SESL AUSTRALIA
Environment & Soil Sciences

Tier 1 Preliminary Site Investigation

133 Marys Mount Road, Goulburn NSW 2580

(Lot 28 DP 479)

Prepared for:

Spacelab Studio for

Cappello Development No. 10

May 2018

(Report: J0891 Goulburn PSI 1.0.doc)

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ABBREVIATIONS

ABC	Ambient Background Concentration
ACL	Added contaminants limit
ACM	Asbestos-containing material
AEC	Areas of Environmental Concern
AF	Asbestos Fines
AHD	Australian Height Datum
ANZECC	Australian and New Zealand Environment and Conservation Council
APHA	American Public Health Association
ASC	Assessment of Site Contamination
ASS	Acid Sulfate Soils
ASTM	ASTM International (previously American Society for Testing and Materials)
BaP	Benzo(a)pyrene
BTEX	Benzene, Toluene, Ethylbenzene and Xylenes
BTEXN	Benzene, Toluene, Ethylbenzene, Xylenes and Naphthalene
CEC	Cation Exchange Capacity
CLM	Contaminated Land Management Act
CPAHs	Carcinogenic Polycyclic Aromatic Hydrocarbons
CRC CARE	Cooperative Research Centre for Contamination Assessment and Remediation or the Environment
CSM	Conceptual Site Model
DBYD	Dial-Before-You-Dig
DEC	Department of Environment and Conservation NSW
DECC	Department of Environment and Climate Change NSW
DECCW	Department of Environment, Climate Change and Water NSW
DLWC	Department of Land and Water Conservation
DP	Deposited Plan
DQO	Data Quality Objectives
DQI	Data Quality Indicator
DSI	Detailed Site Investigation
EILs	Ecological Investigation Levels.
EPA	NSW Environmental Protection Authority
EPL	Environmental Protection License
ESLs	Ecological Screening Levels
FA	Fibrous Asbestos
GILs	Groundwater Investigation Levels
HILs	Health Investigation Levels
HSLs	Health Screening Levels
LEP	Local Environment Plan
LGA	Local Government Area
mAHD	Metres Australian Height Datum (above mean sea level)
NATA	The National Association of Testing Authorities
NEHF	National Environment and Health Forum
	National Environment Protection Council
NEPM	National Environment Protection Measure
NHMRC	National Health Medical Research Council
NSW	New South Wales
OCP	Organochlorine Pesticides
OEH	Office of Environment and Heritage NSW
OPP	Organophosphate Pesticides
PAH	Polycyclic Aromatic Hydrocarbons
PCB	Polychlorinated Biphenyl
PCoC	Potential Contaminants of Concern
PFAS	Perfluoroalkyl and polyfluroalkyl substances
POEO	Protection of Environment Operations
PSI	Preliminary Site Investigation
PVC	Polyvinyl Chloride
QA	Quality Assurance
QC	Quality Control
RAP	Remedial Action Plan
RPD	Relative Percent Difference
RSL	Regional Screening Levels
SAC	Soil Assessment Criteria
SESL	SESL Australia Pty Limited
SMP	Site Management Plan
SVR	Site Validation Report
TEQ	Toxic Equivalence Quotient
TPH	Total Petroleum Hydrocarbons
TRH	Total Recoverable Hydrocarbon
UCL	Upper Confidence Limit
UPSS	Underground Petroleum Storage System
USCS	Unified Soil Classification System
USEPA	United States Environmental Protection Authority

1 EXECUTIVE SUMMARY

SESL Australia Pty Ltd (SESL) was engaged by SpaceLab Studio on behalf of Cappello Development No. 10 (the Client) to conduct a Tier 1 Preliminary Site Investigation (PSI) for the property located at 133 Marys Mount Road, Goulburn NSW 2580 (the site – see Appendix A: Figure 2). The site encompasses Lot 28 DP 479. This investigation was required as part of the development application for the proposed subdivision development for a proposed low-density residential development.

The objective of this Tier 1 PSI is to identify areas with potential contamination concern, based on its current and former land use, and determine the site's suitability for the proposed subdivision and low-density residential development.

This Tier 1 PSI was conducted and prepared in April / May 2018, based on a desktop review of available information, a search of historical records, a review of EPA licensed documents, and site inspection conducted on 20th April 2018.

Based on the findings of the report, the following areas of environmental concern (AEC) and its associated contamination risk were identified as shown in Table 1. SESL notes only AEC 1 – 3 are located within the proposed development area within the subdivision area (see Appendix A: Figure 2), with no proposed work impacted by the the remaining AECs. All AECs has been classified as low contamination risk.

Table 1 – Summary of AECs and its associated contamination risk

AEC	Contamination Risk
AEC 1: Potential contamination from fertiliser or pesticide application used on former orchard. • Site observations and anecdotal information from site owner did not indicate the former orchard have been impacted by fertiliser or pesticide application. The orchard was in its peak form in the 1920s and has been declining since the 1970s according to aerial photographs. There is risk of pesticides usage during the orchard's peak time in the 1920s, however as its has been almost a century since, the risk of contamination is considered relatively low (OCPs were primarily used in Australia starting from the 1939-1950s)[1].	Low

[1] NEPC 2013, Schedule B7 – Appendix 3: Derivation of HILs of Organochlorine Pesticides (ASC NEPM 2013)

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AEC	Contamination Risk
AEC 2: Construction materials stockpiled on-site • Construction materials identified within proposed work area (metal sheet and building waste along access roads) presents an aesthetic concern to the site.	Low
AEC 3: Potential contamination from imported fill of unknown source used in cut and fill activity for the access road construction. Site observation indicates the cut and fill is likely to have occurred on-site using locally sourced materials, as advised by the resident of the cottage.	Low
AEC 4: Potential sediment and groundwater contamination from herbicide application used on dam on-site. • Site observations and information from site owners did not indicate the dam on-site has been applied with herbicides. SESL notes this is outside the proposed work area.	Low
AEC 5: Potential contamination from imported fill of unknown source used in cut and fill activity during residence and farm dam construction on-site. • Cut and fill activities are likely undertaken using site sourced materials, with materials brought in restricted to construction materials as observed on-site (concrete, bricks etc). SESL notes no works are proposed for these areas.	Low
AEC 6: Construction materials stockpiled on-site • Construction materials identified on-site present a contamination concern to the site. These materials can be removed off-site if necessary, and shall be investigated prior to off-site removal due to presence of potential asbestos containing material. However SESL notes no works are proposed for these areas.	Moderate
AEC 7: Potential contamination from leakages of on-site sewage systems • Septic sewage management systems were installed on-site. Site observation did not identify potential leakage from the systems creating concern for bacterial contamination, and appears to be well maintained, therefore considered a low risk.	Low

Based on this Tier 1 PSI, SESL considers that the site is suitable for the proposed subdivision and future low-density residential development, subject to the implementation of an unexpected finds protocol under the construction environmental management plan during pre-construction work, to manage any potential contamination that may arise during bulk excavation work.

Waste material (building waste, old vehicle and equipment) located within proposed work area posed an aesthetic concern, and shall be disposed off-site accordingly to licensed facility, and if any contamination is identified shall be managed under the unexpected finds protocol.

SESL recommends the remaining AECs outside of the proposed work area to be investigated and managed accordingly in *NSW EPA Contaminated Site Guidelines*, due to presence of potential asbestos-containing material and a variety of building waste that may pose unacceptable human-health risk to the residents.

Reference should be made to Section 12 of the report that sets out the details of the limitations of the assessment.

2 INTRODUCTION

SESL Australia Pty Ltd (SESL) was engaged by SpaceLab Studio on behalf of Cappello Development No. 10 (the Client) to conduct a Tier 1 Preliminary Site Investigation (PSI) for the property located at 133 Marys Mount Road, Goulburn NSW 2580 (the site – see Appendix A: Figure 2). The site encompasses Lot 28 DP 479. This investigation was required as part of the development application for the proposed subdivision development for a proposed low density residential development.

This PSI was prepared based on a desktop review of available information, a search of the historical records, and a site walkover conducted on 20th April 2018.

2.1 BACKGROUND

The site is currently occupied by two (2) rural residential properties, a primary homestead and a smaller cottage with its associated sheds, and rural paddocks. The site is primarily used for residential purposes, with the rural paddocks used for low-scale livestock grazing. SESL understands the site has been proposed for subdivision development for a low-density residential development of approximately 393 individual residential lots. This investigation is limited to assessing the areas included for the proposed subdivision, excluding the existing dwellings structures at the north-east portion of the site (see Appendix A: Figure 2). SESL notes the proposed work for the residential development are only located at the paddocks, with no proposed work intended for the existing dwellings, some of the farm dams and some of the current paddocks.

The PSI has been conducted by SESL to accurately assess the status of the site pertaining to potential contamination associated with former and current site uses. The scope of works for this assessment was agreed to by the client prior to the commencement of the works. This investigation has been performed in accordance with the scope of works in SESL proposal Q8336.

2.2 OBJECTIVES

The objective of this Tier 1 PSI is to identify areas with potential contamination concern, based on its current and former land use, and determine the site's suitability for the proposed subdivision and low-density residential development.

2.3 REGULATORY GUIDELINES

The investigation and preparation of this report was undertaken with reference to (but not limited to) the following regulatory guidance documents and standards:

- ANZECC and ARMCANZ (2000). Australian and New Zealand Guidelines for Fresh and Marine Water Quality (October 2000);

- ASTM (2000). Standard Practice D2488 90 Description and Identification of Soils (Visual-Manual Procedure). American Society for Testing and Materials;
- *Contaminated Land Management Act 1997*
- CRC CARE (2010). A technical guide for demonstrating monitored natural attenuation of petroleum hydrocarbons in groundwater. Technical Report no. 15. Beck, P & Mann, B. CRC for Contamination Assessment and Remediation of the Environment, Australia;
- CRC CARE (2011). Health Screening Levels for Petroleum Hydrocarbons in Soil and Groundwater;
- CRC CARE (2013) Petroleum hydrocarbon vapour intrusion assessment: Australian guidance, CRC CARE Technical Report no. 23, CRC for Contamination Assessment and Remediation of the Environment, Adelaide, Australia;
- EnHealth (2012) Environmental Health Risk Assessment: Guidelines for assessing human health risks from environmental hazards, Department of Health and Ageing and EnHealth Council, Commonwealth of Australia (2012);
- National Environmental Protection Council (NEPC) (2013). National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended April 2013);
- NHMRC & NRMMC (2011). Australian Drinking Water Guidelines Paper 6 (ADWG), National Health and Medical Research Council & Natural Resource Management Ministerial Council, Commonwealth of Australia, Canberra (October 2017);
- NSW DEC (2017) Guidelines for the NSW Site Auditor Scheme (3rd Ed.) (2017);
- NSW DEC (2007) Guidelines for the Assessment and Management of Groundwater Contamination (March 2007);
- NSW DECCW (2010) Vapour Intrusion: Technical Practice Note, September 2010;
- NSW DECCW. Guidelines for Implementing the Protection of the Environment Operations (Underground Petroleum Storage Systems) Regulation 2008;
- NSW Department of Urban Affairs and Planning (1998) Managing Land Contamination: Planning Guidelines: SEPP 55 Remediation of Land, August (1998);
- NSW EPA (1995). Sampling Design Guidelines (1995);
- NSW EPA (2005). Protection of the Environment Operations (Waste) Regulation (2005);
- NSW EPA (2014). Technical Note: Investigation of Service Station Sites, NSW EPA, April (2014);
- NSW EPA (2014). Waste Classification Guidelines (November 2014);
- NSW EPA (2015). Guidelines on the Duty to Report Contamination under the Contaminated Land Management Act 1997 (July 2015);
- NSW OEH (2011). Guidelines for Consultants Reporting on Contaminated Sites (2011). NSW Office of Environment and Heritage;
- NSW EPA (2012) Guidelines for the Assessment and Management of Sites Impacted by Hazardous Ground Gases (November 2012);
- NSW Workcover (2014) Managing Asbestos in or on Soil;

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- *Protection of Environment Operations Act 1997;*
- Standards Australia (1993) AS1726-1993. Geotechnical Site Investigations Australian Standard;
- Standards Australia (2005). Guide to the investigation and sampling of sites with potentially contaminated soil. Part 1: Non-volatile and semi-volatile compounds AS4482.1 (2005) and Part 2: Volatile substances, AS4482.2 (2005);
- USEPA (2000). Guidance for the Data Quality Objectives Process, EPAC QA/G-4 DEC/600/r-96/055, United States Environmental Protection Agency Office of Environmental Information, Washington DC; and
- Western Australia Department of Health (2009). Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia.

2.4 Scope of Works

The scope of works for this PSI included the following:

2.4.1 *Historical desktop review*

- Undertaking of a comprehensive site history review including a review of selected historical aerial photographs;
- Searches for information held by relevant state authorities in relation to contaminated land; and
- Obtaining information pertaining to the site's environmental setting including the proximity of the site to sensitive receptors and information on site geology.

2.4.2 *Site Inspection*

- Inspection of the site by SESL's qualified and experienced environmental scientist (see Table 2) and immediate surrounds to support results of the data review and to identify site characteristics that may be suggestive of land contamination; and
- Interview site owners/occupiers.

2.4.3 *Reporting*

- Summary of site history;
- Summary of field observations from detailed site inspection;
- Areas of environmental concern identified and its associated contaminants of concerns;
- Development of a preliminary Conceptual Site Model (CSM) to identify data gaps that require additional environmental information;
- Site suitability recommendations for the investigation area;
- Conclusions and recommendations to address any data gaps in the investigation and development of remedial strategies; and

- Prepare this Tier 1 PSI report in accordance with *NSW OEH (2011) Guidelines for Consultants Reporting on Contaminated Sites (2011)* for reporting contaminated sites.

2.5 PERSONNEL

SESL's Environmental Scientist conducted the works associated with this PSI. The personnel involved for this project is shown in Table 2.

Table 2 – Project Personnel

Personnel	Title	Project Task
Ryan Jacka B Env Sc, M Env Sc, MEIANZ, ASSSI, CEnvP	Senior Environmental Scientist and National Consultant Manager >11 years of contaminated land experience	• Technical peer review and authorisation
Kelly Lee BSc Env Sc (Hons), MEnvLaw, MEIANZ, ASSSI Asbestos Awareness Training #012448 White card induction #CGI0116594SEQ01	Senior Environmental Scientist >7 years of contaminated land experience	• Conduct historical data review and previous investigation reports; • Conduct site inspection and interview with stakeholders; and • Report preparation.

SESL notes that the *NSW Workcover (2014) Managing Asbestos in or on Soil* and WA DoH (2009) *Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia* states investigation and management of asbestos contamination should only be conducted by a competent person who has acquired through training, qualification or experience, the knowledge and skills to identify, investigate and assess asbestos and to develop appropriate risk management strategies, and supervised by lead consultant with appropriate asbestos credentials (minimum three continuous years of experience with asbestos soil contamination and relevant tertiary qualifications). Personnel listed fulfil this criteria, with previous in-house and external asbestos training, and more than three years experience in undertaking asbestos contaminated land project[2].

[2] It is noted that when friable asbestos is involved, or occupational hygienists is required in previous asbestos contamination projects, licensed asbestos assessors and occupational hygienists are engaged to undertake the works.

3 QUALITY ASSURANCE AND CONTROL

3.1 DATA QUALITY OBJECTIVES (DQO)

In determining the type, quantity and quality of data needed to support decisions relating to the investigation, the seven-step DQO approach has been undertaken in accordance with Schedule B2 under ASC NEPM 2013. The DQOs are presented in detail in the following sections.

3.1.1 *Step 1 - State the Problem*

The Clients intend to subdivide the existing properties into approximately 393 smaller residential blocks, for the low-density residential development project.

The assessment will determine if the investigation area poses a contamination risk based on its current and former land use, and determine its suitability for low-density residential development, including the associated further investigation or management work that may be required.

3.1.2 *Step 2 - Identify the Decision/Goal of the Study*

Refer to Section 2.2 of the report for the detailed objectives of this assessment. The goal of this assessment was to identify any potential contamination on-site, identify associated potential risk and make recommendations to determine its suitability for low-density residential development.

The decisions to be made based on the results of this assessment are as follows:

- Is potential contamination present across the site due to current and/or former site activities?
- Is there any potential fill material from unknown origin identified on-site which may be impacted by contamination?
- Is there any potential for underlying natural soil material to be impacted by contamination?
- Has the nature and extent of potential contaminants of concern (PCoCs) been sufficiently identified/delineated?
- What is the stratigraphy of the site and does it influence the distribution of the contamination (if detected)?
- Are there potential for acid sulfate soils to be present and if so what impact might they have on potential contaminant migration and remediation?
- Have the PCoCs been adequately identified/addressed?
- Do the results of desktop review indicate the requirement for further assessment on the site to ensure adequate site characterisation can be made to enable a statement on suitability to be made?
- Has a conceptual site model been developed to fully understand source, pathway and receptors and associated risks?

- What are the potential requirements for further investigation, remediation and/or management of potential contamination identified on the site in the future?
- When should decisions reviewed, and on what basis should they be made, for changes in the way contamination is assessed and managed in the future?

3.1.3 *Step 3 - Identify Information Inputs*

The inputs required to make the above decisions are as follows:

- A review of historical information, including aerial photographs and government records pertaining to the site and its surrounds.
- Interviews with site owners / occupiers and users.
- A detailed site inspection identifying signs indicating of potential contaminating activities, and to ground-truth the historical review conducted.

3.1.4 *Step 4 - Define the Study Boundaries*

The boundaries of the environmental assessment have been identified as follows:

- The area subject to the Tier 1 PSI is based on the area identified by the Client for the proposed subdivision as shown in Appendix A: Figure 2 (Lot 28 DP 479).
- The investigation area excludes areas where the existing residential structures on-site and the north-eastern paddock as shown in Appendix A: Figure 2.
- The findings of this assessment are required by 1st May 2018.

3.1.5 *Step 5 - Develop the Analytical Approach (or Decision Rule)*

The decision rules for this assessment are as follows:

- If site history review identified potentially contaminating land uses, then further assessment work to adequately characterise the risk profile for the area will be required to confirm the AECs and PCoCs identified.
- If site inspection identified signs of recent contamination, then further assessment work to characterise the contamination risk will be required to confirm the AECs and PCoCs identified and determine the management actions required to render the site suitable for the proposed development.
- If PCoCs identified have potential to cause risk to identified potential receptors and exceeds the adopted investigation and screening levels as shown in section 8, then further intrusive investigation to determine their concentration will be required. Fate and transport modelling of potential off-site migration of contaminants and associated risk to potential receptors, remediation and/or management options may be needed in order to ensure risks to receptors can be managed to an acceptable level.

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3.1.6 *Step 6: Specify the Performance or Acceptance Criteria*

The acceptable limits on decision errors to be applied for the assessment and the manner of addressing possible decision errors have been developed based on the DQIs of precision, accuracy, representativeness, comparability and completeness and are in the DQIs presented Section 3.2.

The potential for significant decision errors are to be minimised by:

- Completing a robust review assessment, including technical peer review for the assessment;
- Assessing whether the historical information used for the review are appropriate to determine the history of the site; and
- Ensuring that the criteria set for the assessment works are appropriate for the proposed use of the site.

The potential for significant decision errors are to be minimised by completing a robust QA/QC program and by completing an environmental assessment that has utilise appropriate historical and current information for the purposes of the assessment, and that the representative inspection is undertaken are employed by trained and experienced environmental scientist.

3.1.7 *Step 7: Optimise the Design for Obtaining Data*

Based on the objectives of the assessment, the design of the assessment program is based assessment on the historical information gathered for the site, to inspect site condition and ground truth the information previously obtained. Works were conducted by qualified professionals, and managed by senior, experienced staff to ensure that correct and adequate data was collected for the formation of conclusions.

3.2 Data Quality Indicators and Data Evaluation

SESL has selected the following Data Quality Indicators (DQIs) to ensure that the data obtained from the assessment are of sufficient quality to be used to draw reliable and representative conclusion in an assessment of the environmental conditions of the investigation area.

Table 3 – Data reliability assessment

DQI	Desktop Review	Field considerations	Comments
Completeness	All critical and relevant historical information reviewed (see Section 6). Information were reviewed and documented accordingly by an experienced contaminated land consultant, with technical peer review conducted.	All site area and critical locations inspected. Historical information was ground truth on-site. Site assessment conducted in accordance to SESL's SOPs. Site assessment conducted by experienced contaminated land consultant. Documentation undertaken correctly and peer reviewed.	As per ASC NEPM 2013 data considered acceptable and reliable.

DQI	Desktop Review	Field considerations	Comments
Comparability	Same and consistent review methodology conducted for all historical information. Information were reviewed and documented accordingly by an experienced contaminated land consultant, with technical peer review conducted.	Same site inspection methodologies used on each day of assessment, with consistent notes taking procedures. Site assessment conducted in accordance to SESL's SOPs. Site assessment conducted by experienced contaminated land consultant.	As per ASC NEPM 2013, data considered acceptable and reliable.
Representativeness	Desktop review conducted appropriately and complied with ASC NEPM 2013 Schedule B2. Historical information for all study areas were reviewed	Site inspection conducted appropriately and complied with ASC NEPM 2013 Schedule B2. All previous areas of environmental concerns identified in desktop review inspected, including the rest of the study area.	As per ASC NEPM 2013, data considered acceptable and reliable.
Precision	Desktop review conducted appropriately and complied with ASC NEPM 2013 Schedule B2. Historical information for all study areas were reviewed. Documentation were peer reviewed.	Site inspection conducted appropriately and complied with ASC NEPM 2013 Schedule B2. Site assessment conducted in accordance to SESL's SOPs.	As per ASC NEPM 2013, data considered acceptable and reliable.
Accuracy	Desktop review conducted appropriately and complied with ASC NEPM 2013 Schedule B2. Historical information for all study areas were reviewed. Documentation were peer reviewed.	Site inspection conducted appropriately and complied with ASC NEPM 2013 Schedule B2. Site assessment conducted in accordance to SESL's SOPs.	As per ASC NEPM 2013, data considered acceptable and reliable.
Sensitivity	Historical information was obtained from the appropriate authority, producing reliable data for the data review.	Historical information was ground truth on-site. Site assessment conducted in accordance to SESL's SOPs. Site assessment conducted by experienced contaminated land consultant.	As per ASC NEPM 2013, data considered acceptable and reliable.

In the event if any of the DQIs are not met, the following steps will be undertaken:

- Review information provided or obtained to identify the non-conformances.
- Determine the cause of the non-conformances.
- Identify the course of action required to rectify the non-conformances.
- In the event the non-conformances cannot be rectified, determine how the non-conformance will significantly affect the usefulness of the data to determine if the data will be used with discretion or marked as invalid.

4 SITE DESCRIPTION

4.1 SITE LOCATION

The site consists of one property with two primary rural residential properties located at 133 Marys Mount Road, Goulburn NSW 2580 (the site). Access to the site is currently from Marys Mount Road.

4.2 SITE IDENTIFICATION AND OWNERSHIP

The following details the portion of land subject to this PSI (Table 4).

Table 4 – Site Identification

Site Owner	Steve Hazelton SESL notes the site is currently undergoing acquisition by Cappello Development No. 10.
Site Addresses	Teneriffe, 133 Marys Mount Road, Goulburn, NSW 2580
Lot and DP Number	Lot 28 DP 479
Site Area	Approximately 61.92 ha
Proposed work area	Approximately 40 ha
Local Government Area	Goulburn Mulwaree Council
Current Zoning	R2 Low Density Residential and RU6 Transition (north western portion of the site)
Distance from CBD	Approximately 94 km north east of Canberra CBD Approximately 200 km south west of the Sydney CBD
Geographical Coordinates	34°43'15"S 149°42'56"E
Site Elevation	Approximately 683 to 647 m AHD from north to south of the site
Locality Map	Appendix A: Figure 1
Site Layout	Appendix A: Figure 2

4.3 CURRENT LAND USE AND SITE LAYOUT

The site layouts can be viewed in Appendix A: Figure 2, with a summary of site features detailed below.

The site is known is Teneriffe, which is housed by a heritage listed homestead at the northern portion of the site. Teneriffe is primarily a brick dwelling from pre 1870s, and has been restored by the current landowner. Several sheds are located surrounding the primary homestead, including a large shed attached to west of the cottage. Two sheds are located to the rear of the cottage, with foundation of former building structures evident in some areas (former stable and cistern). To the east of the main cottage, remnants of a former apricot orchard is apparent, with several scattered apricot trees still remaining on-site.

A cottage is located to the western portion of the site, with an attached secondary building and a railway carriage located to the rear of the site. SESL notes the cottage was also from the pre 1870's and has been restored and extended.

SESL observed building foundations located at the centre of the site, near the junction of the main access road. SESL was advised by the Client that the foundation was constructed by current owner for a new building, but never progressed, and no former building are located there.

Three primary farm dams are located on-site, which are located outside of the proposed work area. Two small dams and dried gully are observed in the southern portion of the site (within proposed work area).

The paddocks are used for low-scale cattle and sheep grazing. A few old vehicles are placed around the paddocks, generally near the paddock fence.

Mains supply of gas, water, telephone and electricity are connected to the site, with overhead electricity cables evident. No sewer network is connected to the site, with on-site septic system observed at both residential properties.

4.4 Surrounding Land Use

The site is located within a R2 low density residential area and RU6 transition area, and primarily surrounded by rural residential properties with agricultural paddocks of the same zoning. West of the site is zone E4 for environmental living.

SESL notes the south of the site across Marys Mount Road shows a new low density residential development.

Further south-west of the site is the local neighbourhood centre.

4.5 Proposed Future Land Use / Development

The site is intended for the development of a residential subdivision, spanning over an area of approximately 40 hectares, including approximately 22 hectares within the site to be retained for the existing residences. The development is expected to be delivered in two (2) stages, delivering approximately 393 residential blocks of approximately 700 m^2 per lot (including existing residences), and new access roads (see Appendix A: Figure 2). Three out of the five farm dams on-site will be retained, including some of the paddocks as open space rural land, with minor trees removal (within proposed work area).

5 ENVIRONMENTAL SETTING

5.1 TOPOGRAPHY AND DRAINAGE

The site is elevated approximately 647 to 683 m AHD from south to north of the site. The site is elevated above the natural land surface with on-site surface water draining towards the southern boundary of the site. General topography in the area slopes towards the south, with paddocks relatively flat.

5.2 GEOLOGY

The NSW Department of Industry, Resources and Energy indicates the site comprised of indicates the site to be within three geological units from the Calnozoic and Palaeozoic age. The units are characterised by carinozoic alluvium, gravel, sand, siltstone, sandstone, dacite, andesite, conglomerate, tuff, felsite, porphyry, claystone, limestone, shale, and quartzite (see Appendix C).

According to the *Soil Landscapes of Goulburn 1: 250 000 Sheet Report (Hird 1991),* the investigation area is within the Sooley and Monastery Hill soil landscape group (see Appendix C). The description for each soil landscape group and its associated documented soil limitations are shown in Table 5.

Table 5 – Summary of Soil Landscape Type

Soil Landscape Group	Soil Description and Limitation
Sooley	Soils: Complex soil distribution formed on complex geological landscape including texchenite intrusions, metamorphosed mudstones and limestone outcrops, with lithosols formed on crests and upper sideslopes, and prairie soils formed in the valleys. Limitations: • Moderate permeability soils • Short term erosion risk from urban development • Friable surface condition • Flood hazard
Monastery Hill	Soils: Duplex orange coloured soils with acid to alkaline reaction, no development of A2 horizons and massive to moderately structures upper B horizons on crests and side slops. Prairie soils, grey clays and alluvial soils occur on foot slopes and in drainage lines. Limitations: • Moderate permeability soils • Moderate erodibility and short term erosion risk from urban development

5.3 HYDROGEOLOGY

From a review of *Hydrogeology Map of Australia: Commonwealth of Australia*, the aquifers on site are fractured or fissured, with extensive aquifers of low to moderate productivity (see Appendix C).

5.4 Groundwater Bore Search

A search of the NSW Office of Water records identified three groundwater bores within 500 m of the site. All three bores are privately owned and used for domestic and/or stock purposes. There are 60 groundwater bores identified within 2 km of the site and the majority of these were used for domestic, stock, irrigation or recreation (see Appendix C).

The depths of groundwater bore ranged from 9.0 m to 108 m depth, with standing water level recorded at 3.5 m to 40 m below ground.

5.5 Natural Occurring Asbestos Potential

Data from the NSW EPA indicates the site is not located within natural occurring asbestos potential area, including within the 1km buffer area (see Appendix C).

5.6 Acid Sulfate Soil

Data from the Atlas of Australian Acid Sulfate Soils indicate that the site has a low (6-70%) probability of occurrence of acid sulfate soils (see Appendix C). The site soils are categorised as Class B according to the Atlas of Australian Acid Sulfate Soils.

5.7 Significant Plants, Animals and Registered Trees

The site is not located within any sensitive vegetation or wetland area.

In accordance to NSW and federal conservation status, there are 24 endangered and vulnerable wildlife species within 10 km of the site (see Appendix C).

5.8 Proximity to Local Sensitive Environments

The site is heritage listed under the Goulburn Mulwaree Local Environmental Plan 2009 (LEP), for the main residential building Teneriffe. Another residence is also heritage listed under the LEP, located 25m south-east of the site.

The site is located within the Underground Petroleum Storage System (UPSS) sensitive zones (see Appendix C).

The site is not located within bush fire prone land (see Appendix C).

No other sensitive or cultural or other environmental receptors are identified in close proximity to the site.

6 SITE HISTORY

A review of the site history was undertaken to assess the historical use of the site, and in particular to identify activities with potential to contaminate soil, groundwater and surface water at the site. The historical review included:

- Current and historical aerial photographs;
- Planning certificates section 10.7 (2 and 5);
- EPA Contaminated Lands Register;
- Current and former EPA Licences;
- Heritage listed items; and
- Interview with site owners.

6.1 HISTORICAL AERIAL PHOTOGRAPHS

Aerial photographs taken in 1953, 1967, 1975, 1987, 1997, 2006, 2012, 2014 and 2017 were obtained from the Department of Finance, Services and Innovation and Google, were reviewed to assess the history of the development of the site (see Appendix C). It is noted photographs from 1953, 1967, 1975 and 1987 are of black and white and are of lower resolution. Aerial photograph review observed the following:

1953 The site appears to be rural paddocks with the main house located to the north of the site, two smaller buildings to the rear of the house (one is the former stable, and one is the current shed), and a significant orchard located east of the house, at the north-east portion of the site.

