



Preliminary Site Investigation

91 Gardiner Street, Rutherford

Project: C1102

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12 October 2021

Prepared for

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Project Details

Site Address:	91 Gardiner Street, Rutherford	
Project Type:	Proposed Commercial Development	
Project no	Report type	Report no
C1102	PSI	001

Report Register

Revision Number	Reported By	Reviewed By	Date
Rev0	JD	MA	12/10/2021

We confirm that the following report has been produced for Diana Petfood, based on the described methods and conditions within.

For and on behalf of **Hunter Civilab**,

Malcolm Adrien

Environmental Services Manager

Executive Summary

Hunter Civilab (HC) was engaged by Diana Petfood to undertake a Preliminary Site Investigation (PSI) with limited sampling at 91 Gardiner Street, Rutherford (herein referred to as the site).

The site is currently proposed to undergo redevelopment to incorporate a commercial warehouse. The Preliminary Site Investigation is required as part of the development application.

This PSI includes the following elements:

- Review of historical aerial images of the site and surrounding area;
- Compilation of a historical title summary;
- Review of a Section 10.7 Planning Certificate;
- Review of publicly available environmental databases and legislative instruments;
- Site inspection and interview with knowledgeable site representative (if available);
- A preliminary Conceptual Site Model (CSM) with an assessment of source-pathway-receptor linkages; and
- Recommendations for further investigation, any management requirements and/or any ongoing management, monitoring or remedial works that may be required.

Limited Soil sampling was also conducted to supplement the desktop assessment for contamination purposes. Soil sampling consisted of:

- Collection of six (6) primary samples analysed for contaminants of concern;
- Collection of one (1) duplicate sample for QA/QC purposes; and
- Collection of one (1) rinsate sample for QA/QC purposes.

The detailed desktop review of available information and thorough site inspection including shallow soil investigation has enabled the development of a preliminary conceptual site model allowing assessment of potential health and environmental issues relating to the site. Key findings were:

1. Potential contamination sources at the site are limited based on historical land use;
2. Visible signs of gross contamination were not observed during the site inspection and intrusive works; and
3. Contamination in shallow soils was not identified at any of the sampling locations.

In summary, based on the desktop study and limited intrusive sampling conducted on the Site, no indication of gross contamination has been identified which would constrain the development of the Site for its proposed land use as commercial development.

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1 Introduction

1.1 Background

Hunter Civilab (HC) was engaged by Diana Petfood to undertake a Preliminary Site Investigation (PSI) with limited soil sampling at 91 Gardiner Street, Rutherford (herein referred to as the site).

The site is currently proposed to undergo redevelopment to incorporate a commercial warehouse. The Preliminary Site Investigation is required as part of the development application.

A Site Features Plan is presented in **Figure 1** of **Annex A**.

1.2 Objectives

The objectives of this PSI were to investigate potential contaminant sources, pathways and receptors in relation to the site as well as inform preliminary consideration of potential risks to human health and/or the environment within the context of the most sensitive potential land use. The Site is intended to have Commercial land use. For the purpose of the investigation, HIL-D has been adopted as the most sensitive land use.

This report has been prepared in general accordance with provisions for a PSI as defined within the *National Environment Protection Measure (NEPC 2013)*, *AS 4482.1-1997 Guide to the sampling and Investigation of potentially contaminated soil* and the *Consultants Reporting on Contaminated Sites Contaminated Land Guidelines (NSW EPA 2020)*.

All information collected informed the development of the preliminary conceptual site model which provides a representation of potential contamination sources, receptors and exposure pathways between these sources and receptors.

1.3 Scope of Works

1.3.1 Preliminary Site Investigation

This PSI includes the following elements:

- Review of historical aerial images of the site and surrounding area;
- Compilation of a historical title summary;
- Review of a Section 10.7 Planning Certificate;
- Review of publicly available environmental databases and legislative instruments;
- Site inspection and interview with knowledgeable site representative (if available);
- A preliminary Conceptual Site Model (CSM) with an assessment of source-pathway-receptor linkages; and
- Recommendations for further investigation, any management requirements and/or any ongoing management, monitoring or remedial works that may be required.

1.3.2 Limited Soil Investigation

Limited soil sampling was also conducted to supplement the desktop assessment for contamination purposes. Soil sampling consisted of:

- Collection of six (6) primary samples analysed for contaminants of concern;
- Collection of one (1) duplicate sample for QA/QC purposes; and
- Collection of one (1) rinsate sample for QA/QC purposes.

2 Site Description

2.1 Site and Lot identification

The site is located at 91 Gardiner Street, Rutherford, at the time of this investigation the site is legally identified as Lot 2 on Deposited Plan (DP) 1197299 and covers an area of approximately 23,000m². For the purpose of this investigation, the investigation area forms a triangular-shaped area of approximately 23,000m² located at the western corner of the lot.

A summary of site information is provided in **Table 1** below.

Table 1 - Site Identification

Item	Description
Site Address	91 Gardiner Street Rutherford
Current Zoning	IN1 General Industrial
Legal Description	Lot 2 DP 1197299
Local Government Authority	Maitland City Council
Site Area	Approximately 23,000m ²
Elevation	~30m Above Sea Level (ASL)
Geographical Location	151°29'19.34"E 32°43'10.98"S

Review of Maitland Local Environmental Plan (LEP) 2011 together with the Planning Certificate under Section 10.7 Part 2 and 5 of the Environmental Planning and Assessment Act 1979 (attached as **Annex B**) provides the following information:

1. The site is not affected by heritage items;
2. The site and/or adjacent lots are not affected by land reserved for acquisition;
3. The site is not affected by environmentally sensitive land or critical habitat;

4. The site and/or adjacent lots are not subject to flood planning constraints; and
5. There are no prescribed matters under section 59(2) of the Contaminated Land Management Act 1997 to be disclosed.

A review of the eSPADE online database (2021) identifies the site as being within an area of no known acid sulfate occurrence.

2.2 Surrounding Land Use

The site is located predominantly within an undeveloped/commercial area of Rutherford. A review of satellite imagery identified surrounding land uses as summarised in **Table 2** below.

Table 2 - Summary of surrounding land uses

Direction	Land Use	Distance
North	Motocross Track	400m
East	Vacant Land	Adjacent
South	Railway	20m
West	Vacant Land	Adjacent

3 Background Data Review and Database Searches

3.1 Summary of ownership and site use

Historical title documents sourced as part of this assessment are presented as **Annex C**.

3.2 Historical Photographs

Historical aerials and satellite images dating 1938-2020 provide a summary of development at the site and within the surrounding area. Historical images are presented as part of **Annex D** and a summary of review in **Table 4** below.

Table 3 - Historical Aerial Review

Date	Summary
1938	Low resolution black and white image, at this time the site is undeveloped, the rail line can be seen adjacent south of the site.
1954	Low resolution black and white image, at this time the site is undeveloped, minor commercial development can be depicted to the north of the site.

Date	Summary
1958	The 1965 image is a black and white image, the site and surrounding areas appear consistent with the previous image.
1965	The 1965 image is a low resolution black and white image. The site and surrounding areas appear mostly consistent with the previous image.
1977	The 1965 image is a high-resolution colour image, the site remains consistent with previous images, further commercial development can be depicted to the north of the site.
1984	The 1985 image is a low resolution black and white image, the site and surrounding areas appear consistent with the previous image
1994	The 1994 image is a low-resolution colour image, the site and surrounding areas appear consistent with the previous image.
2010	The 2010 image is a high-resolution colour image, at this time the site appears to have been cleared of vegetation. The surrounding areas show further commercial development.
2015	The 2015 image is a high-resolution colour image, the site and surrounding areas appear consistent with the previous image.
2020	The 2020 image is a high-resolution colour image, at this time the clearing to the centre of the lot appears to have been used for storage. The investigation area appears vacant and consistent with the previous image.

3.3 Site Setting

3.4 Topography and hydrology

The topography of the area is characterised by undulating rises to low hills and creek flats. Elevations range from 50 – 80 m, and slopes from 3 – 5%. Slope lengths are up to 600 m. Local relief is 10 – 40 m. Much of this landscape has drainage lines, spaced at 400 – 1,500 m intervals. A review of Google Earth Pro (2021) indicates the site slightly slopes from 34m Above Sea Level (ASL) in the West to 25m ASL in the East. The closest surface water body identified is Stoney Creek located approximately 60m North of the site.

3.4.1 Lithology and Geology

A review of the NSW Office of Environment and Heritage soil-landscape database– indicates that the site falls within the Branxton Soil Landscape.

A review of the NSW Department of Industry, Resources & Energy Geological Sheet indicates that the site lies on the Rutherford and Allandale Formations. Typical lithology includes Siltstone, marl, conglomerate and Sandstone.

3.4.2 Hydrogeology

Review of the NSW Department of Primary Industries – Office of Water / Water Administration Ministerial Corporation database identified no registered bores within 1km of the site.

3.5 Chemical storage and waste production/disposal

The results of the SafeWork Dangerous Goods Search were not considered necessary due to the historical and current land use of the site.

3.6 Environmental incident history/register

Sources to inform consideration of potential environment incidents at the site were not identified as part of this investigation.

3.7 Online Database Searches

3.7.1 Current and Former Environmental Protection Licenses

A review of the licenced activities under the Protection of the Environment Operations Act 1997 was completed on the 1st of September 2021.

Several NSW EPA licensed activities have been conducted within proximity to the Site. The tables below list both former and current licensed activities and the type of licensed activity conducted.

Table 4 - Current Licensed EPA Activities

EPL	Organisation	Activity	Distance (m)	Direction
12846	JUROX PTY LIMITED	Chemical production waste generation	0	On-site
12846	JUROX PTY LIMITED	Pharmaceutical and veterinary products production	0	On-site
10393	MAITLAND CITY COUNCIL	Other activities	0	On-site
3142	AUSTRALIAN RAIL TRACK CORPORATION LIMITED	Railway systems activities	3	South West
11956	NATIONAL CERAMIC INDUSTRIES AUSTRALIA PTY LTD	Ceramics production	216	North East
2463	KYLE STREET HOLDINGS PTY LTD	Animal accommodation	564	North
3426	100% BOTTLING COMPANY PTY LTD	Chemical storage waste generation	620	North East
3426	100% BOTTLING COMPANY PTY LTD	General agricultural processing	620	North East
11383	CLEANAWAY OPERATIONS PTY LTD	Waste storage - hazardous, restricted solid, liquid, clinical and related waste and asbestos waste	869	North East
12555	CLEANAWAY REFINERS PTY LTD	Petroleum products and fuel production	921	North
12555	CLEANAWAY REFINERS PTY LTD	Chemical storage waste generation	921	North

Table 5 - Delicensed and Former Licensed EPA Activities

Licence No	Organisation	Activity	Distance (m)	Direction
2292	FULTON HOGAN INDUSTRIES PTY LTD	Bitumen mixing	393	North
4653	LUHRMANN ENVIRONMENT MANAGEMENT PTY LTD	Other Activities / Non Scheduled Activity - Application of Herbicides	0	On-site
4838	Robert Orchard	Other Activities / Non Scheduled Activity - Application of Herbicides	0	On-site
6630	SYDNEY WEED & PEST MANAGEMENT PTY LTD	Other Activities / Non Scheduled Activity - Application of Herbicides	0	On-site
13319	AUSTRALIAN RAIL TRACK CORPORATION LIMITED	Crushing, grinding or separating; Extractive Activities	2	South West
13319	AUSTRALIAN RAIL TRACK CORPORATION LIMITED	Railway systems activities	2	South West
7638	TRUEGAIN PTY. LIMITED	Recovery of waste oil; Non-thermal treatment of liquid waste	525	North

3.7.2 PFAS Investigation and Management Programs

A review of the NSW Government PFAS Investigation Program map identified Truegain Rutherford, as an Investigation program in which intersects the site on the eastern boundary. However, this does not affect the area of investigation in the context of the proposed development.

3.7.3 Heritage

A review of the Heritage Data Source - Planning & Environment, indicates the site is not affected by heritage items. The closest registered heritage item is 'Government Railway' situated 0m South-West of the Site. Registered heritage items within the area are described in **Table 8** below.

Table 6 - Heritage Item Summary

Heritage Item Number	Description	Approximate Distance from Site
1119	Government Railway	0m South West

A figure detailing locations of heritage items listed above is presented within Lotsearch Report in **Annex D**.

3.7.4 Contaminated Land Records

A review of the NSW EPA Contaminated Land Record of Notices was completed on 1st of September 2021. This review identified that the site is not subject to regulation by the NSW EPA under Section 60 of the *Contaminated Land Management (CLM) Act 1997* and similarly that there are no sites within the surrounding area subject to regulation under the *CLM Act 1997*.

A review of the NSW EPA List of Contaminated Sites was completed 1st of September 2021. This review identified that the site has not been notified to the EPA as a contaminated site. There are two sites within the surrounding area that have been notified to the EPA, being Transpacific Industrial Services and Rutherford Transpacific located at 99 and 11 Kyle Street, respectively. These sites are not under regulation. The findings of these reviews indicate that the site is unlikely to be impacted by contamination known to the EPA.

3.7.5 Naturally Occurring Asbestos

NSW Department of Industry, Resources & Energy (2016) identifies that the site does not fall in an area known to contain naturally occurring asbestos.

4 Site Inspection

Hunter Civilab attended the site on the 7th of September 2021 to consolidate the desktop review described in the sections above. The site visit included a detailed visual inspection of the site surface and infrastructure. Key findings are presented below:

At the time of investigation the site was undeveloped and consistent of a partially cleared lot with grass coverage. Topographically the site was flat, bordered by the rail corridor to the south.

No waste material or olfactory evidence of contamination was identified during the site inspection.

5 Limited Soil Investigation

As stated in **Section 1.3**, a soil investigation was commissioned following desktop review of information.

The sampling density and analytical schedule generated as part of this intrusive investigation is only intended to supplement findings from the desktop review of information and is not intended to meet the minimum requirements of a Detailed Site Investigation (DSI) as outlined within the *NSW EPA Contaminated Land Guidelines - Consultants Reporting on Contaminated Sites (2020)*.

All works were conducted in accordance with Hunter Civilab's relevant Standard Operating Procedures (SOPs). Methodologies are outlined in the following sub-sections. Soil Investigation locations are presented in **Figure 1 of Annex A**.

5.1 Soil sampling

Limited Soil sampling was also conducted to supplement the desktop assessment for contamination purposes. Soil sampling consisted of:

- Collection of six (6) primary samples analysed for contaminants of concern;
- Collection of one (1) duplicate sample for QA/QC purposes; and
- Collection of one (1) rinsate sample for QA/QC purposes.

5.1.1 Sampling & Analysis

Sample locations were selected using a grid-based sampling strategy. Sampling locations and contaminants of concern were targeted following the desktop review of historical data pertaining to the Site's historical use.

5.2 Assessment Criteria

Tier 1 assessment criteria relevant to the proposed land use have generally been adopted from the NEPM (NEPC, 2013). Specifically, this includes:

1. The CRC CARE (2011) health screening levels (HSLs) for petroleum hydrocarbons at 0 to <1m below ground level in sand/silt/clay, adopted to assess potential vapour risks to human receptors;
2. The ASC NEPM (2013) health investigation levels (HILs), adopted to evaluate potential direct contact risks associated with the presence of other contaminants of potential concern (CoPCs) in soil (i.e. metals and PAH);
3. The CRC CARE (2011) assessment criteria for direct contact with petroleum hydrocarbons by future receptors;
4. The ASC NEPM (1999) ecological investigation levels (EILs) for inorganics to assess risks to ecological receptors; and
5. The ASC NEPM (1999) ecological screening levels for coarse soil for hydrocarbon compounds to assess risks to ecological receptors.

All criteria adopted along with their associated values are displayed in **Table 1 to Table 2 of Annex F**.

5.3 Intrusive Investigation Observations

Inspection of soil cuttings infers natural undisturbed soils across the investigation area. Shallow test pits revealed residual soils at depths of approximately 0.1-0.3m BGL. Detailed borehole logs from the geotechnical investigation can be found within HC report C1105-R-001-Rev0.

5.4 Analytical Results

A total of six (6) samples were submitted for chemical analysis for a range of Contaminants of Concern including:

- Heavy Metals (Arsenic, Cadmium, Chromium, Copper, Lead, Mercury, Nickel & Zinc);
- Total Recoverable Hydrocarbons (TRH);
- Benzene, Toluene, Xylene and Ethylbenzene (BTEX);
- Polyaromatic Hydrocarbons (PAH);
- Organophosphorus Pesticides (OPP) and Organochlorine Pesticides (OCP);
- Polychlorinated Biphenyls (PCBs); and
- Asbestos.

The results of the analysis of the six (6) primary soils samples indicate that all analytes were below the Limit of Reporting (LOR) for TRH, BTEX, PAH, OC/OP Pesticides, PCBs and Asbestos. All heavy metals results were below the HIL-D criteria.

Soil analytical results are included in **Table 1** and **Table 2** of **Annex F**. All samples returned results which were below applicable assessment criteria for site land use.

6 Analytical Data Quality Assessment

The quality of analytical data presented within this report has been assessed with reference to the following issues:

1. Sampling technique;
2. Preservation and storage of samples upon collection and transport to the laboratory;
3. Sample holding times;
4. Analytical procedures;
5. Laboratory limit of reporting (LOR);
6. Laboratory quality assurance (QA) procedures; and
7. The occurrence of apparently unusual or anomalous results.

A review of these items was conducted to assess data in terms of completeness, representativeness, comparability, accuracy and precision. A discussion of the data quality assessment related to the items listed above is provided in the subsections that follow.

6.1 Sample Collection, Storage, Transport and Analysis

6.1.1 General

Samples were collected, stored and transported to the laboratory in accordance with Hunter Civilab's standard operating procedures which are consistent with guidelines provided in the ASC NEPM (2013). All samples were collected in appropriate containers provided by the laboratory.

6.1.2 Holding Times

Laboratory analysis was undertaken within specified holding times in accordance with Schedule B3 of the ASC NEPM (2013) and using NATA accepted analytical procedures.

6.1.3 Sample Transport and Storage temperature

In accordance with Schedule B3 of the ASC NEPM (2013), all samples were chilled during transport to the laboratory and evidence of chilling was recorded on the sample receipt documentation for the laboratory.

6.2 Field Intra-Laboratory Duplicate Assessment

Relative Percentage Differences (RPDs) were calculated between the primary sample concentration and its corresponding intra-laboratory duplicate. As stipulated by the NEPM, the RPD acceptance criteria is 30% however it is noted that higher variations can be expected for organic analysis, samples with low analyte concentrations or non-homogenous samples (NEPC, 2013). As such, the primary laboratory RPD acceptance criteria were used and are as follows:

1. Results <10 times the LOR: No Limit;
2. Results between 10-20 times the LOR: RPD must lie between 0-50%; and
3. Results >20 times the LOR: RPD must lie between 0-30%.

One intra-laboratory duplicate sample was collected as part of this investigation. Given that the purpose of the sampling works was to provide preliminary indications as to the presence/absence of contamination, collection of 1 field duplicate per 20 primary samples was considered appropriate.

All RPD results were within the acceptable range. The field QA/QC is considered acceptable for the investigation. Sample and RPDs results are included in **Table 3** of **Annex F**.

6.3 Laboratory Quality Assurance and Quality Control

The samples were initially analysed at SGS Melbourne, a NATA accredited laboratory. Anomalies were identified within the hydrocarbon analysis, which showed consistent F2-F4 hydrocarbons between sample locations for all 6 samples from this Site, and 23 samples from another site. Both sites were undeveloped and did not indicate any potentially contaminating activities within the desktop review of available information. Based on the unexpected anomalous results, the samples were sent to SGS Sydney for re-analysis. The results from Sydney found no hydrocarbons above the limit of detection, and therefore the original hydrocarbon results were considered null and void.

Laboratory QA/QC procedures and results are detailed in the certified laboratory results contained in **Annex G**. The analytical methods implemented by the laboratories were reported to be consistent with the scope of their NATA accreditation and consistent with Schedule B3 of the ASC NEPM (2013). The

laboratory generally reported an adequate range and frequency of data quality information (including laboratory duplicates and control samples).

The reported laboratory data quality was considered acceptable to meet the objectives of this assessment.

6.4 Data Quality Summary

Overall, the data from this investigation is considered to be of sufficient quality to serve as a basis for interpretation as part of this assessment.

7 Preliminary Conceptual Site Model

A CSM is a representation of site-related information regarding contaminant sources, exposure pathways and receptors. A CSM facilitates consideration of risks to human health and the environment associated with site contamination through assessment of source – pathway – receptor linkages. A preliminary CSM based on the understanding of site history and the environmental setting is presented in the following sections.

7.1 Potential Sources and Associated Contaminants of Concern

Analytical results from the intrusive investigation did not indicate any Contaminants of Potential Concern (CoPC).

Off-site sources of contamination with the potential to affect the site were considered unlikely taking into consideration information discussed in **Section 2.2** of this report.

7.2 Potential Receptors and Pathways

The following receptors have been identified based on the current site setting and proposed future development:

1. Construction workers associated with the proposed development;
2. Current and future site users (including construction workers);
3. Future on-site intrusive maintenance workers; and
4. Terrestrial flora and fauna.

Pathways by which the contamination may affect the receptors presented above includes:

1. Direct contact (dermal contact, incidental ingestion and dust inhalation); and
2. Ecological uptake.

7.3 SPR Linkage Assessment

A source-pathway-receptor (SPR) linkage is present when a pathway links a source with a receptor. These linkages are considered complete where a risk to the identified receptors may exist, now or in the future. Given that soil analytical results were reported below the adopted screening criteria (HIL/HSL-D) for the identified receptors via the relevant pathway (direct contact), this SPR linkage is incomplete. Therefore, a potential exposure risk is considered unlikely.

8 Conclusions

The detailed desktop review of available information and thorough site inspection including shallow soil investigation have enabled the development of a preliminary conceptual site model allowing assessment of potential health and environmental issues relating to the site. Key findings were:

1. Potential contamination sources at the site are limited based on historical land use;
2. Visible signs of gross contamination were not observed during site inspection and intrusive works; and
3. Contamination in shallow soils was not identified at any of the sampling locations.

In summary, based on the desktop study and limited soil sampling conducted on the Site, no indication of gross contamination has been identified which would constrain the development of the Site for its proposed land use as commercial development.

If you have any further questions about this report, please contact the undersigned.

For and on behalf of

Valley Civilab Pty Ltd, trading as Hunter Civilab

Reported by:



Jake Duck

Environmental Scientist

Reviewed by:



Malcolm Adrien

Environmental Services Manager

References:

Australian Standard AS 4482.1-2005 (2005) *Guide to the Sampling and Investigation of Potentially Contaminated Soil. Part 1 – Non-volatile and Semi-Volatile Compounds.*

National Environment Protection Council (NEPC), (2013). *National Environment Protection (Assessment of Site Contamination) Measure 1999, NEPM, Canberra. Schedule B2: Guideline On-site Characterisation.*

NSW EPA (2020) Contaminated Land Guidelines – *Consultants reporting on contaminated Sites*

NSW EPA (1997). *Contaminated Land Management Act 1997.*

NSW EPA (2017) *Naturally Occurring Asbestos in NSW*

<https://trade.maps.arcgis.com/apps/PublicInformation/index.html?appid=87434b6ec7dd4aba8cb664d8e646fb06> accessed 1/9/21.

Lotsearch (2021) Enviro Professional, *Reference: LS023709 EP – 01 Sep 2021, 10:26:31*



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Annex A

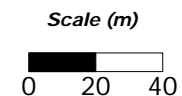


Note:
(1) Base layer sourced from NearMap (2021).
(2) Scale bar is approximate.

Figure 1: Site Plan

LEGEND

Sample Location





Annex B

Certificate No.: PC/2021/2398

Certificate Date: 23/07/2021

Fee Paid: \$53.00

Receipt No.: 1051180

Your Reference: 2769

SECTION 10.7 PLANNING CERTIFICATE

Environmental Planning and Assessment Act, 1979 as amended

APPLICANT:	Infotrack ecertificates@infotrack.com.au
PROPERTY DESCRIPTION:	91 Gardiner Street RUTHERFORD NSW 2320
PARCEL NUMBER:	50417
LEGAL DESCRIPTION:	Lot 2 DP 1197299

IMPORTANT: Please read this Certificate carefully.

This Certificate contains important information about the land described above.

Please check for any item, which could be inconsistent with the proposed use or development of the land. If there is anything you do not understand, please contact Council by phoning (02) 4934 9700, or personally at Council's Administration Building at 285-287 High Street, Maitland.

The information provided in this Certificate relates only to the land described above. If you require information about adjoining or nearby land, or about the Council's development policies or codes for the general area, contact Council's Planning & Environment Department.

All information provided is correct as at the date of issue of this Certificate, however it is possible for changes to occur at any time after the issue of this Certificate. We recommend that you only rely upon a very recent Certificate.

The following responses are based on the Council's records and/or information from sources outside the Council. The responses are provided with all due care and in good faith, however the Council cannot accept responsibility for any omission or inaccuracy arising from information outside the control of the Council.

Furthermore, while this Certificate indicates the general effect of the zoning of the abovementioned land, it is suggested that the applicable planning instruments be further investigated to determine any additional requirements.

Copies of Maitland City Council's Local Environmental Planning Instrument, Development Control Plans and Policies are available from Council's [website](#).

PART 1: MATTERS PROVIDED PURSUANT TO SECTION 10.7 (2)

1. Local Environmental Plan (LEP)

Maitland LEP 2011, published 16 December 2011, applies to the land.

Exhibited draft Local Environmental Plans

No draft local Environmental Plans that have been on public exhibition under the Act are applicable to the land.

Development Control Plan prepared by Council

Maitland Development Control Plan 2011 applies to the land.

Development Control Plan prepared by the Director General

The Council has not been notified of any Development Control Plan applying to the land that has been prepared by the Director-General under section 51A of the Act.

State Environmental Planning Policies

The Minister for Planning has notified that the following State Environmental Planning Policies (SEPPs) shall be specified on Certificates under Section 10.7 of the Environmental Planning and Assessment Act, 1979.

The land is affected by the following State Environmental Planning Policies:

- SEPP21 Caravan Parks
- SEPP (Mining, Petroleum Production and Extractive Industries) 2007
- SEPP (State and Regional Development) 2011
- SEPP33 Hazardous and Offensive Development
- SEPP36 Manufactured Home Estates
- SEPP (Koala Habitat Protection) 2019
- SEPP50 Canal Estate Development
- SEPP (Housing for Seniors or People with a Disability) 2004
- SEPP55 Remediation of Land
- SEPP Affordable Rental Housing 2009
- SEPP Building Sustainability Index: BASIX 2004
- SEPP (Exempt and Complying Development Codes) 2008
- SEPP (Infrastructure) 2007
- SEPP64 Advertising and Signage
- SEPP Primary Production and Rural Development 2019
- SEPP65 Design Quality of Residential Apartment Development
- SEPP70 Affordable Housing (Revised Schemes)
- SEPP (Concurrences and Consents) 2018
- SEPP Vegetation in Non Rural Areas 2017
- SEPP (Educational Establishments and Child Care Facilities) 2017

Draft State Environmental Planning Policies

The following draft State Environmental Planning Policy(s) applying to the land is, or has been, the subject of community consultation or on public exhibition under the Act:

Housekeeping Amendment to the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008

The proposed amendments to this SEPP are housekeeping amendment to the Codes SEPP to simplify and improve the policy, clarify definitions and standards, and address other minor technical matters raised. The proposed housekeeping amendment to the Codes SEPP will simplify and improve the policy, clarify definitions and standards, and address other minor technical matters.

2. Zoning and land use under relevant LEPs

Maitland LEP 2011, published 16 December 2011, identifies the zone applying to the land as:

IN1 General Industrial

The following development information gives the objectives of the zone, the description of the zone and identifies development allowed or prohibited in each zone. Development consent where required, must be obtained from the Council.

IN1 General Industrial

a) Purpose/Objective

- To provide a wide range of industrial and warehouse land uses
- To encourage employment opportunities
- To minimise any adverse effect of industry on other land uses
- To support and protect industrial land for industrial uses
- To provide a limited range of retailing activities that accommodate the everyday needs of employees within the zone and do not adversely affect the viability of centres

b) Permitted with Consent

Depots; Freight transport facilities; Garden centres; General industries; Hardware and building supplies; Industrial training facilities; Kiosks; Landscaping material supplies; Light industries; Liquid fuel depots; Neighbourhood shops; Oyster aquaculture; Places of public worship; Plant nurseries; Roads; Rural supplies; Tank-based aquaculture; Timber yards; Warehouse or distribution centres; Any other development not specified in item 2 or 4

c) Permitted without Consent

Nil

d) Prohibited

Agriculture; Air transport facilities; Airstrips; Amusement centres; Animal boarding or training establishments; Boat launching ramps; Boat sheds; Camping grounds; Caravan parks; Cemeteries; Centre-based child care facilities; Charter and tourism boating facilities; Commercial premises; Community facilities; Correctional centres; Eco-tourist facilities; Entertainment facilities; Environmental facilities; Exhibition homes; Exhibition villages; Farm buildings; Forestry; Function centres; Health services facilities; Heavy industrial storage establishments; Heavy industries; Helipads; Highway service centres; Home-based child care; Home businesses; Home occupations; Home occupations (sex services); Information and education facilities; Jetties; Marinas; Mooring pens; Moorings; Passenger transport facilities; Pond-based aquaculture Public administration buildings; Recreation areas; Recreation facilities (indoor); Recreation facilities (major); Recreation facilities (outdoor); Registered clubs; Research stations; Residential accommodation; Respite day care centres; Schools; Tourist and visitor accommodation; Veterinary hospitals; Water recreation structures; Wharf or boating facilities.

e) Land dimensions to permit the erection of a dwelling house on the land

For the land zoned IN1 General Industrial the Maitland LEP 2011 does not contain a development standard specifying the land dimensions required to permit the erection of a dwelling house on the land.

f) Critical Habitat

No Local Environmental Plan or draft Local Environmental Plan identifies the land as including or comprising critical habitat.

g) Conservation Area

The land IS NOT in a Heritage Conservation Area.

h) Item of Environmental Heritage

The land does NOT contain an item of Environmental Heritage.

3. Complying Development

Complying development under the **Housing Code** may not be carried out on the land as it is not within an applicable zone.

Complying development under the **Low Rise Medium Density Housing Code and Greenfield Housing Code** may not be carried out on the land as it is not within an applicable zone.

Complying development under the **Rural Housing Code** may not be carried out on the land as it is not within an applicable zone.

Complying development under the **Housing Alterations Code** may be carried out on the land.

Complying development under the **General Development Code** may be carried out on the land.

Complying development under the **Commercial and Industrial Alterations Code** may be carried out on the land.

Complying development under the **Commercial and Industrial (New Buildings and Additions) Code** may be carried out on the land.

Complying development under the **Subdivisions Code** may be carried out on the land.

Complying development under the **Demolition Code** may be carried out on the land.

Complying development under the **Fire Safety Code** may be carried out on the land.

Complying development under the **Container Recycling Facilities Code** may be carried out on the land.

Note: Despite the above provisions, if only part of a lot is subject to an exclusion or exemption under Clause 1.17A or Clause 1.19 of State Environmental Planning Policy (Exempt and Complying Development Codes) Amendment (Commercial and Industrial Development and Other Matters) 2013, complying development may be carried out on that part of the lot that is not affected by the exclusion or exemption.

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

The owner (or any previous owner) of the land has NOT consented in writing to the land being subject to annual charges under section 496B of the Local Government Act 1993 for coastal protection services that relate to existing coastal protection works (within the meaning of section 553B of that Act).

5. Coal Mine Subsidence Compensation Act 2017

The land has NOT been proclaimed to be within a Mine Subsidence District under the meaning of section 20 of the Coal Mine Subsidence Compensation Act 2017.

6. Road widening and road realignment

- a) The land is NOT affected by road widening under Division 2 of Part 3 of the Roads Act 1993.
- b) The land is NOT affected by any environmental planning instrument
- c) The land is NOT affected by any road-widening or realignment under any resolution of the Council

The information above relates to Council's road proposals only. Other authorities, including Roads and Maritime Services, may have proposals, which have not been set out.

7. Council and other public authority policies on hazard risk restrictions

All land within the Maitland Local Government Area has the potential to contain acid sulfate soils. Clause 7.1 of the Maitland Local Environmental Plan 2011 generally applies. Development consent is required where works described in the Table to this clause are proposed on land shown on the Maitland LEP 2011 Acid Sulfate Soils Map as being of the class specified for those works.

The Council has adopted a Contaminated Lands Policy to provide a framework to appropriately manage land contamination risk through the land use planning process. This Policy seeks to ensure that changes in land use will not increase the risk to human health or the environment. The Policy applies to all land in the

Maitland Local Government Area.

7A. Flood Related Development Controls

The land or part of the land IS NOT within the flood planning area and subject to flood related development controls.

The land or part of the land IS NOT between the flood planning area and the probable maximum flood and subject to flood related development controls.

The Maitland LEP 2011 identifies the flood planning level (FPL) as the level of a 1:100 ARI flood event plus 0.5m freeboard. The probable maximum flood has the same meaning as the Floodplain Development Manual.

8. Land Reserved for Acquisition

No environmental planning instrument, deemed environmental planning instrument or draft environmental planning instrument applying to the land provides for the acquisition of the land by a public authority, as referred to in section 3.15 of the Act.

9. Contribution Plans

The following contribution plan(s) apply to the land:

- Maitland S94A Levy Contributions Plan 2006
- Maitland City Wide Section 94 Contributions Plan 2016
- Maitland S94 Contributions Plan (City Wide) 2006

Contributions Plans may be viewed on Council's website or inspected and purchased at Council's Customer Service Centre.

9A. Biodiversity Certified Land

The land is not biodiversity certified land under Part 8 of the Biodiversity Conservation Act 2016.

10. Biodiversity Stewardship Sites

The Council is not aware if the land is a biodiversity stewardship site under a biodiversity stewardship agreement under part 5 of the *Biodiversity Conservation Act 2016*.

