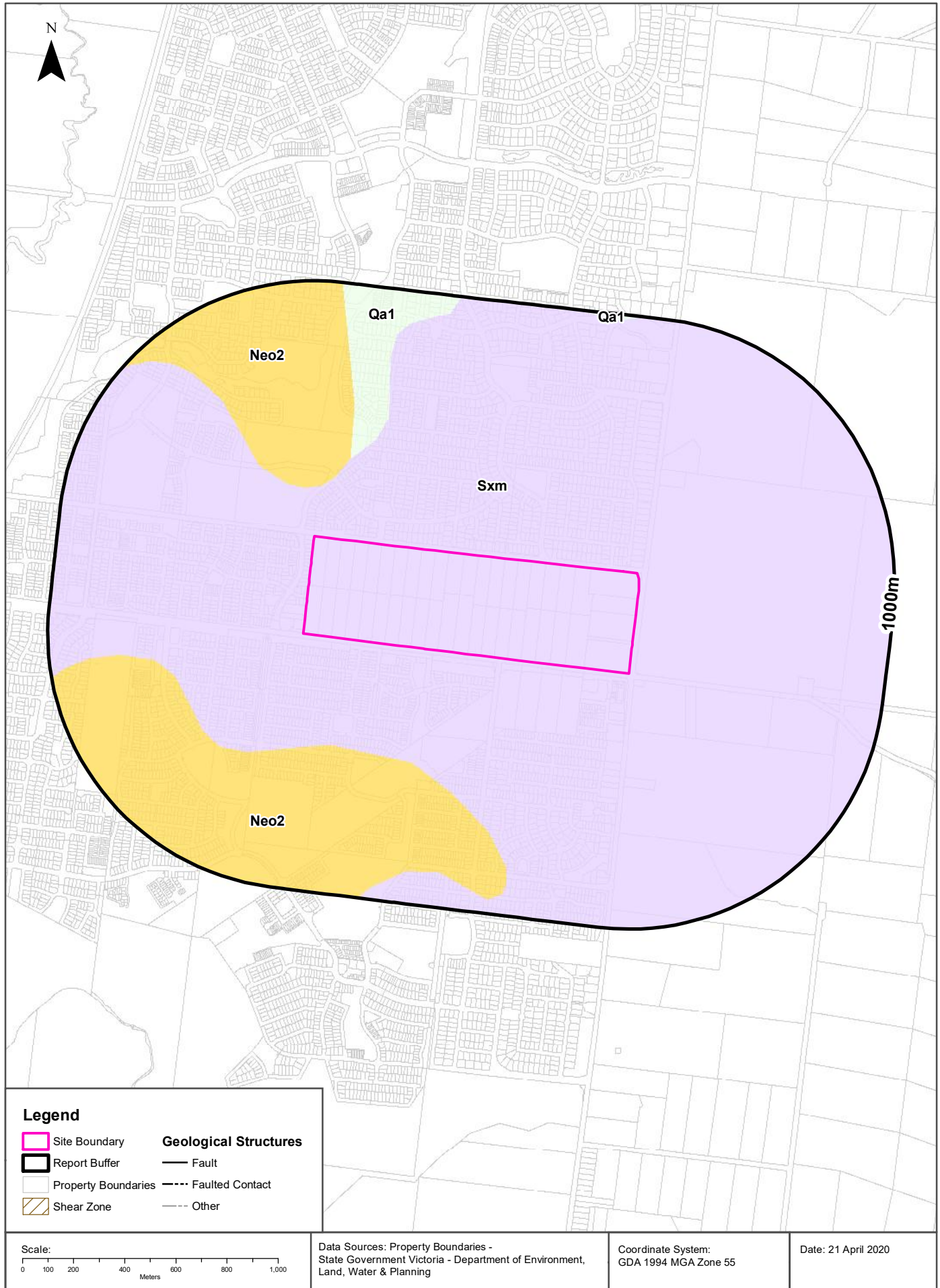
| Map Id | Name | Source | Depth (m) | Collar (ft) | Fill/Cap Method | Location Desc | Location Accuracy | Distance | Direction |
|--------|----------------------|--------|-----------|-------------|-----------------|---------------|-------------------|----------|-----------|
| N/A | No records in buffer | | | | | | | | |

Historical Mining Activity Data Custodian: State Government Victoria - Dept of Economic Development, Jobs, Transport & Resources

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Geology 1:250,000

Bridge Inn and Cookes Roads, Mernda, VIC 3754



Geology

Bridge Inn and Cookes Roads, Mernda, VIC 3754

Geological Units

What are the Geological Units onsite?

| Symbol | Name | Description | Geological Age | Lithology | Dataset |
|--------|------------------------------------|--|----------------------|--|-----------|
| Sxm | Melbourne Formation(Sxm): generic | Siltstone and sandstone: mainly thin-bedded; most beds show undisturbed Bouma sequences. | Silurian to Silurian | sandstone (major proportion); siltstone (major proportion) | 1:250,000 |

What are the Geological Units within the dataset buffer?

| Symbol | Name | Description | Geological Age | Lithology | Dataset |
|--------|---|--|-------------------------|--|-----------|
| Neo2 | Newer Volcanic Group - stony rises basalt (Neo2): generic | Tholeiitic to alkalic basalt, basanite: youngest flows with little weathering or soil development (stony rises and hummocky lava flows) | Miocene to Holocene | basalt (all) | 1:250,000 |
| Qa1 | alluvium(Qa1): generic | Gravel, sand, silt: variably sorted and rounded; generally unconsolidated; includes deposits of low terraces; alluvial floodplain deposits | Pleistocene to Holocene | gravel material (significant); sand (significant); silt material (significant) | 1:250,000 |
| Sxm | Melbourne Formation(Sxm): generic | Siltstone and sandstone: mainly thin-bedded; most beds show undisturbed Bouma sequences. | Silurian to Silurian | sandstone (major proportion); siltstone (major proportion) | 1:250,000 |

Geology Data Custodian: State Government Victoria - Dept of Economic Development, Jobs, Transport & Resources
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Geology

Bridge Inn and Cookes Roads, Mernda, VIC 3754

Geological Structures

What are the Geological Faults or Faulted Contacts onsite?

| Map Id | Type | Name | Contact | Positional Accuracy | Dataset |
|-------------|------|------|---------|---------------------|-----------|
| No features | | | | | 1:250,000 |

What are the Dykes, Marker Beds and Veins onsite?

| Map Id | Type | Name | Description | Positional Accuracy | Dataset |
|------------------|------|------|-------------|---------------------|---------|
| No Data Coverage | | | | | |

What are the Shear Zones onsite (1:250,000 scale)?

| Map Id | Type | Name | Description | Positional Accuracy | Dataset |
|-------------|------|------|-------------|---------------------|-----------|
| No features | | | | | 1:250,000 |

What are the Geological Faults or Faulted Contacts within the dataset buffer?

| Map Id | Type | Name | Contact | Positional Accuracy | Dataset |
|-------------|------|------|---------|---------------------|-----------|
| No features | | | | | 1:250,000 |

What are the Dykes, Marker Beds and Veins within the dataset buffer?

| Map Id | Type | Name | Description | Positional Accuracy | Dataset |
|------------------|------|------|-------------|---------------------|---------|
| No Data Coverage | | | | | |