A smaller building structure (cottage) is observed to the west of the site, connected via local access roads with the main house. It is noted the main access road connects the site to the main road south of the site (Marys Mount Road), whereby the access roads run through the centre of the site showing some tree covers and a dam. A large dam can be seen west of the site, with a smaller dam located to the east of the trees cover.

Surrounding property shows agricultural paddocks.

1967 Another dam can be observed located in the centre of the orchard. South of the site near Marys Mount Road shows a local gully line.

1975 Rear of the main house shows some materials are stored on-site, potentially in preparation for new shed construction. The orchard appears to have reduced significantly compared to previous photographs.

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1987 The stable is no longer on-site, likely demolished or has collapsed. The orchard continues to have less tree cover compared to previous photographs. A large dam is located at the western border of the site.

1997 Two structures can be seen at adjacent to the cottage the western section of the site, likely the new extension to the cottage, and the railway carriage located at the rear of the cottage. The photograph also showed potential stockpiles of materials to the north-west of the main homestead, likely building materials used for the restoration of the homestead. The orchard continues to have less tree cover compared to previous photographs. The vehicles placed in certain areas in the paddock can also be observed in this photo. The main access road into the property has been altered with a junction in the centre of property, with a second access road that connects to the west of the site to the cottage.

2006 A large building is located west of the homestead, which forms the main shed on-site today. A structure can be seen on the west of the main road, likely an animal pen or stockyard which was observed on-site (see Appendix B: Photo 35). The orchard has minimal trees that are scattered across the former orchard paddock.

2012 A small shed can be seen south-west of the homestead under a tree, with more piles of building materials can be seen west of the main shed near the homestead, and some materials located north of the cottage. Some small earthwork movement is observed at the centre of the site near the junction of the access road, and along the main access road. The orchard has even less trees now, scattered across the former orchard paddock.

2014 No other significant changes can be observed within the site, with the exception of some small structures observed south-west of the homestead near the trees (likely vehicles). West of the site showed evidence of construction work.

2017 No other significant changes can be observed within the site, with the exception of increased piles of materials is seen north of the cottage, and west of the homestead. A second access road to the homestead has been constructed running around the dam facing the front of the homestead. SESL notes south of the property, earthworks are observed for the new residential development.

6.2 Site Zoning and Planning Certificates

Goulburn Mulwaree Local Environmental Plan 2009 and State Environment Planning Policies are the principle-planning instruments regulating land use and development in the area. The site is zoned as *RU2 low density residential*, with north-western portion of zoned as *RU6 Transition.*

The Section 10.7 planning certificate was obtained from Goulburn Mulwaree Council and a copy is provided in Appendix C. The following information has been noted following a review of the certificates:

- The site is not affected by the matters prescribed by Section 59 (2) of the *Contaminated Land Management Act 1997*;
- The site does not include or comprise critical habitat;
- The site is not located within a heritage conservation area;
- The site contains a heritage listed item (see Section 6.3);
- The site is not affected by the operation of Section 38 or 39 of the *Coastal Protection Act 1979*;
- The site is not subject to mine subsidence under section 15 of the *Mine Subsidence Compensation Act 1961*;
- The site is not identified to be within bushfire prone land;
- The site is not identified to be within development area that requires flood related development controls;
- The site is not identified as biodiversity certified under part 8 of the *Biodiversity Conservation Act 2016*;
- The site is not identified in the loose-fill asbestos insulation register as containing loose-fill asbestos ceiling insulation.
- Additional information from section 10.7(5) of the certificate indicates that any building on site that was constructed prior to 1980 may be subject to potential loose fill asbestos. Therefore, advice should be obtained from appropriately qualified expert to whether loose fill asbestos is present in any building on the land and the associated health risk. SESL notes the main shed west of the homestead, and extension of the cottage were constructed after 1980, and the rest were constructed before.

6.2.1 *Contaminated Land Search*

A search of the NSW EPA Contaminated Land list returned no records within the site and within 1 km buffer (see Appendix C). It should be noted that this database only relates to records held by the EPA and therefore may not represent the actual conditions of the site. Further, the findings of this search do not absolutely rule out the possibility of contamination and should not be interpreted as a warranty that there is no contamination.

The search also identified the following:

- No records of former gasworks on-site nor within 1 km buffer.
- No records in the national waste management site on-site nor within 1 km buffer.
- No records in the perfluoroalkyl and polyfluroalkyl substances (PFAS) investigation program on-site nor within 2 km buffer.

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6.2.2 *Environmental Protection Licenses Search*

A search of the NSW EPA Environment Protection Licenses (EPL) under the *Protection of the Environment Operations Act 1997* (POEO Act 1997) identified the following (see Appendix C):

- No records of current licensed activities under the *POEO Act 1997* on-site or within the 1 km buffer.
- Three records of former licensed activities under the *POEO Act 1997* on-site, for application of herbicides in waterways. SESL notes the licensed area was for the main farm dam west of the homestead.

6.3 HERITAGE ITEMS

A local heritage item is located on-site, being the homestead "Teneriffe" (see Appendix B: Photo 17 and 18).

No state heritage items are located on-site, or within 1 km buffer (refer to Appendix C). Two local heritage items (Ravensworth and Goulburn City Conservation Area) were found within the 1 km buffer of the site (see Appendix C).

6.4 INTERVIEW WITH SITE OWNERS

Informal interviews were conducted with the current site owner and resident on 20th April 2018 and with the proposed new owner on 21st April 2018 are summarised as follows:

i) Owner and resident of the homestead – Mr. Steve Hamilton
   - The property was acquired in 1987, with the cottage as the primary residence while restoration works were undertaken at the homestead for approximately 10 years.
   - Site owner advised the homestead and cottage was constructed in the 1850s. SESL notes the heritage report did not indicate the year the homestead and cottage was constructed[3].
   - The paddock was used for cattle and sheep grazing.
   - The shed adjacent to the homestead and the extension of the cottage was built by Mr. Hamilton.

[3] A conservation management strategy report prepared for the site in November 2017 indicated the house was already on-site in 1865 (Biosis, 2017).

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- The apricot orchard has deteriorated when the owner first moved in, however it was continuously worked on. The owner advised a bad weather event in the 90s destroyed majority of the orchard.
- No pesticides or fertiliser has been applied on the orchards and paddocks. The owner advised that the orchard commenced in the 1880s and was highly sucessful in the 1920s ran by Joseph Shepherd and does not believe fertiliser / pesticides was used in that period[4].
- The former stable and cistern at the rear of the homestead had collapsed before the owner moved in (see Appendix B: Photo 20). Some of the residual building waste are still stored at the rear of the homestead.
- Site has a septic on-site sewage management system (see Appendix B: Photo 29).

ii) Resident of the cottage – Miss Lauren Rankmore

- The cottage was one of the original buildings in the property, with the extension conducted on the original façade of the cottage (see Appendix B: Photo 36).
- Second building was built by the owner, attached to the original structure.
- An old railway carriage that was used to transport cattle is located at the rear of the house (see Appendix B: Photo 43).
- The resident is currently doing renovation of the cottage and the extended structure, with materials currently stored next to the cottage.
- Small scale vegetable garden is constructed by the resident.

iii) Proposed new owner and the client – Mr. Ryan Cappello of Cappello Developments No. 10

- The client advised they are in the progress of acquiring the property for the subdivsion and residential development.
- The client is not aware of any previous development on-site.
- The client advised that the buildng foundation found along the access road was not from a former building, but the construction never progressed further (see Appendix B: Photo 46 and 47).

[4] https://trove.nla.gov.au/newspaper/article/99207173

6.5 SAFEWORK NSW SEARCH

Safework NSW search for hazardous chemical storage was not conducted for this PSI, as the site has only been used for rural residential purposes with the orchard, with no prior development. SESL also did not observed any chemicals storage on-site.

6.6 PREVIOUS ENVIRONMENTAL INVESTIGATIONS

SESL is unaware of any previous environmental investigations pertaining to the contamination status of the site that may have been conducted.

6.7 INTEGRITY ASSESSMENT

The integrity of information provided in this PSI is considered reliable. The PSI followed appropriate methods of investigation with the desktop survey being consistent with field observation and anecdotal evidence presented. Details regarding the site history and present status of the site have been largely obtained from official records sourced from site owners, NSW EPA and NSW Land and Property Information Division. These documents are considered accurate and credible. All information provided, as part of this report was believed to be true, accurate and representative of the past and present status of the site at the time of this investigation.

7 SITE RECONNAISSANCE

A detailed walkover was undertaken by Kelly Lee of SESL (see Table 2) to visually inspect the site condition and any areas or features of potential environmental concern on 20th April 2018. The inspection was undertaken to support the findings of the desktop review, identify site characteristics that may be suggestive of site contamination and provide an initial indication of the contamination status of site soils.

7.1 Surface Water Features – Dams / Gully

The primary surface water features on-site with the three primary farm dams and two small dams (see Appendix A: Figure 2 and Appendix B: Photo 8-9, 30-31 and 50). The two small dams are located within the proposed work area. A dried gully is located at the south of the site (see Appendix B: Photo 10).

A stormwater outlet is located south of the site (see (Appendix B: Photo 11).

7.2 Chemical Use and Storage

Site owner advised no fertiliser nor pesticides have been used on the paddocks on-site, including the orchard. Site owner advised no chemicals was ever used on the orchard since its inception in 1880s.

Historical searches indicate an old license may have been issued to the site for herbicide application on the dam adjacent to the homestead (see Appendix C).

No chemical storage issues were observed during the site inspection.

7.3 Waste Water and Sewage Treatment

A review of DBYD diagrams and site inspection indicates no sewer network is connected to the site, with on-site sewage management installed in each property (see Appendix B: Photo 29 and 44).

SESL anticipate the new sewer network will be installed on-site for the proposed residential development.

7.4 Equipment / Machinery

SESL notes some old equipment is placed around vicinity of the homestead and the cottage (see Appendix B: Photo 22-23 and 42). The machinery near the homestead does not appear to be used, whilst the ones around the cottage appears to be functioning. Some old vehicles are also placed around the paddocks and near the residences (see Appendix B: Photo 22-24 and 37).

7.5 Buried Services

DBYD diagrams were obtained for the investigation area, identifying buried gas pipes, communication services line and electricity cables. Site inspection identified overhead electricity cables (see Appendix B: Photo 22). SESL notes DBYD does not indicate buried mains water services.

7.6 Vegetation Stress

The site is primarily covered in dryland grassing across all paddocks, with natural tree covers. Some residual apricot trees are located in the former orchard (see Appendix B: Photo 1-6). Some large mature trees are located near the homestead, and the dam near the access road junction. No vegetation stress was observed, other than the apricot trees that has been declining steadily since the 70s.

A small vegetable garden patch was observed at the front of the cottage, constructed and managed by the residents.

Paddock area near the stormwater outlet south of the site shows more vigorous grass growth than the rest of the paddocks (see Appendix B: Photo 11).

SESL notes the proposed subdivision is primarily located in the paddocks and former orchard and will not impact on other trees.

7.7 Hazardous Building Materials

SESL identified potential asbestos-containing material at the rear of the homestead, within piles of building material adjacent to the homestead and the cottage (see Appendix B: Photo 32-33 and 41). No hazardous building materials were observed within the building infrastructures on-site. SESL notes the residences and areas where the building spoil are stored are outside the scope of the investigation area.

No asbestos-containing material were observed at the proposed subdivision area.

7.8 Cut and Fill

Cut and fill activities are likely to have occurred on-site, during the development of the residential buildings in the 1850s and the construction of the local dam network. However, SESL anticipate the cut and fill activity involved locally sourced materials.

SESL observed small stockpiles of spoil were located within the stockpiles of building materials at the rear and adjacent to the homestead, as well as adjacent to the cottage (see Appendix B: Photo 25, 26, 37 and 40).

The resident from the cottage advised small scale of earthwork are being undertaken by the resident within the paddock to be used near the cottage. SESL notes the access road towards the cottage showed some erosion and is likely to have been filled with site sourced materials (see Appendix B: Photo 45).

SESL notes the area near the access road junction with a building footprint also showed ground disturbance (see Appendix B: Photo 48). The client advised these were groundwork to commence a new building construction was never continued. SESL notes this lies just outside of the proposed subdivision area.

Small patches of ground disturbance were observed near the access roads (see Appendix B: Photo 7), likely during installation of light poles along the access road (see Appendix B: Photo 34). No other signs of earthwork or potential cut and fill activity were observed within the paddock proposed for subdivision. The paddocks generally conform to natural landform on-site.

7.9 Waste Management

Waste collection services are available for the properties managed by Goulburn Mulwaree Council. SESL also observed a number of construction and building waste in the following areas:

i) Homestead

- A number of stockpiles of construction and building waste were stored at the rear of the homestead and adjacent to the homestead. The stockpiles consist of bricks, concrete, metal, logs, sandstones, rocks, and spoil (see Appendix B: Photo 24-28). SESL observed potential asbestos-containing fragments within the piles of building materials Appendix B: Photo 32-33).
- Remnants of a former cistern and stable can be observed at the rear of the homestead, with residual building materials such as brick, metals and logs (see Appendix B: 20-21).
- The shed contains a number of different waste materials including bricks, tyres, metals and logs (see Appendix B: Photo 19).
- SESL notes the above observations are not located within the proposed work areas.

ii) Cottage

- A number of stockpiles of construction and building waste were stored adjacent to the homestead. The stockpiles consist of bricks, concrete, metal, logs, sandstones, rocks, and spoil (see Appendix B: Photo 37-40). SESL observed potential asbestos-containing fragments within the piles of building materials (Appendix B: Photo 41).
- A small area within the building materials showed burnt materials (ashes), potentially used as a

fire pit (see Appendix B: Photo 39).

- An old railway carriage used to transport cattle was located at the rear of the cottage, that is used to store a variety of waste materials (see Appendix B: Photo 43).
- SESL notes the above observations are not located within the proposed work areas.

iii) Access roads

- SESL notes small piles of construction materials are stored at the start of the access road near Mary Mounts Road, consisting of bricks, concretes, sandstones and wood pallets (see Appendix B: Photo 12-13).

iv) Paddocks

- SESL notes several corrugated metal sheeting were observed in some paddocks, likely blown from the piles of metal sheets from the rear of the homestead (see Appendix B: Photo 14-15).
- Some animal waste is observed in paddocks (see Appendix B: Photo 6).

7.10 Potential Contamination

Based on the historical review and site walkover conducted for the site, the potential contamination identified for the proposed work area and the rest of the properties include the following:

Proposed work area

- Potential fertiliser and pesticide application on former apricot orchard.
- Stockpiles of building waste near the access roads.
- Potential fill material used on and along access roads.
- Building rubble and waste across the proposed subdivision site (aesthetic contamination).

Remaining properties

- Herbicide used on the dam on-site based on the former license.

- Potential imported fill material of unknown sources used for the construction of the residence buildings on-site. SESL notes no development work are proposed for these areas.
- Potential contamination from construction materials and spoil stockpiled on-site, including the potential asbestos-containing materials identified. SESL notes no development work are proposed for these areas.
- Potential contamination for on-site sewage management system. SESL notes no development work are proposed for these areas.
- Aesthetic contamination concern from building waste and old vehicles and equipment located across the site.

8 RELEVANT GUIDELINES FOR CONTAMINATION ASSESSMENT AND MANAGEMENT

8.1 RELEVANT GUIDELINES

Assessment criteria will be based on guidelines made or approved by the NSW EPA under Section 105 of the *Contaminated Land Management Act 1997*. These include EPA's Contaminated Sites series of guidelines, and fundamental guideline documents such as the Australian and New Zealand Guidelines for the *Assessment and Management of Contaminated Sites* (ANZECC/NHMRC 2000) and *National Environmental Protection (Assessment of Site Contamination) Measure 1999*, published by the NEPC (henceforth referred to as the NEPM).

The NEPM incorporates a recommended general process for the assessment of site contamination and a set of nine specific guidelines. The process and guidelines are closely based on previous documentation widely used for assessing site contamination (such as ANZECC/NHRMC 2000 and the various National Environmental Health Forum monographs and proceedings). Assessment criteria have been drawn from other guidelines and information sources, if not available in the above guidelines.

8.2 NATIONAL ENVIRONMENTAL PROTECTION (ASSESSMENT OF SITE CONTAMINATION) MEASURE

National Environment Protection (Assessment of Site Contamination) Measure 1999 (April 2013) (NEPC 2013, Canberra) (hereafter ASC NEPM 2013) provides a national framework for conducting assessments of contaminated sites in Australia.

The purpose of the NEPM is to establish a nationally consistent approach to the assessment of site contamination to ensure sound environmental management practices by the community which includes regulators, site assessors, environmental auditors, landowners, developers and industry.

The NEPM addresses assessment of contamination, and does not provide specific guidance on prevention of site contamination. The desired environmental outcome for the NEPM is to provide adequate protection of human health and the environment, where site contamination has occurred, through the development of an efficient and effective national approach to the assessment of site contamination.

Schedule A in the NEPM outlines the general process for assessment of site contamination, with reference to Schedules B (1) to B (9) for guidance on each step of the process. In broad terms, the assessment process as provided in Schedule A can be described as:

Tier 1 PSI — Preliminary investigation, laboratory analysis and interpretation, and assessment of results with reference to investigations levels;

Tier 1 DSI — Where required, detailed investigation, laboratory analysis and interpretation is completed, and the need for risk assessment to derive response levels and/or the need for remediation is evaluated; and

Tier 2 or 3 — Site-specific risk assessment to confirm/define appropriate health and ecological investigation levels.

Overarching guidance is provided on community consultation and risk communication, protection of health and safety during assessment of site contamination, and expected competencies of environmental auditors and related professionals.

NEPM provides a framework for the use of investigation and screening levels for the protection of human health, ecosystems, groundwater resources and aesthetics. Investigation levels and screening levels are applicable to the Tier 1 site assessment. The adopted investigation and screening levels for this assessment is as follow:

i) Health Investigation Levels (HILs);
ii) Health Screening Levels (HSLs);
iii) Ecological Investigation Levels (EILs); and
iv) Ecological Screening Levels (ESLs).

8.2.1 *Health Investigation Levels (HILs)*

HILs are scientifically based, generic assessment criteria designed to be used in the Tier 1 assessment for assessing human health risk via all relevant pathways of exposure. HILs are designed to be intentionally conservative and based on a reasonable worst-case scenario for the following generic land use settings:

A — **Residential with garden/accessible soil (home grown produce contributing less than 10% of vegetable and fruit intake; no poultry) this category includes children's day-care centres, preschools and primary schools.**

B — Residential with minimal opportunities for soil access, including dwellings with fully and permanently paved yard space such as high-rise apartments and flats.

C — Public open space such as parks, playgrounds, playing fields (e.g. ovals), secondary schools and footpaths. It does not include undeveloped public open space (such as urban bushland and reserves), which should be subject to a site-specific assessment where appropriate.

D — Commercial/industrial includes shops and offices as well as factories and industrial sites.

The investigation area is predominantly rural land used for minimal livestock grazing, with the remaining area used for rural residential purposes. Based on the proposed subdivision for a low-density rural residential area, HIL – A, for residential use with garden / accessible soil, has been adopted for this assessment. This is also the most sensitive land use criteria under ASC NEPM 2013.

NEPM Schedule B7 defined the HILs as the concentration of a contaminant above, which further appropriate investigation and evaluation will be required. It is also stated "levels in excess of the HILs do not imply unacceptability or that a significant health risk is likely to be present".

The NEPM Schedule B7 states at the very least, the maximum and the 95% UCL of the arithmetic mean contaminant as well as localised elevated values must be compared to the HILs. Two additional (secondary) criteria should also be met, namely that the standard deviation of the results must be <50% of the relevant investigation level and that no single value exceeds 250% of the relevant investigation level.

NEPM also states that the HILs are not intended to be used as clean-up levels for contaminated sites. The requirement of clean-up should be based on site-specific assessment and risk management options.

The adopted HIL is shown in Table 6.

Table 6 – Health Investigation Levels for Soil Contaminants

Chemical	HIL (mg/kg) Residential[1] A
Metals and Inorganics	
Arsenic[2]	100
Beryllium	60
Boron	4,500
Cadmium	20
Chromium (VI)	100
Cobalt	100
Copper	6,000
Lead[3]	300
Manganese	3,00
Mercury (Inorganic) [5]	40
Methyl Mercury[4]	10
Nickel	400
Selenium	200
Zinc	7,400
Cyanide	250
Polycyclic Aromatic Hydrocarbons (PAHs)	
Carcinogenic PAHs (as BaP TEQ)[6]	3
Total PAHs[7]	300
Phenols	
Phenol	3,000
Pentachlorophenol	100
Cresols	400
Organochlorine Pesticides	
DDT+DDE+DDD	240
Aldrin and Dieldrin	6
Chlordane	50
Endosulfan	270
Endrin	10
Heptachlor	6
HCB	10
Methoxychlor	300
Mirex	10
Toxaphene	20
Herbicides	
2,4,5-T	600
2,4-D	900
MCPA	600
MCPB	600
Mecoprop	600
Picloram	4,500
Other Pesticides	
Atrazine	320
Chlorpyrifos	160
Bifenthrin	600
Other Organics	
PCBs[8]	1
PBDE Flame Retardants (Br1-Br9)	1

Notes: This table is adapted from Table 2 in Schedule B7: Derivation of Health-Based Investigation Levels, *National Environment Protection (Assessment of Site Contamination) Amendment Measure 2013* (NEPC 2013).

1 HIL A: Residential with garden/accessible soil (home-grown produce <10% fruit and vegetable intake (o poultry)), also includes childcare centres, preschools and primary schools.
HIL B: Residential with minimal opportunities for soil access; includes dwellings with fully and permanently paved yard space such as high-rise buildings and apartments.
HIL C: Public open space such as parks, playgrounds, playing fields (e.g. ovals), secondary schools and footpaths. This does not include areas of undeveloped open space where the potential for exposure is lower and where a site-specific assessment may be more appropriate.
HIL D: Commercial/industrial includes premises such as shops, offices, factories and industrial sites.

2 Arsenic: HIL for arsenic assumes 70% oral bioavailability. Site-specific bioavailability may be important and should be considered where appropriate

3 Lead: HIL for lead is based on blood lead models (IEUBK for HILs A, B and C and adult lead model for HILD D) where 50% oral bioavailability has been considered. Site-specific bioavailability may be important and should be considered where appropriate

4 Methyl mercury: Assessment of methyl mercury should only occur where there is evidence of its potential source. It may be associated with inorganic mercury and anaerobic microorganism activity in aquatic environments. In addition, the reliability and quality of sampling/analysis should be considered.

5 Elemental mercury: HIL does not address elemental mercury. A site-specific assessment should be considered if elemental mercury is present, or suspected to be present.

6 Carcinogenic PAHs: HIL for carcinogenic PAHs is based on the 8 carcinogenic PAHs and their respective TEFs (potency relative to BaP) adopted by CCME 2008. The BaP TEQ is calculated by multiplying the concentration of each carcinogenic PAH in the sample by its BaP TEF, given below, and summing these products.

PAH Species	TEF	PAH Species	TEF
Benzo(a)anthracene	0.1	Benzo(g,h,i)perylene	0.01
Benzo(a)pyrene	1	Chrysene	0.01
Benzo(b+j)fluoranthene	0.1	Dibenz(a,h)anthracene	1
Benzo(k)fluoranthene	0.1	Indeno(1,2,3-c,d)pyrene	0.1

Where the BaP occurs in bitumen fragments it is relatively immobile and does not represent a significant health risk.

7 Total PAHs: HIL for total PAH is based on the sum of the 16 PAHs most commonly reported for contaminated sites (WHO 1998). The application of the total PAH HIL should consider the presence of carcinogenic PAHs and naphthalene (the most volatile PAH). Carcinogenic PAHs reported in the total PAHs should meet the BaP TEQ HIL. Naphthalene reported in the total PAHs should meet the relevant HSL.

8 PCBs: HIL for PCBs relates to non-dioxin-like PCBs only. Where a PCB source is known, or suspected, to be present at a site a site-specific assessment of exposure to all PCBs (including dioxin-like PCBs) should be undertaken.

8.2.2 *Health Screening Levels (HSLs)*

8.2.2.1 Petroleum Hydrocarbon Compounds

ASC NEPM 2013 adopts the Health Screening Levels for various petroleum hydrocarbon compounds developed by the Cooperative Research Centre for Contamination Assessment and Remediation of the Environment (CRC CARE). Friebel and Nadebaum 2011 provide the methodology for assessing human health risk via the inhalation and direct contact pathways of selected petroleum compounds and fractions.

The HSLs apply to the same land use scenarios with additional consideration of soil texture and depth to determine the appropriate soil, groundwater and soil vapour criteria.

The ASC NEPM 2013 provides HSL fractions and corresponding equivalent carbon range for petroleum hydrocarbon compounds. HSLs are given only for F1, F2 and BTEX as the heavier petroleum compounds of F3 and F4 are non-volatile and do not pose a concern for vapour intrusion. However, exposure can be via direct contact pathways (dermal contact, incidental oral ingestion and dust in halation). Friebel and Nadebaum 2011 provides the HSLs for direct contact, however for most site assessments, these levels are unlikely to trigger further investigation or site management as the values are substantially higher than most soil screening levels.

Table 7 – Health Screening Levels for Soil Contaminants

Fraction Number	Equivalent Carbon Number Range
F1	$C_6 - C_{10}$
F2	$>C_{10} - C_{16}$
F3	$>C_{16} - C_{34}$
F4	$>C_{34} - C_{40}$

As discussed earlier, HSLs for soil, groundwater and soil vapour haven been developed based on soil texture. The HSLs assume a uniform soil profile and the highest proportion of the soil texture from the soil profile should be used selecting the appropriate HSLs. For Tier 1 soil assessment, the HSL classifications of sand, silt and clay may be broadly applied to soil texture classification in Table A1 of Australian Standard 1726 as follow:

i) Coarse grained soil: >50% of particles (by weight) <63mm and >0.075mm
   - Sand: >50% of particles (by weight) <2.36mm; or
   - Gravel: >50% of particles (by weight) >2.36mm.

ii) Fine-grained soil: >50% of particles (by weight) <0.075mm
- Silts and clays (liquid limit >50%);
- Silts and clays (liquid limit <50%); or
- Highly organic soils.

8.2.2.2 Asbestos

ASC NEPM 2013 adopted the HSLs from the Western Australia Department of Health (WA DoH) *Guidelines of Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia 2009.* The HSLs are based on scenario-specific likely exposure levels, that includes bonded and friable asbestos levels (see Table 8).

Asbestos only poses human health risk when asbestos fibres are made airborne and inhaled. Bonded asbestos is not readily made airborne except through substantial physical damage. ASC NEPM 2013 states "the assessment and management of asbestos contamination should take into account the condition of the asbestos materials and the potential for damage and resulting release of asbestos fibres".

The HSLs are to be used for Tier 1 assessment, in the event of an exceedance that triggers the need for a Tier 2 site-specific assessment. Site-specific assessments of asbestos contaminated sites should be designed to describe the nature and quantity of asbestos present in the soil that can sufficiently develop a risk management plan for the current and proposed land use of the site.

Table 8 – Health Screening Levels for Asbestos Contamination in Soil

	Health Screening Level (w/w)
Form of asbestos	**Residential A[1]**
Bonded ACM	**0.01%**
Fibrous Asbestos (FA) and Asbestos Fines (AF) [5] (Friable Asbestos)	**0.001%**
All forms of asbestos	**No visible asbestos for surface soil**

Note: This table is adapted from Table 7 in Schedule B1: Health Screening Levels of Asbestos Contamination in Soil, National Environment Protection (Assessment of Site Contamination) Amendment Measure 2013 (NEPC 2013).
1 Residential A with garden/accessible soil also includes childcare centres, preschools and primary schools.
2 Residential B with minimal opportunities for soil access; includes dwellings with fully and permanently paved yard space such as high-rise buildings and apartments.
3 Recreational C includes public open space such as parks, playgrounds, playing fields (e.g. ovals), secondary schools and unpaved footpaths.
4 Commercial/industrial D includes premises such as shops, offices, factories and industrial sites.
5 The screening level of 0.001% w/w asbestos in soil for FA and AF (i.e. non-bonded/friable asbestos) only applies where the FA and AF are able to be quantified by gravimetric procedures. This screening level is not applicable to free fibres.

8.2.3 *Ecological Investigation Levels (EILs)*

Ecological Investigation Levels (EILs) have been developed for assessing risk to terrestrial ecosystem for common contaminants in soil. The EILs are derived for specified levels of species protection depending on land use and are principally applied to the top 2 m of the soil.

Table 9 – EILs Landuse Criteria and Protection Levels

Land Use	Levels of Protection
Areas of ecological significance	99%
Urban residential areas and public open space (HIL A, B and C)	80%
Commercial and industrial	60%

Schedule B5 of ASC NEPM 2013 provides the EILs for Arsenic, Copper, Trivalent Chromium, DDT, Naphthalene, Nickel, Lead and Zinc. The methodology to derive the EILs considers the physicochemical properties of soil and contaminants and the capacity of the local ecosystem to accommodate increases in contaminant levels above ambient background.

EILs are obtained by summing added ambient background concentration (ABC) and contaminant limit (ACL). ABC is the soil concentration in a specified locality that is the total of naturally occurring background level and the contaminant levels that have been introduced by general anthropogenic sources. ACL is the added concentration above the ACB of a contaminant which requires further investigation on the impact on ecological values.

The derivation of EILs takes into consideration the ageing of contamination (>2 years) and soil properties as the toxicity of soil contaminants will reduce over time. Values for ACL based on pH, CEC and exposure scenario are provided for Lead, Zinc, Copper, Nickel and Trivalent Chromium. This method of deriving EILs only applies to metals and metalloids, with the exception of Arsenic.

Methodology for Tier 2 site-specific assessments to determine site-specific EILs is provided in Schedule B5(b).

8.2.4 *Ecological Screening Levels (ESLs)*

Ecological Screening Levels (ESLs) haven been developed for selected petroleum hydrocarbon compounds to assess risk to terrestrial ecosystem. The ESLs adopts the same four fractions from the HSLs (see Table 8) however the soil texture standards are only divided into two; coarse or fine.