10A. Native Vegetation clearing set asides

The Council is not aware if the land contains a set aside area under 60ZC of the *Local Land Services Act 2013*.

11. Bushfire Prone Land

The land is mapped as bushfire prone land and as such restrictions may apply to new development on this land.

12. Property vegetation plans

The Council has not received any notification from Hunter Local Land Services that this land is affected by a property vegetation plan under Part 4 of the Native Vegetation Act 2003 (and that continues in force).

13. Order under Trees (Disputes between Neighbours) Act 2006

Council has NOT received notification from the Land and Environment Court of NSW that the land is affected by an Order under Trees – (Disputes Between Neighbours) Act 2006.

14. Directions under Part 3A

There is NO direction by the Minister under Section 75P(2)(c1) of the Act that a provision of an environmental planning instrument prohibiting or restricting the carrying out of a project or a stage of a project on the land under Part 4 (other than a project of a class prescribed by the regulations) of the Act does not have effect.

15. Site Compatibility Certificate and Conditions for Seniors Housing

a) Site Compatibility Certificate

Council is unaware of whether a current Site Compatibility Certificate issued under Clause 25 of the State Environmental Planning Policy (Housing for Seniors and People with a Disability) 2004 has been issued for the land.

b) Conditions of Development Consent since 11 October 2007

No development consent has been granted for the development permitted under State Environmental Planning Policy (Housing for Seniors and People with a Disability) 2004 after 11 October 2007.

16. Site compatibility certificates for infrastructure, schools or TAFE establishments

Council is unaware of whether a valid Site Compatibility Certificate has been issued under clause 19 of State Environmental Planning Policy (Infrastructure) 2007 for the land.

17. Site compatibility certificates and conditions for affordable rental housing

Council is unaware if a Site Compatibility Certificate (Affordable Rental Housing) has been issued in accordance with State Environmental Planning Policy (Affordable Rental Housing) 2009.

18. Paper subdivision information

There is no development plan that applies to the:

- 1) Land or that is proposed to be subject to a consent ballot
- 2) There is no subdivision order that applies to the land.

19. Site verification certificates

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

20. Loose-fill asbestos insulation

There are no premises on the subject land listed on the register.

21. Affected building notices and building product rectification orders

The Council is NOT aware of any affected building notice which is in force in respect of the land.

The Council is NOT aware of any building product rectification order which is in force in respect of the land and that has not been fully complied with.

The Council is NOT aware of any notice of intention to make a building product rectification order being given in respect of the land and that is outstanding.

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.

Contaminated Land

- a) The land to which this certificate relates is NOT significantly contaminated land within the meaning of the Contaminated Land Management Act 1997.
 - b) The land to which this certificate relates is NOT subject to a management order within the meaning of the Contaminated Land Management Act 1997.
 - c) The land to which this certificate relates is NOT the subject of an approved voluntary management proposal within the meaning of the Contaminated Land Management Act 1997.
 - d) The land to which this certificate relates is NOT the subject to an ongoing maintenance order within the meaning of the Contaminated Land Management Act 1997.
 - e) Council has NOT been provided with a site audit statement, within the meaning of the Contaminated Land Management Act 1997, for the land to which this Certificate relates.
-

David Evans
General Manager



Annex C

Title Review

91 Gardiner Street, Rutherford NSW (hereinafter the 'Land')

Title Particulars	
Folio	Lot 2 in Deposited Plan 1197299
Area	35.23 ha
Overview: DP1197299	<p>At the end of this document is a screenshot of sheet 1 of the deposited plan creating the Land. The deposited plan is an aerial view of the property and identifies the location of various easements, restrictions and covenants. Where they apply to only part of the Land, we have highlighted the location of the relevant easements, covenants and restrictions for your reference.</p> <p>The highlighted easements, covenants and restrictions in this case are all in a similar part of the property. Because there is overlap, have not been able to highlight properly where there are two or more easements / etc in one area. In this regard:</p> <ol style="list-style-type: none">1. The areas highlighted green, yellow and blue should also be read as being highlighted pink and purple.2. The areas highlighted purple should also be read as being highlighted pink. <p>(There is some discrepancy in the location of the pink highlighted easement between the first and second sheets of the deposited plan; however our interpretation of the location of this is as per the comments above.)</p>
J581097	<p>EASEMENT FOR EFFLUENT APPURTENANT TO THE LAND</p> <p>This is an easement for effluent, the terms of which are set out in Memorandum No J581097. It appears to benefit the entirety of the Land.</p> <p>In summary it gives the owner of the Land the right to erect, use and maintain drains, pipes and ancillary works for the conveyance of effluent on the easement site. There is also an ancillary right of access. Among other obligations, the owner of the Land benefiting from the easement is required to keep the pipes in good order and condition so as to prevent leakage and also provides an indemnity in favour of the owner of the burdened land in connection with any negligence of the benefited owner.</p> <p>Given the age of the easement and the old title references referred to, it is not easy to identify where the easement site is located (noting it should be external to the Land). It has not been drawn on the current deposited plan. Further enquiries would be necessary to determine where this easement is located.</p>
J581097	<p>EASEMENT FOR RAILWAY SIDING AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM, AS VARIED BY DEALINGS N382390 AND AD462931</p> <p>This is an easement for railway siding, the terms of which are set out in Memorandum J581097. It applies to and burdens part of the Land (refer to that part of the title diagram</p>

	<p>labelled (B) and highlighted (or to be read as highlighted) pink).</p> <p>In summary it gives the benefiting party the right to use that land for a railway siding. There are ancillary rights including of maintenance, other works and access. There is also a covenant not to interfere with the railway siding and in particular not to erect any structures on the easement site without the permission of the benefiting party.</p> <p>The easement has been varied so that it no longer applies to benefit certain parcels of land, and so that it no longer benefits Maitland Council (the original transferee). Given the easement refers to old title references which are not easily converted to current title arrangements, further enquiries would be necessary to determine who still has the benefit of this easement.</p>
P658686	<p>COVENANT</p> <p>This is a covenant the terms of which are set out in Memorandum P658686. It applies to and burdens the whole of the Land.</p> <p>It is a covenant to not erect a fence on the boundary of the Land so as to divide it from adjoining land owned by the local council (except with such council's consent). The covenant benefits the adjoining land owned by the local council and (unless otherwise stated in a transfer) becomes void if there is a transfer in ownership of that land by council.</p> <p>We have not investigated whether the local council still owns adjoining land, so we cannot comment on whether this covenant is void based on its terms. Noting the age of the covenant (it was created in 1974), there is a likelihood that (depending on the current land/adjoining land use) this covenant is now obsolete.</p>
DP640232	<p>EASEMENT FOR GAS PIPELINE 6 METRE(S) WIDE AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM</p> <p>This is an easement for gas pipeline, the terms of which are set out in the s88B instrument for DP640232. It applies to and burdens part of the Land (refer to that part of the title diagram labelled (D) and highlighted light green).</p> <p>In summary it gives Newcastle Gas Company Limited the right to install, use and maintain pipes, mains and other apparatus for the conveyance of natural gas, artificial gas, liquid petroleum gas, oil and other hydrocarbons (whether in solid, liquid or gas form) across or under that part of the Land impacted by the easement. There is also an ancillary right of support and right of access / right for works. No buildings / improvements can be erected on the affected land without the consent of Newcastle Gas Company.</p>
DP1062820	<p>EASEMENT FOR DRAINAGE OF WATER 16 METRE(S) WIDE AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM</p> <p>This is an easement for drainage of water, further details of which are set out in the s88B instrument for DP1062820. It applies to and burdens part of the Land (refer to that part of the title diagram labelled (E) and highlighted light yellow).</p> <p>As the s88B instrument does not contain specific terms for this easement, the standard terms in Schedule 8 of the <i>Conveyancing Act 1919</i> (NSW) apply. In summary it gives the owner of the benefited lot (being Lot 101 in DP1062820) the right to drain water across the part of the Land impacted by the easement, including the right to use and / or install</p>

	<p>pipes for that purpose. There is an ancillary right to enter the Land and excavate as necessary for the use of the easement.</p>
DP836843	<p>EASEMENT TO DRAIN SEWAGE 2 METRE(S) WIDE APPRUTENANT TO THE PART(S) SHOWN SO BENEFITED IN THE TITLE DIAGRAM, AS VARIED BY DEALING O679693</p> <p>This is an easement for drainage of sewage, further details of which are set out in the s88B instrument for DP836843. It benefits part of the Land (refer to that part of the title diagram labelled (BB) and highlighted purple).</p> <p>The standard terms in Schedule 8 of the <i>Conveyancing Act 1919</i> (NSW) apply. In summary it gives the owner of the benefited lot (i.e. the Land) the right to drain by means of pipes sewage and other waste material and fluid across that part of the Land impacted by the easement, including the right to use and / or install pipes for that purpose. There is an ancillary right to enter the Land and excavate as necessary for the use of the easement.</p> <p>The location of the easement site is not shown on the current deposited plan. It is therefore difficult to locate the exact site of this easement and further enquiries would be required to ascertain the location.</p>
DP1062820	<p>EASEMENT FOR ELECTRICITY TRANSMISSION LINE AND ACCESS THERETO 20 METRE(S) WIDE AND VARIABLE AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM</p> <p>This is an easement for electricity transmission line and access, the terms of which are set out in the s88B instrument for DP1062820. It applies to and burdens part of the Land (refer to that part of the title diagram labelled (F) and highlighted blue).</p> <p>In summary, it gives Energy Australia the right to install, maintain and use overhead and / or underground electricity transmission, conductors, mains, wires and cables and their supports (including towers and poles) and other ancillary works (including substations) for the transmission of electricity. There are ancillary rights to access the easement and adjoining property and to undertake tree / foliage works. The owner must not damage the electricity assets or, without the consent of Energy Australia, alter the existing levels of the easement or erect any structure on above or below the easement.</p>
DP1062820	<p>RESTRICTION(S) ON THE USE OF LAND</p> <p>This is a restriction on the use of land, the terms of which are set out in the s88B instrument for DP1062820. It appears to apply to and burden the whole of the Land.</p> <p>It provides that no fence shall be erected on the Land to divide it from any adjoining land owned by the local council (except with such council's consent). The restriction is stated to be for the benefit of all other lots in DP1062820 and can be modified/varied/released by the local council.</p> <p>We have not investigated whether the local council still owns adjoining land.</p>
DP1014501	<p>PLAN OF PROPOSED EASEMENT (NOTATION ON TITLE)</p> <p>This is a plan of proposed easement which was registered in 2000. It appears on the title only as a notation, not a registered dealing creating an interest in the Land. It has been prepared in reference to outdated deposited plans, and doesn't contain an accompanying</p>

	<p>instrument, making it difficult to interpret. However it appears to be a plan of easement for electricity transmission lines. Given the location of the easement on the plan, we consider it most likely that this is plan of proposed easement has been superseded by DP1062820 which created easements for electricity transmission lines in substantially similar locations.</p>
<p>DP1099317</p>	<p>PLAN FOR EASEMENT PURPOSES (NOTATION ON TITLE)</p> <p>This is a plan of proposed easement which was registered in 2002. It appears on the title only as a notation, not a registered dealing creating an interest in the Land. It shows the location of pipeline easements proposed to be acquired under the <i>Pipelines Act 1967</i> (NSW). There does not appear to be a dealing lodged subsequently to the registration of this plan creating an easement, creating such an easement, so this may still be relevant to a future acquisition. However, we note that the proposed location is within the vicinity of other easements on the Land.</p>

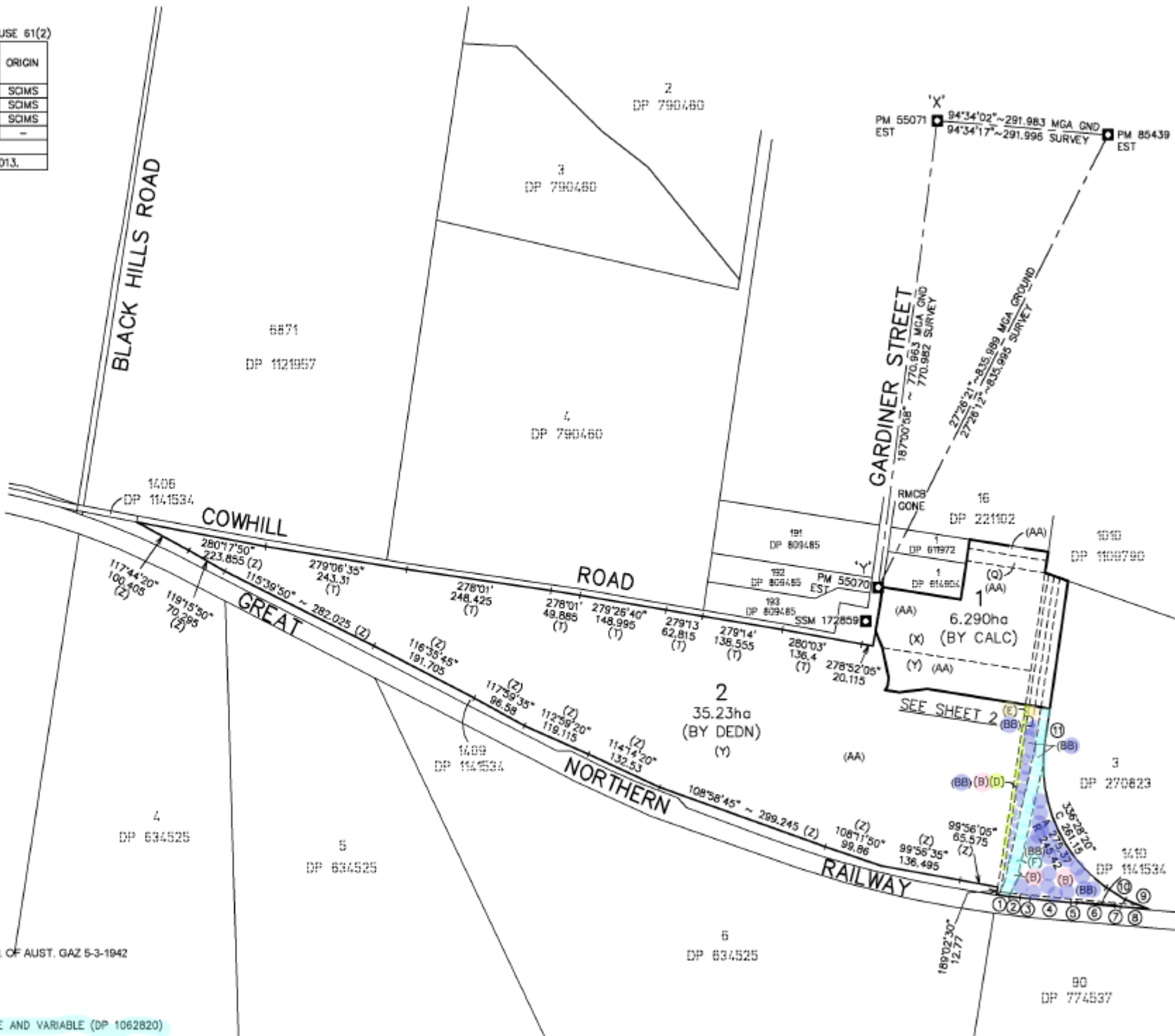


MARK	M.G.A. COORDINATES		CLASS	ORDER	METHOD	ORIGIN
	EASTING	NORTHING				
PM 55070	359290.796	6378792.950	B	2	-	SCIMS
PM 55071	359384.954	6379558.015	B	2	-	SCIMS
PM 85439	359675.962	6379534.769	A	1	-	SCIMS
SSM 172859	359267.449	6378749.537	C	-	CADASTRAL TRAVERSE	-
COMBINED SCALE FACTOR = 0.999836			ZONE 56			
SOURCE : M.G.A. COORDINATES ADOPTED FROM SCIMS AS AT 19 FEBRUARY 2013.						

MGA



LINE	BEARING	DISTANCE	BY
1	97°18'20"	21.655	DP 1141534
2	96°43'45"	18.68	DP 1141534
3	95°57'	17.36	DP 1141534
4	95°04'10"	69.53	DP 1141534
5	86°02'	10.23	DP 1141534
6	94°32'30"	65	DP 1141534
7	103°40'30"	10.13	DP 1141534
8	94°32'30"	47.12	DP 1141534
9	291°00'20"	42.43	DP 1141534
10	301°38'20"	37.86	DP 1141534
11	188°35'05"	54.455	SURVEY



- (AA) - LAND EXCLUDES MINERALS VIDE NOTIFICATION OF ACQUISITION IN THE COMM. OF AUST. GAZ 5-3-1942
- (BB) - BENEFITED BY EASEMENT TO DRAIN SEWAGE 2 WIDE (DP836943)
- (B) - EASEMENT FOR RAILWAY SIDING (J581097)
- (D) - EASEMENT FOR GAS PIPELINE 6 WIDE (DP 640232)
- (E) - EASEMENT FOR DRAINAGE OF WATER 16 WIDE (DP 1062820)
- (F) - EASEMENT FOR ELECTRICITY TRANSMISSION LINE AND ACCESS THERETO 20 WIDE AND VARIABLE (DP 1062820)
- (Q) - EASEMENT FOR TRANSMISSION LINE 20.115 WIDE (G148013)
- (X) - COVENANT (N946334)
- (Y) - COVENANT (P658688)
- (T) - DENOTES DIMENSION COMPILED FROM DP 1127199
- (Z) - DENOTES DIMENSION COMPILED FROM DP 1141534

Surveyor: DAVID LUKE SULLIVAN Date of Survey: 19/02/2013 Surveyor's Ref: 130079DPA 2013M7100(296) PARTIAL SURVEY	PLAN OF SUBDIVISION OF LOT 106 DP 1062820 & LOT 1414 DP 1141534.	LGA: MAITLAND Locality: RUTHERFORD Subdivision No: P41588/P47734 Lengths are in metres. Reduction Ratio 1:5000	Registered 11.07.2014	DP1197299
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FOLIO: 2/1197299

SEARCH DATE	TIME	EDITION NO	DATE
28/6/2021	4:43 PM	3	8/4/2020

NO CERTIFICATE OF TITLE HAS ISSUED FOR THE CURRENT EDITION OF THIS FOLIO.
CONTROL OF THE RIGHT TO DEAL IS HELD BY NATIONAL AUSTRALIA BANK LIMITED.

LAND

LOT 2 IN DEPOSITED PLAN 1197299
AT RUTHERFORD
LOCAL GOVERNMENT AREA MAITLAND
PARISH OF GOSFORTH COUNTY OF NORTHUMBERLAND
TITLE DIAGRAM DP1197299

FIRST SCHEDULE

MACHIL PTY LTD (T AJ154483)

SECOND SCHEDULE (11 NOTIFICATIONS)

- 1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
- 2 LAND EXCLUDES MINERALS IN NOTIFICATION OF ACQUISITION IN THE
COMM. OF AUST. GAZ. 5-3-1942 AFFECTING THE PART SHOWN SO
INDICATED IN THE TITLE DIAGRAM
- 3 J581097 EASEMENT FOR EFFLUENT APPURTENANT TO THE LAND ABOVE
DESCRIBED
- 4 J581097 EASEMENT FOR RAILWAY SIDING AFFECTING THE PART(S)
SHOWN SO BURDENED IN THE TITLE DIAGRAM
N382390 EASEMENT RELEASED IN SO FAR AS IT BENEFITS VOL
9853 FOLS 190, 192-195, 198-213, 216 & 217
AD462931 EASEMENT RELEASED IN SO FAR AS IT BENEFITS
MAITLAND CITY COUNCIL
- 5 P658686 COVENANT
- 6 DP640232 EASEMENT FOR GAS PIPELINE 6 METRE(S) WIDE AFFECTING
THE PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM
- 7 DP1062820 EASEMENT FOR DRAINAGE OF WATER 16 METRE(S) WIDE
AFFECTING THE PART(S) SHOWN SO BURDENED IN THE TITLE
DIAGRAM
- 8 DP836843 EASEMENT TO DRAIN SEWAGE 2 METRE(S) WIDE APPURTENANT
TO THE PART(S) SHOWN SO BENEFITED IN THE TITLE DIAGRAM
O679693 VARIATION OF EASEMENT
- 9 DP1062820 EASEMENT FOR ELECTRICITY TRANSMISSION LINE AND ACCESS
THERETO 20 METRE(S) WIDE AND VARIABLE AFFECTING THE
PART(S) SHOWN SO BURDENED IN THE TITLE DIAGRAM
- 10 DP1062820 RESTRICTION(S) ON THE USE OF LAND
- 11 AQ21193 MORTGAGE TO NATIONAL AUSTRALIA BANK LIMITED

END OF PAGE 1 - CONTINUED OVER

FOLIO: 2/1197299

PAGE 2

NOTATIONS

DP1014501 NOTE: PLAN OF PROPOSED EASEMENT

DP1099317 NOTE: PLAN FOR EASEMENT PURPOSES - SEE PIPELINES ACT, 1967

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

SPF001-00013

PRINTED ON 28/6/2021

* Any entries preceded by an asterisk do not appear on the current edition of the Certificate of Title. Warning: the information appearing under notations has not been formally recorded in the Register. InfoTrack an approved NSW Information Broker hereby certifies that the information contained in this document has been provided electronically by the Registrar General in accordance with Section 96B(2) of the Real Property Act 1900.



Annex D



LOTSEARCH

LOTSEARCH ENVIRO PROFESSIONAL

Date: 01 Sep 2021 10:26:24

Reference: LS023709 EP

Address: 91 Gardiner Street, Rutherford, NSW 2320

Disclaimer:

The purpose of this report is to provide an overview of some of the site history, environmental risk and planning information available, affecting an individual address or geographical area in which the property is located. It is not a substitute for an on-site inspection or review of other available reports and records. It is not intended to be, and should not be taken to be, a rating or assessment of the desirability or market value of the property or its features. You should obtain independent advice before you make any decision based on the information within the report. The detailed terms applicable to use of this report are set out at the end of this report.

Dataset Listing

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

Dataset Name	Custodian	Supply Date	Currency Date	Update Frequency	Dataset Buffer (m)	No. Features On-site	No. Features within 100m	No. Features within Buffer
Cadastre Boundaries	NSW Department of Finance, Services & Innovation	20/08/2021	20/08/2021	Quarterly	-	-	-	-
Topographic Data	NSW Department of Finance, Services & Innovation	25/06/2019	25/06/2019	As required	-	-	-	-
List of NSW contaminated sites notified to EPA	Environment Protection Authority	16/08/2021	13/08/2021	Monthly	1000m	0	0	2
Contaminated Land Records of Notice	Environment Protection Authority	06/08/2021	06/08/2021	Monthly	1000m	0	0	0
Former Gasworks	Environment Protection Authority	11/08/2021	11/10/2017	Quarterly	1000m	0	0	0
National Waste Management Facilities Database	Geoscience Australia	12/05/2021	07/03/2017	Annually	1000m	0	0	2
National Liquid Fuel Facilities	Geoscience Australia	15/02/2021	13/07/2012	Annually	1000m	0	0	0
EPA PFAS Investigation Program	Environment Protection Authority	23/08/2021	28/04/2021	Monthly	2000m	1	1	1
Defence PFAS Investigation & Management Program - Investigation Sites	Department of Defence	02/08/2021	02/08/2021	Monthly	2000m	0	0	0
Defence PFAS Investigation & Management Program - Management Sites	Department of Defence	02/08/2021	02/08/2021	Monthly	2000m	0	0	0
Airservices Australia National PFAS Management Program	Airservices Australia	05/08/2021	05/08/2021	Monthly	2000m	0	0	0
Defence 3 Year Regional Contamination Investigation Program	Department of Defence	19/08/2021	19/08/2021	Quarterly	2000m	0	0	0
EPA Other Sites with Contamination Issues	Environment Protection Authority	02/02/2021	13/12/2018	Annually	1000m	0	0	0
Licensed Activities under the POEO Act 1997	Environment Protection Authority	16/08/2021	16/08/2021	Monthly	1000m	3	4	11
Delicensed POEO Activities still regulated by the EPA	Environment Protection Authority	16/08/2021	16/08/2021	Monthly	1000m	0	0	1
Former POEO Licensed Activities now revoked or surrendered	Environment Protection Authority	16/08/2021	16/08/2021	Monthly	1000m	3	5	6
UBD Business Directories (Premise & Intersection Matches)	Hardie Grant			Not required	150m	0	0	0
UBD Business Directories (Road & Area Matches)	Hardie Grant			Not required	150m	-	76	76
UBD Business Directory Dry Cleaners & Motor Garages/Service Stations (Premise & Intersection Matches)	Hardie Grant			Not required	500m	0	0	0
UBD Business Directory Dry Cleaners & Motor Garages/Service Stations (Road & Area Matches)	Hardie Grant			Not required	500m	-	0	0
Points of Interest	NSW Department of Finance, Services & Innovation	19/08/2021	19/08/2021	Quarterly	1000m	0	0	8
Tanks (Areas)	NSW Department of Customer Service - Spatial Services	19/08/2021	19/08/2021	Quarterly	1000m	0	0	0
Tanks (Points)	NSW Department of Customer Service - Spatial Services	19/08/2021	19/08/2021	Quarterly	1000m	0	0	3
Major Easements	NSW Department of Finance, Services & Innovation	19/08/2021	19/08/2021	Quarterly	1000m	0	0	4
State Forest	Forestry Corporation of NSW	25/02/2021	14/02/2021	Annually	1000m	0	0	0
NSW National Parks and Wildlife Service Reserves	NSW Office of Environment & Heritage	22/01/2021	11/12/2020	Annually	1000m	0	0	0
Hydrogeology Map of Australia	Commonwealth of Australia (Geoscience Australia)	08/10/2014	17/03/2000	As required	1000m	1	1	2
Temporary Water Restriction (Botany Sands Groundwater Source) Order 2018	NSW Department of Planning, Industry and Environment	26/10/2020	21/02/2018	Annually	1000m	0	0	0
Groundwater Boreholes	NSW Dept. of Primary Industries - Water NSW; Commonwealth of Australia (Bureau of Meteorology)	24/07/2018	23/07/2018	Annually	2000m	0	0	10

Dataset Name	Custodian	Supply Date	Currency Date	Update Frequency	Dataset Buffer (m)	No. Features On-site	No. Features within 100m	No. Features within Buffer
Geological Units 1:250,000	NSW Department of Planning, Industry and Environment	20/08/2014		Annually	1000m	2	3	3
Geological Structures 1:250,000	NSW Department of Planning, Industry and Environment	20/08/2014		Annually	1000m	0	0	1
Naturally Occurring Asbestos Potential	NSW Dept. of Industry, Resources & Energy	04/12/2015	24/09/2015	Unknown	1000m	0	0	0
Atlas of Australian Soils	Australian Bureau of Agriculture and Resource Economics and Sciences (ABARES)	19/05/2017	17/02/2011	As required	1000m	1	1	1
Soil Landscapes of Central and Eastern NSW	NSW Department of Planning, Industry and Environment	14/10/2020	27/07/2020	Annually	1000m	2	3	4
Environmental Planning Instrument Acid Sulfate Soils	NSW Department of Planning, Industry and Environment	19/08/2021	28/06/2021	Monthly	500m	1	-	-
Atlas of Australian Acid Sulfate Soils	CSIRO	19/01/2017	21/02/2013	As required	1000m	1	1	1
Dryland Salinity - National Assessment	National Land and Water Resources Audit	18/07/2014	12/05/2013	None planned	1000m	2	2	2
Mining Subsidence Districts	NSW Department of Customer Service - Subsidence Advisory NSW	19/08/2021	05/08/2021	Quarterly	1000m	0	0	0
Current Mining Titles	NSW Department of Industry	03/08/2021	03/08/2021	Monthly	1000m	0	0	0
Mining Title Applications	NSW Department of Industry	03/08/2021	03/08/2021	Monthly	1000m	0	0	0
Historic Mining Titles	NSW Department of Industry	03/08/2021	03/08/2021	Monthly	1000m	7	7	7
Environmental Planning Instrument SEPP State Significant Precincts	NSW Department of Planning, Industry and Environment	19/08/2021	07/12/2018	Monthly	1000m	0	0	0
Environmental Planning Instrument Land Zoning	NSW Department of Planning, Industry and Environment	19/08/2021	13/08/2021	Monthly	1000m	1	9	16
Commonwealth Heritage List	Australian Government Department of the Agriculture, Water and the Environment	18/05/2021	20/11/2019	Annually	1000m	0	0	0
National Heritage List	Australian Government Department of the Agriculture, Water and the Environment	18/05/2021	20/11/2019	Annually	1000m	0	0	0
State Heritage Register - Curtilages	NSW Department of Planning, Industry and Environment	19/08/2021	25/06/2021	Quarterly	1000m	0	0	0
Environmental Planning Instrument Local Heritage	NSW Department of Planning, Industry and Environment	19/08/2021	13/08/2021	Monthly	1000m	0	1	1
Bush Fire Prone Land	NSW Rural Fire Service	30/08/2021	23/08/2021	Weekly	1000m	2	2	2
Lower Hunter and Central Coast Regional Vegetation Survey	NSW Office of Environment & Heritage	28/02/2015	16/11/2009	As required	1000m	2	3	10
Ramsar Wetlands of Australia	Australian Government Department of Agriculture, Water and the Environment	24/02/2021	19/03/2020	Annually	1000m	0	0	0
Groundwater Dependent Ecosystems	Bureau of Meteorology	14/08/2017	15/05/2017	Annually	1000m	2	4	4
Inflow Dependent Ecosystems Likelihood	Bureau of Meteorology	14/08/2017	15/05/2017	Unknown	1000m	9	12	15
NSW BioNet Species Sightings	NSW Office of Environment & Heritage	30/08/2021	30/08/2021	Weekly	10000m	-	-	-

Site Diagram

91 Gardiner Street, Rutherford, NSW 2320



Legend Site Boundary Internal Parcel Boundaries	Total Area: 348508m ² Total Perimeter: 3.94km	Scale:
	Disclaimers: Measurements are approximate only and may have been simplified or smaller lengths removed for readability. Parcels that make up a small percentage of the total site area have not been labelled for increased legibility.	Data Source Aerial Imagery: © Aerometrex Pty Ltd
		Date: 01 September 2021

Contaminated Land

91 Gardiner Street, Rutherford, NSW 2320



Contaminated Land

91 Gardiner Street, Rutherford, NSW 2320

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	Direction
1173	Transpacific Industrial Services/Nationwide Oil Pty Ltd	99 Kyle Street	Rutherford	Chemical Industry	Regulation under CLM Act not required	Current EPA List	Premise Match	869m	North East
1171	Rutherford Transpacific	11 Kyle Street	Rutherford	Other Industry	Regulation under CLM Act not required	Current EPA List	Premise Match	921m	North

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

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

NSW EPA Contaminated Land List Data Source: Environment Protection Authority
 © State of New South Wales through the Environment Protection Authority

Contaminated Land

91 Gardiner Street, Rutherford, NSW 2320

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

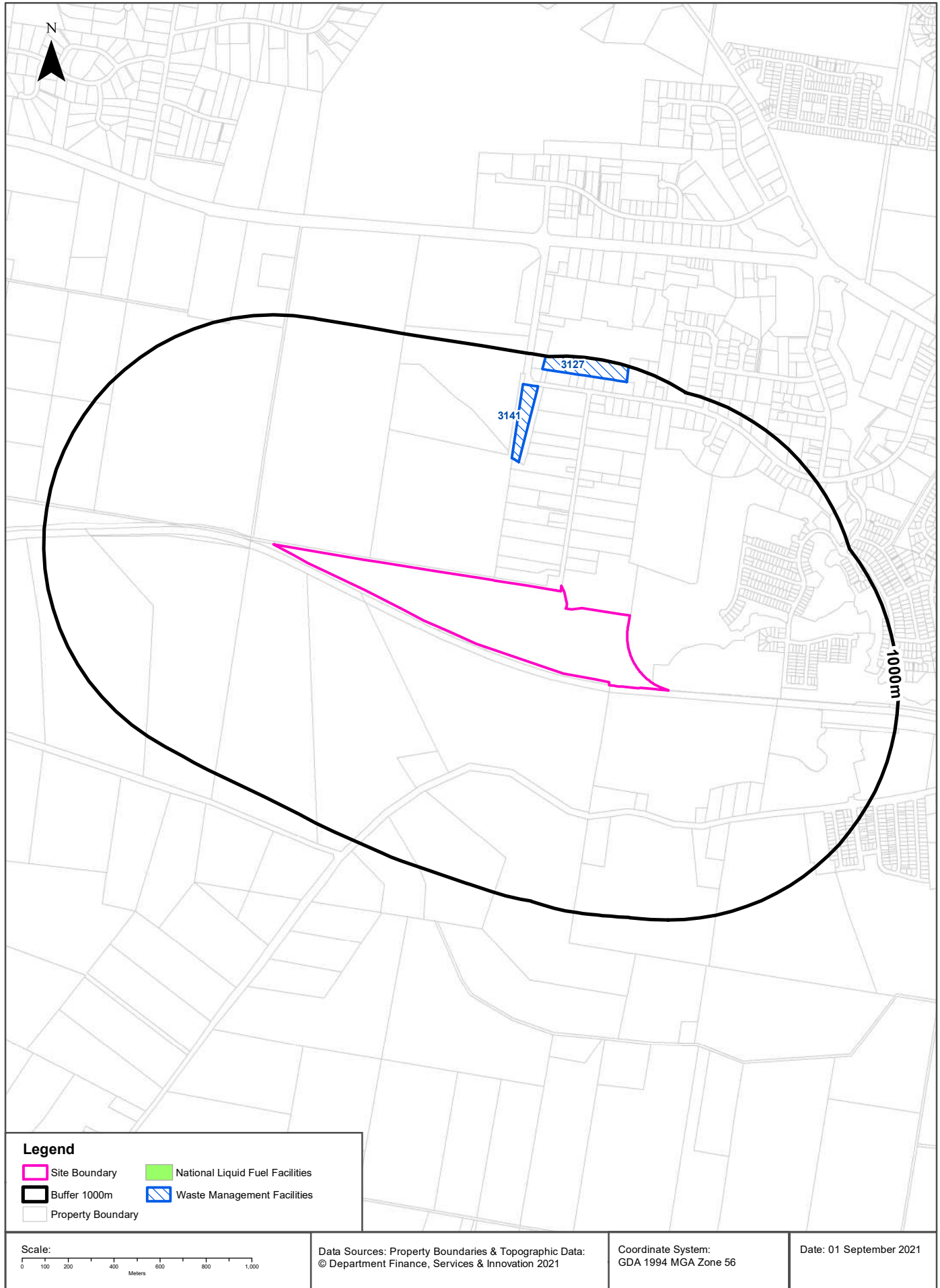
Former Gasworks within the dataset buffer:

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

Waste Management & Liquid Fuel Facilities

91 Gardiner Street, Rutherford, NSW 2320



Legend

- Site Boundary
- Buffer 1000m
- Property Boundary
- National Liquid Fuel Facilities
- Waste Management Facilities

Scale:
0 100 200 400 600 800 1,000
Meters

Data Sources: Property Boundaries & Topographic Data:
© Department Finance, Services & Innovation 2021

Coordinate System:
GDA 1994 MGA Zone 56

Date: 01 September 2021

Waste Management & Liquid Fuel Facilities

91 Gardiner Street, Rutherford, NSW 2320

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	Direction
3141	True Gain Pty Ltd	Australian Waste Oil Refineries	62 Kyle Street	Rutherford	Transfer Station			Operational	Transfer station or temporary storage fac.	Premise Match	525 m	North
3127	Transpacific Industries Group Ltd	Transpacific Rutherford	11 Kyle Street	Rutherford	Reprocessing		Operational		Oil Re-refining Facility.	Premise Match	921 m	North

Waste Management Facilities Data Source: Geoscience Australia

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National Liquid Fuel Facilities

National Liquid Fuel Facilities within the dataset buffer:

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

National Liquid Fuel Facilities Data Source: Geoscience Australia

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PFAS Investigation & Management Programs

91 Gardiner Street, Rutherford, NSW 2320



PFAS Investigation & Management Programs

91 Gardiner Street, Rutherford, NSW 2320

EPA PFAS Investigation Program

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

Map ID	Site	Address	Loc Conf	Dist	Dir
27	Rutherford, Truegain	62 Kyle St, Rutherford NSW 2320 + Stoney, Fishery & Wallis Creeks downstream	Network of Features	0m	On-site

EPA PFAS Investigation Program: Environment Protection Authority
© State of New South Wales through the Environment Protection Authority

Defence PFAS Investigation Program

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

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

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

Defence PFAS Management Program

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

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

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

Airservices Australia National PFAS Management Program

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

Map ID	Site Name	Impacts	Loc Conf	Dist	Dir
N/A	No records in buffer				

Airservices Australia National PFAS Management Program Data Custodian: Airservices Australia

Defence Sites

91 Gardiner Street, Rutherford, NSW 2320

Defence 3 Year Regional Contamination Investigation Program

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

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

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

EPA Other Sites with Contamination Issues

91 Gardiner Street, Rutherford, NSW 2320

EPA Other Sites with Contamination Issues

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

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

Sites within the dataset buffer:

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

EPA Other Sites with Contamination Issues: Environment Protection Authority
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Current EPA Licensed Activities

91 Gardiner Street, Rutherford, NSW 2320



EPA Activities

91 Gardiner Street, Rutherford, NSW 2320

Licensed Activities under the POEO Act 1997

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

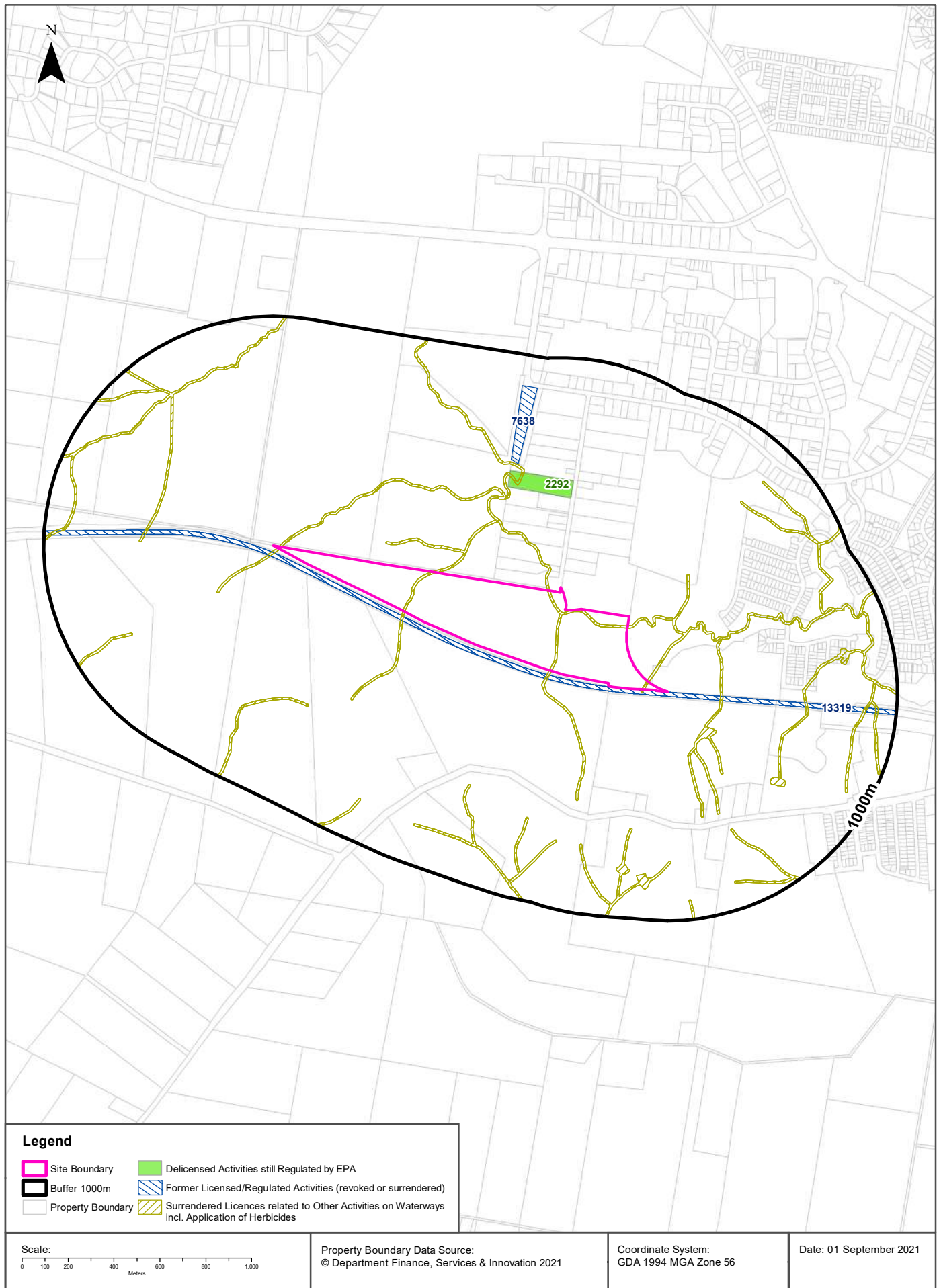
EPL	Organisation	Name	Address	Suburb	Activity	Loc Conf	Distance	Direction
12846	JUROX PTY LIMITED	Jurox Pty Ltd	85 Gardiner Road	RUTHERFORD	Chemical production waste generation	Premise Match	0m	On-site
12846	JUROX PTY LIMITED	Jurox Pty Ltd	85 Gardiner Road	RUTHERFORD	Pharmaceutical and veterinary products production	Premise Match	0m	On-site
10393	MAITLAND CITY COUNCIL	ALL WATERBODIES IN THE MAITLAND LOCAL GOVERNMENT AREA	.	MAITLAND	Other activities	Network of Features	0m	On-site
3142	AUSTRALIAN RAIL TRACK CORPORATION LIMITED		AUSTRALIAN RAIL TRACK CORPORATION (ARTC) NETWORK, SYDNEY, NSW 2001		Railway systems activities	Network of Features	3m	South West
11956	NATIONAL CERAMIC INDUSTRIES AUSTRALIA PTY LTD	NATIONAL CERAMIC INDUSTRIES AUSTRALIA PTY LTD	RACECOURSE ROAD, RUTHERFORD, NSW 2320	RUTHERFORD	Ceramics production	Premise Match	216m	North East
2463	KYLE STREET HOLDINGS PTY LTD	MAITLAND SALEYARDS	52 KYLE STREET	RUTHERFORD	Animal accommodation	Premise Match	564m	North
3426	100% BOTTLING COMPANY PTY LTD	ATLANTIC PACIFIC FOODS	21 GARDINER STREET, RUTHERFORD, NSW 2320	RUTHERFORD	Chemical storage waste generation	Premise Match	620m	North East
3426	100% BOTTLING COMPANY PTY LTD	ATLANTIC PACIFIC FOODS	21 GARDINER STREET, RUTHERFORD, NSW 2320	RUTHERFORD	General agricultural processing	Premise Match	620m	North East
11383	CLEANAWAY OPERATIONS PTY LTD	TRANSPACIFIC INDUSTRIES PTY. LTD.	99 KYLE STREET	RUTHERFORD	Waste storage - hazardous, restricted solid, liquid, clinical and related waste and asbestos waste	Premise Match	869m	North East
12555	CLEANAWAY REFINERS PTY LTD	TRANSPACIFIC REFINERS PTY LTD	41 KYLE STREET, RUTHERFORD, NSW 2320	RUTHERFORD	Petroleum products and fuel production	Premise Match	921m	North
12555	CLEANAWAY REFINERS PTY LTD	TRANSPACIFIC REFINERS PTY LTD	41 KYLE STREET, RUTHERFORD, NSW 2320	RUTHERFORD	Chemical storage waste generation	Premise Match	921m	North

POEO Licence Data Source: Environment Protection Authority

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Delicensed & Former Licensed EPA Activities

91 Gardiner Street, Rutherford, NSW 2320



EPA Activities

91 Gardiner Street, Rutherford, NSW 2320

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
2292	FULTON HOGAN INDUSTRIES PTY LTD	PIONEER ROAD SERVICES PTY LTD	LOT 23 GARDINERS ROAD	RUTHERFORD	Bitumen mixing	Premise Match	393m	North

Delicensed Activities Data Source: Environment Protection Authority
 © State of New South Wales through the Environment Protection Authority

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

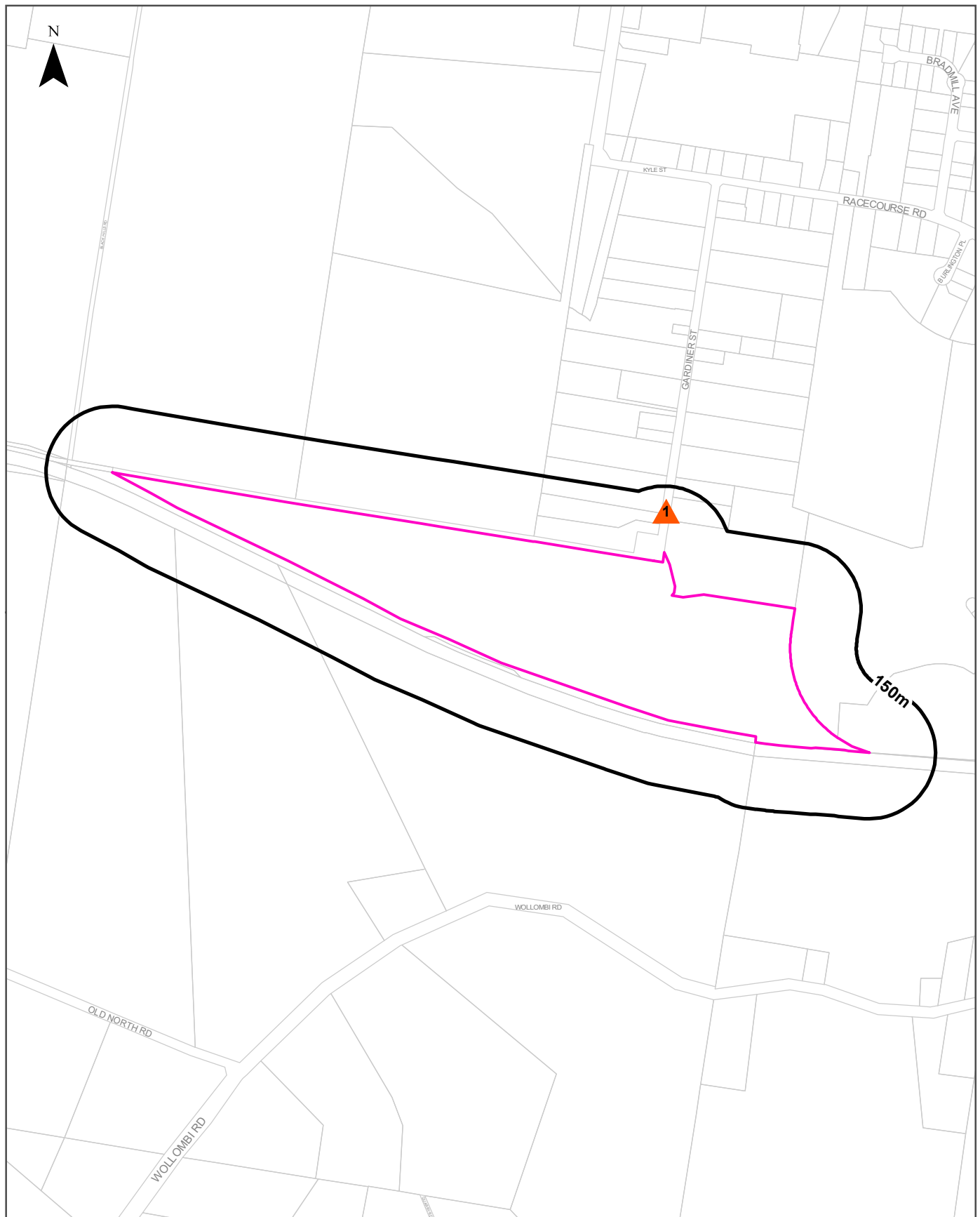
Former Licensed activities under the Protection of the Environment Operations Act 1997, now revoked or surrendered, within the dataset buffer:

Licence No	Organisation	Location	Status	Issued Date	Activity	Loc Conf	Distance	Direction
4653	LUHRMANN ENVIRONMENT MANAGEMENT PTY LTD	WATERWAYS THROUGHOUT NSW	Surrendered	06/09/2000	Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	0m	On-site
4838	Robert Orchard	Various Waterways throughout New South Wales - SYDNEY NSW 2000	Surrendered	07/09/2000	Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	0m	On-site
6630	SYDNEY WEED & PEST MANAGEMENT PTY LTD	WATERWAYS THROUGHOUT NSW - PROSPECT, NSW, 2148	Surrendered	09/11/2000	Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	0m	On-site
13319	AUSTRALIAN RAIL TRACK CORPORATION LIMITED	Maitland to Minimbah Third Track, Main Northern Railway, MAITLAND	Surrendered	16/11/2010	Railway systems activities	Network of Features	2m	South West
13319	AUSTRALIAN RAIL TRACK CORPORATION LIMITED	Maitland to Minimbah Third Track, Main Northern Railway, MAITLAND	Surrendered	16/11/2010	Crushing, grinding or separating; Extractive Activities	Network of Features	2m	South West
7638	TRUEGAIN PTY. LIMITED	TRUEGAIN PTY LTD, 62 KYLE STREET, RUTHERFORD	Revoked	07/12/2000	Recovery of waste oil; Non-thermal treatment of liquid waste	Premise Match	525m	North

Former Licensed Activities Data Source: Environment Protection Authority
 © State of New South Wales through the Environment Protection Authority

Historical Business Directories

91 Gardiner Street, Rutherford, NSW 2320



Legend <ul style="list-style-type: none"> Site Boundary Buffer 150m Property Boundary ● Business directory records mapped to a specific premise ■ Business directory records mapped to a road intersection ▲ Business directory records mapped to a road corridor Business directory records mapped to a general area 		Scale: 	Coordinate System: GDA 1994 MGA Zone 56 Date: 01 September 2021
Data Sources: Reproduced with permission of UBD and Hardie Grant Media Pty Ltd DD 01/08/2018			

Historical Business Directories

91 Gardiner Street, Rutherford, NSW 2320

Business Directory Records 1950-1991 Premise or Road Intersection Matches

Universal Business Directory records from years 1991, 1982, 1970, 1961 & 1950, mapped to a premise or road intersection within the dataset buffer:

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

Reproduced with permission of UBD and Hardie Grant Media Pty Ltd DD 01/08/2018

Business Directory Records 1950-1991 Road or Area Matches

Universal Business Directory records from years 1991, 1982, 1970, 1961 & 1950, mapped to a road or an area, within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found, or the road has been renumbered since the directory was published:

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
1	MOTOR WRECKERS	Auto Wreckers., Lot 19 Gardiner Rd., Rutherford 2320	78606	1991	Road Match	37m
	SEPTIC TANK MFRS. &/OR INSTALLERS &/OR SPECIALISTS.	Bio Cycle., 24 Gardiner Rd., Rutherford 2320	78898	1991	Road Match	37m
	SEWAGE TREATMENT PLANT &/OR EQUIPMENT MFRS. &/OR DIST.	Bio Cycle., 24 Gardiner Rd., Rutherford 2320	78901	1991	Road Match	37m
	COAL MECHANIZATION EQUIPMENT & WASHING PLANTS.	BMCH Constructions Pty Ltd., 76 Gardiner Rd., Rutherford 2320	77685	1991	Road Match	37m
	CRANE &/OR TRAVEL TOWER PROPRIETORS &/OR HIRERS.	BMCH Constructions Pty Ltd., 76 Gardiner Rd., Rutherford 2320	77715	1991	Road Match	37m
	ENGINEERS FABRICATING.	BMCH Constructions Pty Ltd., 76 Gardiner Rd., Rutherford 2320	77831	1991	Road Match	37m
	LABOUR HIRE CONTRACTORS.	BMCH Constructions Pty Ltd., 76 Gardiner Rd., Rutherford 2320	78275	1991	Road Match	37m
	STEEL ERECTORS.	BMCH Constructions Pty Ltd., 76 Gardiner Rd., Rutherford 2320	78974	1991	Road Match	37m
	STEEL FABRICATORS.	BMCH Constructions Pty Ltd., 76 Gardiner Rd., Rutherford 2320	78978	1991	Road Match	37m
	SHEET METAL WORKERS	Boral Cyclone Limited., 14 Gardiner Rd., Rutherford 2320	78907	1991	Road Match	37m
	SILO MFRS. &/OR DIST.	Boral Cyclone Limited., 14 Gardiner Rd., Rutherford 2320	78920	1991	Road Match	37m
	DIVING EQUIPMENT MFRS. &/OR DIST.	Dolman Norm & Son Pty Ltd., 35 Gardiner Rd., Rutherford 2320	77753	1991	Road Match	37m
	FISHING TACKLE MFRS. &/OR IMPS. &/OR DIST.	Dolman Norm & Son Pty Ltd., 35 Gardiner Rd., Rutherford 2320	77893	1991	Road Match	37m
	SPORTS GOODS MFRS. &/OR IMPS. &/OR W/SALERS.	Dolman Norm & Son Pty Ltd., 35 Gardiner Rd., Rutherford 2320	78959	1991	Road Match	37m
	INSULATING MATERIAL MFRS. &/OR DIST. &/OR SUPPLIERS.	Fibre King Home Insulation Co., Gardiner Rd., Rutherford 2320	78204	1991	Road Match	37m
	INSULATION CONTRACTORS.	Fibre King Home Insulation Co., Gardiner Rd., Rutherford 2320	78206	1991	Road Match	37m
	ENGINEERS FABRICATING.	Four-L Fabrications Pty Ltd., 210 Gardiner Rd., Rutherford 2320	77834	1991	Road Match	37m
	ENGINEERS-STRUCTURAL.	Four-L Fabrications Pty Ltd., 210 Gardiner Rd., Rutherford 2320	77855	1991	Road Match	37m
	STEEL FABRICATORS.	Four-L Fabrications Pty. Ltd., 210 Gardiner Rd., Rutherford 2320	78980	1991	Road Match	37m
	EARTH MOVING EQUIPMENT MAINTENANCE &/OR REPAIRS.	Hawker Noyes., Lot 1 Gardiner Rd., Rutherford 2320	77781	1991	Road Match	37m
	EARTH MOVING MACHINERY PARTS MFRS. &/OR DIST.	Hawker Noyes., Lot 1 Gardiner Rd., Rutherford 2320	77782	1991	Road Match	37m
	FILTER MFRS. &/OR DIST.	Hawker Noyes., Lot 1 Gardiner Rd., Rutherford 2320	77878	1991	Road Match	37m
	INSULATING MATERIAL MFRS. &/OR DIST. &/OR SUPPLIERS.	Insul-Guard Advanced Home Insulation., Gardiner Rd., Rutherford 2320	78205	1991	Road Match	37m
	ENGINEERS - GENERAL.	Kress, Rudi & Son Engineering, Lot 22, Gardiner Rd., Maitland 2320	78886	1991	Road Match	37m
	ABRASIVE BLASTING	Lawrences Pipe Lining & Coating Pty Ltd., Lot 21 Gardiner Rd., Rutherford 2320	77301	1991	Road Match	37m

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
1	PIPE LININGS &/OR COATINGS MFRS. &/OR DIST.	Lawrences Pipe Lining & Coating Pty Ltd., Lot 21 Gardiner Rd., Rutherford 2320	78699	1991	Road Match	37m
	MOTOR STEAM CLEANERS.	Maitland Auto Wreckers., Lot 19 Gardiner Rd., Rutherford 2320	78576	1991	Road Match	37m
	APIARISTS SUPPLIES.	Pender Bee Keeping Supplies Pty Ltd., 17 Gardiner Rd., Rutherford 2320	77351	1991	Road Match	37m
	ENGINEERS - GENERAL.	Pender Bee Keeping Supplies Pty Ltd., 17 Gardiner Rd., Rutherford 2320	78888	1991	Road Match	37m
	ENGINEERS FABRICATING.	Pender Bee Keeping Supplies Pty Ltd., 17 Gardiner Rd., Rutherford 2320	77839	1991	Road Match	37m
	SHEET METAL WORKERS	Pender Bee Keeping Supplies Pty Ltd., 17 Gardiner Rd., Rutherford 2320	78908	1991	Road Match	37m
	WELDERS.	Pender Bee Keeping Supplies Pty Ltd., 17 Gardiner Rd., Rutherford 2320	79185	1991	Road Match	37m
	ASPHALT & ASPHALTERS.	Pioneer Asphalts Pty Ltd., 23 Gardiner Rd., Rutherford 2320	77357	1991	Road Match	37m
	TAKE-AWAY FOODS.	Rutherford Industrial Canteen., Gardiner Rd., Rutherford 2320	79040	1991	Road Match	37m
	ENGINEERS FABRICATING.	Teweld Pty Ltd., Gardiner Rd., Rutherford 2320	77840	1991	Road Match	37m
	ENGINEERS-WELDING.	Teweld Pty Ltd., Gardiner Rd., Rutherford 2320	77861	1991	Road Match	37m
	STEEL FABRICATORS.	Teweld Pty Ltd., Gardiner Rd., Rutherford 2320	78984	1991	Road Match	37m
	WELDERS.	Teweld Pty Ltd., Gardiner Rd., Rutherford 2320	79186	1991	Road Match	37m
	ENGINEERS-MACHINING TO THE TRADE.	Treloar Manufacturing Pty Ltd., 20 Gardiner Rd., Rutherford 2320	77850	1991	Road Match	37m
	FOUNDERS - NON-FERROUS.	Treloar Manufacturing Pty Ltd., 20 Gardiner Rd., Rutherford 2320	77915	1991	Road Match	37m
	FOUNDRY CORE MAKERS.	Treloar Manufacturing Pty Ltd., 20 Gardiner Rd., Rutherford 2320	77916	1991	Road Match	37m
	HOSE &/OR HOSE FITTINGS MFRS. &/OR DIST. &/OR W/SALERS.	Treloar Manufacturing Pty Ltd., 20 Gardiner Rd., Rutherford 2320	78160	1991	Road Match	37m
	PIPE &/OR PIPE FITTINGS MFRS. &/OR DIST.	Treloar Manufacturing Pty Ltd., 20 Gardiner Rd., Rutherford 2320	78694	1991	Road Match	37m
	VALVE &/OR COCK MFRS. &/OR DIST.	Treloar Manufacturing Pty Ltd., 20 Gardiner Rd., Rutherford 2320	79144	1991	Road Match	37m
	ENGINEERS - MARINE.	Argo Eng. Pty. Ltd., Gardiner St., Rutherford 2320	168141	1982	Road Match	37m
	SHEET METAL WORKERS.	Boral Cyclone Limited, 14 Gardiner St., Rutherford 2320	168891	1982	Road Match	37m
	SILO MFRS.	Boral Cyclone Limited, 14 Gardiner St., Rutherford 2320	168897	1982	Road Match	37m
	MARINE SUPPLIES.	go Eng. Pty. Ltd., Gardiner St., Rutherford 2320	168457	1982	Road Match	37m
	INSULATING MATERIAL MFRS. &/OR DIST.	Insul'Guard Corporation Pty. Ltd., Gardiner St., Rutherford 2320	168377	1982	Road Match	37m
	INSULATION (INSULATING) CONTRACTORS.	Insul'Guard Corporation Pty. Ltd., Gardiner St., Rutherford 2320	168378	1982	Road Match	37m
	CRANES MOBILE & TRAVEL TOWER - PROPRIETORS &/OR HIRERS.	Kwikweld Crane Hire, 24 Gardiner St., Rutherford 2320	168024	1982	Road Match	37m
	HIRING SERVICES.	Kwikweld Crane Hire, 24 Gardiner St., Rutherford 2320	168336	1982	Road Match	37m
	ENGINEERS - GENERAL &/OR MANUFACTURING &/OR MECHANICAL	Kwikweld Fabrications & Eng. Pty. Ltd., 24 Gardiner St., Rutherford 2320	168136	1982	Road Match	37m
	ENGINEERS FABRICATING.	Kwikweld Fabrications & Eng. Pty. Ltd., 24 Gardiner St., Rutherford 2320	168123	1982	Road Match	37m
	MINING MACHINERY REPAIRERS.	Kwikweld Fabrications & Eng. Pty. Ltd., 24 Gardiner St., Rutherford 2320	168501	1982	Road Match	37m
ENGINEERS - STRUCTURAL	McNally Australia Pty. Ltd., Gardiner St., Rutherford 2320	168147	1982	Road Match	37m	
ENGINEERS FABRICATING.	McNally Australia Pty. Ltd., Gardiner St., Rutherford 2320	168124	1982	Road Match	37m	

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
1	ENGINEERS MINING.	McNally Australia Pty. Ltd., Gardiner St., Rutherford 2320	168143	1982	Road Match	37m
	TRANSFORMER &/OR TRANSFORMER EQUIPMENT MFRS. &/OR IMPS. &/OR DIST.	Modern Products Pty. Ltd., Gardiner St., Rutherford 2320	169011	1982	Road Match	37m
	FOUNDERS - NON-FERROUS.	Pont, J. T. & Co. Pty. Ltd., 18 Gardiner St., Rutherford 2320	168182	1982	Road Match	37m
	FOUNDERS FERROUS.	Pont, J. T. & Co. Pty. Ltd., 18 Gardiner St., Rutherford 2320	168181	1982	Road Match	37m
	APIARISTS SUPPLIES.	Pender Bee Keeping Supplies, 17 Gardiner St., Rutherford 2320	167770	1982	Road Match	37m
	ENGINEERS - GENERAL &/OR MANUFACTURING &/OR MECHANICAL	Pender Bee Keeping Supplies, 17 Gardiner St., Rutherford 2320	168137	1982	Road Match	37m
	ENGINEERS FABRICATING.	Pender Bee Keeping Supplies, 17 Gardiner St., Rutherford 2320	168125	1982	Road Match	37m
	SHEET METAL WORKERS.	Pender Bee Keeping Supplies, 17 Gardiner St., Rutherford 2320	168893	1982	Road Match	37m
	WELDERS - ELECTRIC &/OR OXY.	Pender Bee Keeping Supplies, 17 Gardiner St., Rutherford 2320	169048	1982	Road Match	37m
	ORNAMENTAL METAL WORKERS.	Pont, J. T. & Co. Pty. Ltd., 18 Gardiner St., Rutherford 2320	168703	1982	Road Match	37m
	ENGINEERS - STRUCTURAL	Rutherford Engineering Pty. Ltd., 171 Gardiner St., Rutherford 2320	168149	1982	Road Match	37m
	ENGINEERS - GENERAL &/OR MANUFACTURING &/OR MECHANICAL	Rutherford Engineering Pty. Ltd., 171 Gardiner St., Rutherford 2320	168138	1982	Road Match	37m
	ENGINEERS FABRICATING.	Rutherford Engineering Pty. Ltd., 171 Gardiner St., Rutherford 2320	168126	1982	Road Match	37m
	VALVES - STEAM, WATER - MFRS. &/OR DIST.	Treloar, W. J. & Sons Pty. Ltd., 20 Gardiner St., Rutherford 2320	169034	1982	Road Match	37m
	PIPE &/OR PIPE FITTINGS MFRS. &/OR DIST.	Treloar, W. J. & Sons Pty. Ltd., 20 Gardiner St., Rutherford 2320	168738	1982	Road Match	37m
	PUMP MFRS. &/OR DIST. - WATER &/OR VACUUM.	Treloar, W. J. & Sons Pty. Ltd., 20 Gardiner St., Rutherford 2320	168792	1982	Road Match	37m
	FOUNDERS - NON-FERROUS.	Treloar, W. J. & Sons Pty. Ltd., Gardiner St., Rutherford 2320	168183	1982	Road Match	37m
	PUMP & PUMPING EQUIPMENT MFRS. &/OR DIST.	Treloar, W. J. & Sons Pty. Ltd., Gardiner St., Rutherford 2320	168795	1982	Road Match	37m
	CONCRETE-PRE-STESSED	Gardner Constructions Pty. Ltd., Gardner St., Rutherford	638328	1970	Road Match	37m

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Historical Business Directories

91 Gardiner Street, Rutherford, NSW 2320

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

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

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

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

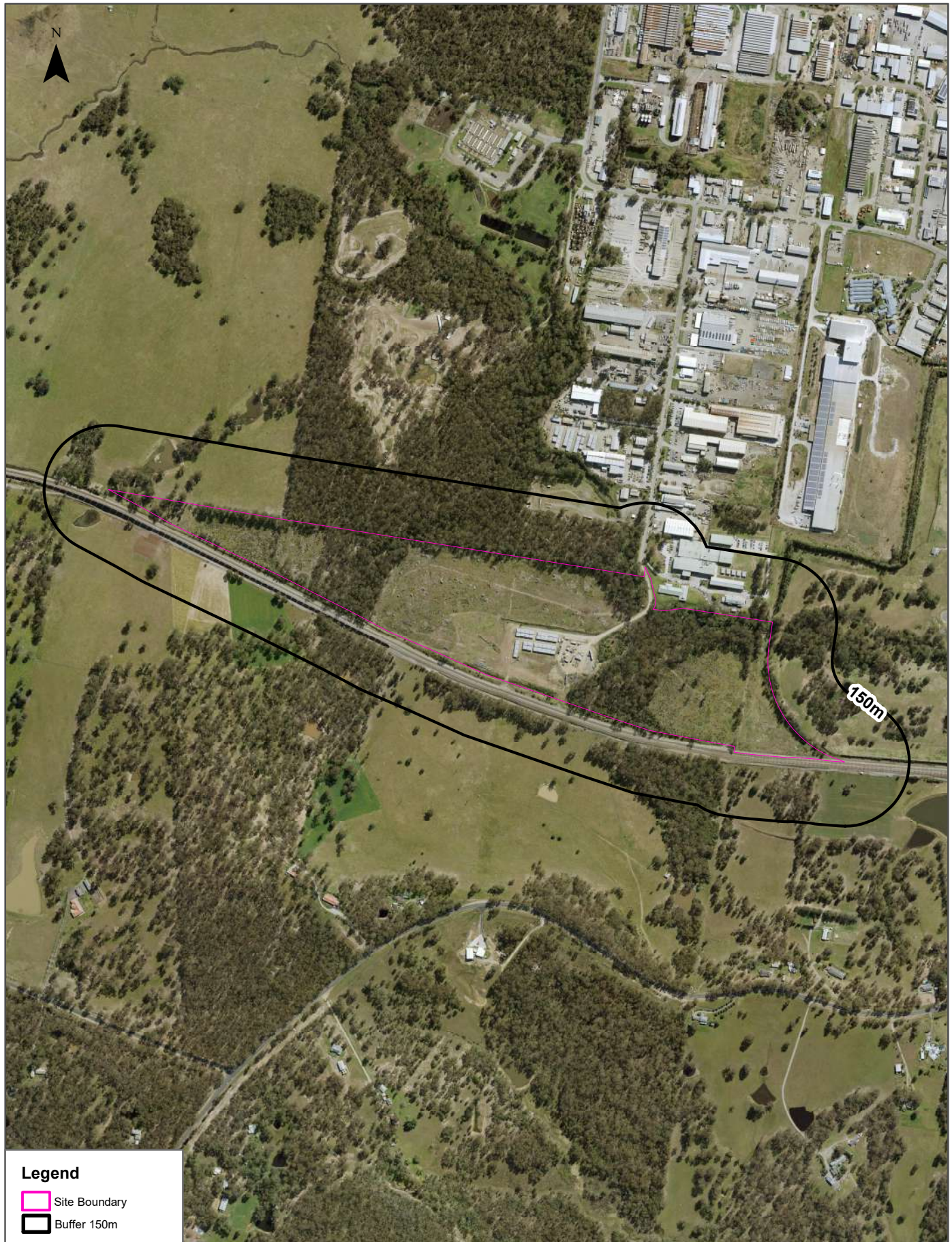
Dry Cleaners, Motor Garages & Service Stations from UBD Business Directories, mapped to a road or an area, within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found, or the road has been renumbered since the directory was published.

