Preliminary site investigation of Lot 10 DP 1218866, Murrumbateman, NSW

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Executive summary

Murrang Earth Sciences was engaged to undertake a preliminary assessment of contamination—commonly referred to as a preliminary site investigation — at the 18.6 ha Lot 10, DP 1218866, Murrumbateman. It is proposed that the Site be subdivided into nine, 2 ha lots, with Murrang Earth Sciences engaged to undertake a Preliminary site investigation to meet development application requirements for this subdivision. The preliminary site investigation presented herein is a largely desktop-based assessment.

The Site is located on land zoned as RU4 (Primary Production Small Lots) under the Yass Valley Council Local Environmental Plan 2013. It is recorded as being owned by Pixiu Holdings, with Murrang Earth Sciences engaged by Soil & Water on behalf of Pixiu Holdings. Of the nine lots planned within the development, Lot 3 will incorporate an existing residential dwelling called “Glen Lea”, as well as a pool, pool tanks, a stabling yard, yards, lunging arena, garage, water tanks, and workshop. All other lots are currently devoid of structures. Ken Houlahan is the current occupant and former owner of Glen Lea, having purchased the property in 1968.

The National Environment Protection (Assessment of Site Contamination) Measure 1999 was used as a framework to undertake a preliminary site assessment of Lot 10 DP 121886, Murrumbateman, NSW. This desktop assessment and inspection of the Site has found no indications of potential contaminants of concern within any area of the Site for which development is proposed — that is within Lots 1, 2, 4, 5, 6, 7, 8, or 9.

An underground petroleum storage system containing diesel occurs immediately adjacent to the residence on Lot 3. This tank is considered to be an environmental hazard by Murrang Earth Sciences. This is due to its:

- location in a UPSS sensitive area, where is located within the vicinity of both a drinking water catchment and groundwater wells used to source drinking water;
- the tanks age;
- the lack of independent monitoring of the tank and surrounds for indications of leaks; and
- the tank containing diesel, which contains contaminants including phenols, polycyclic aromatic hydrocarbons, and total recoverable hydrocarbons known to be a hazard to human health and the environment.

Both Murrang Earth Sciences and the New South Wales Environment Protection Authority recommends the tank be removed and a validation assessment of the remaining excavation be undertaken. The underground petroleum storage system is considered to not be an area of environmental concern, unless the UPSS remains at the Site.

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Preliminary site investigation of Preliminary site investigation of Lot 10 DP 1218866, Murrumbateman, NSW

1. Introduction and background

Murrang Earth Sciences was engaged to undertake preliminary assessment of contamination—commonly referred to as a Preliminary site investigation — at the 18.6 ha Lot 10, DP 1218866 (the Site), Murrumbateman (Figure 1). It is proposed that the Site be subdivided into nine, 2 ha lots (Appendix A), with Murrang Earth Sciences engaged to undertake a Preliminary site investigation to meet development application requirements for this subdivision. The preliminary site investigation presented herein is a largely desktop-based assessment.

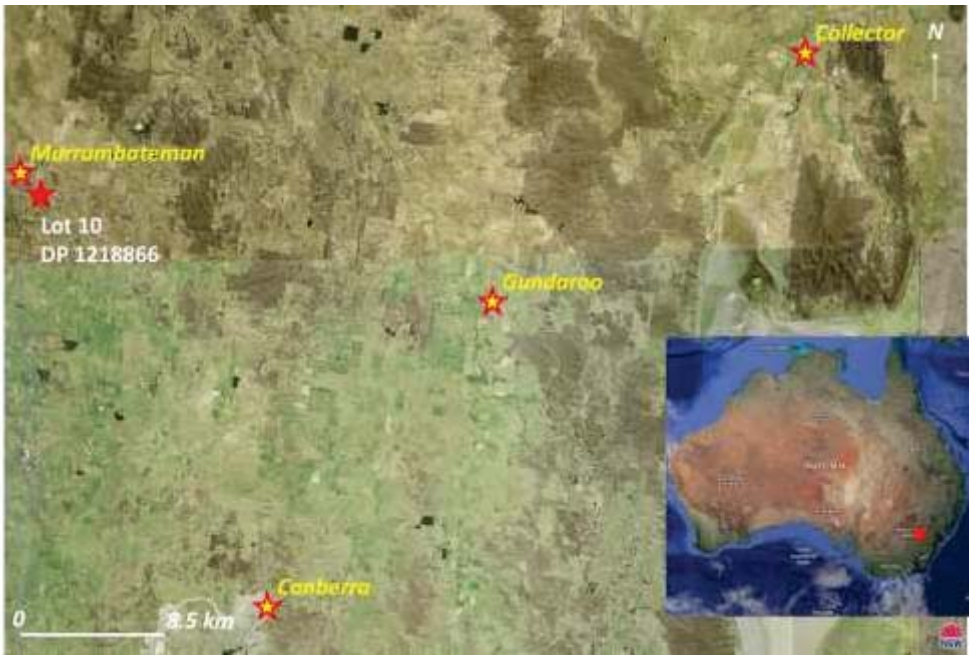
The Site is located on land zoned as RU4 (Primary Production Small Lots) under the Yass Valley Council Local Environmental Plan 2013 (Appendix A). It is recorded as being owned by Pixiu Holdings, with Murrang Earth Sciences engaged by Soil & Water on behalf of Pixiu Holdings (the Client). Of the nine lots planned within the development, Lot 3 will incorporate an existing residential dwelling called "Glen Lea", as well as a pool, pool tanks, a stabling yard, yards, lunging arena, garage, water tanks, and workshop. All other lots are currently devoid of structures. Ken Houlahan is the current occupant and former owner of Glen Lea, having purchased the property in 1968.

The aim of this Preliminary site investigation is to assess the contamination status of the Site by meeting the following objectives:

1. Identify potential sources of contamination and determine potential contaminants of concern
2. Identify areas of potential contamination
3. Identify potential human and ecological receptors
4. Identify potentially affected media (soil, sediment, groundwater, surface water, indoor and/or ambient air).

The works undertaken to meet these objectives are outlined in the following sections.

(a)



(b)

Figure 1. Location of the Site relative to (a) Murrumbateman; and (b) NSW

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2. Assessment framework

The assessment presented below is framed in accordance with the National Environment Protection (Assessment of Site Contamination) Measure (ASC NEPM) 1999[1]. Under Schedules B1 (and others) of the ASC NEPM, the assessment of potential risks associated with site contamination is based on whether there are sources of contamination, receptors of this contamination, and if there are exposure and/or transport pathways between these sources and receptors. On this basis, this report is divided into two main parts: sources and receptors of potential contamination; and potential transport and exposure pathways. This is followed by a summary of potentially affected media, gaps and limitations of the investigation, and conclusions and recommendations.

3. Sources of contamination

Contamination sources at the Site can be classified as environmental contamination sources and human contamination sources. Environmental contamination sources refer to contaminants of concern that occur at the Site due to natural processes. Human contamination sources are those which arise due to some form of current or previous human intervention. These sources of contamination will be discussed in the following subsections.

3.1 Environmental contamination sources

The potential for contaminants of concern to naturally occur at the Site was assessed by reviewing information available on the Site's geology, hydrogeology, and soils.

The soil landscape recorded for the Site on NSW's soils database, eSpade, is Boorowa, with the soil type being kandosol. Kandosols are comprised of sand or silt in the surface layer (A horizon) and clay below (B horizon). As such, there is substantial potential for contaminants of concern to leach through the surficial soil layers to the deeper soil horizons below. These soils are influenced by the Duoro Volcanics (Appendix B). This geological unit is characterised by quartz-feldspar-biotite, quartz-feldspar-biotite-hornblende, or quartz-feldspar-hornblende in a fine-grained, blue grey to greenish matrix. The key soil characteristics of these soil landscape units are described briefly in Table 1 below[2].

Table 1. Key characteristics of soil landscape units at the Site

Soil Landscape Unit	Characteristics
Boorowa	Hardsetting soils with moderate drainage and minor gullying of drainage lines.

Soils at the Site are known to be characterised by a neutral pH[2]. No records of acid sulfate soils apply to the Site (Appendix B). This indicates there is reasonably low potential for metals to be mobilised into soils from any metal-bearing rocks at the Site.

The New South Wales Metallogenic Maps for Canberra (1:250 000) and for Goulburn (1: 250,000) indicate that at least eight metal deposits occur within 5 km of the Site. These deposits included gold, bismuth, copper, tungsten, lead, and silver, both in the form of alluvium and ore, with these deposits prospected or mined for gold and/or bismuth[3,4]. Based on this, it would be reasonable to expect concentrations of metals associated with such deposits (arsenic, cadmium, chromium, copper, nickel, mercury, lead, and zinc) and which are considered to be a potential risk to human health and the environment in Australia to be naturally elevated at the Site. There are no records of any mine subsidence within the Site, however (Appendix B).

The Australian Groundwater Explorer indicates there are twenty bores located within a 1 km radius of the Site, with these used for a combination of irrigation, water supply, domestic stockwater, and monitoring. The depths of these bores range from 11 m to 102 m[5]. Monitoring of the bores by Yass Valley Council indicates good water quality, with the exception of hardness, which exceeded the guideline value of 200 mg/L by up to 115 mg/L in the data presented online[6]. This groundwater occurs within fractured Silurian volcanic, Cambrian metasedimentary, and Silurian and Devonian sedimentary rocks, with low to moderate connectivity between the ground surface and groundwater[7]. No structures or lineaments are recorded as occurring on the Site (Appendix B). Based on this information, there is some potential for contamination to be transported *via* fractures in the aquifer to potential receptors offsite, with receptors including residents in the Murrumbateman area who utilise groundwater as a source of drinking water. No groundwater dependent ecosystems occur within the vicinity of the Site.

Two bores were noted as occurring on the property by Ken Koulahan, the current occupant of the Site. The first (GW416853) was located on the north-western boundary of the Site. This is no longer used by the Site owner, due to plans for the construction of a new highway in that part of the property. It was approximately 15 m deep and provided water for domestic use. Ken noted that the was a bit salty and left white deposits around the taps to which the water was connected. This white deposit is considered to be limescale, caused as

the result of water hardness (i.e. high in magnesium and calcium), with groundwater known to be hard in this area[6].

A bore was constructed to replace this first bore, approximately two years ago (Figure 2). It is located approximately 100 m west of the Glen Lea residence, and has a depth of 40 m. This water is fresher than the original bore. Ken noted that a bore was initially sunk to 200 m approximately 120 m south-east of this new bore without hitting water, before drilling was moved to where the current water bore now occurs. A tributary of Murrumbateman Creek rises in the southern parts of the Site, with this a medium by which any contamination which occurs on the Site might be transported from it. The tributary is considered to not have the potential to transport contamination to the Site, due to the lack of watercourse above the southern area.

The Site is considered to be an Underground Petroleum Storage System (UPSS) sensitive zone (Appendix B), indicating it is considered to be within a region surrounding or near a sensitive receptor (s) such as a drinking water bore, water course, catchment, a national park or other region of environmental significance, or geology which is considered vulnerable to impact from UPSS.

Figure 2. A solar panel providing energy to the bore located on the western Side of the Glen Lea Residence

3.2 Human contamination sources

Human contamination sources were assessed by identifying past and present activities at the Site and its surrounds using historical aerial photographs and interviewing the previous Site owner and current occupant, Ken Houlahan, to understand past and present land-use.

3.2.1 Aerial photographs and mapping

Historical maps from 1952, 1973, 1986, 1994, 1997, 2004, and 2010 are available for the Site (Appendix B). These show Murrumbateman Road has been present on the eastern boundary of the Site since at least 1952. At this time the site was a bare lot, with less than 10 trees, no fences, and a single dam within a watercourse near the Site's southern boundary. Fences can be seen in the 1973 image, and an area of what appears to be land in the midst of cropping just north of the Site's northern boundary. Seven dams can be seen in the 1973 image, more than twice that of the 1952 image. A dwelling and an additional dam were located within the Site in the 1986 image and a number of properties have also been developed in the area surrounding the Site. Historical topographical maps indicate the dwelling within the Site is called Glen Lea. Small trees can be seen along fence lines within and on the southern boundary of the Site. Further development or rural residential dwellings surrounding the Site can be seen in the 1994 image, more in the 1997 image, and still more in the 2004 image. There is no visible change in the Site between 1994 and 2004, with the exception of trees which increased in height over time, and slightly different fence lines.

Google Earth imagery of the Site collected between 2012 and 2016 indicates a difference in plant growth on the eastern side of the Site and on the western side, with this potentially due to a different crop, use of herbicides, or different land management.

Other man-made potential sources or sinks of contamination were not visible from aerial photographs.

3.2.2 Current and proposed land-use

The Site currently consists of one lot – Lot 10 DP 1218866. It is proposed this lot be subdivided into nine (9) separate lots, measuring approximately 2 ha each. It is also intended that the Site be rezoned as part of its development, with each of the lots proposed for residential use.

3.2.3 Historical records of the Site

The Site, like all locations in Australia, occurs within land once cared for and managed by Aboriginal peoples, for whom little history has been recorded in written form. The environment at the Site was almost certainly

shaped through this activity, as described in books such as “Dark Emu”, by Bruce Pascoe, before these people were forced from their land. Any negative impacts to the environment by Aboriginal peoples as a result of this activity is outside the scope of works of this report.

At least eight metal prospects and mines were located within 500 m of the Site, with all extracting a combination of bismuth and gold (Section 3.1)[4].

Records of contaminating activities at the Site state the following (Appendix B). The Site:

- has not been notified to the NSW EPA as contaminated;
- has no applicable records of notices
- is not listed as a former gasworks
- is not listed on the National Waste Management Site Database
- is not being investigated in relation to PFAS or any other form of contamination by the NSW EPA, Department of Defence, or Airservices Australia
- is not and has not been referenced for any licensed activities under the Protection of the Environment Operations Act 1997 or by the NSW EPA
- is not linked to business records from the years 1982, 1970, 1961, or 1950, with no records of dry cleaners, motor garages and services stations occurring within the vicinity
- does not contain visible above ground storage tanks

An interview with the former owner and current occupant of the Site, Ken Houlahan, indicates the Site was once part of Euroka Park and was used as their ewe and lamb paddock. Ken bought the property in 1968 and moved there in 1979. Ken’s family used the property primarily for agisting horses and cattle, and built racing tracks and a lunging arena at the property for training horses for horse and cart racing competitions. Cattle have not been agisted at the property for around 15 years, although four horses still reside there. Sheep have not been grazed at the property since it has been owned by Ken’s family and no sheep dips or yards ever occurred within the Site.

3.2.4 Surrounding land-uses

Surrounding land-uses were assessed in terms of their potential to impact the Site. The Site is located in a semi-rural area, with low density, semi-rural housing approximately 600 m to the west and 60 m to the east. Low intensity agriculture and viticulture occurs south of the Site — a number of vineyards including Clonakilla, Dionysus, and Eden Road occur within 2 km. A high frequency of dams occurs in this area of Murrumbateman, with five dams in the 20 ha immediately east of the Site. Aerial imagery indicates little ground cover and sparse forest cover surrounding the Site, with wind fetch and aerosol transport of contaminants which might occur in surface soils from the Site therefore a potential exposure pathway.

The town of Murrumbateman and its petrol station is located 600 m north-west of and at the same elevation as the Site. This is considered too far from the Site for Murrumbateman to be a receptor of any contamination which might occur at the Site or for the Site to receive any contamination from the petrol station.

3.3 Sensitive receptors

The Site was assessed in terms of its potential to impact receptors on site and in surrounding areas. Potential environmental receptors of contamination of the Site include:

- Dams within and surrounding the Site
- Tributaries of Murrumbateman Creek, which both rise within the Site and in surrounding properties
- Groundwater aquifers, actively used as a source of drinking water
- Neighbouring agricultural and horticultural (i.e. vineyards) land
- Livestock

Workers involved with Site development, future residents, and site visitors are also potential receptors of any contamination which might be present at the Site.

3.3 Site inspection and potential areas of environmental concern

The site inspection offers a means of identifying contamination sources which cannot be identified using desktop available information. Julia Jasonsmith of Murrang Earth Sciences undertook an inspection of the Site on 31 July 2019, accompanied by Ken Houlahan. Salient information collected during this Site inspection is as follows.

The Site was largely comprised of empty and grassed paddocks (Figure 3). Trees occurred in rows around the property's boundary, with the fenced paddocks otherwise well grassed. No indications of any rubbish, including barrels, fences, or any other farm equipment, were noted across the Site. A neighbour on the Site's southern boundary stores farm equipment including old barrels on the property boundary, however no indications of leaks, staining, or odours were noted. Ken noted that noxious weeds on the property are actively

Figure 3. Empty paddocks located in the southern portion of the Site, looking south. The trees in the left, right, and background of the photograph indicate the Site boundary

controlled with Round-up (glyphosate) and cattle agisted at the property were drenched in cattle yards at the property using medicines issued by the vet. Ken stated no sheep or cattle dips occurred at the Site. Other features at the Site considered to be of no concern included a home workshop, underground rain water tanks, a pool, small yards, and a horse stable. All these features are located within the vicinity of the Glen Lea residence and within the boundaries of the planned Lot 3. No asbestos containing material (ACM) was noted as ever having occurred at the Site, including the Glen Lea residence, with no indications of illegal dumping of such material within the property boundary. No paint was seen on the exterior walls of the residence, and it is therefore considered unlikely lead associated with pain occurs at the Site.

A UPSS used for the storage of diesel is located within Lot 3 of the proposed development (Figure 4). This 15,000 L tank has been refuelled only once in its existence and was used to fuel a diesel furnace within the Glen Lea residence. The furnace was used to heat the house. The tank is thought to be located 0.5 to 0.75 m

(a)

(b)

Figure 4. Underground petroleum storage system cover on the eastern side of the current Glen Lea residence looking (a) east; and (b) west

below the ground surface, and within 5 m of the centre of the eastern side of the house. The tank itself is steel and was concreted into the ground. Ken checks the tank for water as an indication of any leaks using ullage paste, with no indications of leaks. The diesel furnace has not been run for at least 20 years, due to the high cost of fuel, and around 1000 L of diesel is thought to remain within the tank.

Such storage systems are defined within the Exemption Order under Clause 28 of the Protection of the Environment Operations (Underground Petroleum Storage Systems) Regulation 2014 as exempt from certain provisions of this regulation. This is as the sole purpose of the tank is for the purposes of heating a residential premises. This exemption only applies until 31 August 2019, then the responsibility for all Underground Petroleum Storage Systems, such as the diesel tank at Glen Lea, becomes the responsibility of the local council, in this case Yass Valley Council. Yass Valley Council and the New South Wales Environment Protection Authority were contacted for clarification regarding the status of the underground petroleum storage system after 31 August 2019 (Appendix D). Correspondence from the Yass Valley Council states that as the tank is not actively used, it should be decommissioned, and a validation report written and issued to the Yass Valley Council within 60 days of the tanks decommissioning.

Murrang Earth Sciences considers the underground petroleum storage system within Lot 3 to present a hazard to both human health and the environment due to its:

- location in a UPSS sensitive area, where is located within the vicinity of both a drinking water catchment and groundwater wells used to source drinking water;
- the tanks age;
- the lack of independent monitoring of the tank and surrounds for indications of leaks; and
- the tank containing diesel, which contains contaminants including phenols, polycyclic aromatic hydrocarbons, and total recoverable hydrocarbons known to be a hazard to human health and the environment.

In its current state, the UPSS is an area of environmental concern until such time it can be proven otherwise. Based on the existing New South Wales Environment Protection Authority and Yass Valley Council policy, the tank should be removed unless it can be proven that the removal of the tank compromises the structural integrity of the building. In this case, negotiation with the Yass Valley Council can be pursued, with an option for the tank to be filled with an inert slurry. An option to recommission the tank is also available. Such recomissioning has a number of requirements, however, including using the fuel within one to two years, undertaking monitoring, and installing leak detection systems. Murrang Earth Sciences understands that such requirements are often more expensive than decommissioning.

Correspondence received on this matter from the Canberra Region Joint Organisation, which acts on behalf of local councils such as Yass Valley Council to enhance contaminated land management, is presented in Appendix C.

Murrang Earth Sciences recommends the Underground Petroleum Storage System be extracted from the Site. Contaminants of potential concern including:

- Phenols
- Polycyclic aromatic hydrocarbons
- Total recoverable hydrocarbons

must be below assessment criteria in the soils surrounding the tank within validation samples collected from the excavation which remains after tank removal. Should any indications of groundwater contamination linked to this Underground Petroleum Storage System occur, then further assessment and/or remedial action may be necessary.

No indications of mining or of mineralisation such as iron-rich minerals (e.g. haematite or jarosite), diggings, slag, tailings, staining, or scalding were observed within the Site.

3.4 Assessment of potential contamination sources

The yards within Lot 3 can be considered as potential areas of concern in some circumstances. For example, when a land-use is changed from one use to another more sensitive — such as from agriculture to residential, yards would be considered a potential area of concern. In additional, large farms with hundreds of head of livestock result in a higher localised impact of farm chemicals within yard areas. In the case of this development, no change in land use is occurring within Lot 3 and the Site will continue to function as a rural residential property. The property was never used for the grazing of livestock in large enough numbers to present the risk of chemical build up within the yard area. Based on this information, the yards are not considered to be an area of environmental concern by Murrang Earth Sciences.

The geology, soil and hydrogeology of the Site indicates concentrations of metals associated with gold, bismuth, copper, tungsten, lead, and silver deposits may be naturally elevated in soils and groundwater. Potentially toxic metals associated with such deposits are considered to not be a hazard in this case as:

- Both Murrumbateman bore water (groundwater)[6] and the soils in the Murrumbateman area have a neutral pH[2], indicating that potentially toxic metals which might be associated with such metals at the Site are neither bioavailable nor mobile;
- No indications of impacts from potential metals of concern, such as scalding, vegetative die-back, or significant soil variation such as the presence of haematite were noted at the Site;
- There were no indications of out-cropping rock to which direct exposure to metal-bearing rocks might occur;
- Concentrations of potentially toxic metals associated with such metals deposits are monitored within Murrumbateman bore water on a monthly basis by the Yass Valley Council, and have not been found at concentrations which present a risk to human health or the environment. Murrumbateman bore water is considered to be similarly exposed to the metal deposits which potentially influence the Site;
- Naturally occurring metals are not considered to be contaminants of concern within the national Australian guidelines for the assessment of site contamination — that is the ASC NEPM (1999), as native flora and fauna are considered to be adapted to such metal occurrences.

Based on this, metals are not considered to be potential contaminants of concern at the Site in this case.

Leaded petrol was used in Australian vehicles until the year 2002, when its sale was prohibited[8]. The Murrumbateman Road has been used for vehicles since at least 1950, and has been exposed to the exhaust created from leaded petrol since this time. Boundaries of the Site were planted with trees by Ken Houlahan after its purchase, and can be seen in 1986 aerial imagery (Figure 5). While these trees were not planted prior to the use of vehicular traffic on Murrumbateman Road, they are considered likely to have captured and impeded the movement of pollutants including lead onto the Site prior to development of the surrounding area into residential properties. As such these trees are considered to have mitigated potential impacts from lead pollution caused by leaded petrol, with lead not considered a contaminant of concern in this case.

Figure 5. Trees planted in the 1980s, looking towards the eastern boundary of the Site from the Glen Lea residence

As discussed in Section 3.3, yards are not considered to be an area of environmental concern in this case, as they are located within a portion of the Site not subject to a more sensitive development. The Underground Petroleum Storage System is considered to present a hazard to human health and the environment, and it is recommended it be removed as part of works to develop the Site.

4. Site conceptual model (transport and exposure pathways)

Potential transport and exposure pathways of the Underground Petroleum Storage System will be discussed in this section. Transport and exposure pathways refer to the processes by which a human or environmental receptor may be exposed to or impacted by a contaminant of concern present in an environment.

Contaminant transport

Fractured rock beneath the Site indicates there is a potential pathway between any fuel which has leaked from the Underground Petroleum Storage System within the at the Glen Lea dwelling and groundwater bodies further down gradient. The depth of bores in the local area (between 15 to 100 m) indicates direct contamination of groundwater beneath the Site is unlikely, however this should be confirmed if contamination related to the Underground Petroleum Storage System is identified at the Site.

Information provided by Ken Houlahan indicates groundwater flow at the Site is complex, with water-bearing zones occurring at depths far shallower than non-bearing zones within 100 m of bores. This, as well as fractored rock, indicates that groundwater flow is not horizontal and does not follow the contours of the land. Instead, groundwater flow is likely vertical to some degree and may include areas of artesian (i.e. pressurised) flow. There is potential that substantial contamination of the aquifer can give rise to contaminated surface water, if this groundwater discharges into surface water systems. This is considered unlikely, and should only be considered if contamination is confirmed in relation to the Underground Petroleum Storage System and if this contamination is confirmed to have migrated from its source and into groundwater.

Contaminant exposure pathways

Groundwater used as a water supply is considered to be a means by which contamination caused by the Underground Petroleum Storage System would be exposed to humans and livestock drinking this water. Humans and livestock also have the potential to be exposed to these contaminants if vapours from the soils onto which fuel from the tank have leaked occur. Finally, site workers who handle soils contaminated with leaked fuel have the potential to be exposed to contaminants through dermal contact, with the Underground Petroleum Storage System the primary source of contamination but any residual contamination in soil acting as a secondary source. These contaminant exposure pathways are not considered to occur if the Underground Petroleum Storage System is removed from the Site and the surrounding soils validated as free of contamination, as the source of contamination will be removed.

5. Summary of affected media and receptors

Sources of contamination and potential pathways between contamination sources and receptors have been identified in the previous sections. Potentially affected media/environmental receptors were identified in this process. Areas within which these contamination sources occur are presented as areas of environmental concern in Table 2 below, which also presents a summary of the potentially affected environmental media and receptors. It is noted that the Underground Petroleum Storage System is considered an area of environmental

Table 1. Summary of potentially affected media and environmental receptors at the Site

AEC	Area	Contaminants of concern	Potential affected media/environmental receptor
UPSS	10 m^2	• Phenols • Polycyclic aromatic hydrocarbons • Total recoverable hydrocarbons	Primary – soil and groundwater

concern only in the event it is left on-site post-development. In such an event, continuous and independent monitoring by an appropriately qualified environmental consultant is recommended.

6. Information gaps and limitations

The findings of this report are subject to the following information gaps and limitations:

- As this is a preliminary site investigation, no samples were collected during this phase of work. This is in accordance with the National Environmental Protection Council (1999) and the NSW Contaminated Sites guidelines.
- Findings from the site inspection are based on what was observed on the day. Key areas throughout the Site were visited, but not every area of the Site could practicably be observed. This is considered to have low impact on the findings of this investigation, as aerial photographs and Google Earth imagery were used to corroborate the findings of the site inspection.
- Owners of neighbouring properties were not interviewed. This is considered to have low impact on the outcomes of this report, due to the lines of evidence attained regarding contamination at the Site from other sources.

7. Conclusions and recommendations

The National Environment Protection (Assessment of Site Contamination) Measure 1999 was used as a framework to undertake a preliminary site assessment of Lot 10 DP 121886, Murrumbateman, NSW. This desktop assessment and inspection of the Site has found no indications of potential contaminants of concern within any area of the Site for which development is proposed — that is within Lots 1, 2, 4, 5, 6, 7, 8, or 9.

An underground petroleum storage system containing 1000 L of diesel occurs immediately adjacent to the residence on Lot 3. This tank is considered to be an environmental hazard by Murrang Earth Sciences. This is due to its:

- location in a UPSS sensitive area, where is located within the vicinity of both a drinking water catchment and groundwater wells used to source drinking water;
- the tanks age;
- the lack of independent monitoring of the tank and surrounds for indications of leaks; and
- the tank containing diesel, which contains contaminants including phenols, polycyclic aromatic hydrocarbons, and total recoverable hydrocarbons known to be a hazard to human health and the environment.