ESLs were adopted based on a review of Canadian guidance, a risk based TPH standards for human health and ecological aspects for various land uses in the *Canada-wide standard for petroleum hydrocarbons in soil* (CCME 2008).

In summary, the Investigation and Screening Levels adopted for this assessment is as follow:

- NEPC 2013, ASC NEPM 2013 Schedule B7, Table 1(A)1 – Health Investigation Levels for Soil Contaminants, Exposure Setting **Residential A**;
- NEPC 2013, ASC NEPM 2013 Schedule B7, Table 7 – Health Screening Levels for Asbestos Contamination in Soil, Exposure Setting **Residential A;**
- NEPC 2013, ASC NEPM 2013 Schedule B7, Table 1(A)3 – Soil Health Screening Levels for Vapour Intrusion;
- NEPC 2013, ASC NEPM 2013 Schedule B5b & B5c, Ecological Investigations Levels;
- NEPC 2013, ASC NEPM 2013 Schedule B7, Table 1(B)5 – Generic EILS for Aged As, Fresh DDT and Fresh Naphthalene in Soils; and
- NEPC 2013, ASC NEPM 2013 Schedule B7, Table 1(B)6 – ESLs for TPH Fractions F1-F4, BTEX and Benzo(a)pyrene in Soil.

8.3 The Managing Land Contamination: Planning Guidelines – Remediation of Land, NSW EPA 1997 (SEPP55 Guidelines)

The Managing Land Contamination: Planning Guidelines – Remediation of Land, NSW EPA 1997 (SEPP55 Guidelines) establishes the best practice for managing land contamination through the planning and development control process. The planning and development control process as provided for in the Environmental Planning and Assessment Act 1979 plays an important role in the management of land contamination. The integration of land contamination management into the planning and development control process will:

- Ensure that changes of land use will not increase the risk to health or the environment;
- Avoid inappropriate restrictions on land use; and
- Provide information to support decision-making and to inform the community.

The SEPP55 Guidelines include:

- Information to assist in the investigation of contamination possibilities;
- A decision making process that responds to the information obtained from an investigation;
- Information on how planning and development control can cover the issues of contamination and remediation;
- A suggested policy approach for planning authorities;

- Discussion of information management systems and notification and notation schemes, including the use of Section 149 planning certificates notations; and
- Approaches to prevent contamination and reduce the environmental impact from remediation activities.

SEPP 55 Guidelines provides consistent statewide planning and development controls for the remediation of contaminated land and ensures the following:

- Landuse changes do not occur until planning authorities consider whether the land is contaminated and whether it needs to be remediated to make it suitable for the proposed use;
- Remediation of contaminated land is permissible throughout the State;
- Remediation requires consent only where it has the potential for significant environmental impacts or does not comply with a council's policy for contaminated land;
- Most remediation proposal which require consent are advertised for public comment;
- All remediation is carried out in accordance with appropriate standards and guidelines;
- Applications for remediation are not refused without substantial justification; and
- Councils are notified at commencement and completion of remediation.

9 PRELIMINARY CONCEPTUAL SITE MODEL

A preliminary conceptual site model (CSM) was developed based on the information obtained during the investigation process to allow assessment of potential sources of impact, chemicals of concern, transport mechanism and receptors.

This section integrates source information (source location / PCoC, medium / stratum affected) with migration characteristics (pathway, migration media, and migration mechanism), and the nearest receptors, into a comprehensive description of source, pathway, and receptor relationships organised by impacted medium or stratum of the geologic framework.

9.1 Sources of Impact

In summary, the sources of impact (areas of environmental concern – AEC) identified in the proposed work area include:

- AEC 1: Potential fertiliser or pesticide application used on former orchard.
- AEC 2: Potential contamination from stockpiles of building waste located near the access roads.
- AEC 3: Potential contamination from unknown fill material used to build the access roads.

The AEC identified in the remaining areas of the site is as follow:

- AEC 4: Potential sediment and groundwater contamination from herbicide application used on the dam on-site.
- AEC 5: Potential contamination from potential Imported fill of unknown source used in cut and fill activity residence construction on-site.
- AEC 6: Potential contamination from construction and building materials stockpiled on site, including the potential asbestos-containing fragments identified.
- AEC 7: Potential contamination from leakages from on-site sewage systems.

SESL notes the waste materials including old vehicles, equipment and building waste located across the site posed an aesthetic concern.

9.2 Potential Contaminants of Concern (PCoC)

Based on the potential sources and the findings of the current investigation, the potential contaminants of concerns (PCoC) is summarised in Table 10.

Table 10 – Summary of PCoC based on its AEC

AEC	Potential Contaminants of Concerns
AEC 1	Heavy metals, organochlorine pesticides (OCP), organophosphate pesticides (OPP), phenoxy acid herbicides and nutrients.
AEC 2	Heavy metals, total recoverable hydrocarbon (TRH), benzene, toluene, ethylbenzene, xylenes, naphthalene (BTEXN), polycyclic aromatic hydrocarbon (PAHs), OCP, OPP, polychlorinated biphenyls (PCB), asbestos
AEC 3	Heavy metals, TRH, BTEXN, PAH, OCP, OPP, PCB, asbestos
AEC 4	Herbicides
AEC 5	Heavy metals, TRH, BTEXN, PAH, OCP, OPP, PCB, asbestos
AEC 6	Heavy metals, TRH, BTEXN, PAH, OCP, OPP, PCB, asbestos
AEC 7	Nutrients (nitrogen, phosphorus), and pathogen (E.coli, faecal coliforms, and salmonella)

9.3 Fate and Transport

9.3.1 *Transport Medium*

The anticipated primary transport media for the migration of contaminants of concern are:

- Migration of contaminated material through erosion and dust during construction works (if any soil is disturbed during redevelopment).
- Vertical vapour migration through impacted soils.
- Leaching of contaminants and vertical migration into groundwater through permeable soils.
- Surface runoff to local waterways.

9.3.2 *Potential Migration Pathways*

There are a number of mechanisms by which identified receptors may come into contact with contaminated sources, including the following:

- Ingestion or direct dermal contact with contaminated soil / surface water / groundwater.
- Inhalation of impacted dusts, aerosols or sediments from impacted soils.
- Inhalation of vapours from impacted groundwater.
- Potentially contaminated groundwater consumption for irrigation and/or stock watering.
- Direct contact with sensitive environment including local waterways.

9.4 Potential Surrounding Receptors

The potential receptors identified based on the PCoC are as follow:

i) Site users.
ii) Site visitors for new residential development and existing residences.
iii) Future occupants to the site.
iv) Neighbouring land users.
v) Construction workers working on-site during development stage.
vi) Underlying bedrock aquifer – groundwater is used for domestics and irrigation purposes based on bores within the 2 km radius of the site.
vii) Livestock within properties and nearby properties.

9.5 Data Gaps

This report is based on desktop review of available information and visual inspection of the site; with no intrusive sampling undertaken.

10 CONCLUSIONS

10.1 SITE CHARACTERISATION

The investigation area for this Tier 1 PSI comprised of primarily rural farmland covered in native dryland grassing with tree covers, that are used for low-scale livestock grazing with two rural residential properties located on-site. The investigation area that covers the paddocks and former orchard forms the proposed subdivision area for the proposed 393 lots of low-density residential development.

The historical review and visual inspection on-site identified the following areas of potential environmental concern within the investigation area and its associated risk:

Table 11 – Summary of AEC and associated contamination risk

AEC	Contamination Risk
AEC 1: Potential contamination from fertiliser or pesticide application used on former orchard. • Site observations and anecdotal information from site owner did not indicate the former orchard have been impacted by fertiliser or pesticide application. The orchard was in its peak form in the 1920s and has been declining since the 1970s according to aerial photographs. There is risk of pesticides usage during the orchard's peak time in the 1920s, however as it has been almost a century since, the risk of contamination is considered relatively low (OCPs were primarily used in Australia starting from the 1939-1950s)[5].	Low
AEC 2: Construction materials stockpiled on-site • Construction materials identified within proposed work area (metal sheet and building waste along access roads) present an aesthetic concern to the site.	Low
AEC 3: Potential contamination from imported fill of unknown source used in cut and fill activity for the access road construction. Site observation indicates the cut and fill is likely to have occurred on-site using locally sourced materials, as advised by the resident of the cottage.	Low
AEC 4: Potential sediment and groundwater contamination from herbicide application used on dam on-site. • Site observations and information from site owners did not indicate the dam on-site has been applied with herbicides. SESL notes this is outside the proposed work area.	Low

[5] NEPC 2013, Schedule B7 – Appendix 3: Derivation of HILs of Organochlorine Pesticides (ASC NEPM 2013)

AEC	Contamination Risk
AEC 5: Potential contamination from imported fill of unknown source used in cut and fill activity during residence construction on-site. • Cut and fill activities are likely undertaken using site sourced materials, with materials brought in restricted to construction materials as observed on-site (concrete, bricks etc). SESL notes no works are proposed for these areas.	Low
AEC 6: Construction materials stockpiled on-site • Construction materials identified on-site present a contamination concern to the site. These materials can be removed off-site if necessary, and shall be investigated prior to off-site removal due to presence of potential asbestos containing material. However SESL notes no works are proposed for these areas.	Moderate
AEC 7: Potential contamination from leakages of on-site sewage systems • Bio-septic sewage management systems were installed on-site. Site observation did not identify potential leakage from the systems creating concern for bacterial contamination, and appears to be well maintained, therefore considered a low risk.	Low

SESL notes only AEC 1 – 3 are located within the proposed development area within the subdivision area (see Appendix A: Figure 2), with no proposed work impacted by the remaining AECs. All AECs within the proposed work area has been classified as low contamination risk.

10.2 Summary

The objective of this Tier 1 PSI was to determine the site suitability's for the proposed subdivision and proposed low-density residential development, and identify areas that may require further investigation. This report has provided a summary of the historical review conducted, and findings of the site inspection conducted.

Based on this Tier 1 PSI, SESL considers that the site is suitable for the proposed subdivision and future low-density residential development, subject to the implementation of an unexpected finds protocol under the construction environmental management plan during pre-construction work, to manage any potential contamination that may arise during bulk excavation work.

Waste material (building waste, old vehicle and equipment) located within proposed work area posed an aesthetic concern, and shall be disposed off-site accordingly to licensed facility, and if any contamination is identified shall be managed under the unexpected finds protocol.

SESL recommends the remaining AECs outside of the proposed work area to be investigated and managed accordingly in *NSW EPA Contaminated Site Guidelines*, due to presence of potential asbestos-containing material and a variety of building waste that may pose unacceptable human-health risk to the residents.

11 REFERENCES

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- NSW EPA (2012) Guidelines for the Assessment and Management of Sites Impacted by Hazardous Ground Gases (November 2012)
- NSW EPA (1998) Managing Contaminated Land: Planning Guidelines SEPP 55 – Remediation of Land
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- NSW Workcover (2014) Managing Asbestos in or on Soil
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- US EPA (1996) Soil screening guidance: user's guide: Washington, D.C., U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response Publication 9355.4-23
- WA DoH (2009) Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia (2009)

12 LIMITATIONS

This report only covers the conditions at the time of investigation. Should there be any variation in the conditions beyond this date, further assessment will be required.

This report is for the use of the client and any relevant authorities that rely on the information for development applications and approval processes. Any reliance on this report by third parties shall be at such parties' sole risk. This report shall only be presented in full and may not be used to support any other objective other than those set out in the report.

SESL's assessment is necessarily based on the result of limited site investigations and upon the restricted program of visual assessment of the surface and consultation of available records. Neither SESL, nor any other reputable consultant, can provide unqualified warranties nor does SESL assume any liabilities for site conditions not observed, or accessible during the time of investigations.

No site investigations can be thorough enough to provide absolute confirmation of the presence or absence of substances, which may be considered contaminating, hazardous or polluting. Similarly, the level of testing undertaken cannot be considered to unequivocally characterise the degree or extent of contamination on site. In addition, regulatory or guideline criteria for the evaluation of environmental soil and groundwater quality are frequently being reviewed and concentrations of contaminants which are considered acceptable at present may in the future be considered to exceed acceptance criteria. Similar changes over time may prevail regarding site remediation standards as different regulatory mechanisms are developed and implemented.

n addition to the above limitations, SESL's terms and conditions apply to this and all works undertaken by SESL. A copy of SESL's current terms and conditions are provided in the following web link: http://sesl.com.au/terms-and-conditions/.

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Appendix A

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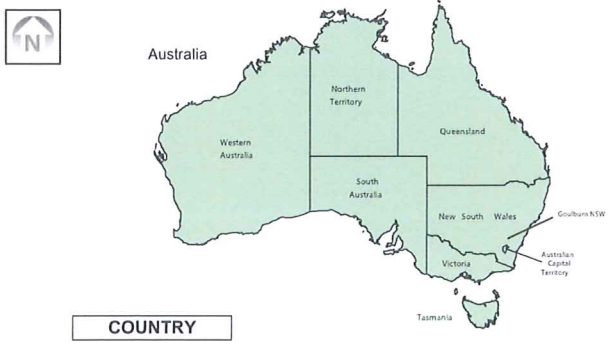

COUNTRY

REGION

Notes: Approximate location

VER	DATE	AMENDMENTS	DRW	CKD
01	30/04/2018	initial draft	KL	RJ

COMMERCIAL IN CONFIDENCE

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FIGURE 1
SITE LOCATION

Project Ref:	J0891 Goulburn PSI 1.0
Project:	Tier 1 Preliminary Site Investigation
Location:	133 Marys Mount Road, Goulburn NSW 2580
Client:	Spacelab Studio Pty Ltd for Cappello Development No. 10
GPS Coordinates: 34°43'15"S 149°42'56"E	PRINT: A3 (L)

					SESL AUSTRALIA	**FIGURE 2**	
						SITE LAYOUT AND PROPOSED SUBDIVISION AREA	
						Project Ref:	J0891 Goulburn Subdivision PSI 1.0
						Project:	Tier 1 Preliminary Site Investigation
					16 Chilvers Road, Thornleigh NSW 2120 ABN 70 106 810 708 L 1300 30 40 80 www.sesl.com.au	Location:	133 Marys Mount Road, Goulburn, NSW 2580
01	30/04/2018	initial draft	KL	RJ		Client:	Spacelab Studio Pty Ltd for Cappello Development No. 10
VER	DATE	AMENDMENTS	DRW	CKD	COMMERCIAL IN CONFIDENCE	GPS Coordinates: 34°43'15"S 149°42'56"E	PRINT: A3 (P)

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Appendix B

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Proposed subdivision area – Paddocks

Photo 1. Paddocks facing east and former apricot orchard area

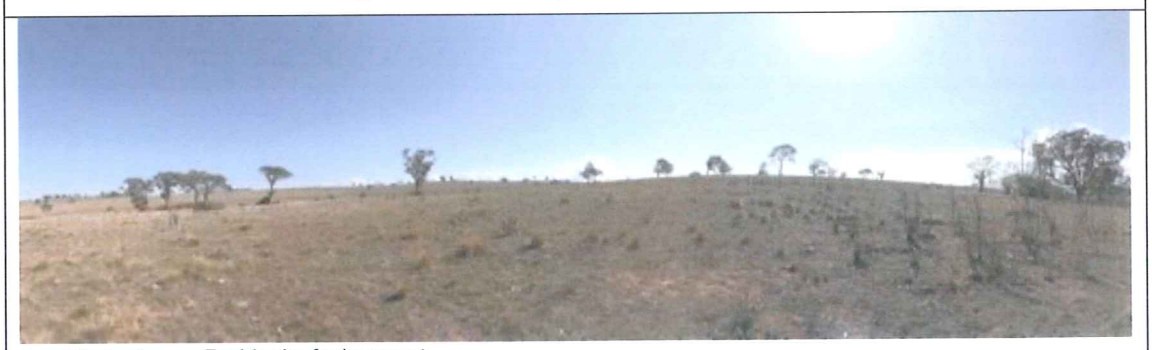

Photo 2. Paddocks facing west

Photo 3. Paddocks facing north with homestead in the background

Photo 4. Paddocks facing south and east

Photo 5. Paddocks on the western portion of the access road.

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Photo 6. Animal waste found in paddocks

Photo 7. Ground disturbance in paddocks near access road

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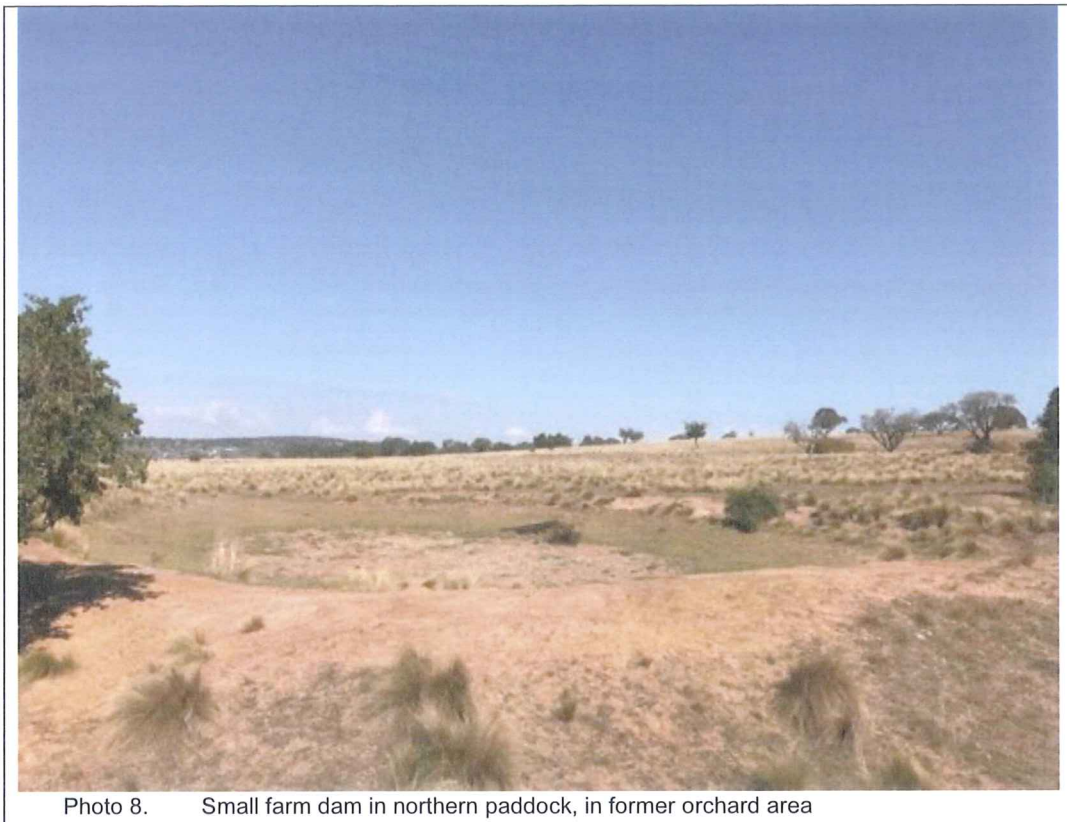

Photo 8. Small farm dam in northern paddock, in former orchard area

Photo 9. Small farm dam in centre of paddock

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Photo 10. Dried gully in paddock

Photo 11. Stormwater outlet south of the paddock, near Marys Mount Road with greener vegetation.

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Photo 12. Building waste materials along access road, near access to site via Mary Mounts Road.

Photo 13. Building waste materials along access road, near access to site via Mary Mounts Road.

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Photo 14. Metal sheeting in paddock at former orchard with homestead in the background.

Photo 15. Metal sheeting in paddock.

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Photo 16. Main access road with potential imported fill

Areas outside of proposed subdivision work – homestead area

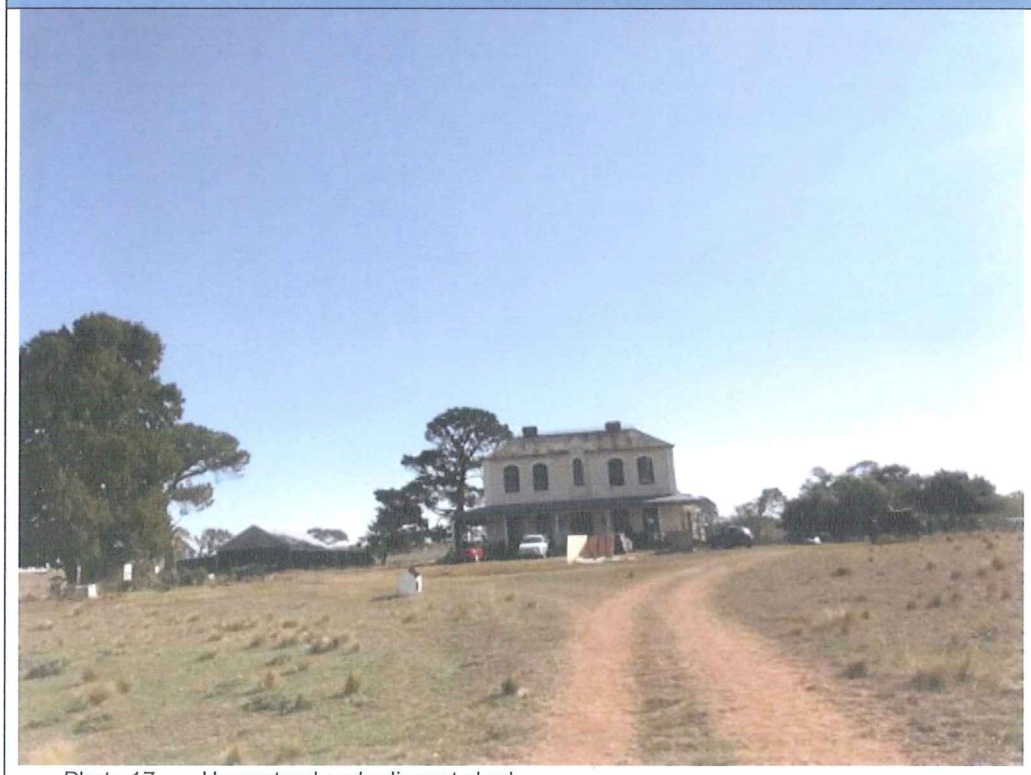

Photo 17. Homestead and adjacent shed

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Photo 18. Western portion of homestead under construction.

Photo 19. Main shed and its contents

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Photo 20. Former cistern and metal tank, with shed in the background (rear of homestead).

Photo 21. Building footprint of former stable at the rear of homestead.

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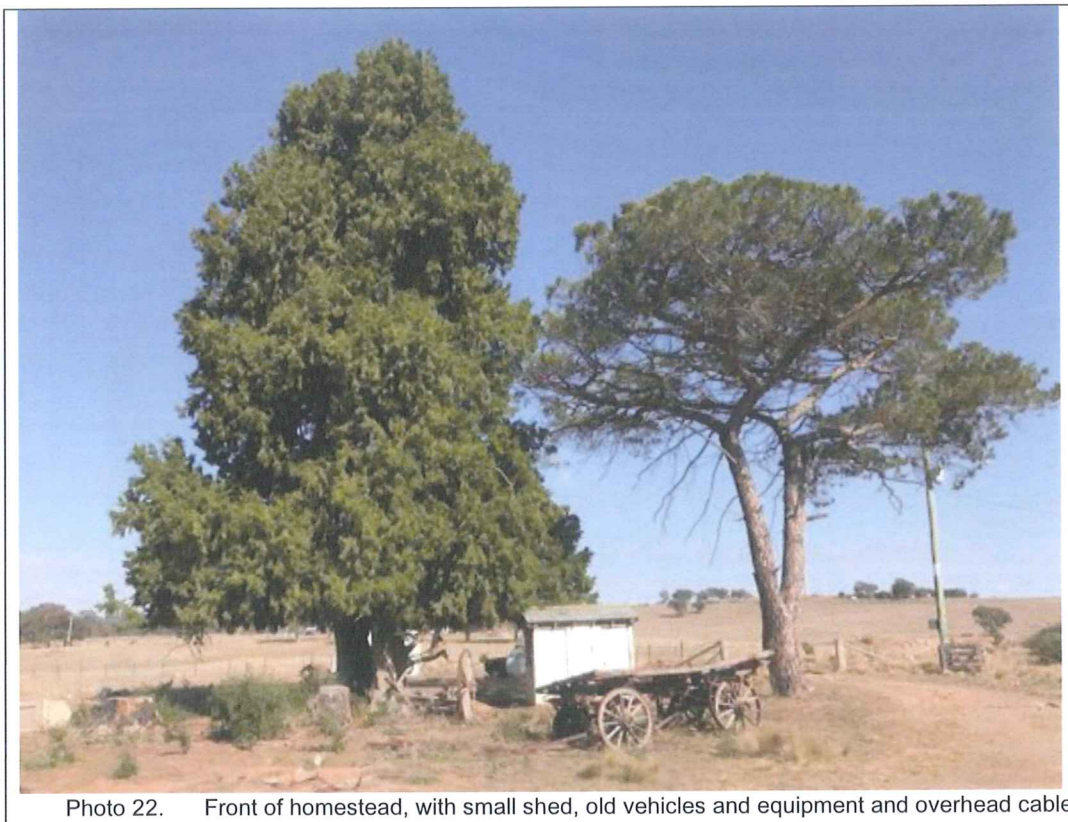

Photo 22. Front of homestead, with small shed, old vehicles and equipment and overhead cables.

Photo 23. Front of homestead, with old vehicle and equipment.

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Photo 24. Rear of homestead with trees, metal sheeting, and old vehicles.

Photo 25. Stockpile of waste at rear of homestead with cistern and shed in the background.

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Photo 26. Building waste to the west of homestead.

Photo 27. Building waste to the west of homestead.

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Photo 28. Building waste at rear of homestead.

Photo 29. Septic system at homestead.

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Photo 30. Primary dam west of homestead.

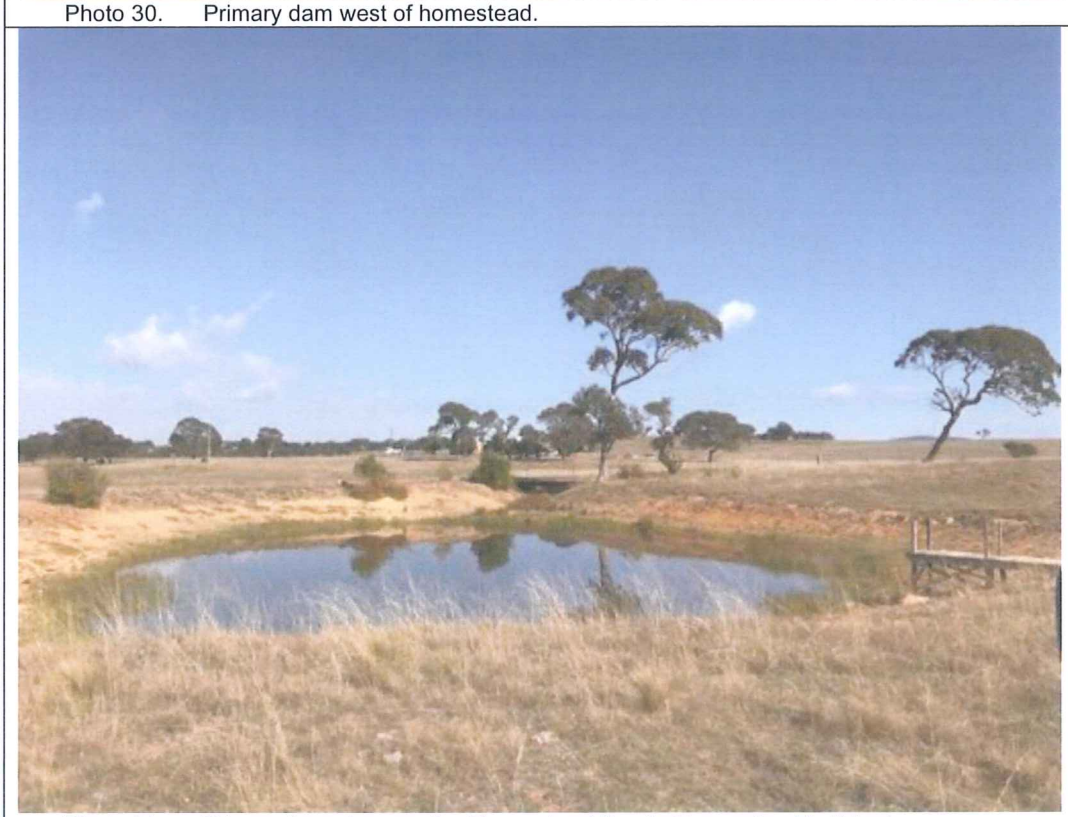

Photo 31. Primary farm dam south of homestead (front of homestead building)

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Photo 32. Potential asbestos-containing fragment identified at the rear of homestead.

Photo 33. Potential asbestos-containing fragment found within building waste west of homestead.

Photo 34. Light poles installed along access roads.

Photo 35. Metal sheet and former structure that resembles livestock pen located along access road.

