

# **Appendix K**

## **Contamination**

# Great Western Highway Blackheath to Little Hartley

## Appendix K - Technical Report - Contamination

Client: Transport for NSW

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## Glossary and abbreviations

Term	Description
AAJV	AECOM Australia Pty Ltd & Aurecon Australasia Pty Ltd Great Western Highway Joint Venture
ACM	Asbestos Containing Material
ADWG	Australian Drinking Water Guidelines
ANZECC	Australian and New Zealand Environmental Conservation Council
ANZG	Australian and New Zealand Governments and Australian States and Territory Governments
ASC NEPM	National Environment Protection (Assessment of site Contamination) Measure as amended 2013 (NEPC, 2013)
ASSMAC	Acid Sulfate Soils Management Advisory Committee
BTEXN	Benzene, Toluene, Ethylbenzene, Xylenes and Naphthalene
CBD	Central Business District
CCTV	Closed Circuit Television
CEMP	Construction Environment Management Plan
CLM Act	Contaminated Land Management Act 1997
CSM	Conceptual Site Model
CSWMP	Construction Soil and Water Management Plan
DEC	NSW Department of Environment and Conservation
DPE	NSW Department of Planning and Environment
DPI Water	NSW Department of Primary Industries Water
DQO	Data Quality Objective
DSI	Stage 2 Detailed Site Investigation
DUAP	NSW Department of Urban Affairs and Planning
EHC Act	Environmentally Hazardous Chemicals Act 1985
EIS	Environmental Impact Statement
EP&A Act	Environmental Planning and Assessment Act 1979
EPB	Earth Pressure Balance
ENM	Excavated Natural Material
EPL	Environment Protection License
GDE	Groundwater Dependent Ecosystems
GWHC	Great Western Highway Upgrade Program Central Package – the project
GWHE	Great Western Highway East
GWHW	Great Western Highway West
HEPA	National Chemical Working Group of the Heads of EPAs Australia and New Zealand
HVSS	Heavy Vehicle Safety Station
LEP	Local Environmental Plan
LGA	Local Government Authority

Term	Description
m AHD	metres Australian Height Datum
m bgl	metres below ground level
NAPL	Non-aqueous Phase Liquid
NEPC	National Environment Protection Council
NorBE	Neutral or beneficial effect
NSW	New South Wales
NSW EPA	New South Wales Environment Protection Authority
NSW WQO	NSW Water Quality Objectives
OCPs	Organochlorine Pesticides
OEMP	Operational Environmental Management Plan
OPPs	Organophosphorus Pesticides
PAHs	Polycyclic Aromatic Hydrocarbons
PCBs	Polychlorinated Biphenyls
PFAS	Per- and Poly-Fluoralkyl Substances
POEO Act	Protection of the Environment Operations Act 1997
PSI	Stage 1 Preliminary Site Investigation
RAP	Remedial Action Plan
REF	Review of Environmental Factors
SAQP	Sampling, Analysis and Quality Plan
SEARs	Secretary's Environment Assessment Requirements
SEPP55	State Environment Planning Policy No 55 – Remediation of Land
S-P-R	Source – pathway – receptor
SVOCs	Semi-volatile Organic Compounds
TBM	Tunnel Boring Machine
TOFs	Tunnel Operation Facilities
TPHSS	Temperate Highland Peat Swamps on Sandstone
Transport	Transport for New South Wales
TPH	Total Petroleum Hydrocarbons
TRH	Total Recoverable Hydrocarbons
TWA	Trade Waste Agreement
UBD	Universal Business Directories
VENM	Virgin Excavated Natural Material
VOCs	Volatile Organic Compounds

## Executive summary

### Project Overview

Transport for NSW (Transport) is seeking approval under Division 5.2, Part 5 of the *Environmental Planning and Assessment Act 1979* (NSW) (EP&A Act) to upgrade the Great Western Highway between Blackheath and Little Hartley (the project).

The project would comprise the construction and operation of new twin tunnels around 11 kilometres in length between Blackheath and Little Hartley, and associated surface road upgrade work for tie-ins to the east and west of the proposed tunnel portals.

Most of the project would be located below ground, generally along or west of the existing Great Western Highway between Blackheath and Little Hartley.

The project would also comprise the following:

- site establishment and enabling works
- three construction compounds at Blackheath, Little Hartley and Soldiers Pinch and associated infrastructure
- tunnel portal construction
- tunnelling and associated works
- operational infrastructure construction and fit-out, including the construction of operational environmental controls
- finishing works, testing and commissioning.

### Purpose of this technical report

The purpose of this technical report is to inform the Environmental Impact Statement (EIS) and address the Secretary's Environment Assessment Requirements (SEARs) by:

- identifying potential areas of environmental interest (AEIs) and contaminants of potential concern (CoPC) within the construction and operational footprint
- assessing the potential for soil, soil vapour, ground gas, sediment, surface water and groundwater contamination to be present within the construction footprint
- development of a preliminary conceptual site model (CSM) for AEIs identified from the desktop review to assess potential human health and/or ecological risks in the project context. The CSM was developed assuming no mitigation measures and based on the proposed construction works for a particular location, which provides a conservative assessment of exposures, enabling a consistent decision on appropriate mitigation measures to be adopted
- providing a preliminary and qualitative assessment of contamination risk posed during construction and operation
- assessing whether further investigation should be undertaken, or appropriate management procedures should be implemented for the construction and operational phases of the project
- assessing whether the land is contaminated and, if so, whether remediation may be required including confirmation that future assessment and/or remediation would be undertaken in accordance with the current guidelines.

This technical report targets areas of surface disturbance/excavation and the non-tank section of the tunnels (i.e., the portals and at the mid-point shaft) where a potentially complete exposure pathway to potentially contaminated soil and groundwater may occur during construction and operational phases.

### Methodology

This technical report includes a desktop review of available background information relating to known contamination conditions within the construction footprint and has considered construction compounds, surface works areas, and potential impacts to surface water and groundwater. The report has

considered the environmental setting and land use history. It provides a summary of relevant contamination investigation in order to inform the requirement for further assessment and remediation or provide recommendations for the implementation of management measures including unexpected finds protocols, which may be required to appropriately manage contamination as part of the construction and operation of the project.

As part of the project, several Stage 1 Preliminary Site Investigations (PSIs) have been undertaken within and surrounding the project. This technical report consolidates the findings of previous investigations into one overarching document.

To achieve the desired performance outcome, which is to ensure that risks arising from the project relevant to potential site contamination are minimised, the following methodology has been adopted:

1. identification of potential or known soil and groundwater contamination within the construction footprint by assessing the existing environment, including review and assessment of previous reports and any available data relevant to the project (or as determined by detailed site investigations)
2. assessment of the potential contamination impacts of the project before and during construction and operation phases
3. identification and description of mitigation measures to manage potential or known soil and groundwater contamination before and during construction and operation phases.

This technical report has identified medium-risk AEs and CoPC which may require management during the construction and operation of the project. No high risk AEs were identified. Existing identified contamination issues are primarily related to, historical land uses which may have adversely impacted the quality of soil, fill, soil vapour, ground gas, groundwater, surface water and sediment within the construction footprint. There is also a potential that contamination arising from tunnel construction and associated works could adversely impact soil, sediment, groundwater and surface water if not managed appropriately.

## **Assessment of impacts**

### *Construction*

The following areas identified as having a medium risk (mainly due to lack of data) of potential contamination would variably require the completion of targeted site investigations, waste characterisation, and implementation of a Construction Environmental Management Plan, (CEMP) including unexpected finds procedure, and hazardous materials assessment (if required) to inform the appropriate management of contamination during the construction program:

- Blackheath construction footprint
- Soldiers Pinch construction footprint
- Little Hartley construction footprint.

It is noted that investigations comprising soil and groundwater sampling have commenced in accordance with the Stage 2 Detailed Site Investigation Sampling Analysis and Quality Plan (Stage 2 DSI SAQP). Available soil and groundwater analytical results will be included in the submissions report. Subject to the outcomes of these additional investigations, Remedial Action Plans (RAPs) may be required to be developed and implemented in the event that site remediation is warranted before or during construction.

Groundwater and surface water captured as a result of tunnelling activities may be contaminated with suspended solids, increased pH due to tunnel grouting activities (noting that grouting activities are likely to be minimal as the majority of the tunnels would be constructed using tunnel boring machines), decreased pH due to potential acid forming rock and chemical contamination from surrounding land uses, including leachate from landfill areas depending on the types of waste buried. A number of water treatment plants and temporary sediment and water quality basins would be constructed within the construction footprint to treat surface water and extracted groundwater. These measures would mitigate adverse water quality impacts arising from the discharge of untreated construction water.

### *Operation*

Based on the assessment conducted, the following infrastructure would require management during operation through the development and implementation of appropriate controls in an Operational Environmental Management Plan (OEMP).

- tunnel operations facility adjacent the Blackheath portal
- ventilation outlets and associated infrastructure, should ventilation outlets be identified as the preferred ventilation design option
- operational water treatment plant at Little Hartley
- sediment and water quality basins
- installation of other ongoing management controls and utilities post construction if required.

### **Management of impacts**

#### *Construction*

The areas identified as medium risk within the construction footprint would be further investigated prior to and during detailed design and investigation sampling plans would be informed by existing data and project design. As noted above, available soil and groundwater analytical results from the current Stage 2 DSI will be included in the submissions report.

All contamination investigations would be undertaken by a suitably qualified and experienced person in accordance with guidelines made or approved under the *Contaminated Land Management Act 1997* (NSW). A Sampling, Analysis and Quality Plan (SAQP) would be prepared for the proposed investigations in accordance with the ASC NEPM (NEPC, 2013 as amended). Subject to the outcomes of the investigations, RAPs may be required and implemented in the event that site remediation is warranted prior to or during/integrated with construction.

Following completion of project construction, construction footprints would be remediated in accordance with RAP(s), where required, based on the findings of investigations and the intended land use or rehabilitation requirements.

A CEMP would also be prepared for the project. The CEMP would include management measures for areas within the construction footprint identified as being potentially contaminated as well as areas within the construction footprint that have been assessed as low risk do not require further assessment or remediation.

The CEMP would incorporate an unexpected finds procedure for contamination, asbestos and potential acid sulfate soils, an asbestos management plan (if required) and would reference the Draft Contaminated Land Procedure (Transport, 2022). The CEMP would be prepared for implementation during construction of the project and would encompass all construction activities associated with the project. The plan would accurately reflect the existing conditions and potential contamination likely to be encountered during construction at various locations within the construction footprint.

The CEMP would include a Construction Soil and Water Management Plan (CSWMP) sub-plan to manage potentially contaminated soil and water for each construction footprint.

Targeted groundwater investigations would continue to be undertaken along the tunnel alignment prior to construction, to obtain adequate data to estimate the concentrations of contamination to be treated during construction. Water would be captured during construction and treated on-site or at the water treatment plants within construction compounds or within sedimentation ponds.

#### *Operation*

An Operational Environment Management Plan (OEMP) would be prepared to manage potential impacts on soils, sediment, groundwater and surface water during the operational phases of the project. Groundwater and surface water inflows drained from the tunnel would be treated at the water treatment plant and discharged to local rivers or sewer.



## Conclusion

Based on the findings of this technical report, it is concluded that there is potential for areas of soil, fill, soil vapour (from landfill and coal seams), ground gas, acid sulfate soil/potential acid forming rock, surface water, sediment and groundwater contamination associated with current and historical land uses to be encountered during construction, and further investigation and assessment is warranted.

Following the adoption of the proposed mitigation and management measures during the construction and operational phase of the project, the desired performance outcome could be achieved, which is to ensure that risks arising from the disturbance of potential contamination and disposal of potentially contaminated materials are minimised.

## 1.0 Introduction

### 1.1 Project context and overview

The Great Western Highway is the key east-west road freight and transport route between Sydney and Central West New South Wales (NSW). Together, the Australian Government and the NSW Government are investing more than \$4.5 billion towards upgrading the Great Western Highway between Katoomba and Lithgow (the Upgrade Program). Once upgraded, over 95 kilometres of the Great Western Highway would be two lanes in each direction between Emu Plains and Wallerawang.

The Upgrade Program comprises the following components:

Great Western Highway Upgrade – Medlow Bath (Medlow Bath Upgrade): upgrade and duplication of the existing surface road corridor with intersection improvements and a new pedestrian bridge (approved)

- Great Western Highway East – Katoomba to Blackheath (Katoomba to Blackheath Upgrade): upgrade, duplication and widening of the existing surface road corridor, with connections to the existing Great Western Highway east of Blackheath (approved)
- Great Western Highway Upgrade Program – Little Hartley to Lithgow (West Section) (Little Hartley to Lithgow Upgrade): upgrade, duplication and widening of the existing surface road corridor, with connections to the existing Great Western Highway at Little Hartley (approved)
- Great Western Highway Blackheath to Little Hartley: construction and operation of a twin tunnel bypass of Blackheath and Mount Victoria and surface road works for tie-ins to the east and west of the tunnel (the project).

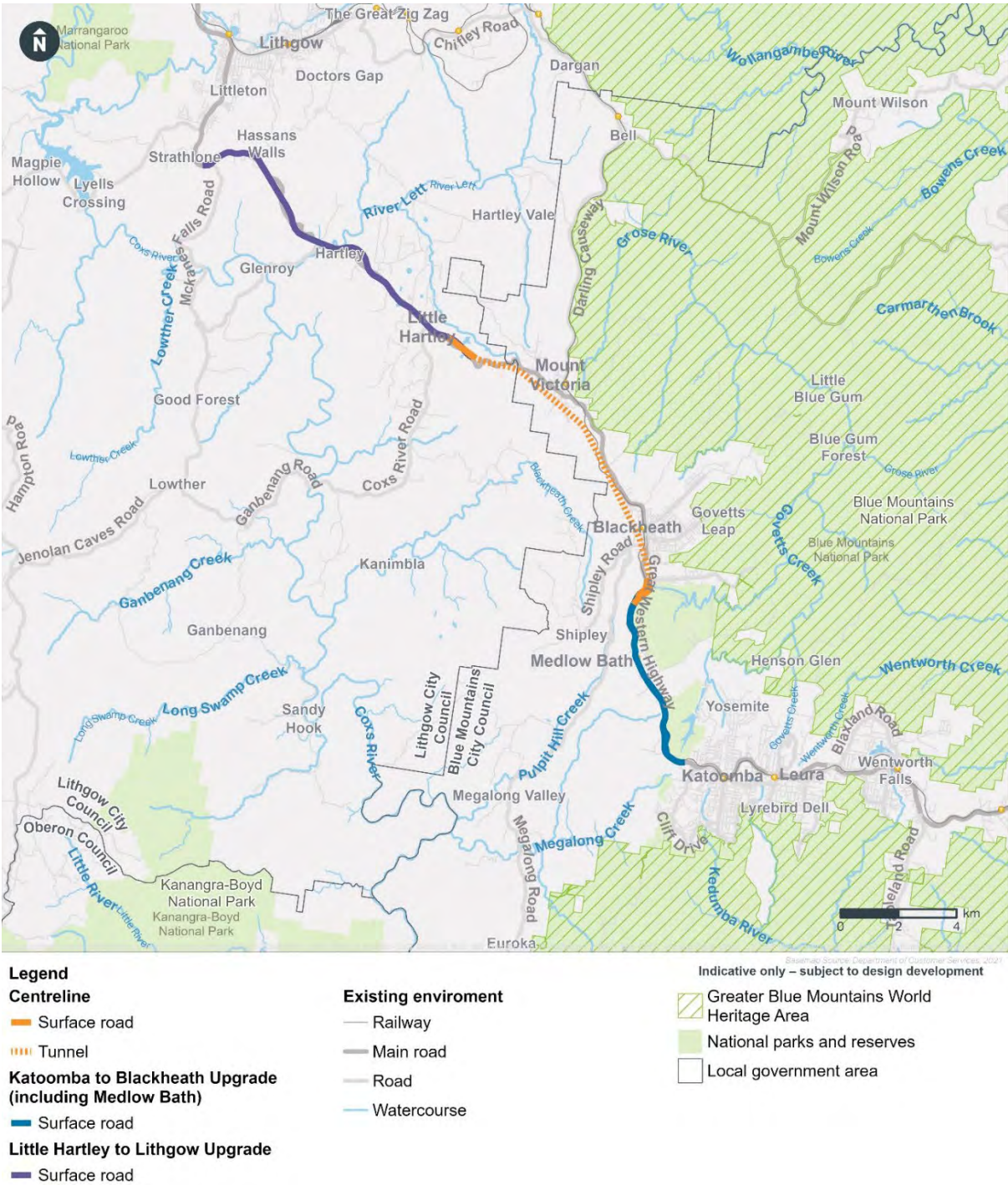
The components of the Upgrade Program are shown in Figure 1-1.

Transport for NSW (Transport) is seeking approval under Division 5.2, Part 5 of the *Environmental Planning and Assessment Act 1979* (NSW) (EP&A Act) to upgrade the Great Western Highway between Blackheath and Little Hartley (the project).

The project would comprise the construction and operation of new twin tunnels around 11 kilometres in length between Blackheath and Little Hartley, and associated surface road upgrade work for tie-ins to the east and west of the proposed tunnel portals.

The project would be located around 90 kilometres northwest of the Sydney Central Business District (CBD) and located within the Blue Mountains and Lithgow Local Government Areas (LGA).

The majority of the project would be located below ground generally along or adjacent to the west of the existing Great Western Highway between around Blackheath and Little Hartley.



## 1.2 The project

### 1.2.1 Key components of the project

Key components of the project are summarised in Table 1-1 and shown in Figure 1-2. These components are described in more detail in Chapter 5 (Project description) of the environmental impact statement (EIS).

The indicative operational configuration of the surface road network at Blackheath and Little Hartley is shown in Figure 1-3 and Figure 1-4.

Subject to approval, the project is anticipated to be open to traffic in 2030.

**Table 1-1 Key components of the project**

Key project component	Summary
Tunnels	Twin tunnels around 11 kilometres in length between Blackheath and Little Hartley, connecting to the upgraded Great Western Highway at both ends. Each tunnel would include two lanes of traffic and road shoulders and would range in depth from just below the surface near the tunnel portals, to up to around 200 metres underground at Mount Victoria.
Surface work	Surface road upgrade work would be required to connect the tunnels and surface road networks south of Blackheath and at Little Hartley. The twin tunnels would connect to the surface road network via: <ul style="list-style-type: none"> <li>mainline carriage ways and on- and off-ramps at the Blackheath portal, located adjacent to the existing Great Western Highway and south of Evans Lookout Road</li> <li>mainline carriageways at the Little Hartley portal, located adjacent to the existing Great Western Highway at the base of the western escarpment below Victoria Pass and southwest of Butlers Creek.</li> </ul>
Operational infrastructure	Operational infrastructure that would be provided by the project include: <ul style="list-style-type: none"> <li>a tunnel operations facility adjacent to the Blackheath portal</li> <li>in-tunnel ventilation systems including jet fans and ventilation ducts connecting to the ventilation facilities</li> <li>one of two potential options for tunnel ventilation currently being investigated, being: <ul style="list-style-type: none"> <li>ventilation design to support emissions via ventilation outlets; or</li> <li>ventilation design to support emissions via portals</li> </ul> </li> <li>water quality infrastructure including sediment and water quality basins, an onsite detention tank in Blackheath and a water treatment plant at Little Hartley</li> <li>fire and life safety systems, emergency evacuation and ventilation infrastructure and Closed Circuit Television</li> <li>lighting and signage including variable message signs and associated infrastructure such as overhead gantries.</li> </ul>
Utilities	Key utilities required for the project would include: <ul style="list-style-type: none"> <li>a new electricity substation at Little Hartley to facilitate construction and operational power supply</li> <li>a new pipeline between Little Hartley and Lithgow to facilitate construction and operational water supply</li> <li>other utility connections and modifications, including electricity substations in the tunnel</li> </ul>
Other project elements	The project would also include: <ul style="list-style-type: none"> <li>integrated urban design initiatives</li> <li>landscape planting.</li> </ul>





Figure 1-2 Overview of the project





Figure 1-3 Indicative operational configuration at Blackheath



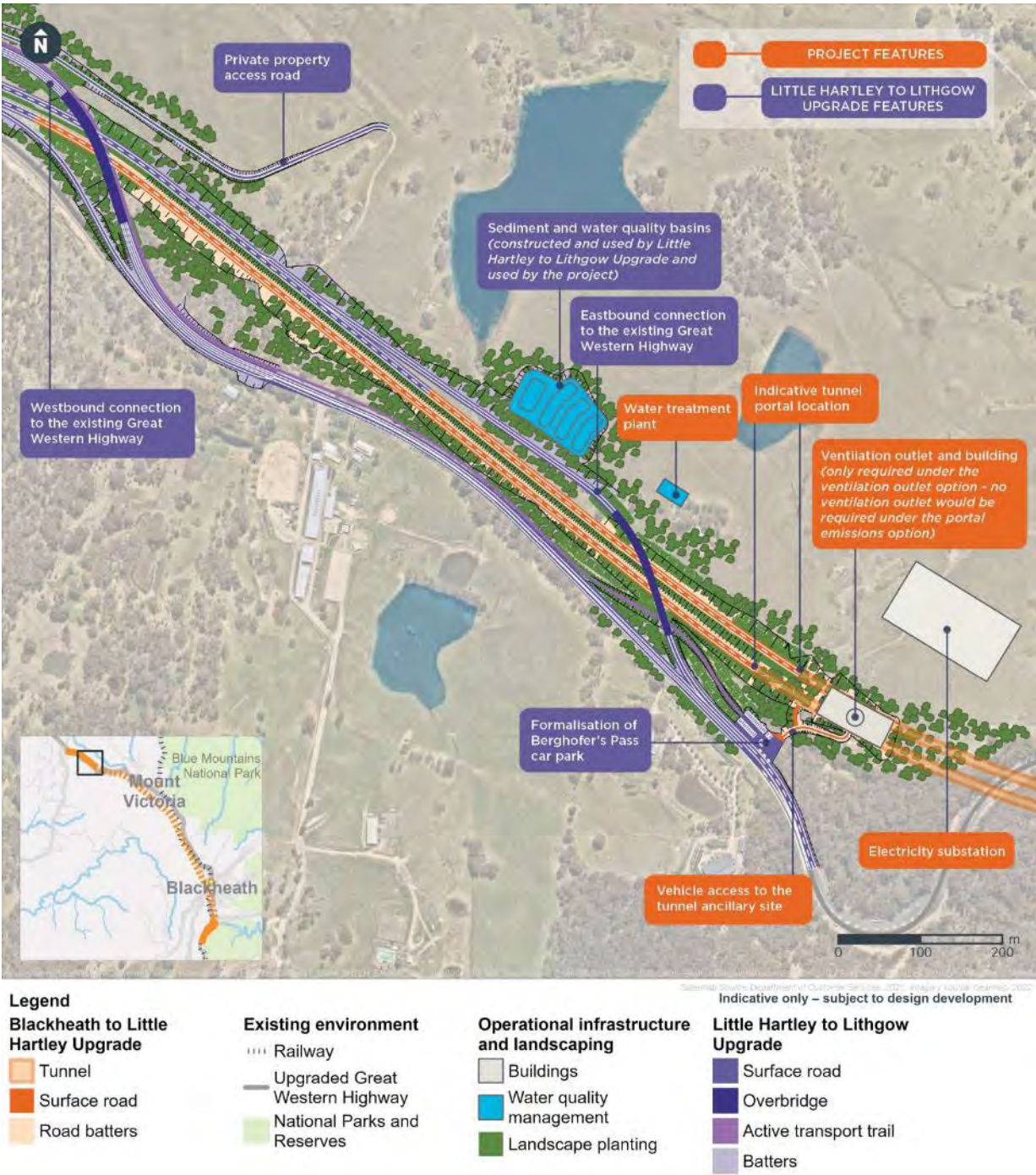


Figure 1-4 Indicative operational configuration at Little Hartley

### 1.2.2 Project construction

Construction of the project would include:

- site establishment and enabling works
- tunnel portal construction
- tunnelling and associated works
- surface road upgrade works
- operational infrastructure construction and fit-out, including construction of operational environmental controls
- finishing works, testing, and commissioning.

These activities are described in more detail in Chapter 6 (Construction) of the EIS.

The indicative construction footprint for the project is shown in Figure 1-5 to Figure 1-7, including construction site layout and access arrangements.

Construction of the project is expected to take up to eight years. Subject to planning approval, construction is planned to commence in 2024 and be completed by late 2031; however, the project would be open to traffic by 2030.





Figure 1-5 Indicative construction footprint at Blackheath





Figure 1-6 Indicative construction footprint at Soldiers Pinch



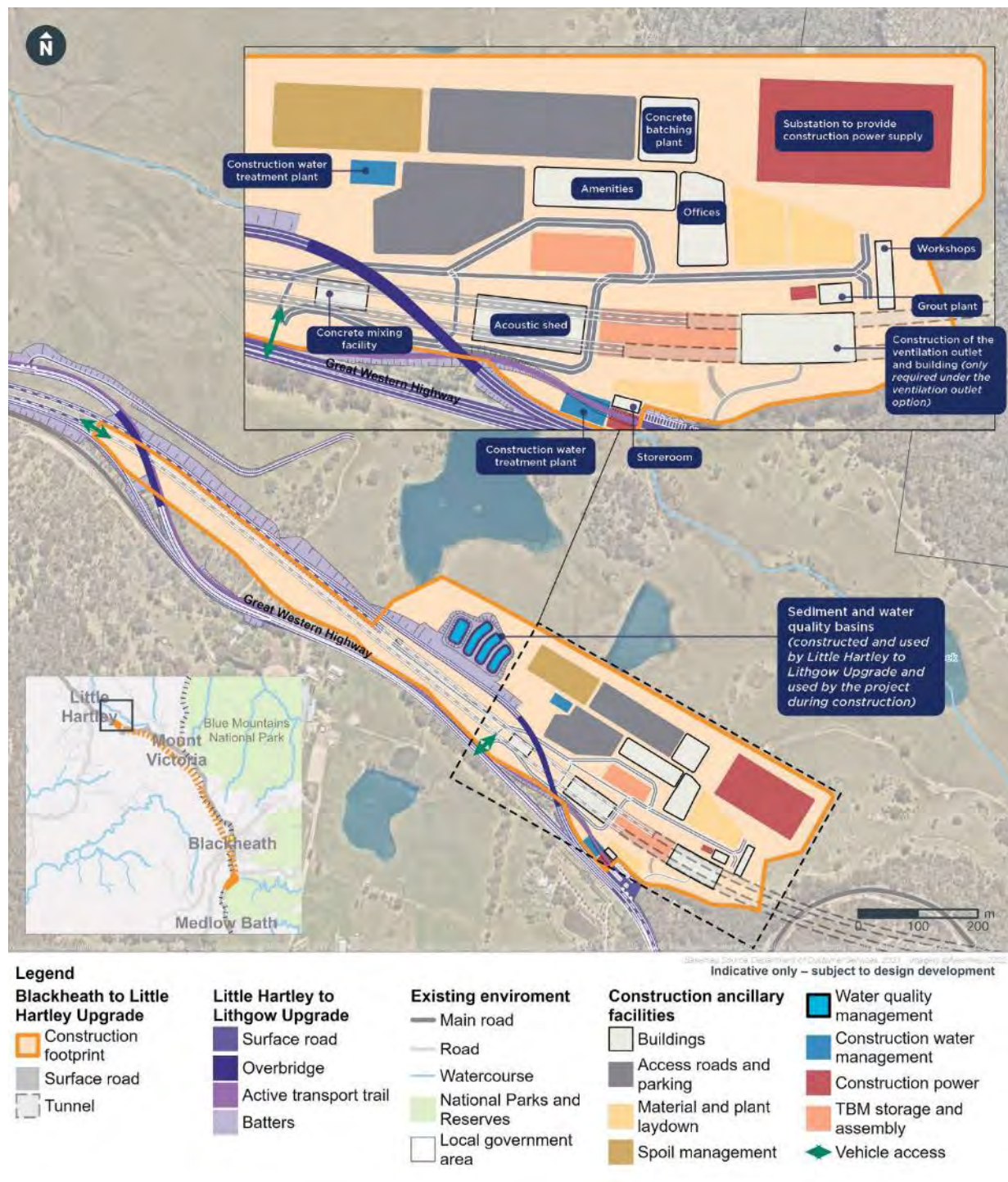


Figure 1-7 Indicative construction footprint at Little Hartley

### 1.2.3 Baseline environment

The Katoomba to Blackheath and Little Hartley to Lithgow Upgrades adjoining the project to the east and west respectively would be under construction when construction of the project commences (refer to Figure 1-8). To minimise environmental impacts, parts of the Katoomba to Blackheath Upgrade and Little Hartley to Lithgow Upgrade construction footprints would be used to support construction of the project.

As a result, the following activities would be undertaken at the construction sites as part of the Katoomba to Blackheath and Little Hartley to Lithgow Upgrades:

- vegetation would be cleared
- topsoil would be levelled and compacted
- site access tracks would be established
- water quality controls such as water quality and sediment basins would be installed.

The environmental impacts associated with these works have been assessed as part of the Katoomba to Blackheath Upgrade and the Little Hartley to Lithgow Upgrade.

The construction footprints for these projects are shown in Figure 1-9 and Figure 1-10 and form the baseline environment considered at Blackheath and Little Hartley for this EIS.

No work is proposed at Soldiers Pinch as part of the Katoomba to Blackheath Upgrade or the Little Hartley to Lithgow Upgrade and therefore the existing environment forms the baseline environment for this EIS.



Figure 1-8 Great Western Highway Upgrade Program construction



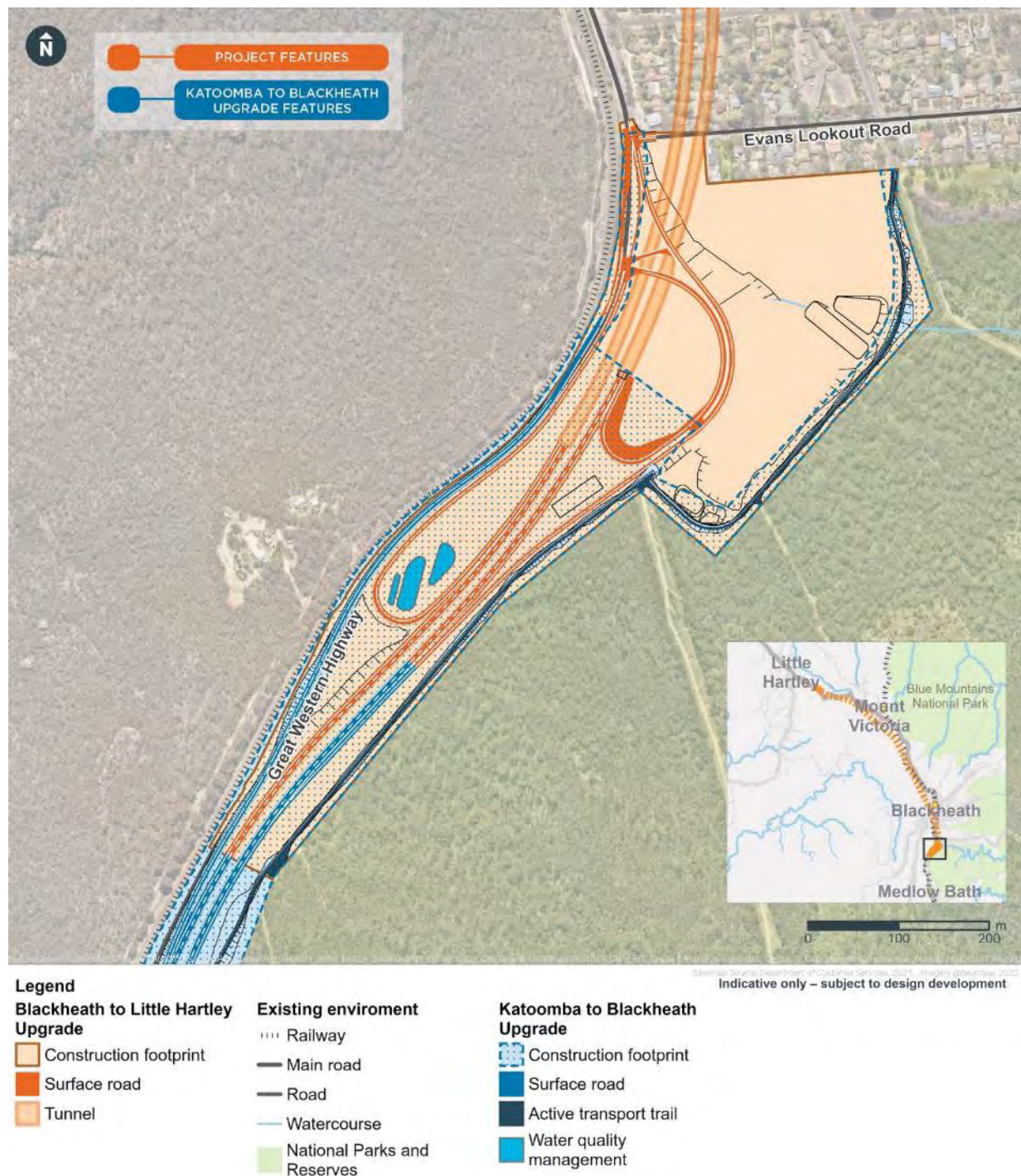


Figure 1-9 Baseline environment at Blackheath



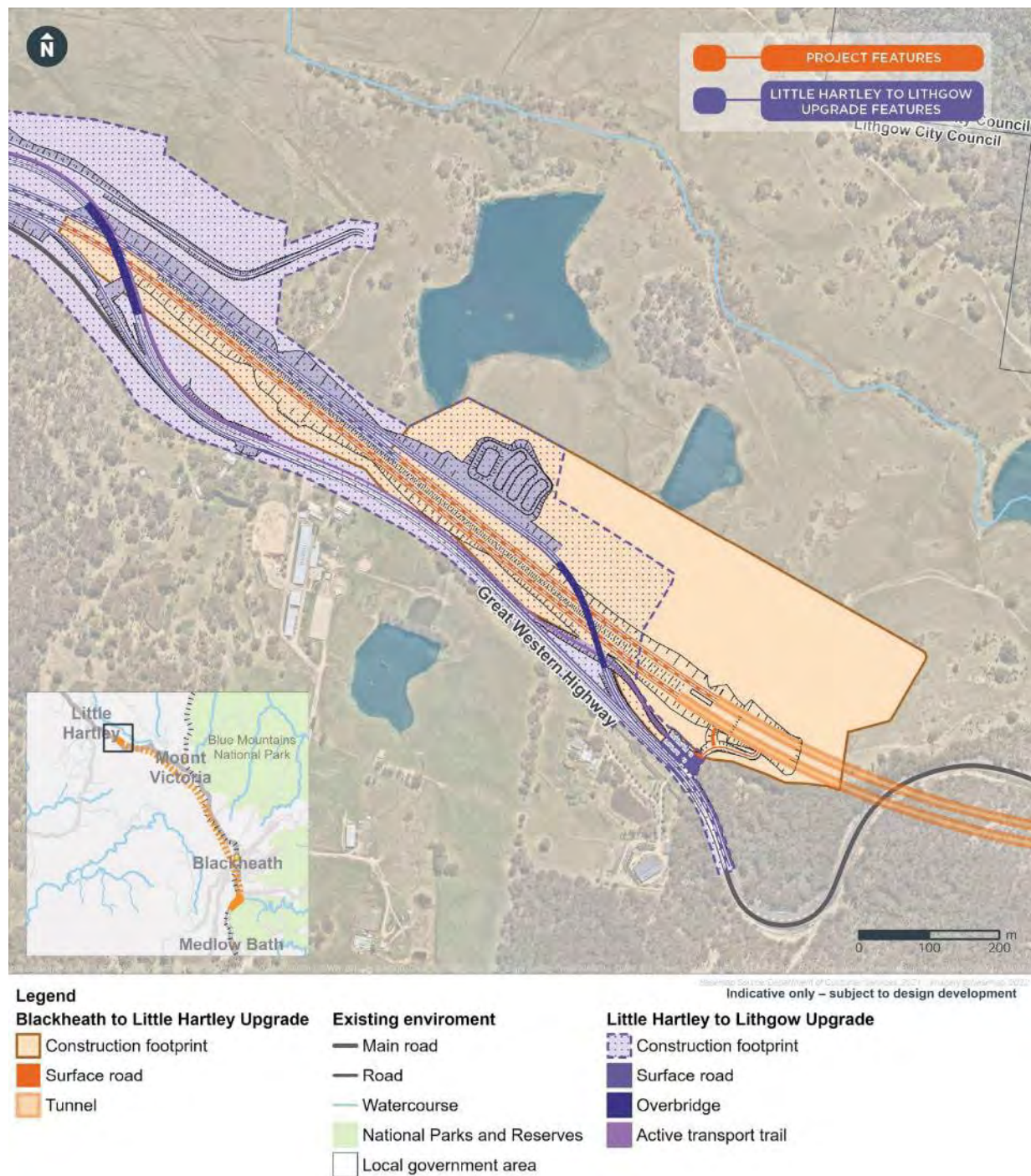


Figure 1-10 Baseline environment at Little Hartley

### 1.3 Purpose of this report

This document is one of a number of technical documents that forms part of the EIS. The purpose of this technical report is to provide an assessment of contamination which addresses the requirements outlined in Section 1.3.1. This technical report:

- identifies potential areas of environmental interest (AEIs) and contaminants of potential concern (CoPC) within the construction and operational footprint
- assesses the potential for soil, soil vapour, ground gas, sediment, surface water and groundwater contamination to be present within the construction footprint
- development of a preliminary conceptual site model (CSM) for AEIs identified from the desktop review to assess potential human health and/or ecological risks in the context of the project. The CSM was developed assuming no mitigation measures and based on the proposed construction works for a particular location, which provides a conservative assessment of exposures, enabling a consistent decision on appropriate mitigation measures to be adopted
- provides a preliminary and qualitative assessment of contamination risk posed during construction and operation
- assesses whether further investigation should be undertaken, or appropriate management procedures should be implemented for the construction and operational phases of the project
- assesses whether the land is contaminated and if so, whether remediation may be required including confirmation that future assessment and/or remediation would be undertaken in accordance with the current guidelines.