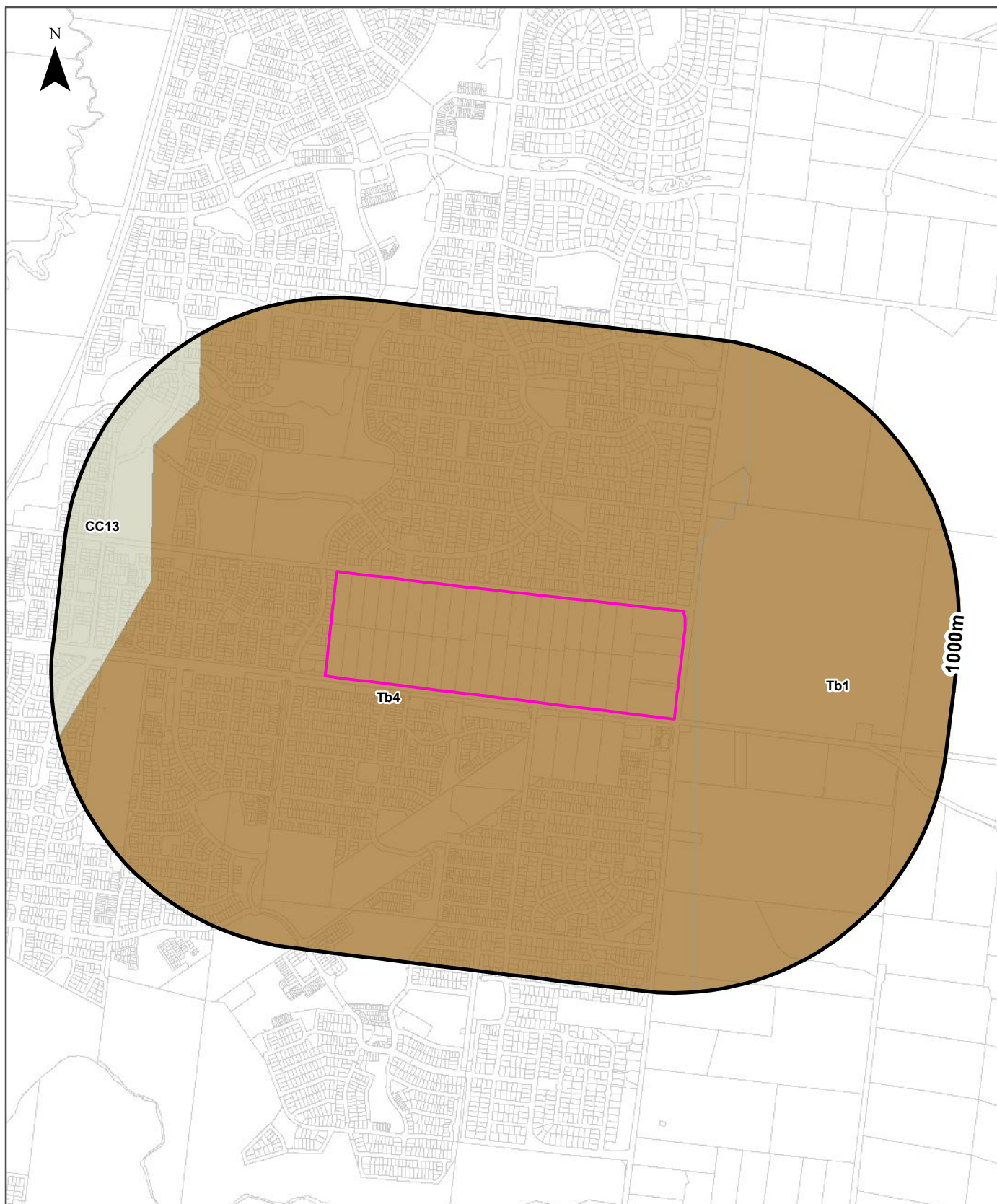
What are the Shear Zones within the dataset buffer (1:250,000 scale)?

| Map Id | Type | Name | Description | Positional Accuracy | Dataset |
|-------------|------|------|-------------|---------------------|-----------|
| No features | | | | | 1:250,000 |

Geology Data Custodian: State Government Victoria - Dept of Economic Development, Jobs, Transport & Resources
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Atlas of Australian Soils

Bridge Inn and Cookes Roads, Mernda, VIC 3754



| Legend | | Australian Soil Classification Orders | | | | | |
|-------------------|-------------|---------------------------------------|-----------|---------|----------|---------|--|
| Site Boundary | Anthroposol | Dermosol | Kandosol | Podosol | Tenosol | No Data | |
| Report Buffer | Calcarosol | Ferrosol | Kurosol | Rudosol | Vertosol | | |
| Property Boundary | Chromosol | Hydrosol | Organosol | Sodosol | Lake | | |

| | | | |
|---------------|--|--|----------------------------|
| <p>Scale:</p> | <p>Data Sources: Property Boundaries - State Government Victoria - Department of Environment, Land, Water & Planning</p> | <p>Coordinate System: GDA 1994 MGA Zone 55</p> | <p>Date: 21 April 2020</p> |
|---------------|--|--|----------------------------|

Soil Landscapes

Bridge Inn and Cookes Roads, Mernda, VIC 3754

Atlas of Australian Soils

Australian soil types within the dataset buffer:

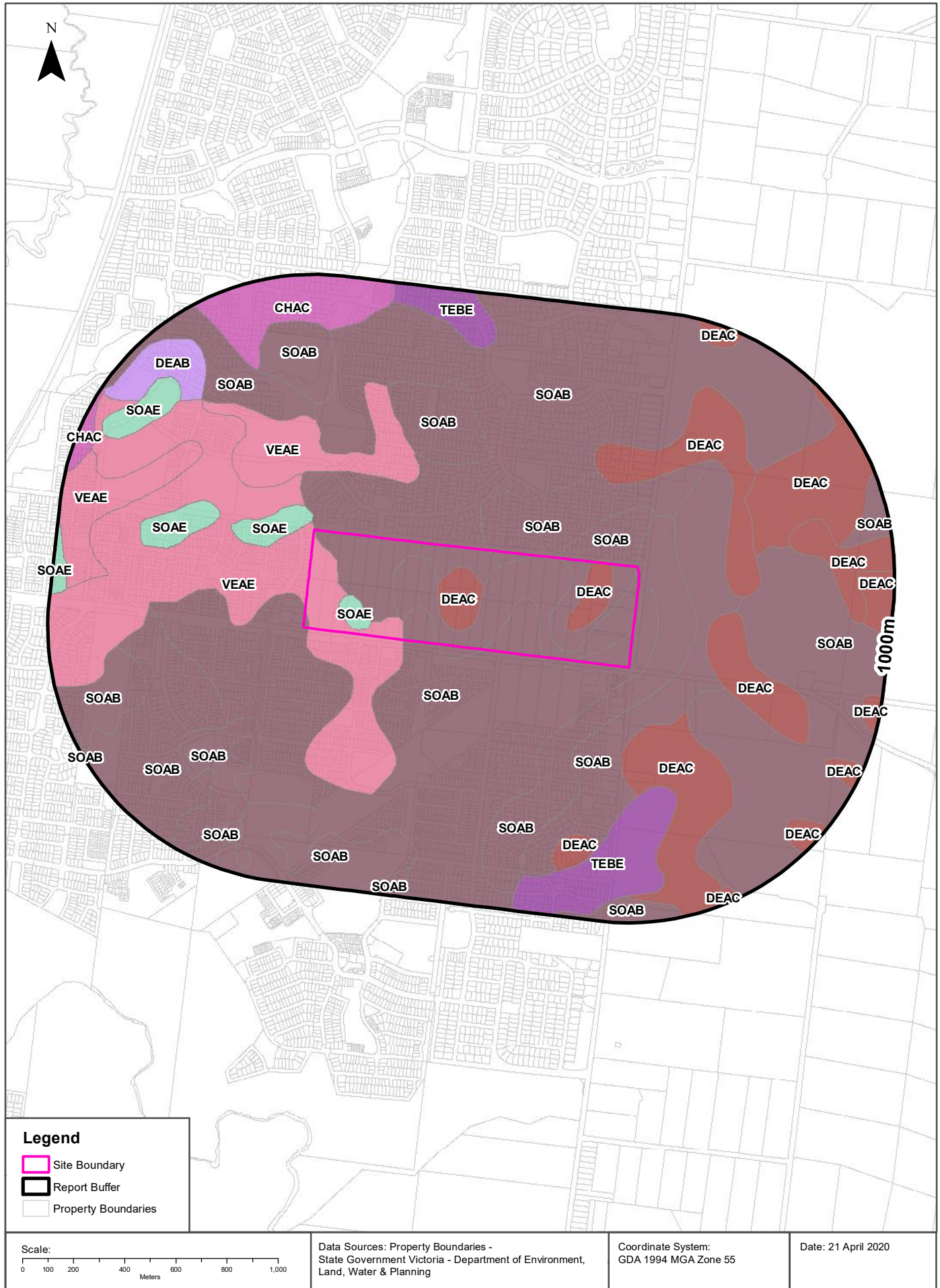
| Symbol | Soil Order | Map Unit Description | Distance |
|--------|------------|---|----------|
| Tb4 | Sodosol | Undulating to hilly, dissected by streams with narrow to moderate expanses of flats: gentle to steep slopes of hard acidic, yellow mottled soils (Dy3.41 and Dy3.81) with (Dy5.41 and Dy5.81), some areas of shallow grey-brown sandy soils (Uc6.11) on upper slopes and various (D) soils including (Db2.42 and Dd1.1) and also leached sands (Uc2.3) on mid and lower slopes; valley plains of (Dy3.41) with some areas of leached sands (Uc2.2 and Uc2.3), with flats and former swampy areas of dark cracking clays (Ug5.16, acid or neutral in reaction) and smaller areas of other soils including (Gn), (Ug), and (Dd3) soils, some of which have peaty surfaces; small areas of units Ob6 in the western part, and Pb3 in the south-eastern part of the unit. | 0m |
| Tb1 | Sodosol | Hills and valley plains: hills and hill slopes of hard acidic yellow mottled soils (Dy3.41 and Dy3.42) in association with hard neutral red soils (Dr2.22 and Dr2.32), shallow grey-brown sandy soils (Uc6.11), and rock outcrops; smaller localized areas of (Dy3.61), (Dy3.81), (Dy3.21), (Dy4.21), (Dr2.11), (Dr2.41), also (Gn2.74) on hills and slopes; valley plains of hard neutral or alkaline yellow mottled soils (Dy3.42 and Dy3.43) with red mottled soils (Dr3.33) and others not described but including cracking clays (Ug5.1) and (Um) soils. Soils of low-lying wet situations generally not studied but (Uf6.41) has been recorded therein. Note in the smaller areas of this unit only the dominant soils of the unit may occur therein. | 47m |
| CC13 | Vertosol | Gently undulating plains with some stony rises and basalt hills: gilgai plains of cracking grey clays (Ug5.2) in association with hard alkaline yellow mottled soils (Dy3.33 and Dy3.43), hard alkaline dark mottled soils (Dd2.33), and hard alkaline yellow soils (Dy2), and also some swampy areas of cracking grey clays (Ug5.2); the stony rises are of irregular distribution and have friable loamy soils especially (Um6.21, Um6.41, and Um6.24) on the rises and usually gilgai areas of cracking dark clays (Ug5.13 and Ug5.14) at their base; soils of the basalt hills are classed with those of the plain; small areas of other undescribed red soils in the northern portion of the unit. Ironstone gravels may occur in surface horizons of (D) soils. | 671m |