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VIC Level 1, 21 Shields St, Flemington VIC 3031

Areas outside of proposed subdivision work – cottage area

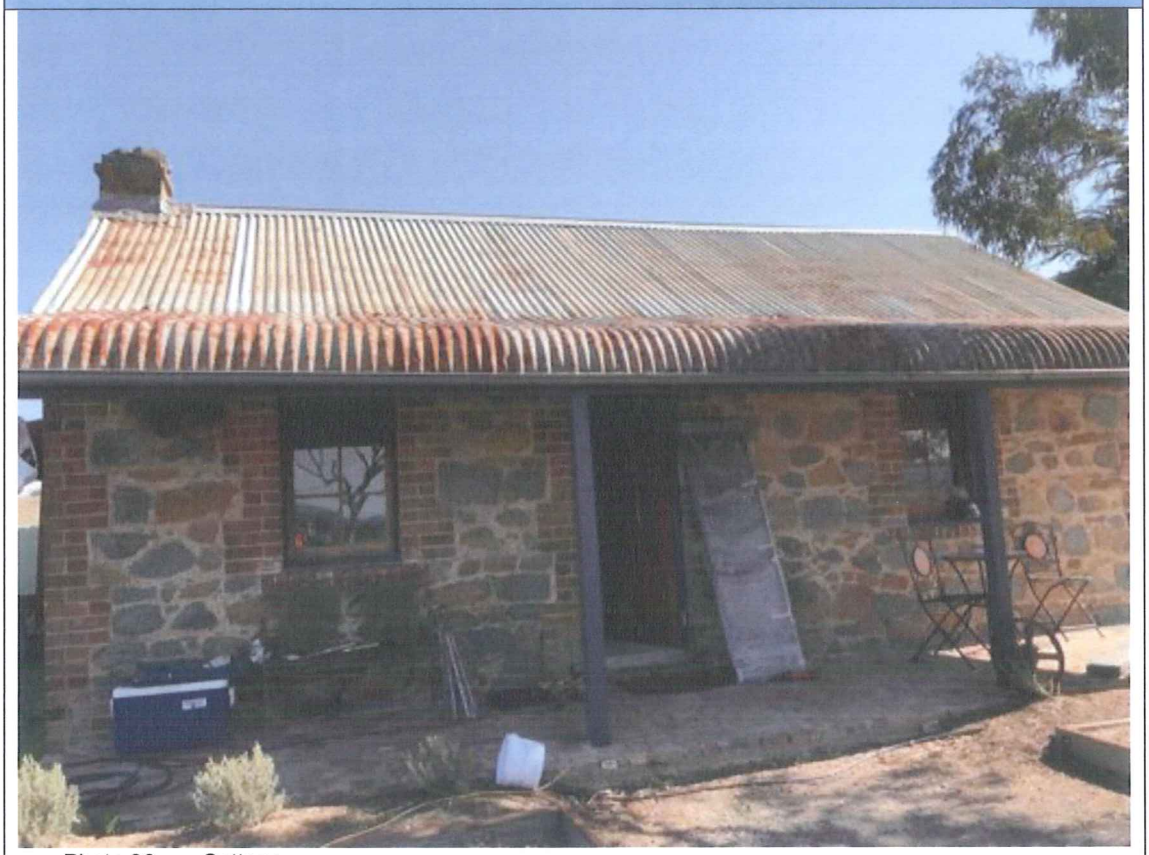

Photo 36. Cottage

Photo 37. Old vehicles adjacent to cottage and spoil.

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ACT Level 6, 10 Hobart Place Canberra ACT 2601
VIC Level 1, 21 Shields St Flemington VIC 3031

Photo 38. Construction materials adjacent to cottage

Photo 39. Construction materials and potential fire pit adjacent to cottage

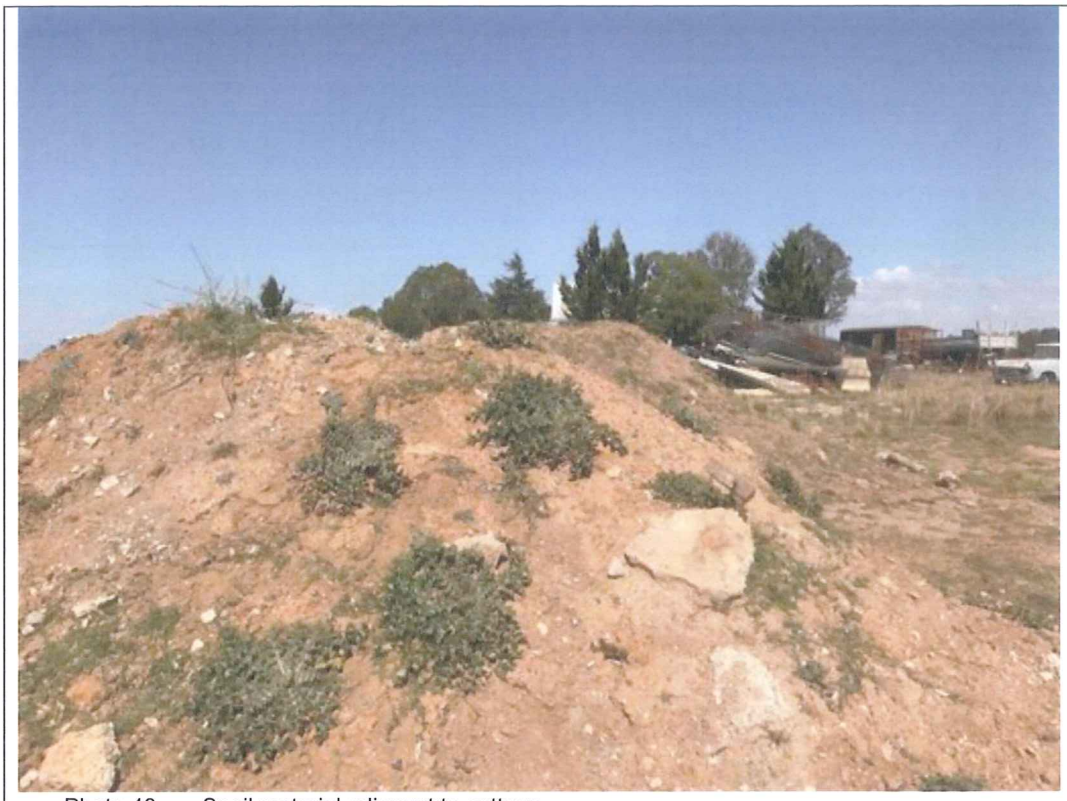

Photo 40. Spoil material adjacent to cottage.

Photo 41. Potential asbestos-containing fragment identified in spoil material adjacent to cottage.

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VIC Level 1, 21 Steeles St Kilmagton VIC 3031

Photo 42. Equipment adjacent to cottage.

Photo 43. Old railway carriage rear of cottage.

Photo 44. Septic system at cottage.

Photo 45. Access road to cottage with potential imported fill.

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VIC Level 1, 21 Shields St, Flemington VIC 3031

Photo 46. Building foundation near junction of access road.

Photo 47. Construction materials near building foundation near junction of access road.

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VIC Level 1, 21 Shields St Flemington VIC 3031

Photo 48. Disturbed ground near building foundation near junction of access road.

Photo 49. Building materials near fence and gate of paddock, likely used for vehicle or livestock crossing.

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VIC Level 1, 21 Shields St, Flemington VIC 3031

Photo 50. Dam and machine near the junction of the access road.

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Appendix C

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QLD Level 10, 15 Green Square CL, Fortitude Valley QLD 4006

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Lotsearch Reports

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VIC Level 1, 21 Shields St, Flemington VIC 3031
QLD Level 10, 15 Green Square Cl, Fortitude Valley QLD 4006

LOTSEARCH

LOTSEARCH ENVIRO PROFESSIONAL

Date: 18 Apr 2018 12:35:02

Reference: LS003215

Address: 133 Marys Mount Road, Goulburn, NSW 2580

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
1	Georeferenced to the site location / premise or part of site
2	Georeferenced with the confidence of the general/approximate area
3	Georeferenced to the road or rail
4	Georeferenced to the road intersection
5	Feature is a buffered point
6	Land adjacent to Georeferenced Site
7	Georeferenced to a network of features

Dataset Listing

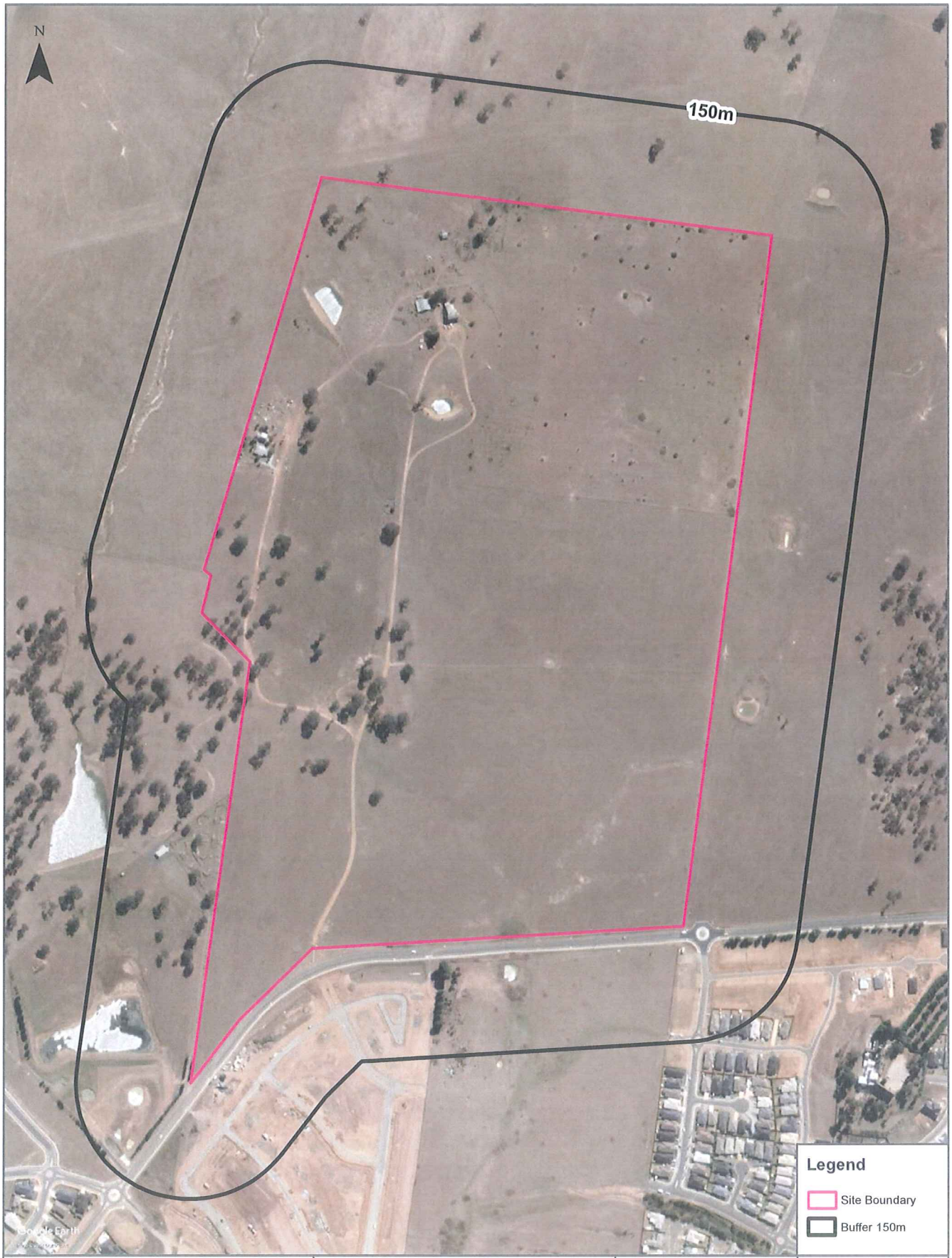
Datasets contained within this report, detailing their source and data currency:

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	Dept. Finance, Services & Innovation	18/04/2018	18/04/2018	Daily	-	-	-	-
Topographic Data	Dept. Finance, Services & Innovation	11/01/2018	11/01/2018	As required	-	-	-	-
List of NSW contaminated sites notified to EPA	Environment Protection Authority	10/04/2018	09/02/2018	Monthly	1000	0	0	0
Contaminated Land: Records of Notice	Environment Protection Authority	10/04/2018	10/04/2018	Monthly	1000	0	0	0
Former Gasworks	Environment Protection Authority	05/03/2018	12/09/2017	Monthly	1000	0	0	0
National Waste Management Site Database	Geoscience Australia	02/02/2018	07/03/2017	Quarterly	1000	0	0	0
EPA PFAS Investigation Program	Environment Protection Authority	12/04/2018	12/04/2018	Monthly	2000	0	0	0
EPA Other Sites with Contamination Issues	Environment Protection Authority	11/01/2018	11/01/2018	Quarterly	1000	0	0	0
Licensed Activities under the POEO Act 1997	Environment Protection Authority	10/04/2018	10/04/2018	Monthly	1000	0	0	0
Delicensed POEO Activities still Regulated by the EPA	Environment Protection Authority	10/04/2018	10/04/2018	Monthly	1000	0	0	0
Former POEO Licensed Activities now revoked or surrendered	Environment Protection Authority	10/04/2018	10/04/2018	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	1000	0	0	0
UBD Business Directory Drycleaners & Motor Garages/Service Stations (Road & Area Matches)	Hardie Grant			Not required	1000	-	0	0
Points of Interest	Dept. Finance, Services & Innovation	09/04/2018	09/04/2018	Annually	1000	0	0	8
Tanks (Areas)	Dept. Finance, Services & Innovation	09/04/2018	09/04/2018	Annually	1000	0	0	0
Tanks (Points)	Dept. Finance, Services & Innovation	11/01/2018	11/01/2018	Annually	1000	0	0	0
Major Easements	Dept. Finance, Services & Innovation	09/04/2018	09/04/2018	As required	1000	0	2	5
State Forest	Dept. 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	18/01/2018	30/09/2017	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

Dataset Name	Custodian	Supply Date	Currency Date	Update Frequency	Dataset Buffer (m)	No. Features Onsite	No. Features within 100m	No. Features within Buffer
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 - Office of Water / Water Administration Ministerial Corporation; Commonwealth of Australia (Bureau of Meteorology)	21/03/2016	01/12/2015	Annually	2000	0	0	60
Geological Units 1:250,000	NSW Dept. of Industry, Resources & Energy	20/08/2014		None planned	1000	3	-	4
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	2	-	2
Atlas of Australian Soils	CSIRO	19/05/2017	17/02/2011	As required	1000	2	2	2
Standard Local Environmental Plan Acid Sulfate Soils	NSW Planning and Environment	07/10/2016	07/10/2016	As required	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	0
Dryland Salinity Potential of Western Sydney	NSW Office of Environment & Heritage	12/05/2017	01/01/2002	None planned	1000	-	-	-
Mining Subsidence Districts	Dept. Finance, Services & Innovation	13/07/2017	01/07/2017	As required	1000	0	0	0
SEPP 14 - Coastal Wetlands	NSW Planning and Environment	17/12/2015	24/10/2008	Annually	1000	0	0	0
SEPP 26 - Littoral Rainforest	NSW Planning and Environment	17/12/2015	05/02/1988	Annually	1000	0	0	0
SEPP 71 - Coastal Protection	NSW Planning and Environment	17/12/2015	01/08/2003	Annually	1000	0	0	0
SEPP Major Developments 2005	NSW Planning and Environment	09/03/2013	25/05/2005	Under Review	1000	0	0	0
SEPP Strategic Land Use Areas	NSW Planning and Environment	01/08/2017	28/01/2014	Annually	1000	0	0	1
LEP - Land Zoning	NSW Planning and Environment	11/04/2018	16/03/2018	Quarterly	1000	2	3	11
LEP - Minimum Subdivision Lot Size	NSW Planning and Environment	04/04/2018	23/03/2018	Quarterly	0	2	-	-
LEP - Height of Building	NSW Planning and Environment	04/04/2018	23/03/2018	Quarterly	0	0	-	-
LEP - Floor Space Ratio	NSW Planning and Environment	04/04/2018	23/03/2018	Quarterly	0	0	-	-
LEP - Land Application	NSW Planning and Environment	04/04/2018	23/03/2018	Quarterly	0	1	-	-
LEP - Land Reservation Acquisition	NSW Planning and Environment	04/04/2018	09/03/2018	Quarterly	0	0	-	-
State Heritage Items	NSW Office of Environment & Heritage	04/04/2018	30/09/2016	Quarterly	1000	0	0	0
Local Heritage Items	NSW Planning and Environment	04/04/2018	23/03/2018	Quarterly	1000	1	2	3
Bush Fire Prone Land	NSW Rural Fire Service	05/02/2018	23/01/2018	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	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	1
Inflow Dependent Ecosystems Likelihood	Bureau of Meteorology	14/08/2017	15/05/2017	Unknown	1000	0	0	1
NSW BioNet Species Sightings	NSW Office of Environment & Heritage	17/04/2018	17/04/2018	Daily	10000	-	-	-

Aerial Imagery 2017

133 Marys Mount Road, Goulburn, NSW 2580



Contaminated Land & Waste Management Facilities

133 Marys Mount Road, Goulburn, NSW 2580

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.

Contaminated Land & Waste Management Facilities

133 Marys Mount Road, Goulburn, NSW 2580

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
© State of New South Wales through the Environment Protection Authority
Terms of use and disclaimer for Contaminated Land: Record of Notices, please visit
http://www.epa.nsw.gov.au/clm/clmdisclaimer.htm

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
© State of New South Wales through the 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
Creative Commons 3.0 © Commonwealth of Australia http://creativecommons.org/licenses/by/3.0/au/deed.en

EPA PFAS Investigation Program

133 Marys Mount Road, Goulburn, NSW 2580

EPA PFAS Investigation Program

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

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

EPA Other Sites with Contamination Issues

133 Marys Mount Road, Goulburn, NSW 2580

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

Sites within the dataset buffer:

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

EPA Other Sites with Contamination Issues: Environment Protection Authority

EPA Activities

133 Marys Mount Road, Goulburn, NSW 2580

Licensed Activities under the POEO Act 1997

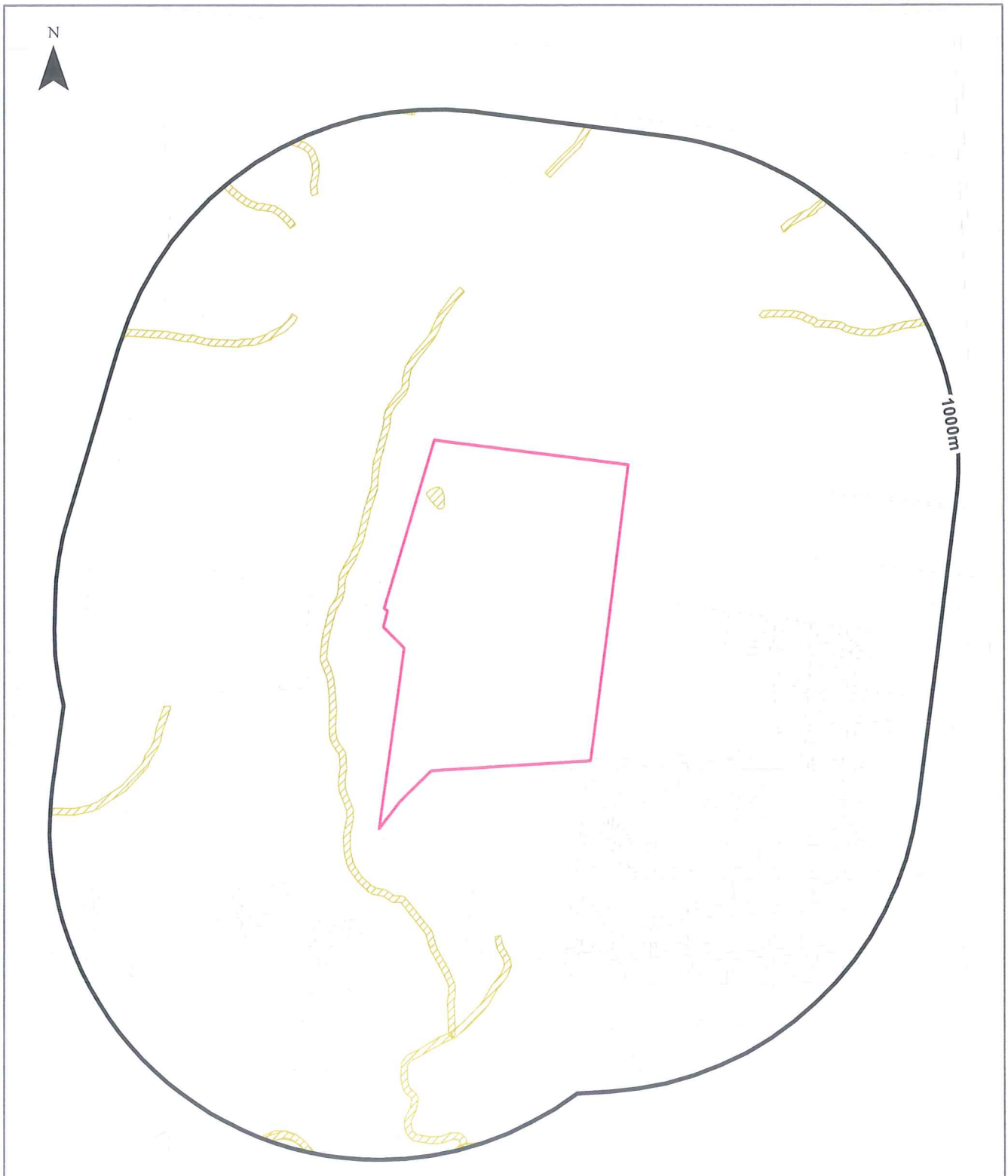
Licensed activities under the Protection of the Environment Operations Act 1997, within the dataset buffer:

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

133 Marys Mount Road, Goulburn, NSW 2580



Legend

- Site Boundary
- Report Buffer
- Property Boundary
- Delicensed Activities still Regulated by EPA
- Former Licensed/Regulated Activities (revoked or surrendered)
- Surrendered Licences related to Other Activities on Waterways incl. Application of Herbicides

Scale:	Property Boundary Data Source:	Coordinate System:	Date:
0 100 200 400 600 800 Meters	© Department Finance, Services & Innovation 2018	GDA 1994 MGA Zone 56	18 April 2018

EPA Activities

133 Marys Mount Road, Goulburn, NSW 2580

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

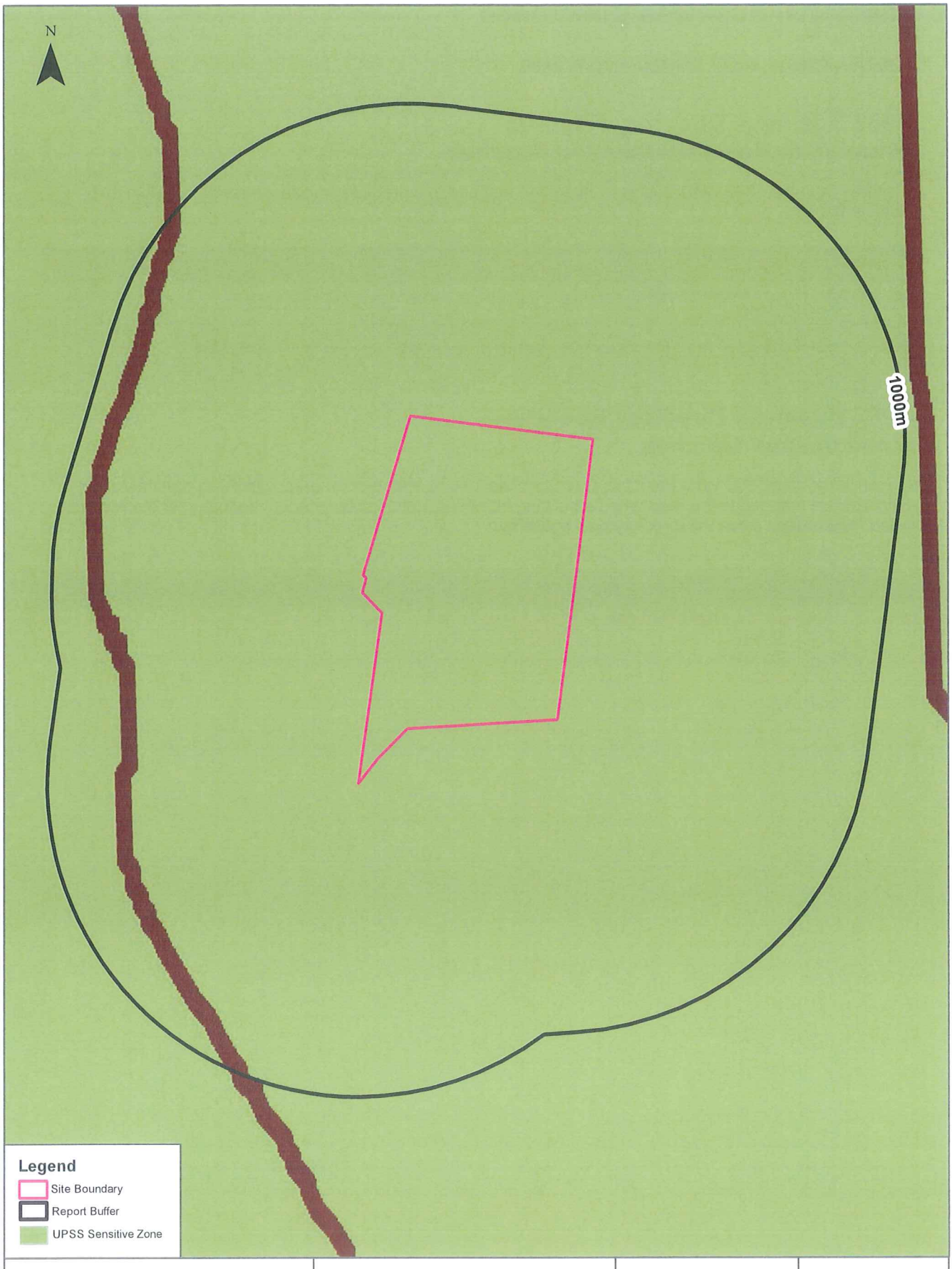
Former Licensed activities under the Protection of the Environment Operations Act 1997, now revoked or surrendered, within the dataset buffer:

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

133 Marys Mount Road, Goulburn, NSW 2580



Historical Business Directories

133 Marys Mount Road, Goulburn, NSW 2580

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:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Feature Point	Direction
N/A	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:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
N/A	No records in buffer			

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

Historical Business Directories

133 Marys Mount Road, Goulburn, NSW 2580

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:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Feature Point	Direction
N/A	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:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
N/A	No records in buffer			

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

Historical Business Directories

133 Marys Mount Road, Goulburn, NSW 2580

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:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Feature Point	Direction
N/A	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:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
N/A	No records in buffer			

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

Historical Business Directories

133 Marys Mount Road, Goulburn, NSW 2580

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:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Feature Point	Direction
N/A	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:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
N/A	No records in buffer			

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

Historical Business Directories

133 Marys Mount Road, Goulburn, NSW 2580

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:

Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Feature Point	Direction
N/A	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:

Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
N/A	No records in buffer				

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

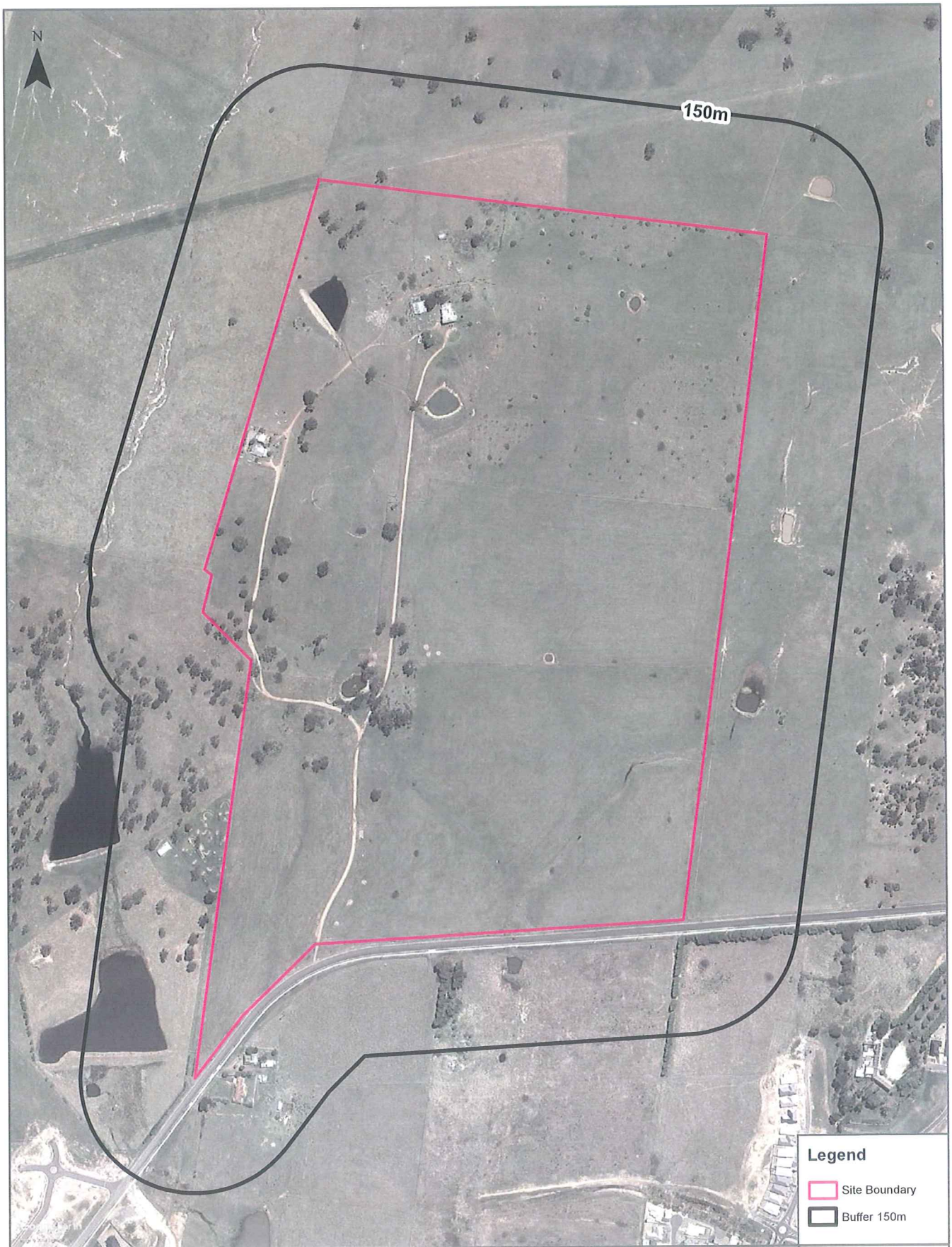
Aerial Imagery 2014

133 Marys Mount Road, Goulburn, NSW 2580

Scale: 0 50 100 200 300 Meters	Data Sources: Aerial Imagery © Department Finance, Services & Innovation	Coordinate System: GDA 1994 MGA Zone 56	Date: 18 April 2018

Aerial Imagery 2012

133 Marys Mount Road, Goulburn, NSW 2580



Aerial Imagery 2006

133 Marys Mount Road, Goulburn, NSW 2580

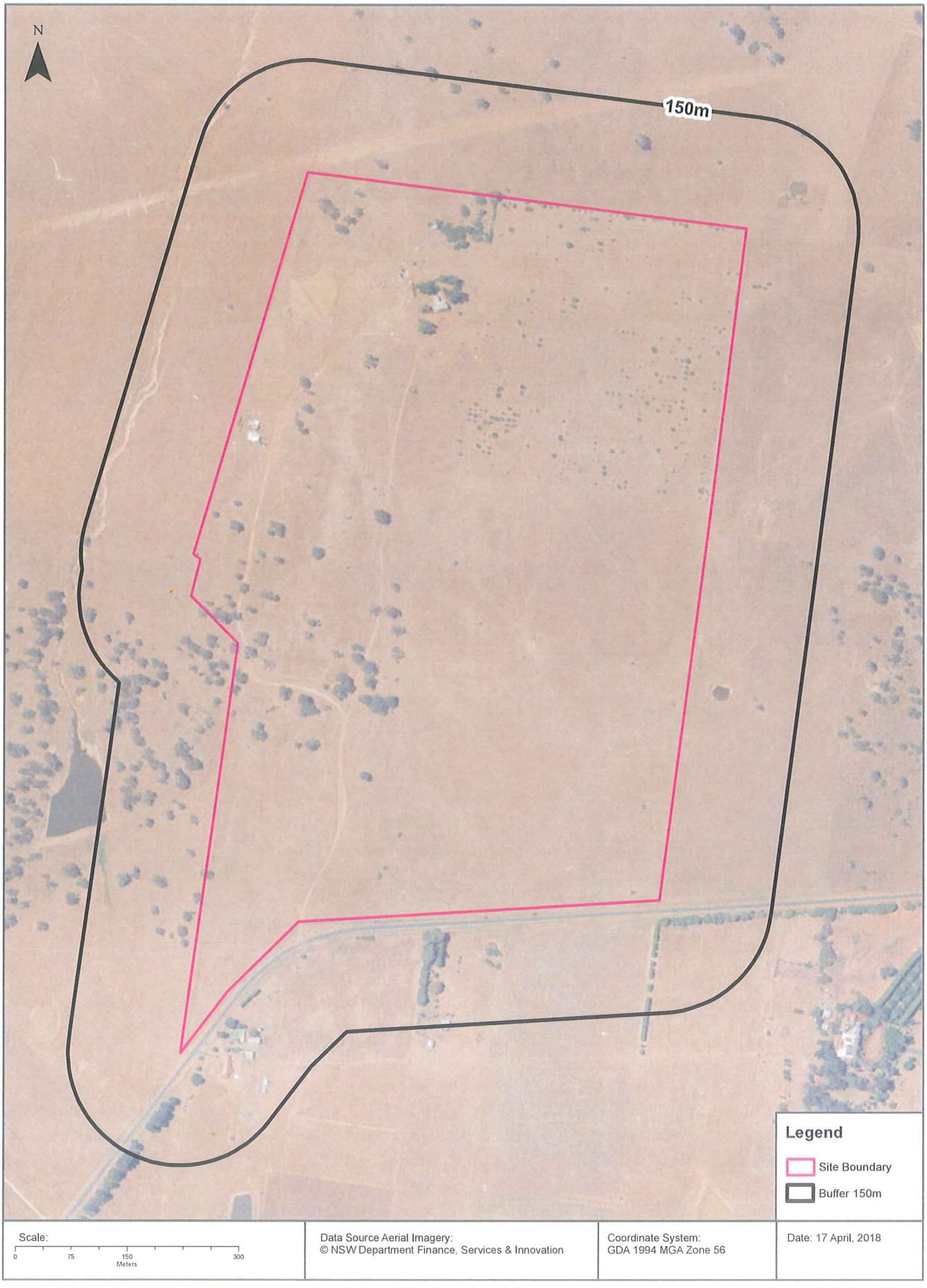
Data Source Aerial Imagery: © 2018 Google Inc, used with permission. Google and the Google logo are registered trademarks of Google Inc.