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



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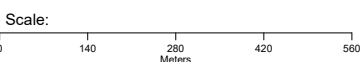
Aerial Imagery 2020

91 Gardiner Street, Rutherford, NSW 2320



Legend

-  Site Boundary
-  Buffer 150m



Data Source Aerial Imagery:
© Aerometrex Pty Ltd

Coordinate System:
GDA 1994 MGA Zone 56



Date: 01 September 2021

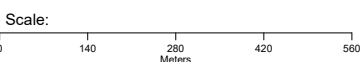
Aerial Imagery 2015

91 Gardiner Street, Rutherford, NSW 2320



Legend

-  Site Boundary
-  Buffer 150m



Data Source Aerial Imagery:
© Aerometrex Pty Ltd

Coordinate System:
GDA 1994 MGA Zone 56



Date: 01 September 2021

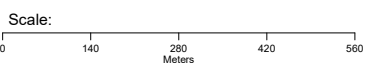
Aerial Imagery 2010

91 Gardiner Street, Rutherford, NSW 2320



Legend

-  Site Boundary
-  Buffer 150m



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Coordinate System:
GDA 1994 MGA Zone 56



Date: 01 September 2021

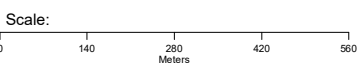
Aerial Imagery 1994

91 Gardiner Street, Rutherford, NSW 2320



Legend

-  Site Boundary
-  Buffer 150m



Data Source Aerial Imagery:
© NSW Department of Customer Service

Coordinate System:
GDA 1994 MGA Zone 56

Date: 01 September 2021

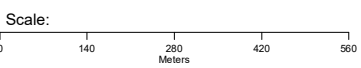
Aerial Imagery 1984

91 Gardiner Street, Rutherford, NSW 2320



Legend

- Site Boundary
- Buffer 150m



Data Source Aerial Imagery:
© NSW Department of Customer Service

Coordinate System:
GDA 1994 MGA Zone 56



Date: 01 September 2021

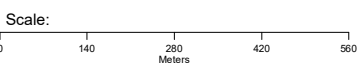
Aerial Imagery 1977

91 Gardiner Street, Rutherford, NSW 2320



Legend

-  Site Boundary
-  Buffer 150m



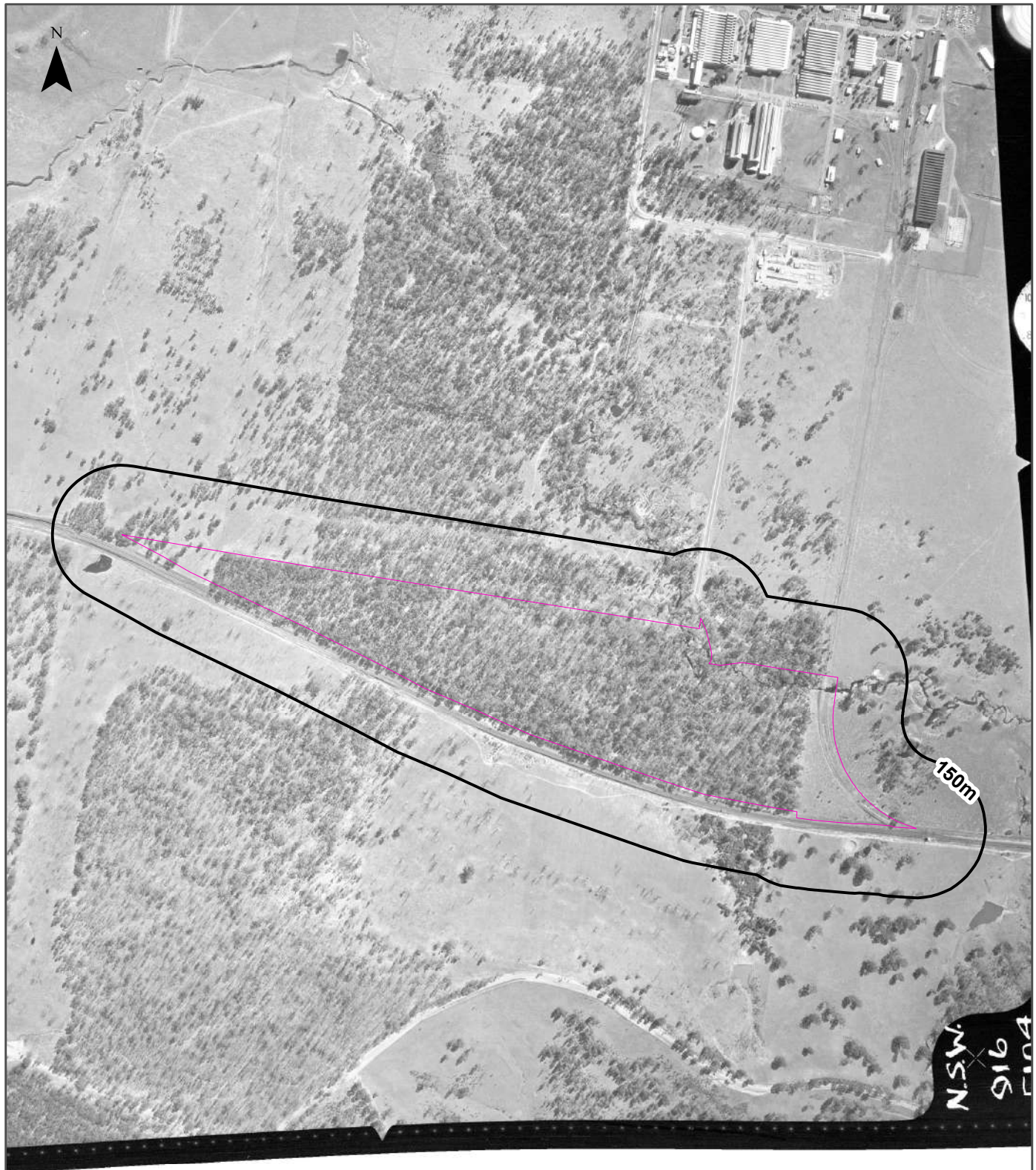
Data Source Aerial Imagery:
© NSW Department of Customer Service

Coordinate System:
GDA 1994 MGA Zone 56



Date: 01 September 2021

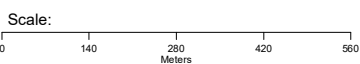
Aerial Imagery 1965

91 Gardiner Street, Rutherford, NSW 2320



Legend

-  Site Boundary
-  Buffer 150m



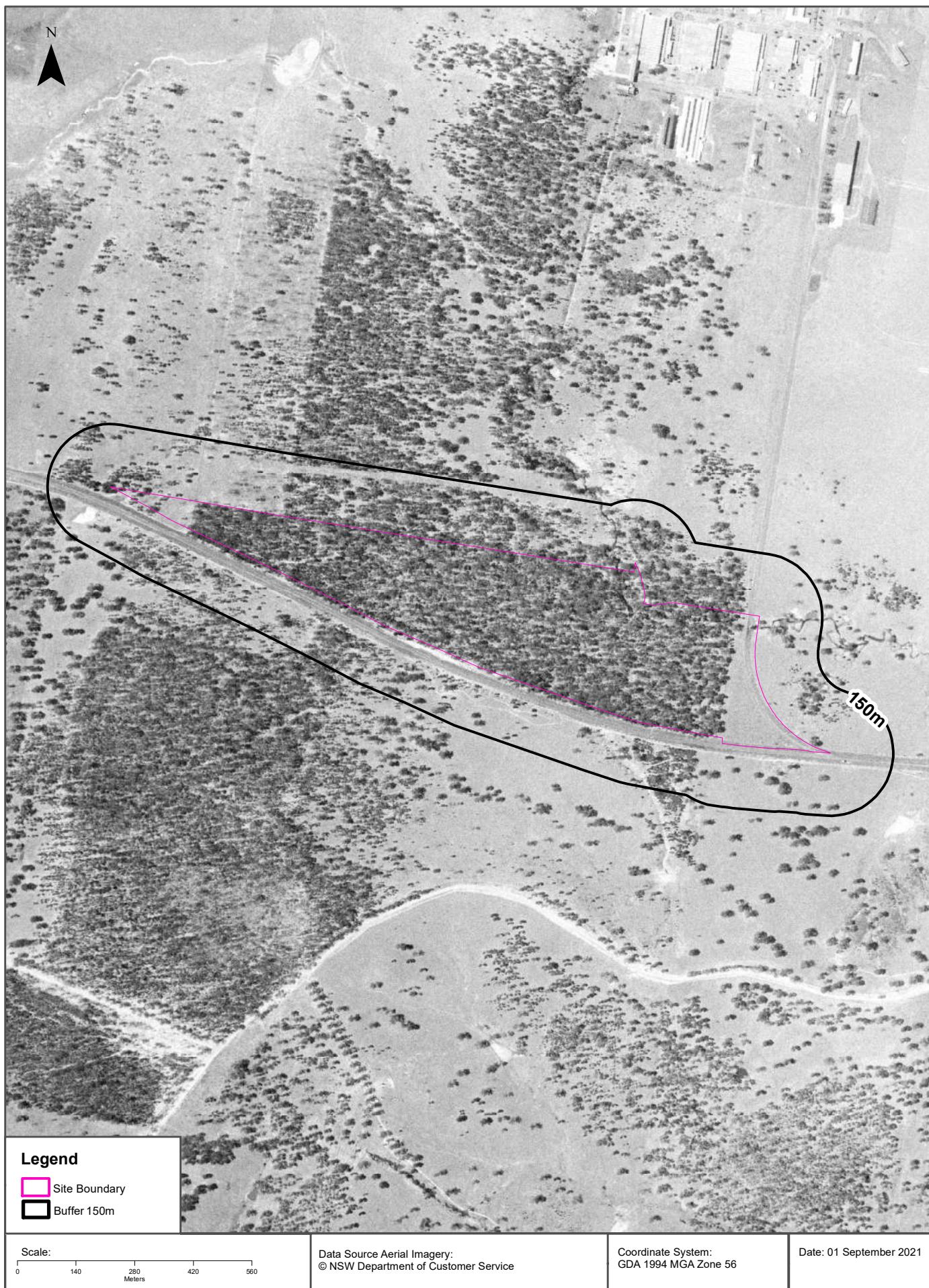
Data Source Aerial Imagery:
© NSW Department of Customer Service

Coordinate System:
GDA 1994 MGA Zone 56

Date: 01 September 2021

Aerial Imagery 1958

91 Gardiner Street, Rutherford, NSW 2320





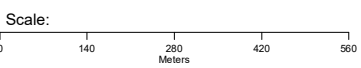
Aerial Imagery 1954

91 Gardiner Street, Rutherford, NSW 2320



Legend

-  Site Boundary
-  Buffer 150m



Data Source Aerial Imagery:
© NSW Department of Customer Service

Coordinate System:
GDA 1994 MGA Zone 56



Date: 01 September 2021

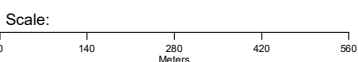
Aerial Imagery 1938

91 Gardiner Street, Rutherford, NSW 2320



Legend

-  Site Boundary
-  Buffer 150m



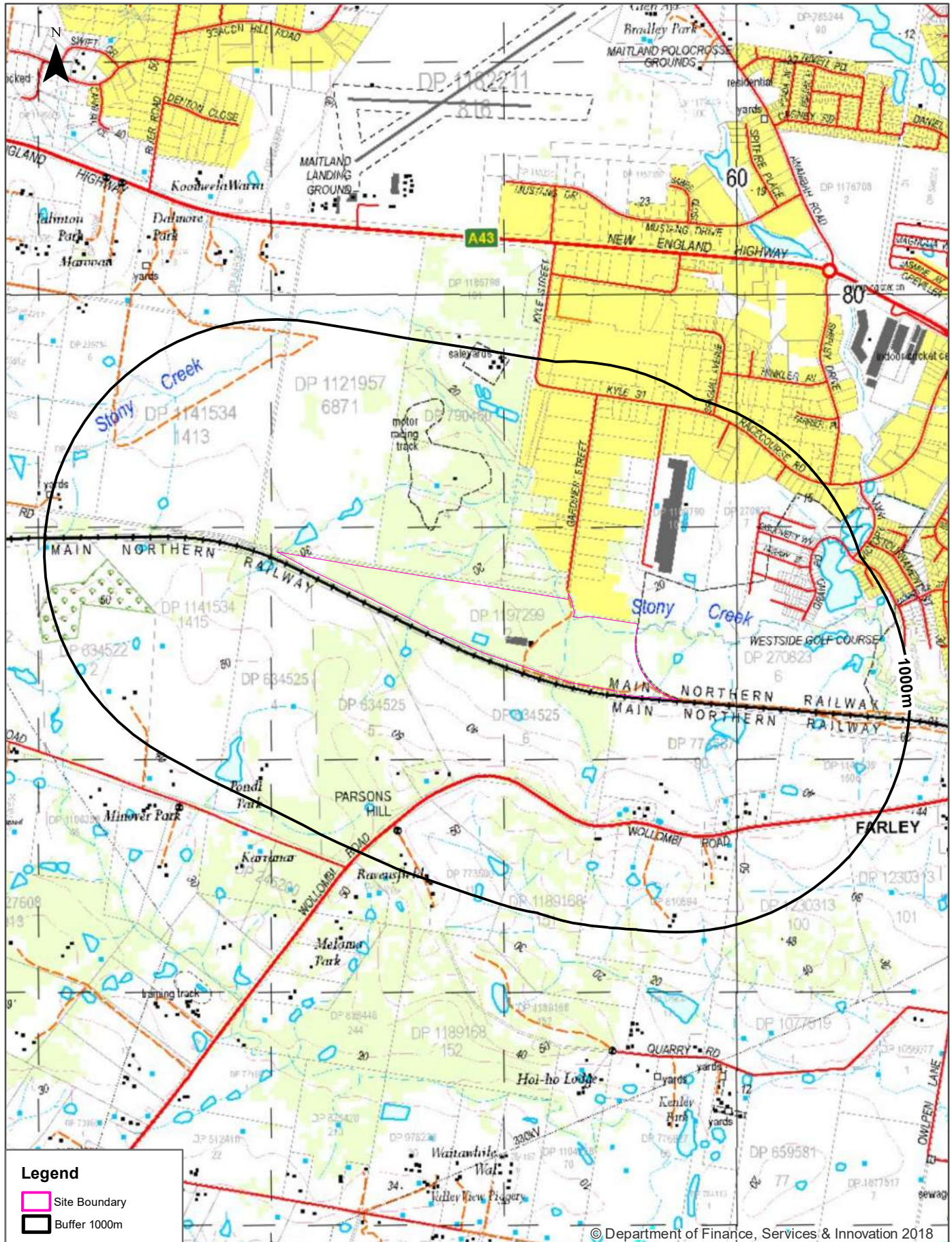
Data Source Aerial Imagery: ©2021 Geoscience Australia

Coordinate System:
GDA 1994 MGA Zone 56

Date: 01 September 2021

Topographic Map 2015

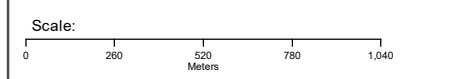
91 Gardiner Street, Rutherford, NSW 2320



Legend

- Site Boundary
- Buffer 1000m

© Department of Finance, Services & Innovation 2018



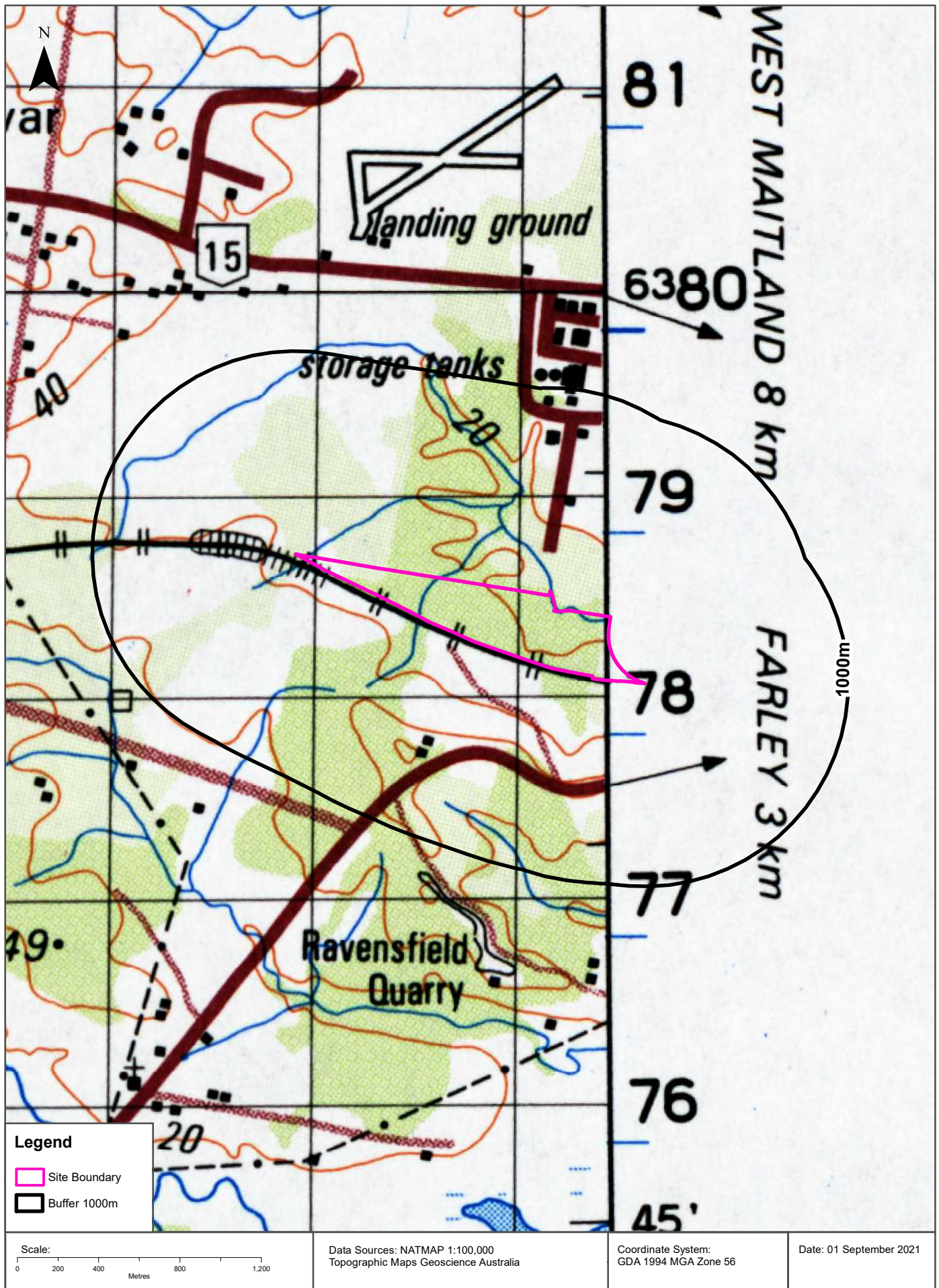
Data Sources: Topographic Map Data
 © NSW Land and Property Information