In its current state, the UPSS is an area of environmental concern until such time it can be proven otherwise. Based on the existing New South Wales Environment Protection Authority and Yass Valley Council policy, the tank should be removed unless it can be proven that the removal of the tank compromises the structural integrity of the building. In this case, negotiation with the Yass Valley Council can be pursued, with an option for the tank to be filled with an inert slurry or to recommission the tank.

Murrang Earth Sciences recommends the underground petroleum storage system be extracted from the Site. Contaminants of potential concern including:

- Phenols
- Polycyclic aromatic hydrocarbons
- Total recoverable hydrocarbons

must be below assessment criteria in the soils surrounding the tank within validation samples collected from the excavation which remains after tank removal. A validation report presenting the results of the tank removal and validation samples should be submitted to Yass Valley Council within 60 days. Should any indications of groundwater contamination linked to the underground petroleum storage system occur, further assessment and/or remedial action may be necessary. Should site owner(s) wish to recommission the tank for use with the domestic heating system in the existing dwelling, tank integrity testing, contamination assessment and monitoring requirements associated with recommissioning will need to be confirmed by Yass Valley Council and included within the conditions of develpoment consent.

This report has been the subject of external review by Dr Chris Gunton, a Certified Environmental Practitioner General (1044) and Site Contamination Specialist (SC41045) within the Site Contamination Practitioners Australia Scheme. This review is presented in Appendix C.

8. References

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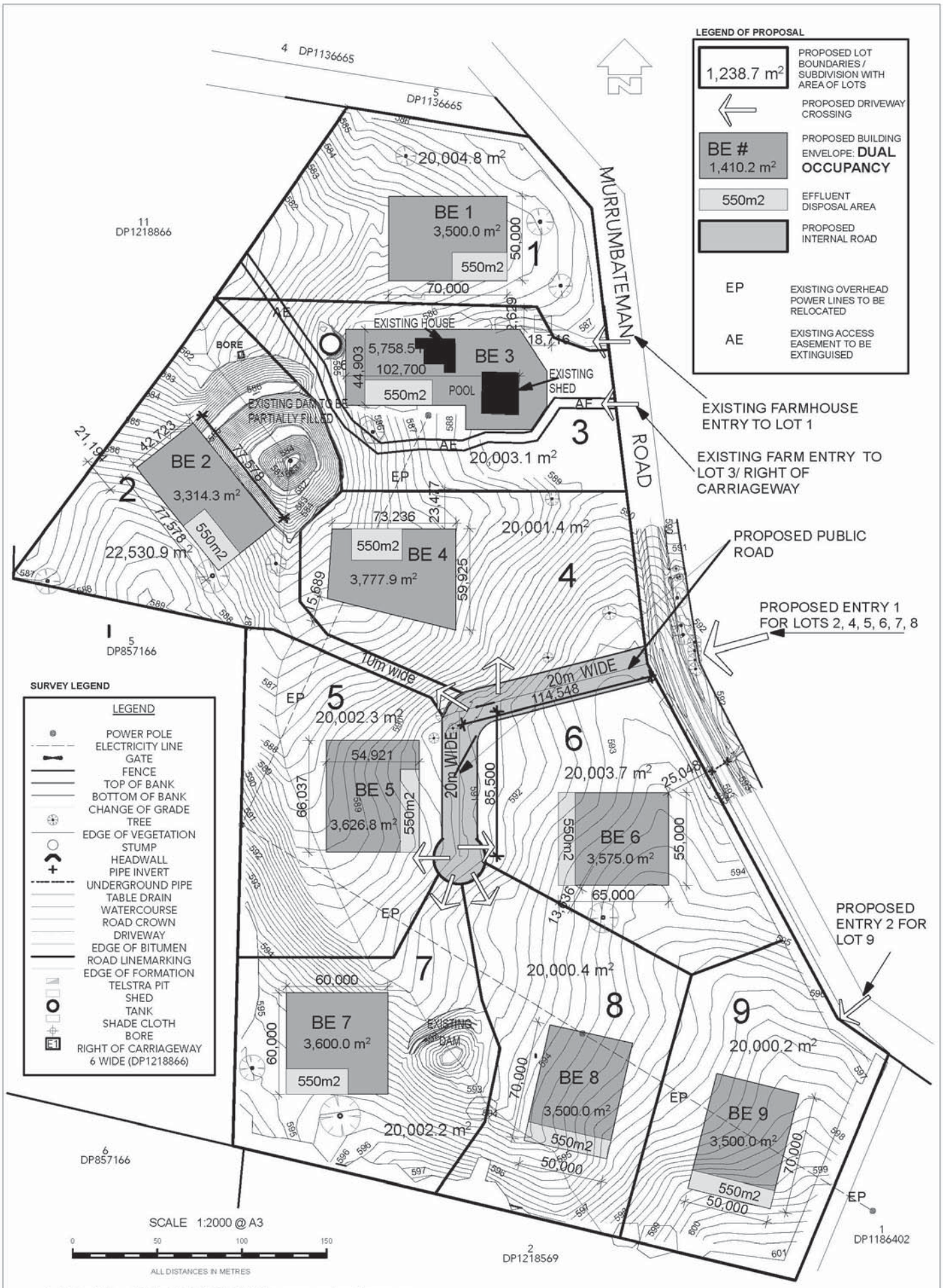
5. Bureau of Meteorology (2019) Australian Groundwater Explorer. Accessed 23 July 2019 at <http://www.bom.gov.au/water/groundwater/explorer/>.
6. Yass Valley Council (2019) Water Quality, Accessed on 23 July 2019: <https://www.yassvalley.nsw.gov.au/our-services/water/water-quality/>.
7. NSW DPI (2012). Water sharing plan Murray-Darling Basin fractured rock groundwater sources. NSW DPI and NSW Office of Water, Sydney.
8. Petrol fuel quality standard (2019). Accessed on 2 August 2019: <https://www.environment.gov.au/protection/fuel-quality/standards/petrol>.

Appendix A.
Site Plans

02 6161 1762

contact@murrang.com.au

www.murrang.com.au
ABN 96 162 928 958



LOT 10 DP 1218866 Murrumbateman

Appendix B.
Lotsearch Government Searches

02 6161 1762

contact@murrang.com.au

www.murrang.com.au
ABN 96 162 928 958

LOTSEARCH

LOTSEARCH ENVIRO PROFESSIONAL

Date: 29 Jul 2019 09:49:23

Reference: LS007619 EP

Address: 80 Murrumbateman Road, Murrumbateman, NSW 2582

Table of Contents

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

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 within Buffer
Cadastre Boundaries	NSW Department of Finance, Services & Innovation	29/07/2019	29/07/2019	Daily	-	-	-	-
Topographic Data	NSW Department of Finance, Services & Innovation	11/04/2019	10/04/2019	As required	-	-	-	-
List of NSW contaminated sites notified to EPA	Environment Protection Authority	17/07/2019	09/07/2019	Monthly	1000	0	0	0
Contaminated Land Records of Notice	Environment Protection Authority	10/07/2019	10/07/2019	Monthly	1000	0	0	0
Former Gasworks	Environment Protection Authority	01/07/2019	11/10/2017	Monthly	1000	0	0	0
National Waste Management Facilities Database	Geoscience Australia	07/05/2019	07/03/2017	Quarterly	1000	0	0	0
EPA PFAS Investigation Program	Environment Protection Authority	01/07/2019	01/07/2019	Monthly	2000	0	0	0
Defence PFAS Investigation & Management Program	Department of Defence	01/07/2019	01/07/2019	Monthly	2000	0	0	0
Airservices Australia National PFAS Management Program	Airservices Australia	01/07/2019	01/07/2019	Monthly	2000	0	0	0
Defence 3 Year Regional Contamination Investigation Program	Department of Defence	01/07/2019	01/07/2019	Monthly	2000	0	0	0
EPA Other Sites with Contamination Issues	Environment Protection Authority	13/12/2018	13/12/2018	Annually	1000	0	0	0
Licensed Activities under the POEO Act 1997	Environment Protection Authority	26/07/2019	26/07/2019	Monthly	1000	0	0	0
Delicensed POEO Activities still regulated by the EPA	Environment Protection Authority	26/07/2019	26/07/2019	Monthly	1000	0	0	0
Former POEO Licensed Activities now revoked or surrendered	Environment Protection Authority	26/07/2019	26/07/2019	Monthly	1000	3	3	3
UPSS Environmentally Sensitive Zones	Environment Protection Authority	14/04/2015	12/01/2010	As required	1000	1	1	1
UBD Business Directory 1982 (Premise & Intersection Matches)	Hardie Grant			Not required	150	0	0	0
UBD Business Directory 1982 (Road & Area Matches)	Hardie Grant			Not required	150	-	0	0
UBD Business Directory 1970 (Premise & Intersection Matches)	Hardie Grant			Not required	150	0	0	0
UBD Business Directory 1970 (Road & Area Matches)	Hardie Grant			Not required	150	-	0	0
UBD Business Directory 1961 (Premise & Intersection Matches)	Hardie Grant			Not required	150	0	0	0
UBD Business Directory 1961 (Road & Area Matches)	Hardie Grant			Not required	150	-	0	0
UBD Business Directory 1950 (Premise & Intersection Matches)	Hardie Grant			Not required	150	0	0	0
UBD Business Directory 1950 (Road & Area Matches)	Hardie Grant			Not required	150	-	0	0
UBD Business Directory Drycleaners & Motor Garages/Service Stations (Premise & Intersection Matches)	Hardie Grant			Not required	500	0	0	0
UBD Business Directory Drycleaners & Motor Garages/Service Stations (Road & Area Matches)	Hardie Grant			Not required	500	-	0	0
Points of Interest	NSW Department of Finance, Services & Innovation	11/04/2019	10/04/2019	Quarterly	1000	1	2	15
Tanks (Areas)	NSW Department of Finance, Services & Innovation	11/04/2019	11/04/2019	Quarterly	1000	0	0	0
Tanks (Points)	NSW Department of Finance, Services & Innovation	11/04/2019	10/04/2019	Quarterly	1000	0	0	0
Major Easements	NSW Department of Finance, Services & Innovation	11/04/2019	11/04/2019	Quarterly	1000	1	2	4

Dataset Name	Custodian	Supply Date	Currency Date	Update Frequency	Dataset Buffer (m)	No. Features Onsite	No. Features within 100m	No. Features within Buffer
State Forest	NSW Department of Finance, Services & Innovation	18/01/2018	18/01/2018	As required	1000	0	0	0
NSW National Parks and Wildlife Service Reserves	NSW Office of Environment & Heritage	16/01/2019	14/11/2018	Annually	1000	0	0	0
Hydrogeology Map of Australia	Commonwealth of Australia (Geoscience Australia)	08/10/2014	17/03/2000	As required	1000	1	1	1
Botany Groundwater Management Zones	NSW Department of Primary Industries	15/03/2018	01/10/2005	As required	1000	0	0	0
Groundwater Boreholes	NSW Dept. of Primary Industries - Water NSW; Commonwealth of Australia (Bureau of Meteorology)	24/07/2018	23/07/2018	Annually	2000	1	3	161
Geological Units 1:250,000	NSW Dept. of Industry, Resources & Energy	20/08/2014		None planned	1000	1	-	2
Geological Structures 1:250,000	NSW Dept. of Industry, Resources & Energy	20/08/2014		None planned	1000	0	-	0
Naturally Occurring Asbestos Potential	NSW Dept. of Industry, Resources & Energy	04/12/2015	24/09/2015	Unknown	1000	0	0	0
Soil Landscapes	NSW Office of Environment & Heritage	12/08/2014		None planned	1000	1	-	2
Atlas of Australian Soils	CSIRO	19/05/2017	17/02/2011	As required	1000	1	1	1
Environmental Planning Instrument Acid Sulfate Soils	NSW Department of Planning and Environment	22/07/2019	28/06/2019	Weekly	500	0	-	-
Atlas of Australian Acid Sulfate Soils	CSIRO	19/01/2017	21/02/2013	As required	1000	1	1	1
Dryland Salinity - National Assessment	National Land and Water Resources Audit	18/07/2014	12/05/2013	None planned	1000	0	0	1
Dryland Salinity Potential of Western Sydney	NSW Office of Environment & Heritage	12/05/2017	01/01/2002	None planned	1000	-	-	-
Mining Subsidence Districts	NSW Department of Finance, Services & Innovation	11/04/2019	11/04/2019	Quarterly	1000	0	0	0
Environmental Planning Instrument SEPP State Significant Precincts	NSW Department of Planning and Environment	22/07/2019	07/12/2018	Weekly	1000	0	0	0
Environmental Planning Instrument Land Zoning	NSW Department of Planning and Environment	22/07/2019	05/07/2019	Weekly	1000	1	2	9
Commonwealth Heritage List	Australian Government Department of the Environment and Energy - Heritage Branch	16/01/2019	31/07/2018	Unknown	1000	0	0	0
National Heritage List	Australian Government Department of the Environment and Energy - Heritage Branch	16/01/2019	28/09/2018	Unknown	1000	0	0	0
State Heritage Register - Curtilages	NSW Office of Environment & Heritage	15/07/2019	09/11/2018	Quarterly	1000	0	0	0
Environmental Planning Instrument Heritage	NSW Department of Planning and Environment	22/07/2019	28/06/2019	Weekly	1000	0	0	5
Bush Fire Prone Land	NSW Rural Fire Service	28/05/2019	05/04/2019	Quarterly	1000	0	0	0
Vegetation of Southern Forests	NSW Office of Environment & Heritage	09/12/2014	10/10/2011	Unknown	1000	0	0	0
Ramsar Wetlands of Australia	Commonwealth of Australia Department of the Environment	08/10/2014	24/06/2011	As required	1000	0	0	0
Groundwater Dependent Ecosystems	Bureau of Meteorology	14/08/2017	15/05/2017	Unknown	1000	0	0	0
Inflow Dependent Ecosystems Likelihood	Bureau of Meteorology	14/08/2017	15/05/2017	Unknown	1000	0	0	0
NSW BioNet Species Sightings	NSW Office of Environment & Heritage	29/07/2019	29/07/2019	Weekly	10000	-	-	-

Aerial Imagery 2019

80 Murrumbateman Road, Murrumbateman, NSW 2582

Scale: 0 50 100 200 Meters	Data Source Aerial Imagery: © 2019 Google Inc, used with permission. Google and the Google logo are registered trademarks of Google Inc.	Coordinate System: GDA 1994 MGA Zone 56	Date: 25 July, 2019

Contaminated Land & Waste Management Facilities

80 Murrumbateman Road, Murrumbateman, NSW 2582

List of NSW contaminated sites notified to EPA

Records from the NSW EPA Contaminated Land list within the dataset buffer:

Map Id	Site	Address	Suburb	Activity	Management Class	Status	Location Confidence	Dist (m)	Direction
N/A	No records in buffer								

The values within the EPA site management class in the table above, are given more detailed explanations in the table below:

EPA site management class	Explanation
Contamination being managed via the planning process (EP&A Act)	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation. The contamination of this site is managed by the consent authority under the Environmental Planning and Assessment Act 1979 (EP&A Act) planning approval process, with EPA involvement as necessary to ensure significant contamination is adequately addressed. The consent authority is typically a local council or the Department of Planning and Environment.
Contamination currently regulated under CLM Act	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation under the Contaminated Land Management Act 1997 (CLM Act). Management of the contamination is regulated by the EPA under the CLM Act. Regulatory notices are available on the EPA's Contaminated Land Public Record of Notices.
Contamination currently regulated under POEO Act	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation. Management of the contamination is regulated under the Protection of the Environment Operations Act 1997 (POEO Act). The EPA's regulatory actions under the POEO Act are available on the POEO public register.
Contamination formerly regulated under the CLM Act	The EPA has determined that the contamination is no longer significant enough to warrant regulation under the Contaminated Land Management Act 1997 (CLM Act). The contamination was addressed under the CLM Act.
Contamination formerly regulated under the POEO Act	The EPA has determined that the contamination is no longer significant enough to warrant regulation. The contamination was addressed under the Protection of the Environment Operations Act 1997 (POEO Act).
Contamination was addressed via the planning process (EP&A Act)	The EPA has determined that the contamination is no longer significant enough to warrant regulation. The contamination was addressed by the appropriate consent authority via the planning process under the Environmental Planning and Assessment Act 1979 (EP&A Act).
Ongoing maintenance required to manage residual contamination (CLM Act)	The EPA has determined that ongoing maintenance, under the Contaminated Land Management Act 1997 (CLM Act), is required to manage the residual contamination. Regulatory notices under the CLM Act are available on the EPA's Contaminated Land Public Record of Notices.
Regulation being finalised	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation under the Contaminated Land Management Act 1997. A regulatory approach is being finalised.
Regulation under the CLM Act not required	The EPA has completed an assessment of the contamination and decided that regulation under the Contaminated Land Management Act 1997 is not required.
Under assessment	The contamination is being assessed by the EPA to determine whether regulation is required. The EPA may require further information to complete the assessment. For example, the completion of management actions regulated under the planning process or Protection of the Environment Operations Act 1997. Alternatively, the EPA may require information via a notice issued under s77 of the Contaminated Land Management Act 1997 or issue a Preliminary Investigation Order.

NSW EPA Contaminated Land List Data Source: Environment Protection Authority

Contaminated Land & Waste Management Facilities

80 Murrumbateman Road, Murrumbateman, NSW 2582

Contaminated Land: Records of Notice

Record of Notices within the dataset buffer:

Map Id	Name	Address	Suburb	Notices	Area No	Location Confidence	Distance	Direction
N/A	No records in buffer							

Contaminated Land Records of Notice Data Source: Environment Protection Authority

Former Gasworks

Former Gasworks within the dataset buffer:

Map Id	Location	Council	Further Info	Location Confidence	Distance	Direction
N/A	No records in buffer					

Former Gasworks Data Source: Environment Protection Authority

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: Geoscience Australia

PFAS Investigation Sites

80 Murrumbateman Road, Murrumbateman, NSW 2582

EPA PFAS Investigation Program

Sites that are part of the EPA PFAS investigation program, within the dataset buffer:

Id	Site	Address	Loc Conf	Dist	Dir
N/A	No records in buffer				

EPA PFAS Investigation Program: Environment Protection Authority

Defence PFAS Investigation & Management Program

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

Map ID	Base Name	Address	Loc Conf	Dist	Dir
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	Loc Conf	Dist	Dir
N/A	No records in buffer				

Airservices Australia National PFAS Management Program Data Custodian: Airservices Australia

Defence Sites

80 Murrumbateman Road, Murrumbateman, NSW 2582

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 Other Sites with Contamination Issues

80 Murrumbateman Road, Murrumbateman, NSW 2582

EPA Other Sites with Contamination Issues

This dataset contains other sites identified on the EPA website as having contamination issues. This dataset currently includes:

- James Hardie asbestos manufacturing and waste disposal sites
- Radiological investigation sites in Hunter's Hill
- Pasminco Lead Abatement Strategy Area

Sites within the dataset buffer:

Site Id	Site Name	Site Address	Dataset	Comments	Location Confidence	Distance	Direction
N/A	No records in buffer						

EPA Activities

80 Murrumbateman Road, Murrumbateman, NSW 2582

Licensed Activities under the POEO Act 1997

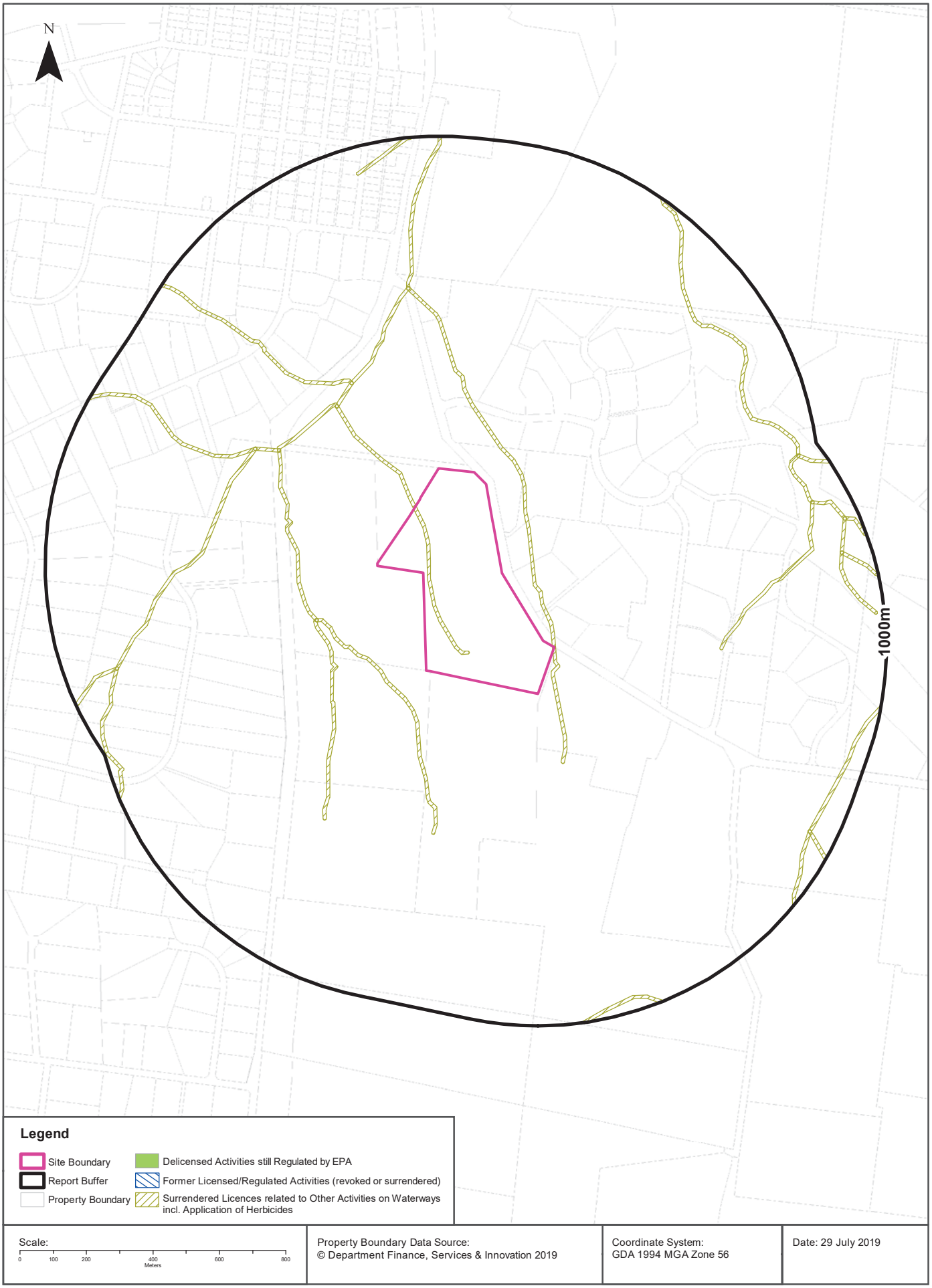
Licensed activities under the Protection of the Environment Operations Act 1997, within the dataset buffer:

EPL	Organisation	Name	Address	Suburb	Activity	Loc Conf	Distance	Direction
N/A	No records in buffer							

POEO Licence Data Source: Environment Protection Authority

Delicensed & Former Licensed EPA Activities

80 Murrumbateman Road, Murrumbateman, NSW 2582



EPA Activities

80 Murrumbateman Road, Murrumbateman, NSW 2582

Delicensed Activities still regulated by the EPA

Delicensed activities still regulated by the EPA, within the dataset buffer:

Licence No	Organisation	Name	Address	Suburb	Activity	Loc Conf	Distance	Direction
N/A	No records in buffer							

Delicensed Activities Data Source: Environment Protection Authority

Former Licensed Activities under the POEO Act 1997, now revoked or surrendered

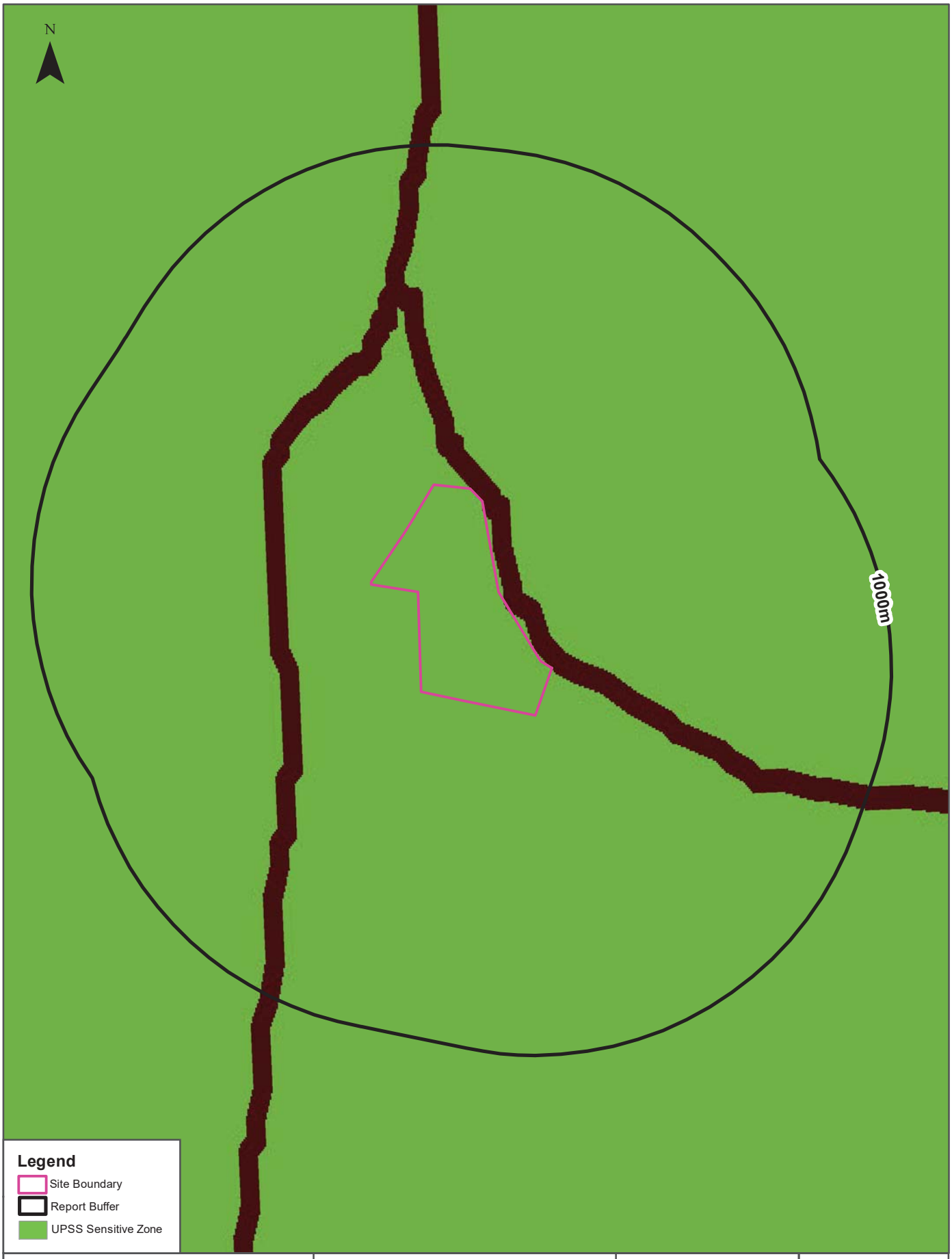
Former Licensed activities under the Protection of the Environment Operations Act 1997, now revoked or surrendered, within the dataset buffer:

Licence No	Organisation	Location	Status	Issued Date	Activity	Loc Conf	Distance	Direction
4653	LUHRMANN ENVIRONMENT MANAGEMENT PTY LTD	WATERWAYS THROUGHOUT NSW	Surrendered		Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	0m	Onsite
4838	Robert Orchard	Various Waterways throughout New South Wales - SYDNEY NSW 2000	Surrendered		Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	0m	Onsite
6630	SYDNEY WEED & PEST MANAGEMENT PTY LTD	WATERWAYS THROUGHOUT NSW - PROSPECT, NSW, 2148	Surrendered		Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	0m	Onsite

Former Licensed Activities Data Source: Environment Protection Authority

UPSS Sensitive Zones

80 Murrumbateman Road, Murrumbateman, NSW 2582



Historical Business Directories

80 Murrumbateman Road, Murrumbateman, NSW 2582

1982 Business Directory Records
Premise or Road Intersection Matches

Records from the 1982 UBD Business Directory, mapped to a premise or road intersection, within the dataset buffer:

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

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

1982 Business Directory Records
Road or Area Matches

Records from the 1982 UBD Business Directory, 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.	Location Confidence	Distance to Road Corridor or Area
	No records in buffer				

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

Historical Business Directories

80 Murrumbateman Road, Murrumbateman, NSW 2582

1970 Business Directory Records
Premise or Road Intersection Matches

Records from the 1970 UBD Business Directory, mapped to a premise or road intersection, within the dataset buffer:

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

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

1970 Business Directory Records
Road or Area Matches

Records from the 1970 UBD Business Directory, 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.	Location Confidence	Distance to Road Corridor or Area
	No records in buffer				

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

Historical Business Directories

80 Murrumbateman Road, Murrumbateman, NSW 2582

1961 Business Directory Records
Premise or Road Intersection Matches

Records from the 1961 UBD Business Directory, mapped to a premise or road intersection, within the dataset buffer:

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

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

1961 Business Directory Records
Road or Area Matches

Records from the 1961 UBD Business Directory, 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.	Location Confidence	Distance to Road Corridor or Area
	No records in buffer				

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

Historical Business Directories

80 Murrumbateman Road, Murrumbateman, NSW 2582

1950 Business Directory Records
Premise or Road Intersection Matches

Records from the 1950 UBD Business Directory, mapped to a premise or road intersection, within the dataset buffer:

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

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

1950 Business Directory Records
Road or Area Matches

Records from the 1950 UBD Business Directory, 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.	Location Confidence	Distance to Road Corridor or Area
	No records in buffer				

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

Historical Business Directories

80 Murrumbateman Road, Murrumbateman, NSW 2582

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

Dry Cleaners, Motor Garages & Service Stations from 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						

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

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

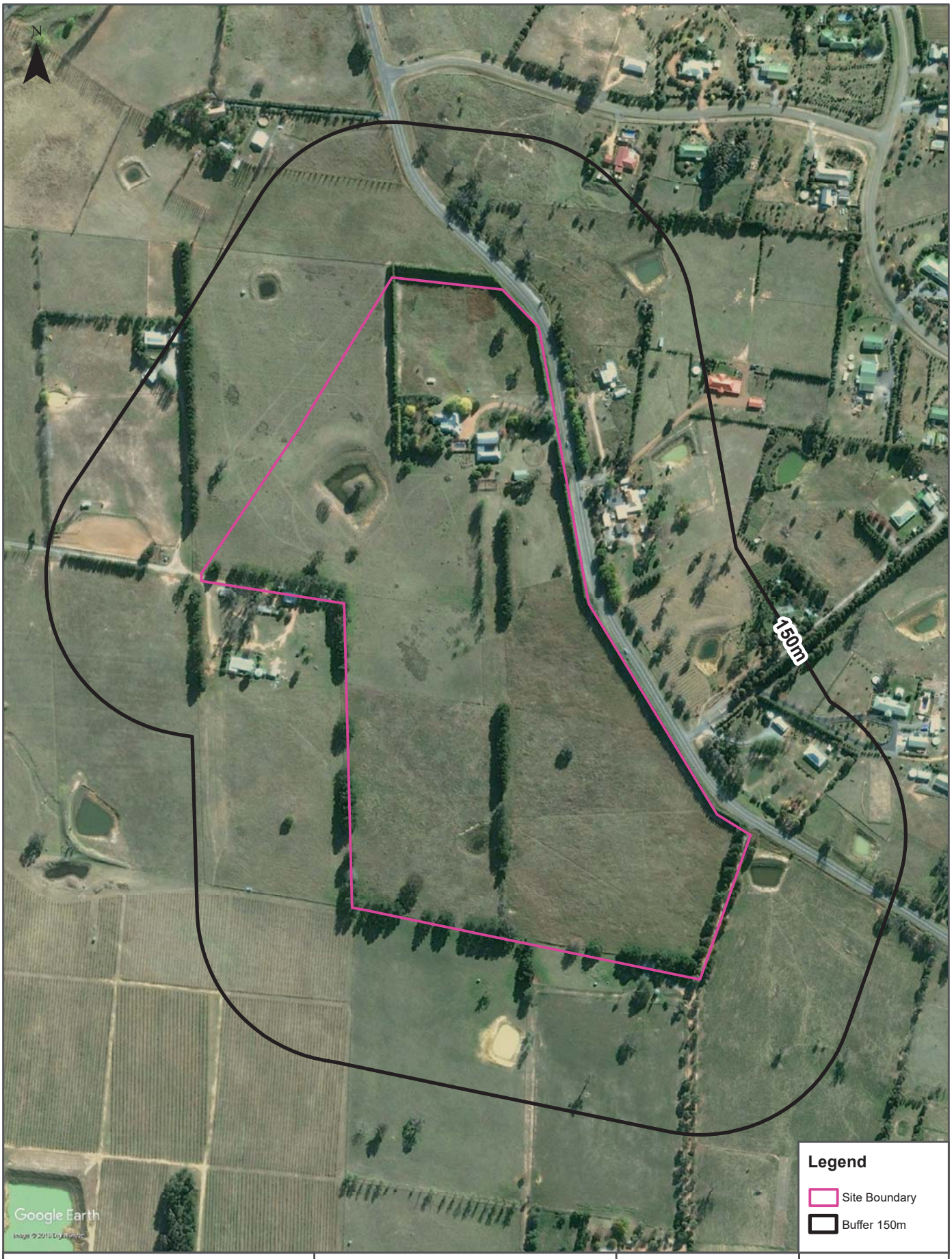
Dry Cleaners, Motor Garages & Service Stations from UBD Business Directories, mapped to a road or an area, within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found, or the road has been renumbered since the directory was published.

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

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

Aerial Imagery 2010

80 Murrumbateman Road, Murrumbateman, NSW 2582



Scale:	Data Source Aerial Imagery: © 2019 Google Inc, used with permission. Google and the Google logo are registered trademarks of Google Inc.	Coordinate System: GDA 1994 MGA Zone 56	Date: 25 July, 2019

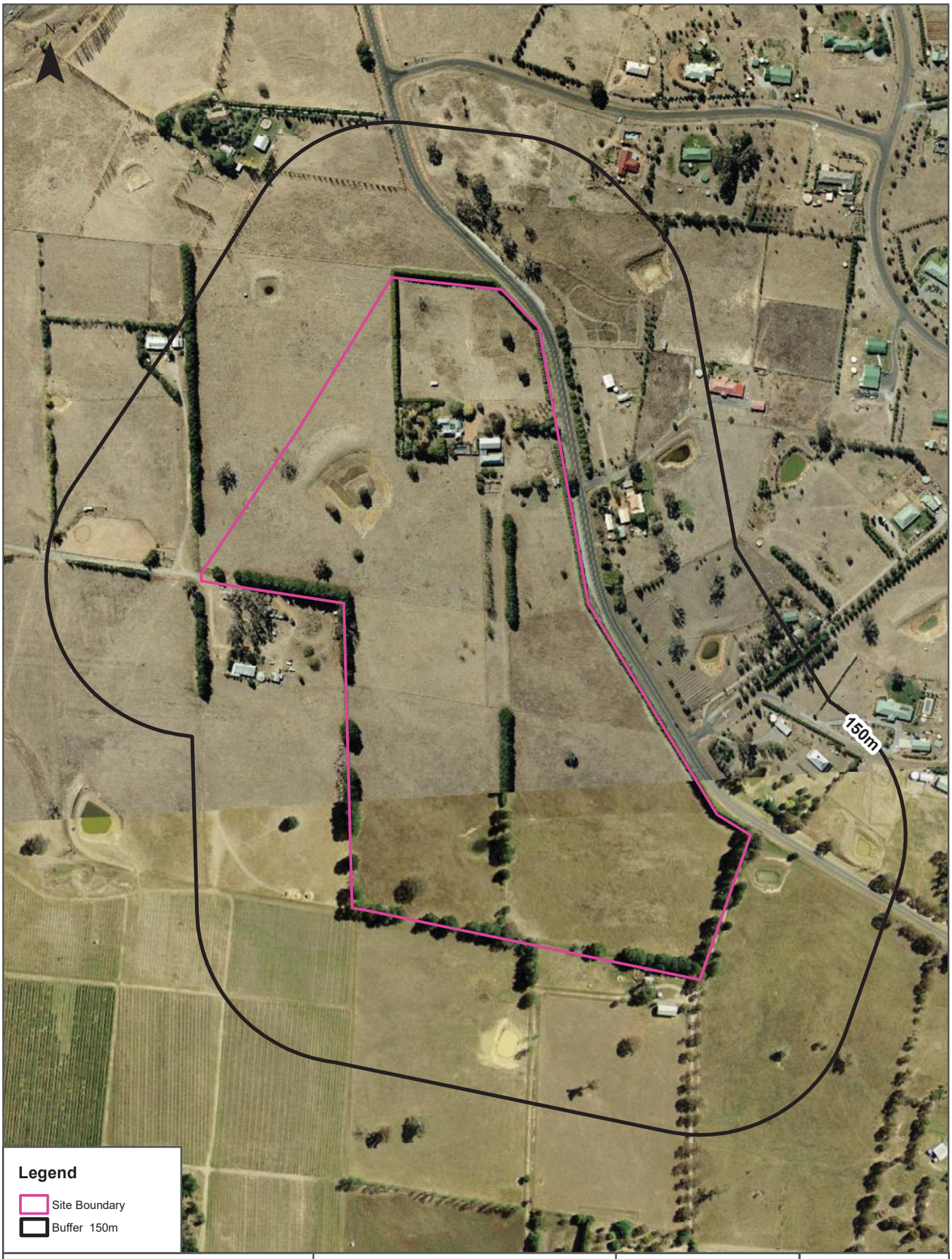
Scale: 0 50 100 200 Meters

Aerial Imagery 2004

80 Murrumbateman Road, Murrumbateman, NSW 2582

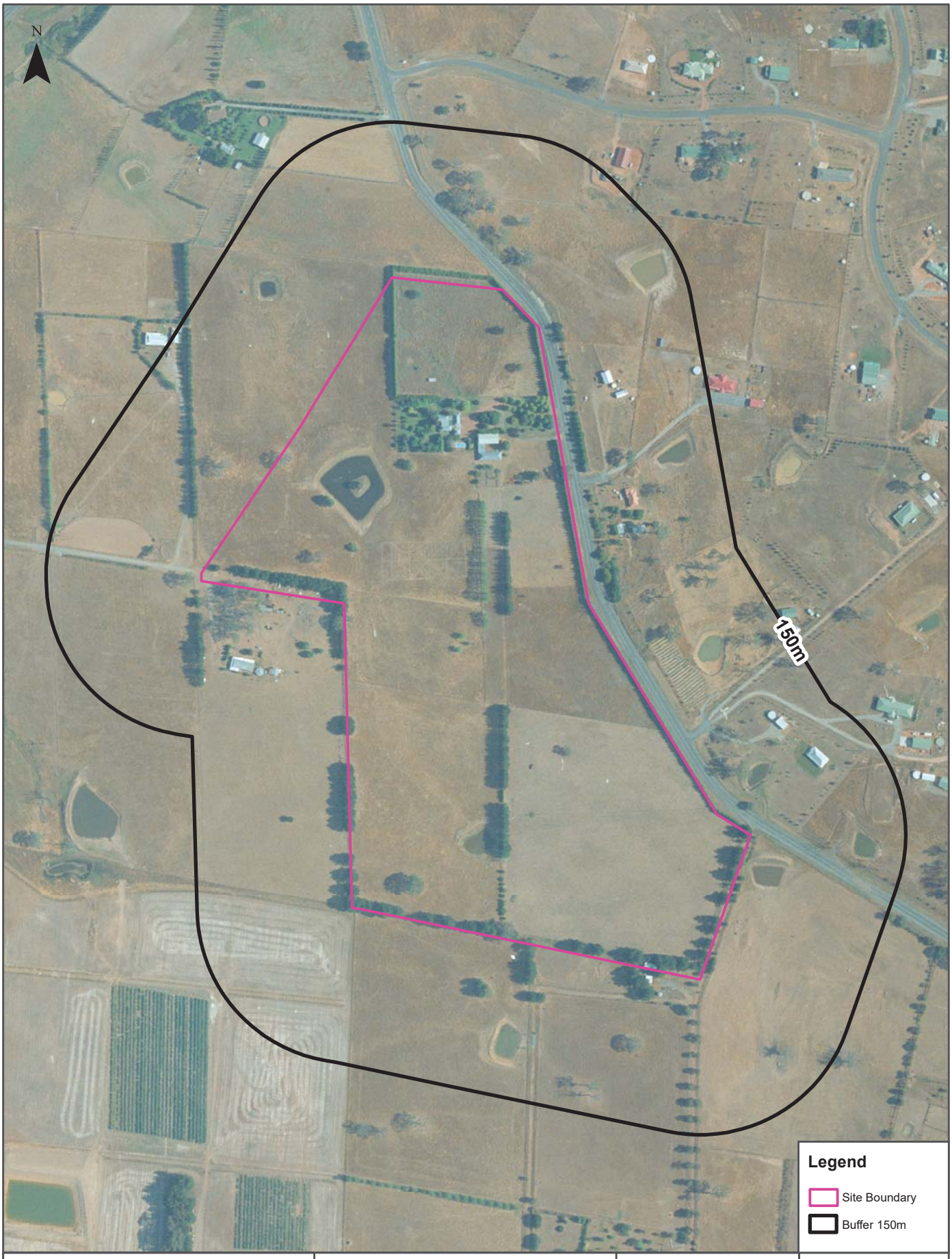
Aerial Imagery 2004, 2015

80 Murrumbateman Road, Murrumbateman, NSW 2582



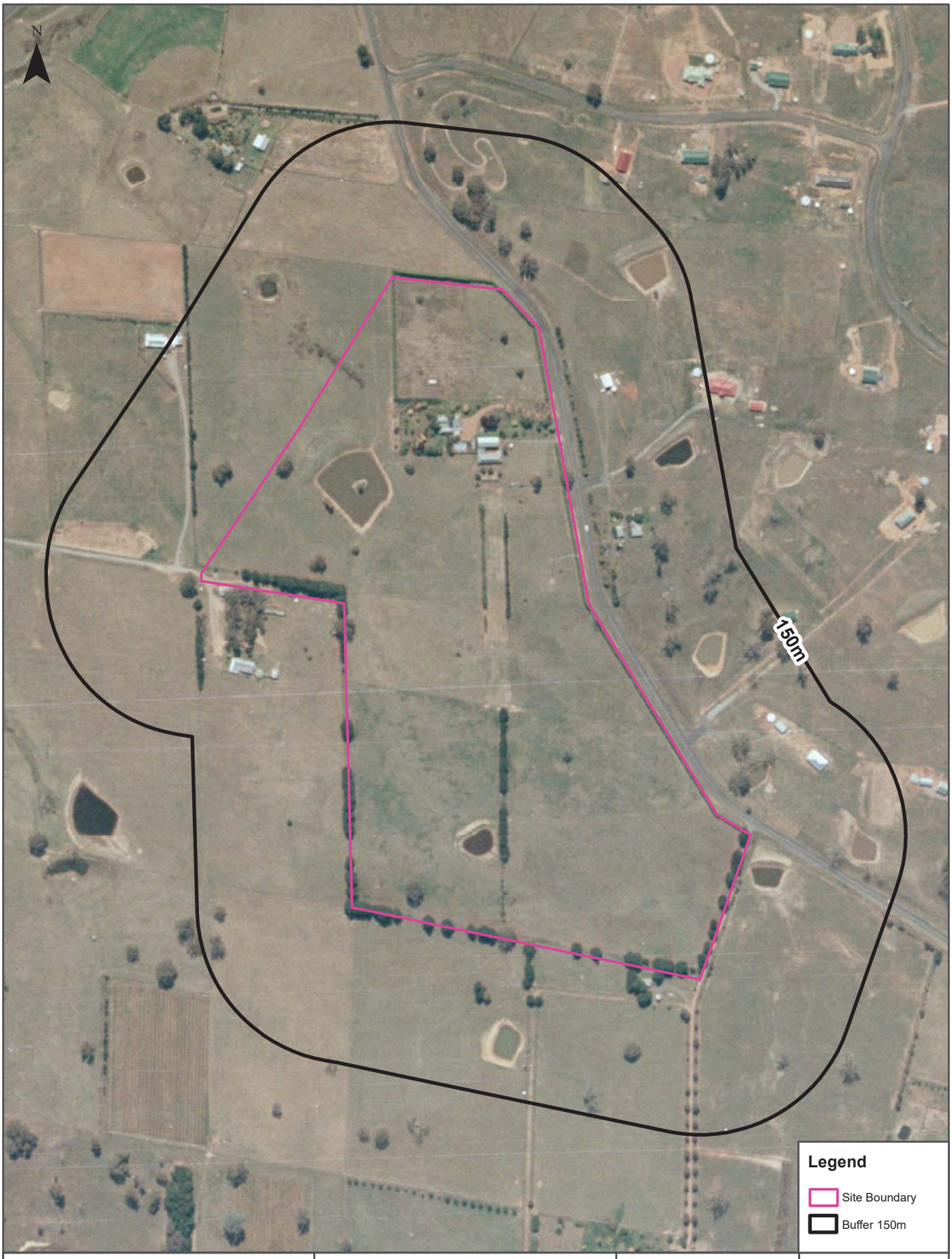
Aerial Imagery 1997

80 Murrumbateman Road, Murrumbateman, NSW 2582



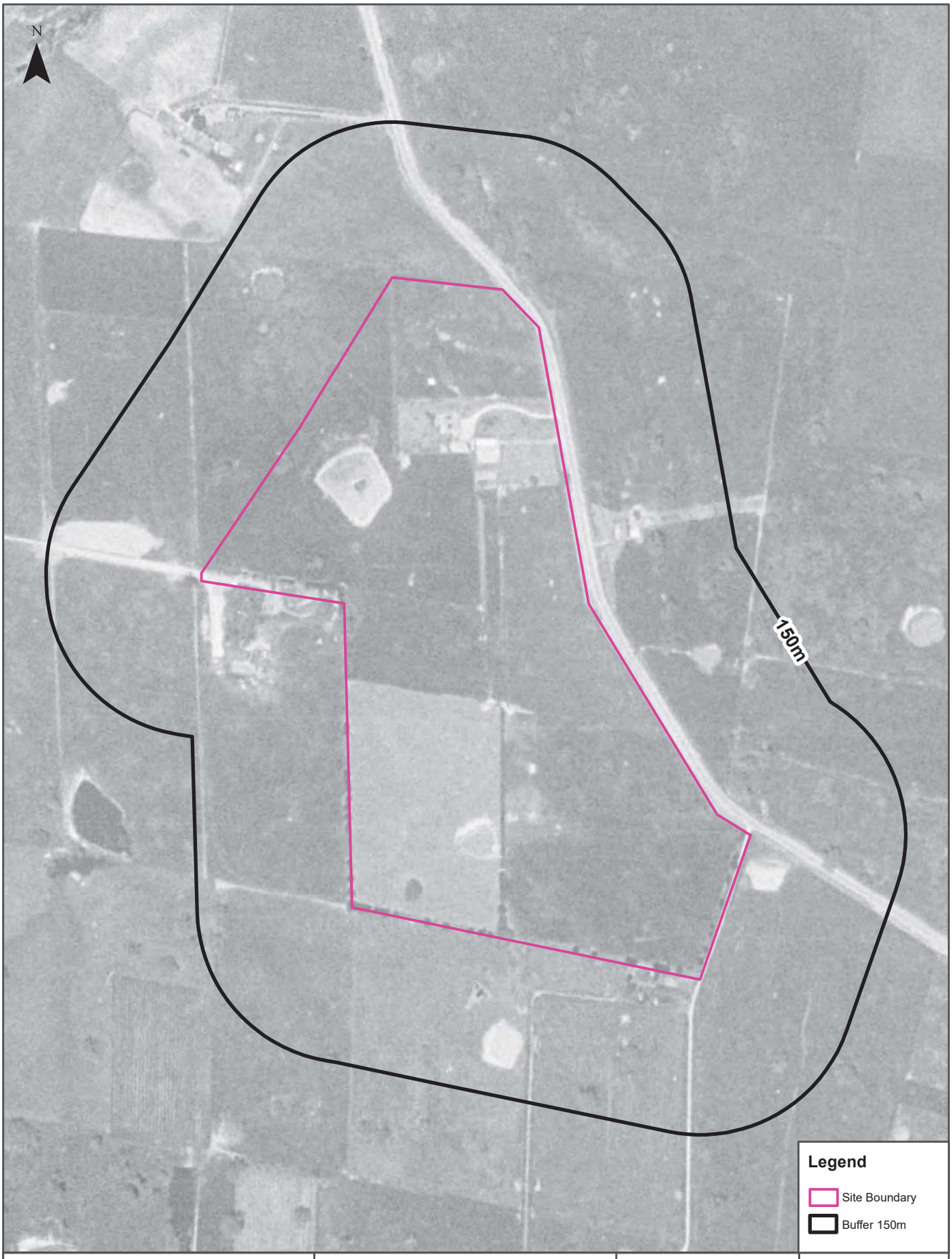
Aerial Imagery 1994

80 Murrumbateman Road, Murrumbateman, NSW 2582



Aerial Imagery 1986

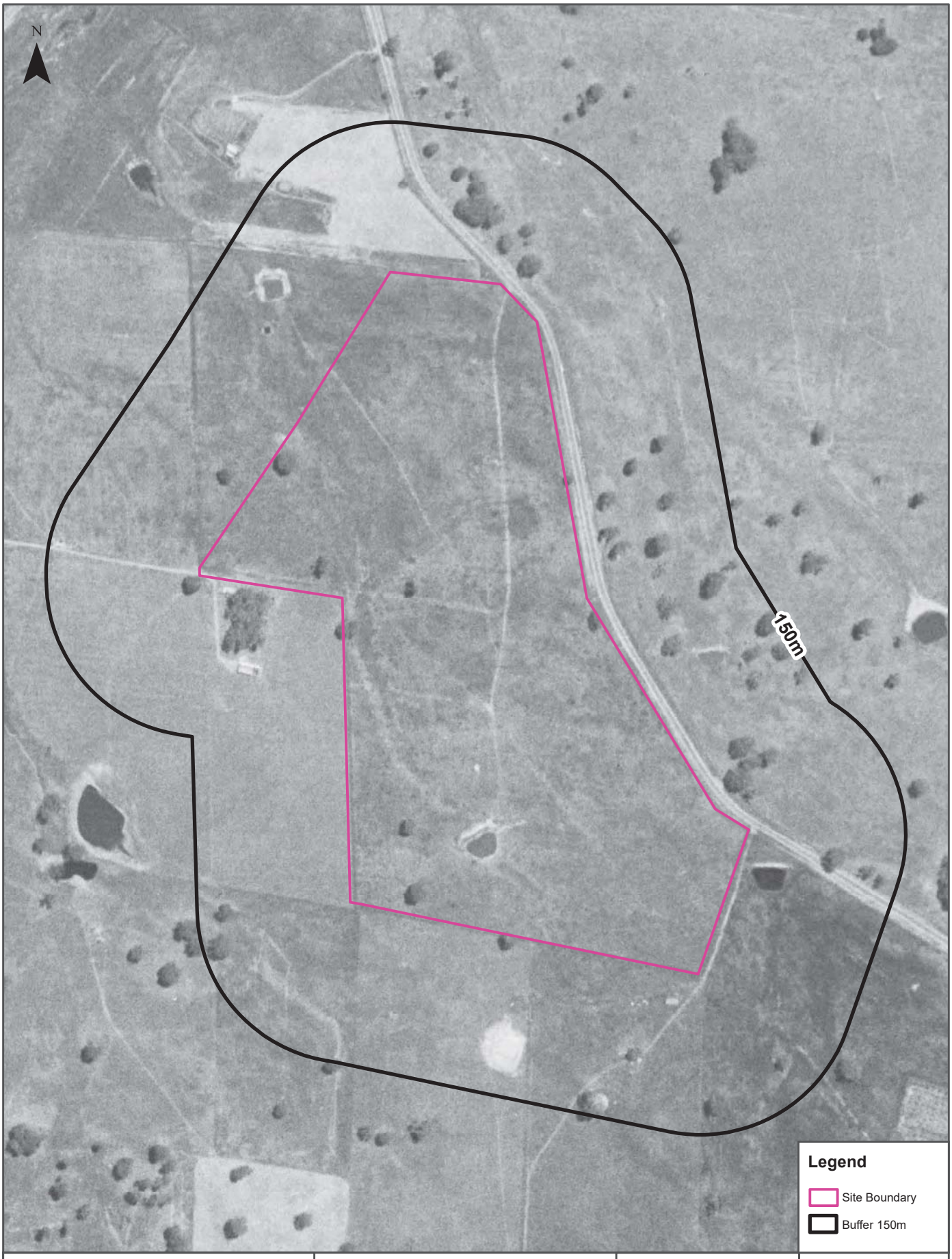
80 Murrumbateman Road, Murrumbateman, NSW 2582



Scale:	Data Source Aerial Imagery:	Coordinate System:	Date: 25 July, 2019
0 50 100 200 Meters	© NSW Department of Finance, Services & Innovation	GDA 1994 MGA Zone 56	