Coordinate System:
GDA 1994 MGA Zone 56

Date: 17 April, 2018

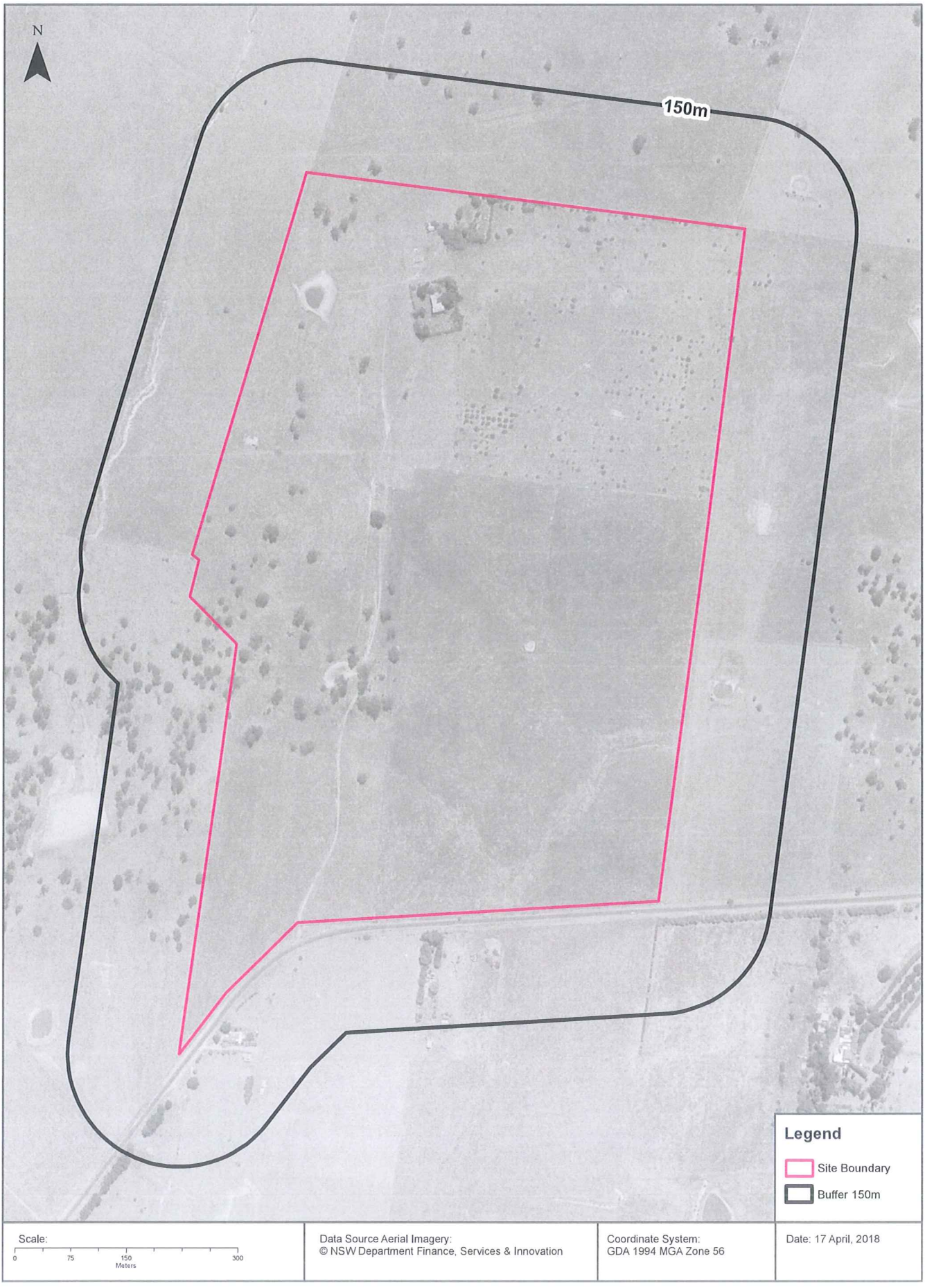
Aerial Imagery 1997

133 Marys Mount Road, Goulburn, NSW 2580



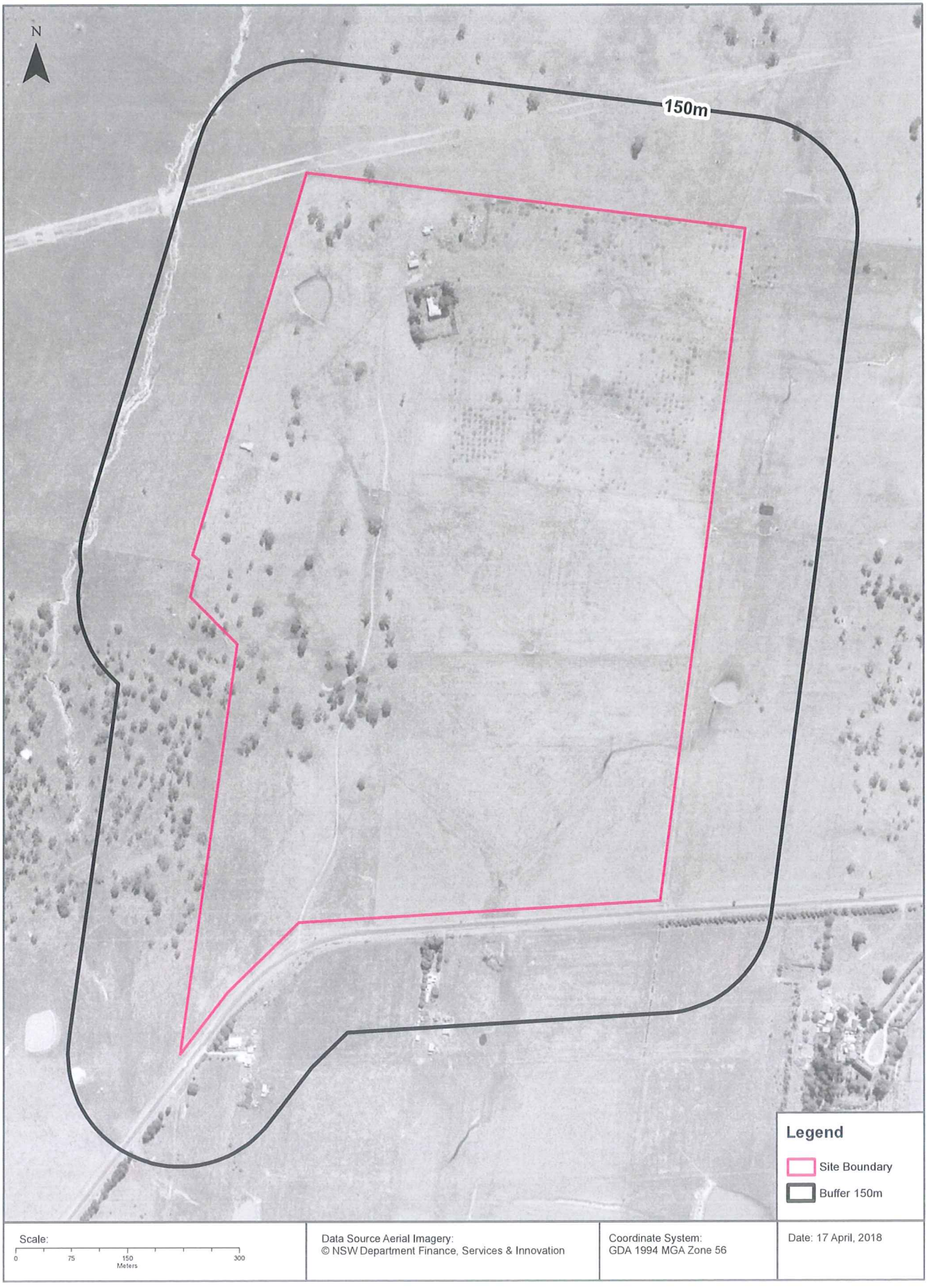
Aerial Imagery 1987

133 Marys Mount Road, Goulburn, NSW 2580



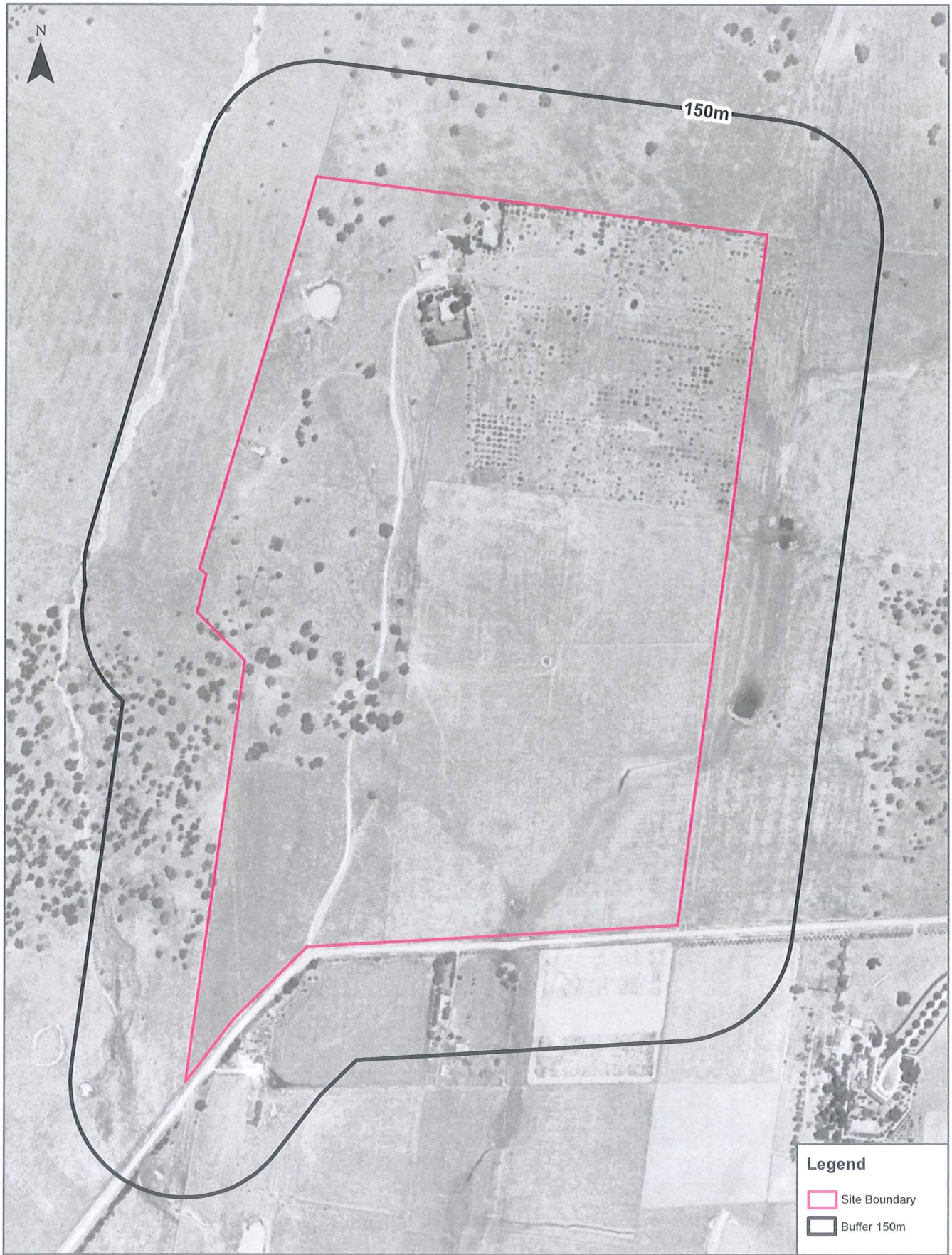
Aerial Imagery 1975

133 Marys Mount Road, Goulburn, NSW 2580



Aerial Imagery 1967

133 Marys Mount Road, Goulburn, NSW 2580

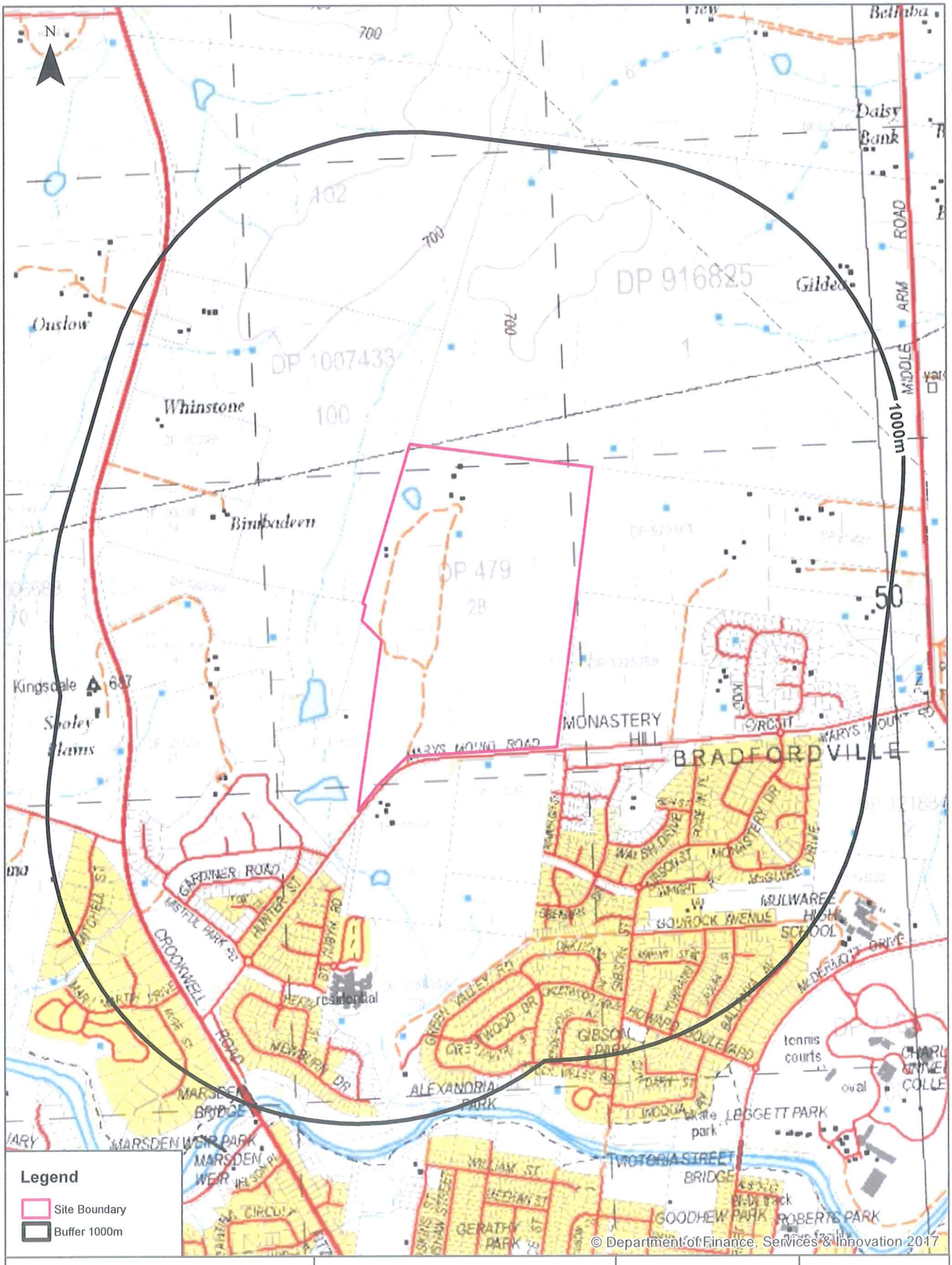


Aerial Imagery 1953

133 Marys Mount Road, Goulburn, NSW 2580

Topographic Map 2015

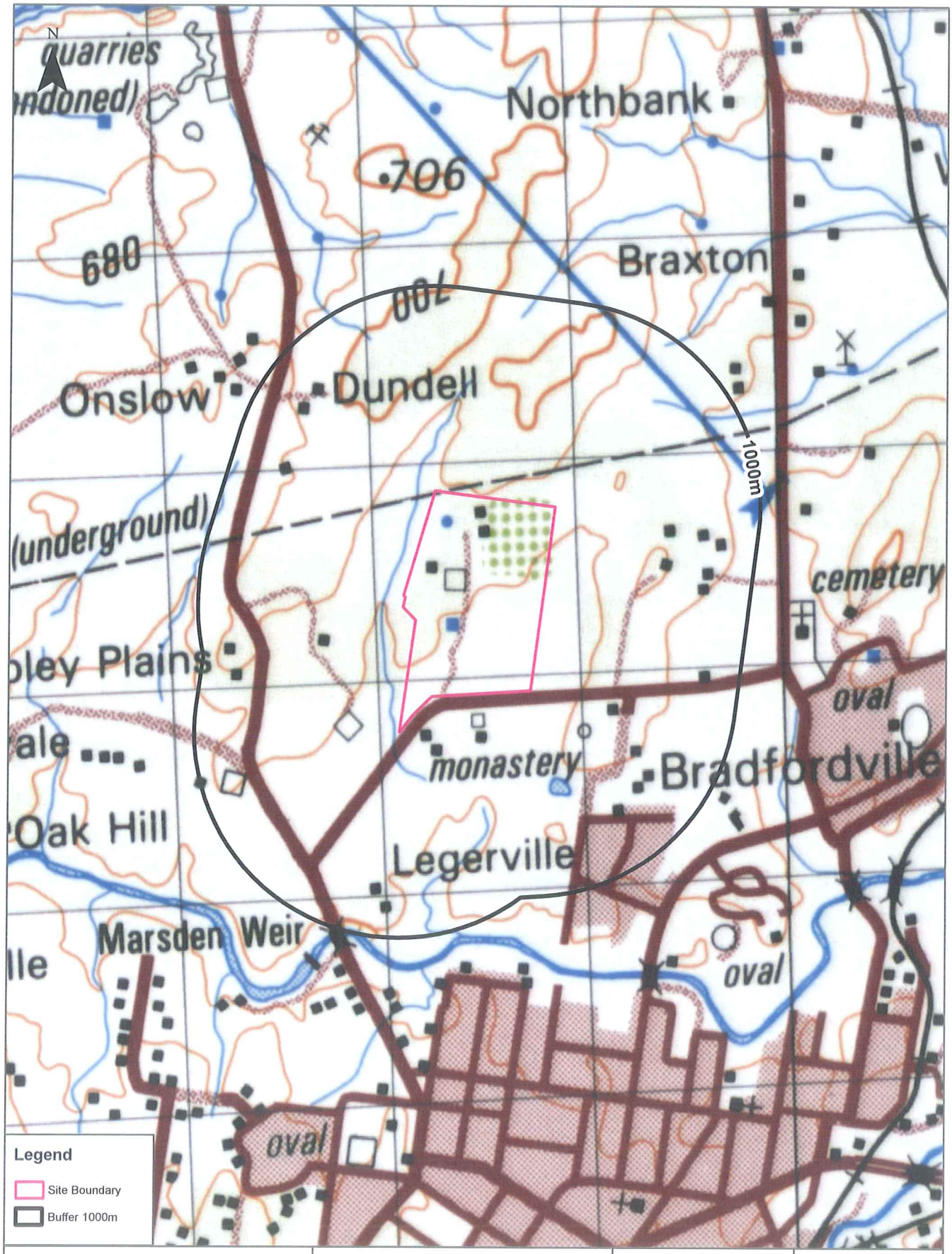
133 Marys Mount Road, Goulburn, NSW 2580



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: 18 April 2018

Historical Map 1981

133 Marys Mount Road, Goulburn, NSW 2580



Scale: 0 200 400 800 Meters

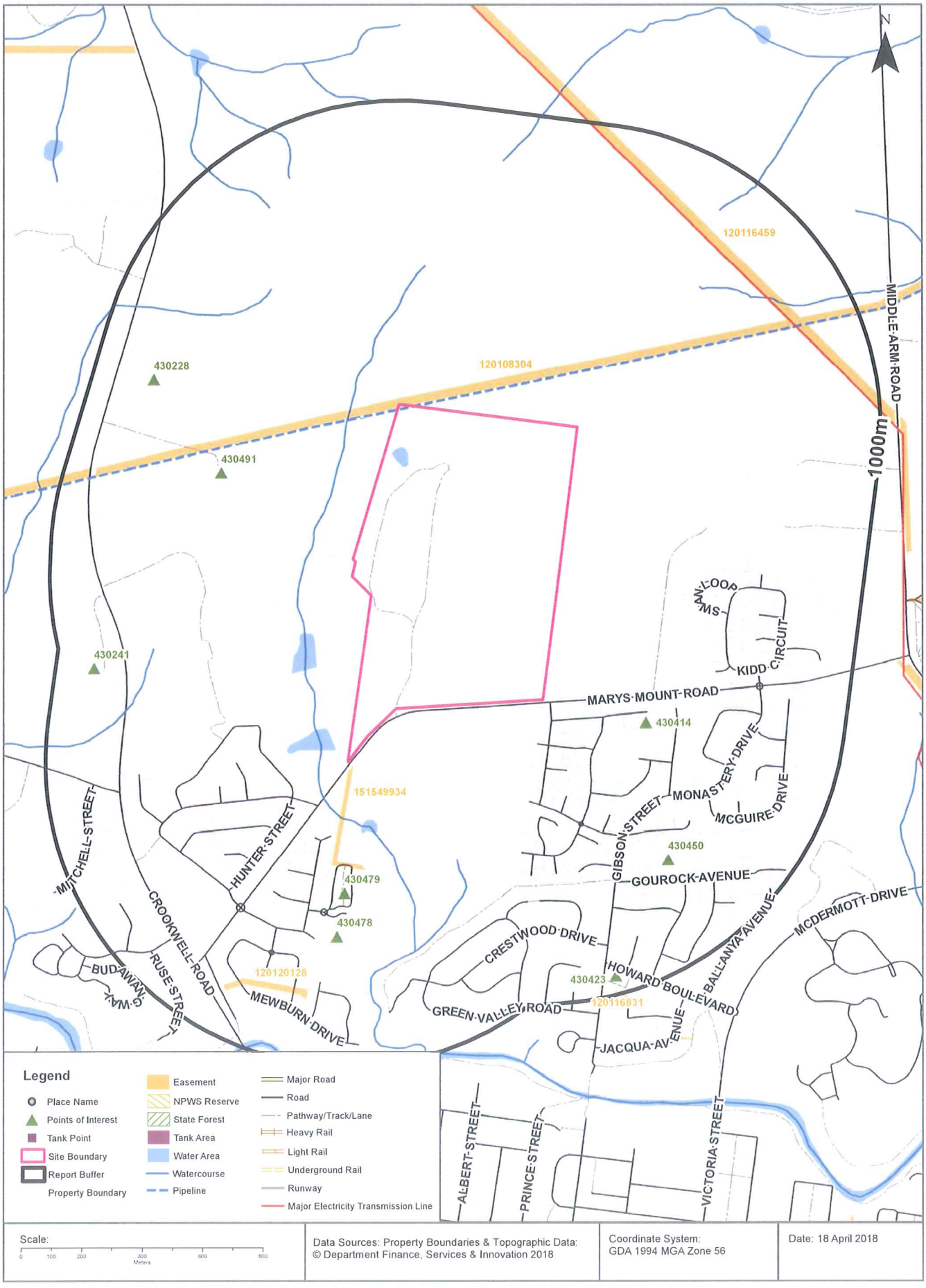
Data Sources: Sheet 8828, Goulburn (Edition 2)
National Topographic Map Series
Commonwealth of Australia

Coordinate System:
GDA 1994 MGA Zone 56

Date: 18 April 2018

Topographic Features

133 Marys Mount Road, Goulburn, NSW 2580



Data Sources: Property Boundaries & Topographic Data: © Department Finance, Services & Innovation 2018

Coordinate System: GDA 1994 MGA Zone 56

Date: 18 April 2018

Topographic Features

133 Marys Mount Road, Goulburn, NSW 2580

Points of Interest

What Points of Interest exist within the dataset buffer?

Map Id	Feature Type	Label	Distance	Direction
430414	Mountain/Hill/Peak	MONASTERY HILL	350m	South East
430479	Retirement Village	WARRIGAL CARE GOULBURN	434m	South
430491	Homestead	BIMBADEEN	499m	West
430478	Community Home	WARRIGAL CARE	577m	South
430450	Place Of Worship	SEVENTH DAY ADVENTIST CHURCH	671m	South East
430228	Homestead	WHINSTONE	801m	North West
430241	Homestead	SOOLEY PLAINS	874m	West
430423	Park	GIBSON PARK	941m	South

Topographic Features

133 Marys Mount Road, Goulburn, NSW 2580

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
120108304	Primary	Undefined		0m	East
151549934	Primary	Right of way	10	26m	South West
120116459	Primary	Undefined		740m	North West
120120128	Primary	Undefined		763m	South West
120116831	Primary	Undefined		992m	South

Topographic Features

133 Marys Mount Road, Goulburn, NSW 2580

State Forest

What State Forest exist within the dataset buffer?