Coordinate System:
 GDA 1994 MGA Zone 56

Date: 01 September 2021

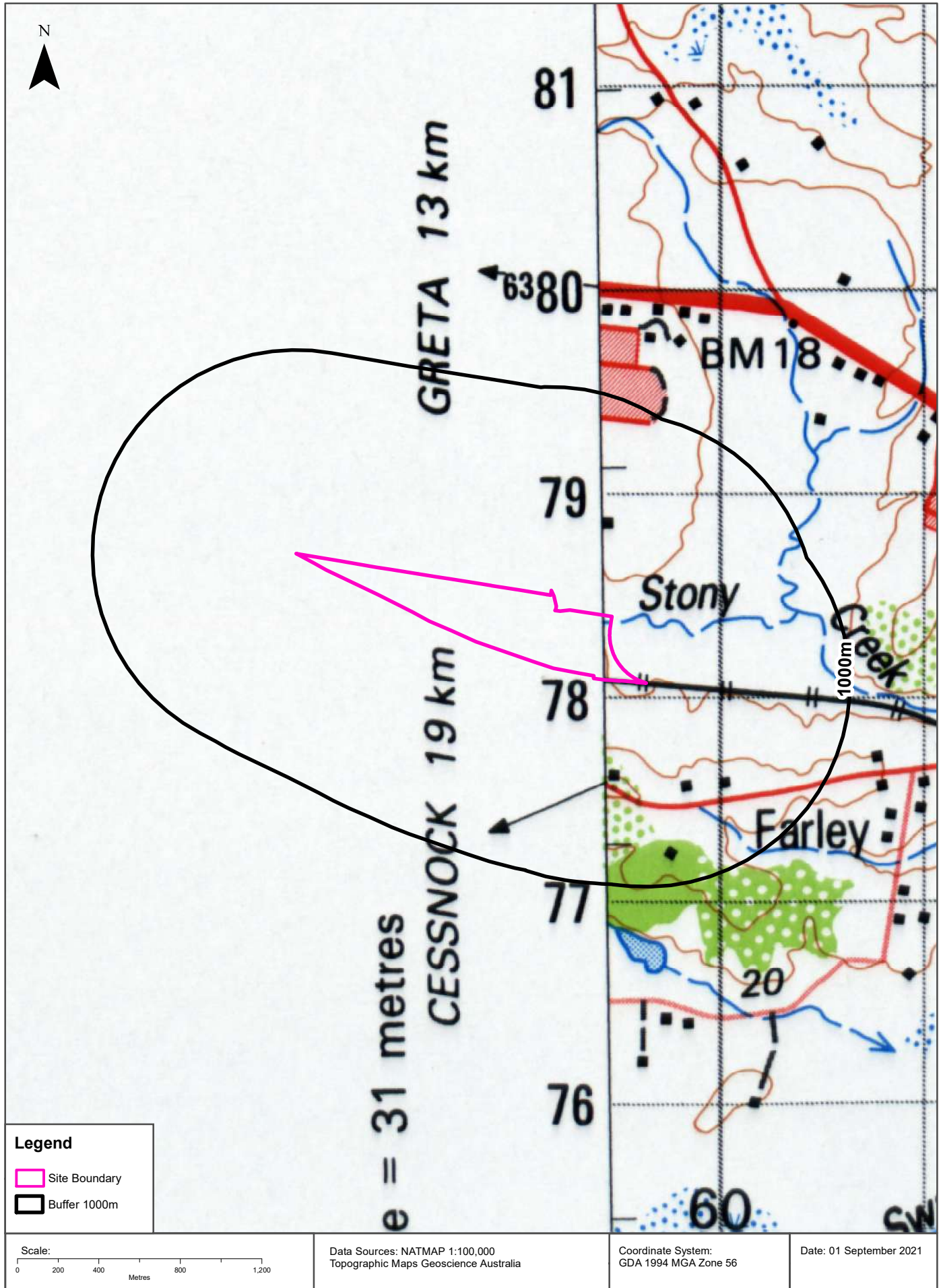
Historical Map 1982

91 Gardiner Street, Rutherford, NSW 2320



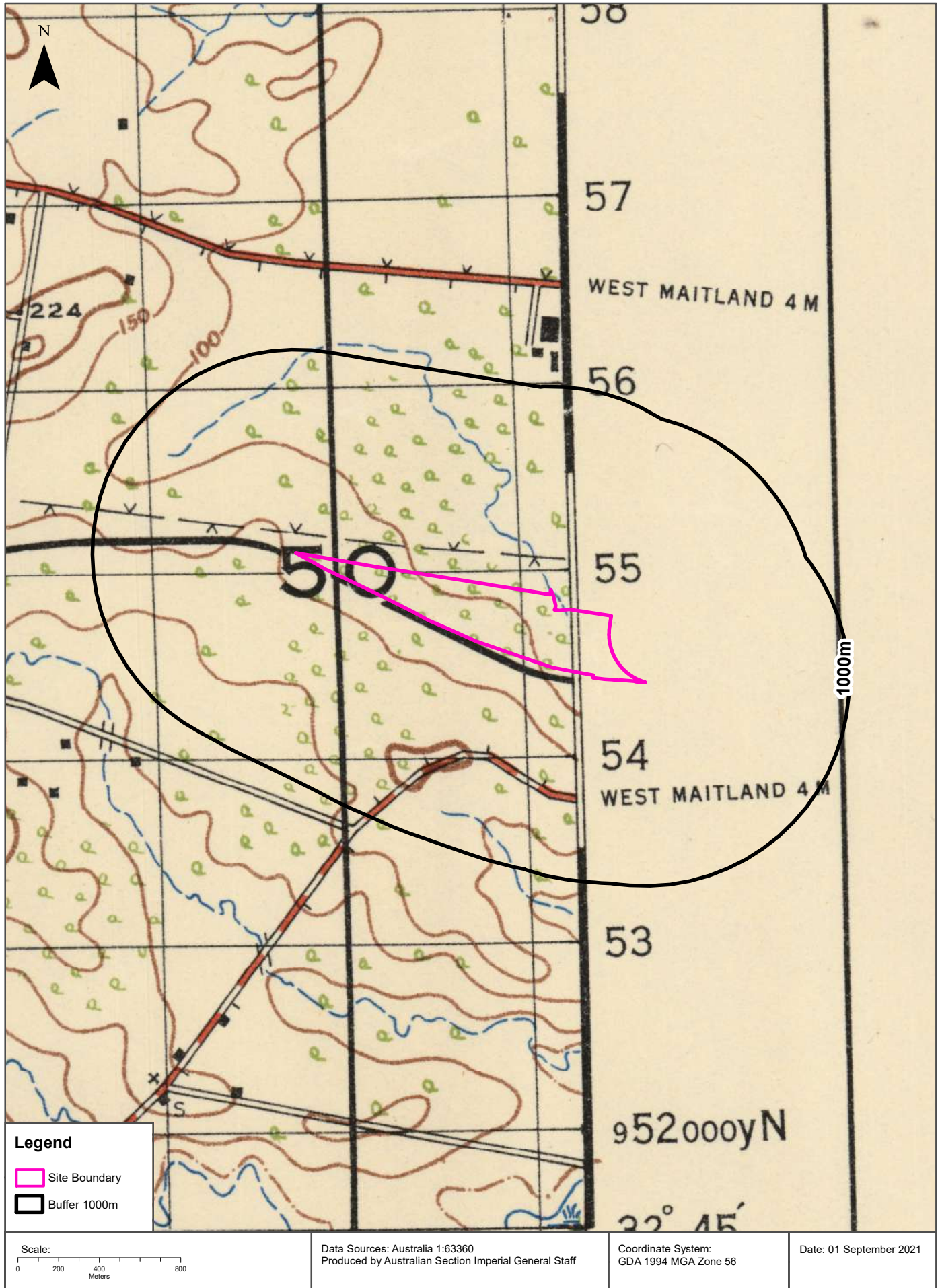
Historical Map 1981

91 Gardiner Street, Rutherford, NSW 2320



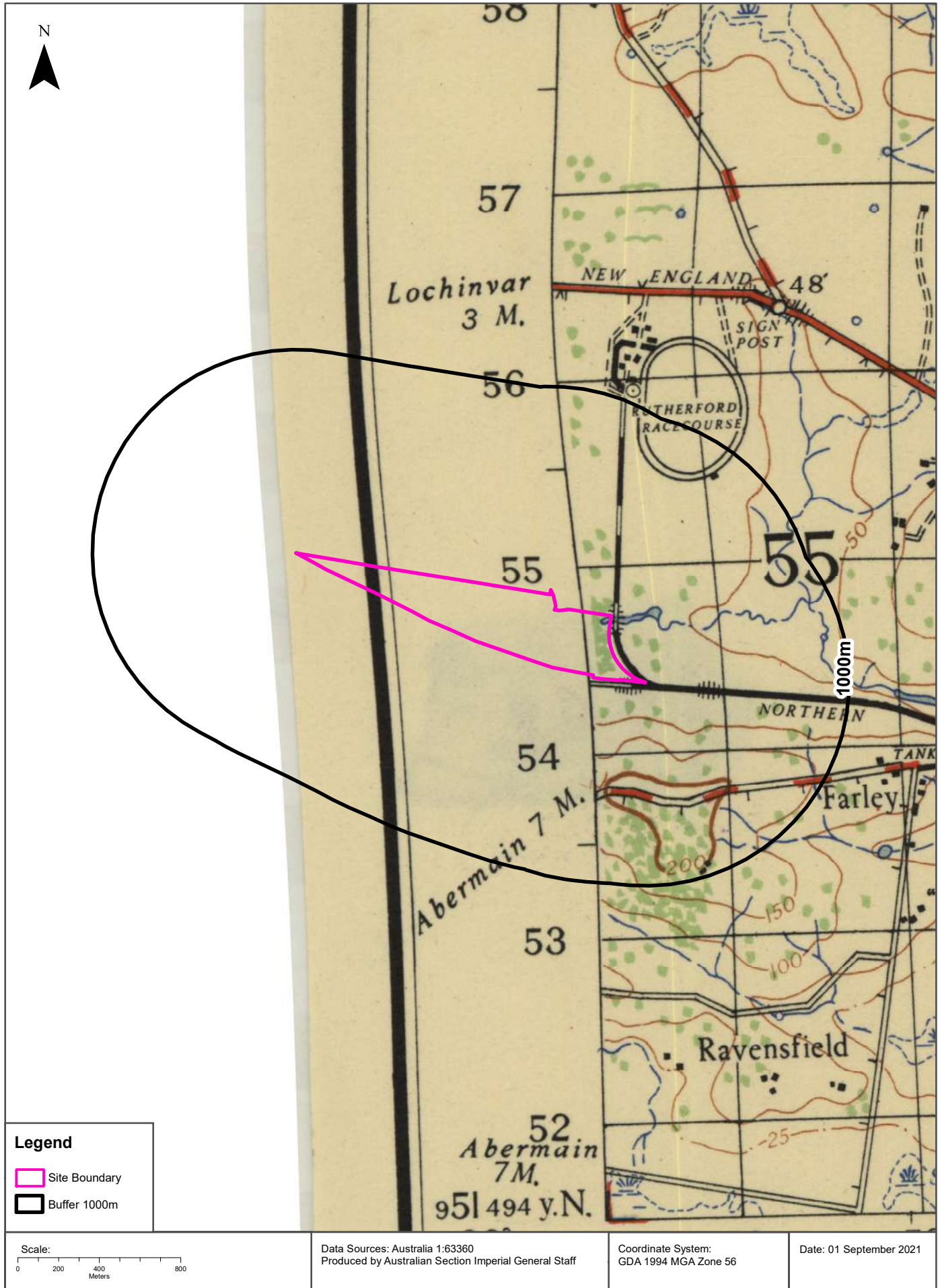
Historical Map c.1955

91 Gardiner Street, Rutherford, NSW 2320



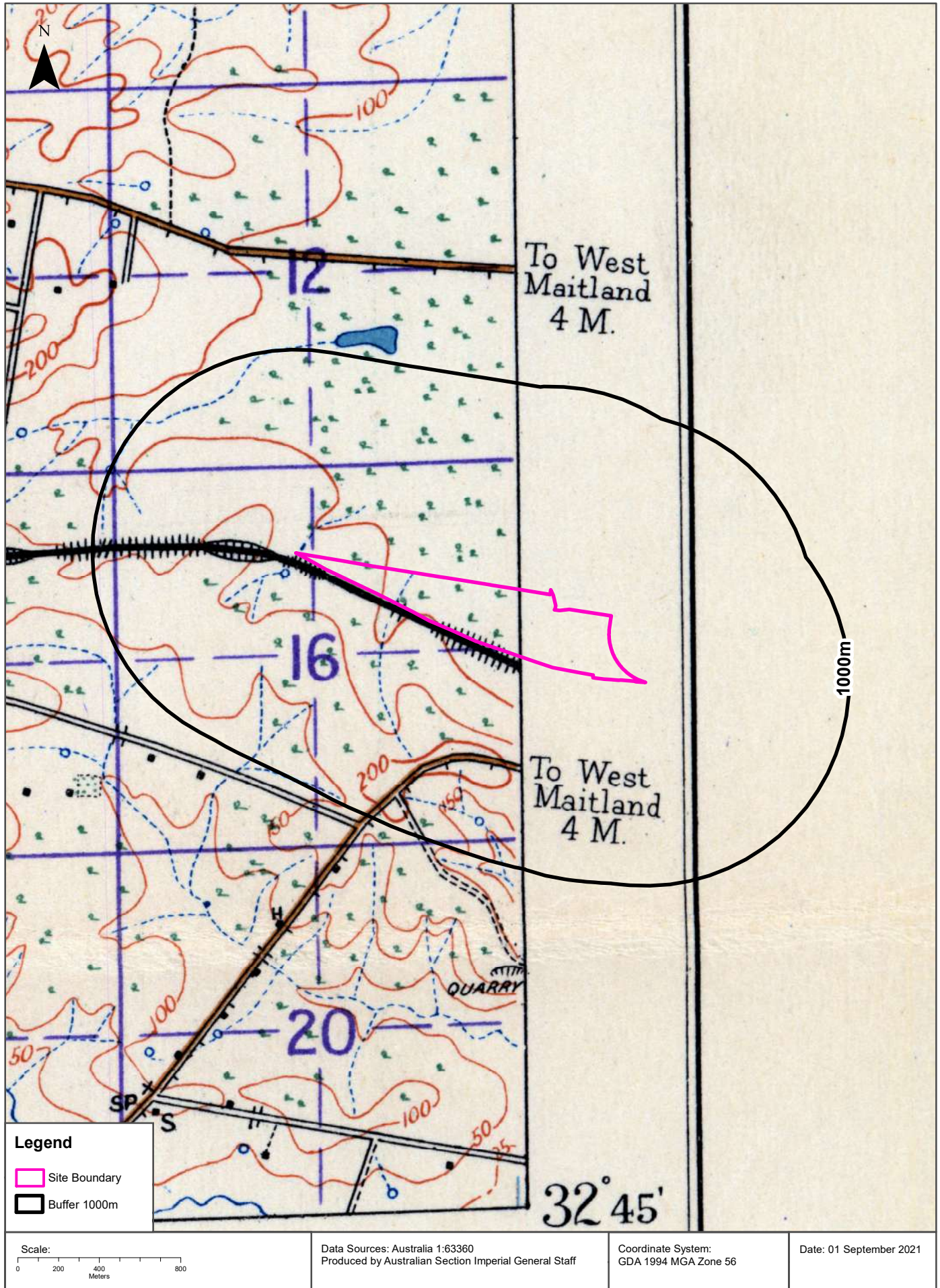
Historical Map c.1942

91 Gardiner Street, Rutherford, NSW 2320



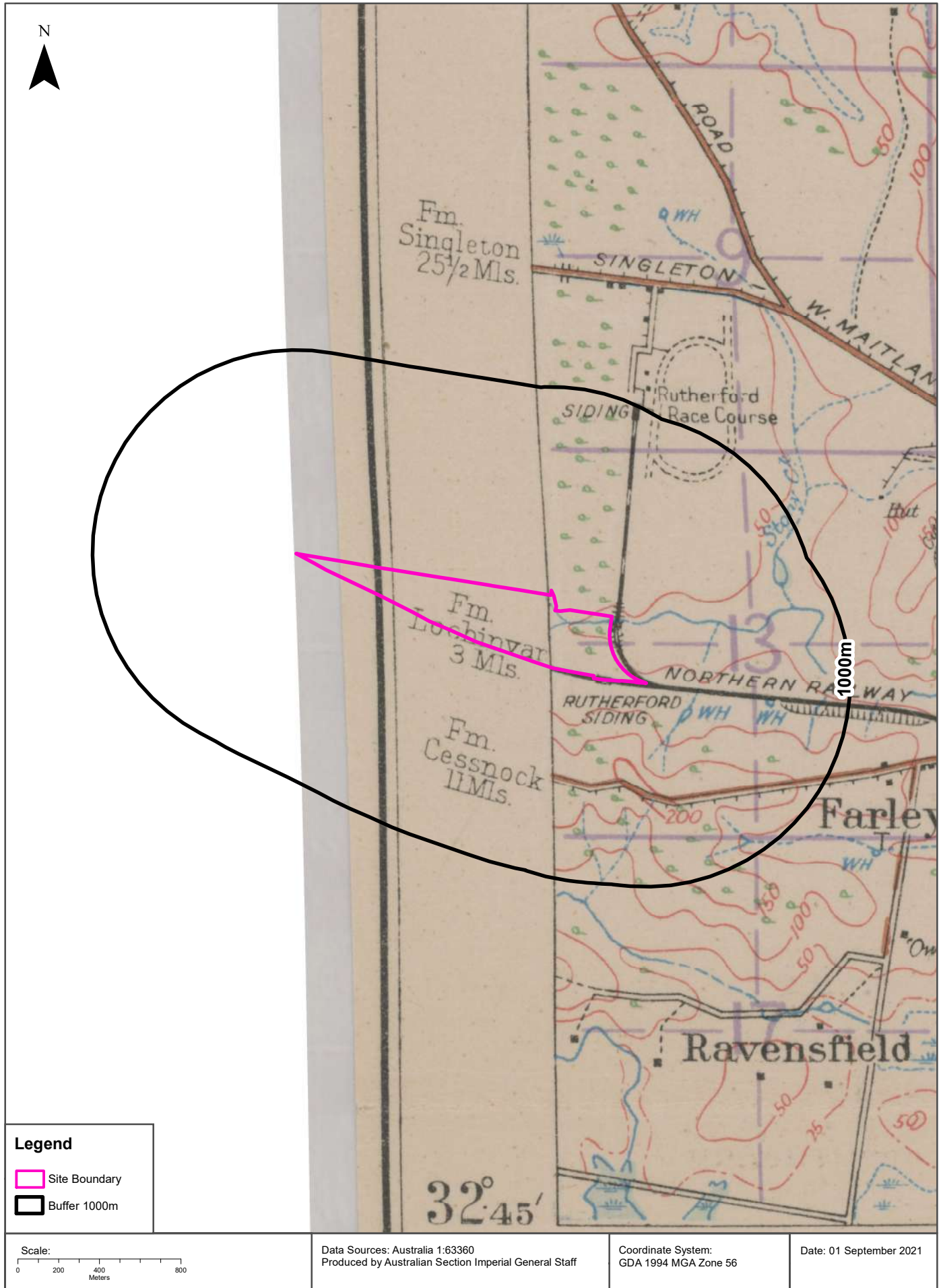
Historical Map c.1927

91 Gardiner Street, Rutherford, NSW 2320



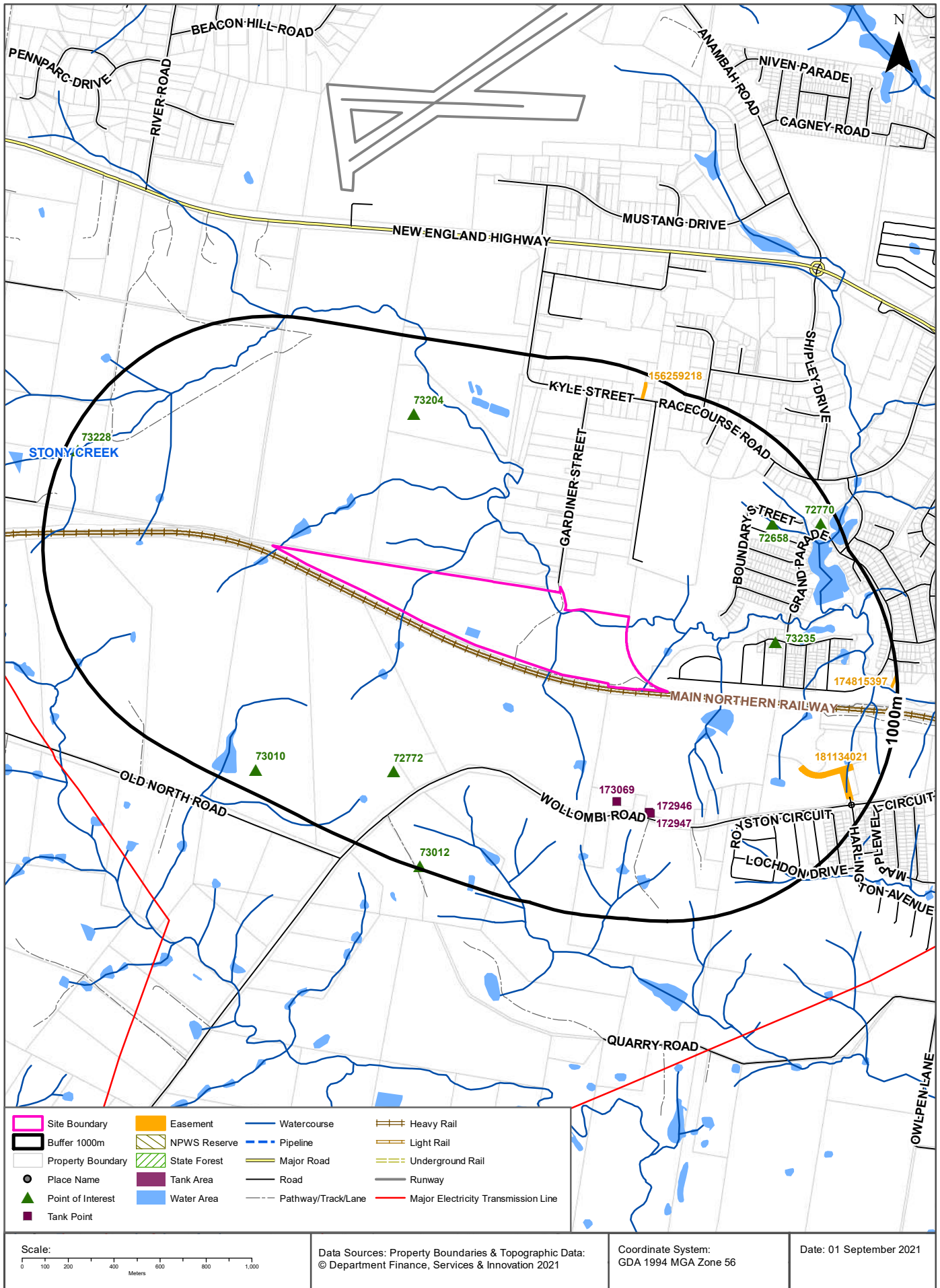
Historical Map c.1925

91 Gardiner Street, Rutherford, NSW 2320



Topographic Features

91 Gardiner Street, Rutherford, NSW 2320



Topographic Features

91 Gardiner Street, Rutherford, NSW 2320

Points of Interest

What Points of Interest exist within the dataset buffer?

Map Id	Feature Type	Label	Distance	Direction
73235	Golf Course	WESTSIDE GOLF COURSE	517m	East
72772	Mountain Like	PARSONS HILL	649m	South West
73204	Motor Racing Track	Motor Racing Track	667m	North West
72658	Retirement Village	OAK TREE RETIREMENT VILLAGE RUTHERFORD	746m	East
73010	Homestead	PONDI PARK	904m	South West
72770	Child Care Centre	GO KINDY HERITAGE PARK	929m	East
73228	Manmade Waterbody	STONY CREEK	944m	West
73012	Homestead	RAVENSFIELD	990m	South

Topographic Data Source: © Land and Property Information (2015)

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Topographic Features

91 Gardiner Street, Rutherford, NSW 2320

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
N/A	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
173069	Water	Operational		01/10/2011	493m	South East
172946	Water	Operational		01/10/2011	531m	South East
172947	Water	Operational		01/10/2011	534m	South East

Tanks Data Source: © Land and Property Information (2015)

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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
181134021	Primary	Right of way	Var	663m	South East
174821285	Primary	Right of way	4.75m	767m	East
156259218	Secondary	Easement for Access		893m	North East
174815397	Primary	Right of way	6m	973m	East

Easements Data Source: © Land and Property Information (2015)

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Topographic Features

91 Gardiner Street, Rutherford, NSW 2320

State Forest

What State Forest exist within the dataset buffer?

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

State Forest Data Source: © NSW Department of Finance, Services & Innovation (2018)
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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				

NPWS Data Source: © NSW Department of Finance, Services & Innovation (2018)
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Elevation Contours (m AHD)

91 Gardiner Street, Rutherford, NSW 2320



Hydrogeology & Groundwater

91 Gardiner Street, Rutherford, NSW 2320

Hydrogeology

Description of aquifers within the dataset buffer:

Description	Distance	Direction
Fractured or fissured, extensive aquifers of low to moderate productivity	0m	On-site
Porous, extensive highly productive aquifers	998m	East

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

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Temporary Water Restriction (Botany Sands Groundwater Source) Order 2018

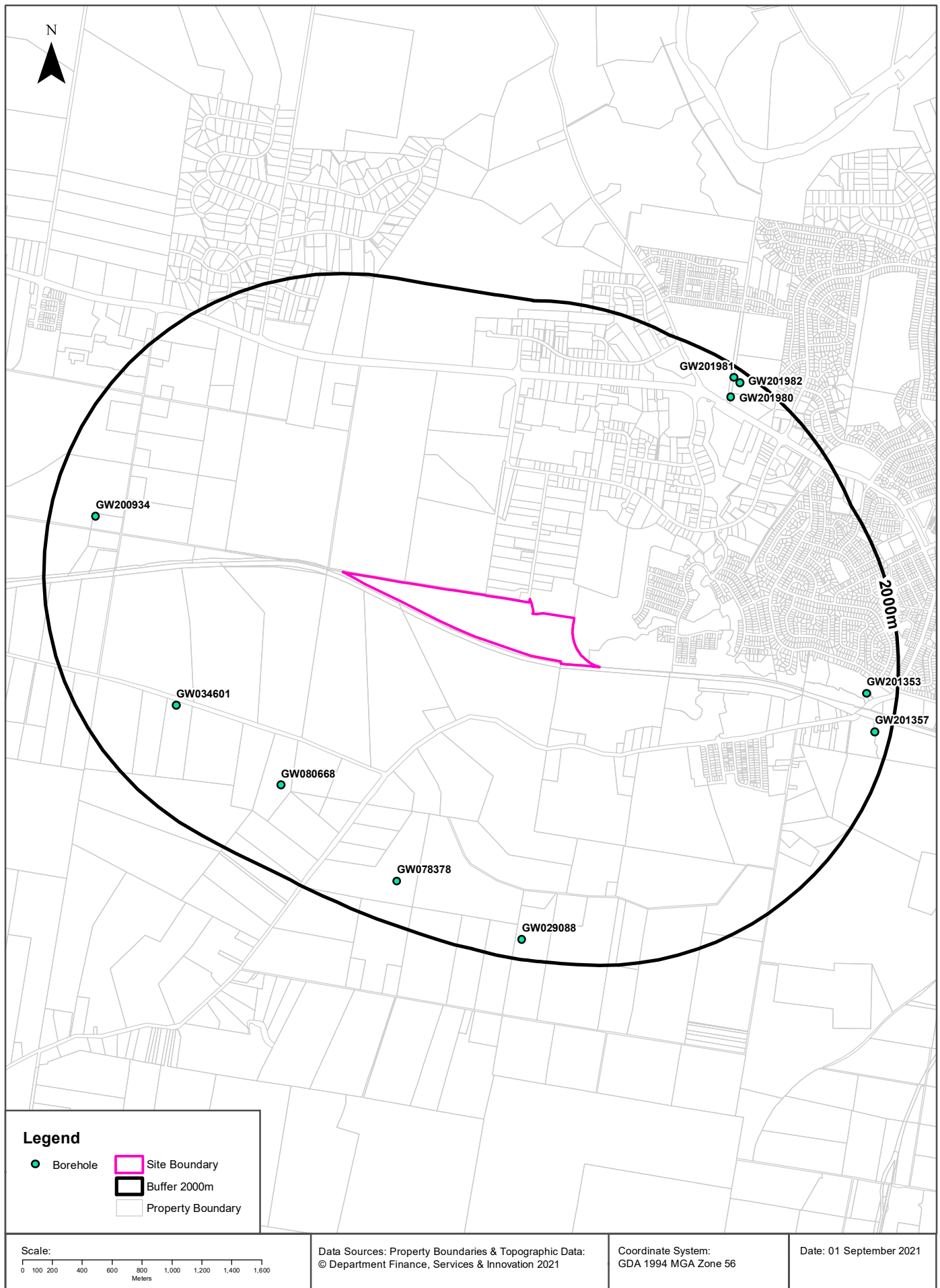
Temporary water restrictions relating to the Botany Sands aquifer within the dataset buffer:

Prohibition Area No.	Prohibition	Distance	Direction
N/A	No records in buffer		

Temporary Water Restriction (Botany Sands Groundwater Source) Order 2018 Data Source : NSW Department of Primary Industries

Groundwater Boreholes

91 Gardiner Street, Rutherford, NSW 2320



Hydrogeology & Groundwater

91 Gardiner Street, Rutherford, NSW 2320

Groundwater Boreholes

Boreholes within the dataset buffer:

GW No.	Licence No	Work Type	Owner Type	Authorised Purpose	Intended Purpose	Name	Complete Date	Final Depth (m)	Drilled Depth (m)	Salinity (mg/L)	SWL (m bgl)	Yield (L/s)	Elev (AHD)	Dist	Dir
GW034601	20BL027721	Well	Private	Domestic, Farming, Stock	Domestic, Stock		01/08/1971	10.30	10.40					1426m	West
GW080668	20BL169135	Bore	Private	Domestic, Stock	Domestic, Stock		28/01/2005							1457m	South West
GW200934	20BL167816	Bore	Private	Domestic	Domestic		03/03/2000	25.00	25.00	2000	12.00	0.200		1693m	West
GW078378	20BL166755	Bore		Stock			01/02/1998	28.50	28.50					1720m	South
GW201353	20BL172368	Bore	Private	Monitoring Bore	Monitoring Bore		03/12/2009	6.20	6.20					1799m	East
GW201980	20BL172011	Bore	Private	Monitoring Bore	Monitoring Bore		07/10/2008	10.00	10.00		8.35			1814m	North East
GW029088	20BL021619	Bore	Private	Irrigation, Stock	Not Known			39.00	39.00					1866m	South
GW201357	20BL172373	Bore	Private	Monitoring Bore	Monitoring Bore		03/12/2009	6.00	6.00					1894m	East
GW201982	20BL172011	Bore	Private	Monitoring Bore	Monitoring Bore		07/10/2008	9.40	9.40		8.70			1927m	North East
GW201981	20BL172011	Bore	Private	Monitoring Bore	Monitoring Bore		07/10/2008	10.50	10.50		8.70			1934m	North East

Borehole Data Source : NSW Department of Primary Industries - Office of Water / Water Administration Ministerial Corporation for all bores prefixed with GW. All other bores © Commonwealth of Australia (Bureau of Meteorology) 2015. Creative Commons 3.0 © Commonwealth of Australia <http://creativecommons.org/licenses/by/3.0/au/deed.en>

Hydrogeology & Groundwater

91 Gardiner Street, Rutherford, NSW 2320

Driller's Logs

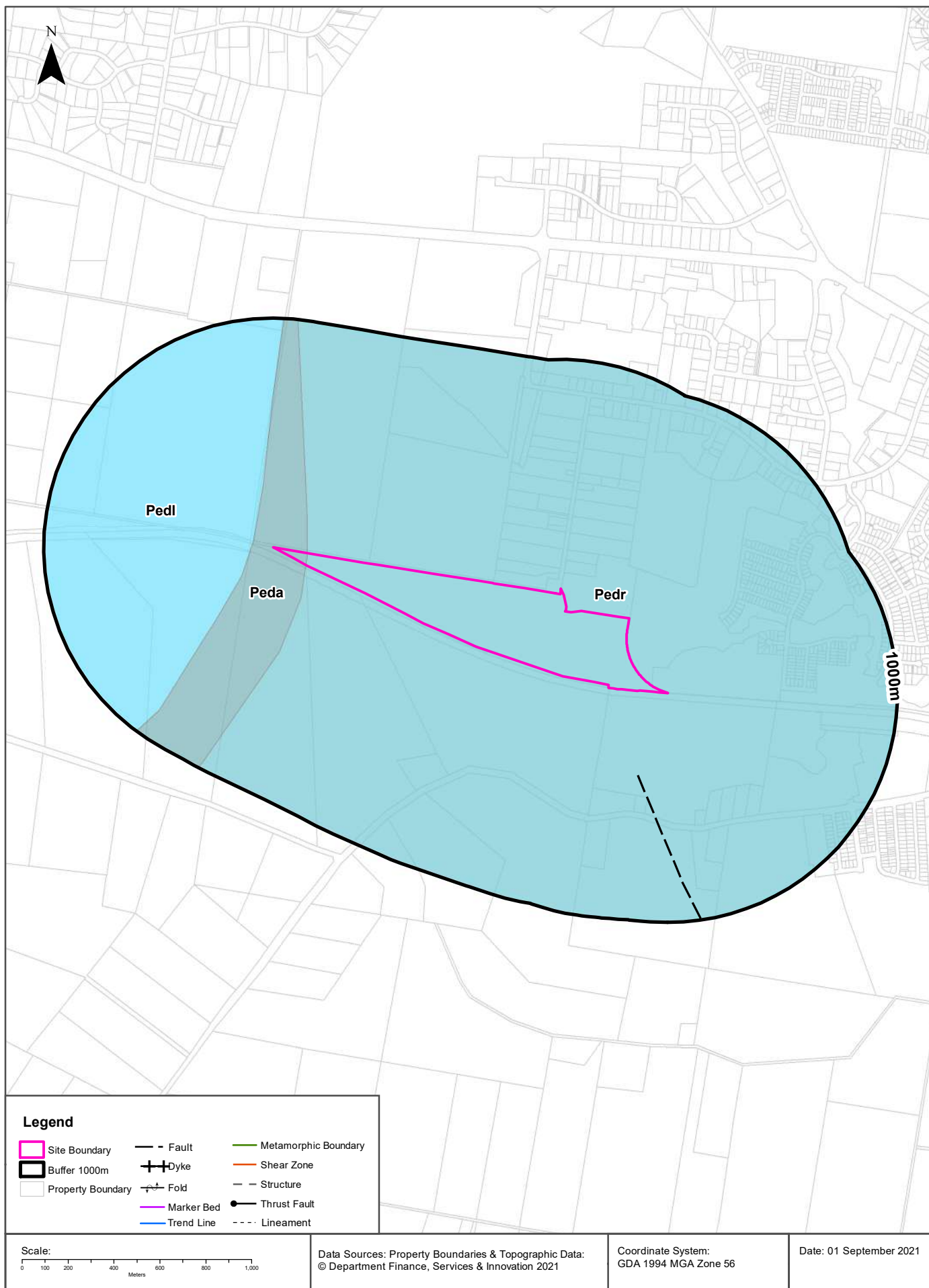
Drill log data relevant to the boreholes within the dataset buffer:

Groundwater No	Drillers Log	Distance	Direction
GW034601	0.00m-0.60m Soil Black Heavy 0.60m-6.09m Clay Crumbly Soft 6.09m-10.36m Gravel Shaley Water Supply	1426m	West
GW200934	0.00m-1.00m BLACK SOIL 1.00m-7.00m BASALT WEATHERED AND DECOMPOSED 7.00m-12.00m WEATHERED BASALT 12.00m-17.00m BASALT FRESH SOFT FINE GRAINED 17.00m-25.00m BASALT FRESH HARD	1693m	West
GW078378	0.00m-1.00m sand 1.00m-4.00m sandstone 4.00m-28.50m ironstone	1720m	South
GW201353	0.00m-1.50m Sandy Clay, grey, fine 1.50m-6.20m Sandy Clay, grey yellow, fine	1799m	East
GW201980	0.00m-0.20m Topsoil; Silty Clay, medium plasticity, brown 0.20m-10.00m Clay; medium to high plasticity, brown, becomes brown & brown grey mottled @ 2.4m	1814m	North East
GW029088	0.00m-6.10m Clay Sand 6.10m-24.38m Shale Water Supply 24.38m-39.01m Sandstone	1866m	South
GW201357	0.00m-0.20m Clayey Sand, brown, fine-medium 0.20m-6.00m Sandy Clay, light brown-light grey, fine-medium	1894m	East
GW201982	0.00m-0.20m Topsoil; Silty Clay, medium plasticity, brown 0.20m-9.40m Clay; medium to high plasticity, brown	1927m	North East
GW201981	0.00m-0.20m Topsoil; Silty Clay, medium plasticity, brown 0.20m-10.50m Clay; medium to high plasticity	1934m	North East

Drill Log Data Source: NSW Department of Primary Industries - Office of Water / Water Administration Ministerial Corp
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Geology

91 Gardiner Street, Rutherford, NSW 2320



Geology

91 Gardiner Street, Rutherford, NSW 2320

Geological Units 1:250,000

What are the Geological Units within the dataset buffer?

Symbol	Description	Unit Name	Group	Sub Group	Age	Dist	Dir
Pedr	Siltstone, marl and minor sandstone	Rutherford Formation	Dalwood Group		Palaeozoic	0m	On-site
Peda	Conglomerate, lithic sandstone	Allandale Formation	Dalwood Group		Palaeozoic	0m	On-site
Pedl	Basalt, siltstone, sandstone	Lockinvar Formation	Dalwood Group		Palaeozoic	94m	West

Geological Structures 1:250,000

What are the Geological Structures within the dataset buffer?

Feature	Name	Description	Map Sheet	Distance	Direction
Fault		Fault, Approximate	Bohena	368m	South East

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

© State of New South Wales through the NSW Department of Industry, Resources & Energy

Naturally Occurring Asbestos Potential

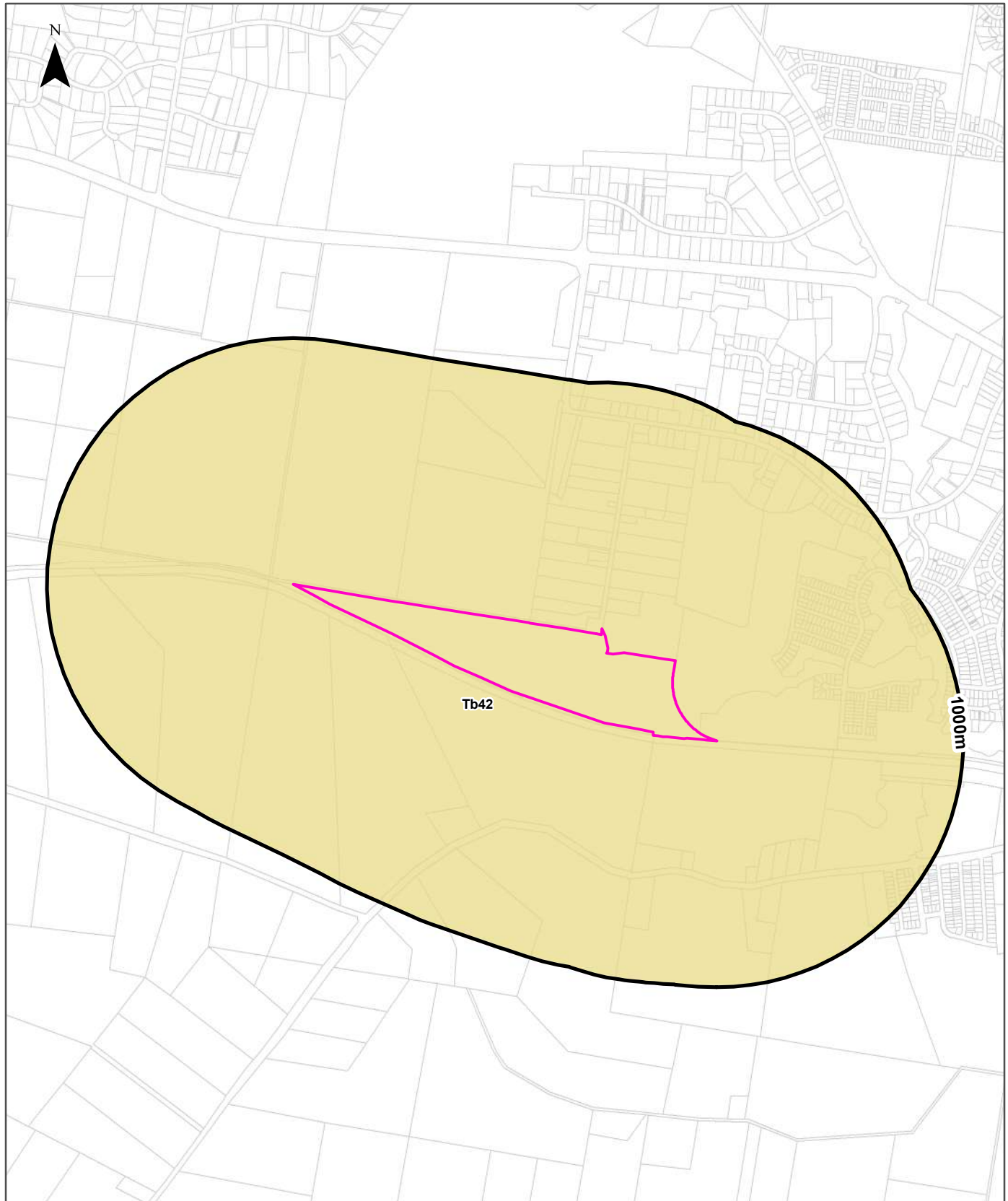
91 Gardiner Street, Rutherford, NSW 2320

Naturally Occurring Asbestos Potential

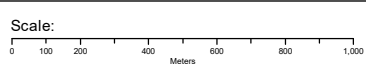
Naturally Occurring Asbestos Potential within the dataset buffer:

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

Naturally Occurring Asbestos Potential Data Source: © State of New South Wales through NSW Department of Industry, Resources & Energy



Legend		Australian Soil Classification Orders					
Site Boundary	Anthrosol	Dermosol	Kandosol	Podosol	Tenosol	No Data	
Buffer 1000m	Calcarosol	Ferrosol	Kurosol	Rudosol	Vertosol		
Property Boundary	Chromosol	Hydrosol	Organosol	Sodosol	Lake		



Data Sources: Property Boundaries & Topographic Data:
© Department Finance, Services & Innovation 2021

Coordinate System:
GDA 1994 MGA Zone 56

Date: 01 September 2021

Soils

91 Gardiner Street, Rutherford, NSW 2320

Atlas of Australian Soils

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

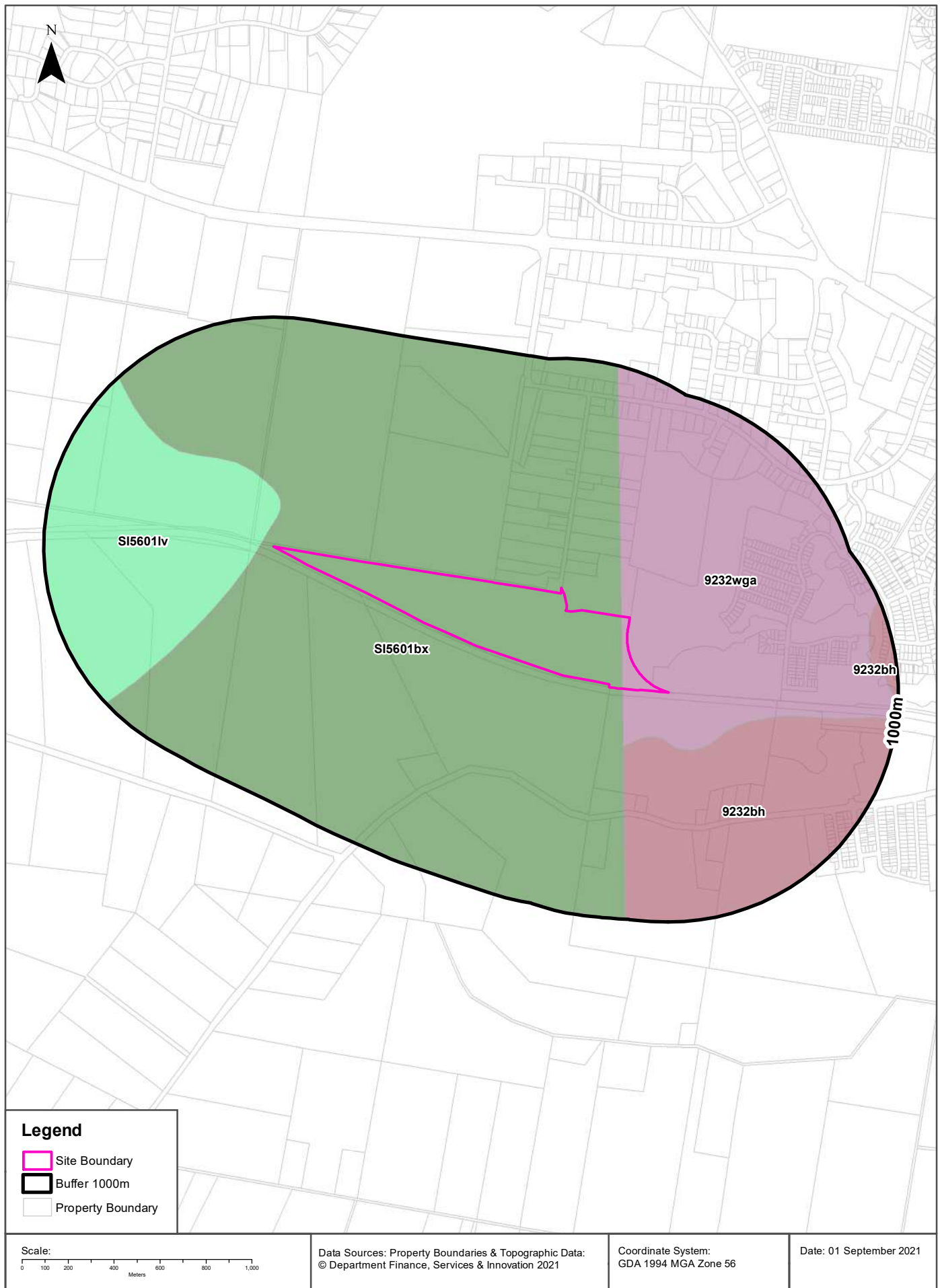
Map Unit Code	Soil Order	Map Unit Description	Distance	Direction
Tb42	Kurosol	Undulating to hilly with a general ridge, slope, and valley sequence throughout; some outcropping sandstone or conglomerate on the ridges, occasionally some escarpments: chief soils are hard acidic yellow mottled soils (Dy3.41), possibly with (Dy3.42). Associated are: narrow ridges of shallow (Dy3.41) and (Dr3.41) soils, both often containing ironstone gravel; (Dr2.41) soils on broader ridges some broad sandy flats of (Dy5.81) soils containing ironstone gravels; dunes of (Uc1.2) soils on local sand deposits; and various undescribed soils along the streams where salinity is a common local feature.	0m	On-site

Atlas of Australian Soils Data Source: CSIRO

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Soil Landscapes of Central and Eastern NSW