Aerial Imagery 1973

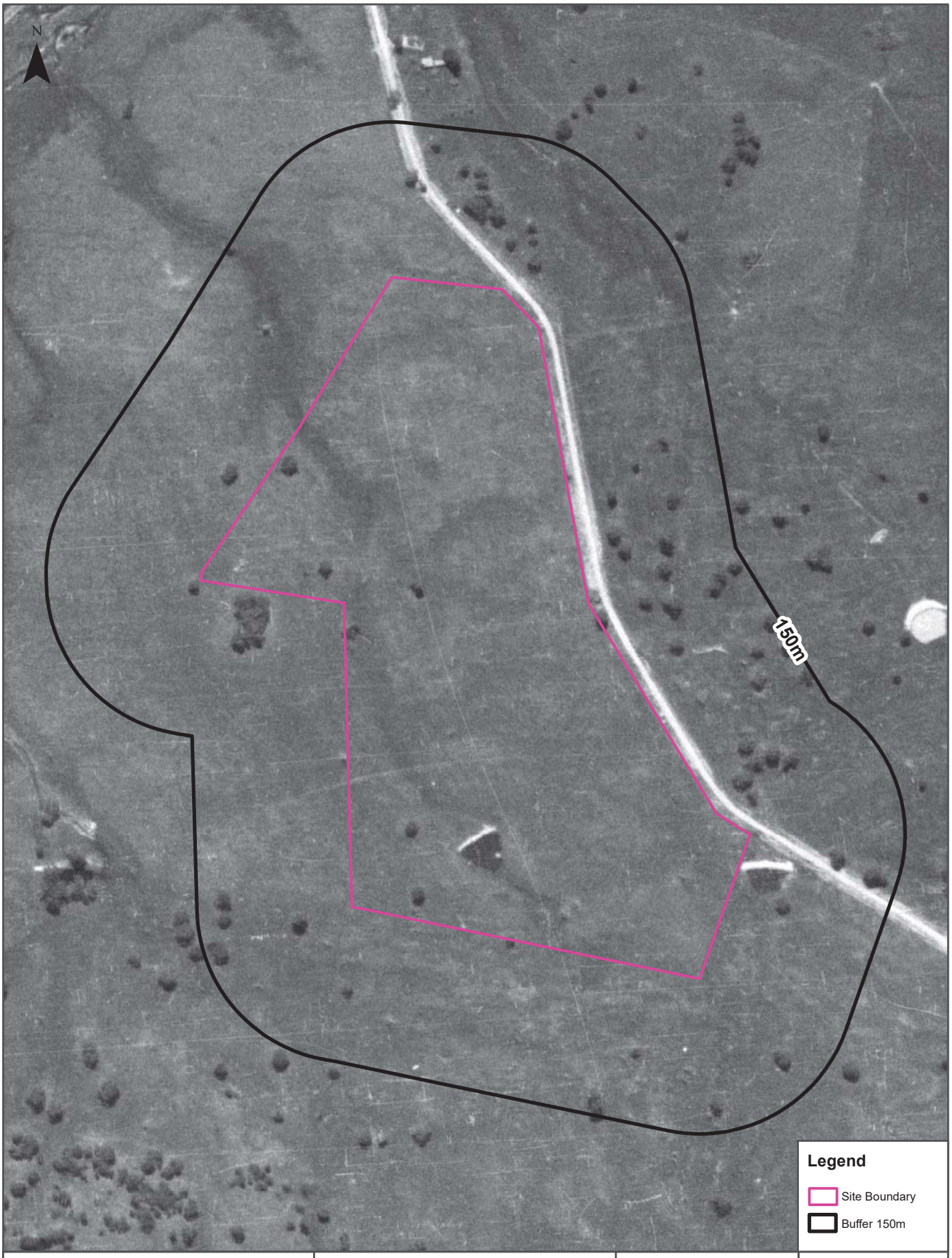
80 Murrumbateman Road, Murrumbateman, NSW 2582



Scale:	Data Source Aerial Imagery:	Coordinate System:	Date: 25 July, 2019
0 50 100 200 Meters	© NSW Department of Finance, Services & Innovation	GDA 1994 MGA Zone 56	

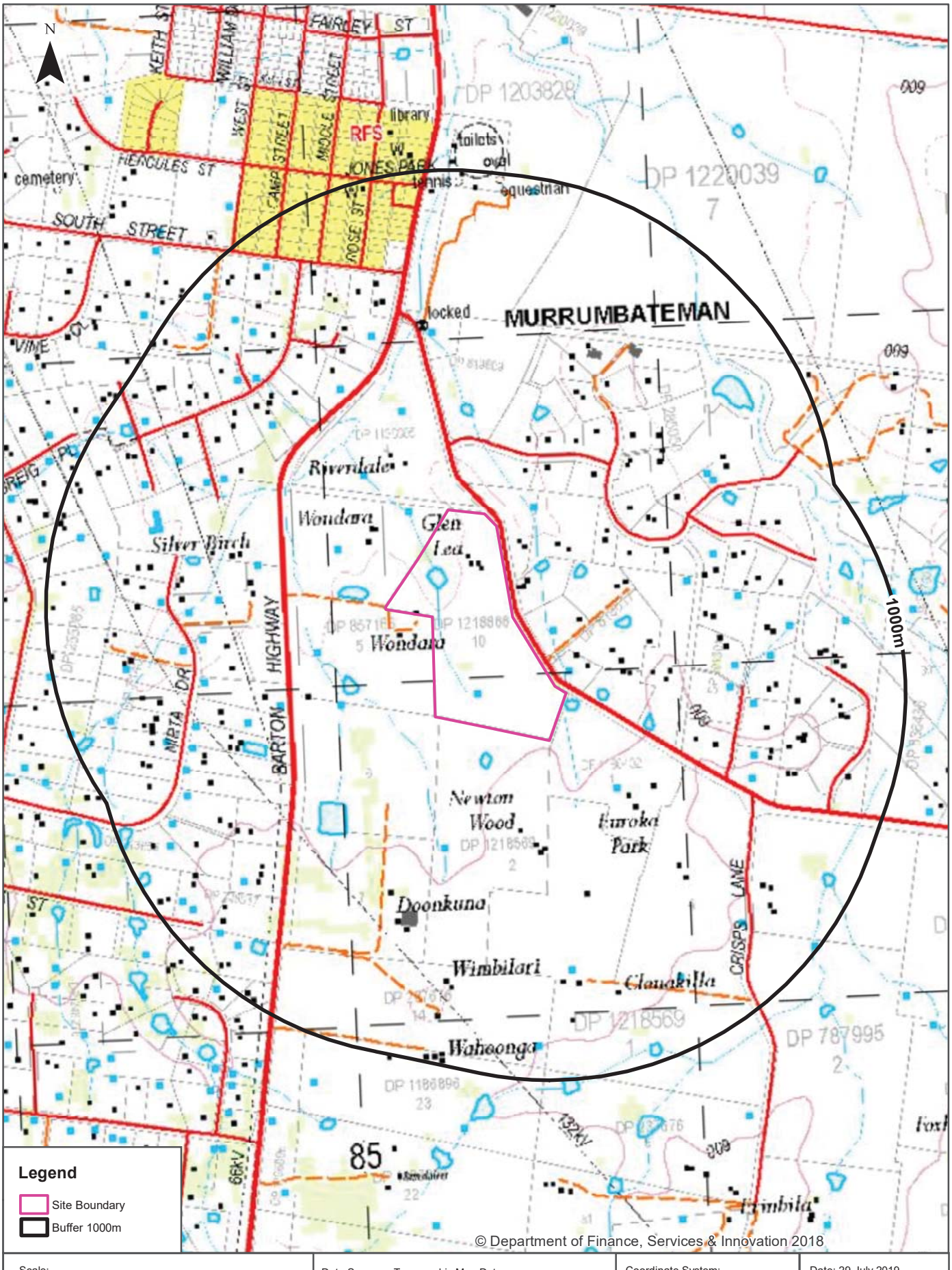
Aerial Imagery 1952

80 Murrumbateman Road, Murrumbateman, NSW 2582



Topographic Map 2015

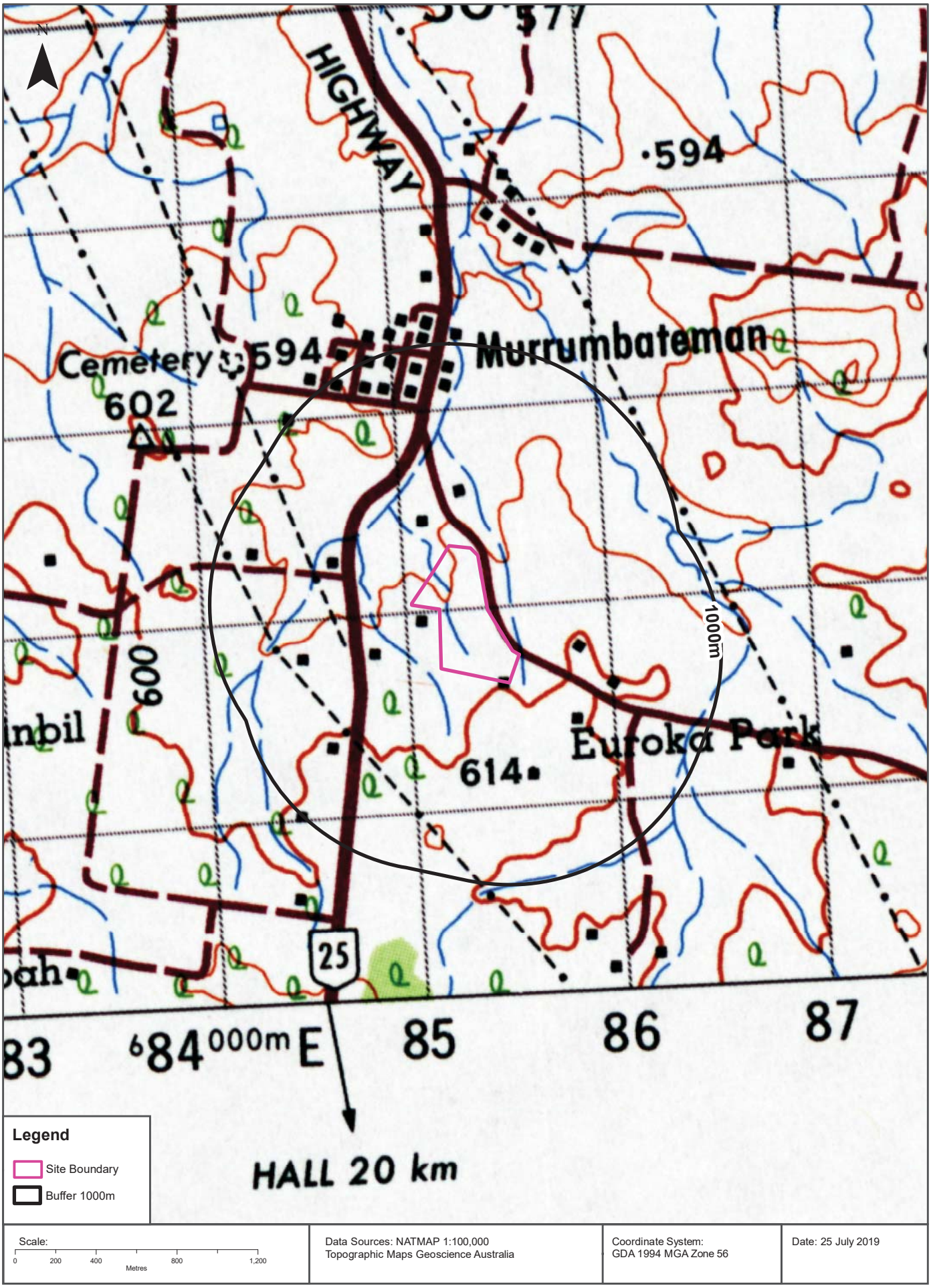
80 Murrumbateman Road, Murrumbateman, NSW 2582



Scale: 0 100 200 400 600 800 Meters	Data Sources: Topographic Map Data © NSW Land and Property Information	Coordinate System: GDA 1994 MGA Zone 56	Date: 29 July 2019

Historical Map 1973

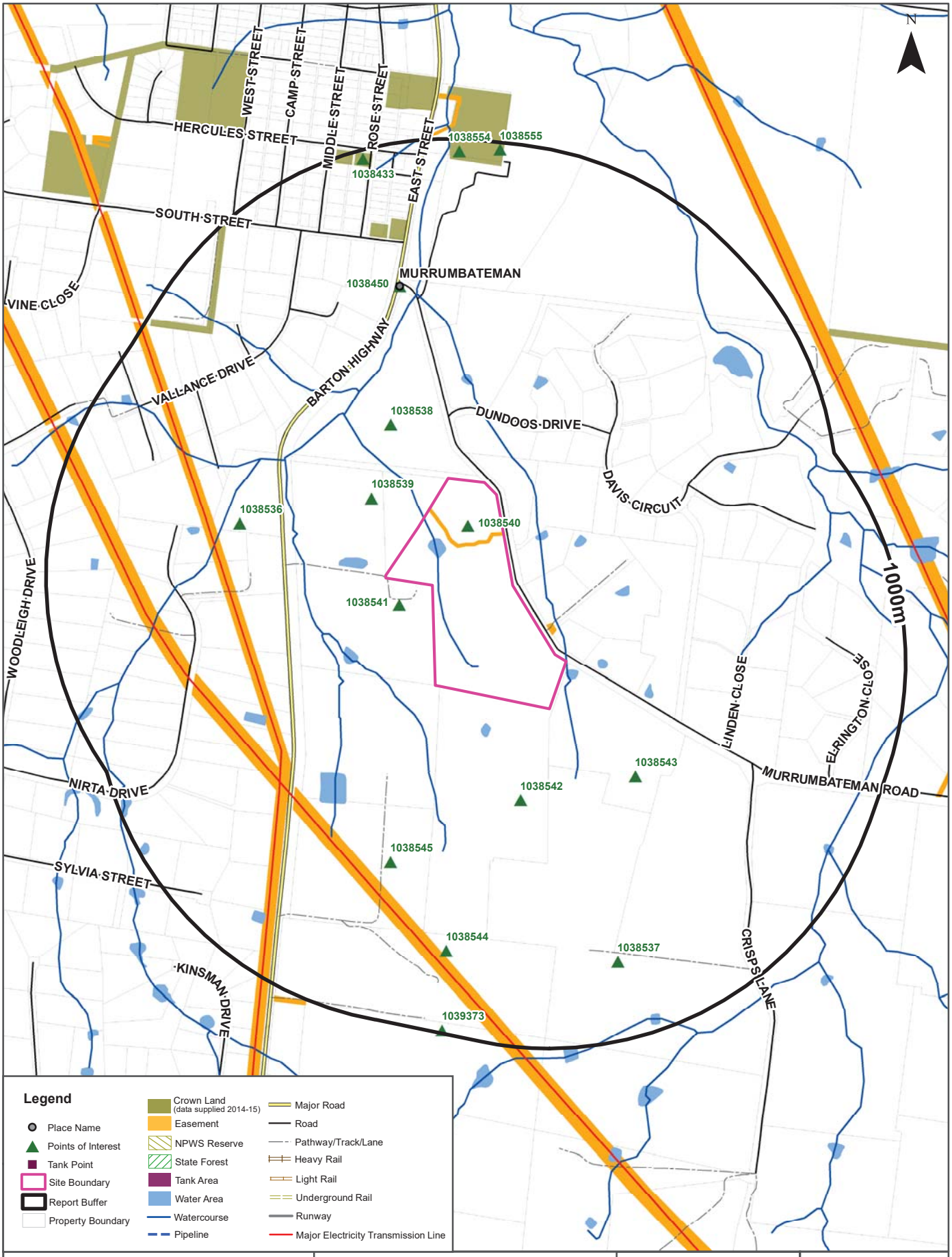
80 Murrumbateman Road, Murrumbateman, NSW 2582



Scale: 0 200 400 800 1,200 Metres	Data Sources: NATMAP 1:100,000 Topographic Maps Geoscience Australia	Coordinate System: GDA 1994 MGA Zone 56	Date: 25 July 2019

Topographic Features

80 Murrumbateman Road, Murrumbateman, NSW 2582



Topographic Features

80 Murrumbateman Road, Murrumbateman, NSW 2582

Points of Interest

What Points of Interest exist within the dataset buffer?

Map Id	Feature Type	Label	Distance	Direction
1038540	Homestead	GLEN LEA	0m	Onsite
1038541	Homestead	WONDARA	72m	West
1038539	Homestead	WONDARA	162m	North West
1038538	Homestead	RIVERDALE	232m	North West
1038542	Homestead	NEWTON WOOD	280m	South
1038543	Homestead	EUROKA PARK	321m	South East
1038536	Homestead	SILVER BIRCH	456m	West
1038545	Homestead	DOONKUNA	537m	South
1038450	Village	MURRUMBATEMAN	584m	North
1038544	Homestead	WIMBILARI	759m	South
1038537	Homestead	CLONAKILLA	771m	South
1038554	Sports Court	TENNIS	963m	North
1038433	Place Of Worship	ANGLICAN CHURCH	973m	North
1038555	Sports Court	EQUESTRIAN	979m	North
1039373	Homestead	WAHOONGA	991m	South

Topographic Features

80 Murrumbateman Road, Murrumbateman, NSW 2582

Tanks (Areas)

What are the Tank Areas located within the dataset buffer?
Note. The large majority of tank features provided by LPI are derived from aerial imagery & are therefore primarily above ground tanks.

Map Id	Tank Type	Status	Name	Feature Currency	Distance	Direction
	No records in buffer					

Tanks (Points)

What are the Tank Points located within the dataset buffer?
Note. The large majority of tank features provided by LPI are derived from aerial imagery & are therefore primarily above ground tanks.

Map Id	Tank Type	Status	Name	Feature Currency	Distance	Direction
	No records in buffer					

Major Easements

What Major Easements exist within the dataset buffer?
Note. Easements provided by LPI are not at the detail of local governments. They are limited to major easements such as Right of Carriageway, Electrical Lines (66kVa etc.), Easement to drain water & Significant subterranean pipelines (gas, water etc.).

Map Id	Easement Class	Easement Type	Easement Width	Distance	Direction
175188024	Primary	Right of way	6m	0m	Onsite
120109777	Primary	Undefined		24m	East
120107270	Primary	Undefined		434m	South West
120107099	Primary	Undefined		508m	West

Topographic Features

80 Murrumbateman Road, Murrumbateman, NSW 2582

State Forest

What State Forest exist within the dataset buffer?

State Forest Number	State Forest Name	Distance	Direction
N/A	No records in buffer		

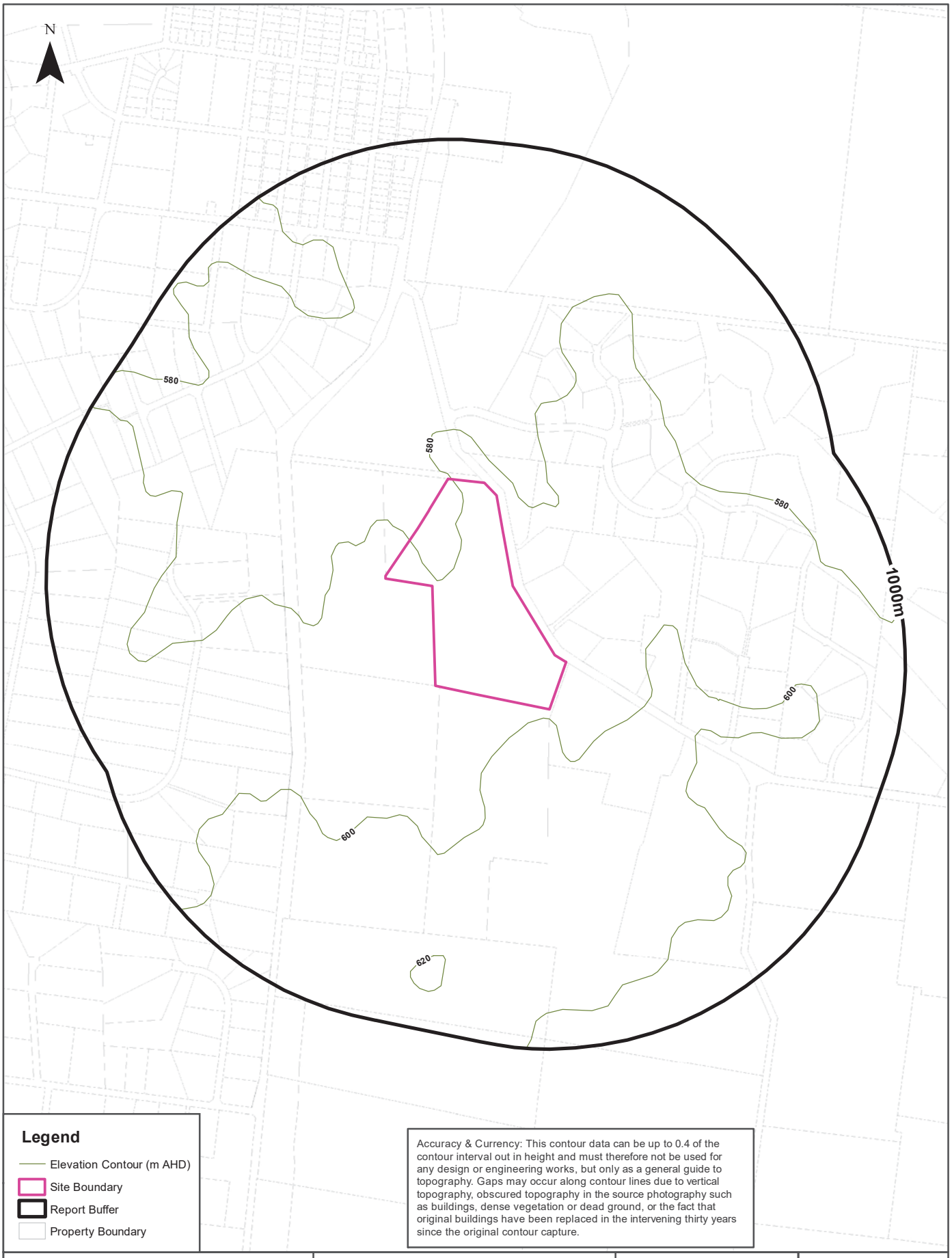
National Parks and Wildlife Service Reserves

What NPWS Reserves exist within the dataset buffer?

Reserve Number	Reserve Type	Reserve Name	Gazetted Date	Distance	Direction
N/A	No records in buffer				

Elevation Contours (m AHD)

80 Murrumbateman Road, Murrumbateman, NSW 2582



Legend

- Elevation Contour (m AHD)
- Site Boundary
- Report Buffer
- Property Boundary

Accuracy & Currency: This contour data can be up to 0.4 of the contour interval out in height and must therefore not be used for any design or engineering works, but only as a general guide to topography. Gaps may occur along contour lines due to vertical topography, obscured topography in the source photography such as buildings, dense vegetation or dead ground, or the fact that original buildings have been replaced in the intervening thirty years since the original contour capture.

Scale: 0 100 200 400 600 800 Meters	Data Sources: Property Boundaries & Topographic Data: © Department Finance, Services & Innovation 2019	Coordinate System: GDA 1994 MGA Zone 56	Date: 29 July 2019

Hydrogeology & Groundwater

80 Murrumbateman Road, Murrumbateman, NSW 2582

Hydrogeology

Description of aquifers on-site:

Description
Fractured or fissured, extensive aquifers of low to moderate productivity

Description of aquifers within the dataset buffer:

Description
Fractured or fissured, extensive aquifers of low to moderate productivity

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

Botany Groundwater Management Zones

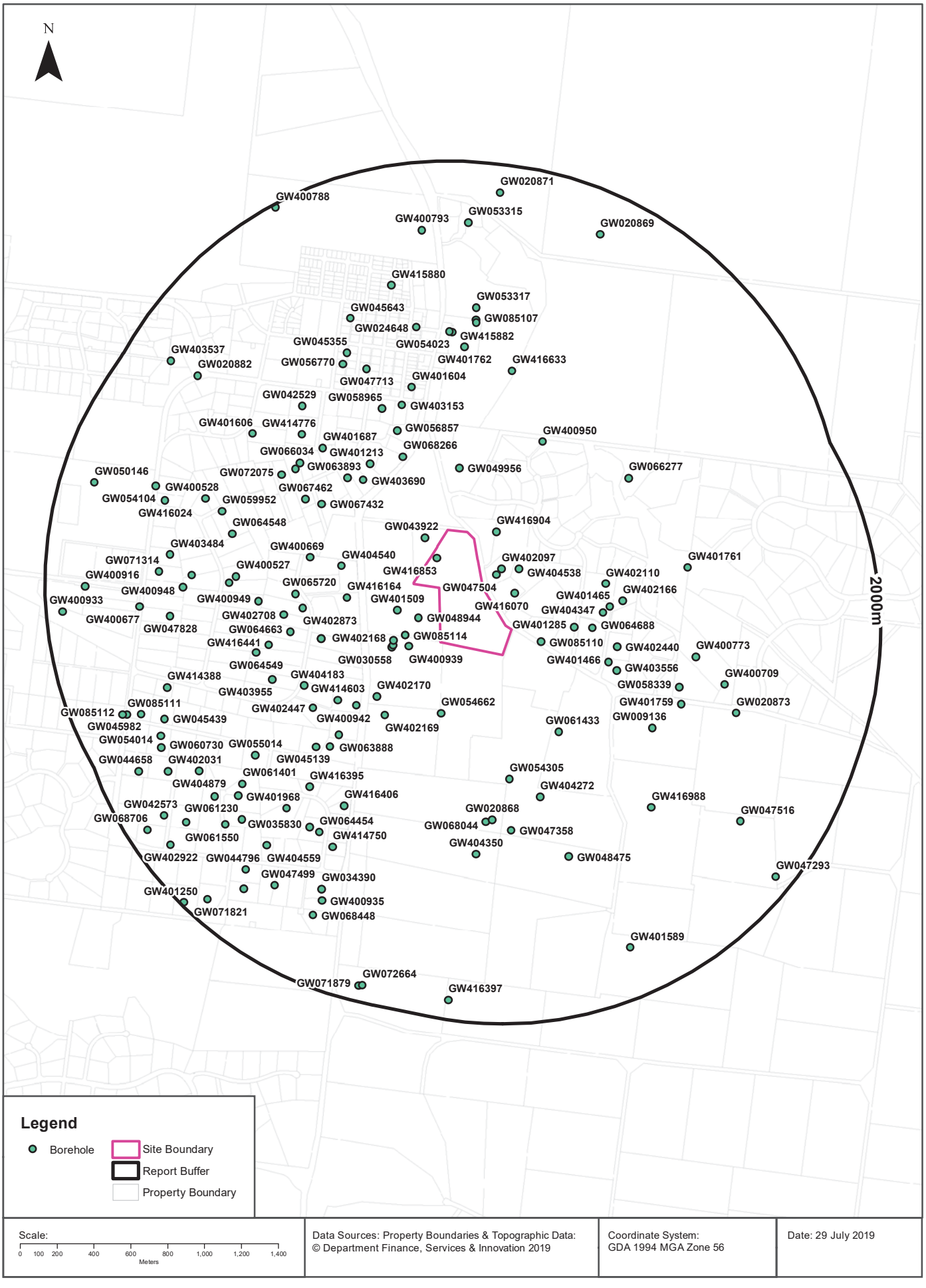
Groundwater management zones relating to the Botany Sand Beds aquifer within the dataset buffer:

Management Zone No.	Restriction	Distance	Direction
N/A	No records in buffer		

Botany Groundwater Management Zones Data Source : NSW Department of Primary Industries

Groundwater Boreholes

80 Murrumbateman Road, Murrumbateman, NSW 2582



Hydrogeology & Groundwater

80 Murrumbateman Road, Murrumbateman, NSW 2582

Groundwater Boreholes

Boreholes within the dataset buffer:

GW No.	Licence No	Work Type	Owner Type	Authorised Purpose	Intended Purpose	Name	Complete Date	Final Depth (m)	Drilled Depth (m)	Salinity (mg/L)	SWL (m)	Yield (L/s)	Elev (AHD)	Dist	Dir
GW416853					Domestic, Stock		06/03/2018	46.00			0.00			0m	Onsite
GW043922	40BL040055, 40WA405926	Bore	Private	Stock	Stock		01/02/1973							82m	North West
GW047504	40BL110642, 40BL115507, 40BL137975, 40WA406281	Bore	Private	Domestic, Irrigation, Stock	Irrigation		01/12/1979	38.10	38.10	1001-3000 ppm				87m	North East
GW048944	40BL105955, 40WA405975	Bore open thru rock	Private	Domestic, Stock	General Use		01/04/1977	31.10	31.10	Good				115m	South West
GW402097	40BL188710, 40WA406649	Bore		Domestic	Domestic, Stock		18/06/2002	56.00	56.00		7.00	0.503		119m	North East
GW416904					Domestic, Stock		27/03/2018	90.00			0.00			127m	North East
GW416070	40BL190174, 40WA406925	Bore	Private	Domestic	Domestic		19/09/2004	102.00	102.00					134m	East
GW401509	40BL188008, 40BL188297, 40CA407470	Bore		Irrigation, Test Bore	Test Bore		10/11/2000	140.00	140.00	Good	3.00	0.880		168m	West
GW400939	40BL187451	Bore		Test Bore			11/01/1999	61.89	80.70			0.630		174m	South West
GW085110		Bore	NSW Office of Water		Monitoring Bore		15/08/1999	50.00	50.00		6.00	0.700	601.49	175m	South East
GW085115		Bore	NSW Office of Water		Monitoring Bore		24/01/2000	11.00	11.00				589.73	190m	South West
GW085114		Bore	NSW Office of Water		Monitoring Bore		23/01/2000	27.00	27.00				589.72	190m	South West
GW404538	40BL186805	Bore	Private	Domestic	Domestic		01/01/1998	42.00	42.00		8.00	0.250		212m	North East
GW402168	40BL186752, 40CA407342	Bore		Farming, Irrigation	Farming, Irrigation		15/06/1998	65.00				0.157		253m	South West
GW402167	40BL186751, 40CA407342	Bore		Farming, Irrigation	Farming, Irrigation		15/06/1998	85.00				0.420		256m	South West