Atlas of Australian Soils: CSIRO

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Victorian Soil Type Mapping

Bridge Inn and Cookes Roads, Mernda, VIC 3754



Soils Landscapes

Bridge Inn and Cookes Roads, Mernda, VIC 3754

Victorian Soil Type Mapping

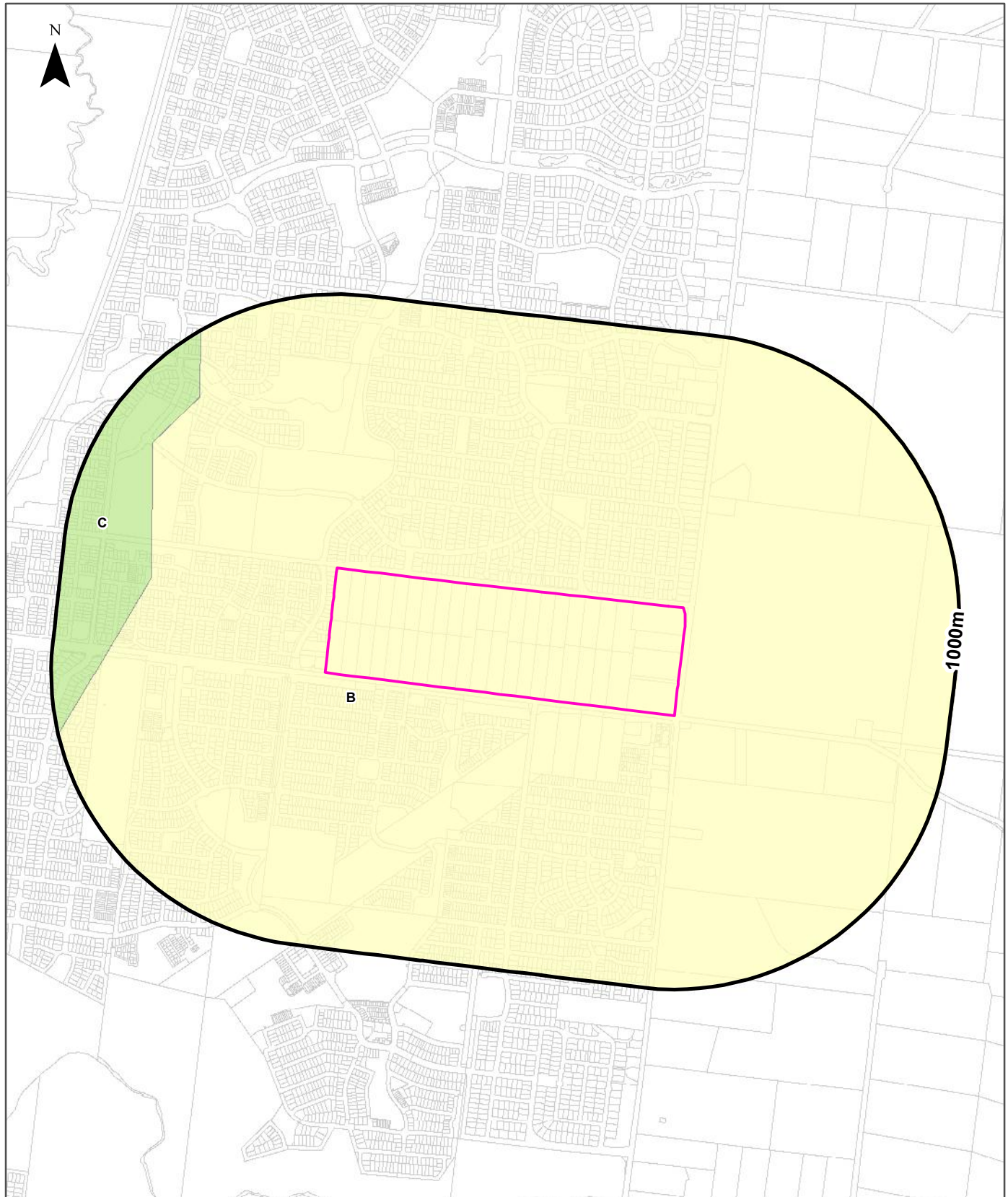
Victorian Soil Types within the dataset buffer:

| Symbol | Description | Distance |
|--------|-------------------|----------|
| DEAC | Yellow Dermosols | 0m |
| SOAB | Brown Sodosols | 0m |
| SOAE | Black Sodosols | 0m |
| VEAE | Black Vertosols | 0m |
| TEBE | Chernic Tenosols | 478m |
| CHAC | Yellow Chromosols | 664m |
| DEAB | Brown Dermosols | 674m |

Victorian Soil Type Mapping Data Source: Department of Economic Development, Jobs, Transport and Resources
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Atlas of Australian Acid Sulfate Soils

Bridge Inn and Cookes Roads, Mernda, VIC 3754



| | | | |
|--|---|--|---------------------|
| Legend | | | |
| Site Boundary | Probability of occurrence of Acid Sulfate Soils | | |
| Report Buffer | A. High (>70%) | C. Extremely Low (1-5%) | No Data |
| Property Boundary | B. Low (6-70%) | D. No Chance (0%) | |
| Scale: 0 100 200 400 600 800 1,000 Meters | Data Sources: Property Boundaries & Topographic Data: State of Victoria - Department of Environment and Primary Industries | Coordinate System: GDA 1994 MGA Zone 55 | Date: 21 April 2020 |

Acid Sulfate Soils

Bridge Inn and Cookes Roads, Mernda, VIC 3754

Atlas of Australian Acid Sulfate Soils

Atlas of Australian Acid Sulfate Soil categories within the dataset buffer:

| PROBCLASS | Description | Distance |
|-----------|---|----------|
| B | Low Probability of occurrence. 6-70% chance of occurrence. | 0m |
| C | Extremely low probability of occurrence. 1-5% chance of occurrence with occurrences in small localised areas. | 672m |