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

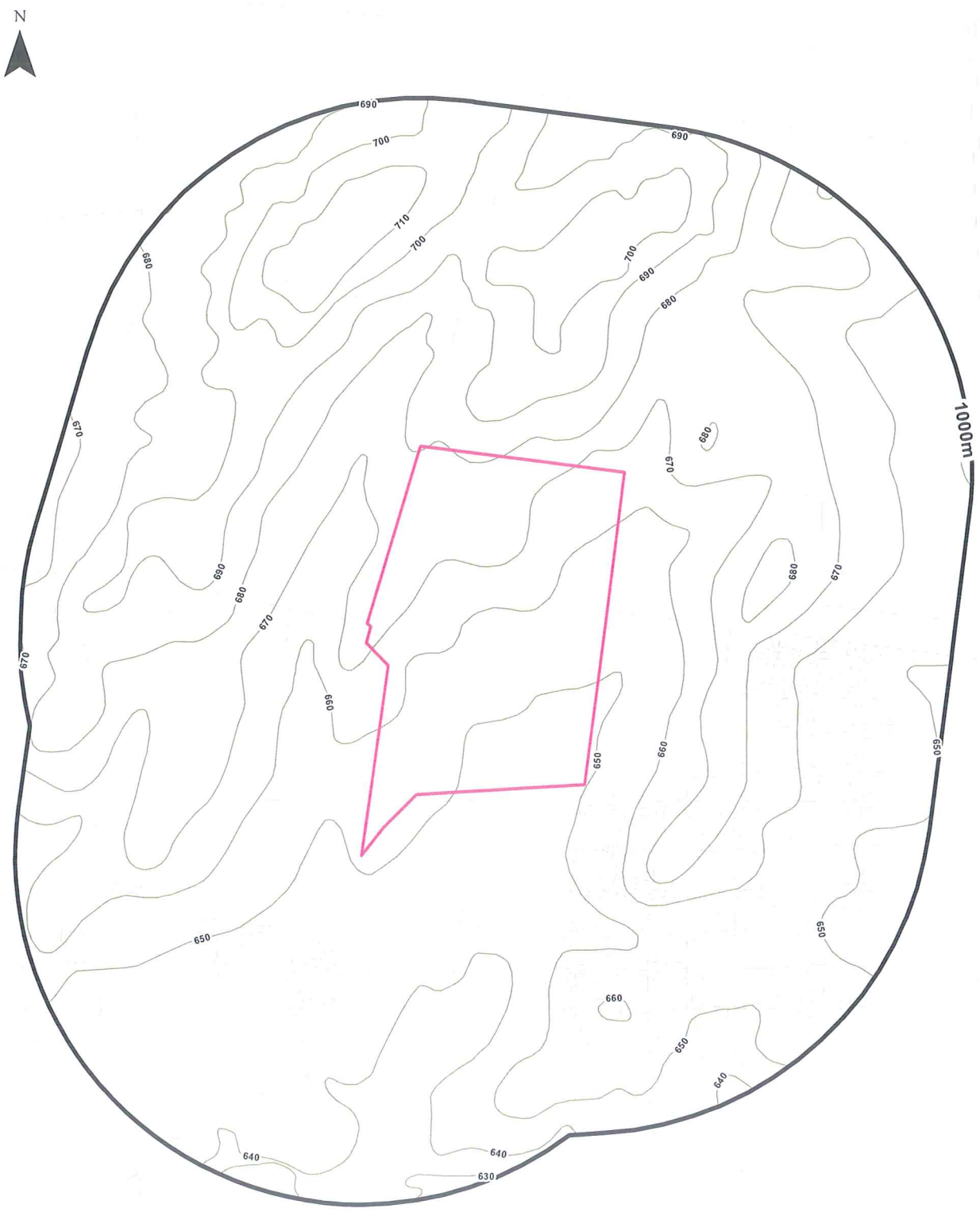
National Parks and Wildlife Service Reserves

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)

133 Marys Mount Road, Goulburn, NSW 2580



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 2018	Coordinate System: GDA 1994 MGA Zone 56	Date: 18 April 2018

Hydrogeology & Groundwater

133 Marys Mount Road, Goulburn, NSW 2580

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

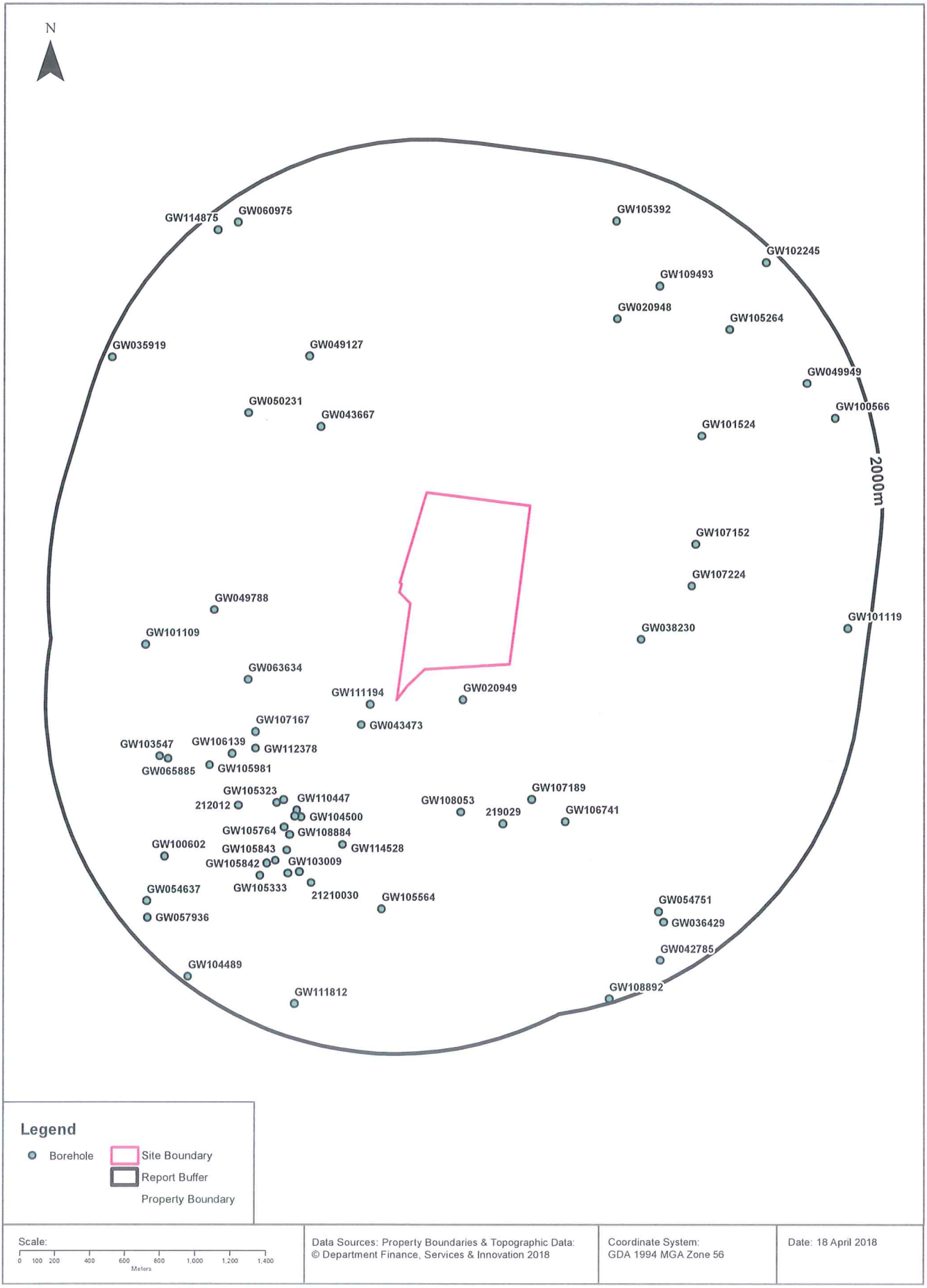
Groundwater management zones relating to the Botany Sand Beds aquifer within the dataset buffer:

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

133 Marys Mount Road, Goulburn, NSW 2580



Hydrogeology & Groundwater

133 Marys Mount Road, Goulburn, NSW 2580

Groundwater Boreholes

Boreholes within the dataset buffer:

GW No.	Licence No	Work Type	Owner Type	Purpose	Contractor	Complete Date	Final Depth (m)	Drilled Depth (m)	Salinity (mg/L)	SWL (m)	Yield (L/s)	Elev (AHD)	Dist	Dir
GW111194	10BL165341, 10WA115604	Bore	Private	Stock		01/01/2005	50.00	50.00					153m	South West
GW020949		Bore open thru rock	Private			01/09/1954	13.00	13.00					186m	South
GW043473	10BL029549, 10WA114894	Bore open thru rock	Private	Domestic, Stock		01/08/1973	17.60	17.70	Good				245m	South West
GW043667	10BL029544, 10WA114893	Bore open thru rock	Private	Domestic, Stock		01/08/1972	42.30	42.40	501-1000 ppm				709m	North West
GW038230		Bore open thru rock	Private	Domestic, Stock		01/05/1974	21.30	21.30	1001-3000 ppm				722m	East
GW108053	10BL600331, 10WA115658	Bore	Private	Domestic	Watermin Drillers Pty Ltd	27/05/2006	32.00	32.00			0.379		734m	South
GW107189	10BL163115, 10WA115474	Bore	Private	Domestic	Bungendore Water Bores	31/07/2004	90.00	90.00		24.00	0.069		776m	South
GW107167	10BL165175, 10WA115580	Bore		Domestic		01/01/2003	54.00			16.00	0.680		822m	South West
GW110447	10BL602741, 10WA115769	Bore	Private	Domestic, Stock	Ultra Drilling	24/10/2008	30.00	30.00			2.000		842m	South West
GW112378	10WA118592	Bore	Private	Domestic		12/02/2013	48.00	48.00		13.00	0.250		848m	South West
GW063634	10BL135193, 10WA115015	Bore	Private	Domestic, Stock		01/09/1986	42.00						854m	South West
GW104500	10BL159923, 10WA115262	Bore	Private	Domestic	Bungendore Water Bores	22/11/2000	30.00	30.00		9.50	2.650		855m	South West
GW105738	10BL162258, 10WA115435	Bore	Private	Domestic, Stock	Central West Water Drillers	17/11/2003	36.00	36.00		15.00	4.375		855m	South West
GW114528	10WA118808	Bore	Private	Domestic	Bungendore Water Bores	27/11/2013	66.00	66.00	Fresh	30.00	0.625		874m	South West
GW105518	10BL162121, 10WA115428	Bore		Domestic	Watermin Drillers Pty Ltd	07/11/2003	38.00	38.00			0.189		876m	South West
GW105323	10BL161634, 10WA115388	Bore		Domestic	Ultra Drilling	14/04/2003	30.00	30.00	1000		3.000		894m	South West
219029				UNK								650.24	901m	South
GW106741	10BL164523, 10WA115545	Bore	Private	Domestic	Watermin Drillers Pty Ltd	06/12/2004	56.00	56.00			0.379		947m	South East
GW107152	10BL164950, 10WA115569	Bore	Private	Domestic, Stock	Watermin Drillers Pty Ltd	03/04/2005	72.00	72.00			0.126		962m	East
GW105764	10BL162578, 10WA115447	Bore	Private	Domestic	Central West Water Drillers	18/11/2003	42.00	42.00		15.00	2.250		963m	South West
GW107224	10BL164749, 10WA115555	Bore	Private	Domestic	Bungendore Water Bores	28/02/2005	72.00	72.00		10.00	0.500		969m	East
GW108884	10BL164809, 10WA115560	Bore	Private	Domestic	Central West Water Drillers	30/05/2008	54.00		Good	28.00	0.137		977m	South West

GW No.	Licence No	Work Type	Owner Type	Purpose	Contractor	Complete Date	Final Depth (m)	Drilled Depth (m)	Salinity (mg/L)	SWL (m)	Yield (L/s)	Elev (AHD)	Dist	Dir
GW106139	10BL161840, 10WA115410	Bore	Private	Domestic, Stock	Ultra Drilling	24/05/2003	84.00	84.00	Fair	40.00	0.550		983m	South West
GW049127	10BL107237, 10WA114927	Bore open thru rock	Private	Stock		01/09/1978	45.70	45.70	Good				1020 m	North West
GW108857	10BL162579, 10WA115448	Bore	Private	Domestic	Central West Water Drillers	13/01/2004	72.00	72.00		36.00	0.950		1053 m	South West
GW101524	10BL158688, 10WA115209	Bore	Private	Domestic, Stock		01/01/1944	13.40			4.27			1053 m	North East
GW049788	10BL110615, 10WA114943	Bore open thru rock	Private	Stock		01/10/1979	53.30	53.30	Good				1055 m	West
212012				UNK								646.34	1078 m	South West
GW050231	10BL110616, 10WA114944	Bore open thru rock	Private	Stock		01/02/1980	38.10	38.10	Good				1109 m	North West
GW105020	10BL160577, 10WA115298	Bore	Private	Domestic	Engineering Explorations Pty Ltd	04/12/2001	9.00	9.00	700	3.50	5.000		1117 m	South West
GW105981	10BL162513, 10WA115442	Bore	Private	Domestic	Ultra Drilling	28/04/2004	90.00	90.00	Good				1124 m	South West
21210030				UNK								631.06	1141 m	South West
GW105843	10BL161895, 10WA115412	Bore				29/04/2005							1141 m	South West
GW103009	10BL159687, 10WA115251	Bore		Domestic	Bungendore Water Bores	22/05/2000	42.00	42.00	Fair				1158 m	South West
GW020948		Bore	Private			01/10/1954	14.80	14.80					1168 m	North East
GW105842	10BL161896, 10WA115413	Bore				29/04/2005							1181 m	South West
GW105564	10BL162096, 10WA115426	Bore		Domestic	Bungendore Water Bores	07/11/2003	108.00	108.00	900	16.00	0.075		1185 m	South
GW105333	10BL161302, 10WA115358	Bore		Domestic	Ultra Drilling	28/05/2003	24.00	24.00	800		2.200		1261 m	South West
GW065885	10BL159821, 10CA116022	Bore	Private	Irrigation		28/01/1989	53.00		Good	10.00	3.000		1337 m	South West
GW103547	10BL159820, 10WA115256	Bore		Domestic	Windley's Water Wells Pty Ltd	29/01/1989	30.00	30.00		10.00	0.900		1381 m	South West
GW109493	10BL602615, 10WA115758	Bore	Private	Domestic, Stock	Bungendore Water Bores	09/10/2008	66.00	66.00		15.00	0.100		1447 m	North East
GW101109	10BL158165, 10WA115196	Bore	Private	Domestic, Stock	Southern Tablelands Drilling	06/08/1997	25.00	25.00		10.00	2.500		1456 m	West
GW105264	10BL161774, 10WA115399	Bore	Private	Domestic, Stock	Watermin Drillers Pty Ltd	30/03/2003	37.00	37.00		13.00	0.190		1513 m	North East
GW100602	10BL158076, 10WA115189	Bore	Private	Domestic, Stock	Ultra Drilling	09/07/1997	91.50	91.50	Good	15.00	0.620		1584 m	South West
GW054751	10BL117170	Bore	Local Govt	Municiple		01/11/1980	100.60	100.60	Good				1637 m	South East
GW105392	10BL161828, 10WA115409	Bore		Domestic	Watermin Drillers Pty Ltd	07/05/2003	32.00	32.00			0.320		1686 m	North East
GW036429		Bore	Local Govt	GW Exploration		01/03/1981	0.00	18.00					1703 m	South East
GW049949	10BL109553, 10WA114935	Bore open thru rock	Private	General Use		01/04/1979	68.60	68.60	Good				1723 m	North East
GW100566	10BL158027	Bore	Private	Domestic, Stock	Windley's Water Wells Pty Ltd	30/04/1997	30.00	30.00					1807 m	North East
GW111812	10BL601052, 10WA115688	Bore	Private	Domestic	ULTRADRILLING	05/02/2007	78.00	78.00	1800	15.00	0.700		1813 m	South

GW No.	Licence No	Work Type	Owner Type	Purpose	Contractor	Complete Date	Final Depth (m)	Drilled Depth (m)	Salinity (mg/L)	SWL (m)	Yield (L/s)	Elev (AHD)	Dist	Dir
GW054637	10BL116986, 10WA114971	Bore open thru rock	Private	General Use		01/12/1980	37.20	37.20	501-1000 ppm				1816 m	South West
GW060975	10BL132591, 10WA115002	Bore	Private	Domestic, Stock		01/04/1985	63.40	63.40					1869 m	North West
GW057936	10BL161661, 10CA116058	Bore	Private	Domestic, Irrigation		01/08/1983	91.40	91.40	Good				1873 m	South West
GW101119	10BL157934, 10BL159865, 10WA116026	Bore	Private	Recreation	Watermin Drillers Pty Ltd	05/03/1997	62.50	62.50					1880 m	East
GW042785	10BL105432, 10WA116008	Bore open thru rock	Private	Recreation		01/09/1976	43.20	43.30	1001-3000 ppm				1884 m	South East
GW114875	10WA118984	Bore	Private	Domestic, Stock	Bungendore Water Bores	11/07/2014	24.00	24.00		12.00	1.300		1903 m	North West
GW102245	10BL142091, 10WA115066	Bore	Private	Domestic, Stock	Watermin Drillers Pty Ltd	29/11/1990	25.00	25.00	Fair	23.00	1.660		1925 m	North East
GW035919	10BL029542, 10WA114892	Bore open thru rock	Private	Stock			23.40	23.50	Good				1945 m	North West
GW104489	10BL160855, 10WA115326	Bore	Private	Domestic	Highland Drilling Pty Ltd	24/10/2002	97.00	97.00	80	23.00	0.165		1961 m	South West
GW108892	10BL164295, 10WA115540	Bore	Private	Domestic	Watermin Drillers Pty Ltd	02/06/2008	55.00						1978 m	South

Hydrogeology & Groundwater

133 Marys Mount Road, Goulburn, NSW 2580

Driller's Logs

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

Groundwater No	Drillers Log	Distance	Direction
GW020949	0.00m-3.66m Clay Grey Gravel 3.66m-12.95m Granite Decomposed Water Supply	186m	South
GW043473	0.00m-0.30m Topsoil 0.30m-2.74m Clay Gravel 2.74m-6.71m Basalt Black 6.71m-17.68m Quartz Porphyry Water Supply	245m	South West
GW043667	0.00m-0.30m Topsoil 0.30m-0.91m Clay 0.91m-18.29m Basalt 18.29m-26.82m Basalt Black Hard 26.82m-42.37m Porphyry Water Supply	709m	North West
GW038230	0.00m-0.30m Topsoil 0.30m-5.48m Clay 5.48m-11.58m Clay Sandy 5.48m-11.58m Limestone Bands 11.58m-21.33m Dolerite Fractured Water Supply	722m	East
GW108053	0.00m-1.00m topsoil 1.00m-2.00m clay 2.00m-11.00m granite, decomposed 11.00m-32.00m granite	734m	South
GW107189	0.00m-2.00m soil, sticky clay 2.00m-9.00m shale, yellow brown 9.00m-9.00m volcanics, balck	776m	South
GW110447	0.00m-5.00m CLAY 5.00m-9.00m GRAVEL 9.00m-17.00m SHALE (YELLOW) 17.00m-30.00m SHALE	842m	South West
GW112378	0.00m-2.00m SOIL BROWN CLAY FILL 2.00m-8.00m VOLCANICS SOFT BROWN 8.00m-26.00m VOLCANICS LIGHT BROWN FRACTURED 26.00m-48.00m SHALE GREY BLACK ,SILTSTONE	848m	South West
GW104500	0.00m-0.40m TOPSOIL 0.40m-5.00m BROWN STICKY CLAY 5.00m-14.00m LT BROWN WEATHEREAD VOLCANICS 14.00m-30.00m GREY BLACK VOLCANICS	855m	South West
GW105738	0.00m-1.00m topsoil 1.00m-5.00m clay, yellow 5.00m-11.00m shale, yellow 11.00m-17.00m shale, grey 17.00m-22.00m slate, black 22.00m-36.00m basalt, broken	855m	South West
GW114528	0.00m-1.00m RED CLAY 1.00m-7.00m VOLCANIC WEATHERED 7.00m-21.00m VOLCANIC GREY 21.00m-66.00m LIMESTONE GREY/BLACK	874m	South West
GW105518	0.00m-1.00m TOPSOIL 1.00m-8.00m CLAYS 8.00m-16.00m SOFT SHALE 16.00m-38.00m HARD SHALE	876m	South West
GW105323	0.00m-4.00m CLAY 4.00m-5.00m GRAVEL SMALL 5.00m-14.00m CLAY SHALE 14.00m-30.00m SHALE	894m	South West
GW106741	0.00m-1.00m topsoil 1.00m-4.00m clay 4.00m-15.00m shale, soft 15.00m-56.00m granite	947m	South East

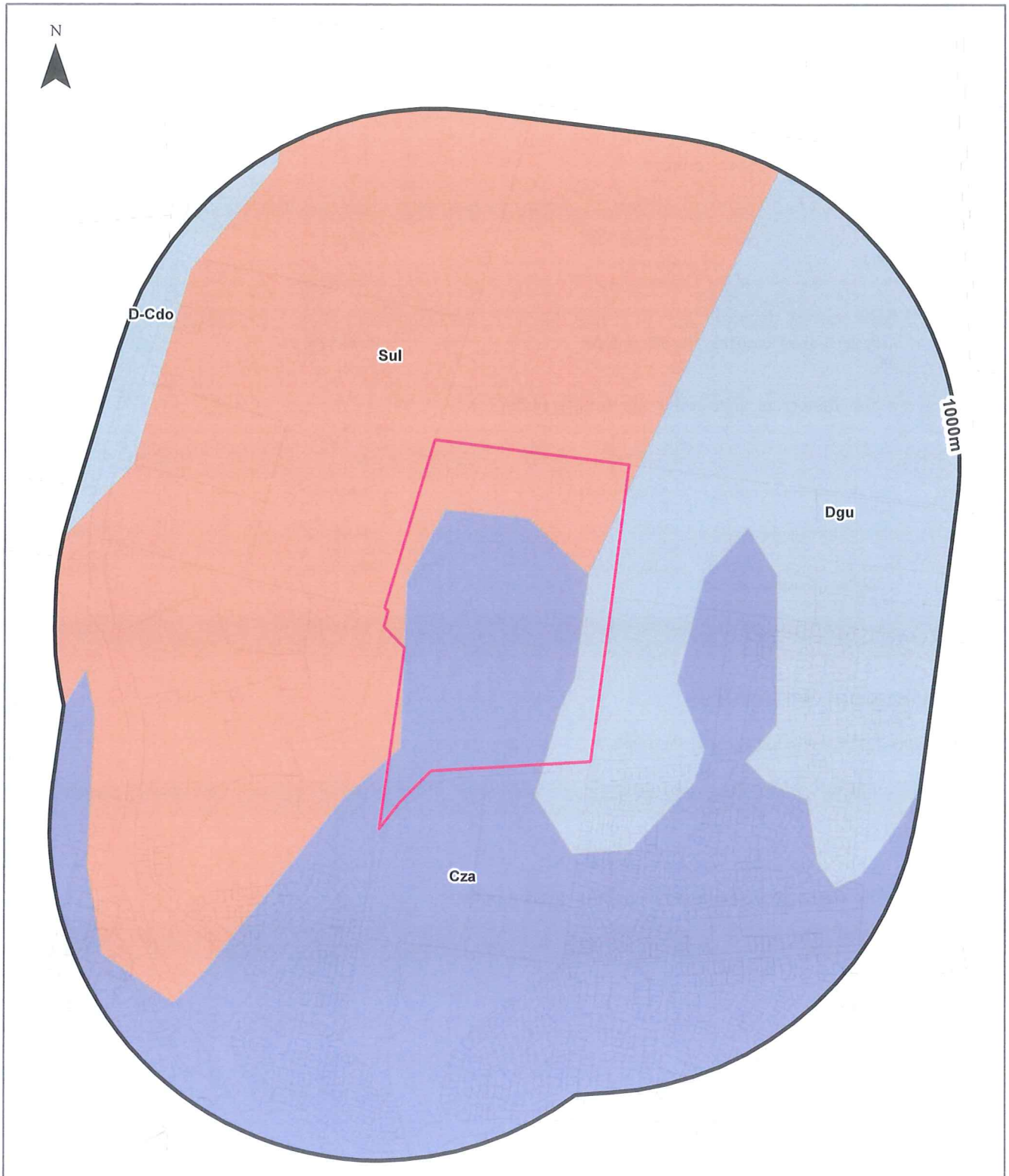
Groundwater No	Drillers Log	Distance	Direction
GW107152	0.00m-1.00m topsoil 1.00m-5.00m clay 5.00m-32.00m granite, soft 32.00m-72.00m granite	962m	East
GW105764	0.00m-1.00m clay, sandy 1.00m-6.00m clay, sandy 6.00m-16.00m shale yellow 16.00m-20.00m shale, grey 20.00m-42.00m basalt , broken	963m	South West
GW107224	0.00m-3.00m loamy soil 3.00m-20.00m volcanic, weathered 20.00m-72.00m volcanic	969m	East
GW106139	0.00m-2.00m clay 2.00m-54.00m schist 54.00m-84.00m granite	983m	South West
GW049127	0.00m-0.30m Topsoil 0.30m-2.40m Clay 2.40m-4.60m Diorite Broken 4.60m-45.70m Diorite Water Supply	1020m	North West
GW108857	0.00m-4.00m clay, brown 4.00m-12.00m baslat, brown 12.00m-31.00m granite, grey 31.00m-39.00m shales, black 39.00m-54.00m basalt 54.00m-72.00m shales, black	1053m	South West
GW049788	0.00m-0.30m Topsoil 0.30m-2.10m Clay 2.10m-8.50m Granite Decomposed 8.50m-53.30m Granite Water Supply	1055m	West
GW050231	0.00m-0.30m Topsoil 0.30m-2.10m Clay 2.10m-5.80m Granite Decomposed 5.80m-38.10m Granite Water Supply	1109m	North West
GW105020	0.00m-1.00m FILL 1.00m-9.00m SAND	1117m	South West
GW105981	0.00m-18.00m granite, soft 18.00m-90.00m granite	1124m	South West
GW103009	0.00m-0.30m TOPSOIL 0.30m-4.50m CLAYS 4.50m-12.00m GRAVEL DECOMPOSED 12.00m-42.00m BLACK VULCANIC FRACTURED	1158m	South West
GW020948	0.00m-3.96m Granite 3.96m-13.11m Granite Decomposed 13.11m-14.78m Granite Very Hard	1168m	North East
GW105564	0.00m-2.00m SOIL/CLAYS 2.00m-9.00m WEATHERED VOLCANICS 9.00m-108.00m FRACTURED GREY VOLCANICS	1185m	South
GW105333	0.00m-2.00m CLAY 2.00m-7.00m QUARTZ/CLAY 7.00m-24.00m SHALE	1261m	South West
GW065885	0.00m-7.00m SOIL AND CLAY 7.00m-13.00m SHALE 13.00m-45.00m GRANITE 45.00m-53.00m GRAVEL	1337m	South West
GW103547	0.00m-6.00m SOIL 6.00m-30.00m GRANITE	1381m	South West
GW109493	0.00m-3.00m SOIL, BROWN CLAY 3.00m-18.00m LIGHT BROWN SOFT GRANITE 18.00m-66.00m BLACK PINK GRANITE VOLCANIC	1447m	North East
GW101109	0.00m-0.50m Top soil 0.50m-2.00m Decomposed granite 2.00m-25.00m Green granite	1456m	West
GW105264	0.00m-1.00m TOPSOIL/CLAY 1.00m-18.00m DECOMPOSED GRANITE 18.00m-37.00m GRANITE	1513m	North East

Groundwater No	Drillers Log	Distance	Direction
GW100602	0.00m-1.00m CLAY/TOP SOIL 1.00m-5.00m DECOMPOSED GRANITE 5.00m-91.50m GRANITE	1584m	South West
GW054751	0.00m-3.30m Topsoil 3.30m-5.20m Sand Gravel 5.20m-9.70m Shale Grey Soft 9.70m-18.30m Shale Grey Water Supply 18.30m-25.90m Shale Hard 25.90m-39.60m Slate 39.60m-42.70m Sandstone 42.70m-47.80m Slate 47.80m-100.60m Quartzite Water Supply	1637m	South East
GW105392	0.00m-2.00m CLAY 2.00m-22.00m DECOMPOSED GRANITE 22.00m-32.00m GRANITE	1686m	North East
GW036429	0.00m-0.40m Topsoil 0.40m-4.00m Clay Yellow Grey 4.00m-6.00m Clay Sandy 6.00m-9.00m Gravel Large Sand Water Supply 9.00m-10.00m Clay Silty Stones Water Supply 10.00m-11.00m Gravel Large Clay Bands Water Bearing 11.00m-12.00m Clay Grey 12.00m-17.00m Gravel Large Clay Bands Water Bearing 17.00m-18.00m Shale Grey Sandy	1703m	South East
GW049949	0.00m-0.30m Topsoil 0.30m-1.50m Clay 1.50m-4.30m Granite Decomposed 4.30m-68.60m Granite Water Supply	1723m	North East
GW100566	0.00m-0.50m SOIL 0.50m-2.00m CLAY 2.00m-3.00m DECOMPOSED GRANITE 3.00m-4.00m CLAY 4.00m-5.00m DECOMPOSED GRANITE 5.00m-30.00m GRANITE	1807m	North East
GW111812	0.00m-21.00m SHALE 21.00m-78.00m BASALT	1813m	South
GW054637	0.00m-0.20m Topsoil 0.20m-4.80m Shale Decomposed 4.80m-17.60m Shale Grey Hard Water Supply 17.60m-31.10m Shale Black Hard Water Supply 31.10m-34.10m Dolerite 34.10m-35.30m Dolerite Green, Quartz White 35.30m-37.20m Dolerite	1816m	South West
GW060975	0.00m-0.30m Topsoil 0.30m-17.10m Limestone Some Clay Bands 17.10m-63.40m Limestone Some Cavity	1869m	North West
GW057936	0.00m-0.30m Topsoil 0.30m-2.40m Clay 2.40m-4.20m Basalt Soft 4.20m-28.00m Basalt Water Supply 28.00m-91.40m Granite Black	1873m	South West
GW101119	0.00m-0.30m Topsoil 0.30m-19.80m Soft shale 19.80m-62.50m Granite	1880m	East
GW042785	0.00m-0.30m Topsoil 0.30m-1.52m Clay 1.52m-6.40m Clay Sand 6.40m-13.41m Clay Gravel Water Supply 13.41m-43.28m Limestone Water Supply	1884m	South East
GW114875	0.00m-1.00m SOIL / BROWN LOAM 1.00m-5.00m LIMESTONE 5.00m-15.00m LIMESTONE GREY AND FRACTURED 15.00m-18.00m LIMESTONE 18.00m-24.00m LIMESTONE FRACTURED	1903m	North West
GW102245	0.00m-1.00m TOP SOIL 1.00m-5.00m CLAY 5.00m-18.00m GRANITE, DECOMPOSED 18.00m-25.00m GRANITE	1925m	North East

Groundwater No	Drillers Log	Distance	Direction
GW035919	0.00m-0.60m Topsoil 0.60m-2.43m Clay 2.43m-23.46m Limestone Water Supply	1945m	North West
GW104489	0.00m-20.00m GRANITE SOFT 20.00m-97.00m GRANITE HARD	1961m	South West
GW108892	0.00m-1.00m TOPSOIL 1.00m-9.00m CLAY 9.00m-16.00m SOFT SHALE 16.00m-49.00m SHALE 49.00m-55.00m BROKEN BASALT	1978m	South

Geology 1:250,000

133 Marys Mount Road, Goulburn, NSW 2580



Legend

Site Boundary	Fault	Metamorphic Boundary
Report Buffer	Dyke	Shear Zone
Property Boundary	Fold	Structure
	Marker Bed	Thrust Fault
	Trend Line	Lineament

Scale: 0 100 200 400 600 800 Meters

Data Sources: Property Boundaries & Topographic Data: © Department Finance, Services & Innovation 2018

Coordinate System: GDA 1994 MGA Zone 56

Date: 18 April 2018

Geology

133 Marys Mount Road, Goulburn, NSW 2580

Geological Units

What are the Geological Units onsite?