#### 1.3.1 Assessment requirements

The SEARs issued by the NSW Department of Planning and Environment (DPE), relating to contamination and where these requirements are addressed in this technical report are outlined in Table 1-2.

**Table 1-2 Relevant SEARs addressed in this report**

SEARs		
13. Soils and Contamination		
Performance outcome	Requirement	Section where addressed in report
The environmental values of land, including soils, subsoils and landforms, are protected. Risks arising from the disturbance and excavation of land and disposal of soil are minimised, including disturbance to acid sulfate soils and site contamination.	<ol style="list-style-type: none"> <li>1. Verify the risk of acid sulfate soils (Class 1, 2, 3 or 4 on the Acid Sulfate Soil Risk Map) within, an in the area likely to be impacted by, the project and map the location of the soils.</li> <li>2. The impact of the project on acid sulfate soils (including impacts of acidic runoff offsite) in accordance with the current guidelines.</li> <li>3. The likelihood of land contamination and identify if remediation of the land is required, having regard to the ecological and human health risks posed by contamination in the context of past, existing and future land uses. Where assessment and/or remediation is required, the EIS must document how assessment and/or remediation would be undertaken in accordance with relevant guidelines made or approved under s105 of the Contaminated Land Management Act 1997.</li> </ol>	<ol style="list-style-type: none"> <li>1. Section 3.1.4</li> <li>2. Construction impacts (Section 4.0 (Assessment of construction impacts)), operational impacts (Section 5.0 (Assessment of operational impacts)), cumulative impacts (Section 6.1) and management of impacts (Section 7.2 and 7.3)</li> <li>3. The qualitative risk ranking was completed in Section 4.0 (Assessment of construction</li> </ol>

SEARs		
	<p>4. Identify whether soil salinity is likely to be an issue and if so, determine the presence, extent and severity of soil salinity within the project area, and assess the impacts of the project on soil salinity and how it may affect groundwater resources and hydrology.</p> <p>5. The impacts in soil and land resources (including erosion risk or hazard). Particular attention must be given to soil erosion and sediment transport consistent with the practices and principles in the current guidelines.</p>	<p>impacts) and Section 5.0 (Assessment of operational impacts) by identifying and assessing the pollutant linkages in the Conceptual Site Model (CSM)</p> <p>4. Section 3.1.3 and Chapter 15 of the EIS</p> <p>5. Section 3.1.3 and Chapter 15 of the EIS</p>

### 1.3.2 Agency engagement

During preparation of the EIS, consultation was carried out with NSW Environment Protection Authority (EPA) relevant to contamination, including:

- 9 May 2022 meeting with NSW EPA, DPE and Transport to discuss:
  - the preliminary findings of the Stage 1 PSI
  - how the Stage 1 PSI will meet the SEARs
  - introduction to the proposed detailed site investigations.
- 26 May 2022 email from Transport with comments from NSW EPA. Key issues raised by the NSW EPA included:
  - the level of contamination assessment on previous infrastructure projects has not been proportionate to the degree of impact or investigation finding
  - a preliminary site investigation (PSI) is to be undertaken to inform the EIS. The PSI is to be undertaken to an appropriate standard as outlined in the Planning Guidelines, including relevant intrusive investigations in areas where contamination is likely to be encountered
  - where contaminating activities are suspected to have had an impact on the land, sampling and analysis would be required to confirm any conclusion reached from the site history appraisal
  - where the results of a preliminary sampling program demonstrate the potential for, or the existence of contamination, or a contaminating activity, whether previous or existing, is confirmed and a detailed site investigation (DSI) is recommended, sampling to confirm contamination levels should be undertaken as part of the EIS and not deferred to post approval
  - an environment protection licence/s (EPL) would be required for construction if approved. Licence conditions must be consistent with the State Significant Infrastructure (SSI) approval.

Following on from this meeting it was agreed that the EPA would be provided the following:

- this Technical Report – Contamination reviewed by a NSW EPA accredited independent Site Auditor
- a summary of the sampling works being undertaken for the project
- a summary of available data collected from sampling works will be included in the submissions report.



## 2.0 Assessment methodology

### 2.1 Legislative and policy context

The relevant legislation and policies for contaminated land in NSW that have been considered during the preparation of this report include:

- *Contaminated Land Management Act 1997* (NSW) (CLM Act)
- *Protection of the Environment Operations Act 1997* (NSW) (POEO Act)
- *Environmentally Hazardous Chemicals Act 1985* (NSW) (EHC Act)
- *State Environment Planning Policy (Resilience and Hazards)*<sup>1</sup>.

The following key guidelines, which are relevant to the assessment of potentially contaminated land in NSW, have been considered during the preparation of this report include:

- Australian and New Zealand Governments and Australian States and Territory Governments (ANZG), 2018. Australian and New Zealand Guidelines for Fresh and Marine Water Quality.
- Acid Sulfate Soils Management Advisory Committee (ASSMAC), 1998. Acid Sulfate Soils Assessment Guidelines. August 1998
- Department of Planning and Infrastructure Western Australia 2008. Acid Sulfate Soils Planning Guidelines
- National Chemical Working Group of the Heads of EPAs Australia and New Zealand (HEPA) 2020. Per- and Poly-fluoro Alkyl Substances PFAS National Environmental Management Plan Version 2.0, January
- NSW EPA 2015. Guidelines on the Duty to Report Contamination under the Contaminated Land Management Act 1997
- NSW EPA 2014. Waste Classification Part 1: Classifying Waste and Part 4: Acid Sulfate Soils. November
- NSW EPA 2016. Environmental Guidelines: Solid Waste Landfills, Second Edition
- NSW EPA 2017. Contaminated Land Management – Guidelines for the NSW Site Auditor Scheme (3<sup>rd</sup> edition). October
- NSW EPA 2020a. Assessment and Management of hazardous ground gases – Contaminated Land Guidelines. May
- NSW EPA 2020b. Consultants reporting on contaminated land – Contaminated Land Guidelines. 5 May
- NSW EPA 2022a. Sampling design part 1 – application Contaminated Land Guidelines
- NSW EPA 2022b. Sampling design part 2 – interpretation Contaminated Land Guidelines
- NSW Department of Urban Affairs and Planning (DUAP) and NSW EPA, 1998. Managing Land Contamination, Planning Guidelines SEPP 55-Remediation of Land
- NSW Department of Environment and Conservation (DEC) 2007. Guidelines for the Assessment and Management of Groundwater Contamination
- National Environment Protection Council (NEPC) 1999. National Environment Protection (Assessment of site Contamination) Measure as amended 2013 (ASC NEPM, (NEPC, 2013))

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<sup>1</sup> Former State Environment Planning Policy No 55 – Remediation of Land is now included in this SEPP as Chapter 4.

- Western Australia Department of Health (WA DoH) (2009) Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia<sup>2</sup>.

## 2.2 Key assumptions

This technical report was undertaken based on the following key assumptions:

- the soil and groundwater data provided by Transport in previous investigations are reliable
- no soil vapour, ground gas, sediment, surface water data and minimal soil data were provided for review
- the parts of construction footprints that will not be part of the operational footprint, would be returned to the previous land use and/or made suitable for ongoing land use, and pre-existing contamination not disturbed by the project will not be required to be remediated as part of the project.

## 2.3 Scope of work and methodology

The contamination assessment comprised a desktop review, site inspection, preliminary conceptual site model (CSM) development, risk ranking and assessment of potential impacts during construction and operation and development of appropriate mitigation measures.

### 2.3.1 Desktop review

The following scope of work was undertaken in the desktop review:

- review of available previous and relevant site contamination reports as provided by Transport
- review of Lotsearch Pty Ltd (Lotsearch) reports prepared for the project which included:
  - NSW EPA records of:
    - contaminated sites notified to the NSW EPA under Section 60 of the CLM Act 1997
    - contaminated sites currently or formerly regulated by the NSW EPA (Record of Notices)
    - former gasworks sites
    - EPA Per- and Poly-Fluoroalkyl Substances (PFAS) investigation program
    - other sites with known contamination issues
    - sites listed on the National Waste Management site database
  - historical business activities from Universal Business Directories (UBD) Business to Business Directory including dry cleaners, motor garages and service stations (for the years 1991, 1986, 1982, 1978, 1975, 1970, 1965, 1961, 1950)
  - historical aerial photographs (generally one per decade between 1940s and 2020s)
  - historical topographic and parish survey maps
  - registered groundwater wells
  - geology, soils, acid sulfate soil risk, dryland salinity potential
  - Local Environmental Plan (LEP) zones.

### 2.3.2 Site inspection

An inspection of the project from publicly accessible land was undertaken by an AECOM Environmental Scientist on 17 December 2021 to assist in the description of the existing environment.

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<sup>2</sup> AECOM notes that WA DOH revised 2021 version has yet to be endorsed by NSW EPA.

### 2.3.3 Preliminary conceptual site model

A preliminary CSM was developed for the AEIs identified from the desktop review to assess potential human health and/or ecological risks in the context of the project. A CSM identifies potential contamination sources, receptors and exposure pathways between the sources and receptors. As detailed in the ASC NEPM (NEPC, 2013), the development of a CSM is a key component of contaminated site assessments and provides the framework for identifying how potential receptors may be exposed to contamination from previous or current site sources. The sources, pathways and receptors were identified by information obtained in the desktop review and site inspection. The preliminary CSM was developed assuming no mitigation and based on the proposed construction works for a particular location, which provides a conservative assessment of exposures, enabling a consistent decision on appropriate mitigation measures to be adopted.

### 2.3.4 Risk ranking

The qualitative risk ranking was completed in Section 4.0 (Assessment of construction impacts) and Section 5.0 (Assessment of operational impacts). The risk analysis involved:

- identifying if a pathway exists between a source and a potential receptor
- assessing the severity and extent of the contamination likely to be present and potential for contamination to be intersected by the project
- determining whether there was a complete exposure pathway.

The risk ranking was then determined by combining the potential pathway and contamination severity and extent to identify the level of risk as shown in the matrix below.

Table 2-1 Risk ranking matrix

		Low potential for contamination to be present in the media of concern at concentrations above the relevant assessment criteria and limited in extent	Contamination potentially present in the media of concern at concentrations above the relevant assessment criteria and limited in extent	Contamination confirmed present in the media of concern at concentrations above the relevant assessment criteria and potentially widespread
Pathways and receptors	Media of concern is unlikely to coincide with or otherwise impact on the construction scope AND/OR No or unlikely exposure pathway for human or ecological receptor's during construction or operation	Low	Low	Medium
	Media of concern may intersect the construction scope. AND Exposure pathway for human or ecological receptors could be present and complete during construction or operation	Low	Medium	Medium
	Media of concern would intersect the construction scope AND Exposure pathway for human or ecological receptors could be present and complete during construction or operation	Low	Medium	High

### **2.3.5 Construction and operational impacts**

The potential contamination related impacts related for the construction compounds and construction footprint were assessed based on the determined risk ranking. Operational impacts which primarily relate to the potential contamination of soil, surface water and groundwater arising from vehicle accidents, leaks and spills on constructed project roadways including tunnels were also assessed.

### **2.3.6 Mitigation measures**

Mitigation measures have been applied for AELs based on consideration of the risk ranking for those areas. The medium risk sites are subject to additional data acquisition as part of the Stage 2 DSI, which will confirm the mitigation measures developed in this technical report.

## 3.0 Existing environment

### 3.1 The project

#### 3.1.1 Location description

The project would be located around 90 kilometres west of the Sydney CBD and within the Blue Mountains and Lithgow Local Government Areas (LGA).

The majority of the project would be located below ground, generally along or adjacent to the existing Great Western Highway alignment between around Blackheath and Little Hartley.

The Blue Mountains National Park and the Greater Blue Mountains World Heritage Area are located generally to the east of the existing Great Western Highway alignment. A large part of the project is also located within the declared drinking water catchment for Sydney. Low density and medium density residential and commercial areas are generally located in the town centres of Blackheath, Mount Victoria and Little Hartley.

#### 3.1.2 Topography and drainage

The project would be generally aligned beneath the existing Great Western Highway, which is located along a ridge line. The lands to the east are generally similar or higher elevation and lands to the west follow a moderately steep slope down towards the Megalong Valley. There are numerous mountain peaks on both sides of the project corridor, including Mount Boyce to the west and Mount Victoria to the north. The lands closest to the western and eastern ends of the project are the lowest and flattest and the land with greatest elevation is located near Mount Victoria, around 1,000 to 1,100 metres Australian Height Datum (metres AHD).

Numerous creeks and gullies traverse or extend from the Great Western Highway and connect as tributaries of rivers on both sides of the project corridor. Those on the southern and western side of the existing Great Western Highway feed into the Coxs River and those in the northern and eastern side of the Great Western Highway feed into the Grose River.

#### 3.1.3 Soils

Soil landscape types along the project corridor and surrounding areas are shown in Figure 3-1.

The soils along the majority of the project corridor are characterised as Kandosol which is described as dissected sandstone plateau of moderate to strong relief with sandstone pillars, ledges and slabs – level to undulating ridges, irregularly benched slopes, steep ridges, cliffs, canyons and narrow sandy valleys. Soils are on areas of gentle to moderate relief, include acid yellow leached sand and siliceous sand, and sometimes these soils contain ironstone gravel.

The soils along the north-western portion of the project corridor (Little Hartley) are characterised as Sodosol which is described as dissected plateau. Soils on undulating ridge crests are hard acidic yellow mottled soils.

The following soil landscapes of central and eastern NSW are present from east to west along the project corridor: Wollangambe, Warragamba, Hassans Walls, Medlow Bath, Cullen Bullen and Lithgow.

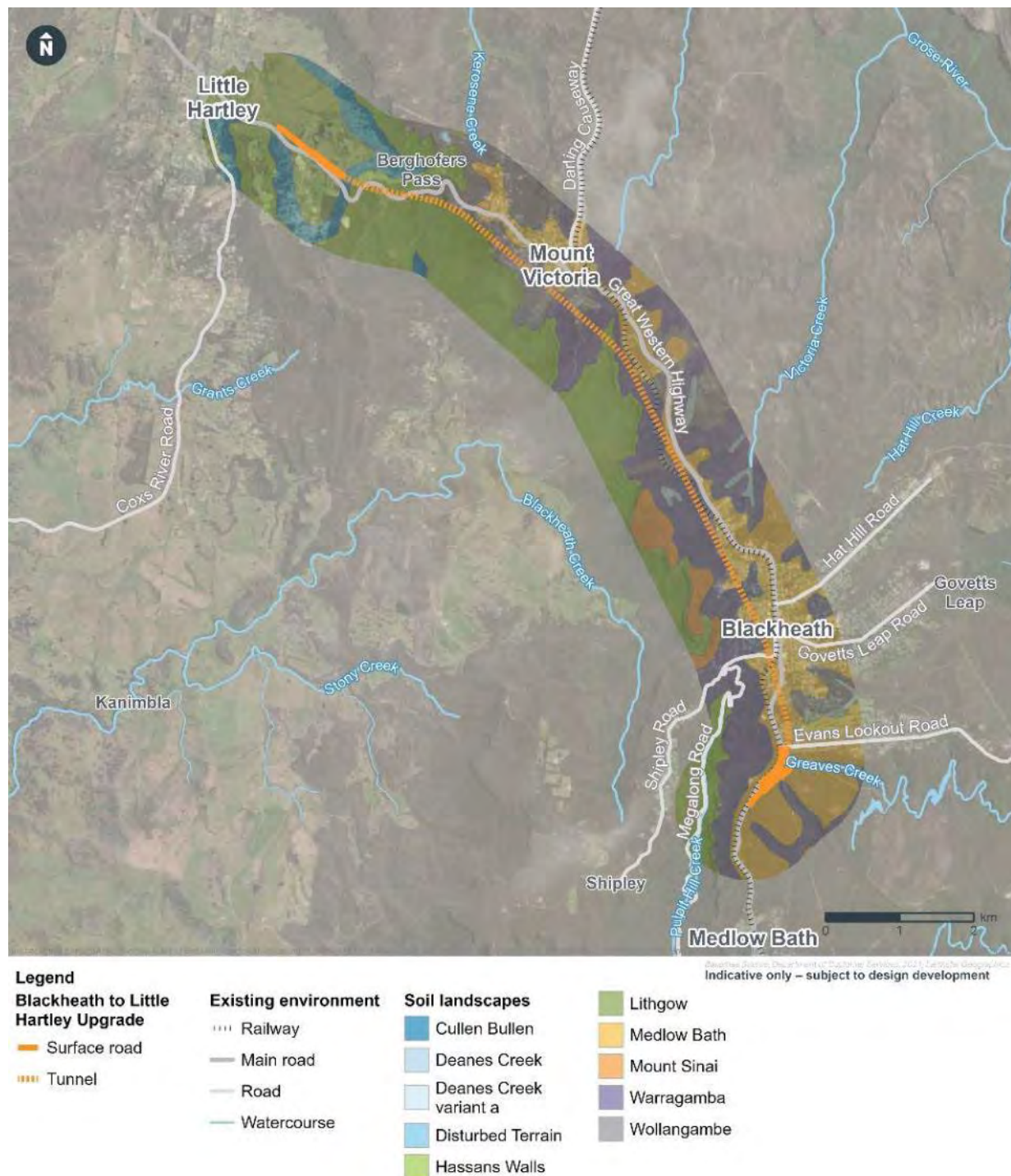


Figure 3-1 Soil landscapes within one kilometre of the project

### 3.1.3.1 Soil erosion

Nine soil landscapes are located across the area of the project. A summary of the erosion hazard of each soil landscape is outlined in Table 3-1.



**Table 3-1 Soil landscapes near the project and erosion hazard**

Soil landscape	Description
Lithgow (li)	Slight erosion hazard in wind and non-concentrated (slower, low power) stream flows. Moderate-high erosion hazard in concentrated (faster, higher power) stream flows.
Cullen Bullen (cb)	Moderate-high erosion hazard in concentrated and non-concentrated flows. Slight wind erosion hazard.
Medlow Bath (mb)	Moderate erosion hazard in non-concentrated flows. Moderate to high erosion hazard in concentrated flows. Slight-moderate wind erosion hazard.
Hassans Walls (hw)	Very high-extreme erosion hazard in concentrated and non-concentrated flows. Slight wind erosion hazard.
Warragamba (wb)	Very high-extreme erosion hazard in concentrated and non-concentrated flows. Slight wind erosion hazard.
Wollangambe (wo)	High-extreme erosion hazard in concentrated and non-concentrated flows. Slight wind erosion hazard.
Deanes Creek (dc) and Deanes Creek variant a (dca)	Slight-moderate erosion hazard in non-concentrated flows. Very high-extreme erosion hazard in concentrated flows. Slight wind erosion hazard.
Mount Sinai (ms)	High-extreme erosion hazard in concentrated and non-concentrated flows. Slight-moderate wind erosion hazard.
Disturbed terrain (xx)	Erosion hazard is variable according to site characteristics. Disturbed terrain was identified near the project at Berghofers Pass.

### 3.1.3.2 Soil salinity

Salinity refers to the salt content of soil or water and is caused by the build-up of salt in surface soil or water. The risk of salinity impacts can be increased by clearing vegetation, irrigation or other activities that can lead to a temporary rise in the groundwater table, which then leaves salt behind as it recedes. Based on searches of the National Assessment Dryland Salinity data, there are no areas of soil salinity recorded near the project. The overall salinity hazard along the project alignment is identified as 'very low' by the Hydrogeological Landscapes of New South Wales and the Australian Capital Territory (DPE, 2016).

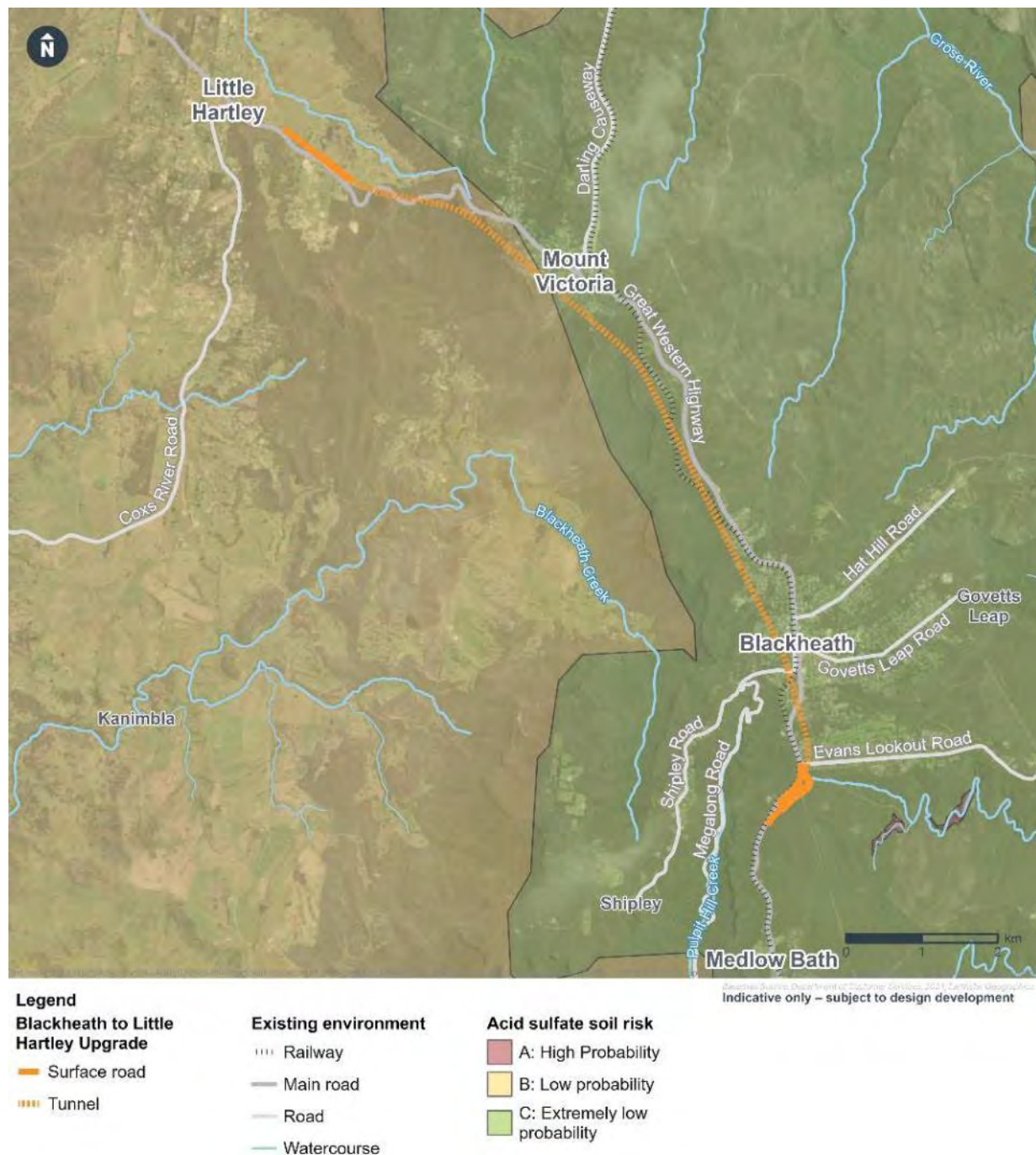
### 3.1.4 Acid sulfate soil/potential acid forming rock

Acid sulfate soils are naturally occurring soils containing iron sulfides, which on exposure to air, oxidise and create sulfuric acid. Disturbance of acid sulfate soils and/or potential acid sulfate soils can result in adverse impacts on surface and groundwater quality, flora and fauna, and degradation of habitats.

Acid sulfate soil risk maps from the Australian Soil Resource Information System (ASRIS) database<sup>3</sup> were reviewed for areas surrounding the project to determine the risk of acid sulfate soils being present. The acid sulfate soil probability near the project is shown in Figure 3-2. The project is located within land mapped as low (six to 70 per cent chance of occurrence) and extremely low (one to five per cent chance of occurrence with occurrences in small, localised areas) probability for acid sulfate soil risk.

<sup>3</sup> Acid sulfate soils have been verified using ASRIS data as class data derived from local environmental plan mapping is not available for this area.





**Figure 3-2 Acid sulfate soil risk near the project footprint (ASRIS database)**

Acid sulfate rock (ASR) is unweathered rock (i.e., rock that has not been exposed to water, wind, ice, plants, or changes in temperatures) which contains metal sulphide minerals. When exposed to either oxygen or water, oxidation of the sulphide within the ASR leads to the formation of iron oxides, sulfuric acid, sulfates, and salts. Potential ASR deposits have been identified around the western half of the project alignment within Illawarra Coal Measures and Shoalhaven geological formations, which are shown on Figure 3-3 to Figure 3-5.

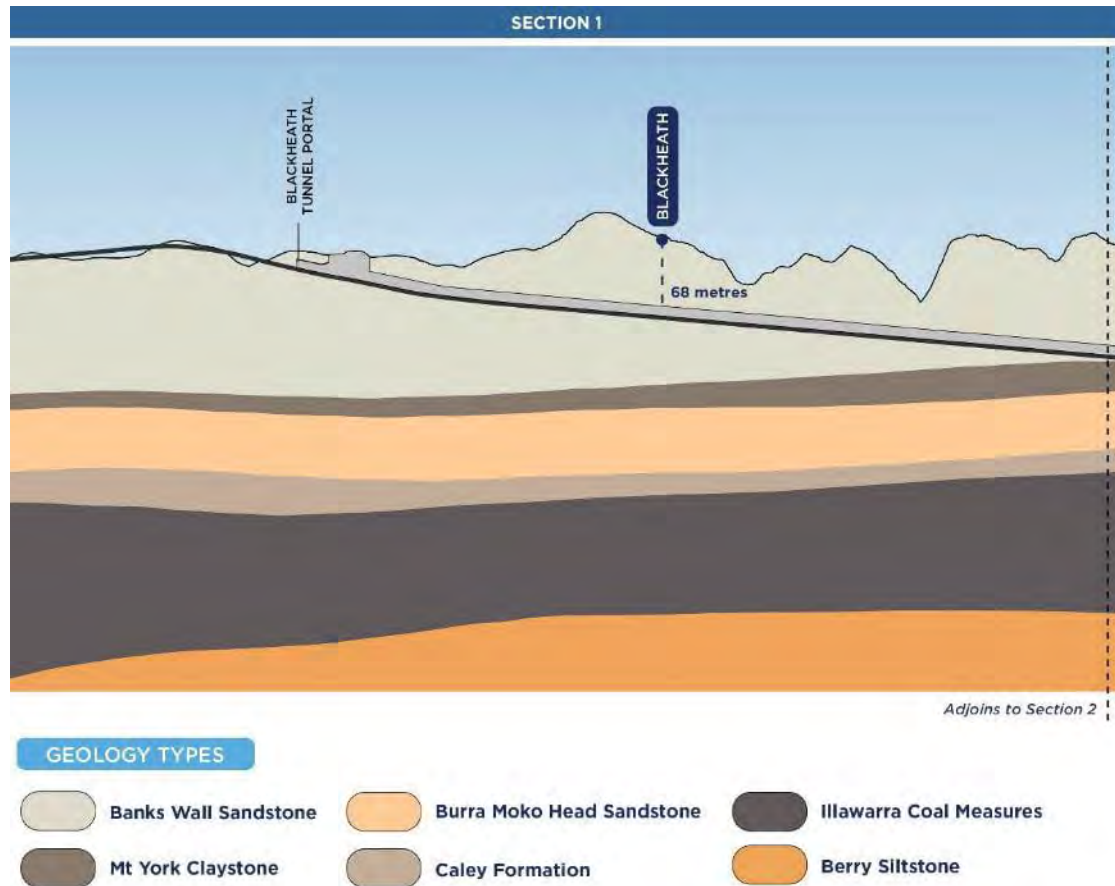


Figure 3-3 Indicative geological formations around the project (section 1 of 3)

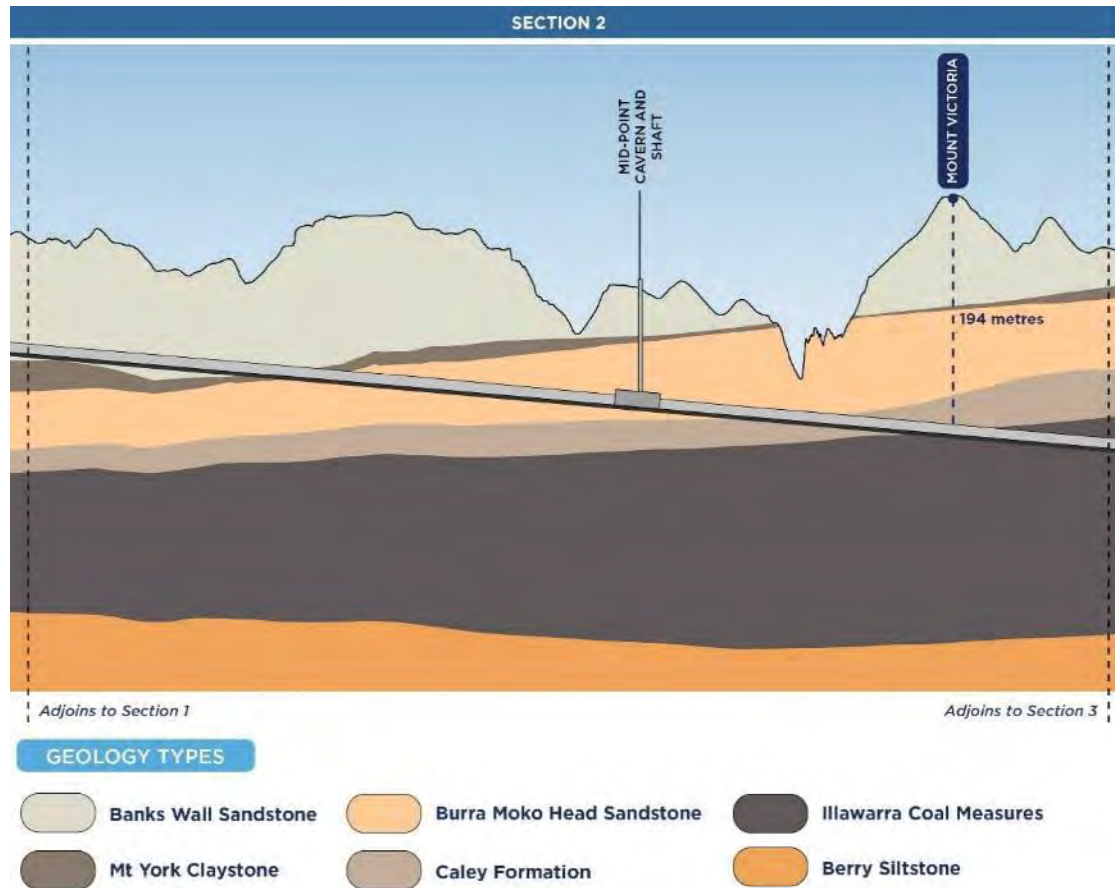


Figure 3-4 Indicative geological formations around the project (section 2 of 3)

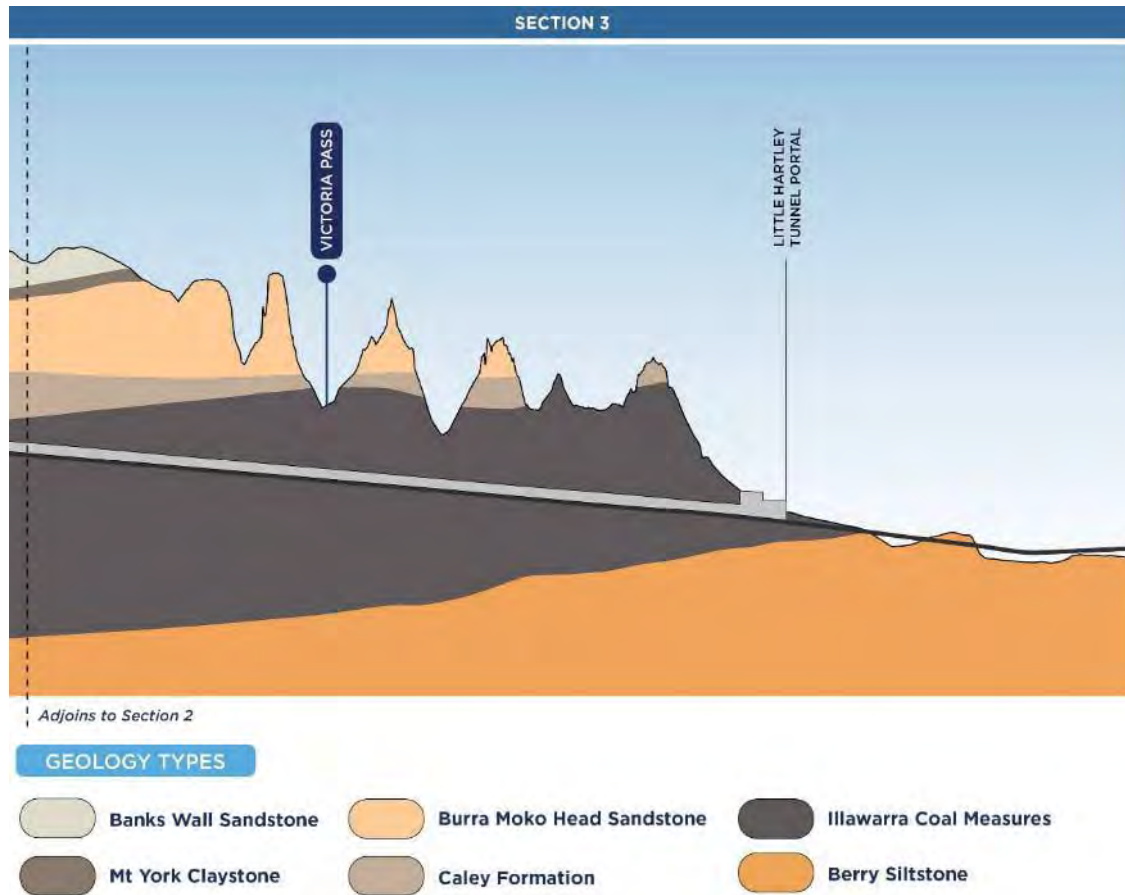


Figure 3-5 Indicative geological formations around the project (section 3 of 3)

### 3.1.5 Coal seams

Coal seams within the Illawarra Coal Measures geological group may be present within the project. Coal seam gas is a natural gas found in coal deposits. Figure 3-3 to Figure 3-5 show where tunnelling activities for the project would intersect with the Illawarra Coal Measures geological group, which likely contains coal seams and has potential for coal seam gas.