91 Gardiner Street, Rutherford, NSW 2320



Soils

91 Gardiner Street, Rutherford, NSW 2320

Soil Landscapes of Central and Eastern NSW

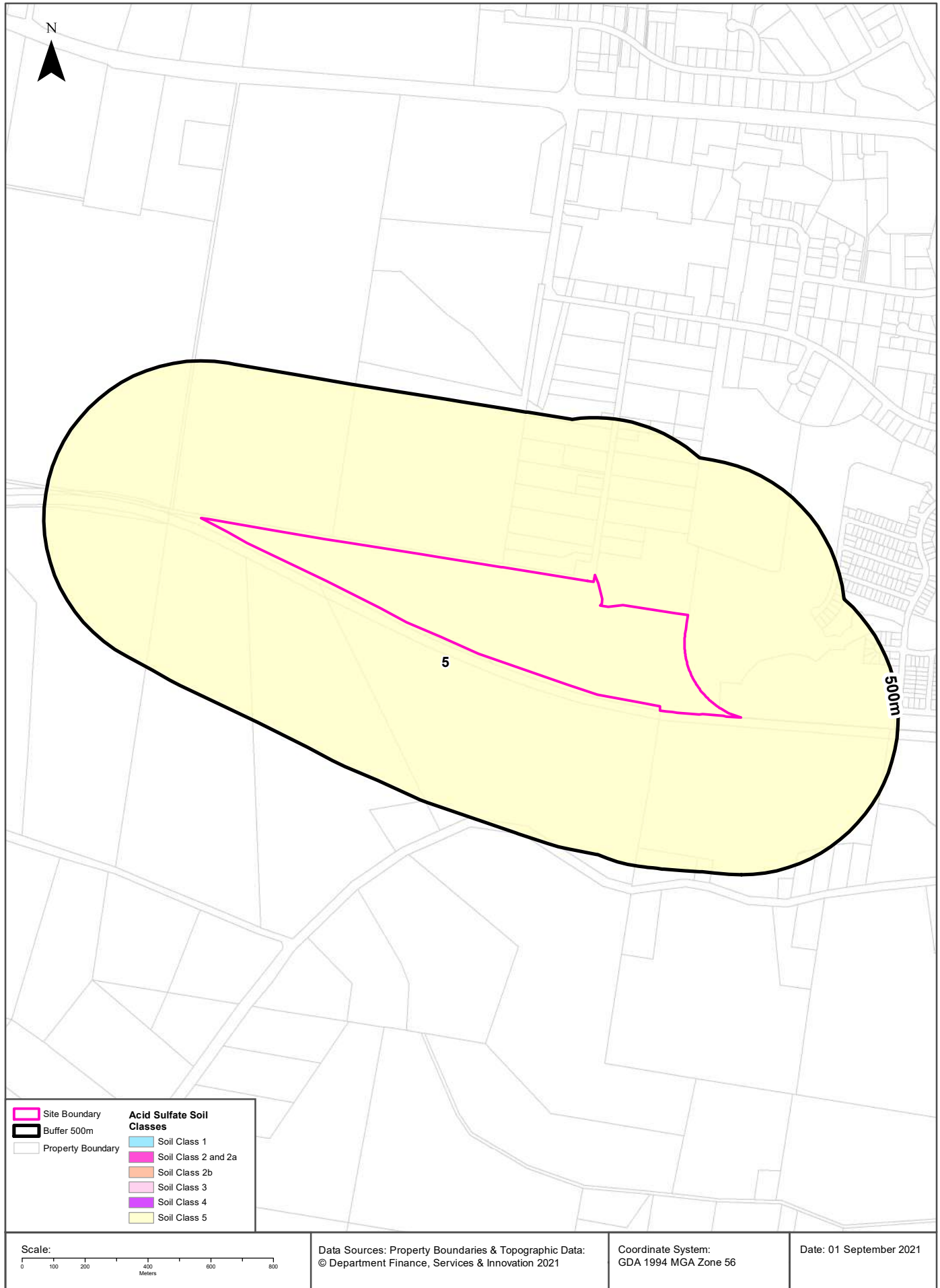
Soil Landscapes of Central and Eastern NSW within the dataset buffer:

Soil Code	Name	Distance	Direction
S15601bx	Branxton	0m	On-site
9232wga	Wallalong variant a	0m	On-site
S15601lv	Lochinvar	55m	West
9232bh	Bolwarra Heights	199m	South East

Soil Landscapes of Central and Eastern NSW: NSW Department of Planning, Industry and Environment
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Acid Sulfate Soils

91 Gardiner Street, Rutherford, NSW 2320



Acid Sulfate Soils

91 Gardiner Street, Rutherford, NSW 2320

Environmental Planning Instrument - Acid Sulfate Soils

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

Soil Class	Description	EPI Name
5	Works within 500 metres of adjacent Class 1, 2, 3, or 4 land that is below 5 metres AHD and by which the watertable is likely to be lowered below 1 metre AHD on adjacent Class 1, 2, 3 or 4 land, present an environmental risk	Maitland Local Environmental Plan 2011

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

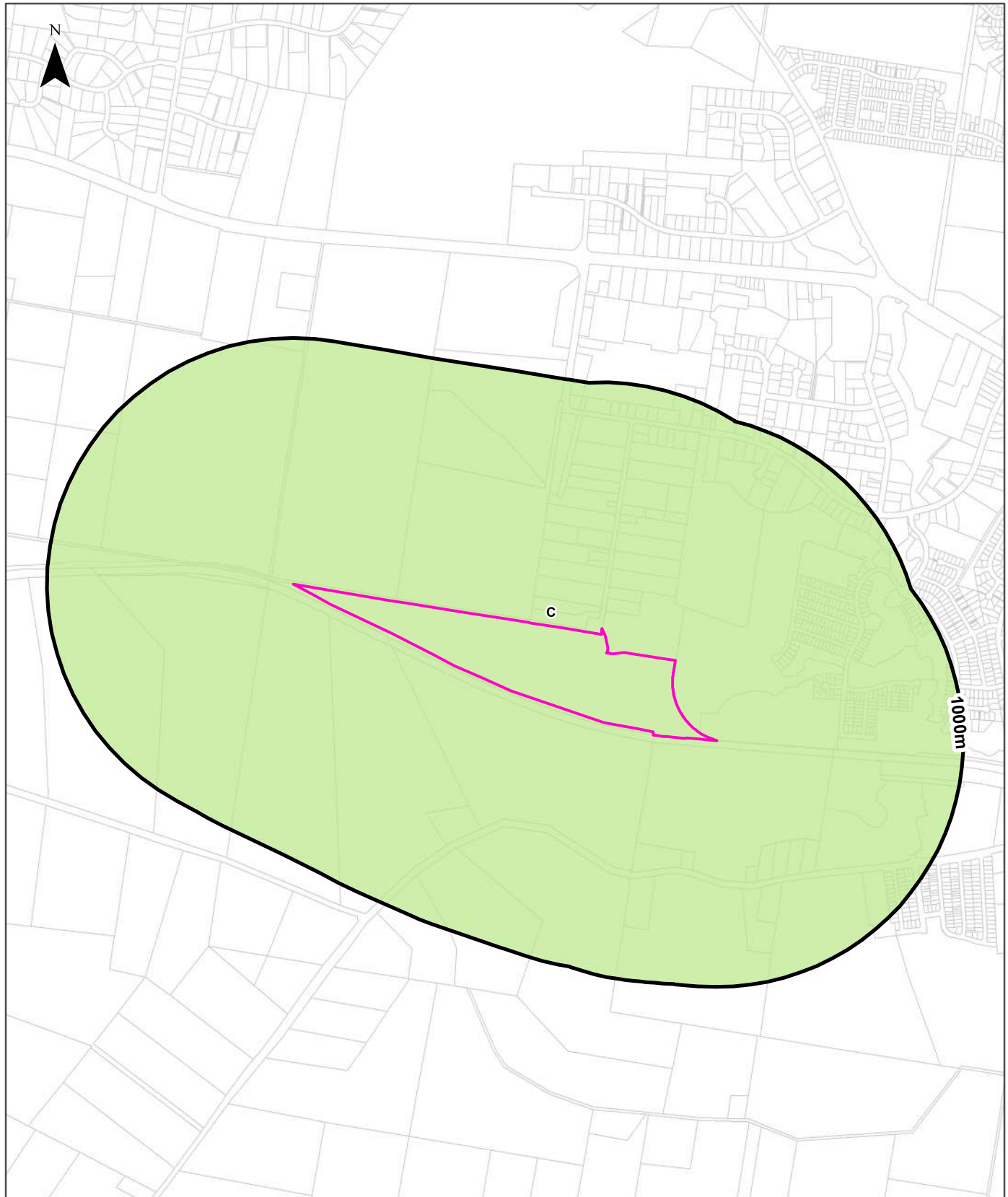
Soil Class	Description	EPI Name	Distance	Direction
None				

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Atlas of Australian Acid Sulfate Soils

91 Gardiner Street, Rutherford, NSW 2320



Legend			
Site Boundary	Probability of occurrence of Acid Sulfate Soils		
Buffer 1000m	A. High (>70%)	C. Extremely Low (1-5%)	No Data
Property Boundary	B. Low (6-70%)	D. No Chance (0%)	
Scale: 0 100 200 400 600 800 1,000 Meters	Data Sources: Property Boundaries & Topographic Data: © Department Finance, Services & Innovation 2021	Coordinate System: GDA 1994 MGA Zone 56	Date: 01 September 2021

Acid Sulfate Soils

91 Gardiner Street, Rutherford, NSW 2320

Atlas of Australian Acid Sulfate Soils

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

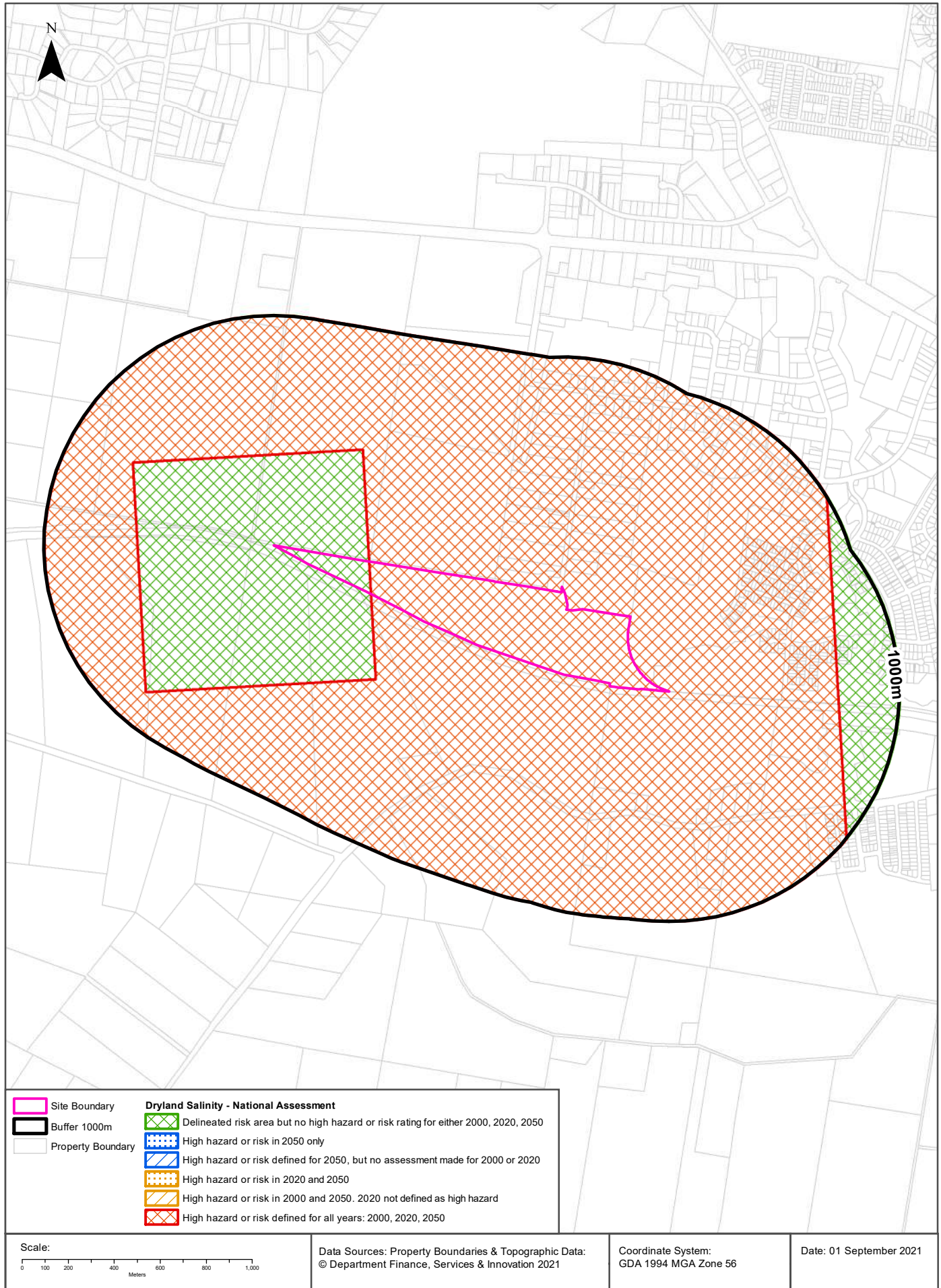
Class	Description	Distance	Direction
C	Extremely low probability of occurrence. 1-5% chance of occurrence with occurrences in small localised areas.	0m	On-site

Atlas of Australian Acid Sulfate Soils Data Source: CSIRO

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Dryland Salinity

91 Gardiner Street, Rutherford, NSW 2320



Dryland Salinity

91 Gardiner Street, Rutherford, NSW 2320

Dryland Salinity - National Assessment

Is there Dryland Salinity - National Assessment data onsite?

Yes

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

Yes

What Dryland Salinity assessments are given?

Assessment 2000	Assessment 2020	Assessment 2050	Distance	Direction
High hazard or risk	High hazard or risk	High hazard or risk	0m	On-site
Delineated risk area but no high hazard or risk rating	Delineated risk area but no high hazard or risk rating	Delineated risk area but no high hazard or risk rating	0m	On-site

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.

Mining

91 Gardiner Street, Rutherford, NSW 2320

Mining Subsidence Districts

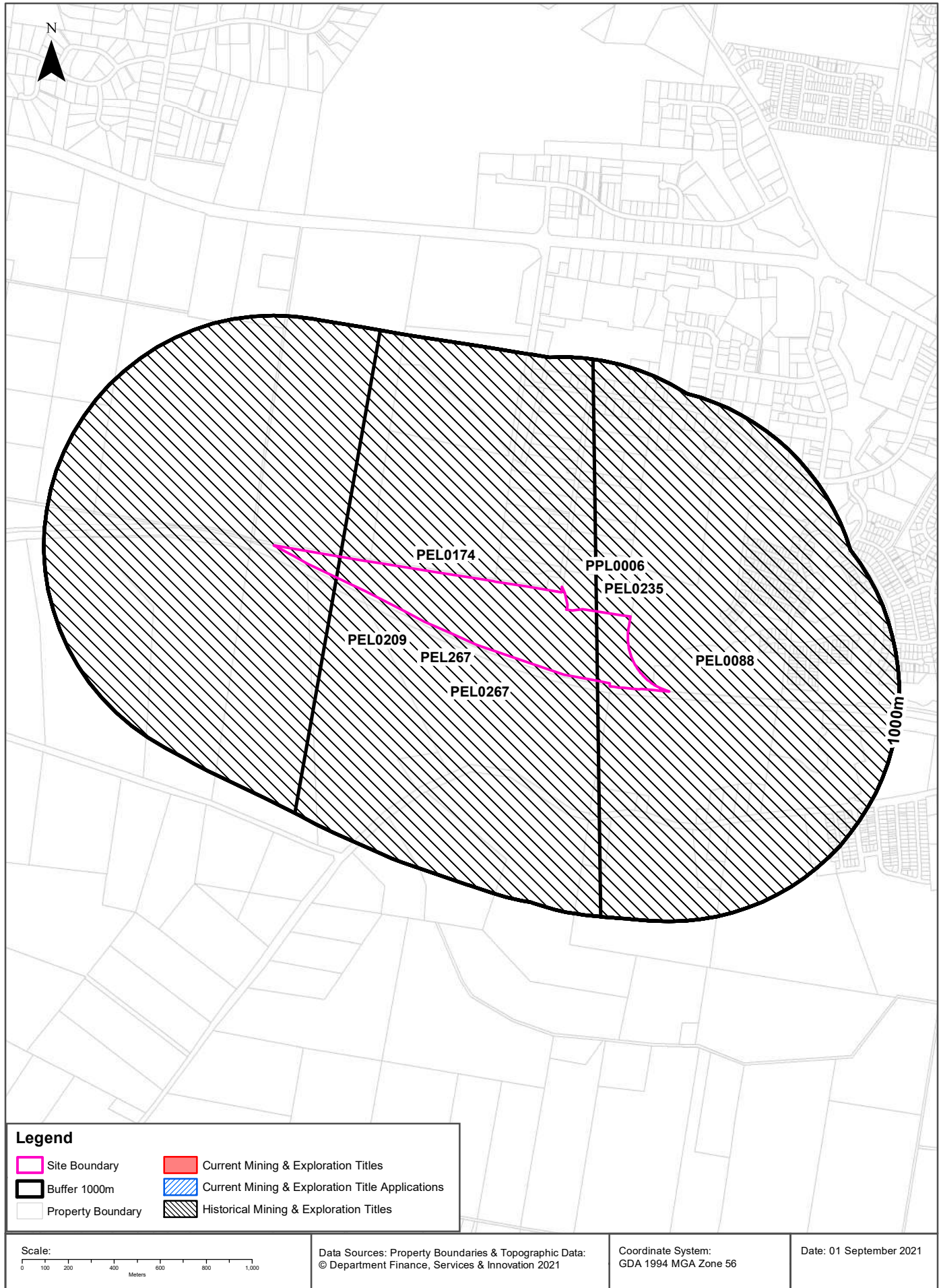
Mining Subsidence Districts within the dataset buffer:

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

Mining Subsidence District Data Source: © Land and Property Information (2016)
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Mining & Exploration Titles

91 Gardiner Street, Rutherford, NSW 2320



Mining

91 Gardiner Street, Rutherford, NSW 2320

Current Mining & Exploration Titles

Current Mining & Exploration Titles within the dataset buffer:

Title Ref	Holder	Grant Date	Expiry Date	Last Renewed	Operation	Resource	Minerals	Dist	Dir
N/A	No records in buffer								

Current Mining & Exploration Titles Data Source: © State of New South Wales through NSW Department of Industry

Current Mining & Exploration Title Applications

Current Mining & Exploration Title Applications within the dataset buffer:

Application Ref	Applicant	Application Date	Operation	Resource	Minerals	Dist	Dir
N/A	No records in buffer						

Current Mining & Exploration Title Applications Data Source: © State of New South Wales through NSW Department of Industry

Mining

91 Gardiner Street, Rutherford, NSW 2320

Historical Mining & Exploration Titles

Historical Mining & Exploration Titles within the dataset buffer:

Title Ref	Holder	Start Date	End Date	Resource	Minerals	Dist	Dir
PEL0174	NSW OIL AND GAS COMPANY NL			PETROLEUM	Petroleum	0m	On-site
PEL0088	PLANET EXPLORATION COMPANY PTY LTD			PETROLEUM	Petroleum	0m	On-site
PEL267	AGL UPSTREAM INVESTMENTS PTY LIMITED			MINERALS		0m	On-site
PEL0209	EARTH RESOURCES AUSTRALIA PTY LTD			PETROLEUM	Petroleum	0m	On-site
PPL0006	PLANET EXPLORATION	15/05/1905		PETROLEUM	Petroleum	0m	On-site
PEL0235	EASTMET LTD	17/04/1980		PETROLEUM	Petroleum	0m	On-site
PEL0267	SYDNEY OIL CO (NSW) PTY LTD, MANVANE PTY LTD AUSTRALIA NL, BASE RESOURCES LTD, SEAHAWK OIL AUSTRALIA NL, READING & BATES	20/01/1984	6/07/2015	PETROLEUM	Petroleum	0m	On-site

Historical Mining & Exploration Titles Data Source: © State of New South Wales through NSW Department of Industry

State Environmental Planning Policy

91 Gardiner Street, Rutherford, NSW 2320

State Significant Precincts

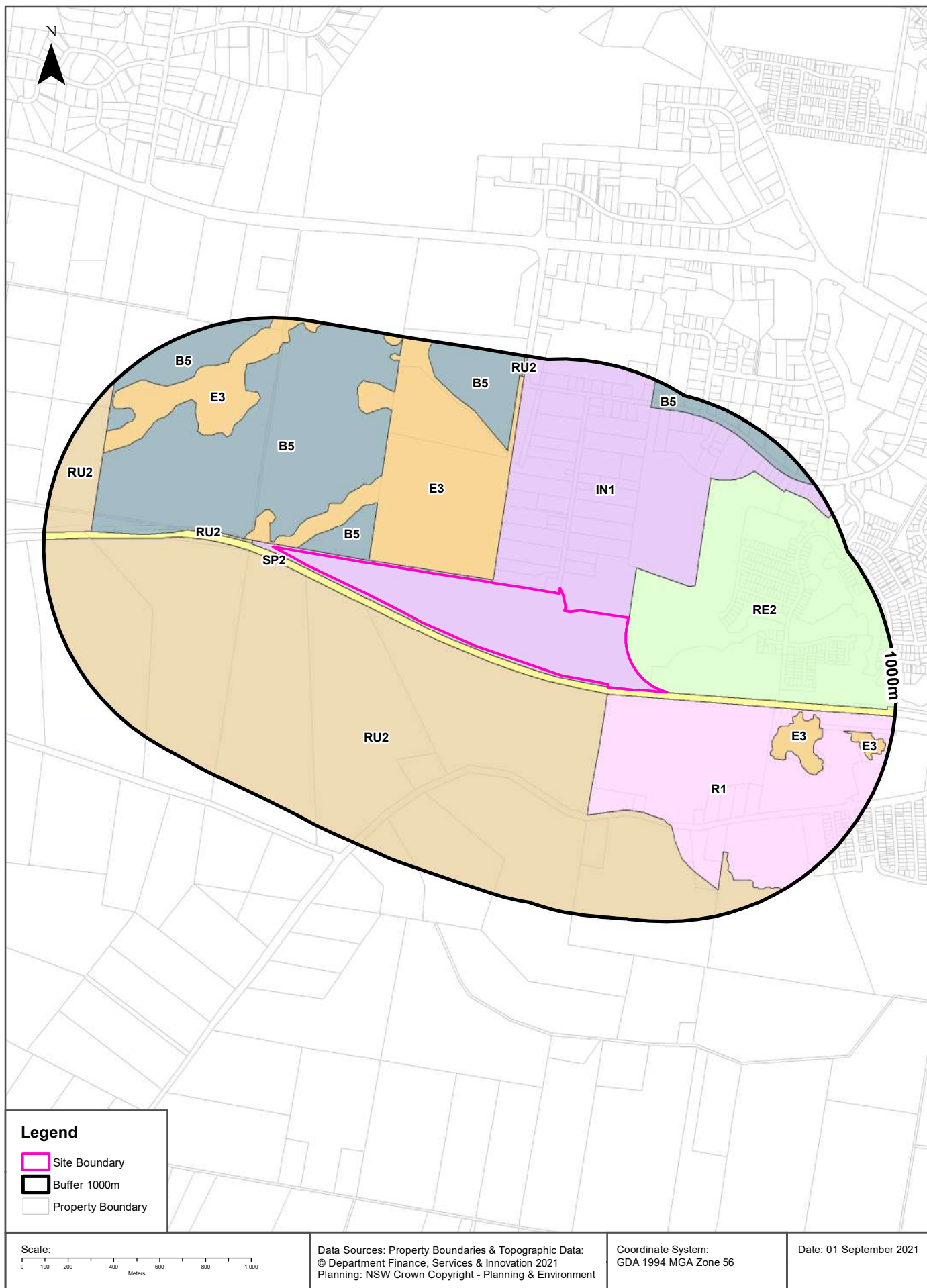
What SEPP State Significant Precincts exist within the dataset buffer?

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

State Environment Planning Policy Data Source: NSW Crown Copyright - Planning & Environment
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EPI Planning Zones

91 Gardiner Street, Rutherford, NSW 2320



Environmental Planning Instrument

91 Gardiner Street, Rutherford, NSW 2320

Land Zoning

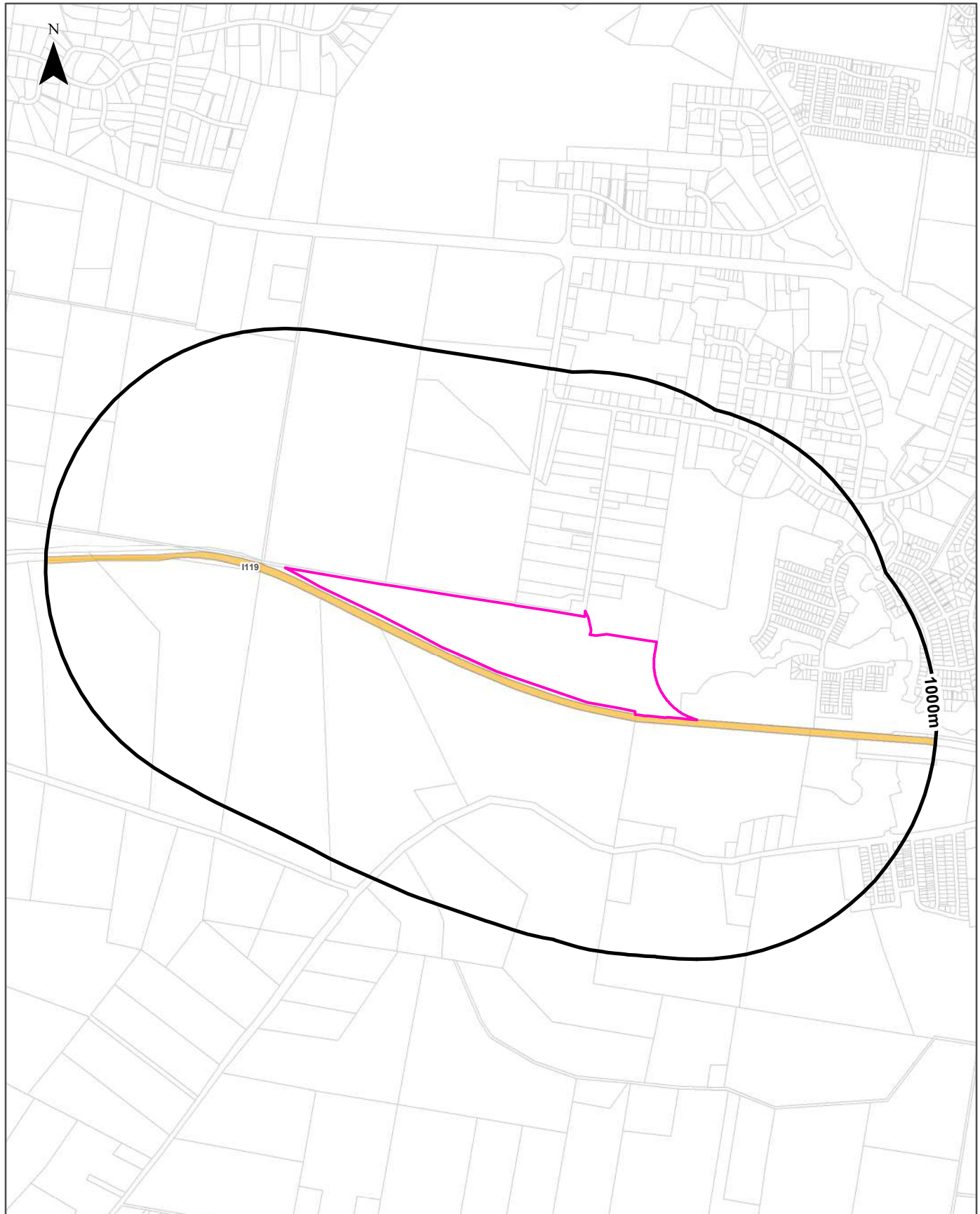
What EPI Land Zones exist within the dataset buffer?

Zone	Description	Purpose	EPI Name	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
IN1	General Industrial		Maitland Local Environmental Plan 2011	16/12/2011	16/12/2011	16/07/2021		0m	On-site
SP2	Infrastructure	Railway	Maitland Local Environmental Plan 2011	16/12/2011	16/12/2011	16/07/2021		0m	South West
RE2	Private Recreation		Maitland Local Environmental Plan 2011	25/08/2017	25/08/2017	16/07/2021	Amendment No 21	0m	East
E3	Environmental Management		Maitland Local Environmental Plan 2011	16/12/2011	16/12/2011	16/07/2021		10m	North West
B5	Business Development		Maitland Local Environmental Plan 2011	16/12/2011	16/12/2011	16/07/2021		11m	North West
B5	Business Development		Maitland Local Environmental Plan 2011	16/12/2011	16/12/2011	16/07/2021		19m	North West
R1	General Residential		Maitland Local Environmental Plan 2011	18/01/2013	18/01/2013	16/07/2021	Amendment No 1	28m	South East
RU2	Rural Landscape		Maitland Local Environmental Plan 2011	16/12/2011	16/12/2011	16/07/2021		30m	South West
RU2	Rural Landscape		Maitland Local Environmental Plan 2011	16/12/2011	16/12/2011	16/07/2021		94m	West
E3	Environmental Management		Maitland Local Environmental Plan 2011	18/01/2013	18/01/2013	16/07/2021	Amendment No 1	503m	East
B5	Business Development		Maitland Local Environmental Plan 2011	16/12/2011	16/12/2011	16/07/2021		577m	North
E3	Environmental Management		Maitland Local Environmental Plan 2011	18/01/2013	18/01/2013	16/07/2021	Amendment No 1	787m	East
RU2	Rural Landscape		Maitland Local Environmental Plan 2011	16/12/2011	16/12/2011	16/07/2021		797m	West
B5	Business Development		Maitland Local Environmental Plan 2011	16/12/2011	16/12/2011	16/07/2021		820m	North West
B5	Business Development		Maitland Local Environmental Plan 2011	16/12/2011	16/12/2011	16/07/2021		883m	North East
RU2	Rural Landscape		Maitland Local Environmental Plan 2011	16/12/2011	16/12/2011	16/07/2021		910m	North

Environmental Planning Instrument Data Source: NSW Crown Copyright - Planning & Environment
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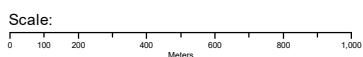
Heritage Items

91 Gardiner Street, Rutherford, NSW 2320



Legend

- Property Boundary
- Site Boundary
- Commonwealth Heritage List
- National Heritage List
- State Heritage Items
- EPI Heritage Items
- Buffer 1000m



Data Sources: Property Boundaries & Topographic Data:
© Department Finance, Services & Innovation 2021
Heritage - NSW Crown Copyright - Planning & Environment

Coordinate System:
GDA 1994 MGA Zone 56

Date: 01 September 2021

Heritage

91 Gardiner Street, Rutherford, NSW 2320

Commonwealth Heritage List

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

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

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

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

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

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

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

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

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

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

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

Map Id	Name	Classification	Significance	EPI Name	Published Date	Commenced Date	Currency Date	Distance	Direction
I119	Government Railway	Item - General	Local	Maitland Local Environmental Plan 2011	16/12/2011	16/12/2011	22/12/2017	0m	South West

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Natural Hazards - Bush Fire Prone Land

91 Gardiner Street, Rutherford, NSW 2320



Natural Hazards

91 Gardiner Street, Rutherford, NSW 2320

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
Vegetation Category 1	0m	On-site
Vegetation Buffer	0m	On-site

NSW Bush Fire Prone Land - © NSW Rural Fire Service under Creative Commons 4.0 International Licence

Ecological Constraints - Vegetation & Ramsar Wetlands

91 Gardiner Street, Rutherford, NSW 2320



Ecological Constraints

91 Gardiner Street, Rutherford, NSW 2320

Lower Hunter and Central Coast Regional Vegetation Survey

What vegetation from the Lower Hunter and Central Coast Regional Survey exists within the dataset buffer?