Atlas of Australian Acid Sulfate Soils Data Source: CSIRO

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Acid Sulfate Soils

Bridge Inn and Cookes Roads, Mernda, VIC 3754

Coastal Acid Sulfate Soils

What are the on-site Coastal Acid Sulfate Soil types?

| Coastal Acid Sulfate Soil Types |
|--|
| There are no Acid Sulfate areas onsite |

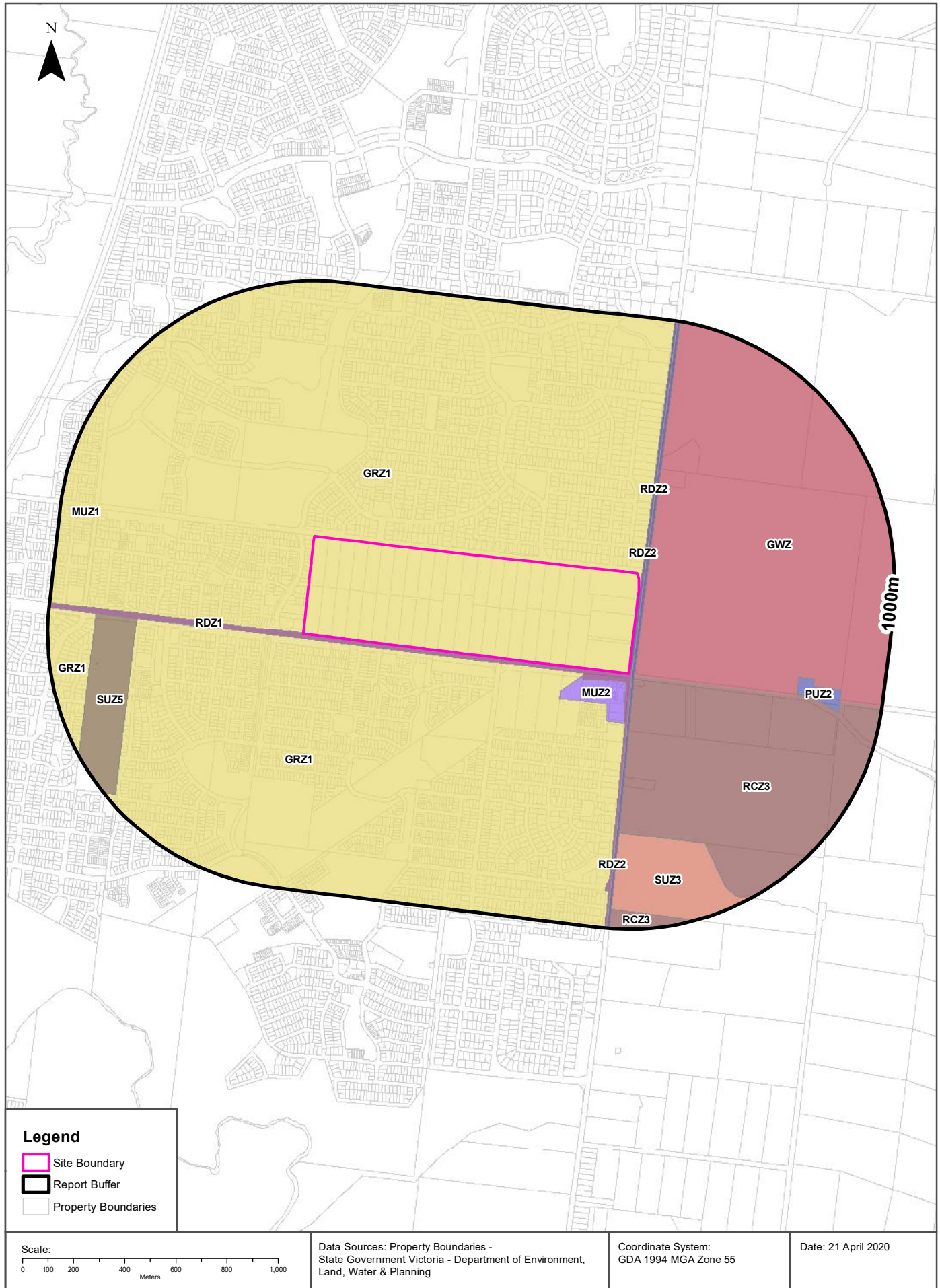
What are the Coastal Acid Sulfate Soil types within the dataset buffer?

| Coastal Acid Sulfate Soil Types | Distance | Direction |
|--|----------|-----------|
| There are no Acid Sulfate areas within the report buffer | | |

Coastal Acid Sulfate Data Custodian: State Government Victoria - Dept of Environment, Land, Water & Planning
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Planning Zones

Bridge Inn and Cookes Roads, Mernda, VIC 3754



Planning

Bridge Inn and Cookes Roads, Mernda, VIC 3754

Planning Zones

Planning zones within the dataset buffer:

| Zone Code | Description | Distance | Direction |
|-----------|---------------------------------------|----------|------------|
| GRZ1 | GENERAL RESIDENTIAL ZONE - SCHEDULE 1 | 0m | Onsite |
| RDZ1 | ROAD ZONE - CATEGORY 1 | 0m | West |
| RDZ2 | ROAD ZONE - CATEGORY 2 | 0m | North |
| RDZ2 | ROAD ZONE - CATEGORY 2 | 10m | East |
| GRZ1 | GENERAL RESIDENTIAL ZONE - SCHEDULE 1 | 20m | South West |
| GWZ | GREEN WEDGE ZONE | 21m | North East |
| RCZ3 | RURAL CONSERVATION ZONE - SCHEDULE 3 | 23m | South East |
| MUZ2 | MIXED USE ZONE - SCHEDULE 2 | 30m | South East |
| SUZ3 | SPECIAL USE ZONE - SCHEDULE 3 | 625m | South East |
| SUZ5 | SPECIAL USE ZONE - SCHEDULE 5 | 657m | West |
| PUZ2 | PUBLIC USE ZONE - EDUCATION | 658m | East |
| RDZ2 | ROAD ZONE - CATEGORY 2 | 741m | South East |
| MUZ1 | MIXED USE ZONE - SCHEDULE 1 | 870m | West |

Planning Zone Data Custodian: State Government Victoria - Dept of Environment, Land, Water & Planning
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Planning Overlays

Bridge Inn and Cookes Roads, Mernda, VIC 3754



Planning

Bridge Inn and Cookes Roads, Mernda, VIC 3754

Planning Overlays

Planning overlays within the dataset buffer:

| Zone Code | Description | Distance | Direction |
|-----------|---|----------|------------|
| DCPO5 | DEVELOPMENT CONTRIBUTIONS PLAN OVERLAY - SCHEDULE 5 | 0m | Onsite |
| DPO5 | DEVELOPMENT PLAN OVERLAY - SCHEDULE 5 | 0m | Onsite |
| IPO1 | INCORPORATED PLAN OVERLAY - SCHEDULE 1 | 0m | Onsite |
| VPO1 | VEGETATION PROTECTION OVERLAY - SCHEDULE 1 | 0m | Onsite |
| SCO9 | SPECIFIC CONTROLS OVERLAY - SCHEDULE 9 | 0m | West |
| HO191 | HERITAGE OVERLAY (HO191) | 10m | East |
| DPO5 | DEVELOPMENT PLAN OVERLAY - SCHEDULE 5 | 20m | South |
| DCPO6 | DEVELOPMENT CONTRIBUTIONS PLAN OVERLAY - SCHEDULE 6 | 20m | South |
| PAO2 | PUBLIC ACQUISITION OVERLAY 2 | 20m | South East |
| PAO2 | PUBLIC ACQUISITION OVERLAY 2 | 21m | South |
| PAO2 | PUBLIC ACQUISITION OVERLAY 2 | 37m | West |
| PAO2 | PUBLIC ACQUISITION OVERLAY 2 | 38m | South West |
| HO74 | HERITAGE OVERLAY (HO74) | 109m | North West |
| PAO2 | PUBLIC ACQUISITION OVERLAY 2 | 127m | West |
| PAO2 | PUBLIC ACQUISITION OVERLAY 2 | 131m | West |
| PAO2 | PUBLIC ACQUISITION OVERLAY 2 | 135m | West |
| PAO2 | PUBLIC ACQUISITION OVERLAY 2 | 484m | West |
| PAO2 | PUBLIC ACQUISITION OVERLAY 2 | 544m | West |
| HO73 | HERITAGE OVERLAY (HO73) | 655m | West |
| PAO2 | PUBLIC ACQUISITION OVERLAY 2 | 657m | West |
| ESO1 | ENVIRONMENTAL SIGNIFICANCE OVERLAY - SCHEDULE 1 | 664m | South East |
| DPO5 | DEVELOPMENT PLAN OVERLAY - SCHEDULE 5 | 817m | West |
| DCPO6 | DEVELOPMENT CONTRIBUTIONS PLAN OVERLAY - SCHEDULE 6 | 817m | West |
| PAO2 | PUBLIC ACQUISITION OVERLAY 2 | 878m | West |
| PAO2 | PUBLIC ACQUISITION OVERLAY 2 | 879m | West |
| DPO28 | DEVELOPMENT PLAN OVERLAY - SCHEDULE 28 | 969m | South West |