Symbol	Description	Unit Name	Group	Sub Group	Age	Dom Lith	Map Sheet	Dataset
Cza	Cainozoic alluvium: gravel, sand	undifferentiated			Cainozoic			1:250,000
Dgu	Siltstone, sandstone, dacite, andesite, conglomerate, tuff, felsite, porphyry, claystone	Gundary beds			Palaeozoic			1:250,000
Sul	Limestone, shale, quartzite, tuff	undifferentiated			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
D-Cdo	Dolerite (post kinematic)				Palaeozoic			1:250,000
Dgu	Siltstone, sandstone, dacite, andesite, conglomerate, tuff, felsite, porphyry, claystone	Gundary beds			Palaeozoic			1:250,000
Sul	Limestone, shale, quartzite, tuff	undifferentiated			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

133 Marys Mount Road, Goulburn, NSW 2580

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

133 Marys Mount Road, Goulburn, NSW 2580

Soils

133 Marys Mount Road, Goulburn, NSW 2580

Soil Landscapes

What are the onsite Soil Landscapes?

Soil Code	Name	Group	Process	Map Sheet	Scale
CSmh	MONASTRY HILL	CHOCOLATE SOILS		Goulburn	1:250,000
PSso	SOOLEY	PRAIRIE SOILS		Goulburn	1:250,000

What are the Soil Landscapes within the dataset buffer?

Soil Code	Name	Group	Process	Map Sheet	Scale
CSmh	MONASTRY HILL	CHOCOLATE SOILS		Goulburn	1:250,000
PSso	SOOLEY	PRAIRIE SOILS		Goulburn	1:250,000

Atlas of Australian Soils

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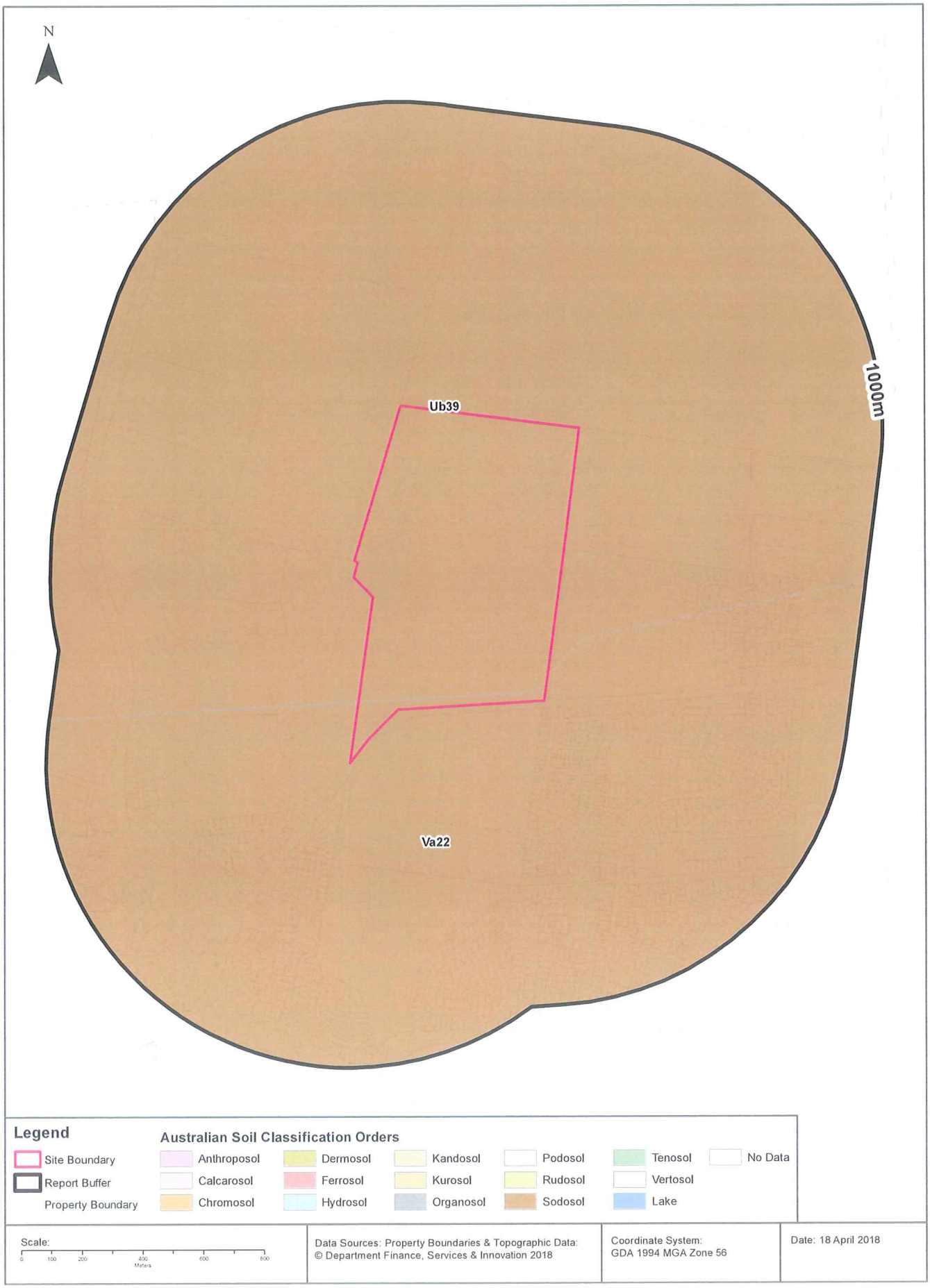


Soils

133 Marys Mount Road, Goulburn, NSW 2580

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
Ub39	Sodosol	Undulating to hilly country: chief soils are hard neutral and acid yellow mottled soils (Dy3.42 and Dy3.41) in a general pattern as follows: (i) undulating to hilly slopes of various (Dy) and (Dr) soils, including (Dy3.41), (Dy3.42), (Dy3.2), (Dr2.2), (Dr2.4); (ii) (Dy3.42) and sometimes (Dr3.42) soils in basins which merge with unit Va21 and lower-lying sites generally; and (iii) less frequently (Gn2. 15) and (Gn2.25) soils on gently undulating areas, usually situated between (i) and (ii). As mapped, small areas of units Tb22 and Va22 are included. Data are limited.	0m
Va22	Sodosol	Valley plain: chief soils are hard alkaline yellow and yellow mottled soils (Dy2.43) and (Dy3.43). Associated are various soils, notably (Gn2.95), also (Ug5.16) and (Gn2.1), with some (Um) soils close to the stream.	0m

Acid Sulfate Soils

133 Marys Mount Road, Goulburn, NSW 2580

Standard Local Environmental Plan Acid Sulfate Soils

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

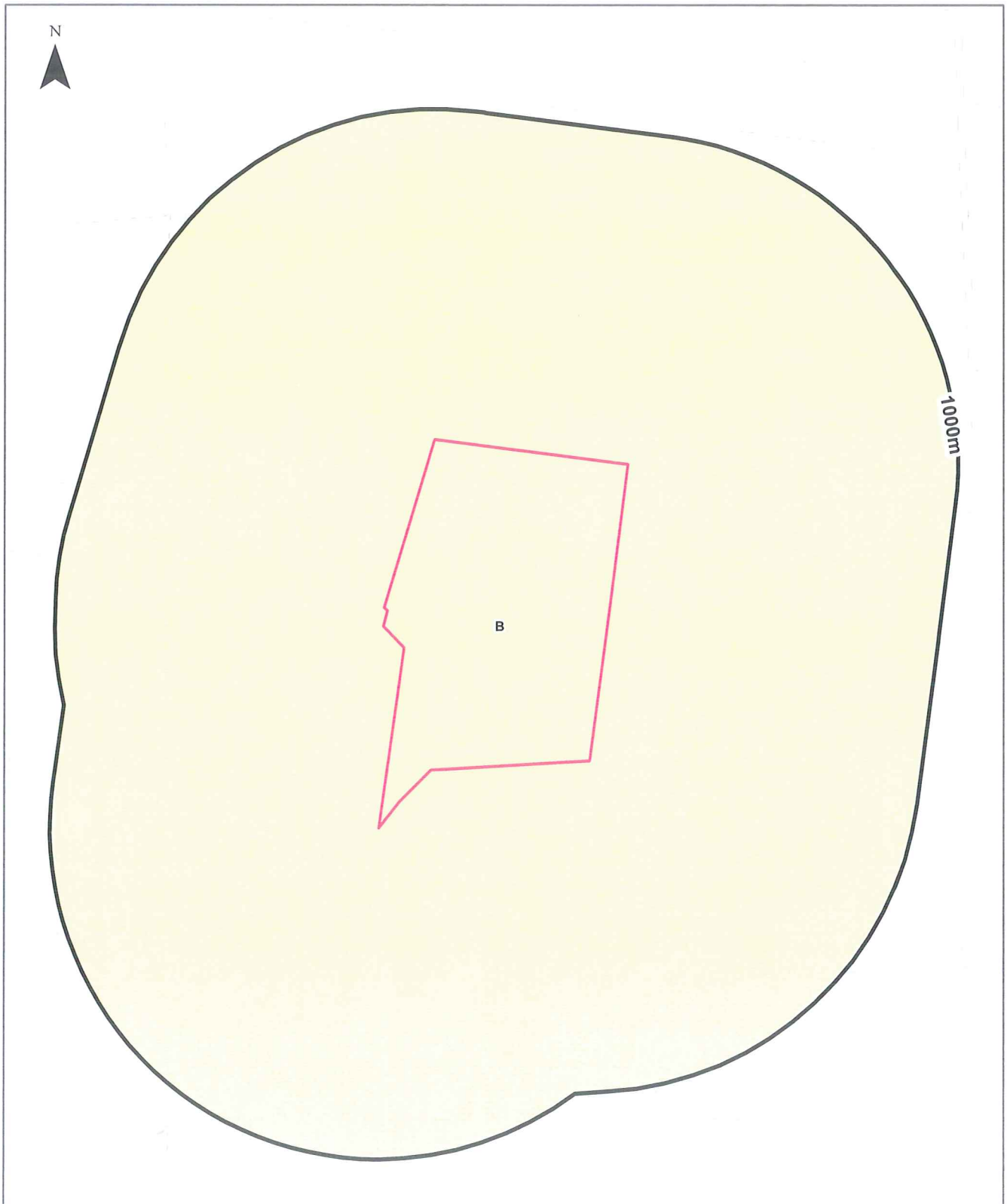
Soil Class	Description	LEP
N/A		

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

Soil Class	Description	LEP	Distance	Direction
N/A				

Atlas of Australian Acid Sulfate Soils

133 Marys Mount Road, Goulburn, NSW 2580



Legend

Site Boundary

Report Buffer

Property Boundary

Probability of occurrence of Acid Sulfate Soils

A. High (>70%)

B. Low (6-70%)

C. Extremely Low (1-5%)

D. No Chance (0%)

No Data

Scale: 0 100 200 400 600 800 Meters

Data Sources: Property Boundaries & Topographic Data: © Department Finance, Services & Innovation 2018

Coordinate System: GDA 1994 MGA Zone 56

Date: 18April 2018

Acid Sulfate Soils

133 Marys Mount Road, Goulburn, NSW 2580

Atlas of Australian Acid Sulfate Soils

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

Class	Description	Distance
B	Low Probability of occurrence. 6-70% chance of occurrence.	0m

Dryland Salinity

133 Marys Mount Road, Goulburn, NSW 2580

Dryland Salinity - National Assessment

Is there Dryland Salinity - National Assessment data onsite?

No

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

No

What Dryland Salinity assessments are given?

Assessment 2000	Assessment 2020	Assessment 2050	Distance	Direction
N/A	N/A	N/A	N/A	N/A

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

133 Marys Mount Road, Goulburn, NSW 2580

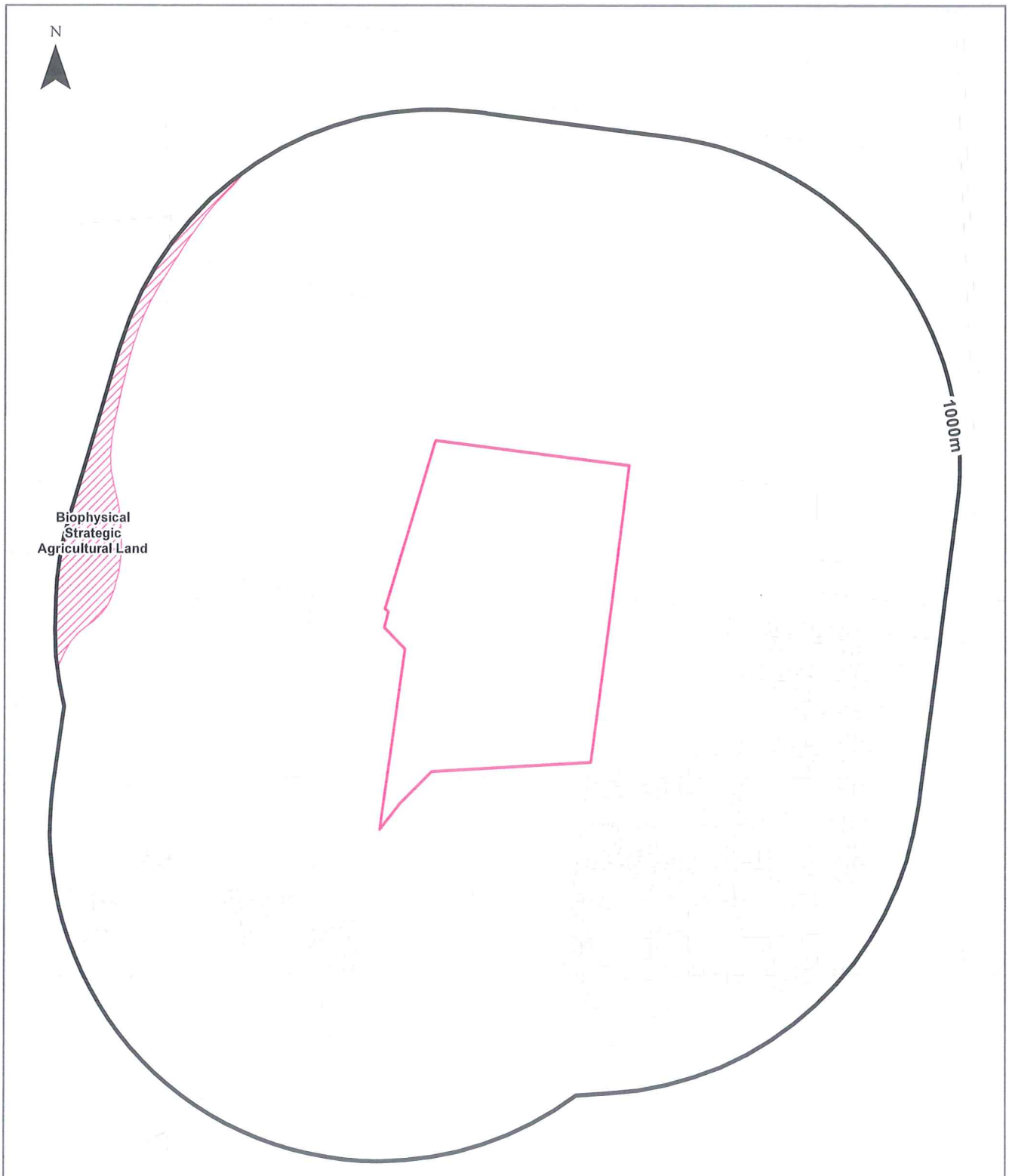
Mining Subsidence Districts

Mining Subsidence Districts within the dataset buffer:

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

State Environmental Planning Policy

133 Marys Mount Road, Goulburn, NSW 2580



Legend

- Site Boundary
- Report Buffer
- Property Boundary
- SEPP 14 - Coastal Wetlands
- SEPP 26 - Littoral Rainforests
- SEPP 71 - Coastal Protection
- SEPP Major Developments 2005
- Strategic Land Use - Future Residential Growth Areas
- Strategic Land Use - Additional Rural Village Land
- Strategic Land Use -Biophysical Strategic Agricultural Land
- Strategic Land Use -Critical Industry Cluster (Equine)
- Strategic Land Use -Critical Industry Cluster (Viticulture)

Scale:	Data Sources: Property Boundaries & Topographic Data:	Coordinate System:	Date: 18 April 2018
0 100 200 400 600 800 Meters	© Department Finance, Services & Innovation 2018	GDA 1994 MGA Zone 56	

Environmental Zoning

133 Marys Mount Road, Goulburn, NSW 2580

State Environmental Planning Policy Protected Areas

Are there any State Environmental Planning Policy Protected Areas onsite or within the dataset buffer?

Dataset	Onsite	Within Site Buffer	Distance
SEPP14 - Coastal Wetlands	No	No	N/A
SEPP26 - Littoral Rainforests	No	No	N/A
SEPP71 - Coastal Protection Zone	No	No	N/A

State Environmental Planning Policy Major Developments (2005)

State Environmental Planning Policy Major Developments within the dataset buffer:

Map Id	Feature	Effective Date	Distance	Direction
N/A	No records within buffer			

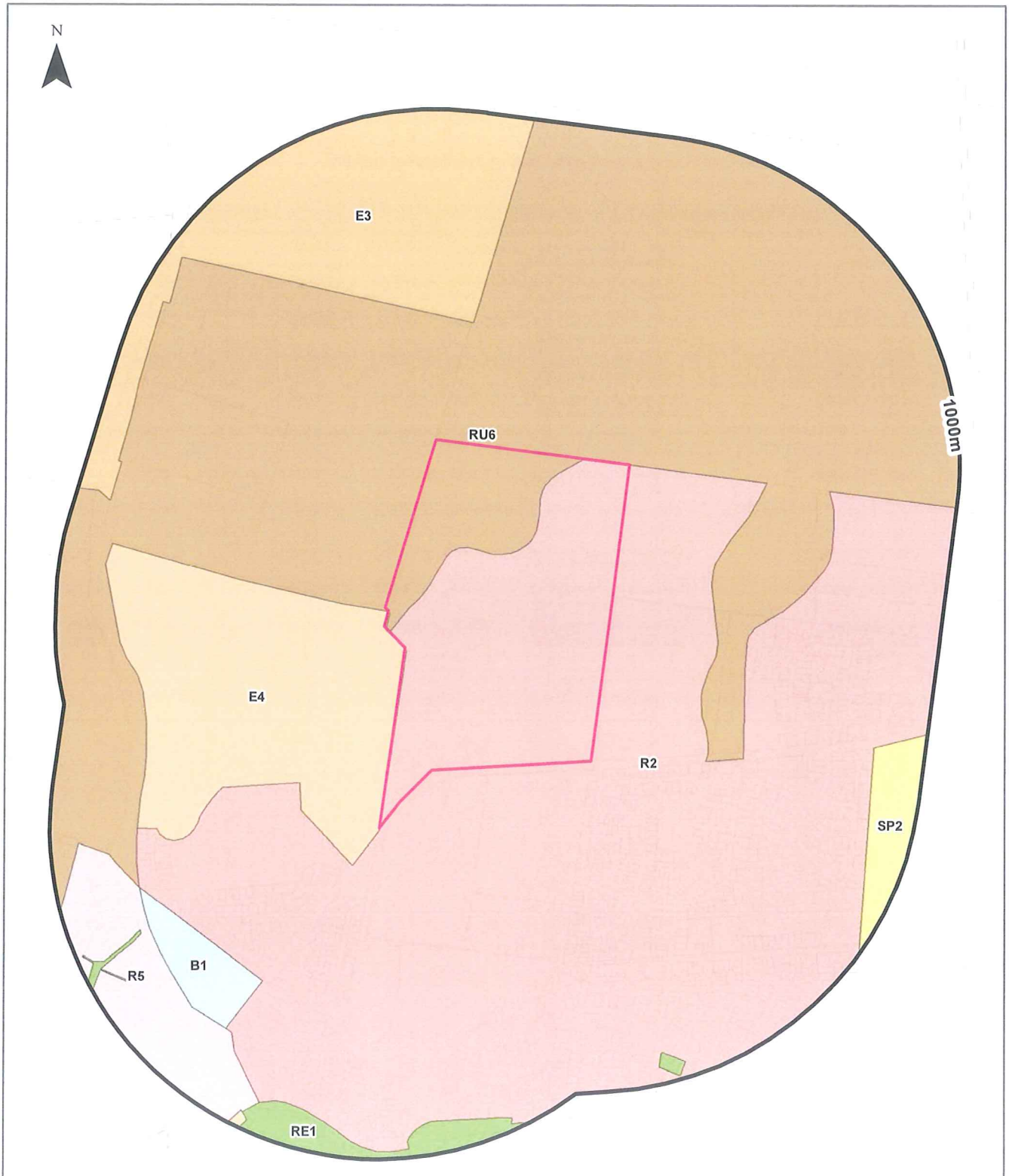
State Environmental Planning Policy Strategic Land Use Areas

State Environmental Planning Policy Strategic Land Use Areas onsite or within the dataset buffer:

Strategic Land Use	SEPPNo	Effective Date	Amendment	Amendment Year	Distance	Direction
Biophysical Strategic Agricultural Land	2007	28/01/2014	Coal Seam Gas	2014	816m	West

LEP Planning Zones

133 Marys Mount Road, Goulburn, NSW 2580



Local Environmental Plan

133 Marys Mount Road, Goulburn, NSW 2580

Land Zoning

What Local Environmental Plan Land Zones exist within the dataset buffer?

Zone	Description	Purpose	LEP or SEPP	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
R2	Low Density Residential		Goulburn Mulwaree Local Environmental Plan 2009	13/03/2009	13/03/2009	15/08/2014		0m	Onsite
RU6	Transition		Goulburn Mulwaree Local Environmental Plan 2009	13/03/2009	13/03/2009	15/08/2014		0m	Onsite
E4	Environmental Living		Goulburn Mulwaree Local Environmental Plan 2009	13/03/2009	13/03/2009	15/08/2014		0m	West
E3	Environmental Management		Goulburn Mulwaree Local Environmental Plan 2009	13/03/2009	13/03/2009	15/08/2014		367m	North
B1	Neighbourhood Centre		Goulburn Mulwaree Local Environmental Plan 2009	13/03/2009	13/03/2009	15/08/2014		584m	South West
R5	Large Lot Residential		Goulburn Mulwaree Local Environmental Plan 2009	13/03/2009	13/03/2009	15/08/2014		751m	South West
RE1	Public Recreation		Goulburn Mulwaree Local Environmental Plan 2009	13/07/2012	13/07/2012	15/08/2014	Amendment No 2	790m	South West
SP2	Infrastructure	School	Goulburn Mulwaree Local Environmental Plan 2009	13/03/2009	13/03/2009	15/08/2014		844m	South East
RE1	Public Recreation		Goulburn Mulwaree Local Environmental Plan 2009	13/03/2009	13/03/2009	15/08/2014		878m	South
RE1	Public Recreation		Goulburn Mulwaree Local Environmental Plan 2009	13/03/2009	13/03/2009	15/08/2014		909m	South
E4	Environmental Living		Goulburn Mulwaree Local Environmental Plan 2009	13/03/2009	13/03/2009	15/08/2014		950m	South West

Local Environmental Plan

133 Marys Mount Road, Goulburn, NSW 2580

Minimum Subdivision Lot Size

What are the onsite Local Environmental Plan Minimum Subdivision Lot Sizes?

Symbol	Minimum Lot Size	LEP or SEPP	Published Date	Commenced Date	Currency Date	Amendment	Percentage of Site Area
Q	700 m²	Goulburn Mulwaree Local Environmental Plan 2009	13/03/2009	13/03/2009	08/11/2013		76.28
AB2	20 ha	Goulburn Mulwaree Local Environmental Plan 2009	13/07/2012	13/07/2012	08/11/2013	Amendment No 2	23.41

Maximum Height of Building

What are the onsite Local Environmental Plan Maximum Height of Buildings?

Symbol	Maximum Height of Building	LEP or SEPP	Published Date	Commenced Date	Currency Date	Amendment	Percentage of Site Area
No Data							

Floor Space Ratio

What are the onsite Local Environmental Plan Floor Space Ratios?

Symbol	Floor Space Ratio	LEP or SEPP	Published Date	Commenced Date	Currency Date	Amendment	Percentage of Site Area
No Data							

Land Application

What are the onsite Local Environmental Plan Land Applications?

Application Type	LEP or SEPP	Published Date	Commenced Date	Currency Date	Amendment	Percentage of Site Area
Included	Goulburn Mulwaree Local Environmental Plan 2009	08/11/2013	08/11/2013	08/11/2013	Amendment No 4	100

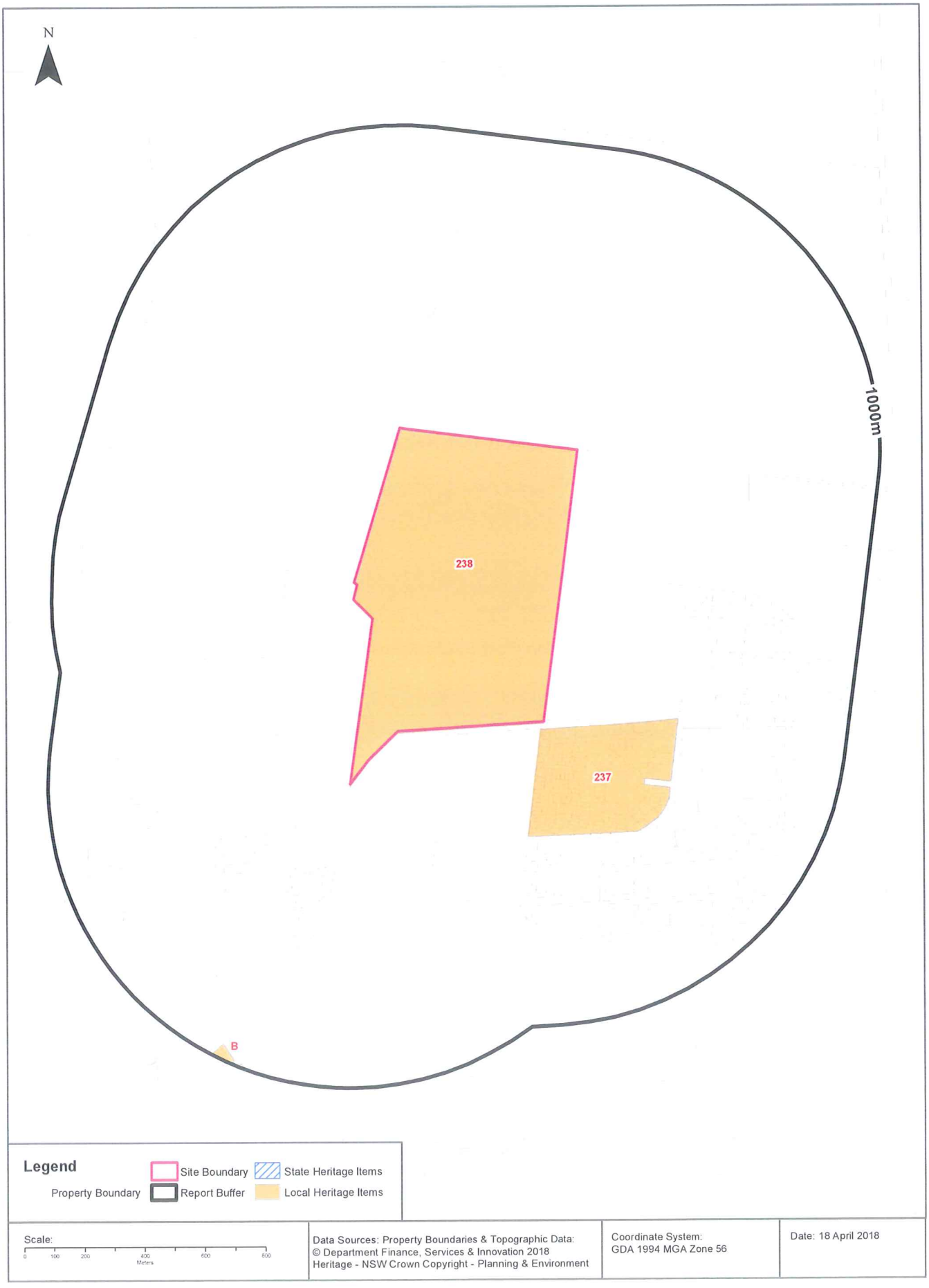
Land Reservation Acquisition

What are the onsite Local Environmental Plan Land Reservation Acquisitions?