Map Id	Unit Desc	Canopy Code	Canopy Cover	Species	Distance	Direction
19	Hunter Lowland Redgum Forest	OF	Mid Dense (Open Forest) 50- <100% cover	E. tereticornis / E. punctata / E. crebra / A. floribunda / C. maculata	0m	On-site
17	Lower Hunter Spotted Gum - Ironbark Forest	OF	Mid Dense (Open Forest) 50- <100% cover	C. maculata / E. fibrosa / E. punctata	0m	On-site
16	Seaham Spotted Gum Iron Bark Forest	OF	Mid Dense (Open Forest) 50- <100% cover	C. maculata / E. crebra / E. punctata / E. fibrosa	50m	West
16	Seaham Spotted Gum Iron Bark Forest	WO	Sparse (Woodland) 20-<50% cover	C. maculata / E. crebra / E. punctata / E. fibrosa	106m	West
19	Hunter Lowland Redgum Forest	WO	Sparse (Woodland) 20-<50% cover	E. tereticornis / E. punctata / E. crebra / A. floribunda / C. maculata	132m	West
17	Lower Hunter Spotted Gum - Ironbark Forest	WO	Sparse (Woodland) 20-<50% cover	C. maculata / E. fibrosa / E. punctata	205m	North West
17	Lower Hunter Spotted Gum - Ironbark Forest	OW	Very Sparse (Open Woodland) 10-20% cover	C. maculata / E. fibrosa / E. punctata	432m	West
19	Hunter Lowland Redgum Forest	S	Scrub	E. tereticornis / E. punctata / E. crebra / A. floribunda / C. maculata	654m	South East
16	Seaham Spotted Gum Iron Bark Forest	OW	Very Sparse (Open Woodland) 10-20% cover	C. maculata / E. crebra / E. punctata / E. fibrosa	862m	West
17	Lower Hunter Spotted Gum - Ironbark Forest	S	Scrub	C. maculata / E. fibrosa / E. punctata	895m	South East

Lower Hunter and Central Coast Regional Vegetation Survey: NSW Office of Environment and Heritage

Ramsar Wetlands

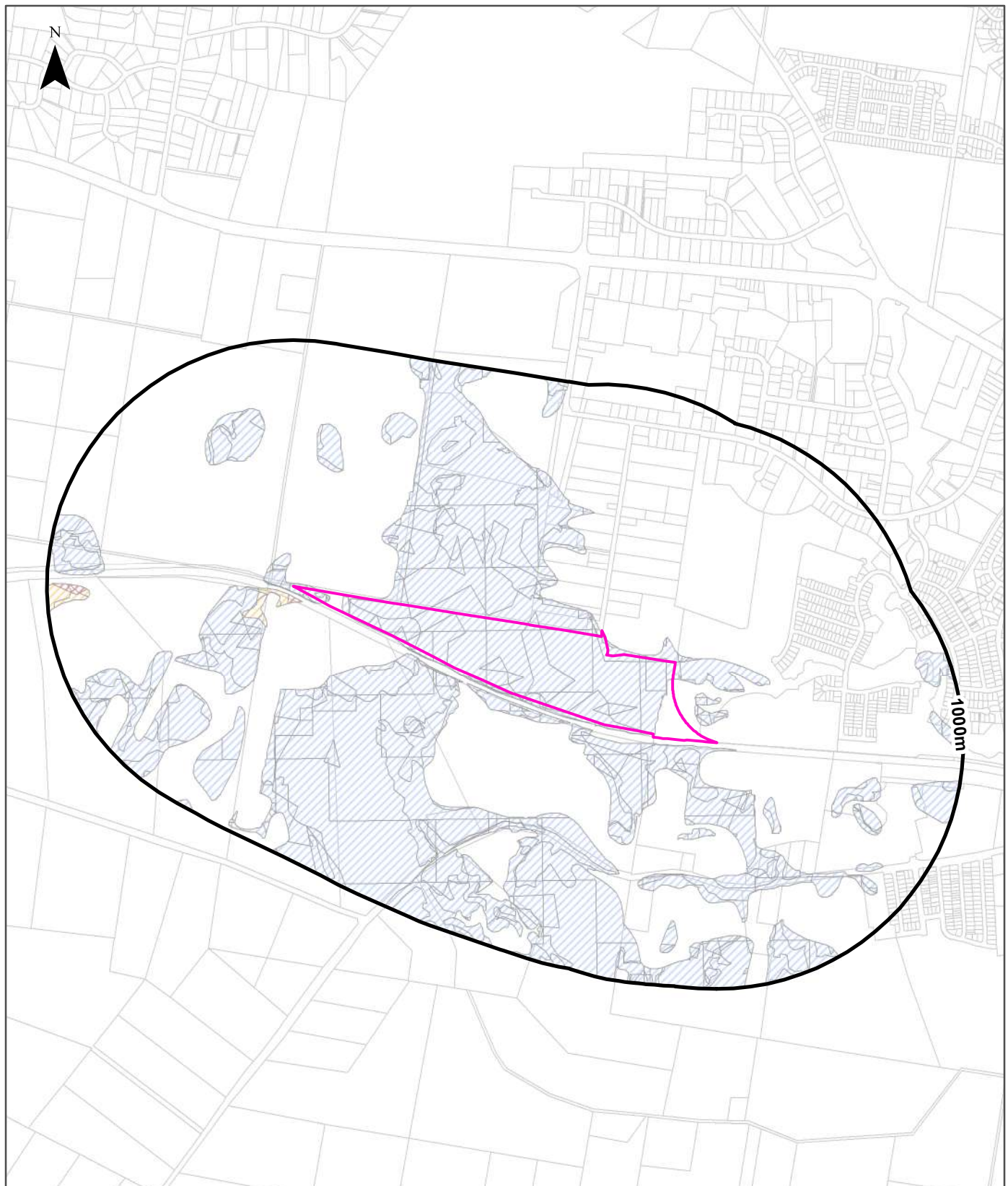
What Ramsar Wetland areas exist within the dataset buffer?

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

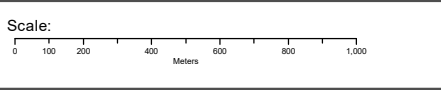
Ramsar Wetlands Data Source: © Commonwealth of Australia - Department of Agriculture, Water and the Environment

Ecological Constraints - Groundwater Dependent Ecosystems Atlas

91 Gardiner Street, Rutherford, NSW 2320



Legend			
	Site Boundary		High potential GDE - from national assessment
	Buffer 1000m		High potential GDE - from regional studies
	Property Boundaries		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



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

Date: 01 September 2021

Ecological Constraints

91 Gardiner Street, Rutherford, NSW 2320

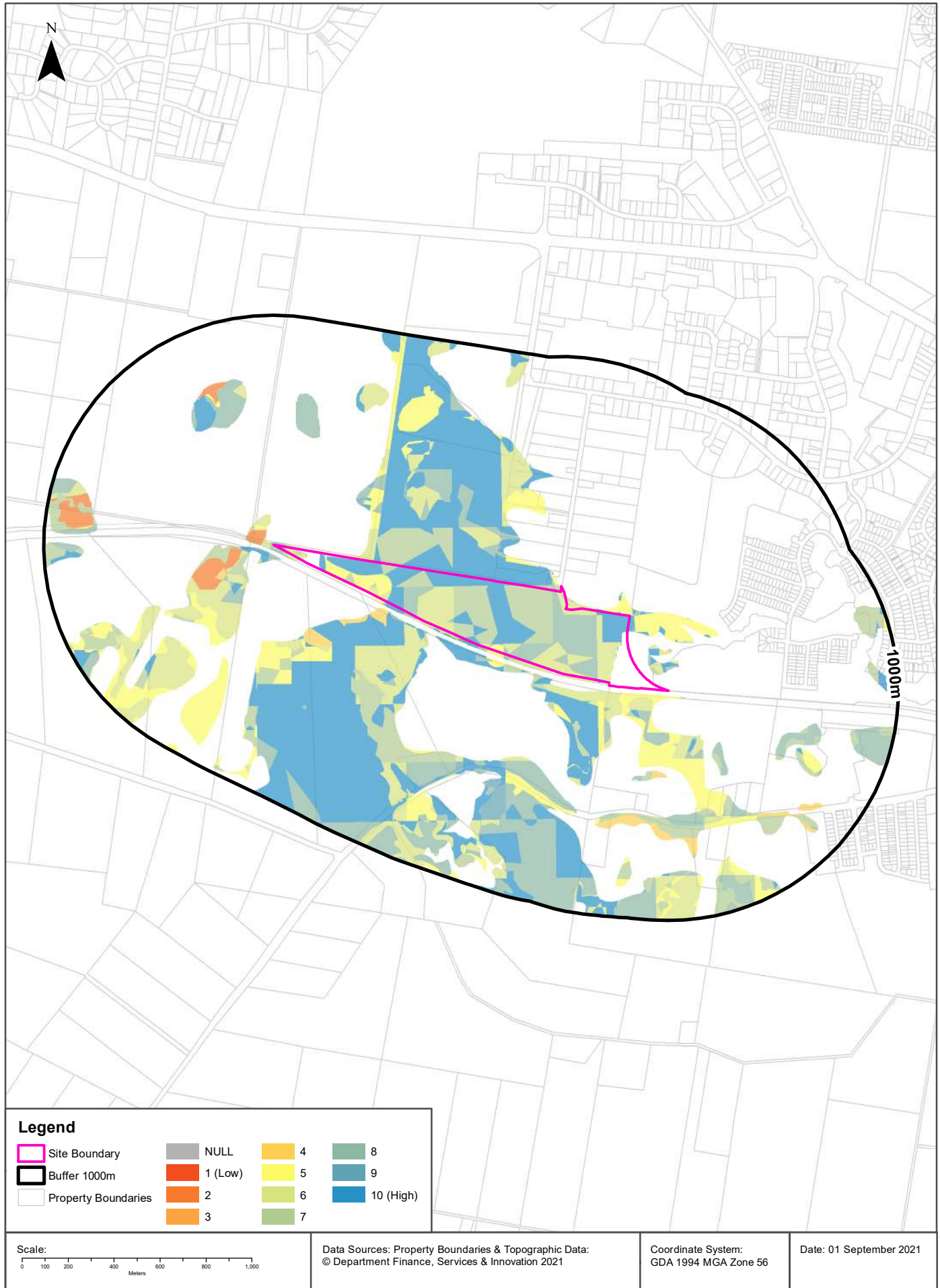
Groundwater Dependent Ecosystems Atlas

Type	GDE Potential	Geomorphology	Ecosystem Type	Aquifer Geology	Distance	Direction
Terrestrial	Low potential GDE - from regional studies	Plateau flank dissected into narrow strike ridges and valleys.	Vegetation		0m	On-site
Terrestrial	Low potential GDE - from regional studies	Undulating to low hilly country on weak rocks, with alluvial and sandy littoral plains.	Vegetation		0m	On-site
Terrestrial	High potential GDE - from regional studies	Undulating to low hilly country on weak rocks, with alluvial and sandy littoral plains.	Vegetation		40m	West
Terrestrial	Moderate potential GDE - from regional studies	Undulating to low hilly country on weak rocks, with alluvial and sandy littoral plains.	Vegetation		40m	West

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

91 Gardiner Street, Rutherford, NSW 2320



Ecological Constraints

91 Gardiner Street, Rutherford, NSW 2320

Inflow Dependent Ecosystems Likelihood

Type	IDE Likelihood	Geomorphology	Ecosystem Type	Aquifer Geology	Distance	Direction
Terrestrial	6	Undulating to low hilly country on weak rocks, with alluvial and sandy littoral plains.	Vegetation		0m	On-site
Terrestrial	6	Plateau flank dissected into narrow strike ridges and valleys.	Vegetation		0m	On-site
Terrestrial	7	Plateau flank dissected into narrow strike ridges and valleys.	Vegetation		0m	On-site
Terrestrial	5	Plateau flank dissected into narrow strike ridges and valleys.	Vegetation		0m	On-site
Terrestrial	10	Plateau flank dissected into narrow strike ridges and valleys.	Vegetation		0m	On-site
Terrestrial	5	Undulating to low hilly country on weak rocks, with alluvial and sandy littoral plains.	Vegetation		0m	On-site
Terrestrial	7	Undulating to low hilly country on weak rocks, with alluvial and sandy littoral plains.	Vegetation		0m	On-site
Terrestrial	10	Undulating to low hilly country on weak rocks, with alluvial and sandy littoral plains.	Vegetation		0m	On-site
Terrestrial	8	Undulating to low hilly country on weak rocks, with alluvial and sandy littoral plains.	Vegetation		0m	On-site
Terrestrial	4	Plateau flank dissected into narrow strike ridges and valleys.	Vegetation		16m	West
Terrestrial	4	Undulating to low hilly country on weak rocks, with alluvial and sandy littoral plains.	Vegetation		17m	West
Terrestrial	2	Undulating to low hilly country on weak rocks, with alluvial and sandy littoral plains.	Vegetation		50m	West
Terrestrial	9	Plateau flank dissected into narrow strike ridges and valleys.	Vegetation		232m	North West
Terrestrial	9	Undulating to low hilly country on weak rocks, with alluvial and sandy littoral plains.	Vegetation		442m	South
Terrestrial	8	Plateau flank dissected into narrow strike ridges and valleys.	Vegetation		473m	South

Inflow Dependent Ecosystems Likelihood Data Source: The Bureau of Meteorology

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Ecological Constraints

91 Gardiner Street, Rutherford, NSW 2320

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	Amphibia	Litoria littlejohni	Littlejohn's Tree Frog	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Aves	Anseranas semipalmata	Magpie Goose	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Anthochaera phrygia	Regent Honeyeater	Critically Endangered	Not Sensitive	Critically Endangered	
Animalia	Aves	Ardenna pacifica	Wedge-tailed Shearwater	Not Listed	Not Sensitive	Not Listed	JAMBA
Animalia	Aves	Ardenna tenuirostris	Short-tailed Shearwater	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Artamus cyanopterus cyanopterus	Dusky Woodswallow	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Calidris melanotos	Pectoral Sandpiper	Not Listed	Not Sensitive	Not Listed	ROKAMBA;JAMBA
Animalia	Aves	Callocephalon fimbriatum	Gang-gang Cockatoo	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Calyptorhynchus banksii samueli	Red-tailed Black-Cockatoo (inland subspecies)	Vulnerable	Category 2	Not Listed	
Animalia	Aves	Calyptorhynchus lathamii	Glossy Black-Cockatoo	Vulnerable	Category 2	Not Listed	
Animalia	Aves	Chthonicola sagittata	Speckled Warbler	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Circus assimilis	Spotted Harrier	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Cuculus optatus	Oriental Cuckoo	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
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	Epthianura albifrons	White-fronted Chat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Falco subniger	Black Falcon	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Gallinago hardwickii	Latham's Snipe	Not Listed	Not Sensitive	Not Listed	ROKAMBA;JAMBA
Animalia	Aves	Glossopsitta pusilla	Little Lorikeet	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Haliaeetus leucogaster	White-bellied Sea-Eagle	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Hirundapus caudacutus	White-throated Needletail	Not Listed	Not Sensitive	Vulnerable	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Ixobrychus flavicollis	Black Bittern	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Lathamus discolor	Swift Parrot	Endangered	Category 3	Critically Endangered	
Animalia	Aves	Lophoictinia isura	Square-tailed Kite	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Melanodryas cucullata cucullata	Hooded Robin (south-eastern form)	Vulnerable	Not Sensitive	Not Listed	

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Animalia	Aves	Melithreptus gularis gularis	Black-chinned Honeyeater (eastern subspecies)	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Neophema pulchella	Turquoise Parrot	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Ninox connivens	Barking Owl	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Ninox strenua	Powerful Owl	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Numenius minutus	Little Curlew	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Oxyura australis	Blue-billed Duck	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	Aves	Pezoporus wallicus wallicus	Eastern Ground Parrot	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Pluvialis squatarola	Grey Plover	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Pomastomus temporalis temporalis	Grey-crowned Babbler (eastern subspecies)	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Rostratula australis	Australian Painted Snipe	Endangered	Not Sensitive	Endangered	
Animalia	Aves	Sternula albifrons	Little Tern	Endangered	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Thinornis cucullatus cucullatus	Eastern Hooded Dotterel	Critically Endangered	Not Sensitive	Vulnerable	
Animalia	Aves	Tringa stagnatilis	Marsh Sandpiper	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Tyto novaehollandiae	Masked Owl	Vulnerable	Category 3	Not Listed	
Animalia	Mammalia	Chalinolobus dwyeri	Large-eared Pied Bat	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Mammalia	Dasyurus maculatus	Spotted-tailed Quoll	Vulnerable	Not Sensitive	Endangered	
Animalia	Mammalia	Falsistrellus tasmaniensis	Eastern False Pipistrelle	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Micronomus norfolkensis	Eastern Coastal Free-tailed Bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Miniopterus australis	Little Bent-winged Bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Miniopterus orianae oceanensis	Large Bent-winged Bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Myotis macropus	Southern Myotis	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Petaurus norfolcensis	Squirrel Glider	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Phascogale tapoatafa	Brush-tailed Phascogale	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Phascolarctos cinereus	Koala	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Mammalia	Pseudomys novaehollandiae	New Holland Mouse	Not Listed	Not Sensitive	Vulnerable	
Animalia	Mammalia	Pteropus poliocephalus	Grey-headed Flying-fox	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Mammalia	Saccolaimus flaviventris	Yellow-bellied Sheath-tail-bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Scoteanax rueppellii	Greater Broad-nosed Bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Vespadelus troungtoni	Eastern Cave Bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Reptilia	Caretta caretta	Loggerhead Turtle	Endangered	Not Sensitive	Endangered	
Animalia	Reptilia	Chelonia mydas	Green Turtle	Vulnerable	Not Sensitive	Vulnerable	

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Plantae	Flora	<i>Acacia bakeri</i>	Marblewood	Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	<i>Acacia bynoeana</i>	Bynoe's Wattle	Endangered	Not Sensitive	Vulnerable	
Plantae	Flora	<i>Callistemon linearifolius</i>	Netted Bottle Brush	Vulnerable	Category 3	Not Listed	
Plantae	Flora	<i>Cymbidium canaliculatum</i>	Tiger Orchid	Endangered Population	Category 2	Not Listed	
Plantae	Flora	<i>Eucalyptus camaldulensis</i>	River Red Gum	Endangered Population	Not Sensitive	Not Listed	
Plantae	Flora	<i>Eucalyptus glaucina</i>	Slaty Red Gum	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	<i>Eucalyptus nicholii</i>	Narrow-leaved Black Peppermint	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	<i>Eucalyptus parramattensis</i> subsp. <i>decadens</i>		Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	<i>Grevillea parviflora</i> subsp. <i>parviflora</i>	Small-flower Grevillea	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	<i>Persoonia pauciflora</i>	North Rothbury Persoonia	Critically Endangered	Category 3	Critically Endangered	
Plantae	Flora	<i>Pterostylis gibbosa</i>	Illawarra Greenhood	Endangered	Category 2	Endangered	
Plantae	Flora	<i>Rhodomyrtus psidioides</i>	Native Guava	Critically Endangered	Not Sensitive	Not Listed	
Plantae	Flora	<i>Rutidosis heterogama</i>	Heath Wrinklewort	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	<i>Syzygium paniculatum</i>	Magenta Lilly Pilly	Endangered	Not Sensitive	Vulnerable	

Data does not include NSW category 1 sensitive species.

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Location Confidences

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

LC Code	Location Confidence
Premise Match	Georeferenced to the site location / premise or part of site
Area Match	Georeferenced to an approximate or general area
Road Match	Georeferenced to a road or rail corridor
Road Intersection	Georeferenced to a road intersection
Buffered Point	A point feature buffered to x metres
Adjacent Match	Land adjacent to a georeferenced feature
Network of Features	Georeferenced to a network of features
Suburb Match	Georeferenced to a suburb boundary
As Supplied	Spatial data supplied by provider

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Annex E

Photographic Log



Photograph 1 - Site facing towards West




Photograph 2 – Site facing long Northern boundary



Photograph 3 - Site facing East




Annex F

	Metals								TRH NEPM (2013)							BTEX				ASB
	Arsenic	Cadmium	Chromium	Copper	Lead	Nickel	Zinc	Mercury	TRH C6-C10 Fraction	TRH C6-C10 minus BTEX (F1)	TRH >C10-C16 Fraction	TRH >C10-C16 - Naphthalene (F2)	TRH >C16-C34 (F3)	TRH >C34-C40 (F4)	Naphthalene	Benzene	Toluene	Ethylbenzene	Xylene Total	Asbestos Present (P) / Absent (A)
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	P / A
Limit of Reporting	2	0.2	2	2	2	2	2	0.05	10	10	25	25	90	120	0.1	0.1	0.1	0.1	0.5	---
EILs (NEPM 2013)	160				1800										370					
ESLs - Fine (NEPM 2013)										215		170	2500	6600		95	135	185	180	
ESLs - Coarse (NEPM 2013)										215		170	1700	3300		75	135	165	95	
HIL D (NEPM 2013)	3000	900	3600	240000	1500	6000	400000	730												
HSL D - Soil Vapour Sand 0 - <1m (NEPM 2013)										260		NL			NL	3	NL	NL	230	
HSL D - Soil Vapour Sand 1 - <2m (NEPM 2013)										370		NL			NL	3	NL	NL	NL	
HSL D - Soil Vapour Sand 2 - <4m (NEPM 2013)										630		NL			NL	3	NL	NL	NL	
HSL D - Soil Vapour Sand 4m+ (NEPM 2013)										NL		NL			NL	3	NL	NL	NL	
HSL D - Soil Vapour Silt 0 - <1m (NEPM 2013)										250		NL			NL	4	NL	NL	NL	
HSL D - Soil Vapour Silt 1 - <2m (NEPM 2013)										360		NL			NL	4	NL	NL	NL	
HSL D - Soil Vapour Silt 2 - <4m (NEPM 2013)										590		NL			NL	6	NL	NL	NL	
HSL D - Soil Vapour Silt 4m+ (NEPM 2013)										NL		NL			NL	10	NL	NL	NL	
HSL D - Soil Vapour Clay 0 - <1m (NEPM 2013)										310		NL			NL	4	NL	NL	NL	
HSL D - Soil Vapour Clay 1 - <2m (NEPM 2013)										480		NL			NL	6	NL	NL	NL	
HSL D - Soil Vapour Clay 2 - <4m (NEPM 2013)										NL		NL			NL	9	NL	NL	NL	
HSL D - Soil Vapour Clay 4m+ (NEPM 2013)										NL		NL			NL	20	NL	NL	NL	
Management Limits - Fine Soil (NEPM 2013)									800		1,000		5,000	10,000						
Management Limits - Coarse Soil (NEPM 2013)									700		1,000		3,500	10,000						
HSL D - Direct Contact (CRC Care 2011)									26,000		20,000		27,000	38,000	11,000	430	99,000	27,000	81,000	

Sample ID	Sampled Date	Arsenic	Cadmium	Chromium	Copper	Lead	Nickel	Zinc	Mercury	TRH C6-C10 Fraction	TRH C6-C10 minus BTEX (F1)	TRH >C10-C16 Fraction	TRH >C10-C16 - Naphthalene (F2)	TRH >C16-C34 (F3)	TRH >C34-C40 (F4)	Naphthalene	Benzene	Toluene	Ethylbenzene	Xylene Total	ASB
S1	7/9/2021	12	<0.2	28	32	32	10	51	<0.05	<10	<10	<25	-	<90	<120	<0.1	<0.1	<0.1	<0.1	<0.5	A
S2	7/9/2021	5	<0.2	23	5	12	7	15	<0.05	<10	<10	<25	-	<90	<120	<0.1	<0.1	<0.1	<0.1	<0.5	-
S3	7/9/2021	7	<0.2	13	8	15	4	13	<0.05	<10	<10	<25	-	<90	<120	<0.1	<0.1	<0.1	<0.1	<0.5	A
S4	7/9/2021	4	<0.2	8	7	12	3	12	<0.05	<10	<10	<25	-	<90	<120	<0.1	<0.1	<0.1	<0.1	<0.5	-
S5	7/9/2021	6	<0.2	11	8	11	2	12	<0.05	<10	<10	<25	-	<90	<120	<0.1	<0.1	<0.1	<0.1	<0.5	A
S6	7/9/2021	4	<0.2	11	12	18	5	18	<0.05	<10	<10	<25	-	<90	<120	<0.1	<0.1	<0.1	<0.1	<0.5	A


Statistical Summary																				
Number of Results	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Number of Detects	6	0	6	6	6	6	6	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Detect	4	0	8	5	11	2	12	0	0	0	0	0	0	0	0	0	0	0	0	0
Maximum Detect	12	0	28	32	32	10	51	0	0	0	0	0	0	0	0	0	0	0	0	0
Average Concentration	6.33333333	-	15.6666667	12	16.6666667	5.16666667	20.1666667	-	-	-	-	-	-	-	-	-	-	-	-	-
Number of Guideline Exceedances	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

	PAH						OCP														OPP	PCB	
	Naphthalene	Benzo(a)pyrene	Carcinogenic PAHs, BaP TEQ <LOR=0	Carcinogenic PAHs, BaP TEQ <LOR=LOR	Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	Total PAH	Aldrin	o,p'-DDE	o,p'-DDD	o,p'-DDT	Gamma Chlordane	Alpha Chlordane	Dieldrin	Alpha Endosulfan	Beta Endosulfan	Endrin	Heptachlor	Hexachlorobenzene (HCB)	Methoxychlor	Toxaphene	Chlorpyrifos (Chlorpyrifos Ethyl)	Total PCBs (Arochlors)	
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Limit of Reporting	0.1	0.1	0.6	0.8	0.6	0.9	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1
EILs (NEPM 2013)	370								640														
ESLs - Coarse/Fine (NEPM 2013)		0.7																					
HIL D (NEPM 2013)			40	40	40	4000	45	3600	3600	3600	530	530	45	2000	2000	100	50	80	2500	160	2000	7	
HSL B - Direct Contact (CRC Care 2011)	11,000																						

Sample ID	Sampled Date	Naphthalene	Benzo(a)pyrene	Carcinogenic PAHs, BaP TEQ <LOR=0	Carcinogenic PAHs, BaP TEQ <LOR=LOR	Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	Total PAH	Aldrin	o,p'-DDE	o,p'-DDD	o,p'-DDT	Gamma Chlordane	Alpha Chlordane	Dieldrin	Alpha Endosulfan	Beta Endosulfan	Endrin	Heptachlor	Hexachlorobenzene (HCB)	Methoxychlor	Toxaphene	Chlorpyrifos (Chlorpyrifos Ethyl)	Total PCBs (Arochlors)
S1	7/9/2021	<0.1	<0.1	<0.6	<0.8	<0.6	<0.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
S2	7/9/2021	<0.1	<0.1	<0.6	<0.8	<0.6	<0.9	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
S3	7/9/2021	<0.1	<0.1	<0.6	<0.8	<0.6	<0.9	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
S4	7/9/2021	<0.1	<0.1	<0.6	<0.8	<0.6	<0.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
S5	7/9/2021	<0.1	<0.1	<0.6	<0.8	<0.6	<0.9	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
S6	7/9/2021	<0.1	<0.1	<0.6	<0.8	<0.6	<0.9	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.

Statistical Summary																						
Number of Results	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Number of Detects	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Detect	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Maximum Detect	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Average Concentration	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Number of Guideline Exceedances	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0


Note:
⁽¹⁾ The NEPM presents a cumulative HIL for DDD, DDE and DDT (240 mg/kg). Concentrations for each of these compounds are presented separately above and conservatively assessed against the HIL.
⁽²⁾ The NEPM presents a cumulative HIL for Aldrin and Dieldrin (6 mg/kg). Concentrations for each of these compounds are presented separately above and conservatively assessed against the HIL.
⁽³⁾ The NEPM presents one HIL for Endosulfan (270 mg/kg). Concentrations for Alpha Endosulfan and Beta Endosulfan are presented separately above and conservatively assessed against the HIL.

	LOR	Unit	Primary Sample	QA Sample	RPD
			S1	DUP1	
Metals					
Arsenic	2	mg/kg	12	11	8.7
Cadmium	0.4	mg/kg	0.1	0.1	0.0
Chromium	5	mg/kg	28	26	7.4
Copper	5	mg/kg	32	27	16.9
Lead	5	mg/kg	32	30	6.5
Nickel	5	mg/kg	10	10	0.0
Zinc	5	mg/kg	51	48	6.1
Mercury	0.1	mg/kg	0.025	0.025	0.0

Notes

RPD = Relative Percentage Difference.

RPD assessment criteria were adopted in general accordance with NEPM Schedule B3 Section 3.5 (NEPC 2013). RPDs where both primary and duplicate results were < 2.5 times the LOR were not considered. RPDs where primary and/or duplicate results were >2.5 times the LOR were assessed based on a threshold of +/- 30%. Exceedence of this threshold triggered consideration of associated data quality.

	LOR	RINS
Date		7/9/2021
Unit of Measure	mg/L	mg/L
Metals		
Arsenic	0.0005	<0.0005
Cadmium	0.0002	<0.0002
Chromium	0.0005	<0.0005
Copper	0.001	<0.001
Lead	0.0002	<0.0002
Mercury	0.0005	<0.0005
Nickel	0.001	0.002
Zinc	0.0005	<0.0005



Annex G

CLIENT DETAILS

LABORATORY DETAILS

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Project **Valley Civilab - Asbestos in Soil**
 Order Number **ME322525**
 Samples 4

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SGS Reference **CE154825 R0**
 Date Received 13 Sep 2021
 Date Reported 16 Sep 2021

COMMENTS

Accredited for compliance with ISO/IEC 17025 - Testing. NATA accredited laboratory 2562(3146/19038)

Fibre identification performed by approved identifier Jon Dicker.

SIGNATORIES



Anthony Nilsson
 Operations Manager



Jon Dicker
 Manager Northern QLD

RESULTS

Fibre Identification in soil

Method AN602

Laboratory Reference	Client Reference	Matrix	Sample Description	Date Sampled	Fibre Identification	Est.%w/w*
CE154825.001	ME322525.001	Soil	66g Soil	07 Sep 2021	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	
CE154825.002	ME322525.003	Soil	63g Soil	07 Sep 2021	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	
CE154825.003	ME322525.005	Soil	51g Soil	07 Sep 2021	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	
CE154825.004	ME322525.006	Soil	52g Soil	07 Sep 2021	No Asbestos Found at RL of 0.1g/kg Organic Fibres Detected	

METHOD

METHODOLOGY SUMMARY

AN602	Qualitative identification of chrysotile, amosite and crocidolite in bulk samples by polarised light microscopy (PLM) in conjunction with dispersion staining (DS). AS4964 provides the basis for this document. Unequivocal identification of the asbestos minerals present is made by obtaining sufficient diagnostic 'clues', which provide a reasonable degree of certainty, dispersion staining is a mandatory 'clue' for positive identification. If sufficient 'clues' are absent, then positive identification of asbestos is not possible. This procedure requires removal of suspect fibres/bundles from the sample which cannot be returned.
AN602	Fibres/material that cannot be unequivocally identified as one of the three asbestos forms, will be reported as unknown mineral fibres (umf) The fibres detected may or may not be asbestos fibres.
AN602	AS4964.2004 Method for the Qualitative Identification of Asbestos in Bulk Samples, Section 8.4, Trace Analysis Criteria, Note 4 states: "Depending upon sample condition and fibre type, the detection/reporting limit (RL) of this technique has been found to lie generally in the range of 1 in 1,000 to 1 in 10,000 parts by weight, equivalent to 1 to 0.1 g/kg."
AN602	The sample can be reported "no asbestos found at the reporting limit (RL) of 0.1 g/kg" (<0.01%w/w) where AN602 section 4.5 of this method has been followed, and if- <ul style="list-style-type: none"> (a) no trace asbestos fibres have been detected (i.e. no 'respirable' fibres); (b) the estimated weight of non-respirable asbestos fibre bundles and/or the estimated weight of asbestos in asbestos-containing materials are found to be less than 0.1g/kg; and (c) these non-respirable asbestos fibre bundles and/or the asbestos containing materials are only visible under stereo-microscope viewing conditions.

FOOTNOTES

Amosite	-	Brown Asbestos	NA	-	Not Analysed
Chrysotile	-	White Asbestos	LNR	-	Listed, Not Required
Crocidolite	-	Blue Asbestos	*	-	NATA accreditation does not cover the performance of this service.
Amphiboles	-	Amosite and/or Crocidolite	**	-	Indicative data, theoretical holding time exceeded.
			***	-	Indicates that both * and ** apply.

(In reference to soil samples only) This report does not comply with the analytical reporting recommendations in the Western Australian Department of Health Guidelines for the Assessment and Remediation and Management of Asbestos Contaminated sites in Western Australia - May 2009.

Unless it is reported that sampling has been performed by SGS, the samples have been analysed as received.

Where reported: 'Asbestos Detected': Asbestos detected by polarised light microscopy, including dispersion staining.

Where reported: 'No Asbestos Found': No Asbestos Found by polarised light microscopy, including dispersion staining.

Where reported: 'UMF Detected': Mineral fibres of unknown type detected by polarised light microscopy, including dispersion staining. Confirmation by another independent analytical technique may be necessary.

Even after disintegration it can be very difficult, or impossible, to detect the presence of asbestos in some asbestos-containing bulk materials using polarised light microscopy. This is due to the low grade or small length or diameter of asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials.

The QC and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: www.sgs.com.au/en-gb/environment-health-and-safety.

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CHAIN OF CUSTODY & ANALYSIS REQUEST

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 Alexandria NSW 2015
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Company Name: Hunter Civilab
 Address: 3/62 Sandringham Avenue Thornton 2322
 Contact Name: Malcolm Adrien

Project Name/No: C1102 - Rutherford
 Purchase Order No: HC0127
 Results Required By: 5th
 Telephone: 0499 151 225 / 0499 160 449
 Facsimile:
 Email Results: ma@huntercivilab.com.au; jd@huntercivilab.com.au

Client Sample ID	Date Sampled	Lab Sample ID	NO OF CONTAINERS															
			WATER	SOIL	PRESERVATIVE		U10	U17	Asbestos	U2								
S1	7/9			X			X	X										
S2							X	X										
S3							X	X										
S4							X	X										
S5							X	X										
S6							X	X										
RIN				X														
DND				X														
Relinquished By: M Adrien			Date/Time: 7/9	Received By: [Signature]			Date/Time: 9/9/21, 9.30am											
Relinquished By: M Adrien			Date/Time:	Received By:			Date/Time:											
Samples Intact: Yes/No			Temperature: Ambient / Chilled	Sample Cooler Sealed: Yes/No			Laboratory Quotation No:											
Comments:																		

SGS EHS Melbourne COC
ME322525

CLIENT DETAILS

Contact Jake Duck & Malcolm Adrien
 Client VALLEY CIVILAB PTY LTD
 Address PO BOX 3127
 THORNTON NSW 2322

Telephone 61 2 4966 1844
 Facsimile (Not specified)
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Project **C1102 - Rutherford**
 Order Number **HC0127**
 Samples 8

LABORATORY DETAILS

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SGS Reference **SE223802A R1**
 Date Received 22/9/2021
 Date Reported 8/10/2021

COMMENTS

Accredited for compliance with ISO/IEC 17025 - Testing. NATA accredited laboratory 2562(4354).

This report cancels and supersedes the report No.SE223802A. dated 24/09/21 issued by SGS Environment, Health and Safety due to the inclusion of results from ME322525.