### 3.1.6 Geology

According to geological maps (Katoomba 1:50,000 Geological Map (Goldbery R. and Bembrick C.S., 1996) and the New South Wales Seamless Geology dataset (Colquhoun et al., 2022)), the bedrock along the project alignment includes the Narrabeen Group, Illawarra Coal Measures, and Shoalhaven Group. There are intrusive units of the Kanimblan cycle of the Lachlan Orogen. It is noted that these units are located west of and therefore not intercepted by the project. The mapped geological within the project area is shown in Figure 3-6.



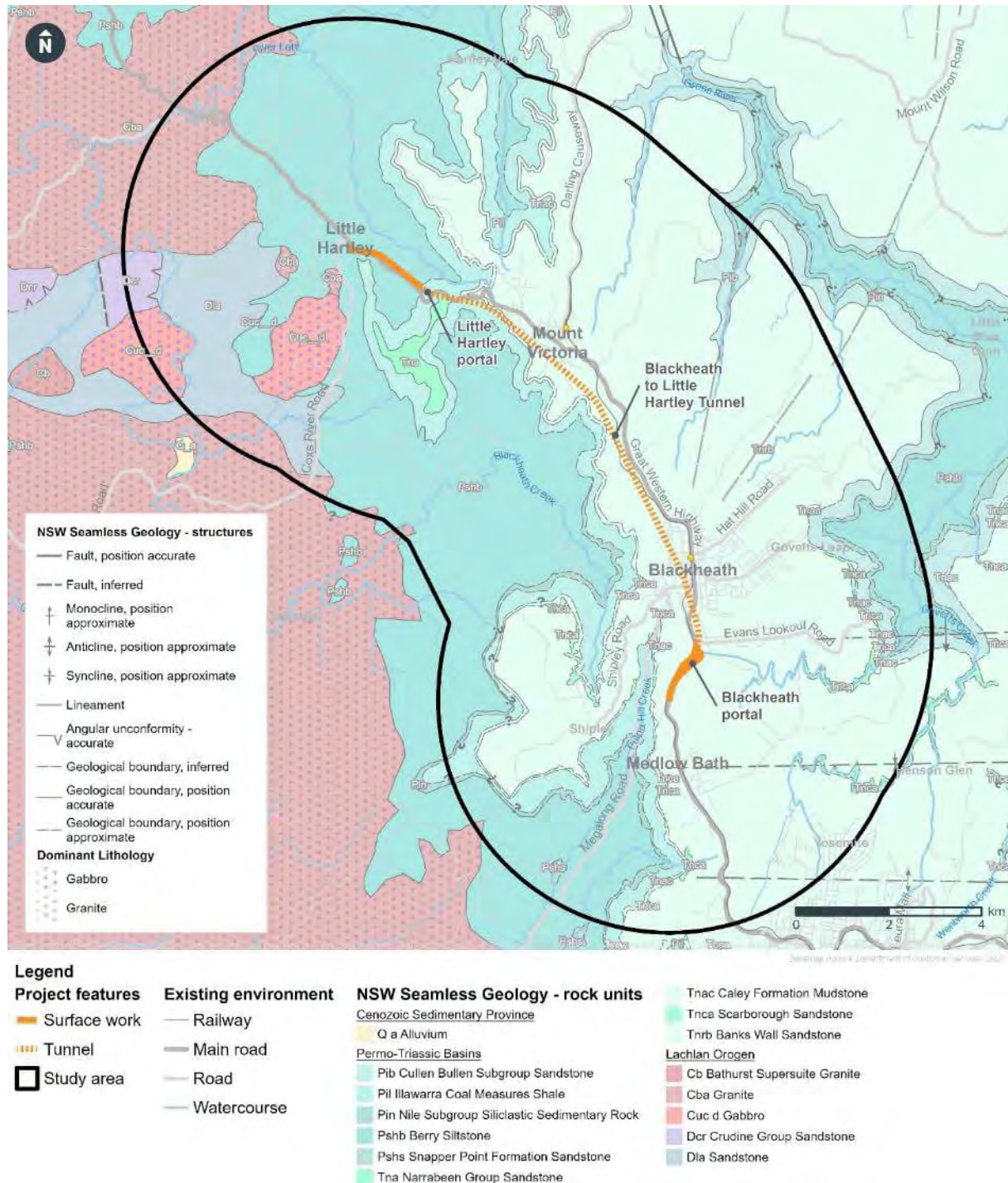


Figure 3-6 Geological setting

### 3.1.7 Hydrogeology

Aquifers within the area of the project are described as either fractured or fissured, extensive aquifers of low to moderate productivity or as porous, extensive aquifers of low to moderate productivity.

Searches of WaterNSW and Bureau of Meteorology (BoM) databases indicated that there are 112 registered groundwater bores located within 5 kilometres of the project footprint (BoM, 2022) (WaterNSW, 2022). These bores are generally used for household water supply, irrigation, groundwater monitoring, livestock water supply and township water supply and are further described in Appendix I (Technical report – Groundwater).

A summary of existing registered groundwater wells (NSW Department of Primary Industries Water [DPI Water]) within the project footprint is provided in Table 3-2.

**Table 3-2 Summary of registered groundwater bores (west to east)**

Bore ID	Purpose	Final depth (m)	Screened lithology	Standing water level (m)	Distance and direction
GW103830	Monitoring bore	3.30	Clayey Sand	Not recorded	Within the project footprint
GW103831	Monitoring bore	2.50	Sandy Gravel	Not recorded	Within the project footprint
GW103832	Monitoring bore	3.35	Sandy Gravel	Not recorded	Within the project footprint
GW111533	Monitoring bore	17.30	Sandstone/ Claystone	Not recorded	Within the project footprint
GW111538	Monitoring bore	17.78	Siltstone	Not recorded	Within the project footprint

It is noted that these registered groundwater bores are located within the western portion of the project footprint and there were no registered groundwater bores located within the southern portion of the project footprint. It is also noted that there was no standing water level data for the registered bores. Based on previous investigations groundwater may be present as shallow as 2.5 metres below ground level (m bgl) (Little Hartley) and up to 10 m bgl in Mount Victoria.

Appendix H (Technical report – Biodiversity) for the project identified three plant community types within the Little Hartley construction footprint associated with high probability groundwater dependent ecosystems. The majority of the high probability GDEs within the construction footprint have been assigned an ecological value (priority) of moderate. Groundwater dependent ecosystems in proximity to the project are shown in Figure 3-7 to Figure 3-9.



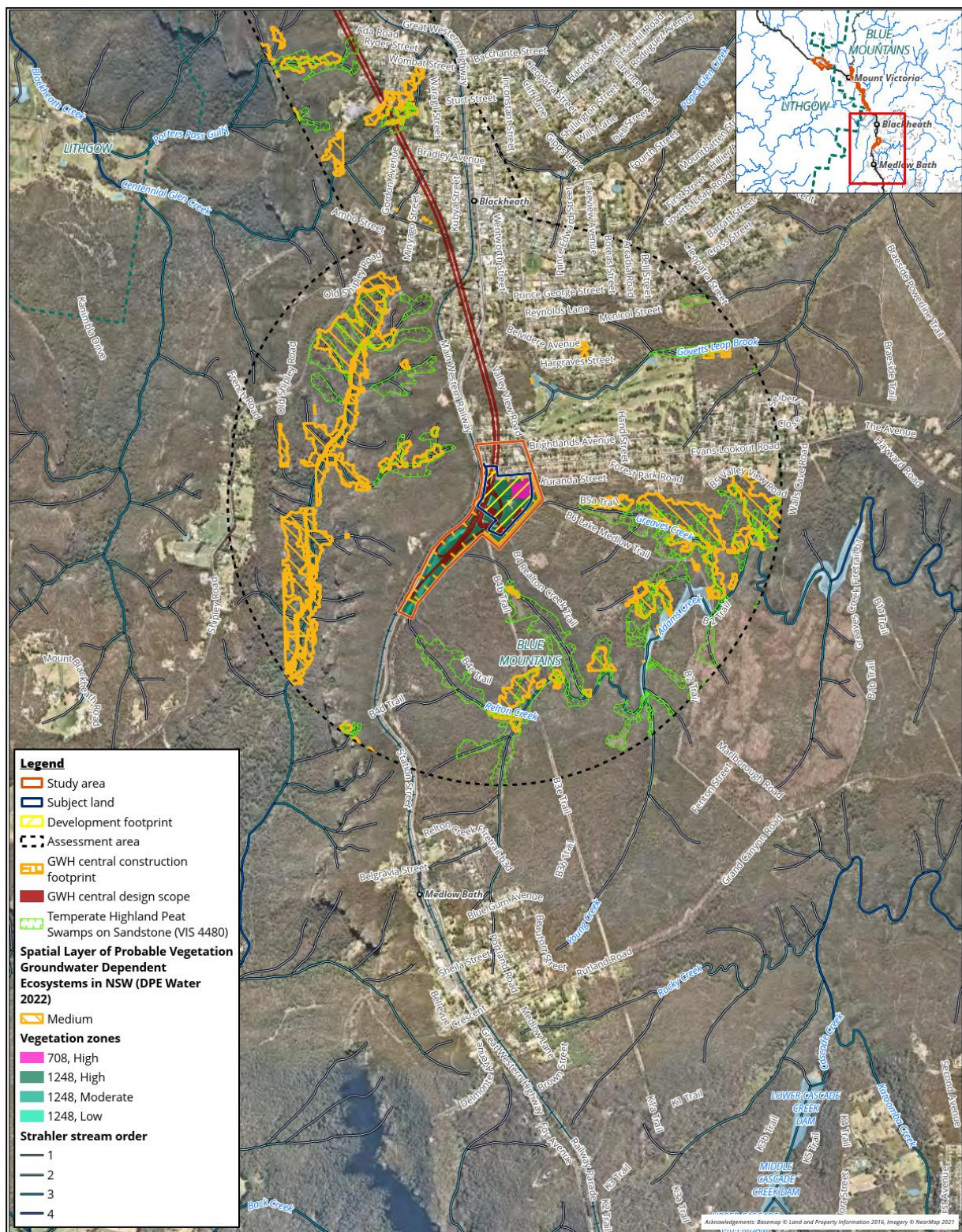
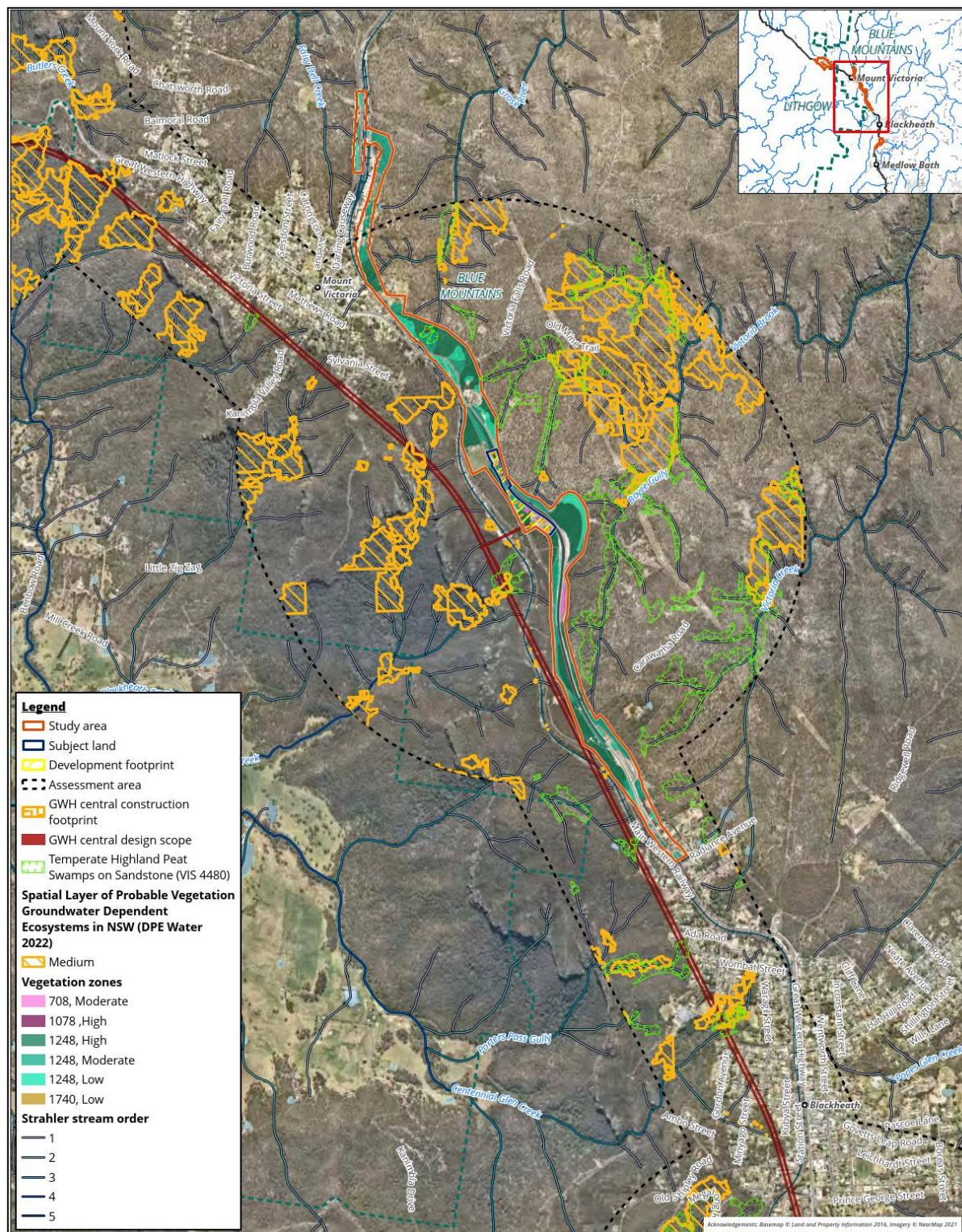


Figure 3-7 Groundwater dependent ecosystems – Blackheath







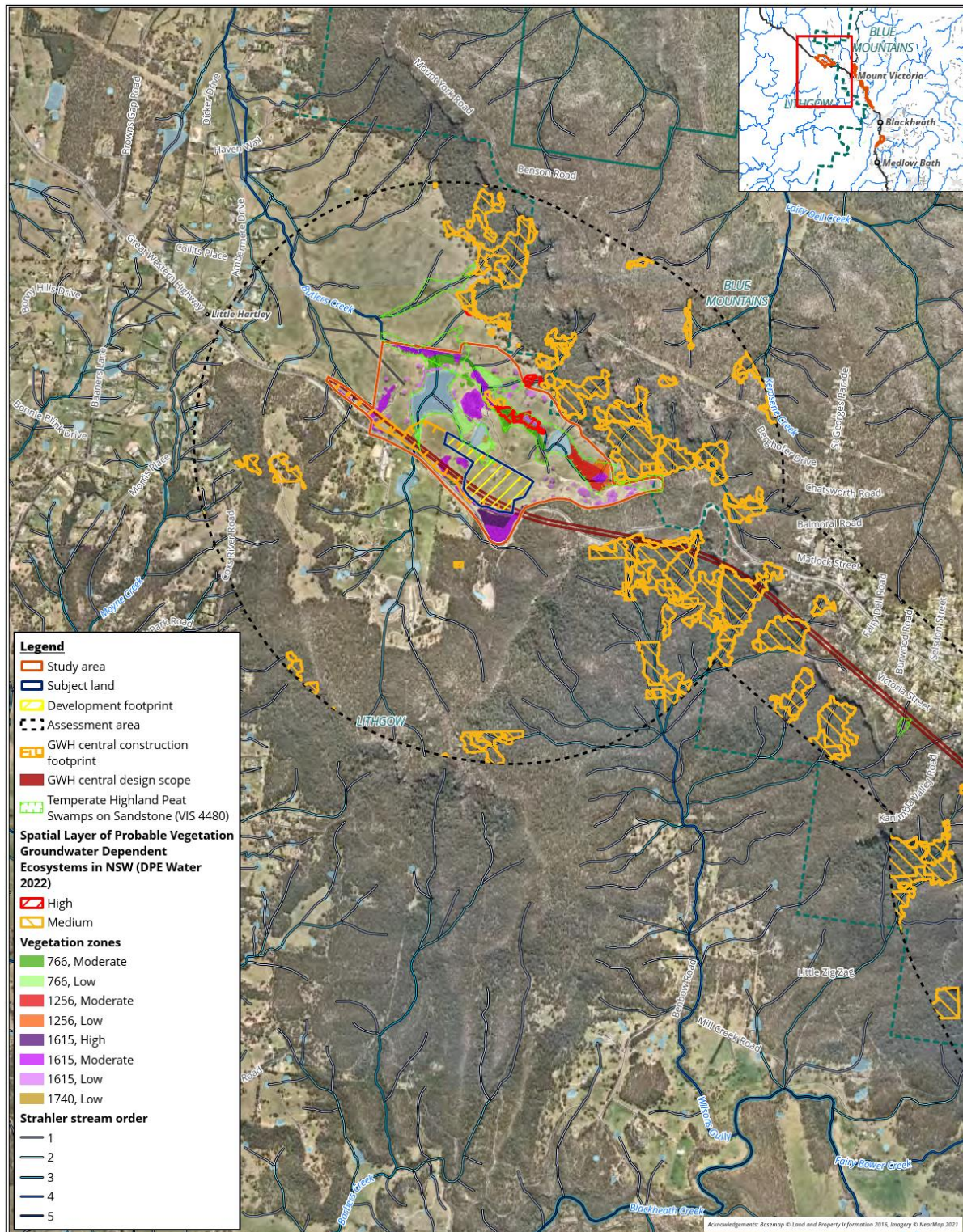


Figure 3-9 Groundwater dependent ecosystems – Little Hartley

### 3.1.8 Current land use zoning and land uses

The land use zoning as per the Blue Mountains LEP (2015) above the project is shown in Figures Figure 3-10 to Figure 3-12 below.



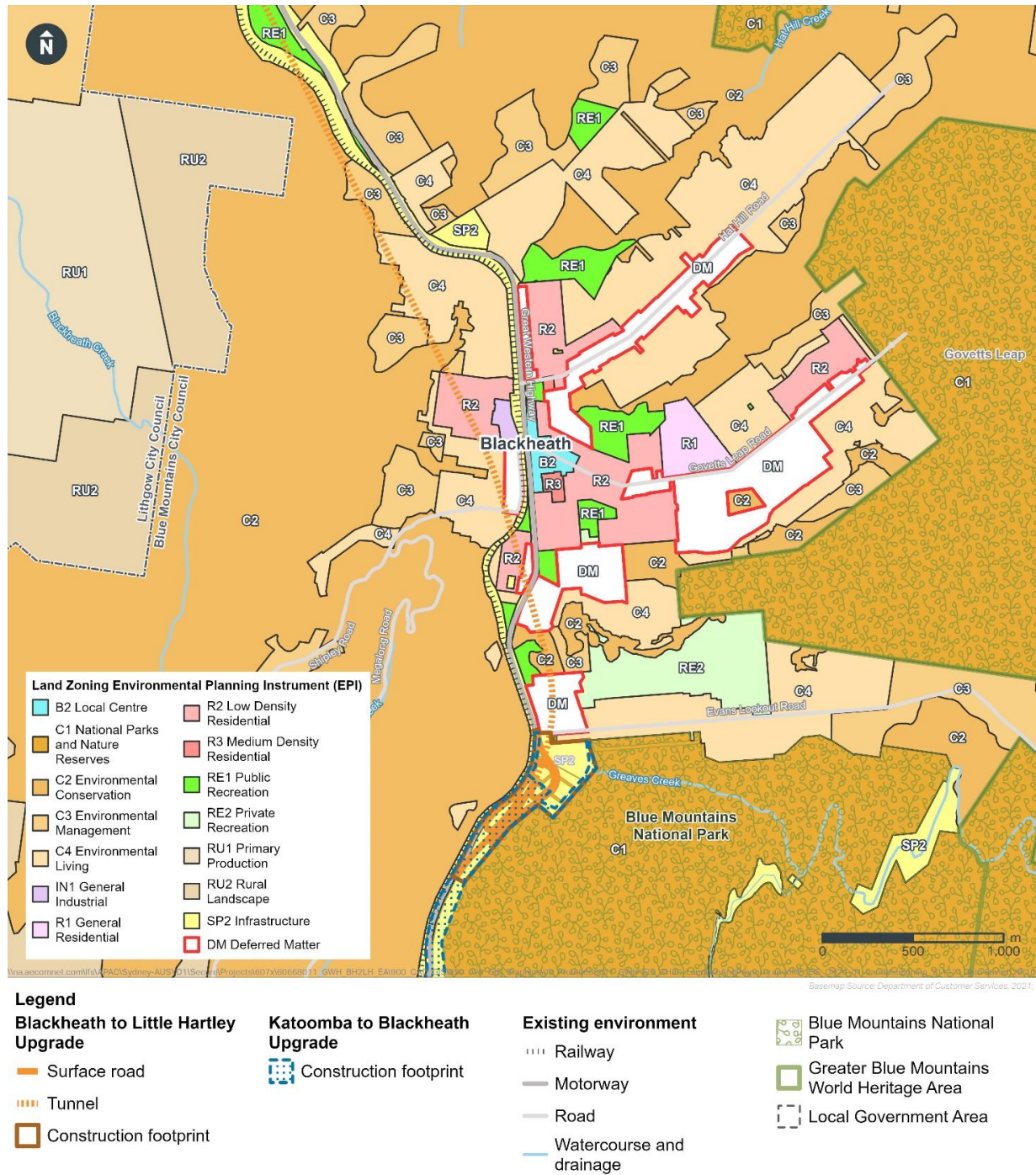


Figure 3-10 Land use zoning Blackheath



Figure 3-11 Land use zoning Mount Victoria

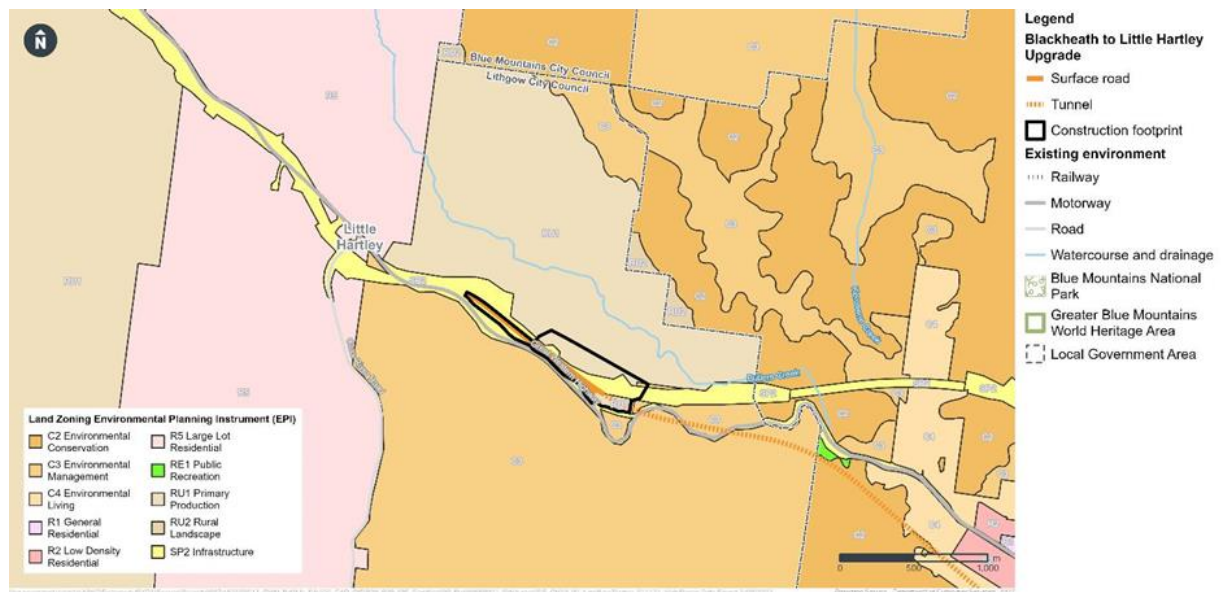


Figure 3-12 Land use zoning Little Hartley

Current commercial and industrial land uses (excluding fuel facilities which are summarised in Section 3.1.11) within the project that could contain potential contaminating activities are listed in Table 3-3 and shown on Lotsearch reports in Annexure A and Figures B-1 to Figure B-5 in Annexure B.

**Table 3-3 Current commercial and industrial land uses**

Property identification	Proximity to the project	Potentially contaminating activity
Great Western Highway Roadway	Above/adjacent Blackheath portal and Little Hartley portal and adjacent Soldiers pinch construction compound	Spills, crashes, illegal dumping
Blackheath Fire Station 233 Great Western Highway Blackheath	200 m east of tanked tunnel	Fuel storage and firefighting foam residues
Bridgestone Service Centre 213-215 Great Western Highway Blackheath	200 m east of tanked tunnel	Use of oils and solvents and storage of fuel
IGA Service Station* 211 Great Western Highway Blackheath	190 m east of tanked tunnel	Fuel storage
Blackheath Railway Station Railway Parade Blackheath	250 m east of tanked tunnel	Use of oils, asbestos
Steve's Auto Barn 136 Station Street, Blackheath	190 m north-east of tanked tunnel	Use of oils and solvents and storage of fuel
Blackheath/Mount Victoria Rural Fire Station Bush 139 Station Street Blackheath	190 m east of tanked tunnel	Fuel storage and Fire Fighting Foam residues
Wood You Believe Firewood 354 Great Western Highway Blackheath	180 m north-east of tanked tunnel	Storage of fuel for plant and machinery
Weber's Nursery Mount Boyce 355 Great Western Highway Blackheath	160 m north-east of tanked tunnel	Pesticides and herbicides
Mount Boyce Heavy vehicle checking/weighing station Great Western Highway Blackheath	150 m north-east of tanked tunnel	Waste/illegal dumping
Former Mobil Service Station 81 Great Western Highway Mount Victoria	230 m north-east of tanked tunnel	Use of oils and solvents and fuel storage

\* Not noted in Lotsearch report (Annexure A)

There is one current mining lease 18 metres southwest from the project footprint in Little Hartley by CSR Building Products Limited for clay/shale and structural clay.

### 3.1.9 Historical aerial photographs

Historical aerial photographs (refer to Lotsearch reports in Annexure A) were reviewed for the project and surrounding land. A summary of the review is provided in Table 3-4

**Table 3-4 Historical aerials**

Area	Summary
Little Hartley (Lotsearch aerial photograph report 1 of 10)	<ul style="list-style-type: none"> <li>the Great Western Highway is visible in the first 1966 aerial photograph and the land within the project is predominantly cleared with some cropping visible</li> <li>development – access trails and dam construction on the site south of the project/the Great Western Highway is visible in the 1975 aerial photograph</li> <li>two large dams and some buildings/structures have been constructed within the tunnel alignment north of the Great Western Highway and buildings are visible in the site south of the project/the Great Western Highway in the 1984 aerial photograph. An area has been cleared in the National Park south of the project/bend in Great Western Highway</li> <li>two more dams are visible south of the Great Western Highway in the 1994 aerial photograph</li> </ul>



Area	Summary
	<ul style="list-style-type: none"> <li>• Ambermere Drive immediately north of the construction footprint is visible in the 1991 aerial photograph</li> <li>• a large surface water body is visible (possible sand mining) south of the bend in the Great Western Highway in the 1999 aerial photograph</li> <li>• a grey stockpile (possibly roadbase) is visible adjacent the surface water body south of the bend in the Great Western Highway, go kart tracks are visible in the Hartley Holiday Farm south of the construction footprint and further residential/agricultural development is visible northwest of the construction footprint in the 2007 aerial photograph</li> <li>• a large warehouse is visible south of the construction footprint near the bend in the Great Western Highway and the surface water body is no longer present south of the bend in the Great Western Highway in the 2015 aerial photograph</li> <li>• the dams on the Hartley Holiday Farm south of the construction footprint are very turbid in the 2020 aerial photograph.</li> </ul>
Victoria Pass (Lotsearch aerial photograph report 2 of 10)	<ul style="list-style-type: none"> <li>• the Great Western Highway including one safety ramp and Mitchell Ridge Lookout are visible in the first 1958 aerial photograph. The area surrounding the highway is National Park characterised by steep ridge lines and valleys. Mount York Road and a cleared fire break is visible to the north of the project. The Grange residential/agricultural property comprising cleared pastureland and a creek line is visible northeast of the project</li> <li>• no significant change in 1966 aerial photograph</li> <li>• 1975 aerial photograph development is occurring in Mount Victoria with numerous access roads visible above the project. Part of the fire break northeast of the project has now grown over with vegetation</li> <li>• a dam is present on The Grange residential/agricultural property and buildings are visible in Mount Victoria north of the Great Western Highway and two properties on Mount York Road. Residential development has occurred in Mount Victoria on the southern side of the Great Western Highway in the 1984 aerial photograph</li> <li>• three properties are visible on Mount York Road in the 1994 aerial photograph</li> <li>• no significant changes in 1999, 2007, 2015 or 2020 aerial photographs.</li> </ul>
Mount Victoria West (Lotsearch aerial photograph report 3 of 10)	<ul style="list-style-type: none"> <li>• the Great Western Highway, Mount York Road and numerous residential streets in Mount Victoria north and south of the Great Western Highway are visible in the first 1943 aerial photograph. The land use appears to be National Park, residential, agricultural and possibly commercial/industrial. A clearing is present at Eltham Park immediately north of the construction footprint. The Ampol Mount Victoria site comprises vacant cleared land</li> <li>• a clearing is visible in the Sydney Water Mount Victoria sewage treatment plant site in the 1958 aerial photograph. A building is visible on the Ampol Mount Victoria site in the location of the current service station building</li> <li>• no significant changes in 1966 aerial photograph</li> <li>• cleared land and numerous access roads are visible north of Great Western Highway just before the start of Victoria Pass in the 1975 aerial photograph and further development (increase in density) has occurred in the residential areas north and south of the Great Western Highway in Mount Victoria. An oval shaped pond/detention basin is visible at the Sydney Water Mount Victoria sewage treatment plant site</li> <li>• more vegetation is visible within cleared land north of the Great Western Highway before the start of Victoria Pass in the 1984 aerial photograph and residential density has increased north and south of the Great Western Highway</li> </ul>



Area	Summary
	<p>in Mount Victoria. Possible filling has occurred at Eltham Park immediately north of the construction footprint</p> <ul style="list-style-type: none"> <li>• further residential development south of the Great Western Highway towards the cliff line has occurred and residential properties are visible along Mount York Road to the north in the 1994 aerial photograph. Four detention basins/ponds are visible on the Sydney Water Mount Victoria sewage treatment plant site</li> <li>• no significant changes in 1999 aerial photographs</li> <li>• the Mount Victoria Fire Station on Montgomery Street has been constructed in the 2007 aerial photograph</li> <li>• the ponds/detention basins are no longer present at the Sydney Water Mount Victoria sewage treatment plant site, one small building is visible in the southern portion in the 2015 aerial photograph. Vegetation in the National Park areas surrounding the tunnel alignment is sparser than the 2007 aerial photograph</li> <li>• no significant changes in the 2020 aerial photograph.</li> </ul>
Mount Victoria North/Town Centre (Lotsearch aerial photograph report 4 of 10)	<ul style="list-style-type: none"> <li>• Mount Victoria station, rail line and rail maintenance yards are visible in the first 1943 aerial photograph. The area comprises predominantly cleared land, residential/agricultural and rail land use. The Great Western Highway and numerous residential roads are visible. The area is surrounded by residential/agricultural land use and National Park. The land east of the station and maintenance yards has been cleared and large water tank (still present) is visible. The Vics Flicks building on Harley Avenue is visible, however the current fire station and substation are vacant land</li> <li>• buildings/structures are visible at the substation site on Harley Avenue in the 1958 aerial photograph. Possible mounding is visible on Rotunda Park corner of Station Street and Harley Avenue</li> <li>• no significant changes in the 1966 aerial photograph</li> <li>• the quality of the 1975 aerial photograph is poor. No significant changes are visible</li> <li>• a building (possibly garage) is visible on the commercial/industrial compound opposite the rail easement compound on Harley Avenue in the 1984 aerial photograph. A building is present on the fire station site on Harley Avenue and the substation building and infrastructure is more clearly visible in the 1984 aerial photograph. Residential density in the surrounding Mount Victoria area has increased</li> <li>• no significant changes in the 1994 aerial photograph</li> <li>• the building adjacent and southeast of the rail easement compound on Harley Avenue has been demolished in the 1999 aerial photograph. Residential density in the surrounding Mount Victoria area has increased</li> <li>• stockpiles are visible in the rail easement compound adjacent the substation on Harley Avenue</li> <li>• upgrades have occurred in the Mount Victoria rail maintenance yards – concrete sealed areas/platforms in the 2015 aerial photograph and some vegetation have been cleared northeast of the station to create a storage yard</li> <li>• further upgrades have occurred on the rail line and maintenance yards at Mount Victoria, numerous storage yards with various materials are visible adjacent in the 2020 aerial photograph.</li> </ul>

Area	Summary
Great Western Highway Mount Victoria (Lotsearch aerial photograph report 5 of 10)	<ul style="list-style-type: none"> <li>the Great Western Highway, rail line, a clearing at Browntown Oval, cleared land opposite the Browntown Oval on the western side of the Great Western Highway, some residential properties, a cemetery in the northeast portion and National Park surround the tunnel alignment in the first 1943 aerial photograph</li> <li>a circular area is visible at Browntown Oval and some vegetation has re-established in the cleared land opposite the Browntown Oval on the western side of the Great Western Highway in the 1958 aerial photograph. A bend in the Great Western Highway has been constructed in the middle of the area near the bridge over the rail line</li> <li>the road east of Browntown Oval has been cleared in the 1966 aerial photograph</li> <li>a cricket pitch is visible in the middle of Browntown Oval in the 1975 aerial photograph. Stockpiles are visible in between the bend in the Great Western Highway and the former highway</li> <li>increased residential density is visible along the Great Western Highway at the southern end of Mount Victoria and to the northwest along Sylvania Street in the 1984 aerial photograph</li> <li>Browntown Oval is larger and rectangular in shape with a building at the northern end in the 1994 aerial photograph</li> <li>no significant changes in the 1999 aerial photograph</li> <li>the stop butt and archery targets at the southern end of Browntown Oval are visible in the 2007 aerial photograph</li> <li>no significant changes in the 2015 aerial photograph</li> <li>exposed soil is visible around the warehouse adjacent a residential property at 144 Great Western Highway Mount Victoria and next to the rail easement compound at 4 Harley Avenue Mount Victoria in the 2021 aerial photograph.</li> </ul>
Great Western Highway Mount Victoria (Lotsearch aerial photograph report 6 of 10)	<ul style="list-style-type: none"> <li>the Great Western Highway, National Park, access trails/roads, drainage lines through National Park, and a fire break are visible in the first 1943 aerial photograph mainly parallel to the Great Western Highway. A residential property is visible northeast of the present-day Heavy Vehicle Safety Station (HVSS). A large bend in the Great Western Highway is visible in the western portion</li> <li>a large fire break is visible to the northeast in the National Park in the 1958 aerial photograph. Numerous drainage lines are visible between the rail line and the Great Western Highway</li> <li>numerous roads and access trails/roads (including Station Street) are cleared/visible west and east of the Great Western Highway and east and west of the rail line in the 1966 aerial photograph. Vegetation around the residential property in the southern portion of the aerial photograph has been cleared</li> <li>sediment is visible in Boyce Gully to the east of the Great Western Highway in the 1975 aerial photograph. The site of the HVSS has been cleared</li> <li>the HVSS building has been constructed in the 1984 aerial photograph</li> <li>a possible antenna station is visible in between the Great Western Highway and the rail line in the 1994 aerial photograph</li> <li>the building at the HVSS has been upgraded/made more prominent in the 1999 aerial photograph</li> <li>the large bend in the Great Western Highway has been bypassed in the 2007 aerial photograph and cut and fill works are visible on either side of the new alignment and a new drainage culvert has been constructed underneath the new portion of the Great Western Highway</li> </ul>