Planning Overlay Data Custodian: State Government Victoria - Dept of Environment, Land, Water & Planning
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Heritage

Bridge Inn and Cookes Roads, Mernda, VIC 3754

Commonwealth Heritage List

What are the Commonwealth Heritage List Items located within the dataset buffer?

| Place Id | Name | Address | Place File No | Class | Status | Register Date | Distance | Direction |
|----------|----------------------|---------|---------------|-------|--------|---------------|----------|-----------|
| N/A | No records in buffer | | | | | | | |

Heritage Data Source: Australian Government Department of the Environment and Energy - Heritage Branch
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National Heritage List

What are the National Heritage List Items located within the dataset buffer?

Note. Please click on Place Id to activate a hyperlink to online website.

| Place Id | Name | Address | Place File No | Class | Status | Register Date | Distance | Direction |
|----------|----------------------|---------|---------------|-------|--------|---------------|----------|-----------|
| N/A | No records in buffer | | | | | | | |

Heritage Data Source: Australian Government Department of the Environment and Energy - Heritage Branch
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Victorian Heritage Register

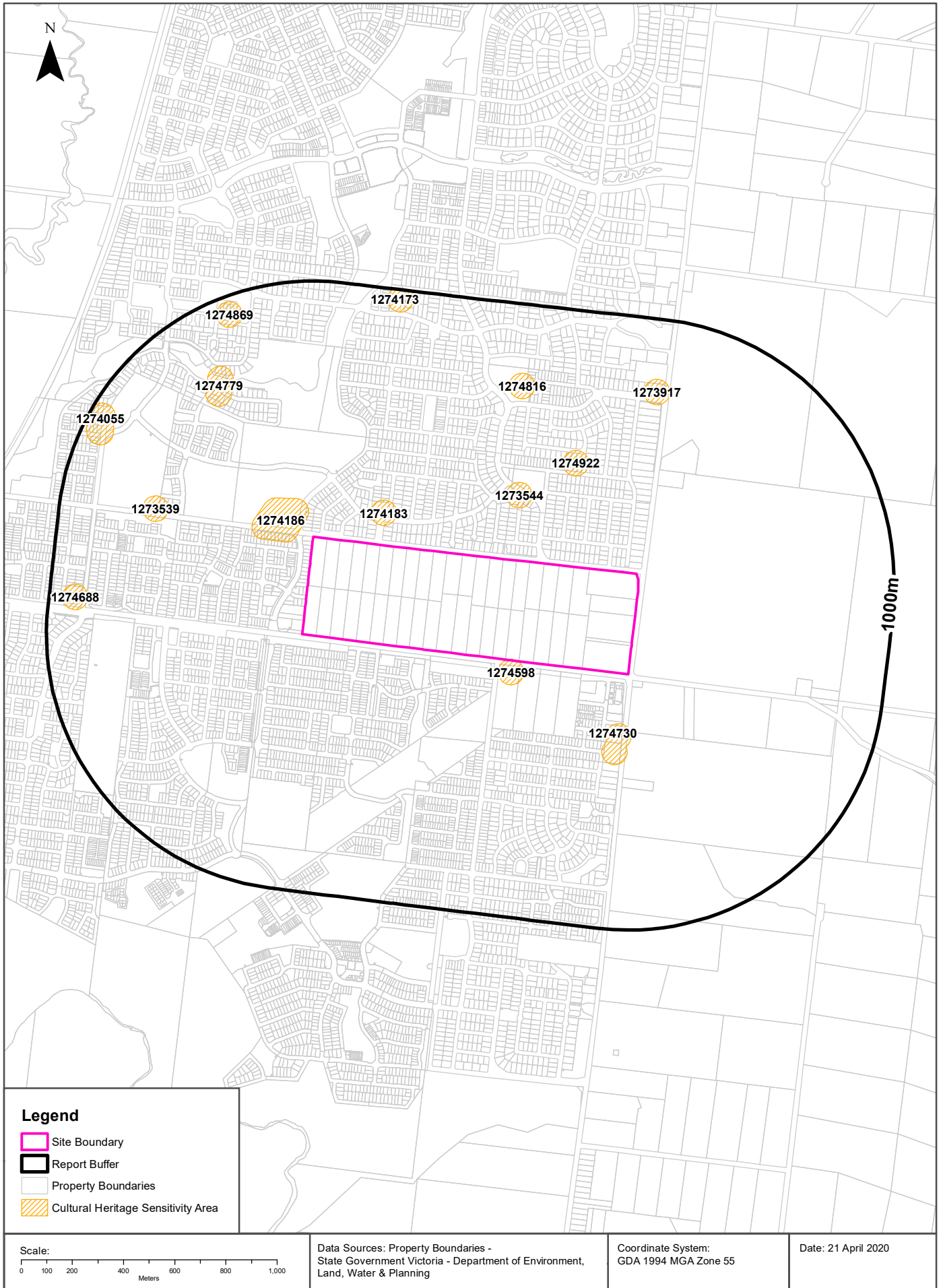
What are the Victorian Heritage Register items located within the dataset buffer?:

| VHR Number | Description | Distance | Direction |
|------------|--------------------------|----------|-----------|
| N/A | No records within buffer | | |

Victorian Heritage Register Data Custodian: State Government Victoria - Dept of Environment, Land, Water & Planning
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Cultural Heritage Sensitivity