Asbestos subcontracted to SGS Cairns, 2/58 Comport St, Portsmith QLD 4870, NATA Accreditation Number: 2562, Site Number: 3146, CE154825
 All analysis excluding TRH C10-C40 and asbestos performed at SGS Melbourne, 10/585 Blackburn Road, Notting Hill, VIC, NATA Accreditation Numbe. 2562/14420, ME322525

SIGNATORIES



Ly Kim HA
 Organic Section Head



Shane MCDERMOTT
 Inorganic/Metals Chemist



Teresa NGUYEN
 Organic Chemist

TRH (Total Recoverable Hydrocarbons) in Soil [AN403] Tested: 22/9/2021

PARAMETER	UOM	LOR	S1	S2	S3	S4	S5
			SOIL	SOIL	SOIL	SOIL	SOIL
			7/9/2021 SE223802A.001	7/9/2021 SE223802A.002	7/9/2021 SE223802A.003	7/9/2021 SE223802A.004	7/9/2021 SE223802A.005
TRH C10-C14	mg/kg	20	<20	<20	<20	<20	<20
TRH C15-C28	mg/kg	45	<45	<45	<45	<45	<45
TRH C29-C36	mg/kg	45	<45	<45	<45	<45	<45
TRH C37-C40	mg/kg	100	<100	<100	<100	<100	<100
TRH >C10-C16	mg/kg	25	<25	<25	<25	<25	<25
TRH >C16-C34 (F3)	mg/kg	90	<90	<90	<90	<90	<90
TRH >C34-C40 (F4)	mg/kg	120	<120	<120	<120	<120	<120
TRH C10-C36 Total	mg/kg	110	<110	<110	<110	<110	<110
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	<210	<210	<210

PARAMETER	UOM	LOR	S6	RIN	DUP
			SOIL	WATER	SOIL
			7/9/2021 SE223802A.006	7/9/2021 SE223802A.007	7/9/2021 SE223802A.008
TRH C10-C14	mg/kg	20	<20	NVL	NVL
TRH C15-C28	mg/kg	45	<45	NVL	NVL
TRH C29-C36	mg/kg	45	53	NVL	NVL
TRH C37-C40	mg/kg	100	<100	NVL	NVL
TRH >C10-C16	mg/kg	25	<25	NVL	NVL
TRH >C16-C34 (F3)	mg/kg	90	<90	NVL	NVL
TRH >C34-C40 (F4)	mg/kg	120	<120	NVL	NVL
TRH C10-C36 Total	mg/kg	110	<110	NVL	NVL
TRH >C10-C40 Total (F bands)	mg/kg	210	<210	NVL	NVL

Moisture Content [AN002] Tested: 22/9/2021

			S1	S2	S3	S4	S5
			SOIL	SOIL	SOIL	SOIL	SOIL
			-	-	-	-	-
			7/9/2021	7/9/2021	7/9/2021	7/9/2021	7/9/2021
PARAMETER	UOM	LOR	SE223802A.001	SE223802A.002	SE223802A.003	SE223802A.004	SE223802A.005
% Moisture	%w/w	1	13.2	18.4	6.5	8.1	6.1

			S6	RIN	DUP
			SOIL	WATER	SOIL
			-	-	-
			7/9/2021	7/9/2021	7/9/2021
PARAMETER	UOM	LOR	SE223802A.006	SE223802A.007	SE223802A.008
% Moisture	%w/w	1	9.4	NVL	NVL

USEPA 8260B Volatile Organic Compounds in Solids/Soils [USEPA 8260 B] Tested: 8/10/2021

PARAMETER	UOM	LOR	S1	S2	S3	S4	S5
			SOIL	SOIL	SOIL	SOIL	SOIL
			7/9/2021 SE223802A.001	7/9/2021 SE223802A.002	7/9/2021 SE223802A.003	7/9/2021 SE223802A.004	7/9/2021 SE223802A.005
Benzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m&p-Xylenes	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o-Xylenes	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total BTEX	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5

PARAMETER	UOM	LOR	S6
			SOIL
			7/9/2021 SE223802A.006
Benzene	mg/kg	0.1	<0.1
Toluene	mg/kg	0.1	<0.1
Ethylbenzene	mg/kg	0.1	<0.1
m&p-Xylenes	mg/kg	0.1	<0.1
o-Xylenes	mg/kg	0.1	<0.1
Naphthalene	mg/kg	0.1	<0.1
Total BTEX	mg/kg	0.5	<0.5

Volatile Petroleum Hydrocarbons in soil [MA30-VPH] Tested: 8/10/2021

PARAMETER	UOM	LOR	S1	S2	S3	S4	S5
			SOIL - 7/9/2021 SE223802A.001	SOIL - 7/9/2021 SE223802A.002	SOIL - 7/9/2021 SE223802A.003	SOIL - 7/9/2021 SE223802A.004	SOIL - 7/9/2021 SE223802A.005
TRH C6-C9 (P&T)	mg/kg	10	<10	<10	<10	<10	<10
TRH C6-C10 (P&T)	mg/kg	10	<10	<10	<10	<10	<10
TRH C6-C10 (P&T) less BTEX (F1)	mg/kg	10	<10	<10	<10	<10	<10

PARAMETER	UOM	LOR	S6
			SOIL - 7/9/2021 SE223802A.006
TRH C6-C9 (P&T)	mg/kg	10	<10
TRH C6-C10 (P&T)	mg/kg	10	<10
TRH C6-C10 (P&T) less BTEX (F1)	mg/kg	10	<10

8270D.SL.01 SVOCs All in Solids/Soils [MA 8270] Tested: 8/10/2021

PARAMETER	UOM	LOR	S1	S2	S3	S4	S5
			SOIL - 7/9/2021 SE223802A.001	SOIL - 7/9/2021 SE223802A.002	SOIL - 7/9/2021 SE223802A.003	SOIL - 7/9/2021 SE223802A.004	SOIL - 7/9/2021 SE223802A.005
1-Methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-Methylnaphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo (b+j) fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo (k) fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo (ghi) perylene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo (a) pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Coronene	mg/kg	0.1	<0.1	-	-	<0.1	-
Dibenz (ah) anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Indeno (1,2,3-cd) pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Naphthalene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Perylene	mg/kg	0.5	<0.5	-	-	<0.5	-
Phenanthrene	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	mg/kg	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Total PAH	mg/kg	0.9	<0.9	<0.9	<0.9	<0.9	<0.9
Total PAH VIC EPA	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Carcinogenic PAH, BaP TEQ, <LOR=0	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Carcinogenic PAH, BaP TEQ, <LOR=LOR	mg/kg	0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Carcinogenic PAH, BaP TEQ, <LOR=LOR/2	mg/kg	0.6	<0.6	<0.6	<0.6	<0.6	<0.6
4,4-DDD	mg/kg	0.5	<0.5	-	-	<0.5	-
4,4-DDE	mg/kg	0.5	<0.5	-	-	<0.5	-
4,4-DDT	mg/kg	0.5	<0.5	-	-	<0.5	-
Aldrin	mg/kg	0.5	<0.5	-	-	<0.5	-
alpha-BHC	mg/kg	0.5	<0.5	-	-	<0.5	-
beta-BHC	mg/kg	0.5	<0.5	-	-	<0.5	-
alpha-Chlordane	mg/kg	0.5	<0.5	-	-	<0.5	-
delta-BHC	mg/kg	0.5	<0.5	-	-	<0.5	-
Dieldrin	mg/kg	0.5	<0.5	-	-	<0.5	-
Endosulfan 1	mg/kg	0.5	<0.5	-	-	<0.5	-
Endosulfan 2	mg/kg	0.5	<0.5	-	-	<0.5	-
Endosulfan Sulphate	mg/kg	0.5	<0.5	-	-	<0.5	-
Endrin	mg/kg	0.5	<0.5	-	-	<0.5	-
Endrin Aldehyde	mg/kg	0.5	<0.5	-	-	<0.5	-
gamma-BHC	mg/kg	0.5	<0.5	-	-	<0.5	-
Heptachlor	mg/kg	0.5	<0.5	-	-	<0.5	-
Heptachlor Epoxide	mg/kg	0.5	<0.5	-	-	<0.5	-
Isodrin	mg/kg	0.5	<0.5	-	-	<0.5	-
Methoxychlor	mg/kg	0.5	<0.5	-	-	<0.5	-
Chlorfenvinphos	mg/kg	0.5	<0.5	-	-	<0.5	-
Chlorpyrifos	mg/kg	0.5	<0.5	-	-	<0.5	-
Dimethoate	mg/kg	0.5	<0.5	-	-	<0.5	-
Ethion	mg/kg	0.5	<0.5	-	-	<0.5	-
Famphur	mg/kg	0.5	<0.5	-	-	<0.5	-
Fenitrothion	mg/kg	0.5	<0.5	-	-	<0.5	-
Fensulfothion	mg/kg	0.5	<0.5	-	-	<0.5	-
Fenthion	mg/kg	0.5	<0.5	-	-	<0.5	-
Malathion	mg/kg	0.5	<0.5	-	-	<0.5	-
Mevinphos	mg/kg	0.5	<0.5	-	-	<0.5	-
Methyl parathion	mg/kg	0.5	<0.5	-	-	<0.5	-
O,O,O-Triethylphosphorothioate	mg/kg	0.5	<0.5	-	-	<0.5	-

8270D.SL.01 SVOCs All in Solids/Soils [MA 8270] Tested: 8/10/2021 (continued)

PARAMETER	UOM	LOR	S1	S2	S3	S4	S5
			SOIL	SOIL	SOIL	SOIL	SOIL
			7/9/2021	7/9/2021	7/9/2021	7/9/2021	7/9/2021
			SE223802A.001	SE223802A.002	SE223802A.003	SE223802A.004	SE223802A.005
Parathion	mg/kg	0.5	<0.5	-	-	<0.5	-
Phorate	mg/kg	0.5	<0.5	-	-	<0.5	-
Stirofos	mg/kg	0.5	<0.5	-	-	<0.5	-
Sulfotepp	mg/kg	0.5	<0.5	-	-	<0.5	-
Thionazin	mg/kg	0.5	<0.5	-	-	<0.5	-
Arochlor 1016	mg/kg	1	<1.0	-	-	<1.0	-
Arochlor 1221	mg/kg	1	<1.0	-	-	<1.0	-
Arochlor 1232	mg/kg	1	<1.0	-	-	<1.0	-
Arochlor 1242	mg/kg	1	<1.0	-	-	<1.0	-
Arochlor 1248	mg/kg	1	<1.0	-	-	<1.0	-
Arochlor 1254	mg/kg	1	<1.0	-	-	<1.0	-
Arochlor 1260	mg/kg	1	<1.0	-	-	<1.0	-
Arochlor 1262	mg/kg	1	<1.0	-	-	<1.0	-
Arochlor 1268	mg/kg	1	<1.0	-	-	<1.0	-
Total PCBs	mg/kg	1	<1.0	-	-	<1.0	-

8270D.SL.01 SVOCs All in Solids/Soils [MA 8270] Tested: 8/10/2021 (continued)

PARAMETER	UOM	LOR	S6
			SOIL - 7/9/2021 SE223802A.006
1-Methylnaphthalene	mg/kg	0.1	<0.1
2-Methylnaphthalene	mg/kg	0.1	<0.1
Acenaphthene	mg/kg	0.1	<0.1
Acenaphthylene	mg/kg	0.1	<0.1
Anthracene	mg/kg	0.1	<0.1
Benzo(a)anthracene	mg/kg	0.1	<0.1
Benzo (b+j) fluoranthene	mg/kg	0.1	<0.1
Benzo (k) fluoranthene	mg/kg	0.1	<0.1
Benzo (ghi) perylene	mg/kg	0.1	<0.1
Benzo (a) pyrene	mg/kg	0.1	<0.1
Chrysene	mg/kg	0.1	<0.1
Coronene	mg/kg	0.1	-
Dibenz (ah) anthracene	mg/kg	0.1	<0.1
Fluorene	mg/kg	0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1
Indeno (1,2,3-cd) pyrene	mg/kg	0.1	<0.1
Naphthalene	mg/kg	0.1	<0.1
Perylene	mg/kg	0.5	-
Phenanthrene	mg/kg	0.5	<0.5
Pyrene	mg/kg	0.5	<0.5
Total PAH	mg/kg	0.9	<0.9
Total PAH VIC EPA	mg/kg	0.8	<0.8
Carcinogenic PAH, BaP TEQ, <LOR=0	mg/kg	0.6	<0.6
Carcinogenic PAH, BaP TEQ, <LOR=LOR	mg/kg	0.8	<0.8
Carcinogenic PAH, BaP TEQ, <LOR=LOR/2	mg/kg	0.6	<0.6
4,4-DDD	mg/kg	0.5	-
4,4-DDE	mg/kg	0.5	-
4,4-DDT	mg/kg	0.5	-
Aldrin	mg/kg	0.5	-
alpha-BHC	mg/kg	0.5	-
beta-BHC	mg/kg	0.5	-
alpha-Chlordane	mg/kg	0.5	-
delta-BHC	mg/kg	0.5	-
Dieldrin	mg/kg	0.5	-
Endosulfan 1	mg/kg	0.5	-
Endosulfan 2	mg/kg	0.5	-
Endosulfan Sulphate	mg/kg	0.5	-
Endrin	mg/kg	0.5	-
Endrin Aldehyde	mg/kg	0.5	-
gamma-BHC	mg/kg	0.5	-
Heptachlor	mg/kg	0.5	-
Heptachlor Epoxide	mg/kg	0.5	-
Isodrin	mg/kg	0.5	-
Methoxychlor	mg/kg	0.5	-
Chlorfenvinphos	mg/kg	0.5	-
Chlorpyrifos	mg/kg	0.5	-
Dimethoate	mg/kg	0.5	-
Ethion	mg/kg	0.5	-
Famphur	mg/kg	0.5	-
Fenitrothion	mg/kg	0.5	-
Fensulfothion	mg/kg	0.5	-
Fenthion	mg/kg	0.5	-
Malathion	mg/kg	0.5	-
Mevinphos	mg/kg	0.5	-
Methyl parathion	mg/kg	0.5	-
O,O,O-Triethylphosphorothioate	mg/kg	0.5	-

8270D.SL.01 SVOCs All in Solids/Soils [MA 8270] Tested: 8/10/2021 (continued)

PARAMETER	UOM	LOR	S6 SOIL - 7/9/2021 SE223802A.006
Parathion	mg/kg	0.5	-
Phorate	mg/kg	0.5	-
Stirofos	mg/kg	0.5	-
Sulfotepp	mg/kg	0.5	-
Thionazin	mg/kg	0.5	-
Arochlor 1016	mg/kg	1	-
Arochlor 1221	mg/kg	1	-
Arochlor 1232	mg/kg	1	-
Arochlor 1242	mg/kg	1	-
Arochlor 1248	mg/kg	1	-
Arochlor 1254	mg/kg	1	-
Arochlor 1260	mg/kg	1	-
Arochlor 1262	mg/kg	1	-
Arochlor 1268	mg/kg	1	-
Total PCBs	mg/kg	1	-

Metals/Elements in Solids [MA1400_1] Tested: 8/10/2021

PARAMETER	UOM	LOR	S1	S2	S3	S4	S5
			SOIL	SOIL	SOIL	SOIL	SOIL
			- 7/9/2021 SE223802A.001	- 7/9/2021 SE223802A.002	- 7/9/2021 SE223802A.003	- 7/9/2021 SE223802A.004	- 7/9/2021 SE223802A.005
Arsenic*	mg/kg	2	12	5	7	4	6
Cadmium*	mg/kg	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chromium*	mg/kg	2	28	23	13	8	11
Copper*	mg/kg	2	32	5	8	7	8
Lead*	mg/kg	2	32	12	15	12	11
Nickel*	mg/kg	2	10	7	4	3	2
Mercury*	mg/kg	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Zinc*	mg/kg	2	51	15	13	12	12

PARAMETER	UOM	LOR	S6	DUP
			SOIL	SOIL
			- 7/9/2021 SE223802A.006	- 7/9/2021 SE223802A.008
Arsenic*	mg/kg	2	4	11
Cadmium*	mg/kg	0.2	<0.2	<0.2
Chromium*	mg/kg	2	11	26
Copper*	mg/kg	2	12	27
Lead*	mg/kg	2	18	30
Nickel*	mg/kg	2	5	10
Mercury*	mg/kg	0.05	<0.05	<0.05
Zinc*	mg/kg	2	18	48

Trace Metals (Total) in Water by ICPMS [MA-1400.WW.10] Tested: 8/10/2021

PARAMETER	UOM	LOR	RIN
			WATER - 7/9/2021 SE223802A.007
Total Arsenic	mg/L	0.0005	<0.0005
Total Cadmium	mg/L	0.0002	<0.0002
Total Chromium	mg/L	0.0005	<0.0005
Total Copper	mg/L	0.001	<0.001
Total Lead	mg/L	0.0002	<0.0002
Total Mercury	mg/L	0.0005	<0.0005
Total Nickel	mg/L	0.0005	<0.0005
Total Zinc	mg/L	0.001	0.002

METHOD

METHODOLOGY SUMMARY

- AN002** The test is carried out by drying (at either 40°C or 105°C) a known mass of sample in a weighed evaporating basin. After fully dry the sample is re-weighed. Samples such as sludge and sediment having high percentages of moisture will take some time in a drying oven for complete removal of water.
- AN403** Total Recoverable Hydrocarbons: Determination of Hydrocarbons by gas chromatography after a solvent extraction. Detection is by flame ionisation detector (FID) that produces an electronic signal in proportion to the combustible matter passing through it. Total Recoverable Hydrocarbons (TRH) are routinely reported as four alkane groupings based on the carbon chain length of the compounds: C6-C9, C10-C14, C15-C28 and C29-C36 and in recognition of the NEPM 1999 (2013), >C10-C16 (F2), >C16-C34 (F3) and >C34-C40 (F4). F2 is reported directly and also corrected by subtracting Naphthalene (from VOC method AN433) where available.
- AN403** Additionally, the volatile C6-C9 fraction may be determined by a purge and trap technique and GC/MS because of the potential for volatiles loss. Total Recoverable Hydrocarbons - Silica (TRH-Si) follows the same method of analysis after silica gel cleanup of the solvent extract. Aliphatic/Aromatic Speciation follows the same method of analysis after fractionation of the solvent extract over silica with differential polarity of the eluent solvents .
- AN403** The GC/FID method is not well suited to the analysis of refined high boiling point materials (ie lubricating oils or greases) but is particularly suited for measuring diesel, kerosene and petrol if care to control volatility is taken. This method will detect naturally occurring hydrocarbons, lipids, animal fats, phenols and PAHs if they are present at sufficient levels, dependent on the use of specific cleanup/fractionation techniques. Reference USEPA 3510B, 8015B.
- MA 8270** This method covers analytical procedures for the analysis of semi-volatile organic compounds (SVOC) including most neutral, acidic, and basic organic compounds based on the USEPA method 8270D. Samples are extracted into a solvent appropriate to the matrix and analysed using a gas chromatograph – mass spectrometer (GC–MS).
- MA-1400.WW.10** Unfiltered sample is extracted in concentrated acid using microwave heating by the Microwave Digestion system . The sample and acid are placed in a microwave vessel (TFM), which is then capped and heated in the microwave unit. After cooling,the vessel contents are diluted with DI water, then filtered, centrifuged, or allowed to settle and analysed by ICP-MS.
- MA1400_1** A weighed portion of as received sample is extracted in concentrated acid using microwave heating by the Microwave Digestion system. The sample and acid are placed in a microwave vessel (TFM), which is then capped and heated in the microwave unit. After cooling,the vessel contents are diluted with DI water, then filtered, centrifuged, or allowed to settle and analysed by ICP-MS.
- MA30 -VPH** This method is used to quantify Volatile Petroleum Hydrocarbon (VPH) fractions using Gas Chromatography Mass Spectrometry coupled with a purge and trap sample concentrator. This method is based on USEPA 8260B (Volatile Organic Compounds by Gas Chromatography Mass Spectrometry GC/MS), using USEPA 5035 (Closed system purge and trap and extraction for volatile organics in soil and solid waste samples.).
- MA30-VPH** A sample is weighed out, and has surrogates added and is extracted in methanol. This methanol extract is then diluted in water. A stream of helium is passed through a portion of the extracted sample; the volatile components are 'purged' from the sample and are collected and concentrated on an adsorbent trap. The trap is rapidly heated and back-flushed with helium to 'desorb' the analytes onto the Gas Chromatographic column. The GC column separates the analytes and they are passed into the Mass Selective detector, which fragments the molecules and produces "mass spectra" of each compound.
- MA8270** Carcinogenic PAHs may be expressed as Benzo(a)pyrene equivalents by applying the BaP toxicity equivalence factor (NEPM 1999, June 2013, B7). These can be reported as the individual PAHs and as a sum of carcinogenic PAHs. The sum is reported three ways, the first assuming all <LOR results are zero, the second assuming all < LOR results are half the LOR and the third assuming all <LOR results are the LOR.
- USEPA 8260B** This method is used to quantify Volatile Organic Compounds using Gas Chromatography Mass Spectrometry coupled with a purge and trap sample concentrator. This method is based on USEPA 8260B (Volatile Organic Compounds by Gas Chromatography Mass Spectrometry GC/MS), using USEPA 5035 (Closed system purge and trap and extraction for volatile organics in soil and solid waste samples.).
- USEPA 8260B** A sample is weighed out, and has surrogates added and is extracted in methanol. This methanol extract is then diluted in water. A stream of helium is passed through a portion of the extracted sample; the volatile components are 'purged' from the sample and are collected and concentrated on an adsorbent trap. The trap is rapidly heated and back-flushed with helium to 'desorb' the analytes onto the Gas Chromatographic column. The GC column separates the analytes and they are passed into the Mass Selective detector, which fragments the molecules and produces "mass spectra" of each compound.

FOOTNOTES

*	NATA accreditation does not cover the performance of this service.	-	Not analysed.	UOM	Unit of Measure.
**	Indicative data, theoretical holding time exceeded.	NVL	Not validated.	LOR	Limit of Reporting.
***	Indicates that both * and ** apply.	IS	Insufficient sample for analysis.	↑↓	Raised/lowered Limit of Reporting.
		LNR	Sample listed, but not received.		

Unless it is reported that sampling has been performed by SGS, the samples have been analysed as received. Solid samples expressed on a dry weight basis.

Where "Total" analyte groups are reported (for example, Total PAHs, Total OC Pesticides) the total will be calculated as the sum of the individual analytes, with those analytes that are reported as <LOR being assumed to be zero. The summed (Total) limit of reporting is calculated by summing the individual analyte LORs and dividing by two. For example, where 16 individual analytes are being summed and each has an LOR of 0.1 mg/kg, the "Totals" LOR will be 1.6 / 2 (0.8 mg/kg). Where only 2 analytes are being summed, the "Total" LOR will be the sum of those two LORs.

Some totals may not appear to add up because the total is rounded after adding up the raw values.

If reported, measurement uncertainty follow the ± sign after the analytical result and is expressed as the expanded uncertainty calculated using a coverage factor of 2, providing a level of confidence of approximately 95%, unless stated otherwise in the comments section of this report.

Results reported for samples tested under test methods with codes starting with ARS-SOP, radionuclide or gross radioactivity concentrations are expressed in becquerel (Bq) per unit of mass or volume or per wipe as stated on the report. Becquerel is the SI unit for activity and equals one nuclear transformation per second.

Note that in terms of units of radioactivity:

- a. 1 Bq is equivalent to 27 pCi
- b. 37 MBq is equivalent to 1 mCi

For results reported for samples tested under test methods with codes starting with ARS-SOP, less than (<) values indicate the detection limit for each radionuclide or parameter for the measurement system used. The respective detection limits have been calculated in accordance with ISO 11929.

The QC and MU criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here: www.sgs.com.au/en-gb/environment-health-and-safety.

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STATEMENT OF QA/QC PERFORMANCE

SE223802A R1

CLIENT DETAILS

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Project **C1102 - Rutherford**
Order Number **HC0127**
Samples 8

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SGS Reference **SE223802A R1**
Date Received 22 Sep 2021
Date Reported 08 Oct 2021

COMMENTS

All the laboratory data for each environmental matrix was compared to SGS' stated Data Quality Objectives (DQO). Comments arising from the comparison were made and are reported below.

The data relating to sampling was taken from the Chain of Custody document.
This QA/QC Statement must be read in conjunction with the referenced Analytical Report.
The Statement and the Analytical Report must not be reproduced except in full.

All Data Quality Objectives were met with the exception of the following:

Extraction Date	Moisture Content	6 items
	TRH (Total Recoverable Hydrocarbons) in Soil	6 items
Surrogate	8270D.SL.01 SVOCs All in Solids/Soils	1 item

SAMPLE SUMMARY

Samples clearly labelled	Yes	Complete documentation received	Yes
Sample container provider	SGS	Sample cooling method	Ice Bricks
Samples received in correct containers	Yes	Sample counts by matrix	2 Soil
Date documentation received	21/9/2021	Type of documentation received	COC
Samples received in good order	Yes	Samples received without headspace	Yes
Sample temperature upon receipt	11.0°C	Sufficient sample for analysis	Yes
Turnaround time requested	Next Day		

SGS holding time criteria are drawn from current regulations and are highly dependent on sample container preservation as specified in the SGS "Field Sampling Guide for Containers and Holding Time" (ref: GU-(AU)-ENV.001). Soil samples guidelines are derived from NEPM "Schedule B(3) Guideline on Laboratory Analysis of Potentially Contaminated Soils". Water sample guidelines are derived from "AS/NZS 5667.1 : 1998 Water Quality - sampling part 1" and APHA "Standard Methods for the Examination of Water and Wastewater" 21st edition 2005.

Extraction and analysis holding time due dates listed are calculated from the date sampled, although holding times may be extended after laboratory extraction for some analytes. The due dates are the suggested dates that samples may be held before extraction or analysis and still be considered valid.

Extraction and analysis dates are shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria. If the

Moisture Content

Method: ME-(AU)-ENVJAN002

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
S1	SE223802A.001	LB233290	07 Sep 2021	22 Sep 2021	21 Sep 2021	22 Sep 2021†	27 Sep 2021	24 Sep 2021
S2	SE223802A.002	LB233290	07 Sep 2021	22 Sep 2021	21 Sep 2021	22 Sep 2021†	27 Sep 2021	24 Sep 2021
S3	SE223802A.003	LB233290	07 Sep 2021	22 Sep 2021	21 Sep 2021	22 Sep 2021†	27 Sep 2021	24 Sep 2021
S4	SE223802A.004	LB233290	07 Sep 2021	22 Sep 2021	21 Sep 2021	22 Sep 2021†	27 Sep 2021	24 Sep 2021
S5	SE223802A.005	LB233290	07 Sep 2021	22 Sep 2021	21 Sep 2021	22 Sep 2021†	27 Sep 2021	24 Sep 2021
S6	SE223802A.006	LB233290	07 Sep 2021	22 Sep 2021	21 Sep 2021	22 Sep 2021†	27 Sep 2021	24 Sep 2021

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-ENVJAN403

Sample Name	Sample No.	QC Ref	Sampled	Received	Extraction Due	Extracted	Analysis Due	Analysed
S1	SE223802A.001	LB233284	07 Sep 2021	22 Sep 2021	21 Sep 2021	22 Sep 2021†	01 Nov 2021	24 Sep 2021
S2	SE223802A.002	LB233284	07 Sep 2021	22 Sep 2021	21 Sep 2021	22 Sep 2021†	01 Nov 2021	24 Sep 2021
S3	SE223802A.003	LB233284	07 Sep 2021	22 Sep 2021	21 Sep 2021	22 Sep 2021†	01 Nov 2021	24 Sep 2021
S4	SE223802A.004	LB233284	07 Sep 2021	22 Sep 2021	21 Sep 2021	22 Sep 2021†	01 Nov 2021	24 Sep 2021
S5	SE223802A.005	LB233284	07 Sep 2021	22 Sep 2021	21 Sep 2021	22 Sep 2021†	01 Nov 2021	24 Sep 2021
S6	SE223802A.006	LB233284	07 Sep 2021	22 Sep 2021	21 Sep 2021	22 Sep 2021†	01 Nov 2021	24 Sep 2021

Surrogate results are evaluated against upper and lower limit criteria established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). At least two of three routine level soil sample surrogate spike recoveries for BTEX/VOC are to be within 70-130% where control charts have not been developed and within the established control limits for charted surrogates. Matrix effects may void this as an acceptance criterion. Water sample surrogate spike recoveries are to be within 40-130%. The presence of emulsions, surfactants and particulates may void this as an acceptance criterion.

Result is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

8270D.SL.01 SVOCs All in Solids/Soils

Method: MA 8270

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Fluorobiphenyl (surrogate)	S1	SE223802A.001	%	60 - 140%	91
	S2	SE223802A.002	%	60 - 140%	82
	S3	SE223802A.003	%	60 - 140%	87
	S4	SE223802A.004	%	60 - 140%	87
	S5	SE223802A.005	%	60 - 140%	88
	S6	SE223802A.006	%	60 - 140%	97
Fluorophenol (surrogate)	S1	SE223802A.001	%	60 - 140%	70
	S2	SE223802A.002	%	60 - 140%	69
	S3	SE223802A.003	%	60 - 140%	68
	S4	SE223802A.004	%	60 - 140%	69
	S5	SE223802A.005	%	60 - 140%	69
	S6	SE223802A.006	%	60 - 140%	76
Nitrobenzene-D5 (surrogate)	S1	SE223802A.001	%	60 - 140%	64
	S2	SE223802A.002	%	60 - 140%	62
	S3	SE223802A.003	%	60 - 140%	64
	S4	SE223802A.004	%	60 - 140%	63
	S5	SE223802A.005	%	60 - 140%	64
	S6	SE223802A.006	%	60 - 140%	69
Phenol-D6 (surrogate)	S1	SE223802A.001	%	60 - 140%	68
	S2	SE223802A.002	%	60 - 140%	64
	S3	SE223802A.003	%	60 - 140%	62
	S4	SE223802A.004	%	60 - 140%	65
	S5	SE223802A.005	%	60 - 140%	68
	S6	SE223802A.006	%	60 - 140%	67
p-Terphenyl-D14 (surrogate)	S1	SE223802A.001	%	60 - 140%	64
	S2	SE223802A.002	%	60 - 140%	58 †
	S3	SE223802A.003	%	60 - 140%	62
	S4	SE223802A.004	%	60 - 140%	63
	S5	SE223802A.005	%	60 - 140%	62
	S6	SE223802A.006	%	60 - 140%	74

USEPA 8260B Volatile Organic Compounds in Solids/Soils

Method: USEPA 8260 B

Parameter	Sample Name	Sample Number	Units	Criteria	Recovery %
Toluene-d8 (surrogate)	S1	SE223802A.001	%	60 - 130%	111
	S2	SE223802A.002	%	60 - 130%	85
	S3	SE223802A.003	%	60 - 130%	86
	S4	SE223802A.004	%	60 - 130%	82
	S5	SE223802A.005	%	60 - 130%	89
	S6	SE223802A.006	%	60 - 130%	91

Blank results are evaluated against the limit of reporting (LOR), for the chosen method and its associated instrumentation, typically 2.5 times the statistically determined method detection limit (MDL).

Result is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-ENVJAN403

Sample Number	Parameter	Units	LOR	Result
LB233284.001	TRH C10-C14	mg/kg	20	<20
	TRH C15-C28	mg/kg	45	<45
	TRH C29-C36	mg/kg	45	<45
	TRH C37-C40	mg/kg	100	<100
	TRH C10-C36 Total	mg/kg	110	<110

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: $RPD = |OriginalResult - ReplicateResult| \times 100 / Mean$

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: $MAD = 100 \times SDL / Mean + LR$

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

NOTE: The RPD reported is calculated from the unrounded data for the original and replicate result. Manual calculation of the RPD from the rounded data reported may

Moisture Content

Method: ME-(AU)-ENVJAN002

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE223801A.010	LB233290.011	% Moisture	%w/w	1	18.1	18.0	36	0
SE223801A.020	LB233290.022	% Moisture	%w/w	1	21.6	21.4	35	1
SE223802A.006	LB233290.032	% Moisture	%w/w	1	9.4	9.2	41	2

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-ENVJAN403

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %	
SE223865.003	LB233284.013	TRH C10-C14	mg/kg	20	<20	<20	200	0	
		TRH C15-C28	mg/kg	45	<45	<45	200	0	
		TRH C29-C36	mg/kg	45	<45	<45	200	0	
		TRH C37-C40	mg/kg	100	<100	<100	200	0	
		TRH C10-C36 Total	mg/kg	110	<110	<110	200	0	
		TRH >C10-C40 Total (F bands)	mg/kg	210	<210	<210	200	0	
		TRH F Bands	TRH >C10-C16	mg/kg	25	<25	<25	200	0
			TRH >C16-C34 (F3)	mg/kg	90	<90	<90	200	0
			TRH >C34-C40 (F4)	mg/kg	120	<120	<120	200	0

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA /QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %	
LB233284.002	TRH C10-C14	mg/kg	20	41	40	60 - 140	103	
	TRH C15-C28	mg/kg	45	46	40	60 - 140	115	
	TRH C29-C36	mg/kg	45	<45	40	60 - 140	103	
	TRH F Bands	TRH >C10-C16	mg/kg	25	43	40	60 - 140	108
	TRH >C16-C34 (F3)	mg/kg	90	<90	40	60 - 140	118	
	TRH >C34-C40 (F4)	mg/kg	120	<120	20	60 - 140	95	

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub-sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

QC Sample	Sample Number	Parameter	Units	LOR
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Matrix spike duplicates are calculated as Relative Percent Difference (RPD) using the formula: $RPD = |OriginalResult - ReplicateResult| \times 100 / Mean$

The original result is the analyte concentration of the matrix spike. The Duplicate result is the analyte concentration of the matrix spike duplicate.

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: $MAD = 100 \times SDL / Mean + LR$

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the

No matrix spike duplicates were required for this job.

Samples analysed as received.

Solid samples expressed on a dry weight basis.

QC criteria are subject to internal review according to the SGS QA/QC plan and may be provided on request or alternatively can be found here: https://www.sgs.com.au/~media/Local/Australia/Documents/Technical Documents/MP-AU-ENV-QU-022_QA_QC_Plan.pdf

- * NATA accreditation does not cover the performance of this service.
- ** Indicative data, theoretical holding time exceeded.
- *** Indicates that both * and ** apply.
- Sample not analysed for this analyte.
- IS Insufficient sample for analysis.
- LNR Sample listed, but not received.
- LOR Limit of reporting.
- QFH QC result is above the upper tolerance.
- QFL QC result is below the lower tolerance.
- ① At least 2 of 3 surrogates are within acceptance criteria.
- ② RPD failed acceptance criteria due to sample heterogeneity.
- ③ Results less than 5 times LOR preclude acceptance criteria for RPD.
- ④ Recovery failed acceptance criteria due to matrix interference.
- ⑤ Recovery failed acceptance criteria due to the presence of significant concentration of analyte (i.e. the concentration of analyte exceeds the spike level).
- ⑥ LOR was raised due to sample matrix interference.
- ⑦ LOR was raised due to dilution of significantly high concentration of analyte in sample.
- ⑧ Reanalysis of sample in duplicate confirmed sample heterogeneity and inconsistency of results.
- ⑨ Recovery failed acceptance criteria due to sample heterogeneity.
- ⑩ LOR was raised due to high conductivity of the sample (required dilution).
- † Refer to relevant report comments for further information.

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