Area	Summary
	<ul style="list-style-type: none"> <li>the cut and fill works around the realignment of the Great Western Highway are complete in the 2015 aerial photograph</li> <li>no significant changes in the 2021 aerial photograph.</li> </ul>
Blackheath West (Lotsearch aerial photograph report 7 of 10)	<ul style="list-style-type: none"> <li>the first 1943 aerial photograph comprises the Great Western Highway and adjacent rail line, residential streets in the northern portion of Blackheath and the Blue Mountains National Park. The Blackheath Cemetery and electricity substation are visible on the northern side of the Great Western Highway. A clearing is visible at the now Wood You Believe Firewood commercial site. Ridgewell Road leading to Blackheath tip is visible to the northeast. Mountains Christian College comprising one large building, and a sports field is visible to the southwest</li> <li>a large rectangular area has been cleared at the now Weber's Nursery site, and further clearing at the adjacent Wood You Believe Firewood commercial site and buildings/structures are visible on both sites in the 1958 aerial photograph</li> <li>the electricity substation site has been expanded to a larger rectangular area and a building is visible in the 1966 aerial photograph. Further clearing is visible at the Blackheath Cemetery and at the Weber's Nursery and Wood You Believe commercial sites. Possible agricultural activity or storage of materials/vegetation is visible in Weber's Nursery site. Two large clearings and two additional buildings/structures are visible at Mountains Christian College. Residential density has increased in Blackheath</li> <li>further clearing northeast of Weber's Nursery property boundary is visible in the 1975 aerial photograph. Clearing/possible landfilling is visible at Mountains Christian College. Vegetation clearing is visible northwest of the Cemetery. Two dams are visible on the Weber's Nursery site behind Wood You Believe Firewood and one dam on the Wood You Believe Firewood site. An area has been cleared at the location of the HVSS. Clearings are visible along Sunbeam Avenue</li> <li>a large building is visible at Mountains Christian College in the 1983 aerial photograph and possible landfilling in recreational areas still occurring. Access roads/cleared areas are visible behind the Weber's Nursery site. A clearing and access roads are visible at the Meditation Centre site on the opposite side of the Great Western Highway from Weber's Nursery. The HVSS building is visible. Residential properties are visible along Sunbeam Avenue. A large dam is visible northeast of Weber's Nursery and Wood You Believe Firewood</li> <li>numerous greenhouses and cropping/vegetation are visible in the Weber's Nursery site in the 1994 aerial photograph and numerous stockpiles are visible at the rear of the site to the northeast. Numerous buildings/structures are visible at the Meditation Centre site. The recreational areas at Mountains Christian College are covered in grass – some brown areas of vegetation are visible on the southwestern batters. Residential density in Blackheath has increased and extended northwest along the Great Western Highway</li> <li>a larger building at the HVSS is visible in the 2002 aerial photograph. More buildings are visible at the Meditation Centre site</li> <li>a portion of the road leading to the HVSS has been reinforced/upgraded in the 2007 aerial photograph</li> <li>a new building/structure is visible on the electricity substation site, possible sealing/regrading of the site surface and a fence around the compound is visible in the 2015 aerial photograph. Numerous stockpiles are still visible at the rear of Weber's Nursery. The dam on the Wood You Believe Firewood site is smaller and possibly dried up</li> </ul>

Area	Summary
	<ul style="list-style-type: none"> <li>no significant changes in the 2020 aerial photograph.</li> </ul>
Blackheath Tip (Lotsearch aerial photograph report 8 of 10)	<ul style="list-style-type: none"> <li>an access road, bushland and a clearing with a small building in the centre are visible at the tip site in the first 1958 aerial photograph. A fire break is visible in the northern portion of the tip site and a cleared residential/agricultural area is visible immediately south. Access roads are visible in the National Park surrounding the access road. The Great Western Highway is visible to the south and southwest</li> <li>stockpiles/swales are visible in the 1966 aerial photograph. Residential density has increased south of the site along the Great Western Highway. The substation and cemetery are being constructed to the southwest</li> <li>residential density has increased south of the site along the Great Western Highway in the 1975 aerial photograph</li> <li>excavation and/or filling are occurring in the 1983-1984 aerial photograph within the Blackheath Tip</li> <li>stockpiles of roadbase are visible in the 1994 aerial photograph within the Blackheath tip. The area north and northwest of the Blackheath tip appears to be a swamp/floodplain area</li> <li>some vegetation has grown over the surface of the Blackheath Tip in the 2002 aerial photograph. A potential small dam/surface water body is present in the centre of the Blackheath tip</li> <li>the majority of the surface of the Blackheath tip is covered in vegetation in the 2007 aerial photograph. Surface water bodies/dams are visible in the northern portion of the Blackheath tip in a non-vegetated area</li> <li>the surface of the Blackheath Tip has been covered in gravel/roadbase in the 2015 aerial photograph. A second residential property comprising two new buildings has been constructed adjacent the residential/agricultural property immediately south of the Blackheath Tip. The fence around the Blackheath Substation has been upgraded/extended in size and the area surrounding the Substation has been sealed with concrete or covered in gravel. Stockpiles, demountable or shipping containers and an excavator are visible in the verge between the rail line and the Great Western Highway opposite the substation and west of the access road leading to the Blackheath Tip</li> <li>more vegetation is visible on the surface of the Blackheath tip in the 2020 aerial photograph. The stockpiles, machinery and structures are no longer visible in the road verge between the rail line and the Great Western Highway.</li> </ul>
Blackheath Town Centre (Lotsearch aerial photograph report 9 of 10)	<ul style="list-style-type: none"> <li>the Great Western Highway, rail line, numerous roads in Blackheath and residential/agricultural land use are visible with potential for some commercial/industrial land use in the first 1933 aerial photograph. Possible filling/resurfacing is occurring at Blackheath Oval/Jubilee Park east of the study area. A square structure is visible in Whitley Park. Blackheath train station is visible. The rectangular locations of the bowling greens and tennis courts at Blackheath Oval are visible south of the Oval</li> <li>a building (same as present day) is visible on the IGA service station site in the 1943 aerial photograph. The residential density surrounding the tunnel alignment has increased.</li> <li>the Blackheath Laundrette building is visible in the 1958 aerial photograph. Possible landfilling has occurred in Blackheath Memorial Park associated with the construction of the swimming pools</li> </ul>



Area	Summary
	<ul style="list-style-type: none"> <li>• construction of Mountains Christian College to the northeast is visible in the 1966 aerial photograph including possible landfilling. Two buildings are visible on the BP service station in Blackheath</li> <li>• a building is present at Steve's Autobarn in Blackheath</li> <li>• landfilling/mounding is visible at Blackheath Oval in the 1983-1984 aerial photograph. Blackheath Glen Tourist Village is visible east of Blackheath Memorial Park. Construction of the swimming pools in Blackheath Memorial Park is still underway. A building is visible on the Blackheath/Mount Victoria Rural Fire Service site. A building is visible in the centre of the Mountains Christian College site with possible landfilling occurring in the recreational/open space areas either side of the building</li> <li>• swimming pool construction is still occurring at Blackheath Memorial Park in the 1994 aerial photograph. The mounded area at Blackheath Oval has been turfed. The recreational areas at Mountains Christian College have been turfed and a cricket pitch is visible on one of the areas. The BP service station site is being used as a service station based on numerous cars visible around the forecourt/bowlers</li> <li>• the Bridgestone service centre appears to be operational based on numerous cars parked adjacent the shed in the 2002 aerial photograph. The roof on Steve's Autobarn has been replaced with terracotta tiles</li> <li>• the swimming pools at Blackheath Memorial Park are full of water in the 2007 aerial photograph. An extension to the building at Steve's Autobarn has been added. The buildings at the BP service station have been upgraded. The Bridgestone service station building has been upgraded</li> <li>• the Mountains Christian College building has been upgraded and additional small buildings have been constructed immediately north and west in the 2015 aerial photograph</li> <li>• all buildings have been demolished and a large excavation is visible at the BP Service Station site in the 2021 aerial photograph.</li> </ul>
Blackheath South (Lotsearch aerial photograph report 10 of 10)	<ul style="list-style-type: none"> <li>• the study area comprises the Great Western Highway and adjacent rail line to the west, National Park, Evans Lookout Road, Brightlands Avenue and Chelmsford Avenue, some residential land use is visible in the first aerial photograph 1932-1933. The Blackheath golf course and clubhouse are visible to the northeast. A clearing with access trails is visible immediately east of the southern boundary of the study area, a small building is visible further south and a possible stockpile east of the Great Western Highway. Access trails and three clearings are visible within the National Park east of the Great Western Highway – one within the study area and two east of the study area. These clearings are visible present day. Access trails are visible through Sutton Park in the northern portion of the study area</li> <li>• buildings (possibly residential) are visible in the clearings within the National Park east of the Great Western Highway in the 1943 aerial photograph. More residential properties are visible along Evans Lookout Road, Brightlands Avenue and Chelmsford Avenue and further residential development has occurred northeast along Hargraves Street</li> <li>• an excavation (possibly sand mining) is visible in the clearing immediately east of the southern boundary of the study area in the 1958 aerial photograph. A significant portion of vegetation in the National Park southeast of Evans Lookout Road has been cleared and access roads are visible. Some buildings within the cleared areas have been demolished. More residential properties are visible along Evans Lookout Road, Brightlands Avenue and Chelmsford Avenue.</li> </ul>

Area	Summary
	<p>Valley View Road through Sutton Park and the eastern portion of Hargraves Street north of Sutton Park are visible. A fire trail (B4b) running southeast is visible in the National Park</p> <ul style="list-style-type: none"> <li>• further clearance of vegetation in the National Park southeast of Evans Lookout Road and south of the fire trail (B4b) is visible in the 1966 aerial photograph</li> <li>• further clearance of vegetation south of the fire trail (B4b) is visible in the 1975 aerial photograph. Vegetation is re-establishing between access roads east of the cleared areas and east of the study area. More residential properties are visible along Evans Lookout Road, Brightlands Avenue and Chelmsford Avenue. Vegetation clearance has occurred in Sutton Park within the northern portion of the study area. A residential building at the site of the now Kyah Boutique hotel (formerly Redleaf Resort) has been demolished and the hotel building is visible</li> <li>• vegetation has been re-established in the cleared areas within the study area east of the Great Western Highway and east of the study area in the 1983-1984 aerial photograph. More residential properties are visible along Evans Lookout Road, Brightlands Avenue and Chelmsford Avenue. A large dam is visible in the northeastern portion of the Blackheath Golf Course</li> <li>• all of the buildings in the cleared areas in the National Park have been demolished in the 1994 aerial photograph. There is increased residential density along Evans Lookout Road, Brightlands Avenue and Chelmsford Avenue. Two dams are present in the northeastern portion of the Blackheath Golf Course</li> <li>• more vegetation has re-established in the cleared areas south and east of the corner of Evans Lookout Road and Great Western Highway in the 2002 aerial photograph. A commercial/industrial facility in the middle of the study area has been constructed west of the rail line and Great Western Highway in the National Park</li> <li>• no significant changes in the 2007, 2015 and 2020 aerial photographs.</li> </ul>

### 3.1.10 NSW EPA records

A search of the NSW EPA records indicated that there were no sites currently regulated by the NSW EPA under Section 60 of the CLM Act 1997 within 500 metres of the construction footprint. Sites that have been notified to the NSW EPA within 500 metres of the construction footprint are listed in the Table 3-5 and shown on Figures B-2 and B-3 in Annexure B and in the Lotsearch reports in Annexure A.

**Table 3-5 Sites within the project notified to the NSW EPA**

Property and address	Proximity to the project	Summary
Ampol (formerly Caltex) Service Station 36-38 Great Western Highway Mount Victoria	350 m north of tanked tunnel	Regulation under CLM Act not required
Former Mobil Service Station 81 Great Western Highway Mount Victoria	230 m north-east of tanked tunnel	Regulation under CLM Act not required

### 3.1.11 National Waste Management & Liquid Fuel Facilities and NSW EPA licensed activities

National Waste Management & Liquid Fuel Facilities and currently and formerly licensed and delicensed activities by NSW EPA within the project are listed in Table 3-6 and operation fuel facilities are shown on Figures B-1 to B-5 in Annexure B and in the Lotsearch reports in Annexure A.

**Table 3-6 National waste management sites and NSW EPA licensed activities**

Property and address	Proximity to the project	Summary
Ampol (formerly Caltex) Service Station 36-38 Great Western Highway Mount Victoria	350 m north of tanked tunnel	Operational petrol station
BP Blackheath Service Station 263 Great Western Highway Blackheath	330 m east of tanked tunnel	Operational petrol station
IGA Service Station* 211 Great Western Highway Blackheath	190 m east of tanked tunnel	Operational petrol station
Sydney Trains	Above tanked tunnel or within 500 m of tanked tunnel	Currently licensed under the POEO Act 1997
Acciona Infrastructure Projects Australia RTA Road Corridor, Great Western Highway, Soldiers Pinch, Katoomba	Adjacent/within Soldiers Pinch construction compound	Concrete works licence surrendered May 2003
Seymour Whyte Constructions Great Western Highway, Hartley	Adjacent/within Little Hartley construction compound	Road construction, land-based extractive activity licence surrendered February 2015
Luhrmann Environment Management Waterways throughout NSW	Likely to be in urban areas above or within 500 m of tanked tunnel	Application of herbicides licence surrendered September 2000
Robert Orchard Waterways throughout NSW	Likely to be in urban areas above or within 500 m of tanked tunnel	Application of herbicides licence surrendered September 2000
Sydney Weed & Pest Management Waterways throughout NSW	Likely to be in urban areas above or within 500 m of tanked tunnel	Application of herbicides licence surrendered November 2000
CPB Contractors Blue Mountains Route Clearance, Katoomba	250 m east of tanked tunnel	Railway systems activities licence surrendered February 2019

\*not noted in Lotsearch report (Annexure A)

### 3.1.12 Historical businesses (dry cleaners, motor garages and service stations)

A summary of dry cleaners, motor garages and service stations within the project from UBD business directory records are summarised in Table 3-7. A figure showing the location of these historical businesses is included in the Lotsearch reports in Annexure A.

**Table 3-7 The project – historical businesses (dry cleaners, motor garages, service stations)**

Property and address	Proximity to the project	Businesses (potentially contaminating)
Blackheath Garage, Great Western Highway Blackheath	Above tanked tunnel or within 500 m of tanked tunnel	Operational service station in 1950s to 1970s
Kerry's Service Station, 213 Great Western Highway Blackheath	Above tanked tunnel or within 500 m of tanked tunnel	Operational service station in 1950s to 1970s

Property and address	Proximity to the project	Businesses (potentially contaminating)
Rolfe Bros Service Station, 22 Govetts Leap Road Blackheath	Above tanked tunnel or within 500 m of tanked tunnel	Operational service station in 1950s
Garden Service Station, Great Western Highway Blackheath	Above tanked tunnel or within 500 m of tanked tunnel	Operational service station in 1960s and 1970s
Alpine Dry Cleaners, Wentworth Street Blackheath	Above tanked tunnel or within 500 m of tanked tunnel	Operational dry cleaner in 1960s
Cedar Lodge Service Station, Bathurst Road, Mount Victoria	Adjacent/within Soldiers Pinch construction footprint	Operational service station in 1970
Mt. Victoria Auto Port Bathurst Road, Mount Victoria	Adjacent/within Soldiers Pinch construction footprint	Operational service station in 1970
Smith Bros. Bathurst Road, Mount Victoria	Adjacent/within Soldiers Pinch construction footprint	Operational service station in 1970
Taylor and Robinson Great Western Highway, Mount Victoria	Adjacent/within Soldiers Pinch construction footprint	Operational motor garage in 1950
Esso Servicer Great Western Highway, Little Hartley	Adjacent/within Little Hartley construction footprint	Operational motor garage in 1970

It is also noted that the subsurface areas along the tunnel alignment was subject to numerous historical mining and exploration titles for both minerals and petroleum.

### 3.1.13 Previous environmental investigations

A summary of previous environmental investigations relevant to the project is provided in the following subsections. A full review of each report is provided in Table D-1 in Annexure D.

#### 3.1.13.1 RTA/PB/SKM (2011) Environmental Corridor Study Groundwater Rev D

This report covers the portion of the project from Mount Victoria to Little Hartley and northwest of the project to Lithgow and details the desktop groundwater assessment and preliminary field investigations undertaken to assess the preferred route corridor.

The report concluded that taking ground conditions and groundwater flow into consideration during concept and detailed design development will assist in preventing and alleviating potential impacts that may arise from the road upgrade construction and operation. Risk management measures include incorporating bridges and appropriate drainage into road design to minimise impacts to landholder bores and groundwater dependent ecosystems.

It was noted that a more detailed groundwater assessment would be undertaken as part of the planning approval process for the upgrade east of Victoria Pass to South Bowenfels in the west.

#### 3.1.13.2 RTA/PB/SKM (2011) Environmental Corridor Report Water Quality Rev E

The corridor study was prepared as part of the concept design development process to identify potential constraints associated with the Great Western Highway proposed upgrade between Mount Victoria and Lithgow.



The report concluded that management of potential water quality impacts would be further developed following comments received from the public and the stakeholder agency consultation process. In addition, the concept and detailed design of proposed sediment basins would be reviewed continuously as the concept and detailed design are developed. It was noted that the next steps in the environmental assessment that would be undertaken included impact assessment, proposed mitigation measures to address identified impacts and recommendations.

#### **3.1.13.3 RTA/PB/SKM (2011) Corridor Study Contaminated Land, Rev B**

This report covers the portion of the project from Mount Victoria to Little Hartley and northwest of the project to Lithgow.

The report concluded that potential areas of environmental interest identified were considered to be a negligible low constraint to the design and construction to the upgraded highway.

It was recommended that the potential contamination constraints associated with the former service station site at Little Hartley be quantified through a Stage 2 sub-surface investigation per the RTA Contaminated Land Management Guidelines April 2005. Other potential areas of interest could be managed during construction in accordance with a CEMP and Unexpected Finds Protocol.

#### **3.1.13.4 RTA/PB/SKM (2012) Groundwater Monitoring Report, Rev B**

The report covers the portion of the project from Mount Victoria to Little Hartley and northwest of the project to Lithgow and details the groundwater monitoring undertaken to inform the Environmental Impact Assessment for the preferred route corridor for the Mount Victoria to Lithgow Great Western Highway upgrade.

The report concluded that the results were consistent with monitoring undertaken in May 2011 and as such supported the conceptual hydrogeological model in the Environmental Corridor Groundwater Study.

#### **3.1.13.5 RTA/PB/SKM (2013) Environmental Corridor Report Rev C**

The report was prepared as part of the concept design development process to identify potential constraints associated with the Great Western Highway proposed upgrade between Mount Victoria and Lithgow.

The report noted that the management of potential water quality impacts would be further developed following comments received from the public and the stakeholder agency consultation process. In addition, the concept and detailed design of proposed sediment basins would be reviewed continuously as the concept and detailed design are developed.

#### **3.1.13.6 Hills Environmental/RTS (2019) Preliminary Environmental Investigation**

The report covers a portion of the project from Mount Victoria to Blackheath and was prepared to provide a preliminary environmental investigation for the proposed upgrade of the Great Western Highway between Katoomba and Mount Victoria.

The report identified the presence of potentially contaminated sites (including highway corridor, the rail corridor and current and former service station sites).

The report recommended that detailed environmental assessment, options development and evaluation and concept design be required to address the environmental impacts.

#### **3.1.13.7 Hills Environmental (2020) Preliminary Environmental Investigation**

The report covers a portion of the project from Mount Victoria to Blackheath and was prepared to provide a preliminary environmental investigation for the proposed upgrade of the Great Western Highway between Katoomba and Lithgow.

The report identified the presence of potentially contaminated sites (including highway corridor, the rail corridor and current and former service station sites).

The report recommended that detailed environmental assessment, options development and evaluation and concept design be required to address the environmental impacts.

#### **3.1.13.8 Golder (2021) Conceptual Hydrogeological Model**

The report covers the project plus areas southeast and includes the results of a hydrogeological desktop study completed for the Great Western Highway Upgrade between Katoomba and Little Hartley.

The report noted that groundwater within the project is likely to be impacted by anthropogenic activities associated with the urbanisation and commercial growth of Blackheath and Mount Victoria. It was recommended that further investigations be undertaken to characterise groundwater within the vicinity of the project.

#### **3.1.13.9 Jacobs Arcadis (2021) Stage 1 Contamination Assessment**

The report covers the project plus areas to the southeast and northwest. The Stage 1 Contamination Assessment was prepared as part of the Review of Environmental Factors (REF) to identify potential contamination that may impact on and require management as part of the construction and operation of the Great Western Highway Upgrade.

It was noted in Section 4.6.2 that a report prepared by RTA in 2011 identified that below ground fuel storage tanks and refuelling infrastructure remained at the front of the Lolly Bug (former service station) site.

The report identified numerous construction areas and activities as having moderate to high potential for contamination and numerous operational activities with moderate to high potential for contamination impacts. The report also provided mitigation measures to manage the risks from these contamination impacts.

The report recommended further investigation to address uncertainties related to potential contamination and in order to better refine the impact assessment.

#### **3.1.13.10 AAJV (2021) Memo: Preliminary groundwater assessment**

The purpose of the memo was to present the preliminary assessment of groundwater associated risk of mined tunnelling and excavation in relation to Temperate Highland Peat Swamps (TPHSS).

The report recommended an undrained (tanked) system for those portions of the tunnel with a high risk of groundwater ingress and a drained system for those portions of the tunnel with a medium risk of groundwater ingress.

#### **3.1.13.11 AAJV (2022a) Stage 1 Preliminary Site Investigation**

The Stage 1 PSI was prepared to assess the potential for contamination to be encountered within the project as part of construction and operation of the project.

Based on a review of available desktop information the report identified numerous data gaps and areas within the project which may present a potential contamination risk during construction and operation. The report recommended targeted investigations be undertaken to better inform the potential for contamination within proposed construction and operation areas.

#### **3.1.13.12 AAJV (2022b) Sampling Analysis and Quality Plan Stage 2 Detailed Site Investigation**

Following issue of the Stage 1 PSI the design of the project was further refined and a Stage 2 DSI was refined to target areas of construction and operation that presented potentially complete source-pathway-receptor linkages. The SAQP provided the proposed sampling methodology, procedures and guidelines for assessment of data collected as part of the Stage 2 DSI.

#### **3.1.13.13 Jacobs Arcadis Joint Venture (JAJV) (2022) Great Western Highway: Little Hartley to Lithgow (West Section) Technical Working Paper – Stage 2 Contamination Assessment**

The Stage 2 Contamination Assessment was prepared to support the REF and to identify whether land within or adjacent to the construction footprint is potentially or known to be contaminated, whether potential/known contamination could impact upon human health or the environment in the context of the proposed construction and operation of the project, and where mitigation or management measures are required to manage identified potential/known contamination.

Investigations were undertaken at the Lolly Bug (former service station) site, comprising two boreholes (BH02 and BH03), one well (GW01) and one surface soil sample (SS05). Another surface soil sample (SS04) was located east along the Great Western Highway. Maximum depth of investigation in soil ranged from 0.95 m below ground level (BH03) to 1.2 m bgl (BH02). Two soil samples were collected at BH02 (surface and 0.5 m bgl) and two soil samples were collected at BH03 (surface and 0.9 m bgl). Soil samples were analysed for heavy metals, hydrocarbons, pesticides and asbestos. No hydrocarbons were reported in soil. GW01 reported concentrations of heavy metals (cadmium and zinc) above ecological criteria and detections of TPH C10-C14 and C15-C28 and TRH C10-C16 and C16-C34 in groundwater.

Investigations were also undertaken at the former Little Hartley airfield, comprising collection of four surface soil samples (SS07 to SS10). Surface soil samples were analysed for heavy metals, hydrocarbons and PFAS. Perfluorooctane sulfonate (PFOS) was detected in SS07 and SS09, but did not exceed the adopted assessment criteria.

Based on the results of the Stage 2 Contamination Assessment, JAJV concluded that the site was suitable for construction and commercial/industrial land use as per the requirements outlined in the ASC NEPM (NEPC, 1999 as revised 2013). The following recommendations were made:

- a CEMP including unexpected finds protocol should be prepared to manage construction activities
- the CEMP should include procedures for management of groundwater encountered during excavations and dewatering, including requirements for testing
- the CEMP should include procedures for management and disposal of coal tar
- the CEMP should include locations of known or potential contamination and contingency measures
- preparation of a Contaminated Land Management Plan which documents location specific mitigations measures
- areas which couldn't be investigated as part of the Stage 2 Contamination Assessment due to access constraints should be managed as per similar areas of interest investigated or undertaken the proposed investigations once access is granted

#### **3.1.14 AECOM site inspection findings**

AECOM attended the project on 17 December 2021. A summary of the observations is included below with photographs in Annexure C:

- Blackheath IGA petrol station is not noted in Lotsearch report as a fuel facility (refer to Photo No. 1 in Annexure C)
- Kyah boutique hotel in Blackheath (formerly Redleaf Resort) was undergoing renovations (refer to Photo No. 2 in Annexure C)
- fire break at rear of properties near the Blackheath portal inaccessible due to drinking catchment protection area (refer to Photo No. 3 in Annexure C)
- covered stockpiles observed on northern side of Valley View Road near Sutton Park in Blackheath (refer to Photo No. 4 in Annexure C)
- LPG above-ground storage tank at rear of Blackheath Public School on old bitumen hardstand in fair condition (refer to Photo No. 5 in Annexure C)
- BP Service Station in Blackheath (corner Gardiners Crescent and Great Western Highway) was in new condition and appears to have been recently remediated/refurbished. No bunding drains present in forecourt (refer to Photo No. 6 and 7 in Annexure C)
- Blackheath Laundrette corner Sutton Lane comprises small commercial brick building (no photo taken)
- Blackheath Fire Station on Great Western Highway no storage tanks external to building visible (no photo taken)

- Browntown Oval raised battered surface possible landfilling, air quality monitoring station, stop butt used for archery club (refer to Photo No. 9 to 13 in Annexure C)
- Mount Victoria Fire Station Harley Avenue two external above ground water tanks at rear and three garages (no photo taken)
- substation adjacent movie theatre (Vic Flicks) and Mount Victoria Fire Station Harley Avenue (refer to Photo No. 16 in Annexure C)
- vacant land with vegetation (Rotunda Park) opposite substation and Mount Victoria Fire Station Harley Avenue possible landfilling, proposed borehole BH616 location (refer to Photo No. 17 in Annexure C)
- rail easement compound adjacent substation on Harley Avenue Mount Victoria (refer to Photo No. 19 in Annexure C) and commercial/industrial compounds with garages, demountable and trucks parked possibly rail related (refer to Photo No. 18 in Annexure C)
- gas cylinders outside Mount Victoria railway station (refer to Photo No. 20 in Annexure C)
- above ground storage tank and chemical shower near carpark/entrance to Mount Victoria rail maintenance yards (refer to Photo No. 21 and 22 in Annexure C)
- Mount Victoria Fire Station new/refurbished (refer to Photo No. 23 in Annexure C)
- Ampol Mount Victoria site comprised 10 bowzers, no bunding, drains around bowzers, workshop at rear comprising 2 closed garages possibly disused, no monitoring wells sighted (refer to Photo No. 24 to 28 in Annexure C)
- Lolly Bug Little Hartley former service station no evidence of storage tanks or monitoring wells. Concrete forecourt with structure possible former bowser location visible outside shop. No bunding, poor condition bitumen surrounding concrete forecourt (refer to Photo No. 29 and 30 in Annexure C)
- entrance – locked fence to Mount Victoria sewage treatment plant and outfall area inspected (refer to Photo No. 31 in Annexure C)
- Weber's Nursery Mount Boyce shop front only accessible, storage yards not accessible (refer to Photo No. 32 in Annexure B)
- Terratest drilling rig outside Mount Victoria cemetery (refer to Photo No. 33 in Annexure C)
- Endeavour substation on Great Western Highway Mount Victoria – hazardous chemicals combustible liquids sign on fence (refer to Photo No. 34 and 35 in Annexure C)
- entrance – locked fence with asbestos warning sign and vegetated surface of Blackheath tip inspected (refer to Photo No. 36 in Annexure C)
- truck maintenance/storage yard at rear of Ampol Mount Victoria (no photo taken)
- Blackheath Oval/Jubilee Park raised battered surface possible landfilling (refer to Photo No. 37 and 38 in Annexure C).

### 3.2 Data gaps

Based on a review of available information the following data gaps exist:

- some previous investigations referenced in reports were not available for review including:
  - SKM (2009) Preliminary Contaminated Land Assessment – Great Western Highway Upgrade, Mount Victoria to Lithgow
  - Parsons Brinckerhoff (2010) Environmental Site Assessment – Former Mount Victoria Sewage Treatment Plant, Wentworth Street, Mount Victoria NSW.
- it is not known if the underground storage tanks and associated infrastructure at the Lolly Bug (former service station) site (730 metres north-west of the Little Hartley construction footprint) (refer Section 3.1.13.9) have been decommissioned and/or removed and validated. The groundwater



flow direction in this area is inferred to be towards the north-west, however there is potential for contaminant migration through overland flow via sediment and surface water during periods of heavy rainfall, followed by infiltration to groundwater. Potential for contamination within the construction footprint from this AEI is unknown based on data gaps and the potential for migration of contamination in groundwater/sediment/surface water.

- PFOS was detected in surface soils at the former Little Hartley airfield (1.25 kilometres north-west of the Little Hartley construction footprint) (refer Section 3.1.13.13), it is not known. The groundwater flow direction in this area is inferred to be towards the north-west, however there is potential for contaminant migration through overland flow via sediment and surface water during periods of heavy rainfall, followed by infiltration to groundwater. Potential for contamination within the construction footprint from this AEI is unknown based on data gaps and the potential for migration of contamination in groundwater/sediment/surface water.
- there were no soil, soil vapour, ground gas or groundwater data in previous investigation reports for the following areas:
  - Blackheath construction footprint
  - Soldiers Pinch construction footprint
  - portions of Little Hartley construction footprint
  - areas of proposed surface disturbance
  - areas of proposed cut and cover
  - areas at the entrance to the tunnel (east and west).

### 3.3 Preliminary conceptual site model

For a receptor to be exposed to a chemical contaminant, a complete exposure pathway must exist. An exposure pathway describes the course a chemical or physical agent takes from the source to the exposed individual or receptor. Due to the number of data gaps, in particular the lack of recent soil or groundwater data in previous investigation reports for the AEIs and CoPC, there is potential that source, pathway, receptor exposure pathways exist at the site for numerous AEIs (refer to Table 3-8 below). General AEIs which could have occurred across multiple locations are denoted in Table 3-8 by \*. See Section 2.3.4 for a description of the risk rankings.