GW No.	Licence No	Work Type	Owner Type	Authorised Purpose	Intended Purpose	Name	Complete Date	Final Depth (m)	Drilled Depth (m)	Salinity (mg/L)	SWL (m)	Yield (L/s)	Elev (AHD)	Dist	Dir
GW030558	40BL024648, 40WA405890	Bore open thru rock	Private	Domestic, Stock	General Use		01/02/1971	29.60	29.60	1001-3000 ppm				266m	South West
GW401285	40BL187825	Bore		Domestic, Stock	Domestic, Stock		19/04/2000	88.00	88.00	Good				339m	East
GW049956	40BL109622, 40WA406019	Bore	Private	Stock	Stock		01/03/1979	45.70	45.70	Good				340m	North
GW416164	40BL191560, 40WA407148	Bore	Private	Stock	Domestic, Stock		01/03/2008	35.00			21.00	0.366		369m	West
GW054662	40BL117127, 40WA406056	Bore open thru rock	Private	Domestic, Stock	Domestic, Stock		01/01/1981	38.10	38.10	Good				379m	South
GW404540	40BL186777	Bore	Private	Domestic, Stock	Domestic, Stock		01/01/1995	60.00	60.00		8.00	0.560		399m	West
GW064688	40BL137274, 40WA406262	Bore	Private	Domestic, Stock	Domestic, Stock		01/01/1988	36.00	36.00	Fair				439m	East
GW402170	40BL186754, 40CA407342	Bore		Farming, Irrigation	Farming, Irrigation		15/06/1998	65.00						452m	South West
GW068266	40BL140506	Bore	Private	Domestic	Domestic		31/03/1990	70.00		Good		0.500		462m	North West
GW402169	40BL186753, 40CA407342	Bore	Private	Farming, Irrigation	Farming, Irrigation		12/03/2003	65.00	65.00					498m	South West
GW404347	40BL188828	Bore	Private	Domestic	Domestic		26/09/2002	36.00	36.00			0.568		505m	East
GW061433	40BL133767, 40BL187185, 40CA407364	Bore open thru rock	Private	Domestic, Grape Vines, Stock	Domestic, Stock		01/05/1981	58.00	58.00	Fair				517m	South East
GW403690	40BL191047	Bore	Private	Domestic	Domestic							0.250		529m	North West
GW401465	40BL187356, 40WA406464	Bore		Domestic, Stock	Domestic, Stock			35.00	35.00			1.010		547m	East
GW401213	40BL186171, 40WA406406	Bore		Domestic, Stock	Domestic, Stock		26/04/1995	68.00	68.00			0.510		552m	North West
GW401466	40BL187164, 40WA406457	Bore		Domestic, Stock	Domestic		06/02/1999	36.00	36.00		15.00	2.250		556m	South East
GW402110	40BL187897, 40WA406524	Bore		Domestic	Domestic		25/10/2002	35.00	35.00			0.505		566m	East
GW400942	40BL187557, 40WA406490	Bore	Private	Domestic, Stock	Domestic, Stock		04/05/1999	30.00	30.00					571m	South West
GW400669	40BL186962, 40WA406448	Bore		Domestic, Stock	Domestic, Stock		01/03/1999	48.00	48.00		5.00	1.750		577m	West
GW402440	40BL189150, 40WA406735	Bore		Domestic	Domestic		20/03/2003	77.00	77.00			0.505		581m	East

GW No.	Licence No	Work Type	Owner Type	Authorised Purpose	Intended Purpose	Name	Complete Date	Final Depth (m)	Drilled Depth (m)	Salinity (mg/L)	SWL (m)	Yield (L/s)	Elev (AHD)	Dist	Dir
GW061650	40BL133961, 40WA406198	Bore open thru rock	Private	Domestic, Stock	Domestic, Stock		01/01/1986	60.90	60.90	Good				583m	West
GW014071	40BL009541, 40WA405873	Bore open thru rock	Private	Stock	Stock		01/04/1959	25.60	25.60	Good				583m	West
GW056857	40BL123896, 40BL128198, 40WA406092	Bore open thru rock	Private	Domestic, Stock	Domestic, Stock		01/01/1983	60.90	60.90	0-500 ppm				603m	North
GW063893	40BL135649, 40WA406224	Bore	Private	Domestic	Domestic		01/01/1983	113.00						609m	North West
GW403556	40BL189371	Bore	Private	Domestic	Domestic, Stock		19/04/2006	89.00	89.00					612m	South East
GW402873	40BL190148, 40WA406921	Bore		Domestic, Stock			09/10/2004	72.00	72.00		15.00	1.375		614m	West
GW402166	40BL188439, 40WA406600	Bore		Domestic	Domestic		24/10/2002	46.00	46.00		20.00	0.442		623m	East
GW400950	40BL187528, 40WA406486	Bore		Domestic	Domestic		10/04/1999	50.00	50.00	Good	21.00	0.131		638m	North East
GW065720	40BL137767, 40WA406275	Bore open thru rock	Private	Domestic, Stock	Domestic, Stock		08/06/1988	51.00		Fresh				641m	West
GW414603	40BL186785	Bore	Private	Domestic	Domestic		21/02/2008	100.00				0.250		641m	South West
GW067432	40BL137261, 40WA406261	Bore	Private	Domestic	Domestic		31/12/1987	24.00	24.00	Good	2.00	4.400		651m	North West
GW054305	40BL114622, 40WA406044	Bore	Private	Domestic, Stock	Domestic, Stock		01/01/1960	54.30		501-1000 ppm				675m	South
GW064663	40BL137180, 40WA406258	Bore	Private	Domestic, Stock	Domestic, Stock		01/12/1987	27.00	27.00					716m	West
GW403153	40BL190538, 40WA406992	Bore		Domestic	Domestic		05/07/2005	21.70			12.00	0.300		719m	North
GW402708	40BL189980, 40WA406893	Bore		Domestic, Stock	Domestic, Stock		26/05/2004	68.00	68.00			2.275		724m	West
GW067462	40BL138141, 40WA406285	Bore	Private	Domestic, Stock			28/07/1988	24.00	24.00	Good		1.500		740m	North West
GW063888	40BL135688, 40WA406225	Bore	Private	Domestic	Domestic		01/12/1984	91.00						745m	South West
GW058965	40BL131033, 40WA406145	Bore	Private	Domestic	Domestic		01/07/1984	60.90	60.90	Good				747m	North West
GW402447	40BL189035, 40WA406709	Bore		Domestic, Stock	Domestic, Stock		17/03/2003	84.00	84.00			0.227		777m	South West

GW No.	Licence No	Work Type	Owner Type	Authorised Purpose	Intended Purpose	Name	Complete Date	Final Depth (m)	Drilled Depth (m)	Salinity (mg/L)	SWL (m)	Yield (L/s)	Elev (AHD)	Dist	Dir
GW404183	40BL189049	Bore	Private	Domestic	Domestic		08/07/2004	54.00	54.00		6.00	1.375		777m	South West
GW401604	40BL187845, 40WA406517	Bore		Domestic	Domestic		09/01/2001	60.00	60.00			1.000		796m	North
GW404272	40BL191034	Bore	Private	Irrigation	Irrigation		06/07/2007	72.00	72.00			1.000		798m	South
GW401687	40BL188146	Bore		Domestic			22/02/2001	122.00	122.00					808m	North West
GW045139	40BL105291, 40WA405961	Bore open thru rock	Private	Domestic	General Use			61.90	61.90	Good				824m	South West
GW400949	40BL187186	Bore		Test Bore			27/02/1999	29.50	29.50	Fair	8.00	2.250		846m	West
GW416441	40WA416110	Bore	Private	Domestic, Stock	Domestic, Stock		24/02/2014	78.00	78.00		15.00	0.375		852m	West
GW066034	40BL138406, 40WA406288	Bore open thru rock	Private	Domestic, Stock	Domestic, Stock		01/10/1988	36.00						871m	North West
GW058808	40BL118890, 40WA406065	Bore open thru rock	Private	Domestic	Domestic		01/03/1981	53.30	53.30	Good				875m	North West
GW044776	40BL104360, 40WA405953	Bore open thru rock	Private	Domestic, Stock	General Use		01/01/1976	36.60	36.60	501-1000 ppm				883m	South West
GW020868		Bore open thru rock	Private		Not Known		01/06/1954	54.30	54.30					896m	South
GW066277	40BL144848, 40WA407314	Bore	Private	Domestic, Stock	Domestic, Stock		31/01/1990	25.00	25.00		2.50	2.500	580.00	902m	North East
GW416633	40CA407288	Bore	Private	Domestic, Irrigation, Stock	Commercial		03/12/2013	102.00	0.00		24.00	2.270		905m	North
GW009136		Bore	Private		Not Known		01/02/1951	39.00	39.00					906m	South East
GW068044	40BL139696, 40BL189025, 40CA407490	Bore	Private	Domestic, Farming, Irrigation, Stock			22/06/1989	69.00	69.00		3.00	0.441		909m	South
GW072075	40BL153125, 40WA406358	Bore	Private	Domestic			07/10/1993	36.40	36.40		12.00	1.000		918m	North West
GW403955	40BL189187	Bore	Private	Domestic	Domestic		21/12/2006	105.00	105.00		18.00	0.379		926m	South West
GW064549	40BL137047, 40WA406251	Bore	Private	Domestic, Stock	Domestic, Stock		01/12/1987	57.00	57.00	Fair				933m	West
GW414776	40BL189757	Bore	Private	Domestic, Stock	Domestic, Stock		16/11/2006	100.00	101.00	good	12.00	0.300		942m	North West
GW047358	40BL105488, 40CA407288	Bore open thru rock	Private	Domestic, Irrigation, Stock	Irrigation		01/01/1978	33.20	33.20	1001-3000 ppm				953m	South
GW058339	40BL110955	Bore	Private	Test Bore	G/water Xplore		01/01/1982	61.00						962m	South East
GW400527	40BL142915, 40WA406321	Bore		Domestic, Stock	Domestic		23/03/1991	39.00	39.00			0.330		963m	West

GW No.	Licence No	Work Type	Owner Type	Authorised Purpose	Intended Purpose	Name	Complete Date	Final Depth (m)	Drilled Depth (m)	Salinity (mg/L)	SWL (m)	Yield (L/s)	Elev (AHD)	Dist	Dir
GW047713	40BL109477, 40BL143407, 40WA406327	Bore	Private	Domestic, Industrial, Stock	Not Known		01/03/1979	30.50	30.50	Good				975m	North West
GW401762	40BL188296	Bore		Test Bore	Test Bore		28/06/2001	100.00	100.00	650	1.95	10.000		994m	North
GW062547	40BL132032, 40WA406157	Bore	Private	Domestic, Stock	Domestic, Stock		01/01/1985	85.00	85.00		27.00			999m	West
GW401759	40BL188293	Bore		Test Bore	Test Bore		22/05/2001	60.00	60.00	900	0.85	2.500		1003m	South East
GW401761	40BL188295, 40BL189561, 40WA407504	Bore		Domestic, Test Bore	Test Bore		21/06/2001	60.00	60.00	950	1.95	6.000		1012m	East
GW400773	40BL186719, 40WA406430	Bore		Domestic, Stock	Domestic, Stock		14/12/1997	30.00	30.00	Good	1.00	1.260		1012m	East
GW064548	40BL137290, 40WA406265	Bore	Private	Domestic, Stock	Domestic, Stock		01/02/1988	69.00	69.00	Fair				1016m	West
GW416406	40WA416056	Bore	Private	Domestic	Domestic		04/12/2013	84.00	84.00		28.00	0.440		1031m	South West
GW042529	40BL103014, 40BL115025, 40WA406045	Bore open thru rock	Private	Domestic, Irrigation, Stock	Irrigation		01/11/1975	24.90	25.00	501-1000 ppm				1035m	North West
GW416395	40WA416090	Bore	Private	Domestic, Stock	Domestic, Stock		17/12/1982	53.00	53.00		21.00	0.300		1058m	South West
GW056770	40BL123684, 40WA406089	Bore open thru rock	Private	Domestic, Stock	Domestic, Stock		01/10/1982	38.10	38.10					1061m	North West
GW415882	40CA407312	Bore	Private	Town Water Supply	Town Water Supply		01/03/2007	100.00	100.00		3.50	3.000		1070m	North
GW054023	40BL110954, 40BL138131, 40CA407312	Bore	Local Govt	Test Bore, Town Water Supply	Public/municipl		01/10/1979	30.00	30.00					1074m	North
GW404350	40BL189262	Bore	Private	Domestic, Stock	Domestic, Stock		13/05/2002	48.00	48.00			0.940		1090m	South
GW045355	40BL103923, 40WA405951	Bore open thru rock	Private	Domestic, Stock	General Use		01/11/1975	37.80	37.80	Fair				1103m	North West
GW059952		Bore	Private		Domestic, Stock		01/05/1981	61.00	61.00					1106m	West
GW024648	40BL018644	Bore	Other Govt	Waste Disposal	Domestic		01/04/1966	24.50	24.50	501-1000 ppm				1110m	North
GW085106		Bore	NSW Office of Water		Monitoring Bore		28/07/1999	42.00	42.00		2.80	0.700	566.75	1133m	North
GW085107		Bore	NSW Office of Water		Monitoring Bore		28/07/1999	7.00	7.00		3.00	1.200	566.83	1145m	North
GW048475	40BL108434	Bore open thru rock	Private	Test Bore	G/water Xplore		01/05/1978	31.10	31.10					1151m	South
GW416988					Domestic, Stock		29/06/2018	25.00			0.00			1157m	South East

GW No.	Licence No	Work Type	Owner Type	Authorised Purpose	Intended Purpose	Name	Complete Date	Final Depth (m)	Drilled Depth (m)	Salinity (mg/L)	SWL (m)	Yield (L/s)	Elev (AHD)	Dist	Dir
GW401606	40BL188031, 40WA406541	Bore		Domestic, Stock	Domestic		08/01/2001	37.00	37.00		12.00	0.625		1173m	North West
GW055014	40BL118038, 40WA406062	Bore open thru rock	Private	Domestic, Stock	Domestic, Stock		01/02/1981	45.70	45.70	Good				1176m	South West
GW400709	40BL186728, 40WA406432	Bore		Domestic, Stock	Domestic, Stock		07/01/1998	36.00	36.00		6.00			1195m	East
GW055203	40BL119610, 40WA406070	Bore open thru rock	Private	Domestic, Stock	General Use		01/09/1981	110.70	110.70	Fair				1202m	West
GW053317	40BL120288, 40BL136516, 40WA406237	Bore	Private	Domestic, Irrigation, Stock	Irrigation		01/06/1981	45.70	45.70	501-1000 ppm				1213m	North
GW400528	40BL143026, 40WA406323	Bore		Domestic, Stock	Domestic, Stock		24/03/1991	50.00	50.00		20.00	0.139		1217m	West
GW064454	40BL136945, 40WA406249	Bore	Private	Domestic	Domestic		01/12/1987	63.00	63.00					1223m	South West
GW035830	40BL028234, 40WA405902	Bore open thru rock	Private	Domestic, Stock	Domestic, Stock			39.60	39.60	Fair				1228m	South West
GW401968	40BL144581, 40WA406337	Bore		Domestic, Stock	Domestic, Stock		17/11/1991	55.00	55.00	Good	13.00	0.130		1228m	South West
GW400948	40BL187186	Bore		Test Bore			26/02/1999	29.50	29.50	Fair	4.10	3.000		1250m	West
GW414750	40BL188787	Bore	Private	Domestic	Domestic		24/10/2004	90.00	90.00		7.00	0.180		1256m	South West
GW045643	40BL105543, 40WA405966	Bore open thru rock	Private	Domestic, Stock	General Use		01/11/1976	42.70	42.70	Good				1260m	North
GW020873	40BL187600, 40WA406492	Bore	Private	Stock	Stock		01/05/1954	28.70	28.70					1302m	South East
GW061401	40BL133233, 40WA406185	Bore open thru rock	Private	Domestic	Domestic		01/07/1985	30.40	30.40	Good				1321m	South West
GW403484	40BL190620, 40WA407011	Bore		Domestic, Stock	Domestic, Stock		09/04/2006	126.00	126.00		96.00	0.250		1328m	West
GW047828	40BL115606, 40BL134337, 40WA406207	Bore	Private	Domestic, Irrigation, Stock	General Use		01/10/1980	61.60	61.60	Good				1332m	West
GW415880	40BL192433, 40CA407312	Bore	Private	Test Bore, Town Water Supply	Test Bore		10/06/2010	132.00	132.00		7.00	3.000		1359m	North
GW061230	40BL133277, 40WA406188	Bore open thru rock	Private	Domestic, Stock	Domestic, Stock		01/07/1985	30.40	30.40	Good				1377m	South West
GW071314		Bore	Private		Domestic, Stock		03/12/1993	36.00	36.00	Good				1381m	West

GW No.	Licence No	Work Type	Owner Type	Authorised Purpose	Intended Purpose	Name	Complete Date	Final Depth (m)	Drilled Depth (m)	Salinity (mg/L)	SWL (m)	Yield (L/s)	Elev (AHD)	Dist	Dir
GW416024	40BL190339, 40WA406953	Bore	Private	Domestic	Domestic		06/01/2005	48.00	48.00			0.379		1418m	West
GW414734	40BL132833	Bore	Private	Domestic	Domestic		01/01/1987	40.00						1442m	South West
GW414388	40BL186021	Bore	Private	Domestic	Domestic		20/08/2010	25.00						1448m	West
GW404559	40BL187846	Bore	Private	Domestic	Domestic		02/03/2002	54.00	54.00		15.00	1.000		1449m	South West
GW404879	40BL191987	Bore - GAB	Private	Domestic	Domestic		10/12/2008	91.00	91.00		20.00	0.300		1483m	South West
GW061270	40BL133336, 40WA406190	Bore	Private	Stock	Stock		01/12/1984	78.00						1483m	South West
GW034390	40BL027540, 40WA405898	Bore open thru rock	Private	Domestic, Stock	Domestic, Stock		01/01/1971	62.50	62.50					1487m	South West
GW400677	40BL187186	Bore		Test Bore	Test Bore		26/10/1998	54.00	54.00	Fair	5.90	1.836		1491m	West
GW054104	40BL106866, 40WA405984	Bore open thru rock	Private	Domestic, Stock	General Use		01/05/1978	49.40	49.40	Good				1494m	West
GW061550	40BL133235, 40WA406186	Bore open thru rock	Private	Domestic	Domestic		01/07/1984	53.90	54.00					1530m	South West
GW045439	40BL103840, 40WA405947	Bore open thru rock	Private	Domestic, Stock	General Use		01/01/1976	80.50	80.50	501-1000 ppm				1535m	West
GW400935	40BL187150, 40CA407394	Bore		Irrigation	Irrigation			50.00			8.00	0.380		1541m	South West
GW047516	40BL111623	Bore	Private	Domestic, Irrigation, Stock	Irrigation		01/04/1980	38.10	38.10					1576m	South East
GW020882		Bore open thru rock	Private		Not Known		01/07/1954	61.30	61.30					1589m	North West
GW047499	40BL109721, 40BL140163, 40WA406303	Bore	Private	Domestic, Irrigation, Stock	Horticulture		01/06/1980	65.50	65.50	Good				1596m	South West
GW054014	40BL109252, 40WA406014	Bore	Private	Domestic, Stock	Domestic, Stock		01/03/1979	52.30	52.30					1599m	South West
GW060730	40BL131863, 40WA406154	Bore open thru rock	Private	Domestic, Stock	Domestic, Stock		01/11/1984	60.90	60.90	501-1000 ppm				1618m	South West
GW044796	40BL104362, 40WA405954	Bore open thru rock	Private	Domestic	General Use		01/01/1976	91.40	91.40	501-1000 ppm				1623m	South West
GW400793	40BL187328, 40BL187892, 40CA407458	Bore		Domestic, Irrigation, Stock	Domestic, Stock		25/07/1998	72.00	72.00			0.310		1629m	North
GW402031	40BL188525, 40WA406615	Bore		Domestic	Domestic, Stock		23/01/2002	104.00	104.00		24.00	0.126		1634m	South West
GW068448		Bore	Private		Domestic, Stock		30/06/1990	30.00						1634m	South West

GW No.	Licence No	Work Type	Owner Type	Authorised Purpose	Intended Purpose	Name	Complete Date	Final Depth (m)	Drilled Depth (m)	Salinity (mg/L)	SWL (m)	Yield (L/s)	Elev (AHD)	Dist	Dir
GW045982	40BL105442, 40WA405962	Bore	Private	Domestic	General Use		01/11/1976	49.40	49.40	Fair				1637m	West
GW053315	40BL120286, 40BL136517, 40WA406238	Bore	Private	Domestic, Irrigation, Stock	Irrigation		01/06/1981	45.70	45.70	501-1000 ppm				1668m	North
GW414748	40BL187500	Bore	Private	Domestic, Stock	Domestic, Stock		12/08/2011	50.00				5.000		1688m	South West
GW085111		Bore	NSW Office of Water		Monitoring Bore		20/01/2000	52.00	52.00		19.85	1.500	610.23	1707m	West
GW400779	40BL187402, 40WA406470	Bore		Domestic, Stock	Domestic		11/01/1999	42.00	42.00		13.00	0.800		1710m	South West
GW085112		Bore	NSW Office of Water		Monitoring Bore		20/01/2000	30.00	30.00		19.47	0.500	610.13	1731m	West
GW401589	40BL186098, 40WA406392	Bore		Domestic, Stock	Domestic, Stock			40.00	40.00	Salty	20.00	0.170		1732m	South East
GW403537	40BL190746, 40WA407538	Bore		Domestic	Domestic		04/05/2005	182.00	182.00		15.00	0.750		1757m	North West
GW020869		Bore	Private		Not Known			32.90						1766m	North
GW042573	40BL103159, 40BL103979, 40BL133775, 40WA406197	Bore open thru rock	Private	Domestic, Irrigation, Stock	Irrigation		01/06/1975	83.80	83.80					1770m	South West
GW044658	40BL103883, 40WA405950	Bore open thru rock	Private	Domestic, Stock	General Use		01/01/1976	73.20	73.20	Good				1779m	South West
GW400916	40BL187186	Bore		Test Bore	Test Bore		27/10/1998	54.00	54.00	Fair	7.20	0.614		1780m	West
GW050146	40BL110790, 40WA406026	Bore	Private	Stock	Public/municipl		01/08/1979	96.00	96.00					1813m	West
GW402922	40BL189489, 40WA406805	Bore		Domestic			05/07/2004	106.00	106.00			0.252		1830m	South West
GW020871		Bore	Private		Not Known			157.30	157.30					1846m	North
GW071821		Bore			Town Water Supply		03/06/1994	402.10	402.10		6.00	0.500		1881m	South West
GW068706	40BL141397, 40WA406314	Bore	Private	Domestic, Stock	Domestic, Stock			190.00		Fair				1885m	South West
GW416397	40WA416074	Bore	Private	Domestic, Stock	Domestic, Stock		20/01/2014	37.00		Sweet	14.50	1.000		1894m	South
GW072664		Bore	Private		Domestic		31/03/1985	130.00		0-500 ppm				1907m	South
GW400933	40BL187392, 40CA407346	Bore		Grape Vines	Irrigation		26/10/1998	54.00	54.00	830	5.90	1.836		1908m	West

GW No.	Licence No	Work Type	Owner Type	Authorised Purpose	Intended Purpose	Name	Complete Date	Final Depth (m)	Drilled Depth (m)	Salinity (mg/L)	SWL (m)	Yield (L/s)	Elev (AHD)	Dist	Dir
GW047293	40BL109069, 40BL139923, 40WA406302	Bore	Private	Domestic, Irrigation, Stock	Irrigation		01/10/1978	45.70	45.70	Good				1909m	South East
GW071879		Bore	Private		Domestic		31/03/1985	130.00		0-500 ppm				1915m	South
GW400788	40BL187183	Bore		Domestic, Stock	Domestic, Stock		08/07/1998		80.00					1979m	North West
GW401250	40BL186147, 40WA406399	Bore		Domestic, Stock	Domestic, Stock		24/04/1995	60.80	60.80	Fair	25.00	0.500		1982m	South West

Hydrogeology & Groundwater

80 Murrumbateman Road, Murrumbateman, NSW 2582

Driller's Logs

Drill log data relevant to the boreholes within the dataset buffer:

Groundwater No	Drillers Log	Distance	Direction
GW047504	0.00m-0.30m Topsoil 0.30m-2.40m Clay 2.40m-11.60m Granite Decomposed Water Supply 11.60m-30.50m Granite 30.50m-38.10m Granite	87m	North East
GW048944	0.00m-0.60m Topsoil 0.60m-3.60m Clay 3.60m-17.90m Clay Sandy 17.90m-23.10m Porphyry Decomposed 23.10m-31.10m Porphyry Water Supply	115m	South West
GW402097	0.00m-0.50m Granite, sandy 0.50m-7.00m Clay, brown 7.00m-16.50m Granite, decomposed 16.50m-37.00m Granite, soft grey 37.00m-56.00m Granite, blue	119m	North East
GW416070	0.00m-3.00m clay 3.00m-18.00m granite, weathered 18.00m-102.00m granite, grey	134m	East
GW401509	0.00m-1.00m TOPSOIL 1.00m-18.00m GRANITE, DECOMPOSED 18.00m-28.00m GRANITE, SOFT RED WITH HARD BANDS 28.00m-110.00m GRANITE, HARD GREY 110.00m-130.00m ROCK, GREY/WHITE 130.00m-140.00m GRANITE, HARD GREY	168m	West
GW400939	28.90m-80.70m Hard Granite	174m	South West
GW085110	0.00m-2.00m Topsoil 2.00m-12.00m Brown clay 12.00m-50.00m Black basalt	175m	South East
GW085114	0.00m-1.00m Top soil grey clay 1.00m-10.00m Brown weathered granite 10.00m-22.00m Grey weathered granite 22.00m-27.00m Fresh grey granite	190m	South West
GW085115	0.00m-1.00m Top soil 1.00m-10.00m Brown weathered granite 10.00m-11.00m Grey granite	190m	South West
GW030558	0.00m-0.30m Topsoil 0.30m-2.13m Clay Red Grey Sandy 2.13m-8.53m Clay Grey Sandy 8.53m-29.57m Porphyry Yellow Water Supply	266m	South West
GW401285	0.00m-2.00m CLAY, BROWN 2.00m-12.00m SANDY CLAY 12.00m-16.00m WEATHERED GRANITE 16.00m-26.00m GRANITE, GREY MEDIUM 26.00m-28.00m GRANITE, BROKEN SOFT 28.00m-88.00m GRANITE, GREY	339m	East
GW049956	0.00m-0.30m Topsoil 0.30m-1.80m Clay 1.80m-11.60m Granite Decomposed Water Supply 11.60m-23.80m Granite Water Supply 23.80m-45.70m Water Supply	340m	North
GW054662	0.00m-0.30m Topsoil 0.30m-3.30m Clay 3.30m-18.60m Granite Decomposed 18.60m-38.10m Granite Porphyry Water Supply	379m	South