Reservation	LEP	Published Date	Commenced Date	Currency Date	Amendment	Comments	Percentage of Site Area
No Data							

Heritage Items

133 Marys Mount Road, Goulburn, NSW 2580



Data Sources: Property Boundaries & Topographic Data:
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Coordinate System:
GDA 1994 MGA Zone 56

Date: 18 April 2018

Heritage

133 Marys Mount Road, Goulburn, NSW 2580

State Heritage Items

What are the State Heritage 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							

Local Heritage Items

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

Map Id	Name	Classification	Significance	LEP or Act	Published Date	Commenced Date	Currency Date	Distance	Direction
238	Dwelling, 'Teneriffe'	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	13/03/2009	13/03/2009	13/03/2009	0m	Onsite
237	Dwellings, 'Ravensworth', Two Storey	Item - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	13/03/2009	13/03/2009	13/03/2009	25m	South East
B	Goulburn City Conservation Area	Conservation Area - General	Local	Goulburn Mulwaree Local Environmental Plan 2009	13/03/2009	13/03/2009	13/03/2009	954m	South West

Natural Hazards

133 Marys Mount Road, Goulburn, NSW 2580

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

133 Marys Mount Road, Goulburn, NSW 2580

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					

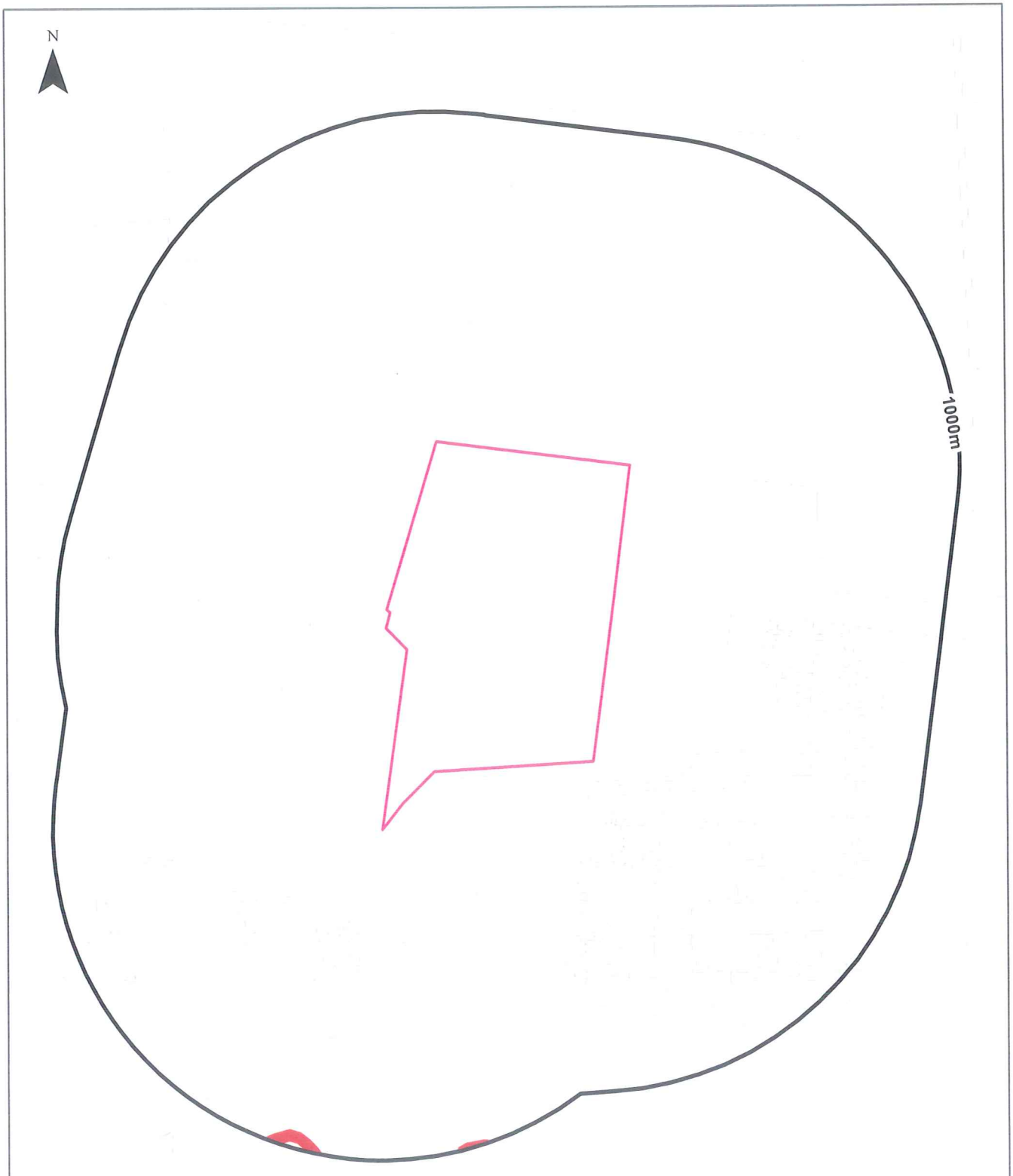
RAMSAR Wetlands

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 - Groundwater Dependent Ecosystems Atlas

133 Marys Mount Road, Goulburn, NSW 2580



Legend

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

Scale: 0 100 200 400 600 800 Meters

Data Sources: Property Boundaries & Topographic Data: © Department Finance, Services & Innovation 2018

Coordinate System: GDA 1994 MGA Zone 56

Date: 18 April 2018

Ecological Constraints

133 Marys Mount Road, Goulburn, NSW 2580

Groundwater Dependent Ecosystems Atlas

Type	GDE Potential	Geomorphology	Ecosystem Type	Aquifer Geology	Distance
Aquatic	High potential GDE - from national assessment	Upland plains with separating strike-aligned hills, closed lake basins.	River		951m

Ecological Constraints - Inflow Dependent Ecosystems Likelihood

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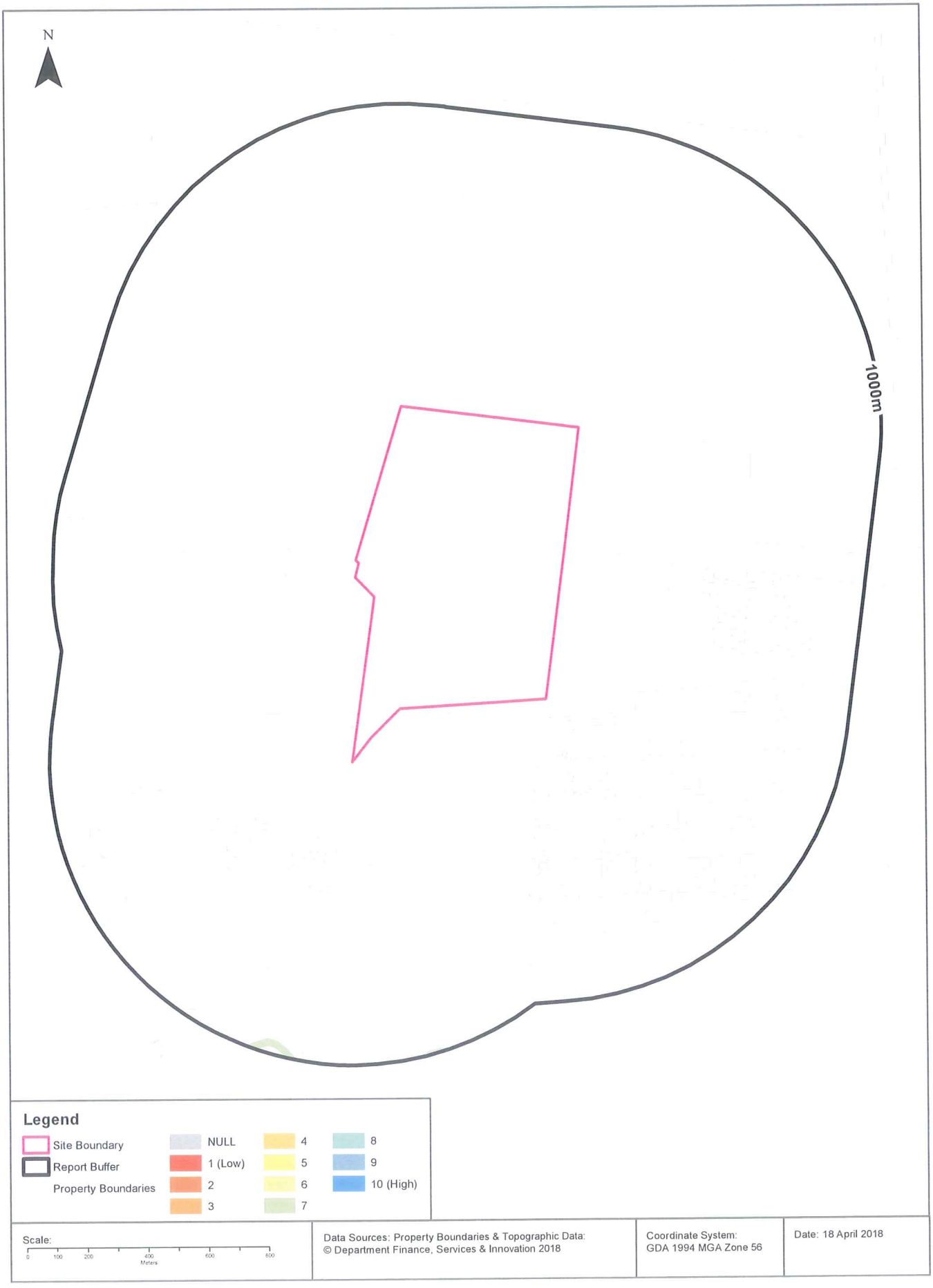

Ecological Constraints

133 Marys Mount Road, Goulburn, NSW 2580

Inflow Dependent Ecosystems Likelihood

Type	IDE Likelihood	Geomorphology	Ecosystem Type	Aquifer Geology	Distance
Aquatic	7	Upland plains with separating strike-aligned hills, closed lake basins.	River		951m

Ecological Constraints

133 Marys Mount Road, Goulburn, NSW 2580

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	Daphoenositta chrysoptera	Varied Sittella	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Ephippiorhynchus asiaticus	Black-necked Stork	Endangered	Not Sensitive	Not Listed	
Animalia	Aves	Falco subniger	Black Falcon	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Haliaeetus leucogaster	White-bellied Sea-Eagle	Vulnerable	Not Sensitive	Not Listed	CAMBA
Animalia	Aves	Hieraaetus morphnoides	Little Eagle	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Petroica boodang	Scarlet Robin	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Petroica phoenicea	Flame Robin	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Falsistrellus tasmaniensis	Eastern False Pipistrelle	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Miniopterus schreibersii oceanensis	Eastern Bentwing-bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Pteropus poliocephalus	Grey-headed Flying-fox	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Mammalia	Saccolaimus flaviventris	Yellow-bellied Sheathtail-bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Reptilia	Delma impar	Striped Legless Lizard	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Bossiaea oligosperma	Few-seeded Bossiaea	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Diuris aequalis	Buttercup Doubletail	Endangered	Category 2	Vulnerable	
Plantae	Flora	Eucalyptus nicholii	Narrow-leaved Black Peppermint	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Leucochrysum albicans subsp. tricolor	Hoary Sunray	Not Listed	Not Sensitive	Endangered	
Plantae	Flora	Pomaderris delicata	Delicate Pomaderris	Critically Endangered	Not Sensitive	Not Listed	
Plantae	Flora	Rutidosis leptorrhynchoides	Button Wrinklewort	Endangered	Not Sensitive	Endangered	

Data does not include NSW category 1 sensitive species.
NSW BioNet: © State of NSW and Office of Environment and Heritage
Data obtained 18/04/2018

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   (f) the Report does not include any information relating to the actual state or condition of the Property;
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   (i) the End User should undertake its own inspection s of the Property to satisfy itself that there are no defects or failures.
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Planning Certificates

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SECTION 10.7 (2) PLANNING CERTIFICATE
ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

Receipt No.: 279885
Applicant's Reference: LS003215
Council Reference: Plan/1060/1718

DESCRIPTION OF PROPERTY

Address: **Teneriffe 133 Marys Mount Road GOULBURN NSW 2580**
Legal Description: **Lot 28 DP 479**

At the date of this certificate the above mentioned land is affected by the following matters set out in Schedule 4 of the *Environmental Planning and Assessment Regulation 2000*.

1 Names of relevant planning instruments and DCP's

(1) The name of each environmental planning instrument that applies to the development on the land.

State Environmental Planning Policies (SEPP)

SEPP No. 21 – Caravan Parks	SEPP (Building Sustainability Index: BASIX) 2004
SEPP No. 30 – Intensive Agriculture	SEPP (Exempt and Complying Development Codes) 2008
SEPP No. 33 – Hazardous and Offensive Development	SEPP (Housing for Seniors or People with a Disability) 2004
SEPP No. 36 – Manufactured Home Estates	SEPP (Infrastructure) 2007
SEPP No. 44 – Koala Habitat Protection	SEPP (Mining, Petroleum Production and Extractive Industries) 2007
SEPP No. 50 – Canal Estate Development	SEPP (Miscellaneous Consent Provisions)2007
SEPP No. 55 – Remediation of Land	SEPP (State & Regional Development) 2011
SEPP No. 62 – Sustainable Aquaculture	SEPP (Rural Lands) 2008
SEPP No. 64 – Advertising and Signage	SEPP (Sydney Drinking Water Catchment) 2011
SEPP No. 65 – Design Quality of Residential Flat Development	SEPP (Vegetation in Non-Rural Areas) 2017
SEPP (Affordable Rental Housing) 2009	SEPP (Educational Establishments and Child Care Facilities) 2017

Local Environmental Plan (LEP)

Goulburn Mulwaree Local Environmental Plan 2009

(2) The name of each proposed environmental planning instrument that will apply to the carrying out of development on the land and that is or has been the subject of community consultation or on public exhibition under the Act (unless Secretary has notified the Council that the making of the proposed instrument has been deferred indefinitely or has not been approved).

Draft Goulburn Mulwaree Local Environmental Plan 2009 (Amendment No 8)

(3) The name of each development control plan that applies to the carrying out of development on the land.

Goulburn Mulwaree Development Control Plan 2009

(4) In this clause, proposed environmental planning instruments includes a planning proposal for a LEP or a draft environmental planning instrument.

2 Zoning and land use under relevant LEP's

(a) The identity of the zone is R2 Low Density Residential
RU6 Transition
under the *Goulburn Mulwaree Local Environmental Plan 2009*.

(b) The purposes for which the plan or instrument provides that development may be carried out within the zone without the need for development consent.

(c) The purposes for which the plan or instrument provides that development may not be carried out within the zone except with development consent.

(d) The purposes for which the plan or instrument provides that development is prohibited within the zone.

The answers for parts (b) to (d) are set out in the land use table below

Zone R2 Low Density Residential

1 Objectives of zone

- To provide for the housing needs of the community within a low density residential environment.
- To enable other land uses that provide facilities or services to meet the day to day needs of residents.
- To maintain the economic strength of commercial centres by limiting the retailing of food and clothing.

2 Permitted without consent

Home occupations; Roads

3 Permitted with consent

Boarding houses; Dwelling houses; Group homes; Home industries; Neighbourhood shops; Any other development not specified in item 2 or 4

4 Prohibited

Agriculture; Air transport facilities; Airstrips; Amusement centres; Animal boarding or training establishments; Biosolids treatment facilities; Boat building and repair facilities; Boat launching ramps; Boat sheds; Camping grounds; Caravan parks; Charter and tourism boating facilities; Commercial premises; Correctional centres; Crematoria; Depots; Eco-tourist facilities; Electricity generating works; Entertainment facilities; Extractive industries; Farm buildings; Forestry; Freight transport facilities; Function centres; Heavy industrial storage establishments; Helipads; Highway service centres; Home occupations (sex services); Industrial retail outlets; Industrial training facilities; Industries; Jetties; Hostels; Marinas; Mooring pens; Moorings; Mortuaries; Open cut mining; Passenger transport facilities; Recreation facilities (indoor); Recreation facilities (major); Registered clubs; Research stations; Residential care facilities; Residential flat buildings; Restricted premises; Rural industries; Rural workers' dwellings; Service stations; Sewage treatment plants; Sex services premises; Storage premises; Tourist and visitor accommodation; Transport depots; Truck depots; Vehicle body repair workshops; Vehicle repair stations; Veterinary hospitals; Warehouse or distribution centres; Waste or resource management facilities; Water recreation structures; Water recycling facilities; Water supply systems; Wharf or boating facilities; Wholesale supplies

Zone RU6 Transition

1 Objectives of zone

- To protect and maintain land that provides a transition between rural and other land uses of varying intensities or environmental sensitivities.
- To minimise conflict between land uses within this zone and land uses within adjoining zones.

2 Permitted without consent

Environmental facilities; Environmental protection works; Extensive agriculture; Home occupations; Roads

3 Permitted with consent

Backpackers' accommodation; Bed and breakfast accommodation; Cellar door premises; Dwelling houses; Farm stay accommodation; Home industries; Kiosks; Landscaping material supplies; Markets; Plant nurseries; Roadside stalls; Rural supplies; Timber yards; Any other development not specified in item 2 or 4

4 Prohibited

Air transport facilities; Airstrips; Amusement centres; Animal boarding or training establishments; Attached dwellings; Boat building and repair facilities; Business premises; Camping grounds; Caravan parks; Crematoria; Dual occupancies; Electricity generating works; Exhibition homes; Exhibition villages; Group homes; Heavy industrial storage establishments; Heavy industries; Helipads; Highway service centres; Home occupations (sex services); Industrial retail outlets; Industrial training facilities; Industries; Intensive livestock agriculture; Intensive plant agriculture; Livestock processing industries; Marinas; Mooring pens; Mortuaries; Multi dwelling housing; Passenger transport facilities; Recreation facilities (major); Registered clubs; Residential flat buildings; Restricted premises; Retail premises; Rural workers' dwellings; Sawmill or log processing works; Semi-detached dwellings; Seniors housing; Service stations; Sex services premises; Shop top housing; Storage premises; Tourist and visitor accommodation; Transport depots; Truck depots; Vehicle body repair workshops; Vehicle repair stations; Warehouse or distribution centres; Waste or resource management facilities; Water recreation structures; Wharf or boating facilities; Wholesale supplies

(e) Whether any development standards applying to the land fix minimum land dimensions for the erection of a dwelling-house on the land and, if so, the minimum land dimensions so fixed.

No.

(f) Whether the land includes or comprises critical habitat.

No the land does not include or comprise critical habitat.

(g) Whether the land is located in a heritage conservation area.

The land is not within a heritage conservation area.

(h) Whether an item of environmental heritage is situated on the land.

An item of environmental heritage is situated on the land, refer to Clause 5.10 and Schedule 5 of *Goulburn Mulwaree Local Environmental Plan 2009.*

2A Zoning and land use under *State Environmental Planning Policy (Sydney Region Growth Centres) 2006*

Not applicable to the Goulburn Mulwaree Local Government Area.

3 Complying development

Whether or not the land to which the certificate relates is land on which complying development may be carried out under *State Environmental Planning Policy (Exempt and Complying Development Codes) 2008*?

Housing Code
No - complying development under the Housing Code can not be carried out on the land because the land is affected by the following exclusions:

The land contains or comprises a heritage item that is listed under an environmental planning instrument.

Rural Housing Code
No - complying development under the Rural Housing Code can not be carried out on the land because the land is affected by the following exclusions:

The land contains or comprises a heritage item that is listed under an environmental planning instrument.

Housing Alterations Code
No - complying development under the Housing Internal Alterations Code can not be carried out on the land because the land is affected by the following exclusions:

The land contains or comprises a heritage item that is listed under an environmental planning instrument.

General Development Code
No - complying development under the General Development Code can not be carried out on the land because the land is affected by the following exclusions:

The land contains or comprises a heritage item that is listed under an environmental planning instrument.

Commercial and Industrial Alterations Code
No - complying development under the General Commercial and Industrial Alterations Code can not be carried out on the land because the land is affected by the following exclusions:

The land contains or comprises a heritage item that is listed under an environmental planning instrument.

Commercial and Industrial (New Buildings and Additions) Code
No - complying development under the General Commercial and Industrial (New Buildings and Additions) Code cannot be carried out on the land due to the zoning of the land

Container Recycling Facilities Code
No - complying development under the Container Recycling Facilities Code cannot be carried out on the land due to the zoning of the land

Subdivisions Code
No - complying development under the Subdivisions Code can not be carried out on the land because the land is affected by the following exclusions:

The land contains or comprises a heritage item that is listed under an environmental planning instrument.

Demolition Code
No - complying development under the Demolition Code can not be carried out on the land because the land is affected by the following exclusions:

The land contains or comprises a heritage item that is listed under an environmental planning instrument.

Fire Safety Code
No - complying development under the Fire Safety Code can not be carried out on the land because the land is affected by the following exclusions:

The land contains or comprises a heritage item that is listed under an environmental planning instrument.

Note. If the land is a lot to which the Housing Code, Rural Housing Code, Housing Alterations Code, General Development Code, Commercial and Industrial Alterations Code or Commercial and Industrial (New Buildings and Additions) Code (within the meaning of the *State Environmental Planning Policy (Exempt and Complying Development Codes)* 2008 applies, complying development may be carried out on any part of the lot that is not affected by the provisions of Clause 1.19 of that Policy.

4 Coastal protection

Not applicable to the Goulburn Mulwaree Local Government Area.

4A Certain information relating to beaches and coasts

Not applicable to the Goulburn Mulwaree Local Government Area.

4B Annual charges under *Local Government Act 1993* for coastal protection services that relate to existing coastal protection works

Not applicable to the Goulburn Mulwaree Local Government Area.

5 Mine subsidence

Whether or not the land is proclaimed to be a mine subsidence district within the meaning of Section 15 of the *Mine Subsidence Compensation Act 1961*.

No.

6 Road widening and road realignment

Whether or not the land is affected by Road widening or road realignment under:

(a) Division 2 of Part 3 of the *Roads Act 1993*; or

(b) any environmental planning instrument; or

(c) any resolution of the Council.

Yes - Marys Mount Road, Goulburn frontage

7 Council and other public authority policies on hazard risk restrictions

Whether or not the land is affected by Policy:

(a) adopted by the council, or

(b) adopted by any other public authority,

that restricts development of the land because of the likelihood of land slip, bushfire, tidal inundation, subsidence, acid sulphate soils or any other risk (other than flooding)?

(a) No.

(b) No.

7A Flood related development controls information

(1) Whether or not development on the land or part of the land for the purpose of dwelling houses, dual occupancies, multi dwelling housing or residential flat buildings (not including development for the purpose of group homes or seniors housing) is subject to flood related development controls.

No.

(2) Whether or not development on that land or part of the land for any other purpose is subject to flood related development controls.

No.

8 Land reserved for acquisition

Whether or not any environmental planning instrument or proposed environmental planning instrument makes provision in relation to the acquisition of the land by a public authority, as referred to in Section 3.15 of the Act?

No.

9 Contribution plans

The name of each contributions plan applying to the land.

Goulburn Mulwaree Section 94 Development Contributions Plan 2009 and / or Section 94A Development Contributions Plan 2009

The land may be affected by any of the following plans under Section 64 of the *Local Government Act 1993*:

Development Servicing Plan for Water Supply, Sewerage and Stormwater, 2017

9A Biodiversity certified land

If the land is biodiversity certified land under Part 8 of the *Biodiversity Conservation Act 2016*, a statement to that effect.

No. Council is not aware that the land is biodiversity certified under Part 8 of the Biodiversity Conservation Act 2016.

Note. Biodiversity certified land includes land certified under Part 7AA of the *Threatened Species Conservation Act 1995* that is taken to be certified under Part 8 of the *Biodiversity Conservation Act 2016.*

10 Biodiversity stewardship sites

If the land is a biodiversity stewardship site under a biodiversity stewardship agreement under Part 5 of the *Biodiversity Conservation Act 2016,* a statement to the effect (but only if the council has been notified of the existence of the agreement by the Chief Executive of the Office of Environment and Heritage).

No. Council is not aware of a biodiversity stewardship agreement under Part 5 of the *Biodiversity Conservation Act 2016* relating to the land.

Note. Biodiversity stewardship agreements include biobanking agreements under Part 7A of the *Threatened Species Conservation Act 1995* that are taken to be biodiversity stewardship agreements under Part 5 of the *Biodiversity Conservation Act 2016.*

10A Native vegetation clearing set asides

If the land contains a set aside area under Section 60ZC of the *Local Land Services Act 2013*, a statement to that effect (but only if the council has been notified of the existence of the set aside area by the Local Land Services or it is registered in the public register under that section.

No. The land does not contain a set aside area under Section 60ZC of the *Local Land Services Act 2013.*

11 Bush fire prone land

Whether or not some or all of the land is bush fire prone land.

The land or part of the land is not bush fire prone land.

12 Property vegetation plans

If the land is land to which a property vegetation plan approved under Part 4 of the *Native Vegetation Act 2003* (and that continues in force) applies, a statement to that effect (but only if the council has been notified of the existence of the plan by the person or body that approved the plan under that Act).

Council is not aware of a property vegetation plan under the *Native Vegetation Act 2003* relating to the land.

13 Orders under *Trees (Disputes Between Neighbours) Act 2006*

Whether an order under the *Trees (Disputes Between Neighbours) Act 2006* has been made to carry out work in relation to a tree on the land (but only if Council has been notified of the order)?

No, an order under the *Trees (Disputes Between Neighbours) Act 2006* has not been made.

14 Directions under Part 3A

Whether there is a direction by the Minister in force under the former Section 75P (2) (c1) of the Act.

No direction is in force.

15 Site compatibility certificates and conditions for seniors housing

If the land is land to which *State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004* applies:

(a) Whether or not Council is aware of a current site compatibility certificate (seniors housing), in respect of the proposed development on the land.

Council is not aware of any current site compatibility certificates (seniors housing) in respect of proposed development on the land.

(b) Whether or not any terms of a kind referred to in clause 18 (2) of that Policy that have been imposed as a condition of consent to a development application granted after October 2007 in respect of the land.

No terms referred to in clause 18(2) of *State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004* have been imposed as conditions of consent to a development application for the land granted after 11 October 2007.

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16 Site compatibility certificates for infrastructure, school or TAFE establishments

Whether or not Council is aware of a valid site compatibility certificate in respect of proposed development on the land.

Council is not aware of any valid site compatibility certificate (affordable rental housing) in respect of proposed development on the land.

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17 Site compatibility certificates and conditions for affordable rental housing

(1) Whether or not Council is aware of a current site compatibility certificate (affordable rental housing) in respect of proposed development on the land.

Council is not aware of any current site compatibility certificate (affordable rental housing) in respect of proposed development on the land.

(2) Whether or not any terms of a kind referred to in clause 17 (1) or 38 (1) of *State Environmental Planning Policy (Affordable Rental Housing) 2009* that have been imposed as a condition of consent to a development application in respect of the land.

No terms referred to in clause 17(1) or 37(1) of *State Environmental Planning Policy (Affordable Rental Housing) 2009* have been imposed as conditions of consent to a development application in respect of the land.

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18 Paper subdivision information

(3) The name of any development plan adopted by a relevant authority that applies to the land or that is proposed to be subject to a consent ballot.

(4) The date of any subdivision order that applies to the land.

(5) Words and expressions used in this clause have the same meaning as they have in Part 16C of *Environmental Planning and Assessment Regulation 2000*.

Not applicable.

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19 Site verification certificates

Whether or not Council is aware of a current site verification certificate, in respect of the land.

Council is not aware of a current site verification certificate in respect of the land.

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20 Loose-fill asbestos insulation

Whether or not the land includes any residential premises (as defined in Division 1A of Part 8 of the *Home Building Act 1989*) that are listed on a register of residential premises that contain or have contained loose-fill asbestos insulation.

No the land has not been identified in the Loose-Fill Asbestos Insulation Register as containing loose-fill asbestos ceiling insulation.

Additional Matters

Note. The following matters are prescribed by Section 59 (2) of the *Contaminated Land Management Act 1997* as additional matters to be specified in a planning certificate:

(a) Whether or not the land to which the certificate relates is significantly contaminated land within the meaning of that Act.

The land is not significantly contaminated as at the date this certificate is issued.

(b) Whether or not the land to which the certificate relates is subject to a management order within the meaning of that Act.

The land is not subject to a management order as at the date this certificate is issued.

(c) Whether or not the land to which the certificate relates is the subject of an approved voluntary management proposal within the meaning of the Act.

The land is not the subject of an approved voluntary management proposal as at the date this certificate is issued.

(d) Whether or not the land to which this certificate relates is subject to an ongoing maintenance order within the meaning of that Act.

The land is not subject to an ongoing maintenance order as at the date this certificate is issued.

(e) Whether or not the land to which the certificate relates is the subject of a site audit statement within the meaning of that Act – if a copy of such statement has been provided at any time to the local authority issuing the certificate.

The land is not the subject of a site audit statement as at the date this certificate is issued.

Legislation and Environmental Planning Instruments including *Goulburn Mulwaree Local Environmental Plan 2009* and the *Standard Instrument (Local Environmental Plans) Order 2006* can be found at www.legislation.nsw.gov.au

SECTION 10.7 (5) PLANNING CERTIFICATE
ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

At the date of this certificate, Council is aware of the following matters affecting the above mentioned land (other than those matters set out in Schedule 4 of the *Environmental Planning and Assessment Regulation 2000.*

A Does the land have frontage to a Classified Road and consequently affected by Clauses 3.3.6, 4.1.7, 6.4.2 and 6.4.3 of Goulburn Mulwaree Development Control Plan 2009?

No

B Is the land identified on the Height of Buildings Map and consequently affected by Clause 4.3 of *Goulburn Mulwaree Local Environmental Plan 2009*?

No

C Is the land identified on the Floor Space Ratio Map and consequently affected by Clauses 4.4 and 4.5 of *Goulburn Mulwaree Local Environmental Plan 2009*?

No

D Is the land located within 50 metres of a zone boundary and consequently affected by Clause 5.3 of *Goulburn Mulwaree Local Environmental Plan 2009*?

Yes

E Is a permit required from Council to clear vegetation under Part 3 of State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017?

Yes - vegetation on the land has been identified in *Goulburn Mulwaree Development Control Plan 2009* and clearing of that vegetation requires a permit from Council pursuant to Part 3 of *State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017*

Note: The requirements for approval of vegetation clearing are varied depending on the location and uses of the land and the intention of the clearing. The question above relates only to whether a permit is required from Council under State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017.

F Is the land identified on the Urban Release Area Map and consequently affected by Part 6 of *Goulburn Mulwaree Local Environmental Plan 2009*?

No

G Is the land identified on the Terrestrial Biodiversity Map and consequently affected by Clause 7.2 *Goulburn Mulwaree Local Environmental Plan 2009*?

No

Information regarding loose-fill asbestos insulation

Some residential homes located in the Goulburn Mulwaree local government area have been identified as potentially containing loose-fill asbestos insulation, for example in the roof space. NSW Fair Trading maintains a Register of homes that are affected by loose-fill asbestos insulation.

You should make your own enquiries as to the age of the buildings on the land to which this certificate relates and, if it contains a building constructed prior to 1980, the council strongly recommends that any potential purchaser obtain advice from a licensed asbestos assessor to determine whether loose-fill asbestos is present in any building on the land and, if so, the health risks (if any) this may pose for the building's occupants.

Contact NSW Fair Trading for further information

A. Adkins

Date of Certificate
18 April 2018

for **Warwick Bennett**
General Manager
Goulburn Mulwaree Council