Table 3-8 Source-pathway-receptor linkages and risk rating

ID	AEI	Source, CoPC and Media	Pathway	Receptor	Potentially complete S P R	Risk rating pre implementation of mitigation and management measures	Risk rating post implementation of mitigation and management measures
AEI1	Mount Victoria rail maintenance yard	<b>Source:</b> Leaks and spills from maintenance activities along rail lines, fill materials and asbestos from brake pads used historically <b>CoPC:</b> Heavy metals, PAH, TPH, TRH, BTEXN, Asbestos <b>Media:</b> Soil, sediment, surface water and groundwater	Direct contact, inhalation, dust, leaching of soil and sediment contaminants into groundwater and surface water, sediment, groundwater and surface water flow	Site workers and visitors, intrusive maintenance workers, beneficial users of registered groundwater bores in proximity to the project, workers and visitors on adjacent properties, recreational users of surface water bodies and tributaries, terrestrial soil biota, terrestrial and aquatic flora and fauna	Construction: No Operation: No	NA	NA
AEI2	Railway lines and rail compounds	<b>Source:</b> Leaks and spills from maintenance activities along rail lines, fill materials and asbestos from brake pads used historically <b>CoPC:</b> Heavy metals, PAH, TPH, TRH, BTEXN, Asbestos <b>Media:</b> Soil, sediment, surface water and groundwater	Direct contact, inhalation, dust, leaching of soil and sediment contaminants into groundwater and surface water, sediment, groundwater and surface water flow	Site workers and visitors, intrusive maintenance workers, beneficial users of registered groundwater bores in proximity to the project, workers and visitors on adjacent properties, recreational users of surface water bodies and tributaries, terrestrial soil biota, terrestrial and aquatic flora and fauna	Construction: No Operation: No	NA	NA

ID	AEI	Source, CoPC and Media	Pathway	Receptor	Potentially complete S P R	Risk rating pre implementation of mitigation and management measures	Risk rating post implementation of mitigation and management measures
AEI3	Current and former service stations, garages and service centres in Blackheath, Little Hartley and Mount Victoria	<b>Source:</b> Leaks and spills from underground petroleum storage infrastructure/refuelling and vehicle maintenance activities <b>CoPC:</b> Heavy metals, PAH, TPH, TRH, VOCs including BTEXN, PFAS, asbestos <b>Media:</b> Soil, soil vapour, sediment, surface water and groundwater	Direct contact, inhalation, dust, leaching of soil and sediment contaminants into groundwater and surface water, sediment, groundwater and surface water flow	Site workers and visitors, intrusive maintenance workers, beneficial users of registered groundwater bores in proximity to the project, workers and visitors on adjacent properties, recreational users of surface water bodies and tributaries, terrestrial soil biota, terrestrial and aquatic flora and fauna	Construction: No Operation: No	NA	NA
AEI4	Fire stations two in Blackheath and two in Mount Victoria	<b>Source:</b> Leaks and spills from underground petroleum storage infrastructure/refuelling, leaks and spills from storage of aqueous film forming foam containing PFAS and during hose clearing <b>CoPC:</b> Heavy metals, PAH, TPH, TRH, VOCs including BTEXN, PFAS, asbestos <b>Media:</b> Soil, soil vapour, sediment, surface water and groundwater	Direct contact, inhalation, dust, leaching of soil and sediment contaminants into groundwater and surface water, sediment, groundwater and surface water flow	Site workers and visitors, intrusive maintenance workers, beneficial users of registered groundwater bores in proximity to the project, workers and visitors on adjacent properties, recreational users of surface water bodies and tributaries, terrestrial soil biota, terrestrial and aquatic flora and fauna	Construction: No Operation: No	NA	NA



ID	AEI	Source, CoPC and Media	Pathway	Receptor	Potentially complete S P R	Risk rating pre implementation of mitigation and management measures	Risk rating post implementation of mitigation and management measures
AEI5	Electricity substations at Blackheath and Mount Victoria	<b>Source:</b> Leaks and spills from maintenance activities <b>CoPC:</b> Heavy metals, PAH, TPH, TRH, VOCs including BTEXN, SVOCs, PFAS, PCBs, asbestos <b>Media:</b> Soil, sediment, surface water and groundwater	Direct contact, inhalation, dust, leaching of soil and sediment contaminants into groundwater and surface water, sediment, groundwater and surface water flow	Site workers and visitors, intrusive maintenance workers, beneficial users of registered groundwater bores in proximity to the project, workers and visitors on adjacent properties, recreational users of surface water bodies and tributaries, terrestrial soil biota, terrestrial and aquatic flora and fauna	Construction: No Operation: No	NA	NA
AEI6	Blackheath Laundrette	<b>Source:</b> Leaks and spills from solvents and infrastructure <b>CoPC:</b> Heavy metals, PAH, TPH, TRH, VOCs including BTEXN, SVOCs <b>Media:</b> Soil, soil vapour and groundwater	Direct contact, inhalation, dust, leaching of soil and sediment contaminants into groundwater and surface water, sediment, groundwater and surface water flow	Site workers and visitors, intrusive maintenance workers, beneficial users of registered groundwater bores in proximity to the project, workers and visitors on adjacent properties, recreational users of surface water bodies and tributaries, terrestrial soil biota, terrestrial and aquatic flora and fauna	Construction: No Operation: No	NA	NA

ID	AEI	Source, CoPC and Media	Pathway	Receptor	Potentially complete S P R	Risk rating pre implementation of mitigation and management measures	Risk rating post implementation of mitigation and management measures
AEI7	Mount Victoria Sewerage Treatment Plant and effluent outflow area	<b>Source:</b> Discharge of untreated sewage and effluent <b>CoPC:</b> Heavy metals, PAH, TPH, TRH, VOCs including BTEXN, SVOCs including phenols and OCPs, nutrients PFAS <b>Media:</b> Soil, sediment, surface water and groundwater	Direct contact, inhalation, dust, leaching of soil and sediment contaminants into groundwater and surface water, sediment, groundwater and surface water flow	Site workers and visitors, intrusive maintenance workers, beneficial users of registered groundwater bores in proximity to the project, workers and visitors on adjacent properties, recreational users of surface water bodies and tributaries, terrestrial soil biota, terrestrial and aquatic flora and fauna	Construction: No Operation: No	NA	NA
AEI8	Covered stockpiles adjacent to Valley View Road Blackheath	<b>Source:</b> Unknown fill <b>CoPC:</b> Heavy metals, PAH, TPH, TRH, BTEXN, VOCs, SVOCs, Phenols, OCPs, nutrients, asbestos (bonded/friable), PCBs, PFAS <b>Media:</b> Soil, soil vapour, ground gas, sediment and surface water and groundwater	Direct contact, inhalation, dust, leaching of soil and sediment contaminants into groundwater and surface water, sediment, groundwater and surface water flow, vapour and gas migration	Site workers and visitors, intrusive maintenance workers, beneficial users of registered groundwater bores in proximity to the project, workers and visitors on adjacent properties, recreational users of surface water bodies and tributaries, terrestrial soil biota, terrestrial and aquatic flora and fauna	Construction: No Operation: No	NA	NA
AEI9	Areas of possible	<b>Source:</b> Uncontrolled fill	Direct contact, inhalation, dust,	Site workers and visitors, intrusive maintenance	Construction: No	NA	NA

ID	AEI	Source, CoPC and Media	Pathway	Receptor	Potentially complete S P R	Risk rating pre implementation of mitigation and management measures	Risk rating post implementation of mitigation and management measures
	historical landfilling in Blackheath Tip (yet to be remediated), Blackheath Oval/Jubilee Park, Eltham Park, Mountain Christian College	<b>CoPC:</b> Heavy metals, PAH, TPH, TRH, BTEXN, VOCs, SVOCs, Phenols, OCPs, nutrients, asbestos (bonded/friable), PCBs, PFAS, biological/microbiological and pathogens <b>Media:</b> Soil, soil vapour, ground gas, sediment and surface water and groundwater	leaching of soil and sediment contaminants into groundwater and surface water, sediment, groundwater and surface water flow, vapour and gas migration	workers, beneficial users of registered groundwater bores in proximity to the project, workers and visitors on adjacent properties, recreational users of surface water bodies and tributaries, terrestrial soil biota, terrestrial and aquatic flora and fauna	Operation: No		
AEI10	Weber's Nursery and Wood You Believe Firewood	<b>Source:</b> Direct application of pesticides and herbicides or storage of materials treated with termiticides <b>CoPC:</b> OCPs, OPPs, herbicides, termiticides (arsenic), nutrients (ammonia, nitrate, nitrite, phosphorous) <b>Media:</b> Soil, soil vapour, sediment, surface water and groundwater	Direct contact, inhalation, dust, leaching of soil and sediment contaminants into groundwater and surface water, sediment, groundwater and surface water flow	Site workers and visitors, intrusive maintenance workers, beneficial users of registered groundwater bores in proximity to the project, workers and visitors on adjacent properties, recreational users of surface water bodies and tributaries, terrestrial soil biota, terrestrial and aquatic flora and fauna	Construction: No Operation: No	NA	NA
AEI11*	Areas of possible historical	<b>Source:</b> Uncontrolled fill <b>CoPC:</b> Heavy metals, PAH, TPH, TRH,	Direct contact, inhalation, dust, leaching of soil	Site workers and visitors, intrusive maintenance workers, beneficial users	Construction: Yes	Construction: Medium Operation: Low	Construction: Low Operation: Low



ID	AEI	Source, CoPC and Media	Pathway	Receptor	Potentially complete S P R	Risk rating pre implementation of mitigation and management measures	Risk rating post implementation of mitigation and management measures
	landfilling adjacent to Soldiers Pinch, Browntown Oval and Great Western Highway roadworks/ cut and fill areas	BTEXN, VOCs, SVOCs, Phenols, OCPs, nutrients, asbestos (bonded/friable), PCBs, PFAS, biological/microbiological and pathogens <b>Media:</b> Soil, soil vapour, ground gas and groundwater	and sediment contaminants into groundwater and surface water, sediment, groundwater and surface water flow, vapour and gas migration	of registered groundwater bores in proximity to the project, workers and visitors on adjacent properties, recreational users of surface water bodies and tributaries, terrestrial soil biota, terrestrial and aquatic flora and fauna	Operation: No		
AEI12*	Illegal dumping	<b>Source:</b> Dumping of waste and potentially contaminated materials on soils beside the road/rail corridor <b>CoPC:</b> Heavy metals, PAHs, TPH/TRH, VOCs including BTEXN, PFAS and asbestos <b>Media:</b> Soil, sediment, surface water and groundwater	Direct contact, inhalation, dust, leaching of soil and sediment contaminants into groundwater and surface water, sediment, groundwater and surface water flow	Site workers and visitors, intrusive maintenance workers, beneficial users of registered groundwater bores in proximity to the project, workers and visitors on adjacent properties, recreational users of surface water bodies and tributaries, terrestrial soil biota, terrestrial and aquatic flora and fauna	Construction: Yes Operation: Yes	Construction: Medium Operation: Medium	Construction: Low Operation: Low
AEI13	Lolly Bug Little Hartley former	<b>Source:</b> Leaks and spills from underground petroleum storage	Direct contact, inhalation, dust, leaching of soil and sediment	Site workers and visitors related to construction of the water pipeline, intrusive maintenance	Construction: Yes Operation: No	Construction: Medium Operation: Low	Construction: Low Operation: Low

ID	AEI	Source, CoPC and Media	Pathway	Receptor	Potentially complete S P R	Risk rating pre implementation of mitigation and management measures	Risk rating post implementation of mitigation and management measures
	service station	infrastructure/automotive repair work <b>CoPC:</b> Heavy metals, PAH, TPH, TRH, BTEXN, VOCs, PFAS, asbestos <b>Media:</b> Soil, soil vapour, sediment, surface water and groundwater	contaminants into sediment and surface water flow	workers, workers and visitors on adjacent properties, recreational users of surface water bodies and tributaries, terrestrial soil biota, terrestrial and aquatic flora and fauna			
AEI14*	Vehicle crashes and spills	<b>Source:</b> Spill of fuel and potential for use of firefighting foam containing PFAS <b>CoPC:</b> Heavy metals, PAH, TPH, TRH, BTEXN, VOCs, PFAS <b>Media:</b> Soil, sediment, surface water and groundwater	Direct contact, inhalation, dust, leaching of soil and sediment contaminants into groundwater and surface water, sediment, groundwater and surface water flow	Site workers and visitors, intrusive maintenance workers, beneficial users of registered groundwater bores in proximity to the project, workers and visitors on adjacent properties, recreational users of surface water bodies and tributaries, terrestrial soil biota, terrestrial and aquatic flora and fauna	Construction: Yes Operation: Yes	Construction: Medium Operation: Medium	Construction: Low Operation: Low
AEI15*	Previously demolished historical buildings	<b>Source:</b> Demolition and potential for burial of buildings materials which contain hazardous substances <b>CoPC:</b> lead and asbestos	Direct contact, inhalation, dust, leaching of soil and sediment contaminants into groundwater	Site workers and visitors, intrusive maintenance workers, beneficial users of registered groundwater bores in proximity to the project, workers and visitors on adjacent	Construction: Yes Operation: No	Construction: Medium Operation: Low	Construction: Low Operation: Low

ID	AEI	Source, CoPC and Media	Pathway	Receptor	Potentially complete S P R	Risk rating pre implementation of mitigation and management measures	Risk rating post implementation of mitigation and management measures
		<b>Media:</b> Soil, sediment, surface water and groundwater	and surface water, sediment, groundwater and surface water flow	properties, recreational users of surface water bodies and tributaries, terrestrial soil biota, terrestrial and aquatic flora and fauna			
AEI16	Former Little Hartley airfield	<b>Source:</b> Leaks and spills from underground petroleum storage infrastructure/refuelling, leaks and spills from storage of aqueous film forming foam containing PFAS and during hose clearing <b>CoPC:</b> Heavy metals, PAH, TPH, TRH, BTEXN, PFAS <b>Media:</b> Soil, sediment, surface water and groundwater	Direct contact, inhalation, dust, leaching of soil and sediment contaminants into surface water, sediment and surface water flow	Site workers and visitors related to construction of the water pipeline, intrusive maintenance workers, workers and visitors on adjacent properties, recreational users of surface water bodies and tributaries, terrestrial soil biota, terrestrial and aquatic flora and fauna	Construction: Yes Operation: No	Construction: Medium Operation: Low	Construction: Low Operation: Low
AEI17*	Historical use pesticides and herbicides	<b>Source:</b> Direct application of pesticides and herbicides <b>CoPC:</b> OCPs, OPPs, herbicides, termiticides (arsenic), nutrients (ammonia, nitrate, nitrite, phosphorous)	Direct contact, inhalation, dust, leaching of soil and sediment contaminants into groundwater and surface	Site workers and visitors, intrusive maintenance workers, beneficial users of registered groundwater bores in proximity to the project, workers and visitors on adjacent properties, recreational	Construction: Yes Operation: No	Construction: Medium Operation: Low	Construction: Low Operation: Low

ID	AEI	Source, CoPC and Media	Pathway	Receptor	Potentially complete S P R	Risk rating pre implementation of mitigation and management measures	Risk rating post implementation of mitigation and management measures
		<b>Media:</b> Soil, sediment, surface water and groundwater	water, sediment, groundwater and surface water flow	users of surface water bodies and tributaries, terrestrial soil biota, terrestrial and aquatic flora and fauna			
AEI18*	Coal seam gas	<b>Source:</b> Disturbance during tunnelling <b>CoPC:</b> Dissolved methane and hydrogen sulfide (gas and dissolved) <b>Media:</b> Soil, soil vapour and groundwater	Direct contact, inhalation, dust, leaching of soil and sediment contaminants into groundwater and surface water, sediment, groundwater and surface water flow, vapour migration	Site workers and visitors, intrusive maintenance workers, beneficial users of registered groundwater bores in proximity to the project, workers and visitors on adjacent properties, recreational users of surface water bodies and tributaries, terrestrial soil biota, terrestrial and aquatic flora and fauna	Construction: Yes Operation: No	Construction: Medium Operation: Low	Construction: Low Operation: Low
AEI19*	Potential acid forming rock	<b>Source:</b> Disturbance/oxidation during tunnelling <b>CoPC:</b> Low pH <b>Media:</b> Soil and groundwater	Direct contact, inhalation, dust, leaching of soil and sediment contaminants into groundwater and surface water, sediment, groundwater	Site workers and visitors, intrusive maintenance workers, beneficial users of registered groundwater bores in proximity to the project, workers and visitors on adjacent properties, recreational users of surface water bodies and tributaries,	Construction: Yes Operation: No	Construction: Medium Operation: Low	Construction: Low Operation: Low



ID	AEI	Source, CoPC and Media	Pathway	Receptor	Potentially complete S P R	Risk rating pre implementation of mitigation and management measures	Risk rating post implementation of mitigation and management measures
			and surface water flow	terrestrial soil biota, terrestrial and aquatic flora and fauna			
AEI20	CSR Building Products Clay/Shale, Structural Clay Mine	<b>Source:</b> Leaks and spills from storage of fuel, refuelling plant and machinery, maintenance activities on plant and machinery and potential import of uncontrolled fill material to fill in mined areas <b>CoPC:</b> Heavy metals, PAHs, TPH/TRH, VOCs including BTEXN, PFAS and asbestos <b>Media:</b> Soil, sediment, surface water and groundwater	Direct contact, inhalation, dust, leaching of soil and sediment contaminants into groundwater and surface water, sediment, groundwater and surface water flow	Site workers and visitors, intrusive maintenance workers, beneficial users of registered groundwater bores in proximity to the project, workers and visitors on adjacent properties, recreational users of surface water bodies and tributaries, terrestrial soil biota, terrestrial and aquatic flora and fauna	Construction: Yes Operation: No	Construction: Medium Operation: Low	Construction: Low Operation: Low

\* General areas of environmental interest

## 4.0 Assessment of construction impacts

### 4.1 Construction compounds and construction footprint

The assessment of impacts for the construction compounds and construction footprint and risk rankings is presented in Table 4-1. It is noted that the risk rankings presented in Table 4-1 are prior to the implementation of the management measures identified in Section 7.0 (Management of impacts). Following the implementation of management measures, it is anticipated that identified medium risk rankings for the construction of the project will ultimately present a low risk.

Table 4-1 Assessment of construction impacts – compounds and construction footprint

Area	Construction works	Potential contamination impacts associated with construction phase	Likelihood of soil or groundwater contamination to be present	Consequence	Pre mitigation risk
Blackheath construction compound	<ul style="list-style-type: none"> <li>Blackheath portal construction</li> <li>tunnel boring machine (TBM) retrieval</li> <li>stockpile and spoil handling</li> <li>surface road upgrade works including landscaping</li> <li>construction worker amenities/facilities and parking</li> <li>construction material and equipment storage</li> <li>construction water treatment plant</li> <li>construction power and ventilation</li> <li>construction ventilation plant including clean air intake (fans and ducting)</li> <li>construction of: <ul style="list-style-type: none"> <li>tunnel operations facility</li> <li>ventilation building and ventilation outlet (only for the ventilation outlet option if progressed)</li> <li>tunnel deluge system</li> <li>permanent electricity substation</li> <li>surface and tunnel drainage infrastructure</li> </ul> </li> </ul>	<p>AEIs near this area include:</p> <ul style="list-style-type: none"> <li>AEI15: historical aerial photographs identified demolition of buildings east of the Great Western Highway</li> <li>AEI14: vehicle crashes and spills along the Great Western Highway</li> <li>AEI12: illegal dumping on publicly accessible properties and adjacent Great Western Highway</li> <li>AEI17: historical use of pesticides and herbicides on agricultural land and waterways in the vicinity of the tunnel alignment and proposed construction compounds</li> <li>AEI11: Great Western Highway cut and fill activities.</li> </ul> <p>The works would include excavation of the access shaft for the construction of the mainline tunnel; and minor excavations at the surface may occur. Temporary stockpiling would also occur. Cross contamination associated with the incorrect handling or disposal of spoil/unexpected finds is a potential impact during construction if appropriate controls and handling procedures are not implemented.</p>	Potentially present at concentrations above the relevant assessment criteria and widespread.	Exposure pathway for human or ecological receptors likely to be present and complete during construction (without implementation of appropriate controls).	Medium <sup>4</sup>

<sup>4</sup> Based on no available or inadequate soil and/or groundwater data for the construction footprint. This will be addressed in the Stage 2 DSI and risk ranking updated.

Area	Construction works	Potential contamination impacts associated with construction phase	Likelihood of soil or groundwater contamination to be present	Consequence	Pre mitigation risk
	<ul style="list-style-type: none"> <li>drainage infrastructure delivered as part of the Katoomba to Blackheath Upgrade would be used during construction of the project</li> <li>a new water supply pipeline between Little Hartley and Lithgow.</li> </ul>	<p>Use of the site as a construction compound also has the potential for leaks and spills from plant and machinery.</p> <p>Potential pathways could be through:</p> <ul style="list-style-type: none"> <li>direct contact, ingestion and inhalation by construction workers</li> <li>off-site transport via dust, vehicle/plant movements</li> <li>surface water runoff and discharge to receiving environment</li> <li>groundwater extraction and discharge to receiving environment.</li> </ul>			
Soldiers Pinch construction compound	<ul style="list-style-type: none"> <li>mid-tunnel access shaft and adit construction</li> <li>access to carry out TBM maintenance</li> <li>construction ventilation plant including clean air intake (fans and ducting) once tunnelling has progressed to Soldiers Pinch</li> <li>construction worker amenities/facilities and parking</li> <li>material and equipment storage</li> <li>construction water treatment plant</li> <li>construction power and ventilation</li> <li>in-tunnel civil finishing works and fit-out.</li> </ul>	<p>AEIs near this area include:</p> <ul style="list-style-type: none"> <li>AEI11: historical aerial photographs identified potential historical landfilling adjacent to Soldiers Pinch and Great Western</li> <li>AEI14: vehicle crashes and spills along the Great Western Highway</li> <li>AEI12: illegal dumping on publicly accessible properties and adjacent Great Western Highway or rail corridor.</li> </ul> <p>The works would include excavation of the mid-point access shaft for the construction of the mainline tunnel; and minor excavations at the surface may occur. Temporary stockpiling would also occur. Cross contamination associated with the</p>	Potentially present at concentrations above the relevant assessment criteria and widespread.	Exposure pathway for human or ecological receptors likely to be present and complete during construction (without implementation of appropriate controls).	Medium <sup>5</sup>

<sup>5</sup> Based on no available or inadequate coverage soil and/or groundwater data for the construction compound footprint. This will be addressed in the Stage 2 DSI and risk ranking updated.



Area	Construction works	Potential contamination impacts associated with construction phase	Likelihood of soil or groundwater contamination to be present	Consequence	Pre mitigation risk
		<p>incorrect handling or disposal of spoil/unexpected finds is a potential impact during construction if appropriate controls and handling procedures are not implemented.</p> <p>Use of the site as an ancillary construction facility also has the potential for leaks and spills from plant and machinery.</p> <p>Potential pathways could be through:</p> <ul style="list-style-type: none"> <li>• direct contact, ingestion and inhalation by construction workers</li> <li>• off-site transport via dust, vehicle/plant movements</li> <li>• surface water runoff and discharge to receiving environment</li> </ul> <p>groundwater extraction and discharge to receiving environment.</p>			
Little Hartley construction compound	<ul style="list-style-type: none"> <li>• Little Hartley portal construction</li> <li>• TBM support including segment storage, assembly and launch</li> <li>• stockpile and spoil handling</li> <li>• grout plant and bentonite silo</li> <li>• surface road upgrade works including landscaping</li> <li>• construction ventilation plant including clean air intake (fans and ducting)</li> </ul>	<p>AEIs near this area include:</p> <ul style="list-style-type: none"> <li>• AEI20: CSR Building Products Clay/Shale, Structural Clay Mine 450 m south of the construction compound</li> <li>• AEI15: demolition of buildings adjacent the Great Western Highway within the proposed construction compound</li> <li>• AEI16: former Little Hartley airfield, located 1.25 km north-west of the Little Hartley construction compound</li> </ul>	Potentially present at concentrations above the relevant assessment criteria and widespread.	Exposure pathway for human or ecological receptors likely to be present and complete during construction (without implementation)	Medium <sup>6</sup>

<sup>6</sup> Based on no available or inadequate coverage soil and/or groundwater data for the construction compound footprint. This will be addressed in the Stage 2 DSI and risk ranking updated.

Area	Construction works	Potential contamination impacts associated with construction phase	Likelihood of soil or groundwater contamination to be present	Consequence	Pre mitigation risk
	<ul style="list-style-type: none"> <li>construction worker amenities/facilities and parking</li> <li>material and equipment storage</li> <li>construction water treatment plant</li> <li>construction power and ventilation</li> <li>construction of: <ul style="list-style-type: none"> <li>ventilation building and ventilation outlet (only for the ventilation outlet option if progressed)</li> <li>operational water treatment plant</li> <li>surface and tunnel drainage infrastructure</li> </ul> </li> <li>drainage infrastructure delivered for the Little Hartley to Lithgow Upgrade would be used during construction of the project</li> <li>a new water supply pipeline between Little Hartley and Lithgow.</li> </ul>	<ul style="list-style-type: none"> <li>AEI14: vehicle crashes and spills along the Great Western Highway</li> <li>AEI12: illegal dumping on publicly accessible properties and adjacent Great Western Highway</li> <li>AEI17: historical use of pesticides and herbicides on agricultural land and waterways in the vicinity of the tunnel alignment and proposed construction compound</li> <li>AEI13: Lolly Bug Little Hartley former service station, located 730 m north-west of the Little Hartley construction compound</li> <li>AEI11: Great Western Highway cut and fill activities.</li> </ul> <p>The works would include excavation of the access shaft for the construction of the mainline tunnel; and minor excavations at the surface may occur. Temporary stockpiling would also occur. Cross contamination associated with the incorrect handling or disposal of spoil/unexpected finds is a potential impact during construction if appropriate controls and handling procedures are not implemented. Use of the site as a construction compound also has the potential for leaks and spills from plant and machinery. Potential pathways could be through:</p> <ul style="list-style-type: none"> <li>direct contact, ingestion and inhalation by construction workers</li> </ul>		of appropriate controls).	

Area	Construction works	Potential contamination impacts associated with construction phase	Likelihood of soil or groundwater contamination to be present	Consequence	Pre mitigation risk
		<ul style="list-style-type: none"> <li>off-site transport via dust, vehicle/plant movements</li> <li>surface water runoff and discharge to receiving environment</li> <li>groundwater extraction and discharge to receiving environment.</li> </ul>			
Blackheath, Soldiers Pinch and Little Hartley construction footprints	<ul style="list-style-type: none"> <li>Site establishment works including:               <ul style="list-style-type: none"> <li>utility relocation, adjustment and protection where the project may affect existing utilities, including relocation of the Sydney Trains 66kV line near Evans Lookout Road at Blackheath</li> <li>intersection upgrades to establish safe access to construction compounds including:                   <ul style="list-style-type: none"> <li>permanent upgrade of the Great Western Highway / Evans Lookout Road to access the Blackheath construction compound</li> <li>permanent upgrade of the Great Western Highway / Browntown Oval access road to access the Soldiers Pinch construction compound</li> </ul> </li> </ul> </li> </ul>	AEs near this area include: <ul style="list-style-type: none"> <li>AEI11: areas of possible historical landfilling adjacent to Soldiers Pinch and Great Western Highway roadworks/cut and fill areas</li> <li>AEI12: illegal dumping on publicly accessible properties and adjacent Great Western Highway or rail corridor</li> <li>AEI13: Lolly Bug Little Hartley former service station, located 730 m north-west of the Little Hartley construction compound</li> <li>AEI14: vehicle crashes and spills along the Great Western Highway</li> <li>AEI15: Previously demolished historical buildings (observed at Blackheath in historical aerial photographs) and if required at Little Hartley construction compound</li> </ul>	Potentially present at concentrations above the relevant assessment criteria and widespread.	Exposure pathway for human or ecological receptors likely to be present and complete during construction (without implementation of appropriate controls).	Medium <sup>7</sup>

<sup>7</sup> Based on no available or inadequate coverage soil and/or groundwater data for the site establishment areas. This will be addressed in the Stage 2 DSI and risk ranking updated.

Area	Construction works	Potential contamination impacts associated with construction phase	Likelihood of soil or groundwater contamination to be present	Consequence	Pre mitigation risk
	<ul style="list-style-type: none"> <li>▪ establishment of a temporary intersection on the Great Western Highway at Little Hartley to access the Little Hartley construction compound</li> <li>- vegetation clearance and minor earthworks to provide access to and level the construction compounds in preparation for use</li> <li>- formalisation of an access track to provide access to Soldiers Pinch construction compound</li> <li>- establishment of site facilities including amenities, site offices, acoustic shed, temporary ventilation, grout plant, site utilities</li> <li>- establishment of construction water treatment equipment including sediment basins and a water treatment plant</li> <li>• a new water supply pipeline between Little Hartley and Lithgow.</li> </ul>	<ul style="list-style-type: none"> <li>• AEI16: former Little Hartley airfield, located 1.25 km north-west of the Little Hartley construction compound</li> <li>• AEI17: historical use of pesticides and herbicides on agricultural land and waterways in the vicinity of the tunnel alignment and proposed construction compounds.</li> <li>• AEI20: CSR Building Products Clay/Shale, Structural Clay Mine 450 m south of the construction footprint</li> </ul> <p>The works would include excavation for installation and relocation of utilities; and minor excavations at the surface may occur. Temporary stockpiling would also occur. Cross contamination associated with the incorrect handling or disposal of spoil/unexpected finds is a potential impact during construction if appropriate controls and handling procedures are not implemented.</p> <p>Short term use of areas within the project for site establishment works also has the potential for leaks and spills from plant and machinery.</p> <p>Potential pathways could be through:</p> <ul style="list-style-type: none"> <li>• direct contact, ingestion and inhalation by construction workers</li> <li>• off-site transport via dust, vehicle/plant movements</li> </ul>			



Area	Construction works	Potential contamination impacts associated with construction phase	Likelihood of soil or groundwater contamination to be present	Consequence	Pre mitigation risk
		<ul style="list-style-type: none"> <li>surface water runoff and discharge to receiving environment</li> <li>potential to encounter perched water during excavations for utilities depth dependent.</li> </ul>			
Mid-point tunnel shaft at Soldiers Pinch and portals at Blackheath and Little Hartley	<ul style="list-style-type: none"> <li>construction activities associated with cut-and-cover structures would include: <ul style="list-style-type: none"> <li>excavation</li> <li>stabilisation and excavation support (retention systems) such as bored pile walls, soil nailing and rock anchoring</li> <li>piling works</li> <li>construction of pile capping beams</li> <li>installation of roof slabs</li> <li>installation of permanent struts and form, reinforcement and pouring of horizontal beams used for bracing and support</li> <li>waterproofing and dewatering</li> <li>finishing works.</li> </ul> </li> <li>construction of the twin tunnels would involve the following activities: <ul style="list-style-type: none"> <li>excavation of TBM launch and retrieval sites</li> <li>bored tunnel excavation and installation of segment lining</li> </ul> </li> </ul>	<p>AEIs near this area include:</p> <ul style="list-style-type: none"> <li>AEI11: areas of possible historical landfilling adjacent to Soldiers Pinch and Great Western Highway roadworks/cut and fill areas</li> <li>AEI12: illegal dumping on publicly accessible properties and adjacent Great Western Highway or rail corridor</li> <li>AEI13: Lolly Bug Little Hartley former service station, located 730 m north-west of the Little Hartley construction compound</li> <li>AEI14: vehicle crashes and spills along the Great Western Highway</li> <li>AEI15: Previously demolished historical buildings (observed at Blackheath in historical aerial photographs) and if required at Little Hartley construction compound</li> <li>AEI16: former Little Hartley airfield, located 1.25 km north-west of the Little Hartley construction compound</li> </ul>	Potentially present at concentrations above the relevant assessment criteria and widespread.	Exposure pathway for human or ecological receptors likely to be present and complete during construction (without implementation of appropriate controls).	Medium <sup>8</sup>

<sup>8</sup> Based on no available or inadequate coverage soil and/or groundwater data for the mid-point tunnel shaft or the tunnel portal footprint areas. This will be addressed in the Stage 2 DSI and risk ranking updated.

Area	Construction works	Potential contamination impacts associated with construction phase	Likelihood of soil or groundwater contamination to be present	Consequence	Pre mitigation risk
	<ul style="list-style-type: none"> <li>- excavation and structural lining of cross-passages and substations</li> <li>- excavation of mid-tunnel access shaft and caverns</li> <li>- civil finishing works and fit-out testing and commissioning.</li> <li>• tunnel support activities:               <ul style="list-style-type: none"> <li>- spoil handling and stockpiling areas</li> <li>- construction water management including a construction water treatment plant and sediment and water quality basins</li> <li>- high voltage power supply (provision of power to supply TBM operations would be subject to separate environmental assessment and approval and would be available at the site prior to the commencement of TBM operations)</li> </ul> </li> <li>• installation of coal seam gas drainage wells</li> <li>• civil finishing works               <ul style="list-style-type: none"> <li>- placement of invert backfill to underside of road pavement</li> <li>- installation of drainage systems, including sumps, pits and pipework</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• AEI17: historical use of pesticides and herbicides on agricultural land and waterways in the vicinity of the tunnel alignment and proposed construction compounds.</li> </ul> <p>The works would include excavation for cut and cover structures and installation of tunnel infrastructure. Temporary stockpiling would also occur. Cross contamination associated with the incorrect handling or disposal of spoil/unexpected finds is a potential impact during construction if appropriate controls and handling procedures are not implemented. There is also potential for leaks and spills from plant and machinery during tunnelling works.</p> <p>Potential pathways could be through:</p> <ul style="list-style-type: none"> <li>• direct contact, ingestion and inhalation by construction workers</li> <li>• off-site transport via dust, vehicle/plant movements</li> <li>• surface water runoff and discharge to receiving environment</li> <li>• groundwater extraction and discharge to receiving environment.</li> </ul>			

Area	Construction works	Potential contamination impacts associated with construction phase	Likelihood of soil or groundwater contamination to be present	Consequence	Pre mitigation risk
	<ul style="list-style-type: none"> <li>- placement of continuous reinforced concrete pavement</li> <li>- installation of service conduits and mechanical and electrical infrastructure including:               <ul style="list-style-type: none"> <li>▪ electrical and communication services and cable trays</li> <li>▪ lighting, power and surveillance systems</li> </ul> </li> <li>- installation of operational infrastructure including:               <ul style="list-style-type: none"> <li>▪ water treatment plant at Little Hartley</li> <li>▪ underground substations at around 1.5 kilometres intervals along the tunnel to connect to power supply</li> <li>▪ in-tunnel ventilation system</li> <li>▪ fire protection systems including deluge system</li> <li>▪ architectural panels</li> <li>▪ in-tunnel maintenance and breakdown bays at tunnel crossover.</li> </ul> </li> <li>- finishing of cross-passages</li> <li>• pavement construction, line marking and painting.</li> </ul>				
Little Hartley and	Surface road upgrade work would involve the following activities:	AEIs near this area include:	Potentially present at concentrations	Exposure pathway for	Medium <sup>9</sup>

<sup>9</sup> Based on no available or inadequate coverage soil and/or groundwater data for the surface road upgrade works areas. This will be addressed in the Stage 2 DSI and risk ranking updated.

Area	Construction works	Potential contamination impacts associated with construction phase	Likelihood of soil or groundwater contamination to be present	Consequence	Pre mitigation risk
Blackheath construction footprints	<ul style="list-style-type: none"> <li>earthworks</li> <li>construction of stormwater drainage</li> <li>road pavement works</li> <li>construction of road furniture and line marking, lighting and signage</li> <li>surface finishing works (e.g., signage installation, revegetation and landscaping).</li> </ul>	<ul style="list-style-type: none"> <li>AEI11: areas of possible historical landfilling adjacent to Soldiers Pinch and Great Western Highway roadworks/cut and fill areas</li> <li>AEI12: illegal dumping on publicly accessible properties and adjacent Great Western Highway or rail corridor</li> <li>AEI13: Lolly Bug Little Hartley former service station, located 730 m north-west of the Little Hartley construction compound</li> <li>AEI14: vehicle crashes and spills along the Great Western Highway</li> <li>AEI15: Previously demolished historical buildings (observed at Blackheath in historical aerial photographs) and if required at Little Hartley construction compound</li> <li>AEI16: former Little Hartley airfield, located 1.25 km north-west of the Little Hartley construction compound</li> <li>AEI17: historical use of pesticides and herbicides on agricultural land and waterways in the vicinity of the tunnel alignment and proposed construction compounds.</li> <li>AEI20: CSR Building Products Clay/Shale, Structural Clay Mine 450 m south of the construction footprint</li> </ul> <p>The works would include minor excavations at the surface. Temporary stockpiling would also occur. Cross</p>	above the relevant assessment criteria and widespread.	human or ecological receptors likely to be present and complete during construction (without implementation of appropriate controls).	



Area	Construction works	Potential contamination impacts associated with construction phase	Likelihood of soil or groundwater contamination to be present	Consequence	Pre mitigation risk
		<p>contamination associated with the incorrect handling or disposal of spoil/unexpected finds is a potential impact during construction if appropriate controls and handling procedures are not implemented. Short term use of areas within the project for site establishment works also has the potential for leaks and spills from plant and machinery.</p> <p>Potential pathways could be through:</p> <ul style="list-style-type: none"><li>• direct contact, ingestion and inhalation by construction workers</li><li>• off-site transport via dust, vehicle/plant movements</li><li>• surface water runoff and discharge to receiving environment.</li></ul>			

## **4.2 Tunnelling and groundwater treatment and discharge**

### **4.2.1 Potential contamination sources**

A review of potential contamination sources along the tunnel alignment identified as medium risk based on the presence of potential current and former contamination sources and investigation results are listed in Table 4-2. All other areas along the tunnel alignment are considered to be a low risk for substantial sources of groundwater contamination.