Groundwater No	Drillers Log	Distance	Direction
GW064688	0.00m-0.30m Topsoil 0.30m-5.20m Clay 5.20m-30.00m Shale Water Supply 30.00m-36.00m Granite	439m	East
GW404347	0.00m-0.50m TOPSOIL 0.50m-8.00m CLAY 8.00m-18.50m SHALE - BROWN 18.50m-24.00m SHALE - BLUE 24.00m-36.00m GRANITE	505m	East
GW061433	0.00m-5.00m Clay 5.00m-16.00m Granite Decomposed 16.00m-58.00m Granite Grey Water Supply	517m	South East
GW401213	0.00m-1.00m TOPSOIL & CLAY 1.00m-10.00m WEATHERED VOLCANICS 10.00m-68.00m DACITE & VOLCANICS	552m	North West
GW401466	0.00m-0.50m TOPSOIL 0.50m-4.00m CLAY, BROWN 4.00m-19.00m GRANITE, DECOMPOSED 19.00m-36.00m GRANITE	556m	South East
GW402110	0.00m-1.00m Topsoil 1.00m-20.00m Granite, decomposed 20.00m-30.00m Granite, broken 30.00m-35.00m Granite, fresh	566m	East
GW400669	0.00m-0.50m Topsoil 0.50m-2.00m Sticky Brown Clay 2.00m-16.00m Brown Decomposed Granite 16.00m-48.00m Hard Blue Granite	577m	West
GW402440	0.00m-2.00m Clay 2.00m-18.00m Granite, decomposed 18.00m-77.00m Granite	581m	East
GW014071	0.00m-3.05m Clay 3.05m-25.60m Tuff Porphyry Water Supply	583m	West
GW061650	0.00m-0.30m Topsoil 0.30m-3.00m Clay 3.00m-23.40m Granite Soft 23.40m-60.90m Granite Water Supply	583m	West
GW056857	0.00m-0.30m Topsoil 0.30m-1.50m Clay 1.50m-9.40m Granite Decomposed 9.40m-60.90m Granite Water Supply	603m	North
GW403556	0.00m-5.00m Clay 5.00m-30.00m Granite, decomposed 30.00m-89.00m Granite	612m	South East
GW402873	0.00m-2.00m Clay, orange, loamy 2.00m-16.00m Dacite, orange, brown, weathered 16.00m-72.00m Dacite, Blue, grey	614m	West
GW402166	0.00m-1.00m Topsoil 1.00m-30.00m Granite, decomposed 30.00m-40.00m Granite, broken 40.00m-46.00m Granite, fresh	623m	East
GW400950	0.00m-20.00m Red sandy clay 20.00m-26.00m Decomposed granite 26.00m-50.00m Hard granite	638m	North East
GW067432	1.20m-16.00m Decomposed Granite 16.00m-24.00m Black Granite	651m	North West
GW064663	0.00m-1.00m Topsoil 1.00m-6.00m Clay 6.00m-13.00m Granite Decomposed 13.00m-27.00m Granite Black Water Supply	716m	West
GW402708	0.00m-7.00m Decomposed granite 7.00m-59.00m Fresh blue granite 59.00m-61.00m Fractured brown granite 61.00m-68.00m Fresh granite	724m	West
GW067462	2.50m-15.00m Decomposed Granite 15.00m-24.00m Black Granite	740m	North West
GW058965	0.00m-0.30m Topsoil 0.30m-2.10m Clay 2.10m-19.20m Granite Decomposed 19.20m-60.90m Granite Water Supply	747m	North West

Groundwater No	Drillers Log	Distance	Direction
GW402447	0.00m-3.00m Sandy clay, yellow 3.00m-18.00m Granite, decomposed 18.00m-84.00m Granite, black with quartz seams	777m	South West
GW404183	0.00m-2.00m SOIL - LOAMY - WEATHERED 2.00m-13.00m DACITE - ORANGE/YELLOW - WEATHERED 13.00m-54.00m VOLCANICS - GREY/BLUE	777m	South West
GW401604	0.00m-1.00m CLAY, RED 1.00m-2.00m GRANITE, YELLOW 2.00m-4.00m GRANITE, PINK 4.00m-33.00m GRANITE,YELLOW 33.00m-41.00m GRANITE, BLUE 41.00m-60.00m GRANITE, BLACK	796m	North
GW404272	0.00m-30.00m GRANITE - DECOMPOSED 30.00m-72.00m GRANITE - BLUE	798m	South
GW401687	0.00m-1.00m TOPSOIL 1.00m-4.00m GRANITE, DECOMPOSED 4.00m-122.00m GRANITE, GREY	808m	North West
GW045139	0.00m-0.61m Topsoil 0.61m-2.74m Soil Sandy 2.74m-13.72m Clay 13.72m-18.29m Porphyry Decomposed 18.29m-18.90m Porphyry 18.90m-23.77m Porphyry 23.77m-61.87m Porphyry Black	824m	South West
GW400949	0.00m-2.00m Brown clays 2.00m-22.00m Weathered granite 22.00m-23.00m Water weathered granite 23.00m-29.50m Weathered and fresh granite	846m	West
GW416441	0.00m-5.00m soil, brown clay 5.00m-13.00m granite, decomposed, light brown 13.00m-19.00m volcanic, brown 19.00m-78.00m volcanic, fracture, grey black	852m	West
GW058808	0.00m-0.30m Topsoil 0.30m-1.50m Clay 1.50m-6.10m Granite Decomposed Porphyry 6.10m-53.30m Granite Porphyry Water Supply	875m	North West
GW044776	0.00m-0.30m Topsoil 0.30m-1.50m Clay 1.50m-3.90m Clay Sandy 3.90m-11.30m Porphyry Decomposed 11.30m-36.60m Porphyry Water Supply	883m	South West
GW020868	0.00m-9.75m Clay Yellow Some Sand Quartz 9.75m-12.80m Clay Yellow Some Sand 12.80m-35.97m Porphyry Decomposed 35.97m-54.25m Porphyry Water Supply	896m	South
GW416633	0.00m-1.00m topsoil 1.00m-14.00m clay, with granite bands 14.00m-18.00m granite, weathered 18.00m-102.00m granite, blue	905m	North
GW009136	0.00m-4.88m Humus Clay 0.00m-4.88m Sand 4.88m-11.89m Porphyry Decomposed 11.89m-24.99m Porphyry 24.99m-39.01m Porphyry Hard	906m	South East
GW068044	4.00m-8.00m Decomposed Granite 8.00m-69.00m Black Granite	909m	South
GW072075	0.00m-0.50m TOP SOIL 0.50m-3.00m RED CLAYS 3.00m-12.00m WEATHERED GRANITES 12.00m-36.40m PORPHRY GRANITE	918m	North West
GW403955	0.00m-1.00m TOPSOIL 1.00m-12.00m SHALE - SOFT 12.00m-105.00m GRANITE	926m	South West
GW064549	0.00m-0.60m Topsoil 0.60m-3.50m Clay 3.50m-18.00m Granite Decomposed 18.00m-57.00m Granite White Water Supply	933m	West

Groundwater No	Drillers Log	Distance	Direction
GW414776	0.00m-14.00m Clay, topsoil 14.00m-15.00m Sands, water 15.00m-81.00m Shale, brown blue 81.00m-82.00m Sands, water 82.00m-97.00m Granite, blue black 97.00m-98.00m Sands, water 98.00m-101.00m Granite, blue black	942m	North West
GW047358	0.00m-0.30m Topsoil 0.30m-2.80m Clay Topsoil 2.80m-13.20m Clay Sandy 13.20m-18.80m Granite Decomposed 18.80m-25.50m Granite Some Broken Bands Water Supply 25.50m-33.20m Granite Hard	953m	South
GW400527	0.00m-2.00m TOPSOIL 2.00m-4.00m ROCK 4.00m-18.00m CLAY SLADE 18.00m-39.00m BLUE BASS ROCK	963m	West
GW047713	0.00m-0.30m Topsoil 0.30m-3.60m Clay 3.60m-13.10m Granite Decomposed Water Supply 13.10m-30.50m Granite Water Supply	975m	North West
GW401762	0.00m-4.00m CLAY, YELLOW BROWN 4.00m-100.00m DACITIC VOLCANICS, MEDIUM GREY GREEN	994m	North
GW401759	0.00m-3.00m CLAY, YELLOW BROWN 3.00m-60.00m DACITIC VOLCANICS, WEATHERED, DENSE, L/GREY	1003m	South East
GW400773	0.00m-1.00m Topsoil 1.00m-6.00m Clay 6.00m-19.00m Decomposed granite 19.00m-30.00m Granite	1012m	East
GW401761	0.00m-7.00m CLAY , YELLOW BROWN 7.00m-60.00m DACITIC VOLCANICS, WEATHERED, BROWN GREY	1012m	East
GW064548	0.00m-0.30m Topsoil 0.30m-3.00m Clay 3.00m-8.00m Granite Decomposed 8.00m-69.00m Granite Black Water Supply	1016m	West
GW416406	0.00m-1.00m topsoil 1.00m-17.00m clay, orange yellow 17.00m-26.00m gravel 26.00m-28.00m granite, weathered 28.00m-84.00m granite, blue	1031m	South West
GW042529	0.00m-0.30m Topsoil 0.30m-0.91m Clay 0.91m-6.70m Clay Sandy 6.70m-7.01m Gravel Bands 7.01m-9.44m Clay Sandy 9.44m-24.99m Porphyry Water Supply	1035m	North West
GW416395	0.00m-1.00m soil 1.00m-10.70m clay, and weathered material 10.70m-53.00m granite	1058m	South West
GW056770	0.00m-0.90m Topsoil 0.90m-2.70m Clay 2.70m-10.40m Granite Decomposed 10.40m-11.30m Granite Porphyry 11.30m-11.60m Granite Decomposed 11.60m-38.10m Granite Porphyry Water Supply	1061m	North West
GW415882	0.00m-4.00m Clay, yellow 4.00m-100.00m Dacitic volcanics, med grey	1070m	North
GW054023	0.00m-1.00m Topsoil 1.00m-3.00m Clay 3.00m-22.00m Granite Weathered 3.00m-22.00m Clay Yellow Silty 22.00m-30.00m Granite Solid	1074m	North
GW404350	0.00m-3.00m SOIL - LOAMY CLAY 3.00m-14.00m DACITE - YELLOW/BROWN - WEATHERED 14.00m-48.00m DACITE - BLUE/GREY	1090m	South
GW045355	0.00m-0.30m Topsoil 0.30m-2.40m Clay Red 2.40m-11.90m Clay Sandy 11.90m-12.80m Clay Sandy Pebbles/pebbly 12.80m-15.50m Porphyry Decomposed 15.50m-15.80m Porphyry Hard Bands 15.80m-18.60m Porphyry Decomposed 18.60m-37.80m Porphyry Black Water Supply	1103m	North West

Groundwater No	Drillers Log	Distance	Direction
GW059952	0.00m-0.30m Topsoil 0.30m-0.90m Clay 0.90m-16.80m Granite Decomposed Porphyry 16.80m-61.00m Granite Porphyry	1106m	West
GW024648	0.00m-1.83m Clay Puggy 1.83m-6.40m Clay Yellow Sandy 6.40m-10.97m Clay Sandy 10.97m-13.56m Clay Gravel 13.56m-14.33m Porphyry Decomposed 14.33m-24.54m Porphyry Water Supply	1110m	North
GW085106	0.00m-1.00m Topsoil 1.00m-3.00m Yellow clay 3.00m-5.00m Brown weathered rock 5.00m-42.00m Granite	1133m	North
GW085107	0.00m-1.00m Topsoil 1.00m-3.00m Yellow clay 3.00m-5.00m Brown weathered rock 5.00m-7.00m Granite	1145m	North
GW048475	0.00m-0.60m Topsoil 0.60m-2.40m Clay Red 2.40m-10.30m Clay Yellow 10.30m-15.80m Clay 15.80m-17.60m Porphyry Decomposed 17.60m-31.10m Porphyry Black Water Supply	1151m	South
GW401606	0.00m-0.50m TOPSOIL 0.50m-13.00m GRANITE, DECOMPOSED 13.00m-22.00m GRANITE, BLUE 22.00m-37.00m GRANITE, BLACK	1173m	North West
GW055014	0.00m-0.30m Topsoil 0.30m-1.50m Clay 1.50m-3.00m Granite Decomposed 3.00m-7.00m Granite Broken 7.00m-45.70m Granite Water Supply	1176m	South West
GW400709	0.00m-3.00m Topsoil, yellow brown clay 3.00m-10.00m Soft decomposed granite 10.00m-36.00m Blue black granite, highly fractured	1195m	East
GW055203	0.00m-0.30m Topsoil 0.30m-7.00m Clay Orange Sandy 7.00m-13.20m Granite Weathered 13.20m-14.70m Granite Grey 14.70m-16.90m Granite 16.90m-110.70m Granite Grey Porphyry Interlayere Water Supply	1202m	West
GW053317	0.00m-0.30m Topsoil 0.30m-4.50m Clay 4.50m-8.50m Gravel Water Supply 8.50m-45.70m Granite Water Supply	1213m	North
GW400528	0.00m-2.00m TOPSOIL 2.00m-4.00m RED CLAY 4.00m-19.00m CLAY & ROCK SOFT 19.00m-22.00m WHITE / BLUE ROCK 22.00m-50.00m BLUE BASS (GRANITE)	1217m	West
GW064454	0.00m-0.15m Topsoil 0.15m-2.00m Clay 2.00m-8.00m Granite 8.00m-63.00m Granite Black Water Supply	1223m	South West
GW035830	0.00m-0.30m Topsoil 0.30m-4.57m Clay Grey 4.57m-8.53m Clay Sandy 8.53m-17.67m Granite Decomposed 17.67m-25.90m Granite Pink Water Supply 25.90m-37.18m Granite Coloured 37.18m-39.62m Granite Grey	1228m	South West
GW401968	0.00m-0.10m Topsoil 0.10m-0.50m Clay, brown 0.50m-11.20m Basalt, weathered 11.20m-55.00m Basalt	1228m	South West
GW400948	0.00m-2.00m Clays 2.00m-22.50m Weathered granite 22.50m-23.50m Water bearing weathered granite 23.50m-29.50m Weathered granite	1250m	West
GW414750	0.00m-3.00m Clay, brown sticky 3.00m-12.00m Dacite, soft weathered 12.00m-90.00m Dacite, blue black	1256m	South West

Groundwater No	Drillers Log	Distance	Direction
GW045643	0.00m-0.40m Topsoil 0.40m-2.10m Clay Red 2.10m-4.80m Clay Yellow 4.80m-6.10m Porphyry Decomposed 6.10m-12.50m Porphyry 12.50m-13.10m Porphyry Water Bearing 13.10m-22.50m Porphyry 22.50m-23.10m Porphyry Water Bearing Water Supply 23.10m-42.70m Porphyry	1260m	North
GW020873	0.00m-7.92m Clay Yellow Some Sand 7.92m-28.65m Granite Water Supply	1302m	South East
GW061401	0.00m-0.30m Topsoil 0.30m-3.40m Clay 3.40m-12.50m Granite Soft 12.50m-30.40m Granite Hard Water Supply	1321m	South West
GW403484	0.00m-0.20m Topsoil 0.20m-15.00m Basalt, weathered 15.00m-126.00m Basalt	1328m	West
GW047828	0.00m-0.60m Topsoil 0.60m-5.10m Clay Sandy 5.10m-14.30m Granite Decomposed Porphyry 14.30m-61.60m Granite Porphyry Water Supply	1332m	West
GW415880	0.00m-4.00m Clay, soil brown 4.00m-21.00m Volcanics, light brown soft 21.00m-26.00m Volcanics, soft grey 26.00m-132.00m Volcanic grey and black	1359m	North
GW061230	0.00m-0.30m Topsoil 0.30m-2.70m Clay 2.70m-11.20m Granite Soft 11.20m-30.40m Granite Water Bearing	1377m	South West
GW071314	0.00m-1.00m Soil & Clays 1.00m-29.00m Decomposed Granite	1381m	West
GW416024	0.00m-1.00m topsoil 1.00m-2.00m clay 2.00m-41.00m granite, soft 41.00m-48.00m granite	1418m	West
GW404559	0.00m-0.30m SOIL 0.30m-5.00m VOLCANICS - DECOMPOSED 5.00m-15.00m VOLCANICS - SOFT BROKEN 15.00m-54.00m VOLCANICS - GREY/BLUE - FRACTURED	1449m	South West
GW404879	0.00m-3.00m CLAY 3.00m-15.00m SANDY CLAY 15.00m-91.00m GRANITE - BLUE/BLACK	1483m	South West
GW034390	0.00m-0.91m Topsoil 0.91m-3.65m Topsoil Clay 3.65m-11.88m Clay Sandy 11.88m-20.42m Granite Decomposed Water Supply 20.42m-25.90m Granite Porphyry Water Supply 25.90m-62.48m Granite Water Supply	1487m	South West
GW400677	0.00m-2.00m Brown Clay 2.00m-23.00m Weathered Granite 23.00m-24.00m Water Weathered Granite 24.00m-54.00m Granite	1491m	West
GW054104	0.00m-0.40m Topsoil 0.40m-1.20m Clay Grey 1.20m-5.70m Clay Yellow 5.70m-17.30m Clay Orange 17.30m-21.00m Porphyry Decomposed 21.00m-49.40m Porphyry Water Supply	1494m	West
GW061550	0.00m-0.30m Topsoil 0.30m-3.66m Clay 3.66m-16.15m Granite Soft 16.15m-53.95m Granite Water Supply	1530m	South West
GW045439	0.00m-0.30m Topsoil 0.30m-0.91m Clay Sandy 0.91m-4.57m Porphyry Decomposed 4.57m-67.36m Porphyry 67.36m-80.47m Shale Hard Water Supply	1535m	West
GW047516	0.00m-0.30m Topsoil 0.30m-6.70m Clay 6.70m-38.10m Granite	1576m	South East

Groundwater No	Drillers Log	Distance	Direction
GW020882	0.00m-7.32m Clay Yellow Some Sand 7.32m-15.85m Clay Yellow Some Sand Quartz 15.85m-18.29m Porphyry Decomposed 18.29m-61.26m Porphyry	1589m	North West
GW047499	0.00m-0.30m Topsoil 0.30m-3.70m Clay 3.70m-20.70m Granite Decomposed Water Supply 20.70m-65.50m Granite	1596m	South West
GW054014	0.00m-0.30m Topsoil Sandy 0.30m-2.10m Granite Decomposed 2.10m-24.90m Granite Red Weathered Bands 24.90m-48.00m Granite Grey Fractured Bands Water Supply 48.00m-52.30m Granite White	1599m	South West
GW060730	0.00m-3.00m Clay 3.00m-20.00m Granite Decomposed 20.00m-60.90m Granite Grey Water Supply	1618m	South West
GW044796	0.00m-0.30m Topsoil 0.30m-1.52m Clay 1.52m-3.66m Clay Sandy 3.66m-13.41m Porphyry Decomposed 13.41m-14.02m Porphyry Broken 14.02m-91.44m Porphyry Water Supply	1623m	South West
GW400793	0.00m-1.00m Topsoil 1.00m-24.00m Decomposed granite 24.00m-72.00m Hard granite	1629m	North
GW402031	0.00m-1.00m Topsoil 1.00m-16.00m Shale, brown 16.00m-26.00m Granite, deco brown 26.00m-32.00m Granite, broken blue 32.00m-104.00m Granite, blue	1634m	South West
GW045982	0.00m-0.30m Topsoil 0.30m-1.50m Clay Sandy 1.50m-5.50m Porphyry Decomposed 5.50m-49.40m Porphyry Decomposed Boulder Water Supply	1637m	West
GW053315	0.00m-0.30m Topsoil 0.30m-4.30m Clay 4.30m-16.10m Granite Decomposed Water Supply 16.10m-45.70m Granite Water Supply	1668m	North
GW085111	0.00m-1.00m Topsoil 1.00m-24.00m Brown weathered granite 24.00m-36.00m Grey weathered granite 36.00m-46.00m Freshly weathered grey granite 46.00m-52.00m Fresh grey granite - hard	1707m	West
GW400779	0.00m-0.20m Topsoil 0.20m-1.00m Light brown clay 1.00m-11.00m Decomposed soft granite 11.00m-42.00m Grey granite fractured in places	1710m	South West
GW085112	0.00m-1.00m Topsoil 1.00m-5.00m Orange brown weathered rock 5.00m-11.00m Hard sandy weathered rock 11.00m-24.00m Brown weathered granite 24.00m-29.00m Weathered grey granite - W/B 29.00m-30.00m Weathered granite grey	1731m	West
GW403537	0.00m-1.50m Topsoil 1.50m-4.00m Clay, brown 4.00m-20.00m Granite, weathered 20.00m-182.00m Granite, black and white	1757m	North West
GW042573	0.00m-0.60m Topsoil 0.60m-3.96m Clay Yellow 3.96m-25.60m Shale 25.60m-46.32m Basalt Water Supply 46.32m-83.82m Granite Water Supply	1770m	South West
GW044658	0.00m-0.30m Topsoil 0.30m-1.22m Clay 1.22m-11.28m Clay Sandy 11.28m-13.72m Porphyry Decomposed 13.72m-73.15m Porphyry Water Supply	1779m	South West
GW400916	0.00m-2.00m Brown clay 2.00m-23.00m Weathered granite 23.00m-24.00m Water weathered granite 24.00m-54.00m Granite	1780m	West

Groundwater No	Drillers Log	Distance	Direction
GW050146	0.00m-0.91m Topsoil 0.91m-5.18m Granite Weathered 5.18m-96.01m Granite Grey	1813m	West
GW402922	0.00m-6.00m Clay 6.00m-29.00m Shale, brown 29.00m-106.00m Shale, hard, black	1830m	South West
GW020871	0.00m-77.11m Driller 77.11m-77.72m Porphyry 77.72m-157.28m Porphyry Very Hard Water Supply	1846m	North
GW400933	0.00m-2.00m Brown clay 2.00m-23.00m Weatered granite 23.00m-24.00m Water weathered granite 24.00m-54.00m Granite	1908m	West
GW047293	0.00m-0.30m Topsoil 0.30m-6.90m Clay 6.90m-19.80m Granite Decomposed Water Supply 19.80m-45.70m Granite Porphyry Water Supply	1909m	South East
GW400788	0.00m-2.00m Topsoil 2.00m-14.00m Yellow sandy clay 14.00m-25.00m D/granite 25.00m-80.00m Hard granite	1979m	North West

Geology 1:250,000

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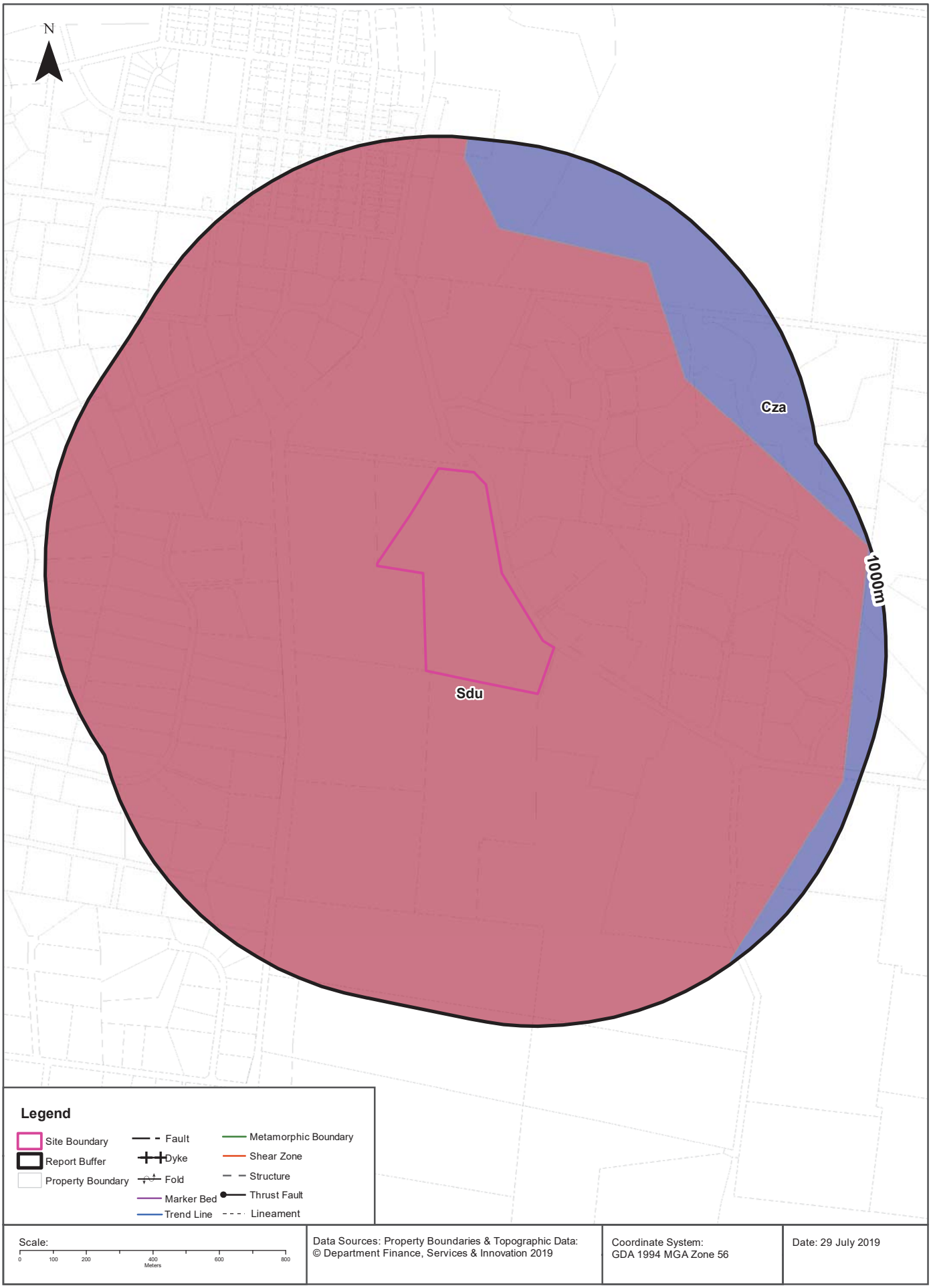

Geology

80 Murrumbateman Road, Murrumbateman, NSW 2582

Geological Units

What are the Geological Units onsite?

Symbol	Description	Unit Name	Group	Sub Group	Age	Dom Lith	Map Sheet	Dataset
Sdu	Rhyolitic-Dacitic tuffs, rhyolite, dacite, andesite, dellenite with interbedded limestone, shale	Douro Group	Douro Group		Palaeozoic			1:250,000

What are the Geological Units within the dataset buffer?

Symbol	Description	Unit Name	Group	Sub Group	Age	Dom Lith	Map Sheet	Dataset
Cza	Cainozoic alluvium: gravel, sand	undifferentiated			Cainozoic			1:250,000
Sdu	Rhyolitic-Dacitic tuffs, rhyolite, dacite, andesite, dellenite with interbedded limestone, shale	Douro Group	Douro Group		Palaeozoic			1:250,000

Geological Structures

What are the Geological Structures onsite?

Feature	Name	Description	Map Sheet	Dataset
No features				1:250,000

What are the Geological Structures within the dataset buffer?