Bridge Inn and Cookes Roads, Mernda, VIC 3754



Heritage

Bridge Inn and Cookes Roads, Mernda, VIC 3754

Cultural Heritage Sensitivity

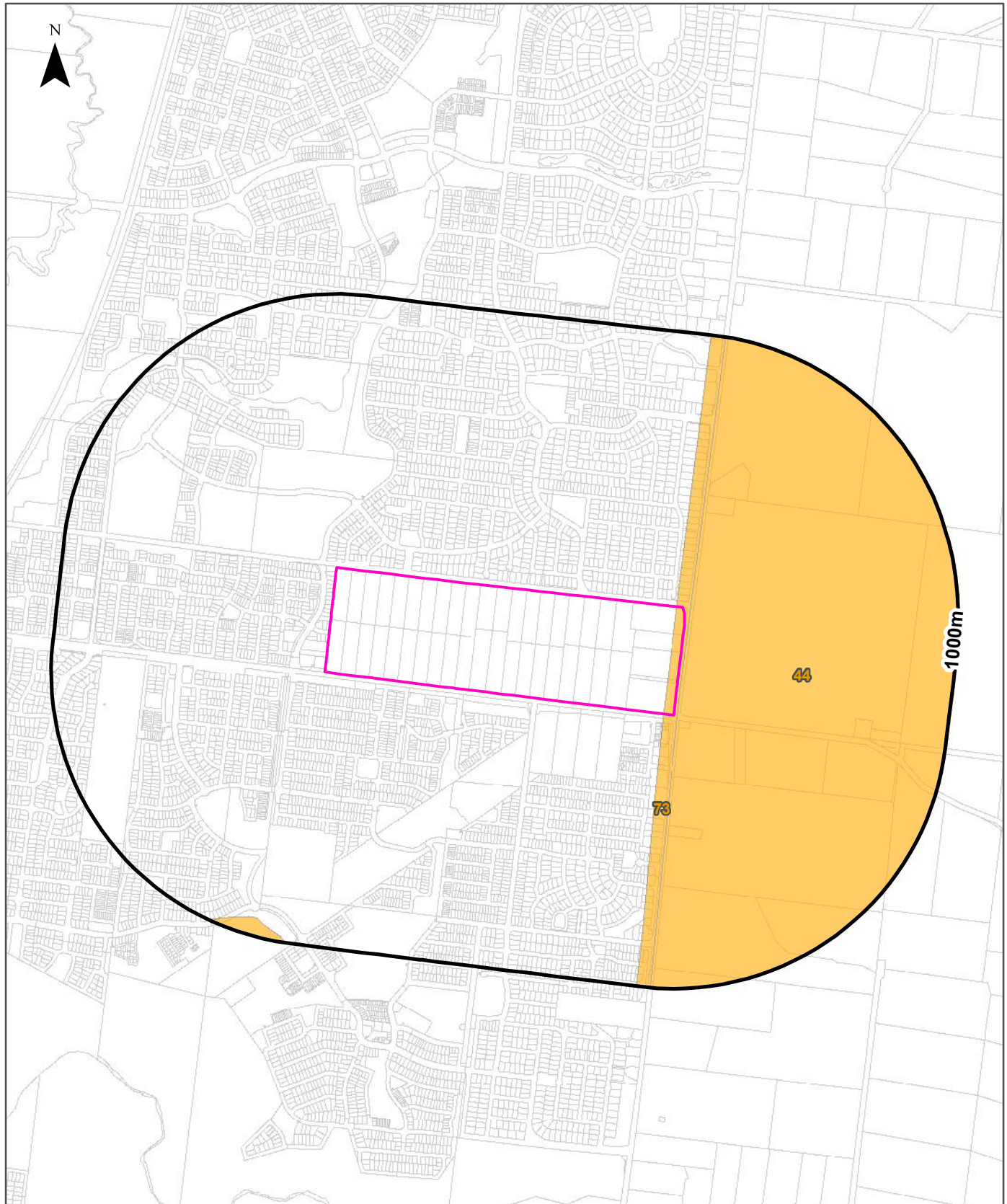
Areas of Cultural Heritage Sensitivity as specified in Division 3 of Part 2 in the Victorian Aboriginal Heritage Regulations 2018, within the dataset buffer:

| Map Id | Distance | Direction |
|---------|----------|------------|
| 1274598 | 0m | South East |
| 1274186 | 59m | North West |
| 1274183 | 76m | North West |
| 1274730 | 195m | South East |
| 1273544 | 205m | North East |
| 1274922 | 354m | North East |
| 1273539 | 576m | West |
| 1274779 | 621m | North West |
| 1274816 | 631m | North |
| 1273917 | 665m | North East |
| 1274688 | 849m | West |
| 1274055 | 877m | North West |
| 1274869 | 879m | North West |
| 1274173 | 913m | North |

Cultural Heritage Sensitivity Data Custodian: State Government Victoria - Department of Premier and Cabinet
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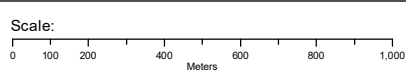
Natural Hazards

Bridge Inn and Cookes Roads, Mernda, VIC 3754



Legend

- | | | | |
|---------------------|--------------------------------|---------------------------------|---------------------------------|
| Site Boundary | Flood 1 in 100 Year Extent | Sea Level 0cm (2009) | Sea Level 47cm (2070) |
| Report Buffer | Fire History Records | 1 in 100 Year Storm Tide (2009) | 1 in 100 Year Storm Tide (2070) |
| Property Boundaries | Designated Bushfire Prone Area | Sea Level 20cm (2040) | Sea Level 82cm (2100) |
| | | 1 in 100 Year Storm Tide (2040) | 1 in 100 Year Storm Tide (2100) |



Data Sources: Property Boundaries - State Government Victoria - Department of Environment, Land, Water & Planning

Coordinate System: GDA 1994 MGA Zone 55

Date: 21 April 2020

Natural Hazards

Bridge Inn and Cookes Roads, Mernda, VIC 3754

Bushfire Prone Areas

What are the designated bushfire prone areas within the dataset buffer?

| Map ID | Feature | Plan No | LGA | Gazetted Date | Distance | Direction |
|--------|--------------------------------|--------------|------------|---------------|----------|-----------|
| 73 | Designated Bushfire Prone Area | LEGL./20-113 | WHITTLESEA | 24/03/2020 | 0m | Onsite |
| 44 | Designated Bushfire Prone Area | LEGL./14-557 | NILLUMBIK | 17/10/2014 | 9m | East |

Bushfire Prone Area Data Custodian: State Government Victoria - Dept of Transport, Planning & Local Infrastructure
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Fire History

What are the fire history records of fires primarily on public land, within the dataset buffer?

| Map Id | Fire Type | Fire Key | Season | Fire No | Fire Name | Treatment | Fire Cover | Start Date | Dist (m) | Direction |
|--------|--------------------------|----------|--------|---------|-----------|-----------|------------|------------|----------|-----------|
| N/A | No records within buffer | | | | | | | | | |

Fire History Data Custodian: State Government Victoria - Dept of Environment, Land, Water & Planning
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Flood - 1 in 100 year modelled flood extent

What 1 in 100 year flood extent features exist within the dataset buffer?

| Feature | Source | Method | Scale | Modified Date | Distance | Direction |
|---------|--------------------------|--------|-------|---------------|----------|-----------|
| N/A | No records within buffer | | | | | |

Flood Data Custodian: State Government Victoria - Dept of Environment, Land, Water & Planning
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Natural Hazards

Bridge Inn and Cookes Roads, Mernda, VIC 3754

Victorian Coastal Inundation Sea Level Rise

What coastal inundation sea level rise features exist within the dataset buffer?

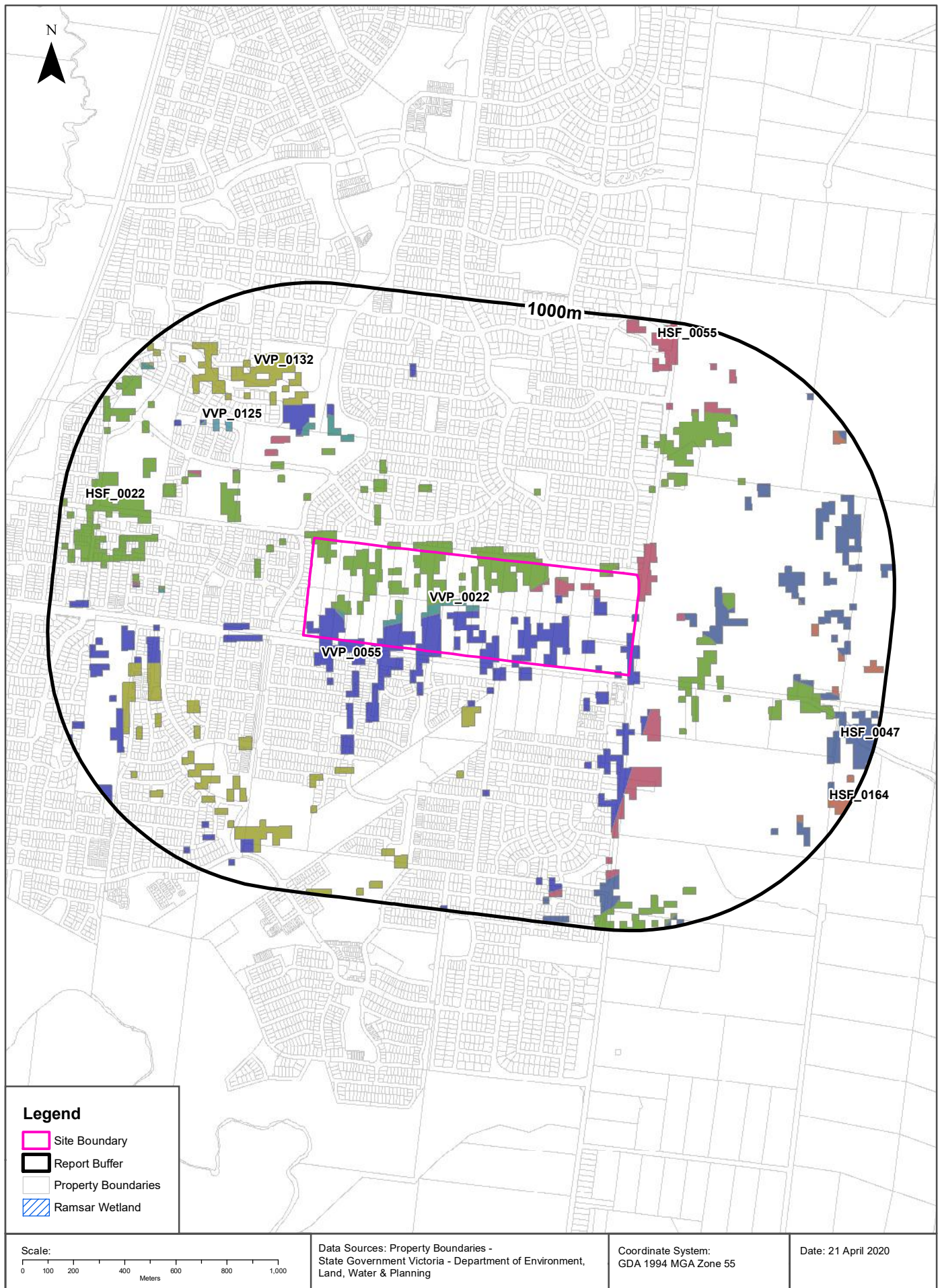
| Description | Distance | Direction |
|--------------------------|----------|-----------|
| No records within buffer | | |