Table 4-2 Summary of key groundwater contamination sources relevant to proposed tunnelling

Tunnel section	Tunnelling description (proposed construction methodology subject to change during on going design development)	Identified potential source sites/areas	Pre mitigation risk
Tunnels	The project involves twin tunnels 10.4 km long. Proposed construction methodology, indicates the majority of the tunnel lining will be filled with cement-based grout, resulting in 'tanked' tunnels which will minimise groundwater ingress long-term.	Given the majority of the tunnels are likely to be constructed within bedrock and the majority of the tunnel would be tanked to minimise groundwater ingress, its considered that potential for contaminated groundwater would be low. It is noted that the cut and cover sections of each portal and the mid-point tunnel shaft are covered in the sections below.	Low
		AEI19: Potential acid forming rock may be encountered during tunnelling in particular areas.	Medium
Cross-passages	Cross-passages would connect the two tunnels at frequent intervals along their length. Construction of these cross-passages would comprise excavation followed by installation of pre-cast tunnel lining. While the excavation is stabilise, the passage would be open to groundwater ingress ('drained'). Each cross-passage has been assumed to be 'drained' for a period of 3 months, after which time waterproofing and concrete lining would be completed.	Given the cross-passages are likely within the portions of the tunnel within bedrock, its considered that potential for contaminated groundwater would be low.	Low
Mid-point access shaft	Conventional excavation methods would be used to construct the mid-point access shaft located at Soldiers Pinch, to allow development of the mid-point cavern enlargements (see below). The access shaft would be bored to 100 m below ground, terminating within the Burra-Moko Head Sandstone.	AEI11: Areas of possible historical landfilling adjacent to Soldiers Pinch and Great Western Highway roadworks/cut and fill areas.	Medium
Mid-tunnel caverns and adit	Two mid-tunnel caverns and an adit would be required for the provision of plant and machinery maintenance during construction and breakdown bays during operation. The mid-tunnel caverns would be constructed within the Burra-Moko Head Sandstone. The mid-tunnel cavern is proposed to be un-lined and therefore considered a 'drained' feature, as would the adit connecting it to the base of the access shaft.	Given the mid-tunnel caverns and adit are to be constructed within sandstone bedrock, its considered that potential for contaminated groundwater to be encountered during construction would be low.	Low

Tunnel section	Tunnelling description (proposed construction methodology subject to change during on going design development)	Identified potential source sites/areas	Pre mitigation risk
Portal – Blackheath	140-190 m of the tunnel at the Blackheath portal would be constructed as cut-and-cover. Excavation (cut) would be followed by construction of walls prior to covering to form the tunnel. These sections are proposed to be 'drained' permanently. To the immediate south of this, the GWH-Central project would connect with the GWH-East package of the GWH upgrade. The nature of the works in the GWH-East package in this area mean that there are no cumulative effects on groundwater that require consideration in the numerical model (i.e., no excavation, no aquifer "interference").	AEI11: Areas of possible historical landfilling adjacent to Great Western Highway roadworks/cut and fill areas.	Medium
		AEI12: Illegal dumping on publicly accessible properties and adjacent Great Western Highway or rail corridor	Medium
		AEI14: Vehicle crashes and spills along the Great Western Highway	Medium
		AEI15: Previously demolished historical buildings (observed at Blackheath in historical aerial photographs)	Medium
		AEI17: Historical use of pesticides and herbicides on agricultural land and waterways in the vicinity of the tunnel alignment and proposed construction compounds	Medium
Portal – Little Hartley	The last 145-180 m of the tunnel at the Little Hartley portal would be cut-and-cover sections. Excavation (cut) would be followed by construction of walls prior to covering to form the tunnel. These sections would be 'drained' permanently. To the immediate south of this, the GWH-Central project would connect with the GWH-West package of the GWH upgrade. The nature of the works in the GWH-West package in this area mean that there are no cumulative effects on groundwater that require consideration in the numerical model (i.e., no excavation, no aquifer "interference").	AEI16: Former Little Hartley airfield, located 1.25 km north-west of the Little Hartley construction compound	Medium
		AEI17: Historical use of pesticides and herbicides on agricultural land and waterways in the vicinity of the tunnel alignment and proposed construction compounds	Medium
		AEI20: CSR Building Products Clay/Shale, Structural Clay Mine 450 m south of the construction footprint	Medium
		AEI15: Previously demolished historical buildings if required at Little Hartley construction compound	Medium
		AEI14: Vehicle crashes and spills along the Great Western Highway	Medium
		AEI13: Lolly Bug Little Hartley former service station, located 730 m north-west of the Little Hartley construction compound	Medium
		AEI11: Areas of possible historical landfilling adjacent Great Western Highway roadworks/cut and fill areas.	Medium



Tunnel section	Tunnelling description (proposed construction methodology subject to change during on going design development)	Identified potential source sites/areas	Pre mitigation risk
Coal seam gas drainage	Coal seams of varying thicknesses may be directly encountered during tunnel construction between Mount Victoria and Little Hartley. Therefore, coal seam or methane gas may also be present in the surrounding geology, and the risks to safety from this would be mitigated via advance investigation and monitoring, and possibly gas drainage (refer to Appendix H (Technical Report – Human health) for further discussion). Gas drainage would involve depressurising the coal seams (of gas and water).	AEI18: Groundwater extracted from coal seams is likely to be saline and therefore unable to be directly discharged. Groundwater may also contain concentrations of dissolved methane and hydrogen sulfide, as well as some heavy metals that would require treatment prior to discharge.	Medium

#### 4.2.2 Potential impacts

During tunnel construction, groundwater would be extracted from the excavation, which would require disposal. The extracted water would be either:

- treated on-site and then discharged to a local river or to stormwater under an Environment Protection Licence (EPL), or to sewer under a trade waste agreement (TWA) from Sydney Water; or
- transported to a liquid waste facility for offsite disposal.

There is a potential for shallow tunnelling (such as near portals, adits or cut-and-cover tunnels) to encounter impacted groundwater from sources such as areas of landfilling, illegal dumping and vehicle crashes and spills along the Great Western Highway, Lolly Bug Little Hartley former service station, Little Hartley former airfield and the historical demolition of buildings with lead paint and use of pesticides and herbicides on agricultural land and waterways.

The likelihood of encountering plumes of high concentrations of contaminants or non-aqueous phase liquids (NAPL) is likely to be low given that most of the tunnel would be tanked limiting groundwater ingress, there is only one former service station in proximity to the Little Hartley portal and there are no sites that are regulated by the NSW EPA within the vicinity of the project. There are limited groundwater data from previous environmental investigations (refer Annexure D) and therefore groundwater sampling is required to characterise the groundwater that may require extraction as part of dewatering. The groundwater may require treatment to meet water quality requirements prior to discharge to the receiving environment and/or depending on the conditions of the EPL and/or licensed facility accepting the wastewater.

Groundwater sampling will be undertaken as part of the geotechnical investigations and as part of the Stage 2 DSI.

Further groundwater investigations would be completed during detailed design to confirm the likely concentrations of contaminants so that the water treatment plants are adequately designed and are able to meet discharge quality requirements. The investigations would target areas of medium risk as well as spatial coverage to enable reliable estimates of the expected concentrations of contaminants in groundwater.

Potential impacts on receiving water bodies and ecological receptors through the disturbance of potentially contaminated sediments associated with the construction could occur at the following locations if no mitigation and management measures are implemented:

- Grose River – the surface works at the Blackheath end of the project would be located within the Grose River sub-catchment and would drain to Grose River via a series of tributaries located immediately downstream of the existing Great Western Highway. Grose River flows over 60km in an easterly direction and eventually connects to the Hawkesbury River at its origin, located approximately 30km east of the project.
- Coxs River – the surface works at the Little Hartley and Soldiers Pinch areas would be located within the Coxs River sub-catchment, and the majority of the project tunnels would be located beneath it. This catchment starts to drain in a westerly direction before it turns south, loops around to the east and drains back north towards the Hawkesbury River. Runoff from the western portion of the project would drain to Butlers Creek, then River Lett and Coxs River and eventually feed into Lake Burragorang. Discharge from Lake Burragorang is controlled at the Warragamba Dam and flows into the upstream end of the Nepean River. The Nepean River then merges with Grose River to become the Hawkesbury River.
- the project would be located along and close to the boundary between the Coxs River and Grose River water catchments at the top of Sydney's drinking water catchment (Coxs River), which drains to Lake Burragorang and Warragamba Dam to the south. The project tunnels would be located beneath the ridge line that separates the two catchments, while surface works at Blackheath would be located predominantly in the Grose River catchment and the surface works at Soldiers Pinch and Little Hartley in the Coxs River Catchment.

- the project is also within the following two water sources which form part of the Water Sharing Plan for the Greater Metropolitan Region Unregulated River Water Sources 2011:
  - Upper Nepean and Upstream Warragamba Water Source
  - Hawkesbury and Lower Nepean Rivers Water Source.
- the project is located adjacent to the Blue Mountains National Park and Blue Mountains World Heritage area. As noted in Appendix M (Technical report – Non-Aboriginal heritage) the Greater Blue Mountains Area is listed on the world heritage list and national heritage list, its significance is assessed under the World Heritage significance criteria and the National Heritage significance criteria. Further information is provided in Appendix M.
- potential for pollution in runoff and increases in runoff volume to damage the peat swamps at Blackheath, Soldier's Pinch and Little Hartley.
- acidification of runoff from oxidation of inadequately treated potential acid forming rock around Little Hartley

Further information on surface water impacts is discussed in Appendix J (Technical Report – Surface water and flooding) of the EIS.

Potential impacts on workers include exposure to extracted contaminated groundwater from either direct contact or inhalation of hydrocarbon vapours or gases, which would require management in accordance with protocols outlined in a site-specific occupational health and safety plan and safe work method statement specific to the work activity being conducted.

Dewatering during construction works may cause changes in the migration of plumes of contaminated groundwater, by changing groundwater gradients and drawing the contamination towards the tunnel. This is most likely in areas where the tunnels are shallow and approaching the surface at Blackheath and Little Hartley, including the cut and cover sections and at the Soldiers Pinch mid-point shaft as discussed further in Appendix I (Technical report – Groundwater) of the EIS. As noted above, groundwater modelling and groundwater analytical data will provide information on water quality and groundwater migration prior to and during construction.

Construction water treatment plants are proposed at Blackheath, Little Hartley and Soldiers Pinch construction compounds, treated groundwater would either be discharged to a local river or disposed via sewer. The treatment plants are designed to treat construction water and groundwater inflows encountered during tunnel construction. Temporary construction water treatment and sedimentation ponds would be used at all construction compounds – Blackheath, Little Hartley and Soldiers Pinch.

Discharge criteria are presented and discussed in Appendix J (Technical Report – Surface water and flooding) of the EIS, along with further details on construction wastewater treatment. Where feasible and reasonable, construction wastewater would be treated such that discharge concentrations would be equal to or less than the discharge criteria set for the receiving waterways. The criteria have been developed in accordance with ANZG (2018) and with consideration to the NSW WQOs.

## 5.0 Assessment of operational impacts

### 5.1 Operational sites

For the purposes of this contamination assessment, identified operational impacts primarily relate to the potential contamination of soil, surface water and groundwater arising from vehicle accidents, leaks and spills on constructed project roadways including tunnels and operational facilities e.g. ventilation, water treatment and substations.

To manage spills and leaks associated with vehicle accidents during the operation of the project, spill containment facilities would be located in tunnels and where the risk of impact from spills is high. A risk assessment of all project roads would be carried out during detailed design to determine the final locations of these facilities. Typically, they would be located on highway sections where the chance of vehicle accidents is higher. This risk assessment would also take into account proximity to waterways, where the risk of harm to aquatic environments is assessed to be greater.

Potential contamination impacts associated with the presence of roads and permanent operational infrastructure such as tunnel operations facilities and associated infrastructure (ventilation facilities, water treatment plants and substations etc.) is presented in Table 5-1.

Table 5-1 Assessment of operational impacts – operational facilities

Area	Operation	Potential contamination impacts associated with operation	Pre mitigation risk
Tunnel operations facility adjacent to the Blackheath portal	<p>The tunnel operations facility would be located adjacent to the Blackheath portal, just south of Evans Lookout Road and comprise an area of around 5,500 square metres.</p> <p>Access to the tunnel operations facility would be via the tunnel off-ramp that connects the eastbound tunnel to the existing Great Western Highway or via the eastbound connection from Blackheath onto the existing Great Western Highway. The tunnel operations facility would operate 24 hours a day, seven days a week and be continuously staffed to monitor and respond to conditions in the tunnels and on surface road connections. Operational staff parking would be provided adjacent to the tunnel operations facility</p>	<ul style="list-style-type: none"> <li>contamination impacts associated with the operation of the project include leaks and spills on constructed roadways from vehicles and vehicle accidents</li> <li>sources of contamination could be from small volumes of oils, fuels, solvents and other chemicals used for operation and maintenance if not stored and handled in accordance with regulations.</li> </ul>	Medium
Ventilation Facilities and associated infrastructure – Blackheath and Little Hartley	<p>The tunnel ventilation system would include:</p> <ul style="list-style-type: none"> <li>jet fans</li> <li>cross passage pressurisation</li> <li>two potential alternate options for tunnel ventilation design including ventilation buildings and ventilation outlets (ventilation outlet option) or portal emissions (portal emissions option)</li> <li>air quality monitoring.</li> </ul> <p>Two options for ventilation facilities are being considered for the project</p> <p>1. Ventilation outlet option</p> <p>This option would include a ventilation building and ventilation outlet at the tunnel portals at Blackheath and Little Hartley</p> <p>Each ventilation building would be located underground to minimise visual impacts and integrate with the surrounding landform and comprise an area of around 2,000 square metres. Each ventilation outlet would extend to around 10 metres above surface level.</p> <p>2. Portal emissions option</p> <p>For this option tunnel emissions would be dispersed via the tunnel portals. Tunnel portal emissions would mean that ventilation outlets and buildings are not required to disperse tunnel emissions. Instead, air would be moved through the tunnels by the movement of vehicles (the piston effect), or by jet fans and dispersed at the portal locations</p>	<ul style="list-style-type: none"> <li>minimal soil or groundwater contamination impacts would be expected from the operation of the substation and ventilation facility (Option 1)</li> <li>negligible soil or groundwater contamination impacts expected from operation of portal emissions infrastructure (Option 2)</li> <li>sources of contamination could be from small volumes of oils, fuels, solvents and other chemicals used for operation and maintenance if not stored and handled in accordance with regulations.</li> </ul>	Low



Area	Operation	Potential contamination impacts associated with operation	Pre mitigation risk
Water treatment plant Little Hartley	An operational water treatment plant would be located at Little Hartley. The water treatment plant would primarily provide treatment of: <ul style="list-style-type: none"> <li>groundwater collected within the tunnel prior to its discharge to the environment</li> <li>water collected by the tunnel surface drainage system (which, for example, would include treatment of deluge water associated with the fire and life safety system).</li> </ul>	<ul style="list-style-type: none"> <li>minimal soil or groundwater contamination impacts would be expected from the operation of the water treatment plant</li> <li>sources of contamination could be from small volumes of oils, fuels, solvents and other chemicals used for operation and maintenance if not stored and handled in accordance with regulations and from leaks and spills of untreated wastewater.</li> </ul>	Medium
Sediment and water quality basins Blackheath and Little Hartley	Surface drainage for the project would include a combination of drainage pits and pipes, drains, headwalls with scour protection and detention basins. The treatment of surface runoff from the upgrade would be designed in line with Neutral or Beneficial Effect (NorBE) requirements as outlined by Water NSW since the upgrade would drain to the Sydney Drinking Water Catchment.	<ul style="list-style-type: none"> <li>minimal soil or groundwater contamination impacts would be expected from the operation of the sediment and water quality basins and</li> <li>sources of contamination could be from spills of untreated surface water and in appropriate management of any contaminated sediments</li> </ul>	Medium
Other features	<ol style="list-style-type: none"> <li>Utility connections (including water pipeline from Little Hartley to Lithgow) and modifications</li> <li>Landscaping.</li> </ol>	<ul style="list-style-type: none"> <li>minimal soil or groundwater contamination impacts would be expected from the utility connections and landscaping</li> <li>sources of contamination could be from small volumes of oils, fuels, solvents and other chemicals used for operation and maintenance if not stored and handled in accordance with regulations and from leaks and spills, inappropriate soil management practices during installation of utilities, spills and leaks from plant and machinery and not assessing imported materials</li> </ul>	Medium

## 5.2 Tunnel groundwater treatment and discharge

During operation, groundwater seepage, stormwater drainage at tunnel portals, tunnel wash-down water, fire suppressant deluge or fire main rupture and spillage of flammable and other hazardous materials would be captured by the tunnel drainage system. The captured water would be treated and discharged to the receiving water bodies. If the discharged water is not treated to the required standard there could be adverse impacts on water quality of the receiving environments.

As described in Section 4.2, groundwater quality may be impacted along parts of the tunnel alignment due to overlying contamination sources impacting groundwater. As discussed in Appendix I (Technical report – Groundwater), the mainline tunnels have been aligned to minimise intersecting highly permeable material that could result in high groundwater inflows into the tunnels. As noted in Appendix I (Technical report – Groundwater), the proposed tunnel alignment avoids unsuitable geology that lies to the east of the project alignment. It is understood that based on the proposed construction methodology, which is subject to change during on-going design development, sections of the tunnel and associated features will be drained and there is potential for minimal groundwater ingress at times during construction and operation.

Therefore, there is potential for source-pathway-receptor linkages for groundwater. Groundwater analytical data will provide information on groundwater quality which will inform management and mitigation measures relevant to exposure and treatment.

Assessment on the potential impacts to surface water receiving environments and proposed treatment and management is provided in Appendix J (Technical report – Surface water and flooding) and Chapter 14 (Surface water and flooding) of the EIS.

An assessment of the expected groundwater seepage rates and groundwater drawdown which may have an effect on existing or future groundwater contamination plumes is provided in Appendix I (Technical report – Groundwater).

## 6.0 Assessment of cumulative impacts

Cumulative impacts have the potential to occur when benefits or impacts from a project overlap or interact with those of other projects, potentially resulting in a larger overall effect (positive or negative) on the environment or local communities. Cumulative impacts may occur when projects are constructed or operated concurrently or consecutively. Once the project is operational, other projects which interrelate may enhance the project and create positive cumulative benefits.

Projects were reviewed against the following screening criteria for this cumulative impact assessment:

- spatially relevant (i.e., the development or activity overlaps with, is adjacent to or within two kilometres of the project)
- timing (i.e., the expected timing of its construction and/or operation overlaps or occurs consecutively to construction and/or operation of the project)
- scale (i.e., large-scale major development or infrastructure projects that have the potential to result in cumulative impacts with the project; as listed on the NSW Government Major project website and on the relevant council websites)
- status (i.e., projects in development with sufficient publicly available information to inform this environmental impact statement and with an adequate level of detail to assess the potential cumulative impacts).

Projects identified as contributing to potential cumulative impacts have met these criteria and include:

- Katoomba to Blackheath Upgrade – construction expected to commence in 2023 and complete in 2027 (including Medlow Bath Upgrade – construction expected to commence mid-2022)
- Little Hartley to Lithgow Upgrade construction expected to commence in 2022 and complete in 2026

Given the regional setting of the project primarily within the Blue Mountains Local Government Area (LGA) and a small portion within the Lithgow LGA, there are fewer major projects within the locality.

Figure 1-5 and Figure 1-7 show the interface of the Katoomba to Blackheath Upgrade (including Medlow Bath) and the Little Hartley to Lithgow Upgrade with the project, respectively. Chapter 24 (Cumulative impacts) details the full cumulative impact assessment methodology adopted for the project.

### 6.1 Potential cumulative construction impacts

Potential construction impacts from these projects, prior to appropriate mitigation measures being implemented are summarised in Table 6-1.

**Table 6-1 Potential cumulative construction impacts**

Potential cumulative impacts	Katoomba to Blackheath Upgrade	Blackheath to Little Hartley Upgrade	Little Hartley to Lithgow Upgrade
Excavation, disturbance, and temporary stockpiling of potentially contaminated soils generating potential dust and odours. There could be potential human health impacts due to exposure to contaminated dust, direct contact with inappropriately managed spoil, vapour migration and odours.	✓	✓	✓
Demolition of hazardous building materials. There could be potential human health impacts due to exposure to lead, asbestos and PCBs if not managed appropriately.	✓	✓	✓

Potential cumulative impacts	Katoomba to Blackheath Upgrade	Blackheath to Little Hartley Upgrade	Little Hartley to Lithgow Upgrade
Excavation and stockpiling of potential acid sulfate soils. There could be impacts to aquatic and terrestrial ecosystems if not managed appropriately	✓	✓	✓
Transport and disposal of contaminated soils to landfill or treatment facilities	✓	✓	✓
Short term changes in hydrogeology from dewatering during construction that could alter existing groundwater contamination migration	x	✓	x
Short term discharge of potentially contaminated groundwater from dewatering to surface water (local rivers/surface water bodies impacted)	x	✓	x
Short term discharge of potentially contaminated stormwater and construction wastewater to surface water (local rivers/surface water bodies impacted)	✓	✓	✓

Potential construction impacts for these projects are related primarily to the disturbance and management of existing land contamination and discharge of stormwater. REF's have been prepared for the Katoomba to Blackheath upgrade and Little Hartley to Lithgow upgrade projects, further discussion on management of cumulative construction impacts with these projects is addressed in Section 7.

All of these projects have included assessment of contamination within the project and assessed impacts and management measures. These projects are not expected to generate substantial new land contamination during construction; however, they are all likely to encounter and disturb existing contamination from past land uses that would require investigation, management or remediation.

If there was a requirement of remediation works during construction, disposal and haulage of contaminated soil and/or acid sulfate soils/rock to landfill could occur. Further assessment of cumulative impacts associated with transport and waste are discussed in Appendix D (Technical report – Transport and traffic) and Chapter 21 (Resource use and waste management) of the EIS.

## 6.2 Potential cumulative operational impacts

Potential operational impacts from these projects, prior to appropriate mitigation measures being implemented, are summarised in Table 6-2.

**Table 6-2 Potential cumulative operational impacts**

Potential cumulative impacts	Katoomba to Blackheath Upgrade	Blackheath to Little Hartley Upgrade	Little Hartley to Lithgow Upgrade
Leaks and spills on constructed roadways from vehicles and vehicle accidents	✓	✓	✓
Leaks and spills from permanent facilities such as maintenance and operations facilities and substations	✓	✓	✓
Residual (pre-existing or from construction) soil and groundwater contamination. Potential	✓	✓	✓

Potential cumulative impacts	Katoomba to Blackheath Upgrade	Blackheath to Little Hartley Upgrade	Little Hartley to Lithgow Upgrade
human health and ecological impacts if land not suitable for intended land use.			
Long term changes in hydrogeology from dewatering during operation (due to tunnel dewatering), altering existing groundwater contamination migration	x	✓	x
Long term treatment and discharge of potentially contaminated groundwater (due to tunnel dewatering) and impacts to surface water (local rivers/surface water bodies impacted)	x	✓	x

Provided the projects are completed in accordance with conditions of approval, legislation under the CLM Act and in accordance with NSW EPA guidelines, cumulative impacts for the projects should reduce the risks of existing land contamination within the combined project boundaries. Land within these projects is required to be assessed on a site-by-site basis and appropriate mitigation measures implemented. Discussion on management of cumulative operational impacts with these projects is addressed in Section 7.

Further assessment of cumulative impacts associated with surface water and groundwater are discussed in Appendix J (Technical report – Surface water and flooding) and Appendix I (Technical report – Groundwater).



## 7.0 Management of impacts

### 7.1 Performance outcomes

Performance outcomes have been developed that are consistent with the SEARs for the project. The performance outcomes for the project are summarised below in Table 7-1 and identify measurable, performance-based standards for environmental management.

**Table 7-1 Performance outcomes for the project – Contamination**

Desired performance outcome	Project performance outcome	Timing
<b>13. Soils and Contamination</b>		
The environmental values of land, including soils, subsoils and landforms, are protected.	Design and construct the project to minimise the disturbance of soils and changes in landform. Rehabilitate disturbed land that is not required for operational infrastructure to a state comparable with its pre-disturbance condition or as otherwise agreed with the landowner.	Design and construction
Risks arising from the disturbance and excavation of land and disposal of soil are minimised, including disturbance to acid sulfate soils and site contamination.	Characterise and evaluate the risks associated with land and soils affected by the project prior to disturbance, including with respect to potential contamination and acid sulfate soils. Develop and implement management measures specific to the characteristics and risks of land and soils to be disturbed, including the preparation of a Remedial Action Plan for contaminated land where relevant.	Construction

### 7.2 Management of construction impacts

A Construction Environmental Management Plan(s) (CEMP) will be prepared for the project, and may be developed as a series of complementary and coordinated CEMPs to address specific construction sites, construction activities or periods during the construction period. The CEMP(s) will detail the approach to environmental mitigation, management, monitoring and reporting during construction of the project. The CEMP(s) will provide a consolidated environmental management framework, supplemented by more detailed sub-plans and other documentation focused on key environmental issues during construction.

Key issues that will be addressed in the CEMP(s), where relevant, will include:

- minimisation and management of air emissions, including dust generation and emissions from plant and equipment
- minimisation and management of noise and vibration, including construction scheduling, protocols for the management of noisy activities outside standard construction hours, protection of sensitive structures and receivers from vibration, and management of ground vibration during tunnelling
- management of construction traffic, including site access arrangements and minimisation of impacts associated with heavy vehicle movements, including spoil haulage
- management of water, including surface, groundwater and wastewater, treatment and reuse standards, discharge locations and requirements, mitigation and management of erosion and sedimentation risks and management of works within areas prone to flooding
- protection of Aboriginal and non-Aboriginal heritage during construction, procedures for managing and salvage of archaeology where relevant, and protocols for the management of unexpected finds

- protection of biodiversity within and around construction sites
- mitigation and management of potential impacts on social infrastructure and businesses, including access requirements, notifications and engagement, and property impacts
- management of waste, including transport and disposal requirements, and resource efficiency and sustainability measures.

Further details of issue-specific sub-plans and other documentation that will be prepared to support, inform and complement the CEMP(s) are provided in Table 1 of Appendix R.

A community and stakeholder engagement plan has been prepared for the Upgrade Program and would be used to guide community and stakeholder engagement activities during construction of the project. Engagement during construction will include updates on planned construction activities and will respond to concerns and enquiries in a timely manner, seeking to minimise potential impacts where possible.

### 7.3 Management of operational impacts

During operation, the project's environmental performance will be managed under Transport's existing environmental management system (or similar), prepared in accordance with the AS/NZS ISO 14000 Environmental Management System series. Detailed operational policies and procedures specific to the project will be developed consistent with the environmental management system, and to reflect project-specific requirements arising from the assessments presented in this EIS, conditions of approval that may be applied to the project, and other issues that may arise through ongoing consultation with stakeholders. Key areas of focus for operational policies and procedures will include:

- tunnel air quality and ventilation system management
- traffic management, including management of breakdowns and other traffic incidents
- emergency management, both within the project tunnels and through external events such as bushfires
- maintenance of project landscaping and visual appearance
- sustainability, resource efficiency and waste management
- environmental management of project maintenance activities.

### 7.4 Contamination-specific environmental mitigation measures

Construction and operation mitigation measures to manage potential contamination impacts of the project are outlined in Table 7-2.

**Table 7-2 Construction and operation environmental mitigation measures – soils and contamination**

ID	Mitigation measure	Timing
SC1	<p>A Detailed Site Investigation (DSI) will be carried out for areas of environmental interest within the construction footprint identified as posing a medium or greater risk, in accordance with the <i>National Environment Protection (Assessment of Site Contamination) Measure 1999</i> (as amended 2013) and other relevant guidelines.</p> <p>If the DSI identifies that remediation of contaminated land is required, a Remedial Action Plan will be developed and implemented in accordance with relevant guidelines and codes of practice. If required, remediation will be performed as an integrated component of construction and to a standard commensurate with the proposed end use of the land.</p>	Design

ID	Mitigation measure	Timing
SC2	<p>An unexpected contamination finds procedure will be developed and implemented during construction of the project. The unexpected contamination finds procedure that includes a process for addressing unexpected contamination and will generally include provision for:</p> <ul style="list-style-type: none"> <li>• cessation of works within the affected area until inspection of the suspected contamination by a qualified contaminated lands specialist (verification by a certified contaminated land practitioner)</li> <li>• collection of soil samples for analysis based on observations</li> <li>• assessment of results against applicable land use or waste classification criteria in accordance with applicable statutory guidelines</li> <li>• management of the contamination in accordance with applicable statutory guidelines.</li> </ul>	Construction
SC3	<p>An Acid Sulfate Rock Management Plan (ASRMP) will be prepared as part of the Construction Environmental Management Plan (CEMP), taking into account the management guidelines in the <i>Acid Sulfate Soil Manual</i> (ASSMAC, 1998) and the <i>National Acid Sulfate Soils Guidance: National Sulfate Soils Identification and Laboratory Methods Manual</i> (Water Quality Australia, 2018).</p> <p>The ASRMP will include the process for identification, management and handling and re-use or disposal of acid sulfate rock.</p>	Construction

#### 7.4.1 Further investigations

Additional soil and groundwater investigations have commenced within the construction footprint with soil and groundwater sampling locations targeting areas identified as medium risk in Table 4-1

The site investigations have been designed in accordance with the relevant guidelines listed in Section 3.1. It is anticipated that available soil and groundwater results will be included in the submissions report. An independent NSW EPA Accredited Site Auditor has been engaged to review reports where required, including this Appendix.

Where required based on the results of the additional investigations, a RAP, would be prepared prior to commencement of construction for areas which pose an unacceptable risk to human health and/or ecological receptors and which require remediation.

#### 7.4.2 Remediation

Parts of the permanent operational footprint which are assessed as having potential to contain soil or groundwater contamination that poses an unacceptable risk to human or ecological receptors, would be remediated following further investigations.

Sites requiring remediation would have a RAP developed prior to the commencement of construction. The RAP would be prepared by a suitably qualified and experienced contaminated lands consultant.

Remediation and validation activities would be completed by a contaminated lands consultant, independent to the construction contractor. A validation report would be prepared by the consultant. An independent NSW EPA Accredited Site Auditor would be engaged to review all contamination reports and evaluate the suitability of sites for a specified use as part of the project.

The RAPs would be prepared in accordance with the relevant legislation and guidelines listed in Section 2.1.

The need for remediation would be determined by considering the risks of undertaking the works. If the risks posed to the environment and human health are greater than the contamination remaining *in situ*, then the need for active remediation would be reconsidered and alternative management options such as capping, or implementation of long-term environmental management plans investigated. The RAPs would include the assessment of sustainable remediation options and consideration of the *Waste Avoidance and Resource Recovery Act 2001* (NSW).

Remediation works may need to occur in a staged approach throughout the construction and post construction periods, depending on the final land use following completion of construction of the project.

#### 7.4.3 Landfill gas and leachate management

There is potential for landfill gases and leachate to be present within historical tip sites. A former tip site was identified in Blackheath however this site is outside the construction footprint. Based on a review of historical aerial photographs possible landfilling has occurred at Blackheath Oval/Jubilee Park, Blackheath Memorial Gardens, Mountains Christian College Blackheath, Rotunda Park Mount Victoria, Eltham Park Mount Victoria, adjacent to the Great Western Highway as part of cut and fill works during road upgrades and at the rear of Weber's Nursery. It is noted that most of these sites are outside the construction footprint or above/within close proximity to the tunnel. Noting the proposed depth of the tunnel (up to 200 metres below ground near Mount Victoria) in bedrock and that the majority of the tunnel would be tanked, minimising groundwater ingress, it is considered that the potential to encounter landfill gases or leachate during construction and operation is low and the associated risk is also likely to be low.

The methods for the management of construction impacts are outlined in the following section and specified for each construction area in Table 7-3.

**Table 7-3 Mitigation of construction impacts by area – contamination-specific**

Management measure	Area
<b>Site investigations:</b> Targeted characterisation of soil and fill materials within areas where there is a potentially complete exposure pathway or where waste classification is required	All areas <sup>10</sup>
<b>RAP:</b> Based on the future investigations, preparation of a RAP for the excavation and off-site disposal of contaminated materials to licensed landfill or on-site treatment/beneficial reuse is to be undertaken (if identified and practicable)	Blackheath, Soldiers Pinch, Little Hartley construction compounds
<b>Waste management:</b> In situ /ex-situ waste classification/ VENM/ENM assessment of excavated fill, natural soils and rock to evaluate suitability for potential reuse or disposal to landfill is to be undertaken prior to construction	All areas
<b>Acid sulfate soils:</b> Management of acid sulfate soils and sediment would occur as part of the unexpected finds procedure in the CEMP.	All areas
<b>CEMP:</b> Potential construction impacts would also be managed by the development and implementation of a CEMP	All areas

#### 7.4.4 Coal seam gas

As noted in Appendix H (Technical report – Human health), the project involves tunnelling through areas which include coal measures – i.e. there are coal seams in the geology through which the tunnelling would occur. It is possible that coal seam gas (i.e., methane) may be present in such areas which may escape into the areas where tunnelling is occurring. If sufficient methane accumulates in a space, an explosive risk is possible.

A detailed site investigation would be undertaken prior to the works commencing which would outline where coal seam gas might occur. If this work indicates that a sufficient quantity to cause a health and safety risk for workers might exist, then infrastructure to drain and vent such gas away from the tunnelling and away from work areas would be installed. Such investigations and infrastructure are well understood and accessible.

While the potential for encountering coal seam gas during construction has been discussed above, the potential for ongoing management of methane in tunnel infrastructure requires further assessment. It is expected that the tunnel ventilation requirements would be sufficient to mitigate hazards posed by coal seam gas (specifically methane) within the tunnel. However, the potential for methane to migrate into

<sup>10</sup> All areas include Blackheath, Soldiers Pinch, Little Hartley construction compounds, site establishment, tunnel shaft at Soldiers Pinch and portals at Blackheath and Little Hartley

and accumulate in confined spaces within the tunnel such as pedestrian cross-passages, worker corridors and plant/equipment rooms requires further investigation and assessment.

Should methane be identified as a risk for these confined spaces, gas mitigation measures would need to be designed and constructed to ensure explosive risks during operations are appropriately mitigated.

During operation additional assessment would be required to adequately manage risks related to coal seam gas (methane).

## **7.5 Risk post implementation of management measures**

Following implementation of the above management measures during construction it is anticipated that the risks to human health and ecological receptors from known contamination would be low.



## 8.0 Conclusion

### 8.1 Key findings

This technical report has identified a number of areas of potential or known contamination which require management during the construction and operation of the project. Existing identified contamination issues are primarily related to historical land uses (e.g., service stations, historical landfilling) which may have adversely impacted the quality of soil, fill, soil vapour, groundwater, ground gas, sediment and surface water within the construction footprint.

The areas within the construction footprint identified as having a medium risk (largely due to lack of data) of potential contamination are:

- Blackheath construction footprint
- Soldiers Pinch construction footprint
- Little Hartley construction footprint
- areas of proposed site establishment works where there is potential for disturbance of soil/sediment/surface water/groundwater
- tunnel shafts/portals
- surface road upgrade works
- coal seam gas drainage.

There is also potential that contamination arising from tunnel construction and associated project works, such as stockpiling of contaminated soil and acid sulfate soils/potential acid forming rock and storage and use of fuel and chemicals, could adversely impact soil, sediment, groundwater and surface water if not managed appropriately.

### 8.2 Construction impacts and mitigation measures

The areas identified as medium risk within the construction footprint would be further investigated prior to and during detailed design and investigation sampling plans would be informed by existing data and project design.

It is noted that investigations, comprising soil and groundwater sampling, have commenced. Available soil and groundwater analytical results will be included in the submissions report.

All contamination investigations would be undertaken by a suitably qualified and experienced person in accordance with guidelines made or approved under the *Contaminated Land Management Act 1997* (NSW). Subject to the outcomes of the investigations, RAPs may be required and implemented in the event that site remediation is warranted prior to or during/integrated with construction.

Following completion of project construction, construction footprints would be remediated in accordance with RAP(s), where required, based on the findings of investigations and the intended land use or rehabilitation requirements.

A CEMP would also be prepared for the project. The CEMP would include management measures for areas within the construction footprint identified as being potentially contaminated as well as areas within the construction footprint that have been assessed as low risk do not require further assessment or remediation and would be managed through the implementation of the CEMP.

The CEMP would incorporate an unexpected finds procedure for contamination, asbestos and potential acid sulfate soils, an asbestos management plan (if required) and would reference the Draft Contaminated Land Procedure (Transport, 2022). The CEMP prepared for implementation during construction of the project and would encompass all construction activities associated with the project. The plan would accurately reflect the existing conditions and potential contamination likely to be encountered during construction at various locations within the construction footprint.

The CEMP would include a CSWMP sub-plan to manage potentially contaminated soil and water for each construction compound.

Targeted groundwater investigations would continue to be undertaken along the tunnel alignment prior to construction, to obtain adequate data to estimate the concentrations of contamination to be treated during construction. Water would be captured during construction and treated on-site or at the water treatment plants within construction compounds or within sedimentation ponds.

### **8.3 Operation impacts and mitigation measures**

An OEMP would be prepared to manage potential impacts on groundwater and surface water during the operational phases of the project. Groundwater and surface water inflows drained from the tunnel would be treated at the water treatment plant and discharged to local rivers or sewer.

### **8.4 Conclusion**

Based on the findings of this technical report, it is concluded that there is potential for areas of soil, vapour, ground gas, acid sulfate soil/potential acid forming rock, surface water, sediment, fill and groundwater contamination associated with current and historical land uses to be encountered during construction, and further investigation and assessment is warranted.

Following adoption of the proposed mitigation and management measures during the construction and operational phase of the project, the desired performance outcome could be achieved, which is to ensure that risks arising from the disturbance of potential contamination and disposal of potentially contaminated materials are minimised.