Feature	Name	Description	Map Sheet	Dataset
No features				1:250,000

Geological Data Source : NSW Department of Industry, Resources & Energy

Naturally Occurring Asbestos Potential

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Naturally Occurring Asbestos Potential

Naturally Occurring Asbestos Potential within the dataset buffer:

Potential	Sym	Strat Name	Group	Formation	Scale	Min Age	Max Age	Rock Type	Dom Lith	Description	Dist	Dir
No records in buffer												

Mining Subsidence District Data Source: © State of New South Wales through NSW Department of Industry, Resources & Energy

Soil Landscapes

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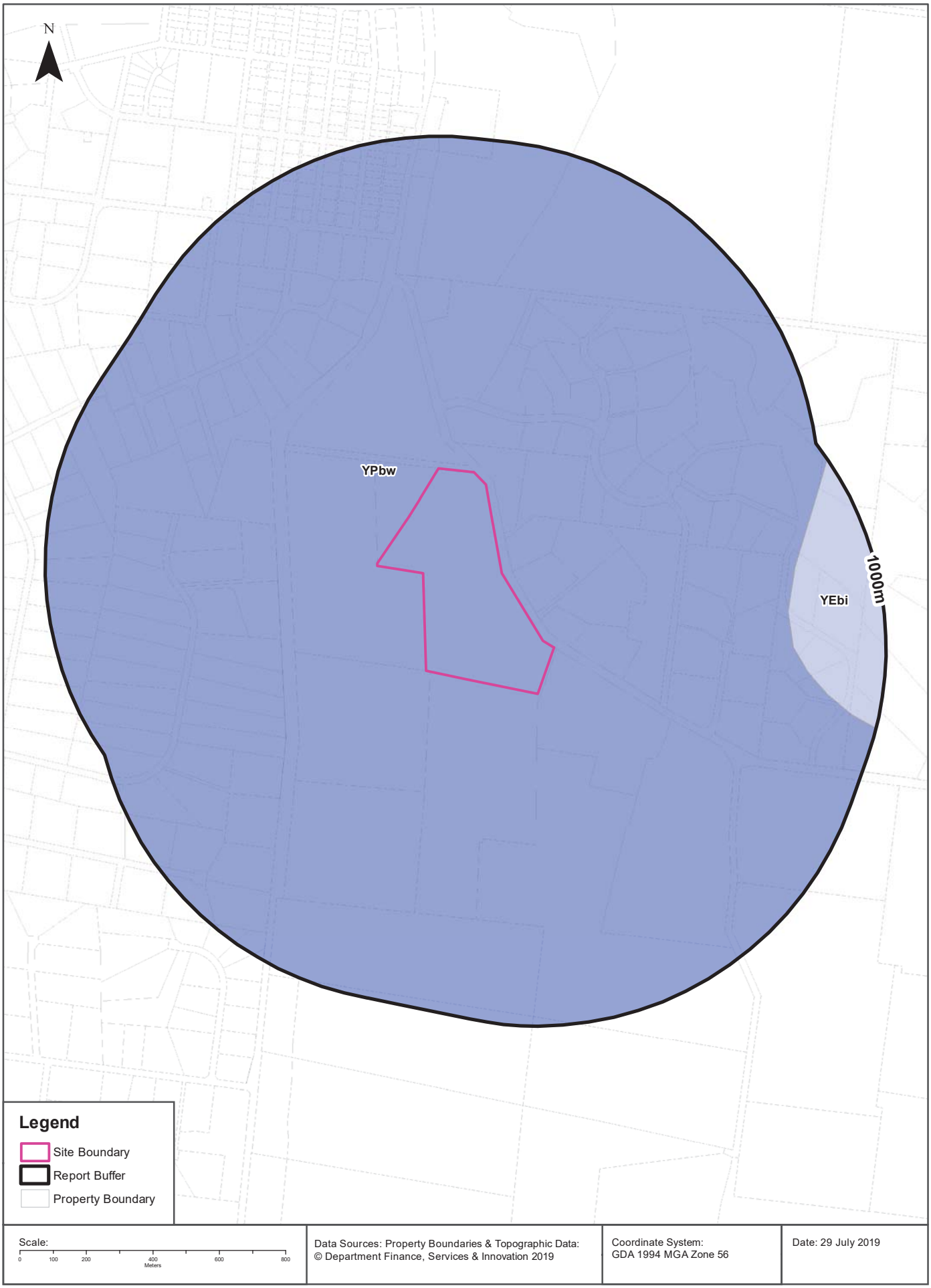

Soils

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Soil Landscapes

What are the onsite Soil Landscapes?

Soil Code	Name	Group	Process	Map Sheet	Scale
YPbw	BOOROWA	YELLOW PODZOLIC SOILS		Goulburn	1:250,000

What are the Soil Landscapes within the dataset buffer?

Soil Code	Name	Group	Process	Map Sheet	Scale
YEbi	BINALONG	YELLOW EARTHS		Goulburn	1:250,000
YPbw	BOOROWA	YELLOW PODZOLIC SOILS		Goulburn	1:250,000

Atlas of Australian Soils

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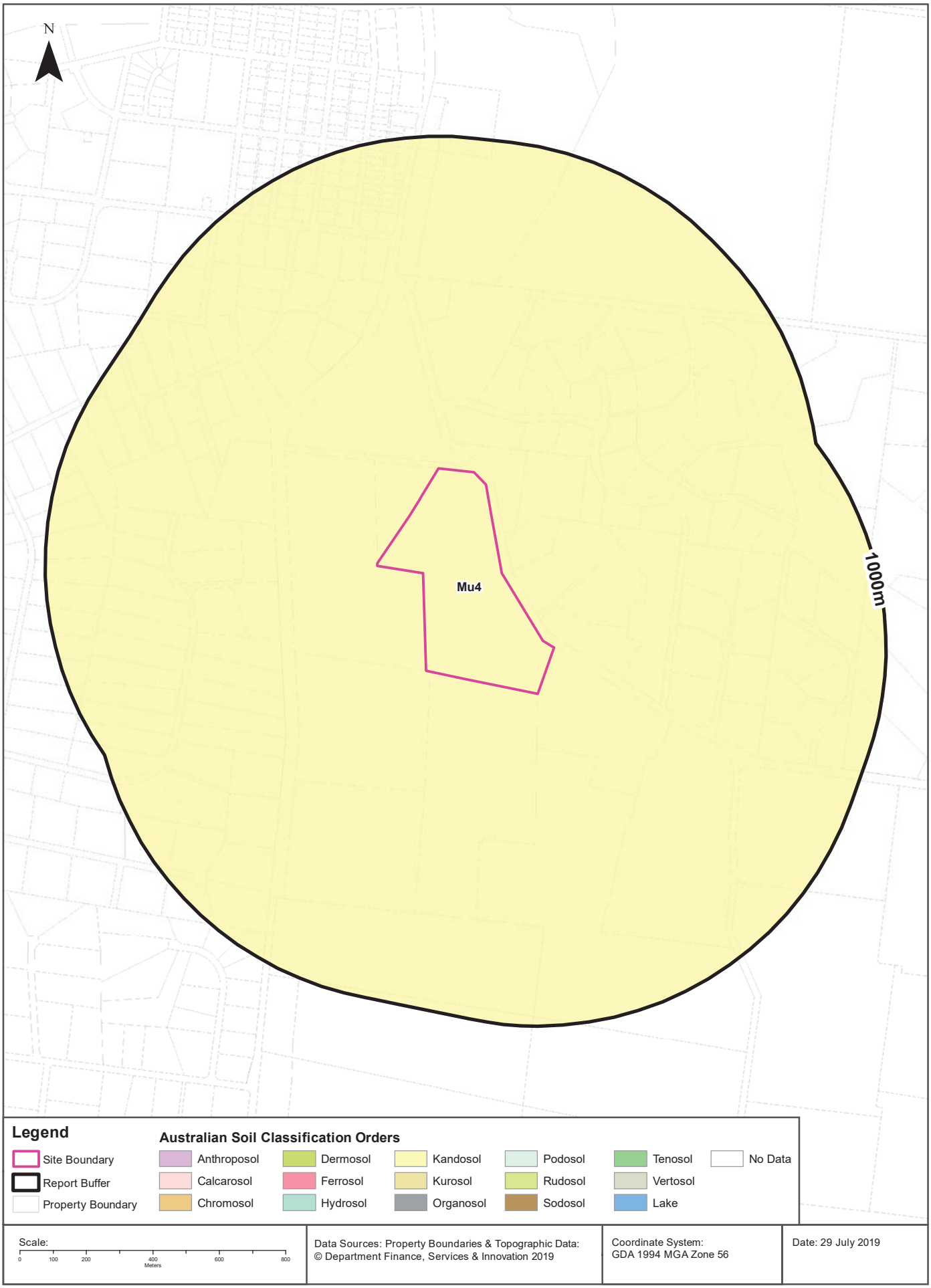

Soils

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Atlas of Australian Soils

Soil mapping units and Australian Soil Classification orders within the dataset buffer:

Map Unit Code	Soil Order	Map Unit Description	Distance
Mu4	Kandosol	Gently to strongly undulating plains at moderate to low elevations (<2000 ft) with basins, stream terraces, and low residual hills and ridges; buried, layered soil materials are present: undulating plains of neutral leached red earths (Gn2.15) in the better-drained sites and yellow earths (Gn2.25) in intermediate drainage situations, with yellow leached earths (Gn2.75) often associated with hard neutral and/or alkaline yellow mottled soils (Dy3.42 and Dy3.43) in poorly drained areas, swampy sites, and seepage situations--all often with heavy clay D horizons below the solum. Associated are: low residual hills and ridges of (Dr2.22 and Dr2.42) or (Dy3.22 and Dy3.42) soils, with small areas of (Um4.2) soils and rock outcrops; basins of (Gn2.15 and Gn2.25) or (Dy3.42) soils; and stream terraces of variable width and development with (Um1) soils on present flood-plains, (Um6.11) soils on the youngest terraces, (Gn2.15, Gn2.25, and Gn2.75) in drainage sequence from well-drained to poorly drained sites on the next, and most extensive, terrace, adjacent to which sand sheets of (Uc1.2) soils may occur; (Dr2.42), (Dy3.42), and (Dy3.43) soils on remnants of the highest terrace, above which gravel fills and ironstone slabs may occur.	0m

Acid Sulfate Soils

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Environmental Planning Instrument - Acid Sulfate Soils

What is the on-site Acid Sulfate Soil Plan Class that presents the largest environmental risk?

Soil Class	Description	EPI Name
N/A		

If the on-site Soil Class is 5, what other soil classes exist within 500m?

Soil Class	Description	EPI Name	Distance	Direction
N/A				

Atlas of Australian Acid Sulfate Soils

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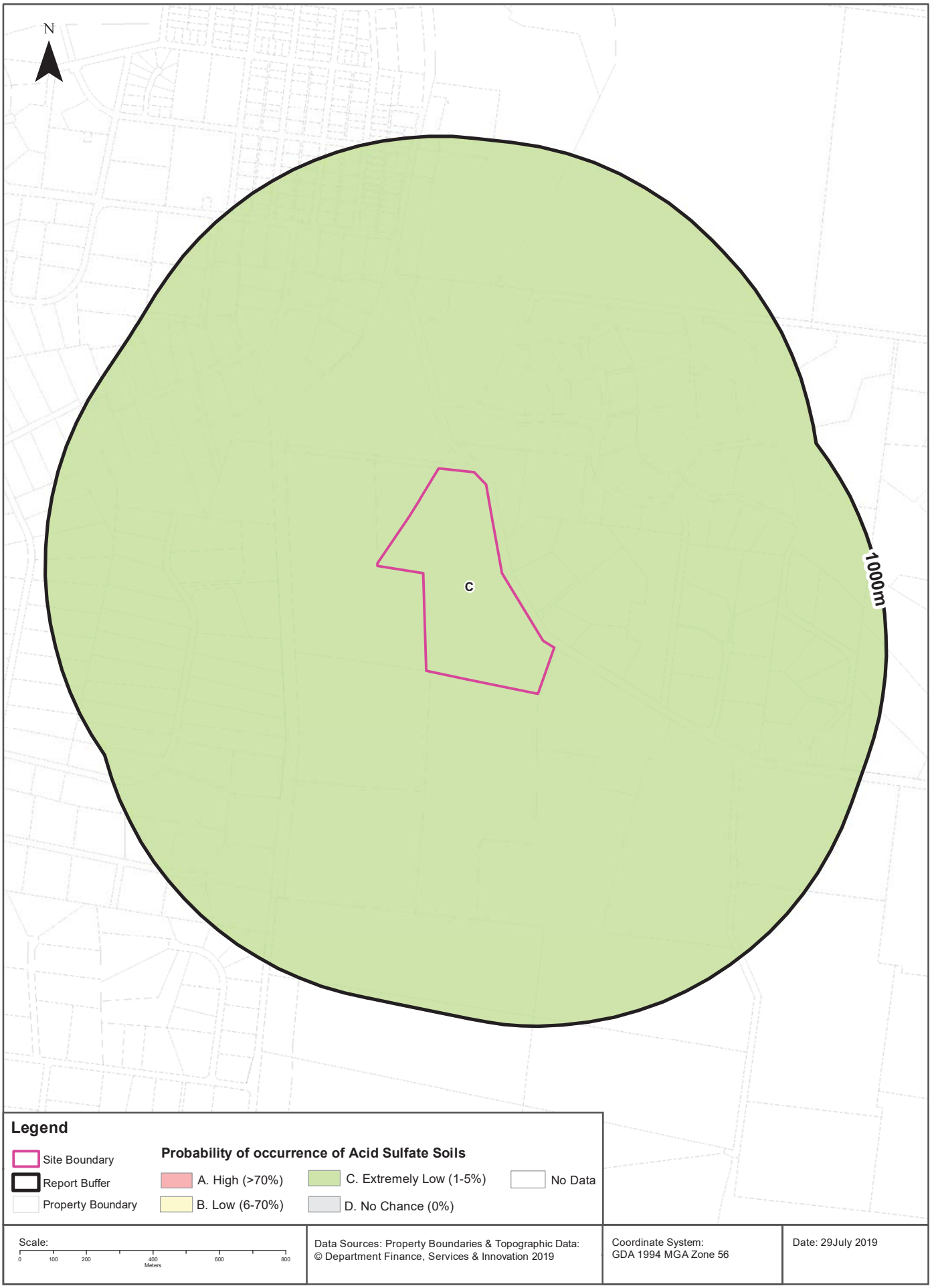

Acid Sulfate Soils

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Atlas of Australian Acid Sulfate Soils

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

Class	Description	Distance
C	Extremely low probability of occurrence. 1-5% chance of occurrence with occurrences in small localised areas.	0m

Dryland Salinity

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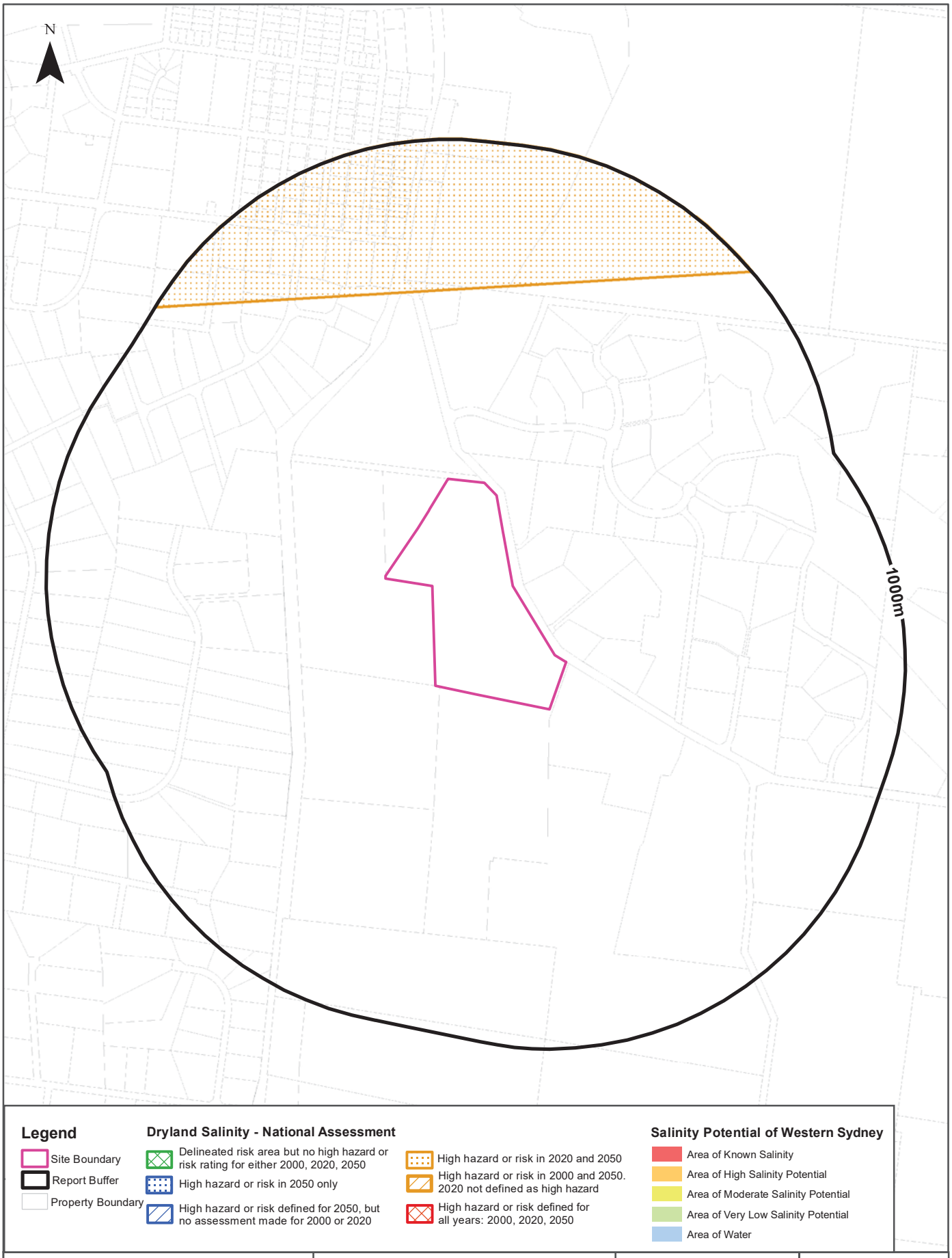

Dryland Salinity

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Dryland Salinity - National Assessment

Is there Dryland Salinity - National Assessment data onsite?

No

Is there Dryland Salinity - National Assessment data within the dataset buffer?

Yes

What Dryland Salinity assessments are given?

Assessment 2000	Assessment 2020	Assessment 2050	Distance	Direction
-	High hazard or risk	High hazard or risk	556m	North

Dryland Salinity Data Source : National Land and Water Resources Audit
The Commonwealth and all suppliers of source data used to derive the maps of "Australia, Forecast Areas Containing Land of High Hazard or Risk of Dryland Salinity from 2000 to 2050" do not warrant the accuracy or completeness of information in this product. Any person using or relying upon such information does so on the basis that the Commonwealth and data suppliers shall bear no responsibility or liability whatsoever for any errors, faults, defects or omissions in the information. Any persons using this information do so at their own risk.
In many cases where a high risk is indicated, less than 100% of the area will have a high hazard or risk.

Dryland Salinity Potential of Western Sydney

Dryland Salinity Potential of Western Sydney within the dataset buffer?

Feature Id	Classification	Description	Distance	Direction
N/A	Outside Data Coverage			

Dryland Salinity Potential of Western Sydney Data Source : NSW Office of Environment and Heritage

Mining Subsidence Districts

80 Murrumbateman Road, Murrumbateman, NSW 2582

Mining Subsidence Districts

Mining Subsidence Districts within the dataset buffer:

District	Distance	Direction
There are no Mining Subsidence Districts within the report buffer		

State Environmental Planning Policy

80 Murrumbateman Road, Murrumbateman, NSW 2582

State Significant Precincts

What SEPP State Significant Precincts exist within the dataset buffer?

Map Id	Precinct	EPI Name	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
N/A	No Records in Buffer							

EPI Planning Zones

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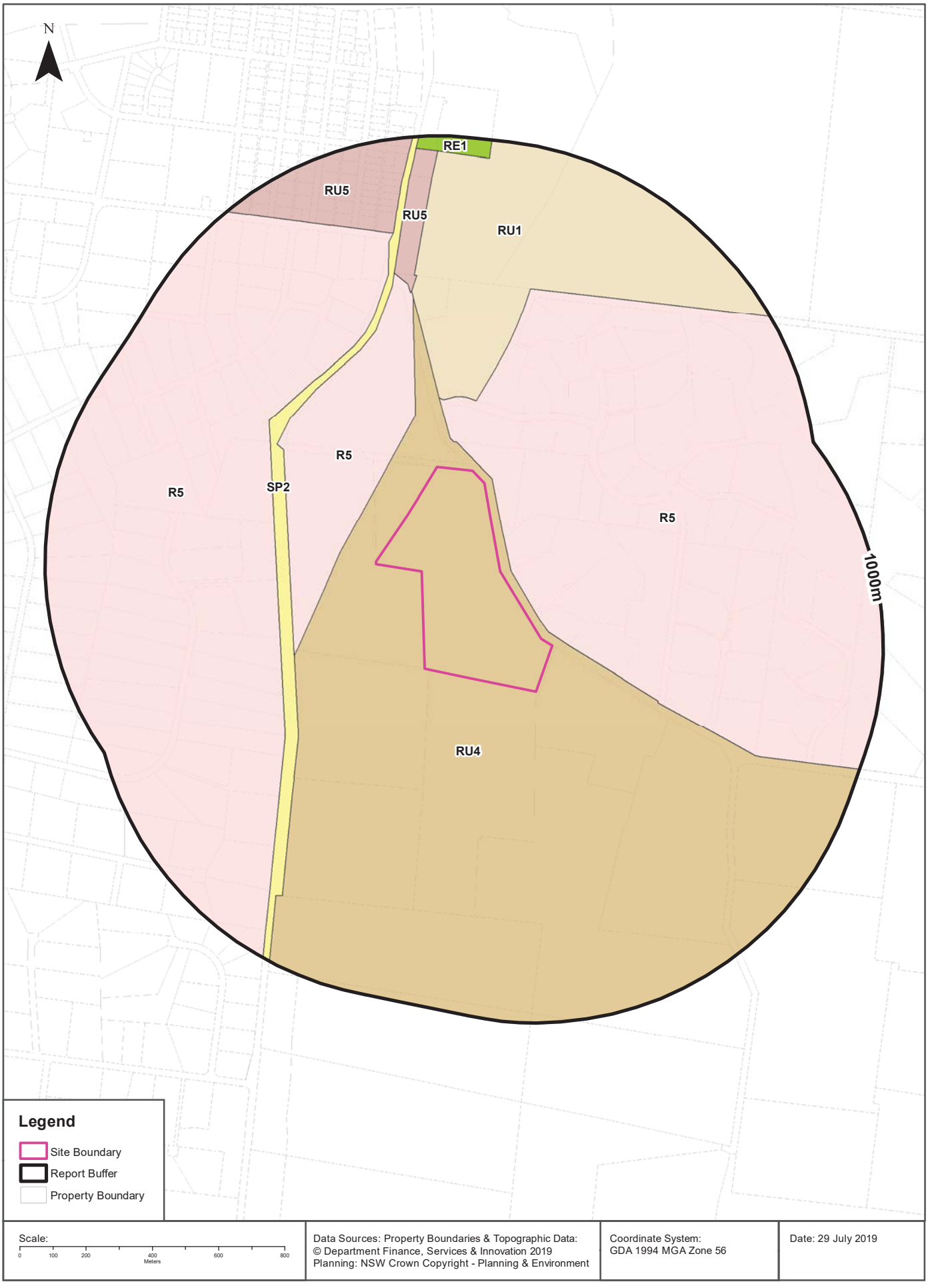

Environmental Planning Instrument

80 Murrumbateman Road, Murrumbateman, NSW 2582

Land Zoning

What EPI Land Zones exist within the dataset buffer?

Zone	Description	Purpose	EPI Name	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
RU4	Primary Production Small Lots		Yass Valley Local Environmental Plan 2013	19/07/2013	19/07/2013	26/04/2019		0m	Onsite
R5	Large Lot Residential		Yass Valley Local Environmental Plan 2013	19/07/2013	19/07/2013	26/04/2019		24m	East
R5	Large Lot Residential		Yass Valley Local Environmental Plan 2013	19/07/2013	19/07/2013	26/04/2019		109m	North West
RU1	Primary Production		Yass Valley Local Environmental Plan 2013	19/07/2013	19/07/2013	26/04/2019		204m	South East
SP2	Infrastructure	Classified Road	Yass Valley Local Environmental Plan 2013	19/07/2013	19/07/2013	26/04/2019		262m	South West
R5	Large Lot Residential		Yass Valley Local Environmental Plan 2013	19/07/2013	19/07/2013	26/04/2019		301m	West
RU5	Village		Yass Valley Local Environmental Plan 2013	19/07/2013	19/07/2013	26/04/2019		534m	North
RU5	Village		Yass Valley Local Environmental Plan 2013	19/07/2013	19/07/2013	26/04/2019		717m	North
RE1	Public Recreation		Yass Valley Local Environmental Plan 2013	19/07/2013	19/07/2013	26/04/2019		943m	North

Heritage Items

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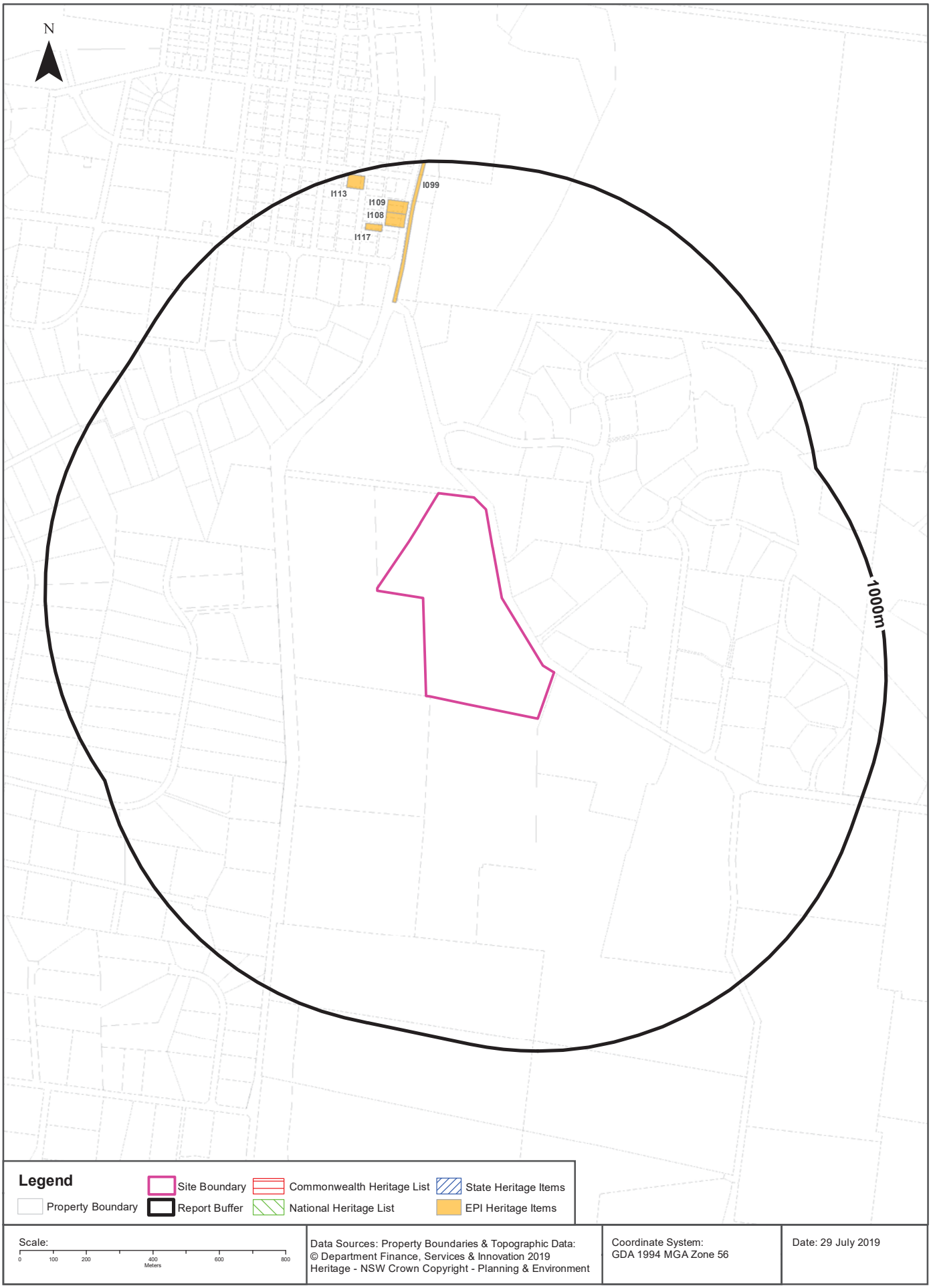

Heritage

80 Murrumbateman Road, Murrumbateman, NSW 2582

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

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

State Heritage Register - Curtilages

What are the State Heritage Register Items located within the dataset buffer?