Victorian Coastal Inundation Sea Level Rise Data Custodian: State Government Victoria - Dept of Environment, Land, Water & Planning

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Ecological Constraints - Native Vegetation 2005 & Ramsar Wetlands

Bridge Inn and Cookes Roads, Mernda, VIC 3754



Ecological Constraints

Bridge Inn and Cookes Roads, Mernda, VIC 3754

Native Vegetation (Modelled 2005 Ecological Vegetation Classes)

What native vegetation exists within the dataset buffer?

| Veg Code | EVC Name | EVCode | Group | Subgroup | Bioregion | Conservation Status | Geographic Occurance | Distance |
|----------|------------------------------|--------|---|-------------------------------------|---------------------------|---------------------|----------------------|----------|
| VVP_0022 | Grassy Dry Forest | 0022 | Dry Forests | Exposed and/or lower altitude | Victorian Volcanic Plain | Depleted | Minor | 0m |
| HSF_0022 | Grassy Dry Forest | 0022 | Dry Forests | Exposed and/or lower altitude | Highlands - Southern Fall | Least Concern | Common | 0m |
| VVP_0055 | Plains Grassy Woodland | 0055 | Plains Woodlands or Forests | Freely-draining | Victorian Volcanic Plain | Endangered | Common | 0m |
| HSF_0055 | Plains Grassy Woodland | 0055 | Plains Woodlands or Forests | Freely-draining | Highlands - Southern Fall | Endangered | Minor | 0m |
| HSF_0047 | Valley Grassy Forest | 0047 | Dry Forests | Sheltered and/or higher altitude | Highlands - Southern Fall | Vulnerable | Common | 133m |
| VVP_0132 | Plains Grassland | 0132 | Plains Grasslands and Chenopod Shrublands | Clay soils | Victorian Volcanic Plain | Endangered | Common | 193m |
| VVP_0125 | Plains Grassy Wetland | 0125 | Wetlands | Freshwater | Victorian Volcanic Plain | Endangered | Common | 527m |
| HSF_0164 | Creekline Herb-rich Woodland | 0164 | Herb-rich Woodlands | Alluvial terraces and/or creeklines | Highlands - Southern Fall | Vulnerable | Naturally Restricted | 595m |

Native Vegetation Data Custodian: State Government Victoria - Dept of Environment, Land, Water & Planning
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Ramsar Wetlands

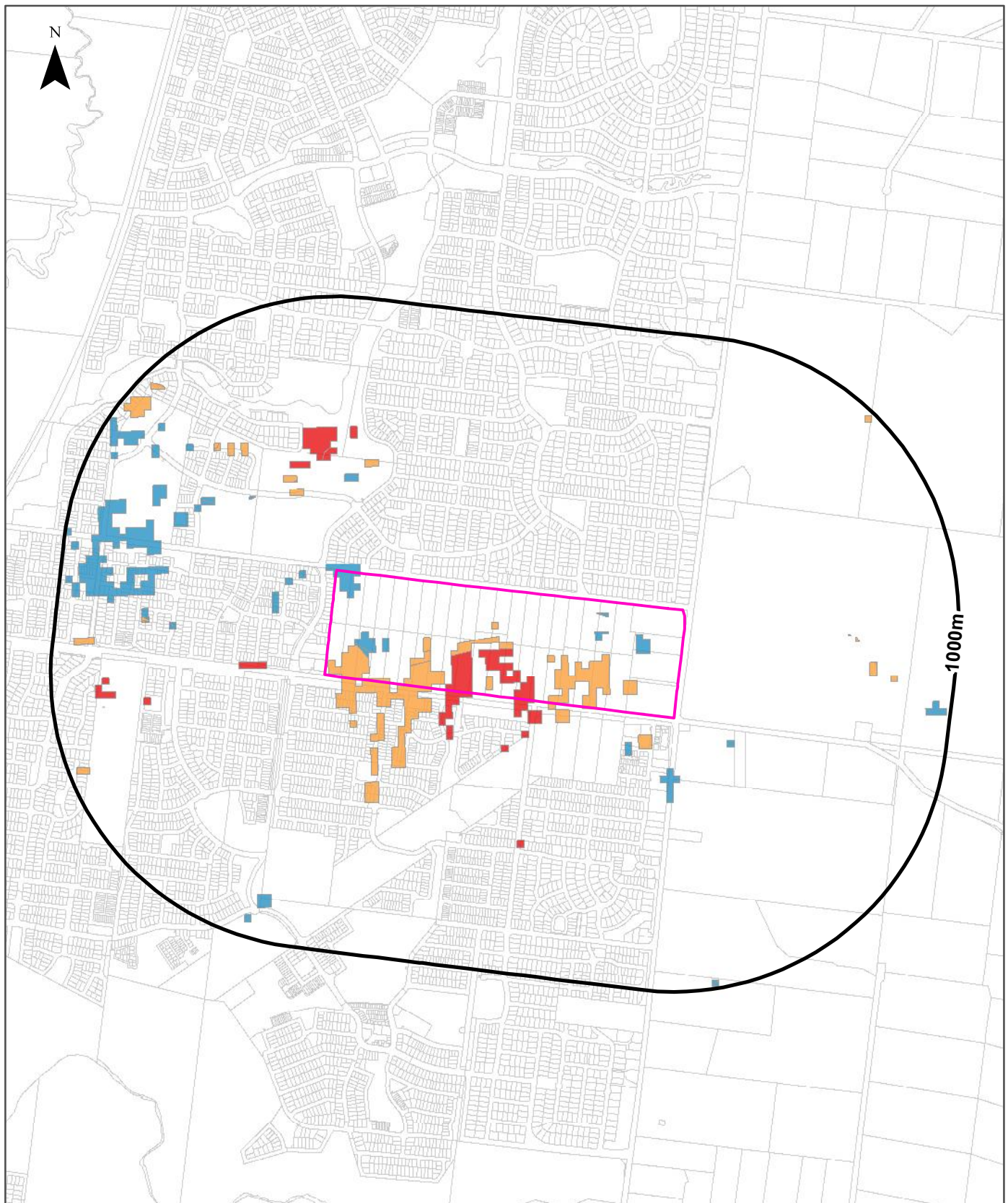
What Ramsar wetland areas exist within the dataset buffer?

| Map ID | Site Name | Lake Name | Distance | Direction |
|--------|--------------------------|-----------|----------|-----------|
| N/A | No records within buffer | | | |

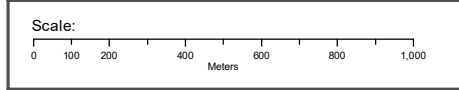
Ramsar Wetland Area Data Custodian: State Government Victoria - Dept of Environment, Land, Water & Planning
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Ecological Constraints - Groundwater Dependent Ecosystems Atlas