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# **Annexure A**

Lotsearch reports



# LOTSEARCH

LOTSEARCH ENVIRO LITE

**Date: 08 Dec 2021 08:49:36**

**Reference: LS027217 EL**

**Address: Road Alignment, Blackheath, NSW 2785 (North)**

**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:

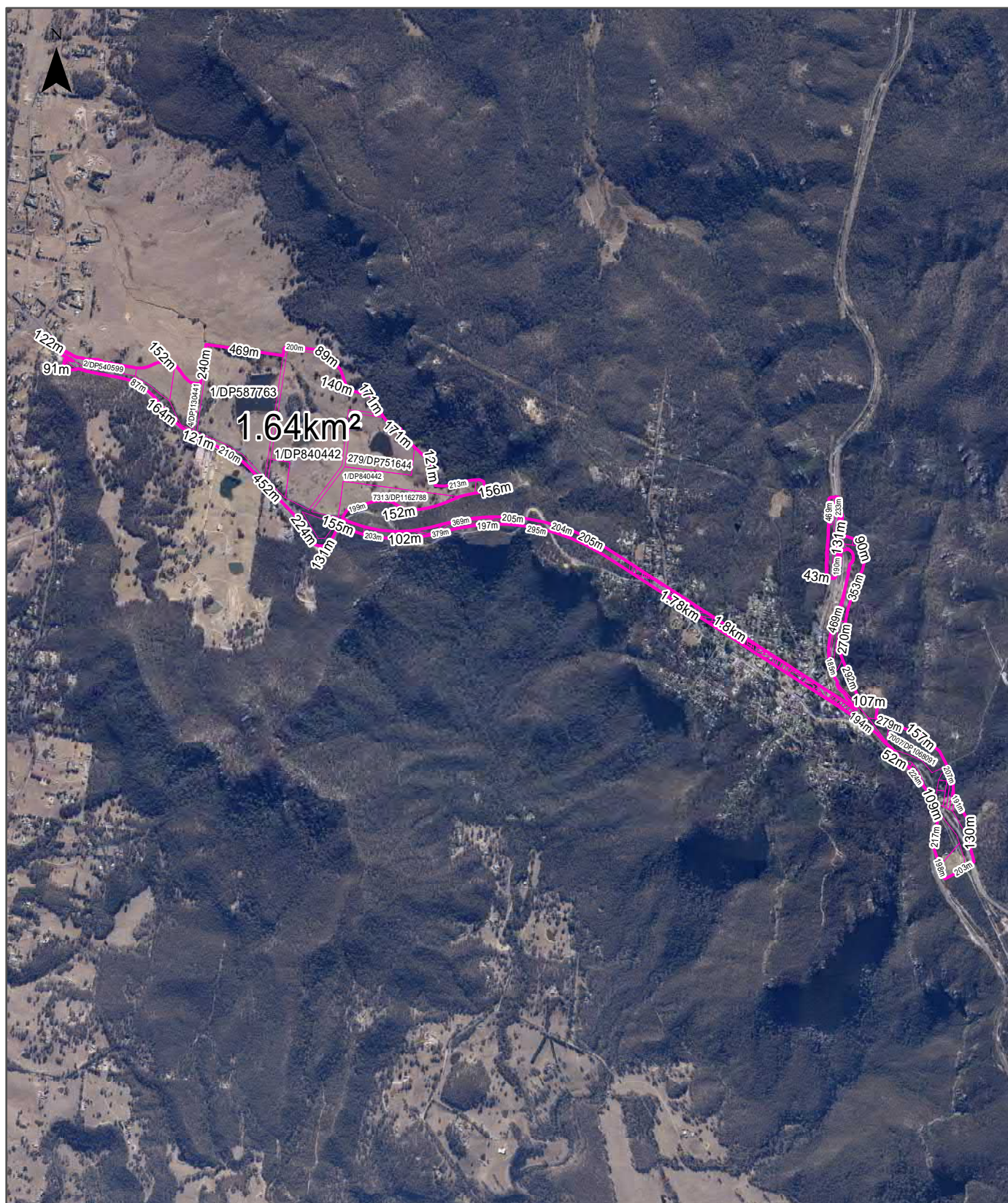
Dataset Name	Custodian	Supply Date	Currency Date	Update Frequency	Dataset Buffer (m)	No. Features On-site	No. Features within 100m	No. Features within Buffer
Cadastre Boundaries	NSW Department of Finance, Services & Innovation	30/06/2021	30/06/2021	Quarterly	-	-	-	-
Topographic Data	NSW Department of Finance, Services & Innovation	25/06/2019	25/06/2019	As required	-	-	-	-
List of NSW contaminated sites notified to EPA	Environment Protection Authority	13/10/2021	11/10/2021	Monthly	1000m	1	2	2
Contaminated Land Records of Notice	Environment Protection Authority	06/12/2021	06/12/2021	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	0
National Liquid Fuel Facilities	Geoscience Australia	15/02/2021	13/07/2012	Annually	1000m	1	1	1
EPA PFAS Investigation Program	Environment Protection Authority	28/10/2021	14/07/2021	Monthly	2000m	0	0	0
Defence PFAS Investigation & Management Program - Investigation Sites	Department of Defence	29/10/2021	29/10/2021	Monthly	2000m	0	0	0
Defence PFAS Investigation & Management Program - Management Sites	Department of Defence	29/10/2021	29/10/2021	Monthly	2000m	0	0	0
Airservices Australia National PFAS Management Program	Airservices Australia	08/10/2021	08/10/2021	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	10/11/2021	10/11/2021	Monthly	1000m	1	1	1
Delicensed POEO Activities still regulated by the EPA	Environment Protection Authority	10/11/2021	10/11/2021	Monthly	1000m	0	0	0
Former POEO Licensed Activities now revoked or surrendered	Environment Protection Authority	10/11/2021	10/11/2021	Monthly	1000m	5	5	6
UBD Business Directories (Premise & Intersection Matches)	Hardie Grant			Not required	150m	8	28	28
UBD Business Directories (Road & Area Matches)	Hardie Grant			Not required	150m	-	191	191
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	-	14	14
Points of Interest	NSW Department of Finance, Services & Innovation	19/08/2021	19/08/2021	Quarterly	1000m	6	28	62
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	2	2	9
Major Easements	NSW Department of Finance, Services & Innovation	19/08/2021	19/08/2021	Quarterly	1000m	0	2	6
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	1	1
Hydrogeology Map of Australia	Commonwealth of Australia (Geoscience Australia)	08/10/2014	17/03/2000	As required	1000m	2	2	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	5	7	34

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	3	3	4
Geological Structures 1:250,000	NSW Department of Planning, Industry and Environment	20/08/2014		Annually	1000m	0	0	0
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	3	3	3
Soil Landscapes of Central and Eastern NSW	NSW Department of Planning, Industry and Environment	14/10/2020	27/07/2020	Annually	1000m	6	6	9
Environmental Planning Instrument Acid Sulfate Soils	NSW Department of Planning, Industry and Environment	15/11/2021	05/11/2021	Monthly	500m	0	-	-
Atlas of Australian Acid Sulfate Soils	CSIRO	19/01/2017	21/02/2013	As required	1000m	2	2	2
Dryland Salinity - National Assessment	National Land and Water Resources Audit	18/07/2014	12/05/2013	None planned	1000m	0	0	0
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	02/11/2021	02/11/2021	Monthly	1000m	0	1	1
Mining Title Applications	NSW Department of Industry	02/11/2021	02/11/2021	Monthly	1000m	0	0	0
Historic Mining Titles	NSW Department of Industry	02/11/2021	02/11/2021	Monthly	1000m	6	6	6
Environmental Planning Instrument SEPP State Significant Precincts	NSW Department of Planning, Industry and Environment	15/11/2021	07/12/2018	Monthly	1000m	0	0	0
Environmental Planning Instrument Land Zoning	NSW Department of Planning, Industry and Environment	15/11/2021	05/11/2021	Monthly	1000m	16	35	58
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	1	2	2
State Heritage Register - Curtilages	NSW Department of Planning, Industry and Environment	19/08/2021	25/06/2021	Quarterly	1000m	1	1	1
Environmental Planning Instrument Local Heritage	NSW Department of Planning, Industry and Environment	15/11/2021	05/11/2021	Monthly	1000m	20	56	82
Bush Fire Prone Land	NSW Rural Fire Service	26/11/2021	24/11/2021	Weekly	1000m	4	4	4
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	3	3	4
Inflow Dependent Ecosystems Likelihood	Bureau of Meteorology	14/08/2017	15/05/2017	Unknown	1000m	7	7	8
NSW BioNet Species Sightings	NSW Office of Environment & Heritage	02/12/2021	02/12/2021	Weekly	10000m	-	-	-



# Site Diagram

Road Alignment, Blackheath, NSW 2785 (North)

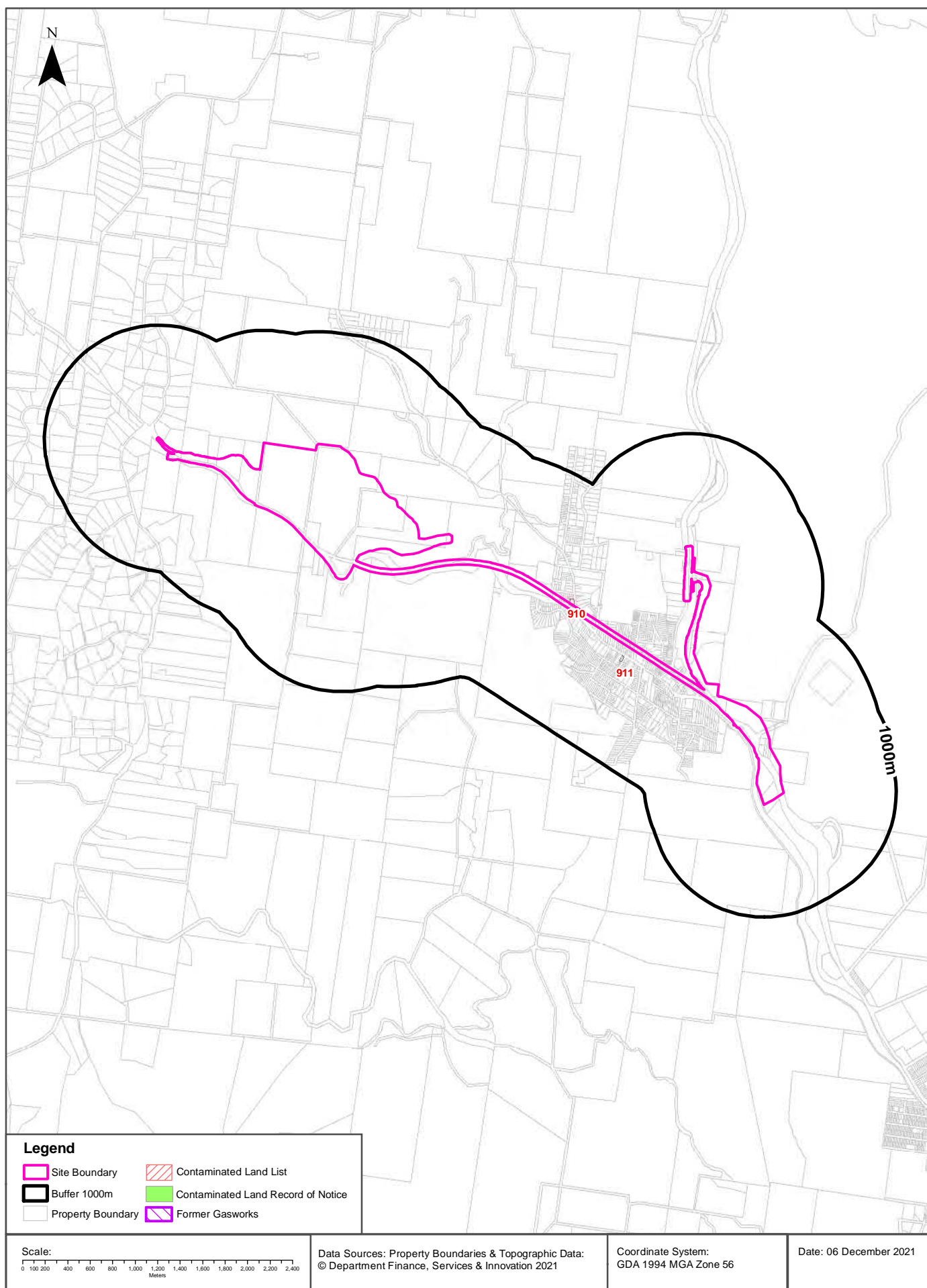


<div>Legend</div> <div><div></div> Site Boundary</div> <div><div></div> Internal Parcel Boundaries</div>	<div>Total Area: 1.64km<sup>2</sup></div> <div>Total Perimeter: 20.31km</div> <div>Disclaimers:</div> <div>Measurements are approximate only and may have been simplified or smaller lengths removed for readability.</div> <div>Parcels that make up a small percentage of the total site area have not been labelled for increased legibility.</div>	<div>Scale:</div> <div><div></div><div>0175350700105014001750</div><div>Meters</div></div> <div>Data Source Aerial Imagery: © Aerometrex Pty Ltd</div>	
		<div>Coordinate System: GDA 1994 MGA Zone 56</div>	<div>Date: 06 December 2021</div>



# Contaminated Land

Road Alignment, Blackheath, NSW 2785 (North)



# Contaminated Land

Road Alignment, Blackheath, NSW 2785 (North)

## 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
910	Caltex Service Station	36a Great Western HIGHWAY	Mount Victoria	Service Station	Regulation under CLM Act not required	Current EPA List	Premise Match	0m	On-site
911	Former Mobil Service Station	81 Great Western Highway	Mount Victoria	Service Station	Regulation under CLM Act not required	Current EPA List	Premise Match	94m	South East

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

Road Alignment, Blackheath, NSW 2785 (North)

### 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

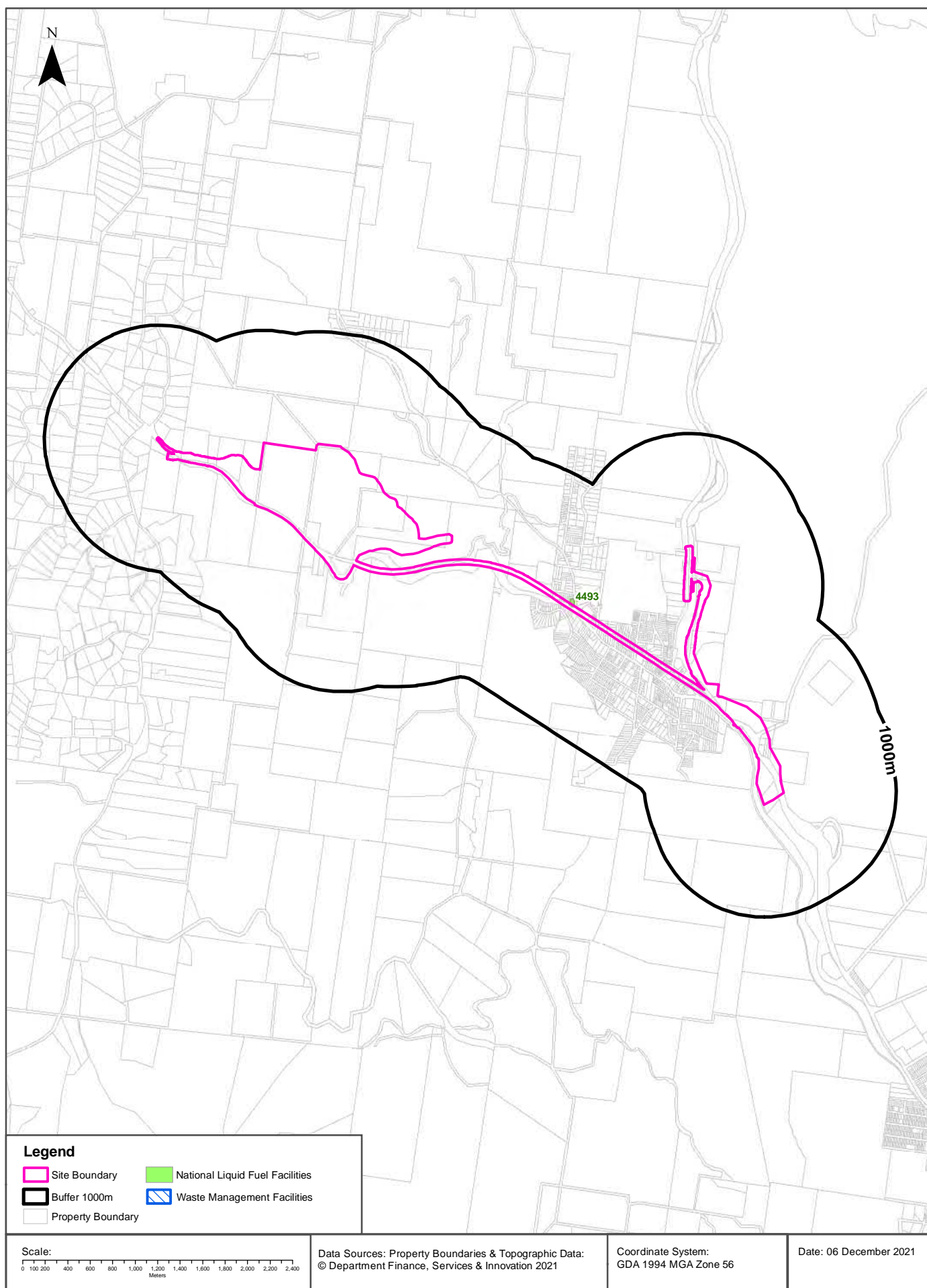
Former Gasworks within the dataset buffer:

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

Road Alignment, Blackheath, NSW 2785 (North)



## Waste Management & Liquid Fuel Facilities

Road Alignment, Blackheath, NSW 2785 (North)

### 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
N/A	No records in buffer											

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
4493	Caltex	Caltex Mount Victoria	36-38 Great Western Highway	Mount Victoria	Petrol Station	Operational		25/07/2011	Premise Match	0m	On-site

National Liquid Fuel Facilities Data Source: Geoscience Australia

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# PFAS Investigation & Management Programs

Road Alignment, Blackheath, NSW 2785 (North)

## 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
N/A	No records in buffer				

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

Road Alignment, Blackheath, NSW 2785 (North)

### 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

Road Alignment, Blackheath, NSW 2785 (North)

### 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

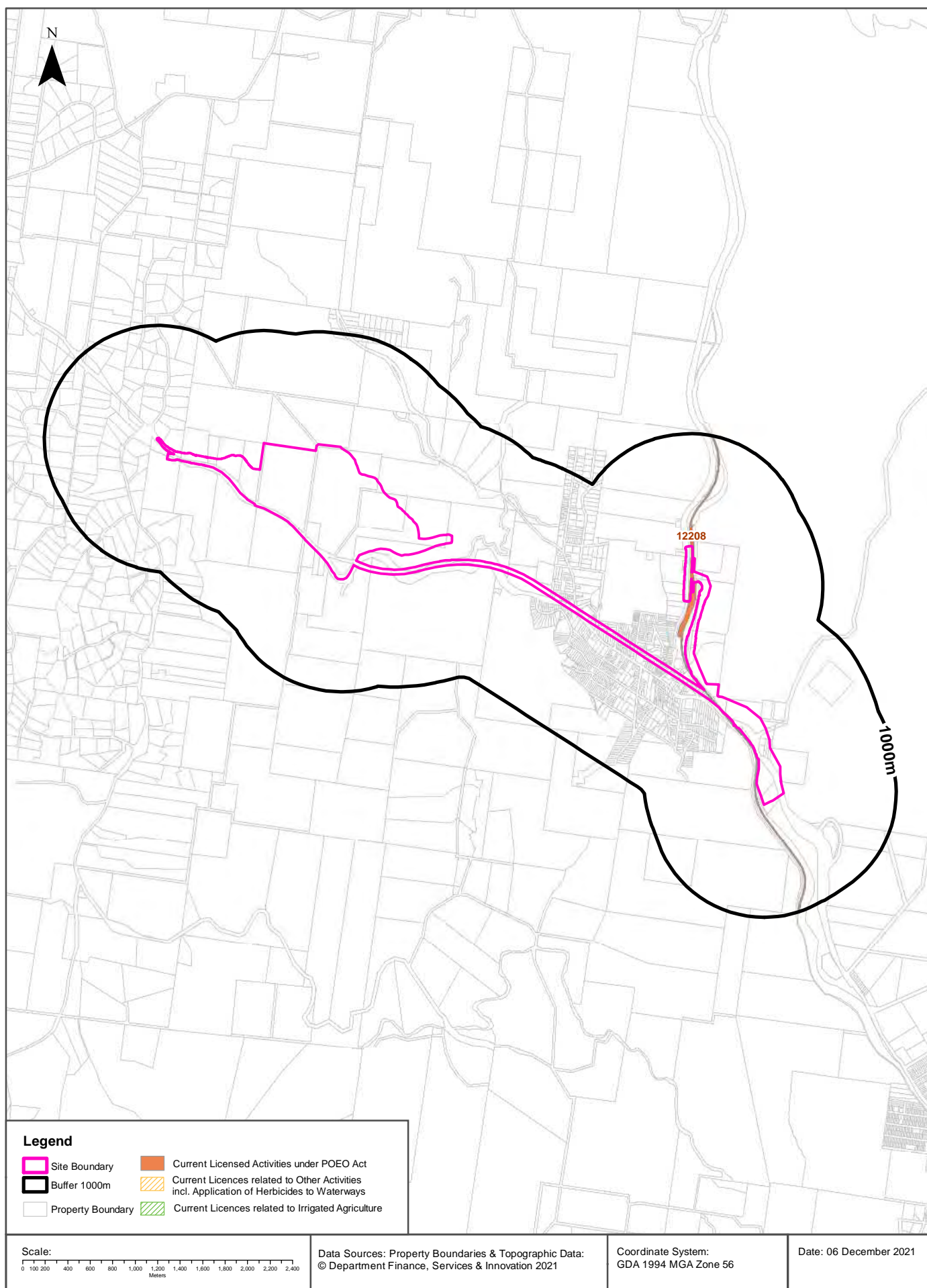
Sites within the dataset buffer:

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  
© State of New South Wales through the Environment Protection Authority

# Current EPA Licensed Activities

## Road Alignment, Blackheath, NSW 2785 (North)



## EPA Activities

Road Alignment, Blackheath, NSW 2785 (North)

## 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
12208	SYDNEY TRAINS		SYDNEY TRAINS, HAYMARKET, NSW 1238		Railway systems activities	Network of Features	0m	On-site

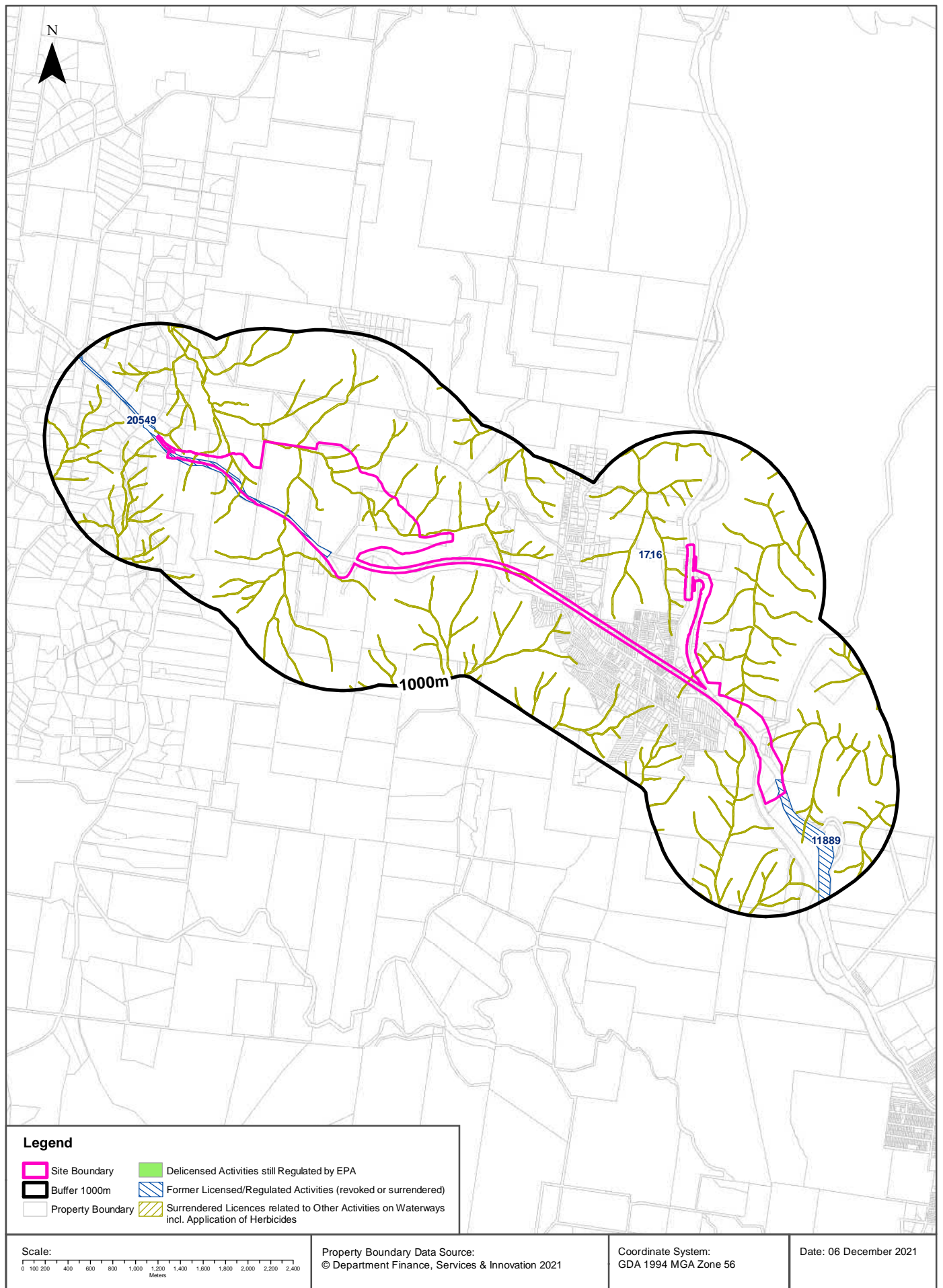
POEO Licence Data Source: Environment Protection Authority

© State of New South Wales through the Environment Protection Authority



# Delicensed & Former Licensed EPA Activities

## Road Alignment, Blackheath, NSW 2785 (North)



## EPA Activities

### Road Alignment, Blackheath, NSW 2785 (North)

## Delicensed Activities still regulated by the EPA

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

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

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

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

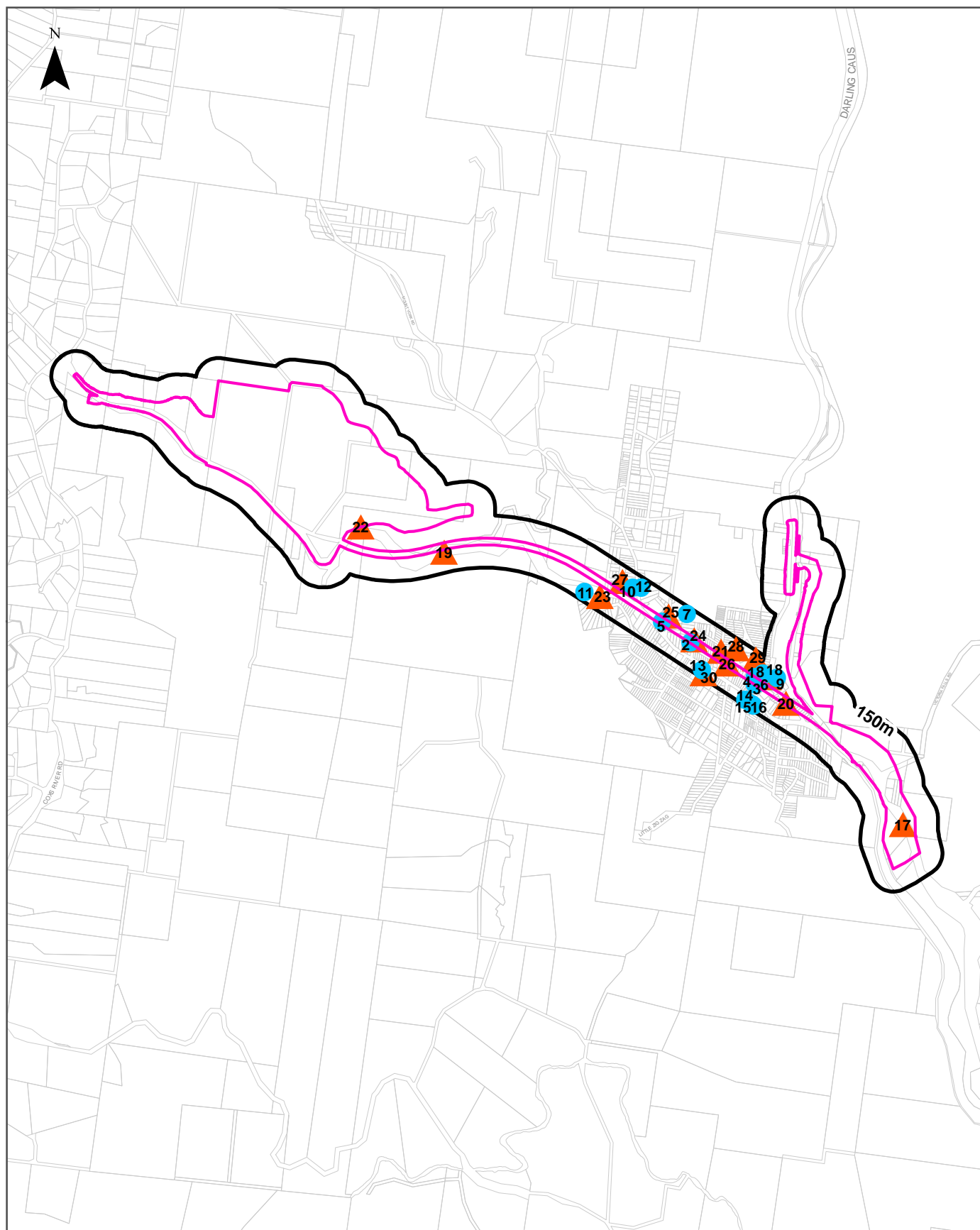
Former Licensed activities under the Protection of the Environment Operations Act 1997, now revoked or surrendered, within the dataset buffer:

Licence No	Organisation	Location	Status	Issued Date	Activity	Loc Conf	Distance	Direction
11889	ACCIONA INFRASTRUCTURE PROJECTS AUSTRALIA PTY LTD	RTA ROAD CORRIDOR, GREAT WESTERN HIGHWAY, SOLDIERS PINCH, KATOOMBA, NSW 2780	Surrendered	21/05/2003	Concrete works	Road Match	0m	On-site
20549	SEYMOUR WHYTE CONSTRUCTION S PTY LTD	, GREAT WESTERN HIGHWAY, HARTLEY, NSW 2790,	Surrendered	18/02/2015	Road construction, Land-based extractive activity	Road Match	0m	On-site
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
1716	SYDNEY WATER CORPORATION	WENTWORTH ST, MOUNT VICTORIA, NSW 2786	Surrendered	25/05/2000	Sewage treatment processing by small plants	Premise Match	294m	East

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

# Historical Business Directories

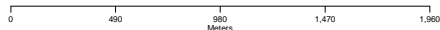
Road Alignment, Blackheath, NSW 2785 (North)



## Legend

- 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: 08 December 2021

Data Sources: Reproduced with permission of UBD and Hardie Grant Media Pty Ltd DD 01/08/2018  
Property Boundaries © NSW Department Finance, Services & Innovation 2021

# Historical Business Directories

## Road Alignment, Blackheath, NSW 2785 (North)

### 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
1	NOT LISTED	Gallery Arts & Crafts The., 28 Station St , Mount Victoria	121394	1991	Premise Match	0m	On-site
	NOT LISTED	Gallery Arts & Crafts, The, 28 Station St., Mount Victoria	131959	1982	Premise Match	0m	On-site
2	NOT LISTED	Holloway A. A Est. Agnt., 2 Burwood Rd , Mount Victoria	121396	1991	Premise Match	0m	On-site
	NOT LISTED	Holloway, A. A., Est.Agnt., 2 Burwood Rd., Mount Victoria	131961	1982	Premise Match	0m	On-site
3	NOT LISTED	Mount Victoria Antiques & Book Shop., 18 Station St, Mount Victoria	121401	1991	Premise Match	0m	On-site
4	NOT LISTED	Upstairs & Downstairs Antiques., 16 Station St , Mount Victoria	121412	1991	Premise Match	0m	On-site
	NOT LISTED	Mount Victoria Antiques.16 Station St., Mount Victoria	131965	1982	Premise Match	0m	On-site
5	TAXI & HIRE CAR SERVICES	Vincent, S., 52 Great Western Hghwy. Mount Victoria	543954	1970	Premise Match	0m	On-site
6	NOT LISTED	Library The., 30 Station St , Mount Victoria	121399	1991	Premise Match	2m	South East
7	NOT LISTED	Grange, The, Hotet, Selsdon St., Mount Victoria	131960	1982	Premise Match	17m	East
	HOLIDAY ACCOMMODATION	Grande (The), Selsdon St. Mount Victoria	543938	1970	Premise Match	17m	East
	HOLIDAY ACCOMMODATION	Grange, The, Selsdon St., Mount McDonald	215682	1961	Premise Match	17m	East
8	NOT LISTED	Police Station., 32 Station St , Mount Victoria	121406	1991	Premise Match	23m	South East
	NOT LISTED	Police Station, 32 Station St., Mount Victoria	131968	1982	Premise Match	23m	South East
9	NOT LISTED	Victoria & Albert Guesthouse. The., 19 Station St , Mount Victoria	121413	1991	Premise Match	23m	South East
	NOT LISTED	Victoria & Albert Guesthouse, The, Station St., Mount Victoria	131973	1982	Premise Match	23m	South East
10	CARRIERS & CARTAGE CONTRACTORS	Johnson, C. J., 6 Mount York Rd. Mount Victoria	543929	1970	Premise Match	43m	East
	LIVESTOCK CARRIERS	Johnson, C. J., 6 Mount York Rd. Mount Victoria	543942	1970	Premise Match	43m	East
11	FISH SHOPS	Vergotis, 5., Great Western Hghwy. Blackheath	541537	1970	Premise Match	73m	South East
12	NOT LISTED	Mcdonald R Carrier., 9 Mount York Rd , Mount Victoria	121400	1991	Premise Match	74m	East
	NOT LISTED	McDonald, R., Carrier, 9 Mount York Rd., Mount Victoria	131963	1982	Premise Match	74m	East
13	NOT LISTED	Smith Bros. Electrical Service., 81 Bathurst Rd , Mount Victoria	121410	1991	Premise Match	94m	South East
	NOT LISTED	Smith Bros, Electrical Service, 81 Bathurst Rd., Mount Victoria	131972	1982	Premise Match	94m	South East
14	NOT LISTED	Merricks Store, Mixed dusns., 109 Great Western Highway., Mount Victoria	131964	1982	Premise Match	94m	South East
	NOT LISTED	Sammons, J. Saddlery Shop, 109 Great Western Highway., Mount Victoria	131971	1982	Premise Match	94m	South East

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
15	NOT LISTED	Lesley's Place Craft Simp., 113 Great Western Hwy , Mount Victoria	121398	1991	Premise Match	96m	South East
16	NOT LISTED	Mountain Top Cals., 115 Great Western Hwy , Mount Victoria	121405	1991	Premise Match	97m	South East
	NOT LISTED	Mountain Top Cafe, 115 Great Western Highway., Mount Victoria	131967	1982	Premise Match	97m	South East