Map Id	Name	Address	LGA	Listing Date	Listing No	Plan No	Distance	Direction
N/A	No records in buffer							

Heritage Data Source: NSW Crown Copyright - Office of Environment & Heritage

Environmental Planning Instrument - Heritage

What are the EPI Heritage Items located within the dataset buffer?

Map Id	Name	Classification	Significance	EPI Name	Published Date	Commenced Date	Currency Date	Distance	Direction
I099	Memorial trees	Item - General	Local	Yass Valley Local Environmental Plan 2013	19/07/2013	19/07/2013	26/04/2019	590m	North
I108	Pise Cottage (former Gruber's cottage)	Item - General	Local	Yass Valley Local Environmental Plan 2013	19/07/2013	19/07/2013	26/04/2019	805m	North
I117	Yass Temperance Hall (former)	Item - General	Local	Yass Valley Local Environmental Plan 2013	19/07/2013	19/07/2013	26/04/2019	805m	North

Map Id	Name	Classification	Significance	EPI Name	Published Date	Commenced Date	Currency Date	Distance	Direction
I109	Murrumbateman Inn and post office (former)	Item - General	Local	Yass Valley Local Environmental Plan 2013	19/07/2013	19/07/2013	26/04/2019	843m	North
I113	All Saints Soldiers Memorial Church	Item - General	Local	Yass Valley Local Environmental Plan 2013	19/07/2013	19/07/2013	26/04/2019	943m	North

Natural Hazards

80 Murrumbateman Road, Murrumbateman, NSW 2582

Bush Fire Prone Land

What are the nearest Bush Fire Prone Land Categories that exist within the dataset buffer?

Bush Fire Prone Land Category	Distance	Direction
No records within buffer		

Ecological Constraints

80 Murrumbateman Road, Murrumbateman, NSW 2582

Vegetation of the Southern Forests

What vegetation of the Southern Forests exists within the dataset buffer?

Map Id	Veg Code	Formation	Class	Group	Distance	Direction
N/A	No records within buffer					

Vegetation of the Southern Forests: NSW Office of Environment and Heritage

Ramsar Wetlands

What Ramsar Wetland areas exist within the dataset buffer?

Map Id	Ramsar Name	Wetland Name	Designation Date	Source	Distance	Direction
N/A	No records in buffer					

Ecological Constraints

80 Murrumbateman Road, Murrumbateman, NSW 2582

Groundwater Dependent Ecosystems Atlas

Type	GDE Potential	Geomorphology	Ecosystem Type	Aquifer Geology	Distance
N/A	No records within buffer				

Ecological Constraints

80 Murrumbateman Road, Murrumbateman, NSW 2582

Inflow Dependent Ecosystems Likelihood

Type	IDE Likelihood	Geomorphology	Ecosystem Type	Aquifer Geology	Distance
N/A	No records within buffer				

Ecological Constraints

80 Murrumbateman Road, Murrumbateman, NSW 2582

NSW BioNet Atlas

Species on the NSW BioNet Atlas that have a NSW or federal conservation status, a NSW sensitivity status, or are listed under a migratory species agreement, and are within 10km of the site?

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Animalia	Amphibia	Litoria aurea	Green and Golden Bell Frog	Endangered	Not Sensitive	Vulnerable	
Animalia	Aves	Anthochaera phrygia	Regent Honeyeater	Critically Endangered	Not Sensitive	Critically Endangered	
Animalia	Aves	Artamus cyanopterus cyanopterus	Dusky Woodswallow	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Callocephalon fimbriatum	Gang-gang Cockatoo	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Chthonicola sagittata	Speckled Warbler	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Circus assimilis	Spotted Harrier	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Climacteris picumnus victoriae	Brown Treecreeper (eastern subspecies)	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Daphoenositta chrysoptera	Varied Sittella	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Hieraaetus morphnoides	Little Eagle	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Hirundapus caudacutus	White-throated Needletail	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Lophochroa leadbeateri	Major Mitchell's Cockatoo	Vulnerable	Category 2	Not Listed	
Animalia	Aves	Lophoictinia isura	Square-tailed Kite	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Merops ornatus	Rainbow Bee-eater	Not Listed	Not Sensitive	Not Listed	JAMBA
Animalia	Aves	Petroica boodang	Scarlet Robin	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Petroica phoenicea	Flame Robin	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Polytelis swainsonii	Superb Parrot	Vulnerable	Category 3	Vulnerable	
Animalia	Aves	Stagonopleura guttata	Diamond Firetail	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Tyto longimembris	Eastern Grass Owl	Vulnerable	Category 3	Not Listed	
Animalia	Insecta	Synemon plana	Golden Sun Moth	Endangered	Not Sensitive	Critically Endangered	
Animalia	Mammalia	Miniopterus orianae oceanensis	Large Bent-winged Bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Pteropus poliocephalus	Grey-headed Flying-fox	Vulnerable	Not Sensitive	Vulnerable	

Data does not include NSW category 1 sensitive species.

Data obtained 26/07/2019

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12. These Terms are subject to New South Wales law.

yass valley council
the country the people

SECTION 10.7(2) & (5) PLANNING CERTIFICATE

Issued under the Environmental Planning and Assessment Act 1979 &
Schedule 4 Environmental Planning and Assessment Regulation 2000

Application Details

Name:	Ms Alison Smith
Address:	3/68 Alfred Street MILSONS POINT NSW 2061
Certificate No:	190884
Fees paid:	$133.00
Receipt no:	25658
Applicant's ref:	LS007619
Pages in certificate:	8

Pursuant to section 10.7 of the Act, it is advised that as of the date of this certificate, the subject land was affected by the matters indicated below and in the attachments to this certificate. Information is given only to the extent that Council has been notified by the NSW Department of Planning and Environment and other relevant State Agencies

Property Details

Address:	80 Murrumbateman Road MURRUMBATEMAN NSW 2582
Property description:	PARISH: NANIMA, LOT: 10, DP: 1218866
Area:	18.7 Hectares
Assessment no:	14811
Owner recorded by Council:	Pixiu Holdings Pty Ltd

Prescribed Matters

Information relating to planning instruments and DCPs that apply to the land

Local Environmental Plan	Yass Valley Local Environmental Plan 2013
Yass Valley LEP 2013 Map Reference	Maps for this property can be viewed at: www.planningportal.nsw.gov.au/find-a-property Instrument and maps can be viewed at: www.legislation.nsw.gov.au
Draft Local Environmental Plan	Nil
Development Control Plan	Draft Yass Valley DCP 2018 currently being prepared.
State Environmental Planning Policies	Refer to Schedule A attached
Draft State Environmental Planning Policies	Refer to Schedule B attached

Information relating to zoning and land use under relevant LEP's

Zoning of the property	RU4 Primary Production Small Lots
Purposes for which development may be carried out ***without the need*** *for Development Consent*	Environmental protection works; Extensive agriculture; Home-based child care; Home businesses; Home occupations; Horticulture; Viticulture; Water storage facilities.
Purposes for which development may be carried out ***with*** *Development Consent*	Agricultural produce industries; Animal boarding or training establishments; Aquaculture; Bed and breakfast accommodation; Cellar door premises; Cemeteries; Dual occupancies; Dwelling houses; Farm buildings; Farm stay accommodation; Flood mitigation works; Function centres; High technology industries; Home industries; Industrial retail outlets; Intensive plant agriculture; Markets; Plant nurseries; Recreation areas; Restaurants or cafes; Roads; Roadside stalls; Rural supplies; Signage; Truck depots; Veterinary hospitals; Water supply systems.
The purposes for which development is ***prohibited****.*	Any development not specified in item 2 or 3.
Yass Valley LEP 2013 Lot Size Map	16 hectares. Part 4 - Principal Development Standards in the Yass Valley LEP 2013 outlines the requirements for the subdivision of the land.
Is this property identified on any other Yass Valley LEP 2013 map	No
Does this zone specify minimum land dimensions or area for the erection of a dwelling-house	Development consent must not be granted for the erection of a dwelling house or a dual occupancy on land to which this clause applies unless the land: (a) is a lot that is at least the minimum lot size shown on the Lot Size Map in relation to that land, or: (b) is a lot created before this Plan commenced and on which the erection of a dwelling house

or a dual occupancy was permissible immediately before that commencement, or

(c) is a lot resulting from a subdivision for which development consent (or equivalent) was granted before this Plan commenced and on which the erection of a dwelling house or a dual occupancy would have been permissible if the plan of subdivision had been registered before that commencement, or

(d) is a lot resulting from a subdivision under clause 4.1 or clause 4.1B, or

(e) would have been a lot or a holding referred to in paragraph (a),(b), (c) or (d) had it not been affected by:

(i) a minor realignment of its boundaries that did not create an additional lot, or

(ii) a subdivision creating or widening a public road or public reserve or for another public purpose, or

(iii) a consolidation with an adjoining public road or public reserve or for another public purpose.

Note. A dwelling cannot be erected on a lot created under clause 9 of State Environmental Planning Policy (Rural Lands) 2008 or clause 4.2. Please note that to confirm whether this property has an entitlement to erect a dwelling, Council is required to undertake a dwelling entitlement search. Please contact Council on 02 6226 1477 for further information about this process and costs.

Does the land include or comprise critical habitat	No
Is the land in a Conservation Area	No
Is there an item of Environmental Heritage situated on the land	No

Can complying development be carried out on the land under the provisions of clauses 1.17(A), 1.18 and 1.19 of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008

General Housing Code	Not applicable.
Rural Housing Code	Complying Development under the Rural Housing Code may be carried out on this land.
Housing Alterations Code	Complying Development under the Housing Alterations Code may be carried out on this land.
General Development Code	Complying Development under the General Development Code may be carried out on this land.
Commercial and Industrial Alterations Code	Complying Development under the Commercial and Industrial Alterations Code may only be carried out on a building used as a specified non-residential purpose.
Commercial and Industrial (New Buildings and Additions) Code	Not applicable.

Fire Safety Code	Complying Development under the Fire Safety Code may only be carried out on an existing building used for a residential care facility or other specified non-residential use.
Demolition Code	Complying Development under the Demolition Code may be carried out on this land.
Subdivisions Code	Complying Development for strata subdivision under the Subdivisions Code may be carried out on this land.

Disclaimer:	This certificate only addresses matters raised in Clauses 1.17A, 1.18 and 1.19 of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. It is your responsibility to ensure that you comply with any other general requirements of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. Failure to comply with these provisions may mean that a Complying Development Certificate issued under the provisions of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 is invalid.

Note:	Clause 1.9 of State Environmental Planning Policy (Exempt and Complying SEPP) specifies its relationship to local environmental plans (LEPs), development control plans (DCPs) and other State environmental planning policies (SEPPs). Please refer to Clauses 1.8 and 1.9 of this SEPP to determine the applicability of exempt and complying provisions of this SEPP, and other applicable LEPs, DCPs and SEPPs.

Is the land affected by the operation of the Coastal Protection Act 1979	No
Are annual charges applicable to this land under the Local Government Act 1993 for coastal protection services that relate to existing coastal protection work	The land within the Yass Valley LGA is not affected by the Coastal Protection Act 1979 being an inland Council. As such, no annual charges apply to this land.
Is the land proclaimed to be in a mine subsidence district within the meaning of the Mine Subsidence Compensation Act 1961	No

Is the land affected by any road widening or road re-alignment proposals under:

Division 2 or Part 3 of the Roads Act 1993	No
Any Environmental Planning Instrument	No
Any resolution of the Council	No

Is the land affected by a policy adopted by the Council or by any other public authority that restricts the development of the land because of the likelihood of:

Land slip	No
Bush fire	Planning for Bush Fire Protection (2006) applies to all land identified below as bushfire prone. This document can be found at: http://www.rfs.nsw.gov.au under Publications.
Tidal inundation	No
Subsidence	No

Acid sulphate soils	No
Any other risk	No
Is development of the land subject to flood related development controls	Clause 6.2 'Flood Planning' of the Yass Valley LEP 2013 applies to land at or below the 1:100 ARI flood event level (plus 0.5 metre freeboard).
Does any Environmental Planning Instrument or Draft Environmental Planning Instrument applying to the land provide for the acquisition of the land by a public authority as referred to in Section 27 of the Act	No
Contributions plans applying to the land	Yass Valley Development Contributions Plan 2018 – Yass Valley Council Heavy Haulage Section 94 Contributions Plan 2006.
Does the property include or comprise biodiversity certified land (within the meaning of Part 7AA of the Threatened Species Conservation Act 1995)	No
Is the property subject to a biobanking agreement under part 7A of the Threatened Species Conservation Act 1995	No
Is the land identified as Bush Fire Prone	No
Does any Property Vegetation Plan under the Native Vegetation Act 2003 apply to this land	No
Has an order been made under the Trees (Disputes Between Neighbours) Act 2006	No
Has a site compatibility certificate been issued for seniors housing, infrastructure or affordable rental housing	No
Is the land significantly contaminated within the meaning of the Contaminated Land Management Act 1997	No
Is the land subject to a management order within the meaning of the Contaminated Land Management Act 1997	No
Is the land the subject of an approved voluntary management proposal within the meaning of the Contaminated Land Management Act 1997	No
Is the land the subject of an ongoing maintenance order within the meaning of the Contaminated Land Management Act 1997	No
Is the land the subject of a site audit statement (if a copy of such a statement has been provided to Council) within the meaning of the Contaminated Land Management Act 1997	No

Is there any paper subdivision applicable to this land	No
Has a site verification certificate ben issued that the land is land is biophysical strategic agricultural land or critical industry cluster land	No
Is the land listed on the Loose-fill asbestos insulation register of the NSW Fair Trading	No
Is there any affected building notice of which the Council is aware that is in force in respect of the land ***Note:*** *affecting building notice has the same meaning as in Part 4 of the Building Products (Safety) Act 2017.*	No
Is there any building product rectification order of which the Council is aware that is in force in respect of the land and has not been fully complied with ***Note:*** *building product rectification order has the same meaning as in Building Products (Safety) Act 2017.*	No
Is there any notice of intention to make a building product rectification order of which the Council is aware has been given in respect of the land and is outstanding	No
Additional matters	Information provided by the Office of Environment and Heritage has identified a high likelihood of threatened fauna on the site. For more information please contact the Office of Environment and Heritage – www.environment.nsw.gov.au

Note:	Houses built prior to 1982 may contain loose fill asbestos. For further information contact WorkCover on 131 050 or www.workcover.nsw.gov.au.

Note:	The information contained in this certificate needs to be read in conjunction with the provisions of the Environmental Planning and Assessment Act 1979 and the Environmental Planning and Assessment Regulation 2000. Council draws your attention to section 10.7(6) which states that a council shall not incur any liability in respect of any advice provided in good faith pursuant to sub-section (5). The absence of any reference to any matter affecting the land shall not imply that the land is not affected by any matter not referred to in this certificate. Interested persons should make their own enquiries as to whether any development consent mentioned in this certificate has lapsed.

Additional Advice
(Issued under section 10.7(5) of the Environmental Planning and Assessment Act, 1979)

Information relating to current Council studies and planning proposals	Further information about current Council Studies and Planning Proposals can be found at: https://www.yassvalley.nsw.gov.au/our-services/planning-and-building/lep-amendments/ https://www.yassvalley.nsw.gov.au/our-services/planning-and-building/controls-policies-and-strategies/
Any other risk	Information provided by the Office of Environment and Heritage has identified a high likelihood of threatened fauna on the site. For more information please contact the Office of Environment and Heritage – www.environment.nsw.gov.au
Information relating to tree removal	Clause 5.9 of the Yass Valley LEP 2013 outlines the requirements for the removal of trees and/or vegetation. Further information about tree removal under the Native Vegetation Act 2003 can be found at http://www.environment.nsw.gov.au/vegetation/selfassess.htm
Information relating to major projects	Details relating to NSW Major Projects on exhibition or determined within the Yass Valley LGA can be viewed at www.majorprojects.planning.nsw.gov.au
Information relating to Council services and assets	Yass Valley Council policies may apply to this site, they can be viewed at www.yassvalley.nsw.gov.au
Information relating to Development Consents & Building Applications	Can be obtained by lodging an 'Informal Request to View a Property File'. Relevant documents (if in Council records) will be scanned and accessible on Council's online portal. https://myportal.yass.nsw.gov.au/download/258389/dccbd5e4a9ae48c4a4a1d2d41302a11e

Note:	Council draws your attention to section 10.7(6) which states that a council shall not incur any liability in respect of any advice provided in good faith pursuant to sub-section (5). The absence of any reference to any matter affecting the land shall not imply that the land is not affected by any matter not referred to in this certificate. Interested persons should make their own enquiries as to whether any development consent mentioned in this certificate has lapsed.

Judith Field
Customer Services Officer

26 July 2019

SCHEDULE A

The following State Environmental Planning Policies (SEPPs) apply to the Yass Valley Local Government Area. These policies can be viewed online at www.legislation.nsw.gov.au

Title	Abstract
SEPP No. 21 **Caravan Parks**	This policy provides for the development of land for a caravan park catering for short-term residents (such as tourists) or for long-term residents.
SEPP No. 30 **Intensive Agriculture**	This policy relates to cattle feedlots and piggeries, outlining matters for consideration within the development assessment.
SEPP No. 33 **Hazardous and Offensive Development**	This policy relates to hazardous and offensive development, outlining matters for consideration in a development assessment, and that any measures proposed to be employed to reduce the impact of the development are taken into account
SEPP No. 36 **Manufactured Home Estates**	This policy helps establish well-designed and properly serviced manufactured home estates (MHEs) in suitable locations.
SEPP No. 44 **Koala Habitat Protection**	This policy encourages the conservation and management of areas of natural vegetation that provide habitat for koalas.
SEPP No. 55 **Remediation of Land**	This policy promotes the remediation of contaminated land, specifying considerations for rezoning land and determining development applications. It also requires that remediation work meet certain standards and notification requirements
SEPP No. 64 **Advertising and Signage**	This policy encourages signage which is compatible with the desired amenity and visual character of an area, and provides effective communication in suitable locations. This policy does not regulate the content of signage.
SEPP No. 65 **Design Quality of Residential Flat Development**	This policy aims to improve the design quality of residential flat development to achieve better built form and aesthetics of buildings and streetscapes. It also aims to maximise amenity, safety and security and minimise consumption of energy.
SEPP **(Affordable Rental Housing) 2009**	This policy encourages a balanced approach between obligations for retaining and mitigating the loss of existing affordable rental housing, and incentives for the development of new affordable rental housing.
SEPP **(Building Sustainability Index: BASIX) 2004**	This policy ensures state-wide consistency in the implementation of the BASIX scheme to encourage sustainable residential development.

SEPP **Educational Establishments and Child Care Facilities 2017**	This policy sets out design requirements and planning approval pathways for child care centres, school, universities and TAFE establishments.
SEPP **(Exempt and Complying Development Codes) 2008**	This policy provides exempt and complying development codes that have State-wide application. It specifies types of development that are of minimal environmental impact that may either be carried out without the need for development consent, or may be carried out in accordance with a complying development certificate as defined in the Act.
SEPP **(Housing for Seniors or People with a Disability) 2004**	This policy aims to increase the supply, quality and diversity of residences to meet the needs of seniors or people with a disability.
SEPP **(Infrastructure) 2007**	This policy provides a consistent planning regime for infrastructure and the provision of services across NSW, along with providing for consultation with relevant public authorities during the assessment process. It supports greater flexibility in the location of infrastructure and service facilities along with improved regulatory certainty and efficiency.
SEPP **(Mining, Petroleum Production and Extractive Industries) 2007**	This policy aims to provide for the proper management and development of mineral, petroleum and extractive material resources for the social and economic welfare of the State. The policy establishes appropriate planning controls to encourage ecologically sustainable development.
SEPP **(Miscellaneous Consent Provisions) 2007**	This policy is to ensure that suitable provisions are made for ensuring the safety of persons using temporary structures, and to encourage the protection of the environment at the location, by managing noise, parking and traffic impacts and ensuring heritage protection.
SEPP **(Rural Lands) 2008**	This policy provides a consistent approach to rural planning across NSW. It provides rural planning principles and matters for consideration in approving rural subdivisions and dwellings.
SEPP **(State and Regional Development) 2011**	This policy identifies development that is State significant development, State significant infrastructure and critical State significant infrastructure. The Department of Planning and Infrastructure - through Joint Regional Planning Panels, is predominantly responsible for assessing these projects whose size, complexity, importance or potential impacts mean they are of State, rather than Local or Regional significance.
SEPP **Vegetation in Non-Rural Areas 2017**	This policy seeks to protect the amenity and biodiversity values of trees in urban areas of the State.

SCHEDULE B

The following draft State Environmental Planning Policies which relate to the Yass Valley Local Government Area and which have been exhibited by the NSW Department of Planning and Environment between 1 September 2010 to date:

Title	Abstract
SEPP Primary Production and Rural Development (EIE exhibited 2017)	This policy is intended to consolidate and replace five existing SEPP's including the Rural Lands SEPP 2008 and Intensive agriculture SEPP No 30

Appendix C.
Correspondence

02 6161 1762

contact@murrang.com.au

www.murrang.com.au
ABN 96 162 928 958

Gmail by Google

Julia Jasonsmith <julia.jasonsmith@murrang.com.au>

UPSS - Murrumbateman

1 message

Alec Palmer <alec.palmer@crjo.nsw.gov.au> Tue, Aug 13, 2019 at 4:35 PM
To: "julia.jasonsmith@murrang.com.au" <julia.jasonsmith@murrang.com.au>
Cc: Mandy Dickens <Mandy.Dickens@yass.nsw.gov.au>

Hi Julia,

Thanks for the call earlier.

In regards to the 15000L UPSS you are dealing with in your Preliminary Site Investigation, I have followed up with the EPA and would recommend the UPSS to be decommissioned in accordance with relevant legislation (WorkCover Code of Practice: *Storage and handling of Dangerous Goods, POEO (UPSS) Regulation 2008,* UPSS Technical Note: *Decommissioning, Abandonment and Removal of UPSS, etc).* Upon decommissioning, a validation report should be provided to the ARA (Yass Valley Council) within 60 days showing the tank has been decommissioned and there is no longer a contamination risk.

The exemption we were discussing is only relevant to UPSS that are currently in use, therefore the tank will require decommissioning. If it is not practical to remove the UPSS due to potential damage to surrounding infrastructure etc., there is an option of filling it with an inert substance (such as concrete slurry). This is not the preferred option however, as it makes it difficult to determine contamination beneath the area of concern.

I have attached the UPSS Technical Note which provides more detail for you.

If you have any questions please let me know.

Regards

Alec Palmer

Contaminated Land Officer – Northern Cluster

Canberra Region Joint Organisation

PO Box 66 | QUEANBEYAN NSW 2620

M: 0439 598 247| E: alec.palmer@crjo.nsw.gov.au

Decommissioning, abandonment and removal of UPSS - Technical Note.pdf
162K

Gmail by Google

Julia Jasonsmith <julia.jasonsmith@murrang.com.au>

Murrumbateman UPSS

Alec Palmer <alec.palmer@crjo.nsw.gov.au> Fri, Aug 30, 2019 at 3:12 PM
To: "julia.jasonsmith@murrang.com.au" <julia.jasonsmith@murrang.com.au>

Hi Julia,

As discussed on the phone, the below is what I have mentioned to Maggie previously.

"As discussed, without receiving any formal reports, operating plans or diagrams pertaining to the system I cannot give a firm answer. I have received very mixed responses in regards to the ongoing use of this system from different people. However, if the intention is to continue using the system – ensure you refer to the regulation which comes into effect as of September 1, 2019. It would be worth reading over the requirement for leak detection systems and loss monitoring procedures to ensure compliance. There are also a number of other parts of legislation/standards that should be considered. I have listed some of those below:

- Work Health and Safety Regulation 2017 – Subdivision 4 storage and handling systems
- Storage and Handling of Dangerous Goods – Code of Practice
- AS4897-2008 The design, installation and operation of UPSS.

Please also note that i do not have authority to approve or decline DA's and this will need to go through the appropriate application pathway"

Since our phone call I have spoken to Maggie again, she seems to understand the legislation requirements requiring decommissioning or re-commissioning. I haven't said a firm yes or no to the continued use of the system, just suggested that they look into the compliance of the system in accordance with the regulation if they wish to continue using it. Again, council will have the final decision regarding the DA.

If you need any more information please let me know.

regards

Alec Palmer

Contaminated Land Officer – Northern Cluster

Canberra Region Joint Organisation

PO Box 66 | QUEANBEYAN NSW 2620

M: 0439 598 247| E: alec.palmer@crjo.nsw.gov.au


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Appendix D.
Peer review

02 6161 1762

contact@murrang.com.au

www.murrang.com.au
ABN 96 162 928 958

Gmail by Google

Julia Jasonsmith <julia.jasonsmith@murrang.com.au>

Reviewed PSI Report

2 messages

Chris Gunton <Chris.Gunton@lanterra.com.au> Tue, Aug 20, 2019 at 12:02 PM
To: Julia Jasonsmith <julia.jasonsmith@murrang.com.au>

Hi Jules,

I'll send a link to the PSI report for Murrumbateman with a couple of comments. Nice job on the report, it was pretty solid. The main comment centres around the wording of the UPSS and being clear that it is an area of environmental concern and that because it is a redundant system, the tank should be removed unless there is a limiting factor (e.g. removal would compromise the structural integrity of the building). I refer to policy in the comment, there isn't a specific policy that relates to this (sorry loose wording) but some guidance documents that specify the removal of decommissioned tanks are:

Guideline for Implementing the POEO (UPSS) Regulation 2008 – (See Section 6)

UPSS Technical Note, Decommissioning, Abandonment and Removal of UPSS (2010).

You also have the email from the Yass Valley Council which is pretty clear. The Guideline for Implementing the POEO (UPSS) Regulation also defines what a decommissioned system is – that is a system that has not been used or filled in 2 years, so my understanding is that the UPSS on the site is 'decommissioned'.

I'm formalising the comments in a letter which can be attached with your report. I'll have this over to you tomorrow if that is ok.

Let me know if you have any questions.

Cheers

Chris

Chris Gunton | Principal Environmental Scientist | BSc (Hons), PhD | CEnvP (SC Specialist)

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:) Super thanks a lot Chris, I appreciate it!
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