Bridge Inn and Cookes Roads, Mernda, VIC 3754



| Legend | | | |
|--------|---|--|--|
| | Site Boundary | | |
| | Report Buffer | | |
| | Property Boundaries | | |
| | High potential GDE - from national assessment | | Low potential GDE - from national assessment |
| | High potential GDE - from regional studies | | Low potential GDE - from regional studies |
| | Moderate potential GDE - from national assessment | | Known GDE - from regional studies |
| | Moderate potential GDE - from regional studies | | Unclassified potential GDE - from regional studies |



Data Sources: Property Boundaries - State Government Victoria - Department of Environment, Land, Water & Planning

Coordinate System: GDA 1994 MGA Zone 55

Date: 21 April 2020

Ecological Constraints

Bridge Inn and Cookes Roads, Mernda, VIC 3754

Groundwater Dependent Ecosystems Atlas

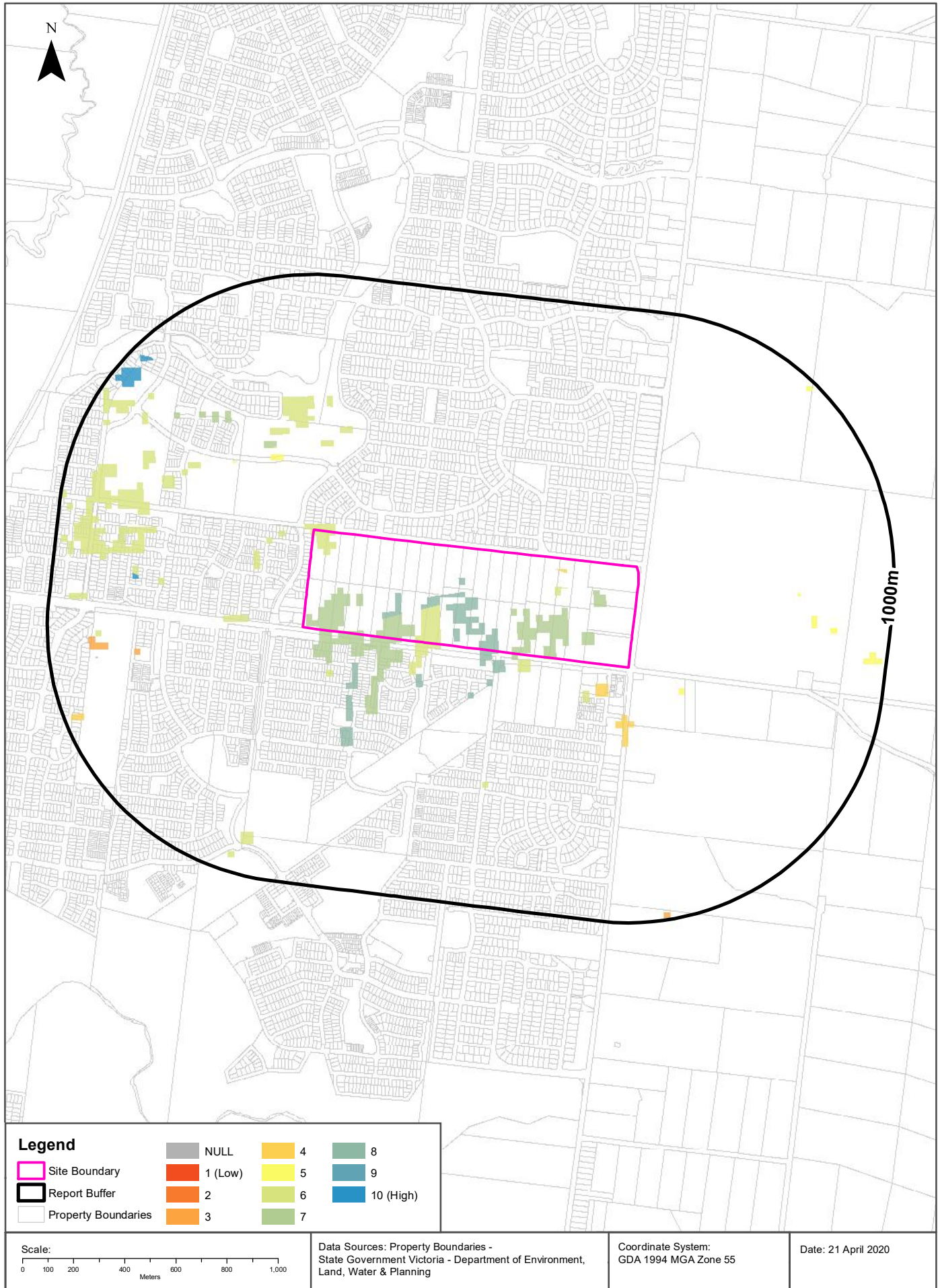
What GDEs exist within the dataset buffer?

| GDE Type | Name | GDE Potential | Geomorphology | Ecosystem Type | Aquifer Geology | Distance |
|-------------|------|---|--|----------------|----------------------------|----------|
| Terrestrial | | High potential GDE - from national assessment | Dissected high plateaus on various resistant rocks, with isolated high plains. | Vegetation | Fractured rock | 0m |
| Terrestrial | | High potential GDE - from national assessment | Dissected high plateaus on various resistant rocks, with isolated high plains. | Vegetation | Unconsolidated sedimentary | 0m |
| Terrestrial | | Low potential GDE - from national assessment | Dissected high plateaus on various resistant rocks, with isolated high plains. | Vegetation | Fractured rock | 0m |
| Terrestrial | | Moderate potential GDE - from national assessment | Dissected high plateaus on various resistant rocks, with isolated high plains. | Vegetation | Fractured rock | 0m |
| Terrestrial | | Moderate potential GDE - from national assessment | Dissected high plateaus on various resistant rocks, with isolated high plains. | Vegetation | Unconsolidated sedimentary | 0m |

Groundwater Dependent Ecosystems Atlas Data Source: The Bureau of Meteorology
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Inflow Dependent Ecosystems Likelihood

Bridge Inn and Cookes Roads, Mernda, VIC 3754



Ecological Constraints

Bridge Inn and Cookes Roads, Mernda, VIC 3754

Inflow Dependent Ecosystems Likelihood

What IDEs exist within the dataset buffer?

| GDE Type | Name | IDE Likelihood | Geomorphology | Ecosystem Type | Aquifer Geology | Distance |
|-------------|------|----------------|--|----------------|----------------------------|----------|
| Terrestrial | | 4 | Dissected high plateaus on various resistant rocks, with isolated high plains. | Vegetation | Fractured rock | 0m |
| Terrestrial | | 6 | Dissected high plateaus on various resistant rocks, with isolated high plains. | Vegetation | Fractured rock | 0m |
| Terrestrial | | 7 | Dissected high plateaus on various resistant rocks, with isolated high plains. | Vegetation | Fractured rock | 0m |
| Terrestrial | | 8 | Dissected high plateaus on various resistant rocks, with isolated high plains. | Vegetation | Fractured rock | 0m |
| Terrestrial | | 8 | Dissected high plateaus on various resistant rocks, with isolated high plains. | Vegetation | Unconsolidated sedimentary | 0m |
| Terrestrial | | 5 | Dissected high plateaus on various resistant rocks, with isolated high plains. | Vegetation | Fractured rock | 209m |
| Terrestrial | | 3 | Dissected high plateaus on various resistant rocks, with isolated high plains. | Vegetation | Unconsolidated sedimentary | 642m |
| Terrestrial | | 10 | Dissected high plateaus on various resistant rocks, with isolated high plains. | Vegetation | Fractured rock | 659m |

Inflow Dependent Ecosystems Likelihood Data Source: The Bureau of Meteorology
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Location Confidences

Where Lotsearch has had to georeference features from supplied addresses, a location confidence has been assigned to the data record. This indicates a confidence to the positional accuracy of the feature. Where applicable, a code is given under the field heading "LC" or "LocConf". These codes lookup to the following location confidences:

| LC Code | Location Confidence |
|--------------------------------|---|
| Premise match | Georeferenced to the site location / premise or part of site |
| General area or suburb match | Georeferenced with the confidence of the general/approximate area |
| Road match | Georeferenced to the road or rail |
| Road intersection | Georeferenced to the road intersection |
| Feature is a buffered point | Feature is a buffered point |
| Land adjacent to geocoded site | Land adjacent to Georeferenced Site |
| Network of features | Georeferenced to a network of features |

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