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## 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
17	NOT LISTED	Aitkens. J. M Dr., Great Western Hway , Blackheath	121935	1991	Road Match	0m
	NOT LISTED	Ampol Blackheath., Great Western Hway , Blackheath	121937	1991	Road Match	0m
	NOT LISTED	Blackheath Electrical Services R. M. A J. D. Simon., 204 Great Western Hway , Blackheath	121953	1991	Road Match	0m
	NOT LISTED	Blackheath Service Centre, Great Western Hway , Blackheath	121966	1991	Road Match	0m
	NOT LISTED	Braeside Restaurant The., Great Western Hway , Blackheath	121974	1991	Road Match	0m
	NOT LISTED	High Mountains Motor Inn., Great Western Hway , Blackheath	122004	1991	Road Match	0m
	NOT LISTED	Mount Boyce Nurseries Pty. Ltd., Great Western Hway , Blackheath	122014	1991	Road Match	0m
	NOT LISTED	New Ivanhoe Hotel., Great Western Hway , Blackheath	122017	1991	Road Match	0m
	NOT LISTED	Scotch Thistle Gardeners Inn., Great Western Hway , Blackheath	122029	1991	Road Match	0m
	NOT LISTED	Aitken, J. M., Dr., Great Western Highway., Blackheath	128550	1982	Road Match	0m
	NOT LISTED	Ampoi Garden Service Station, Great Western Highway., Blackheath	128551	1982	Road Match	0m
	NOT LISTED	Blackheath Fire Station, Great Western Highway., Blackheath	128560	1982	Road Match	0m
	NOT LISTED	Blackheath Garage.Great Western Highway., Blackheath	128563	1982	Road Match	0m
	NOT LISTED	Kerrys Service Station, Great Western Highway., Blackheath	128599	1982	Road Match	0m
	NOT LISTED	Mount Boyce Nurseries, Great Western Highway., Blackheath	128606	1982	Road Match	0m
	NOT LISTED	Tierney, B., Btchr., Great Western Highway., Blackheath	128624	1982	Road Match	0m
	HOLIDAY ACCOMMODATION	"The Pines" Guest House & Hostel, Great Western Hghwy. Blackheath	541565	1970	Road Match	0m
	MEDICAL PRACTITIONERS	Aitkens, J. M., Great Western Hghwy. Blackheath	541580	1970	Road Match	0m
	FUEL MERCHANTS-COAL, COKE & WOOD	Barker, Great Western Hghwy, Blackheath	541543	1970	Road Match	0m
	ASSOCIATIONS, SOCIETIES, CLUBS & SPORTING BODIES	Blackheath Community Centre, Great Western Hghwy. Blackheath	541488	1970	Road Match	0m
	LOCAL BODIES	Blackheath Fire Station, Great Western Hghwy. Blackheath	541579	1970	Road Match	0m
	INSURANCE AGENTS	Blackheath Garage, Great Western Hghwy, Blackheath	541572	1970	Road Match	0m
	MOTOR BODY BUILDERS &/OR REPAIRERS	Blackheath Garage, Great Western Hghwy. Blackheath	541593	1970	Road Match	0m
	MOTOR GARAGES & ENGINEERS	Blackheath Garage, Great Western Hghwy. Blackheath	541595	1970	Road Match	0m
	MOTOR PAINTERS & PANEL BEATERS	Blackheath Garage, Great Western Hghwy. Blackheath	541598	1970	Road Match	0m
	MOTOR TOWING SERVICES	Blackheath Garage, Great Western Hghwy. Blackheath	541599	1970	Road Match	0m
	TAXI & HIRE CAR SERVICES	Blackheath Garage, Great Western Hghwy. Blackheath	541619	1970	Road Match	0m
	WELDERS-ELECTRIC & OXY	Blackheath Garage, Great Western Hghwy. Blackheath	541625	1970	Road Match	0m

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
17	LIBRARIES-LENDING	Community Centre, Great Western Hghwy. Blackheath	541577	1970	Road Match	0m
	GROCERS & SELF SERVICE STORES	Foodlands Supermarket, Bathurst Rd. Blackheath	541552	1970	Road Match	0m
	MOTOR GARAGES & ENGINEERS	Garden Service Station, Great Western Hghwy. Blackheath	541596	1970	Road Match	0m
	HOTELS-LICENSED	Gardner's Inn Hotel, Western Hghwy. Blackheath	541570	1970	Road Match	0m
	FRUITERERS & GREENGROCERS	Growers' Market, Great Western Hghwy. Blackheath	541540	1970	Road Match	0m
	NURSERYMEN	Mount Boyce Nursery, Bathurst Rd. Blackheath	541602	1970	Road Match	0m
	ELECTRICAL CONTRACTORS-LICENSED	Simon, K., Great Western Hghwy. Blackheath	541535	1970	Road Match	0m
	HOT WATER INSTALLATIONS & MAINTENANCE	Simons, K., Great Western Hghwy. Blackheath	541569	1970	Road Match	0m
	CAMPING GROUNDS & CARAVAN PARKS	Sutton Park, Great Western Hghwy. Blackheath	541521	1970	Road Match	0m
	HOLIDAY ACCOMMODATION	"The Pines" Guest House & Hostel, Great Western Highway., Blackheath	188184	1961	Road Match	0m
	GUEST HOUSES	"The Pines," Guest House & Hostel, Great Western Highway., Blackheath	188177	1961	Road Match	0m
	MOTOR OIL & SPIRIT DEPOTS	Atlantic Union Oil Co. Ltd., Blackheath	188212	1961	Road Match	0m
	AGRICULTURAL MACHINERY DEALERS	Blackheath Garage, Great Western Highway., Blackheath	188094	1961	Road Match	0m
	INSURANCE AGENTS	Blackheath Garage, Great Western Highway., Blackheath	188189	1961	Road Match	0m
	MOTOR CAR & TRUCK DEALERS-NEW & USED	Blackheath Garage, Great Western Highway., Blackheath	188207	1961	Road Match	0m
	MOTOR GARAGES & ENGINEERS	Blackheath Garage, Great Western Highway., Blackheath	188209	1961	Road Match	0m
	TAXIS & HIRE CARS	Blackheath Garage, Great Western Highway., Blackheath	188238	1961	Road Match	0m
	TRAVEL AGENCIES & BOOKING OFFICES	Blackheath Garage, Great Western Highway., Blackheath	188245	1961	Road Match	0m
	JOINERY MANUFACTURERS	Blackheath Joinery Co., Great Western Highway., Blackheath	188192	1961	Road Match	0m
	ELECTRICAL SUPPLIES & APPLIANCES-RETAILERS	Central Motor Tourist Bureau, Great Western Highway., Blackheath	188140	1961	Road Match	0m
	REFRIGERATOR DEALERS & SERVICEMEN	Central Motor Tourist Bureau, Great Western Highway., Blackheath	188226	1961	Road Match	0m
	ASSOCIATIONS & SOCIETIES	Civil Defence Organization (Blackheath Branch), City of Katoomba, Blackheath	188096	1961	Road Match	0m
	MOTOR GARAGES & ENGINEERS	Garden Service Station, Great Western Highway., Blackheath	188210	1961	Road Match	0m
	TIMBER MERCHANTS & SAWMILLERS	Hume, W. S., Cnr. Station St., & Great Western Highway., Blackheath	188241	1961	Road Match	0m
	FRUITERERS & GREENGROCERS	Lorenzo, E and J., Great Western Highway., Blackheath	188154	1961	Road Match	0m
	REAL ESTATE AGENTS	Montague, Manfred and Co., Great Western Highway., Blackheath	188223	1961	Road Match	0m
	TOBACCONISTS-RETAIL	Ottley, D. E., Great Western Highway., Blackheath	188242	1961	Road Match	0m
	ASSOCIATIONS & SOCIETIES	School of Arts, Bathurst Rd., Blackheath	188098	1961	Road Match	0m
	CAFES, TEA ROOMS, COFFEE LOUNGES, ETC.	Sedges Heath Cafe, Great Western Highway., Blackheath	188115	1961	Road Match	0m
	MILK, FRUIT JUICE BARS & CONFECTIONERS	Sedges Heath Cafe, Great Western Highway., Blackheath	188202	1961	Road Match	0m
	REAL ESTATE AGENTS	Wallace, Wright and Co., Great Western Highway., Blackheath	188225	1961	Road Match	0m
	GUEST HOUSES	"Norwood", Bathurst Rd. Blackheath	144706	1950	Road Match	0m
	GUEST HOUSES	"Pines" (The), Great Western Highway. Blackheath	144707	1950	Road Match	0m
	DRY CLEANERS, DYERS & PRESSERS	Alpine Dry Cleaners, Great Western Highway. Blackheath	144654	1950	Road Match	0m

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
17	SCHOOLS, COLLEGES-GENERAL	Ashcroft, C. G. (Private), Bathurst Rd. Blackheath	144781	1950	Road Match	0m
	INSURANCE AGENTS	Blackheath Garage (Agents, Union Insrnce.), Great Western Highway. Blackheath	144722	1950	Road Match	0m
	TOURIST CARS	Blackheath Garage, Great Western Highway, Blackheath	144803	1950	Road Match	0m
	AGRICULTURAL MACHINERY DEALERS	Blackheath Garage, Great Western Highway. Blackheath	144591	1950	Road Match	0m
	BATTERY DEALERS & SERVICE STATIONS	Blackheath Garage, Great Western Highway. Blackheath	144607	1950	Road Match	0m
	MOTOR ACCESSORIES DEALERS	Blackheath Garage, Great Western Highway. Blackheath	144743	1950	Road Match	0m
	MOTOR CAR & TRUCK DEALERS	Blackheath Garage, Great Western Highway. Blackheath	144745	1950	Road Match	0m
	MOTOR GARAGES & ENGINEERS	Blackheath Garage, Great Western Highway. Blackheath	144748	1950	Road Match	0m
	MOTOR SERVICE STATIONS	Blackheath Garage, Great Western Highway. Blackheath	144752	1950	Road Match	0m
	TAXIS	Blackheath Garage, Great Western Highway. Blackheath	144796	1950	Road Match	0m
	TYRE DEALERS	Blackheath Garage, Great Western Highway. Blackheath	144807	1950	Road Match	0m
	WELDERS	Blackheath Garage, Great Western Highway. Blackheath	144810	1950	Road Match	0m
	RADIO &/OR REFRIGERATOR DEALERS & SERVICEMEN	Central Motor Tourist Bureau, Great Western Highway Blackheath	144770	1950	Road Match	0m
	ELECTRICAL SUPPLIES & APPLIANCES	Central Motor Tourist Bureau, Great Western Highway. Blackheath	144660	1950	Road Match	0m
	MOTOR SERVICE STATIONS	Central Motor Tourist Bureau, Great Western Highway. Blackheath	144753	1950	Road Match	0m
	TAXIS	Central Motor Tourist Bureau, Great Western Highway. Blackheath	144797	1950	Road Match	0m
	MEDICAL PRACTITIONERS	Figtree, Dr. E. R., Bathurst Rd. Blackheath	144729	1950	Road Match	0m
	MOTOR SERVICE STATIONS	Hatswell, R. M., Bathurst Rd. Blackheath	144754	1950	Road Match	0m
	LINGERIE MANUFACTURERS	McClennon and Son, Great Western Highway. Blackheath	144726	1950	Road Match	0m
	SHIPPING AGENTS	Montague, Manfred and Co. (Agents, Shaw Saville Line), Great Western Highway. Blackheath	144790	1950	Road Match	0m
	INSURANCE AGENTS	Montague, Manfred and Co. (Agents, South British Insrnce. Co., Atlas Insrnce. Co., Australia Mutual Fire Insrnce. Ca.), Great Western Highway. Blackheath	144723	1950	Road Match	0m
	REAL ESTATE AGENTS	Montague, Manfred and Co., Great Western Highway Blackheath	144774	1950	Road Match	0m
	AUCTIONEERS	Montague, Manfred and Co., Great Western Highway. Blackheath	144595	1950	Road Match	0m
	COMMISSION AGENTS	Montague, Manfred and Co., Great Western Highway. Blackheath	144643	1950	Road Match	0m
	STOCK & STATION & BUSINESS AGENTS	Montague, Manfred and Co., Great Western Highway. Blackheath	144793	1950	Road Match	0m
	SCHOOLS, COLLEGES-GENERAL	Plunket, D. (Private), Bathurst Rd. Blackheath	144785	1950	Road Match	0m
	BEAUTY SALONS & LADIES' HAIRDRESSERS	Scandritt, Miss F., Bathurst Rd. Blackheath	144610	1950	Road Match	0m
	ASSOCIATIONS & SOCIETIES	School of Arts, Bathurst Rd. Blackheath	144592	1950	Road Match	0m
	BILLIARD SALOONS	School of Arts, Bathurst Rd. Blackheath	144612	1950	Road Match	0m
	HALLS	School of Arts, Bathurst Rd. Blackheath	144715	1950	Road Match	0m
	SCHOOLS, COLLEGES-GENERAL	Wallace & Co., Great Western Highway, Blackheath Blackheath	144788	1950	Road Match	0m
	INSURANCE AGENTS	Wallace and Co. (Agents, Queensland Insrnce.), Great Western Highway. Blackheath	144725	1950	Road Match	0m
	AUCTIONEERS	Wallace and Co., Great Western Highway. Blackheath	144597	1950	Road Match	0m

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
17	COMMISSION AGENTS	Wallace and Co., Great Western Highway. Blackheath	144644	1950	Road Match	0m
	REAL ESTATE AGENTS	Wallace and Co., Great Western Highway. Blackheath	144776	1950	Road Match	0m
18	NOT LISTED	Bay Tree Tea Shop. Cafe., Station St , Mount Victoria	121389	1991	Road Match	0m
	NOT LISTED	Mount Victoria Motor Inn., Station St , Mount Victoria	121403	1991	Road Match	0m
	HOSPITALS & HEALTH CENTRES	Mount Victoria Private Hospital, Station St. Mount Victoria	543939	1970	Road Match	0m
	GOVERNMENT DEPARTMENTS	Police Station, Station St. Mount Victoria	543934	1970	Road Match	0m
	ELECTRICAL SUPPLIES & APPLIANCES-RETAILERS	Smith Bros., Station St. Mount Victoria	543932	1970	Road Match	0m
	GROCERS & GENERAL STOREKEEPERS	Ashman' R. E., Station St. Mount Victoria	133364	1950	Road Match	0m
	CAKE SHOPS	Ashman, R. E. Station St. Mount Victoria	133351	1950	Road Match	0m
	CAFES, TEA ROOMS & COFFEE LOUNGES	Ashman, R. E., Station St. Mount Victoria	133350	1950	Road Match	0m
	DELICATESSENS	Ashman, R. E., Station St. Mount Victoria	133354	1950	Road Match	0m
	MILK BARS & CONFECTIONERS	Ashman, R. E., Station St. Mount Victoria	133377	1950	Road Match	0m
	BUTCHERS-RETAIL	Hornby, W. J. Station St. Mount Victoria	133349	1950	Road Match	0m
	FRUITERERS & GREENGROCERS	Wallace, I. C., Station St. Mount Victoria	133360	1950	Road Match	0m
	HARDWARE DEALERS &/OR IRONMONGERS	Wallace, I. C., Station St. Mount Victoria	133368	1950	Road Match	0m
	TAXIS	Warby, C. T., Station St. Mount Victoria	133388	1950	Road Match	0m
	HARDWARE DEALERS &/OR IRONMONGERS	Wilson L. J., Station St. Mount Victoria	133369	1950	Road Match	0m
	DRAPERS-RETAIL	Wilson, L. J., Station St. Mount Victoria	133356	1950	Road Match	0m
	GROCERS & GENERAL STOREKEEPERS	Wilson, L. J., Station St. Mount Victoria	133366	1950	Road Match	0m
	MERCERS-MEN'S & BOYS' OUTFITTERS	Wilson, L. J., Station St. Mount Victoria	133376	1950	Road Match	0m
19	NOT LISTED	Cedar Lodge Motel & Cabins., Great Western Hwy , Mount Victoria	121390	1991	Road Match	0m
	NOT LISTED	Esso Service Station., Great Western Hwy , Mount Victoria	121392	1991	Road Match	0m
	NOT LISTED	Imperial Hotel., Great Western Hwy , Mount Victoria	121397	1991	Road Match	0m
	NOT LISTED	Post Office., Great Western Hwy , Mount Victoria	121407	1991	Road Match	0m
	NOT LISTED	Raid John Antg. Dir., Great Western Hwy , Mount Victoria	121408	1991	Road Match	0m
	NOT LISTED	Thompson F Mir. Towg. Srina., Great Western Hwy , Mount Victoria	121411	1991	Road Match	0m
	HOLIDAY' CAMPS	Cedar Lodge Holiday Cabins, Great Western Highway. Mount Victoria	133370	1950	Road Match	0m
	HOTELS	Imperial Hotel (Licensed), (W. R. Thompson, Licensee), Great Western Highway. Mount Victoria	133373	1950	Road Match	0m
	DELICATESSENS	Irland, I. J., Great Western Highway. Mount Victoria	133355	1950	Road Match	0m
	FRUITERERS & GREENGROCERS	Irland, I. J., Great Western Highway. Mount Victoria	133359	1950	Road Match	0m
	GROCERS & GENERAL STOREKEEPERS	Irland, I. J., Great Western Highway. Mount Victoria	133365	1950	Road Match	0m
	MILK BARS & CONFECTIONERS	Irland, I. J., Great Western Highway. Mount Victoria	133378	1950	Road Match	0m
	ARMATURE WINDERS	Smith Bros. Electrical Service, Great Western Highway. Mount Victoria	133347	1950	Road Match	0m
	ELECTRICAL APPLIANCES-RETAIL	Smith Bros., Great Western Highway. Mount Victoria	133357	1950	Road Match	0m

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
19	ELECTRICAL CONTRACTORS	Smith Bros., Great Western Highway. Mount Victoria	133358	1950	Road Match	0m
	MOTOR ELECTRICIANS	Smith Bros., Great western Highway. Mount Victoria	133381	1950	Road Match	0m
	NEWSAGENTS & STATIONERS	Smith, C. C. and D., Great western Highway. Mount Victoria	133386	1950	Road Match	0m
	LAMPS & STOVES-SPIRIT	Taylor and Robinson (Agents, Aladdin Lamps), Great Western Highway. Mount Victoria	133375	1950	Road Match	0m
	INSURANCE AGENTS	Taylor and Robinson (Agents, London and Lancashire), Great Western Highway. Mount Victoria	133374	1950	Road Match	0m
	MOTOR ACCESSORIES DEALERS	Taylor and Robinson, Great Western Highway. Mount Victoria	133379	1950	Road Match	0m
	MOTOR CAR & TRUCK DEALERS	Taylor and Robinson, Great Western Highway. Mount Victoria	133380	1950	Road Match	0m
	MOTOR GARAGES & ENGINEERS	Taylor and Robinson, Great Western Highway. Mount Victoria	133382	1950	Road Match	0m
	MOTOR PAINTERS & PANEL BEATERS	Taylor and Robinson, Great Western Highway. Mount Victoria	133384	1950	Road Match	0m
	MOTOR TOWING SERVICES	Taylor and Robinson, Great Western Highway. Mount Victoria	133385	1950	Road Match	0m
	RADIO & REFRIGERATOR DEALERS & SERVICEMEN	Taylor and Robinson, Great Western Highway. Mount Victoria	133387	1950	Road Match	0m
	TYRE DEALERS, RETREADERS & VULCANIZERS	Taylor and Robinson, Great Western Highway. Mount Victoria	133390	1950	Road Match	0m
	WELDERS-ELECTRIC & OXY	Taylor and Robinson, Great Western Highway. Mount Victoria	133391	1950	Road Match	0m
20	NOT LISTED	Esso Australia Ltd, Hatley Av , Mount Victoria	121391	1991	Road Match	0m
	NOT LISTED	Esso Australia Ltd., Harley Ave., Mount Victoria	131957	1982	Road Match	0m
	MOTOR OIL & SPIRIT DEPOTS	Atlantic Union Oil Co. Ltd., Harley Ave., Mount McDonald	215691	1961	Road Match	0m
	TAXIS & HIRE CARS	Montague, J., Harley Ave., Mount McDonald	215698	1961	Road Match	0m
	MOTOR OIL & SPIRIT MERCHANTS	Atlantic Union Oil Co. Ltd., Harley Ave. Mount Victoria	133383	1950	Road Match	0m
21	NOT LISTED	Grange The Hotel Priv., Selsdon St , Mount Victoria	121395	1991	Road Match	0m
22	RESTAURANTS	Log Cabin Farmhouse, Great Western H'Way. Little Hartley	128258	1991	Road Match	0m
	MOTOR GARAGES & ENGINEERS	Esso Servicenter, Great Western Hghwy. Little Hartley	543880	1970	Road Match	0m
	MOTOR OIL & SPIRIT DEPOTS	Esso Standard Oil (Aust.) Pty. Ltd., Great Western Hghwy. Little Hartley	543882	1970	Road Match	0m
	FRUITERERS & GREENGROCERS	Harris, H. M., Great Western Hghwy. Little Hartley	543877	1970	Road Match	0m
	CAFES, TEA ROOMS & COFFEE LOUNGES, Etc.	Log Cabin House, Great Western Hghwy. Little Hartley	543876	1970	Road Match	0m
	FRUITERERS & GREENGROCERS	Morris's Apple Store, Great Western Hghwy. Little Hartley	543878	1970	Road Match	0m
23	NOT LISTED	Mount Victoria General Store., 108 Great Western Hway , Mount Victoria	121402	1991	Road Match	0m
	NOT LISTED	Cedar Lodge Motel & Cabins, Great Western Highway., Mount Victoria	131956	1982	Road Match	0m
	NOT LISTED	Imperial Hotel-Motel.Great Western Highway., Mount Victoria	131962	1982	Road Match	0m
	NOT LISTED	Mount Victoria Crest Service Station., Great Western Highway., Mount Victoria	131966	1982	Road Match	0m
	NOT LISTED	Post Office, Great Western Highway., Mount Victoria	131969	1982	Road Match	0m
	NOT LISTED	Reid, P., Antq.171r., Great Western Highway., Mount Victoria	131970	1982	Road Match	0m
	NEWSAGENTS-GENERAL	Booth, H. J., Bathurst Rd. Mount Victoria	543951	1970	Road Match	0m
	MOTOR SERVICE STATIONS-PETROL, OILS, ETC.	Cedar Lodge Service Station, Bathurst Rd. Mount Victoria	543947	1970	Road Match	0m

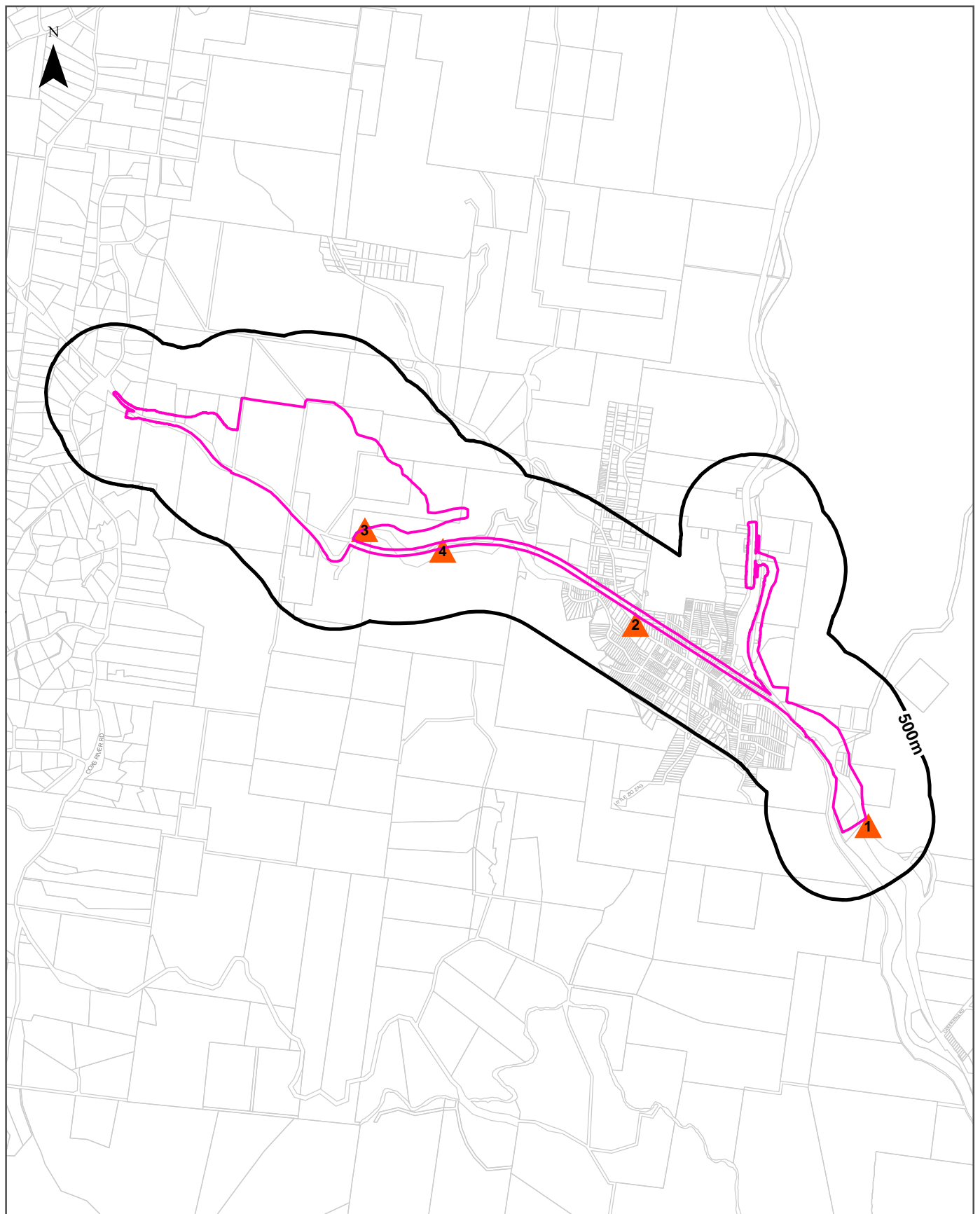


Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
23	HOTELS-LICENSED	Imperial Hotel, Great Western Hghwy. Mount Victoria	543940	1970	Road Match	0m
	TAXI & HIRE CAR SERVICES	Jones, W. J., Great Western Hghwy. Mount Victoria	543953	1970	Road Match	0m
	CAFES, TEA ROOMS & COFFEE LOUNGES, Etc.	Mountain Top Cafe, Bathurst Rd. Mount Victoria	543928	1970	Road Match	0m
	MILK BARS & CONFECTIONERY SHOPS	Mountain Top Cafe, Bathurst Rd. Mount Victoria	543943	1970	Road Match	0m
	MOTOR SERVICE STATIONS-PETROL, OILS, ETC.	Mt. Victoria Auto Port, Bathurst Rd. Mount Victoria	543948	1970	Road Match	0m
	MOTOR TOWING SERVICES	Mt. Victoria Auto Port, Bathurst Rd. Mount Victoria	543950	1970	Road Match	0m
	MOTELS	Mt. Victoria Motel, Bathurst Rd. Mount Victoria	543945	1970	Road Match	0m
	GOVERNMENT DEPARTMENTS	Post Office, Bathurst Rd. Mount Victoria	543935	1970	Road Match	0m
	ANTIQUE DEALERS	Reid, P., Bathurst Rd. Mount Victoria	543923	1970	Road Match	0m
	ELECTRICAL CONTRACTORS-LICENSED	Smith Bros., Bathurst Rd. Mount Victoria	543931	1970	Road Match	0m
	ENGINEERS-ELECTRICAL	Smith Bros., Bathurst Rd. Mount Victoria	543933	1970	Road Match	0m
	MOTOR ELECTRICIANS	Smith Bros., Bathurst Rd. Mount Victoria	543946	1970	Road Match	0m
	MOTOR SERVICE STATIONS-PETROL, OILS, ETC.	Smith Bros., Bathurst Rd. Mount Victoria	543949	1970	Road Match	0m
	CARRIERS & CARTAGE CONTRACTORS	Holden, H., Bathurst Rd. Mount Victoria	133352	1950	Road Match	0m
	WOOD MERCHANTS-COAL &/OR COKE	Holden, H., Bathurst Rd. Mount Victoria	133392	1950	Road Match	0m
	BAKERS & PASTRYCOOKS	Smeaton, L. R., Bathurst Rd. Mount Victoria	133348	1950	Road Match	0m
24	NOT LISTED	Mount Victoria Pottery., 11 Burwood Rd , Mount Victoria	121404	1991	Road Match	0m
25	NOT LISTED	Sharp P Carrier., Fairydell Rd , Mount Victoria	121409	1991	Road Match	0m
	CARRIERS & CARTAGE CONTRACTORS	Sharp, P., Fairydell Rd. Mount Victoria	543930	1970	Road Match	0m
26	HOLIDAY ACCOMMODATION	Glen Ogie Tourist Cabins, Montgomery St. Mount Victoria	543937	1970	Road Match	0m
	HOTELS	Coopers Grand Private Hotel (Private), Montgomery St. Mount Victoria	133372	1950	Road Match	0m
	GUEST HOUSES	Coopers Grand Private Hotel, Montgomery St. Mount Victoria	133367	1950	Road Match	0m
	HOLIDAY' CAMPS	Glen-Ogle, Montgomery St. Mount Victoria	133371	1950	Road Match	0m
27	HOLIDAY ACCOMMODATION	C.Y.C. Camps, Matlock St. Mount Victoria	543936	1970	Road Match	10m
28	CARRIERS & CARTAGE CONTRACTORS	Young D. S., Jersey St. Mount Victoria	133353	1950	Road Match	37m
29	WOOD MERCHANTS-COAL &/OR COKE	Young, D., Carrington Ave. Mount Victoria	133393	1950	Road Match	46m
30	NOT LISTED	Fire Station., Cassilis St , Mount Victoria	121393	1991	Road Match	94m
	NOT LISTED	Fire Station, Cassilis St., Mount Victoria	131958	1982	Road Match	94m
	LOCAL BODIES	Fire Station, Cassias St. Mount Victoria	543941	1970	Road Match	94m

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# Dry Cleaners, Motor Garages & Service Stations

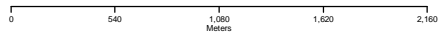
Road Alignment, Blackheath, NSW 2785 (North)



## Legend

- Site Boundary
- Buffer 500m
- 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: 07 December 2021

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

## Historical Business Directories

Road Alignment, Blackheath, NSW 2785 (North)

### 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.

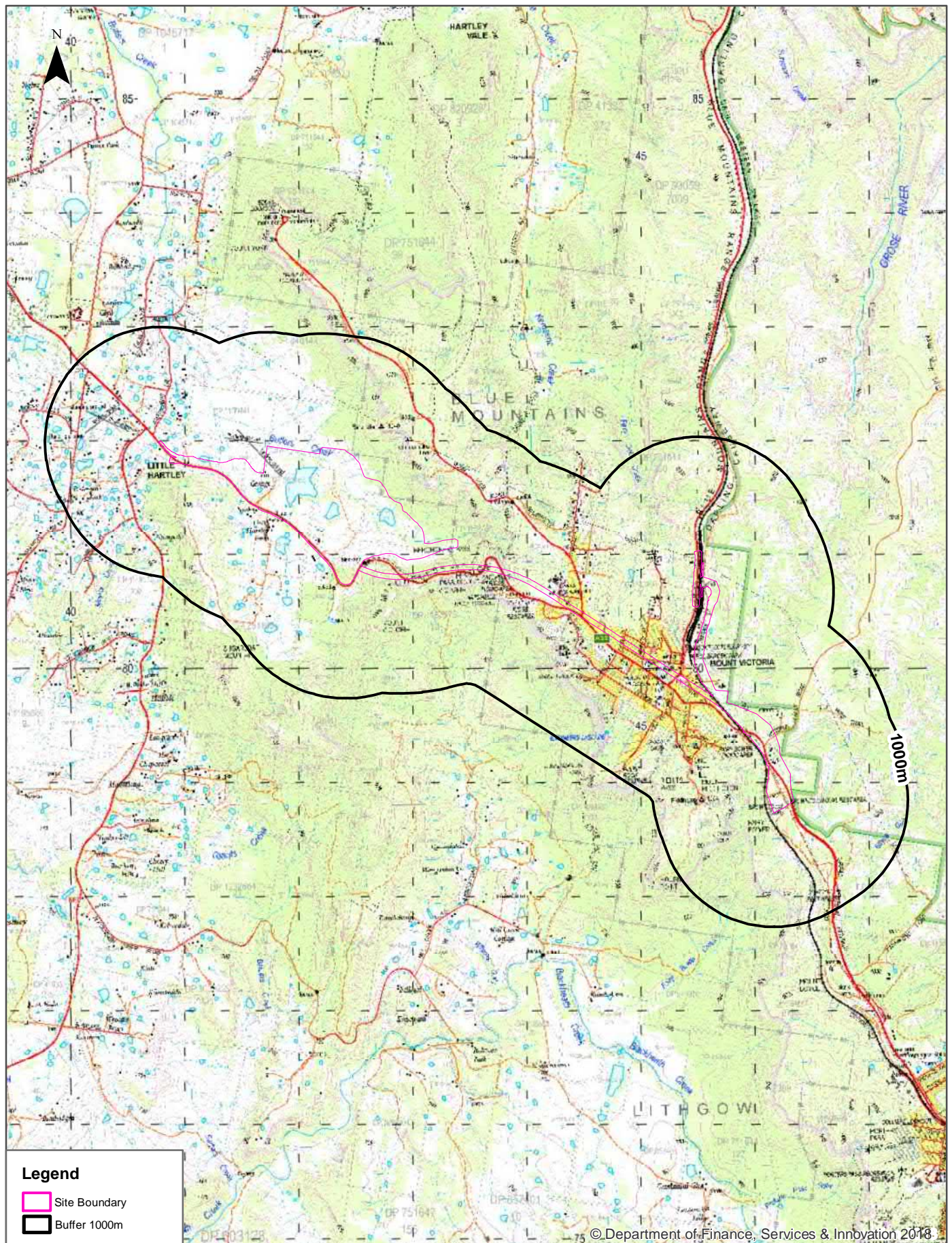
Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
1	MOTOR GARAGES & ENGINEERS	Blackheath Garage, Great Western Hghwy. Blackheath	541595	1970	Road Match	0m
	MOTOR GARAGES & ENGINEERS	Garden Service Station, Great Western Hghwy. Blackheath	541596	1970	Road Match	0m
	MOTOR GARAGES & ENGINEERS	Blackheath Garage, Great Western Highway., Blackheath	188209	1961	Road Match	0m
	MOTOR GARAGES & ENGINEERS	Garden Service Station, Great Western Highway., Blackheath	188210	1961	Road Match	0m
	DRY CLEANERS, DYERS & PRESSERS	Alpine Dry Cleaners, Great Western Highway. Blackheath	144654	1950	Road Match	0m
	MOTOR GARAGES & ENGINEERS	Blackheath Garage, Great Western Highway. Blackheath	144748	1950	Road Match	0m
	MOTOR SERVICE STATIONS	Blackheath Garage, Great Western Highway. Blackheath	144752	1950	Road Match	0m
	MOTOR SERVICE STATIONS	Central Motor Tourist Bureau, Great Western Highway. Blackheath	144753	1950	Road Match	0m
	MOTOR SERVICE STATIONS	Hatswell, R. M., Bathurst Rd. Blackheath	144754	1950	Road Match	0m
2	MOTOR SERVICE STATIONS-PETROL, OILS, ETC.	Cedar Lodge Service Station, Bathurst Rd. Mount Victoria	543947	1970	Road Match	0m
	MOTOR SERVICE STATIONS-PETROL, OILS, ETC.	Mt. Victoria Auto Port, Bathurst Rd. Mount Victoria	543948	1970	Road Match	0m
	MOTOR SERVICE STATIONS-PETROL, OILS, ETC.	Smith Bros., Bathurst Rd. Mount Victoria	543949	1970	Road Match	0m
3	MOTOR GARAGES & ENGINEERS	Esso Servicenter, Great Western Hghwy. Little Hartley	543880	1970	Road Match	0m
4	MOTOR GARAGES & ENGINEERS	Taylor and Robinson, Great Western Highway. Mount Victoria	133382	1950	Road Match	0m

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# Topographic Map 2015

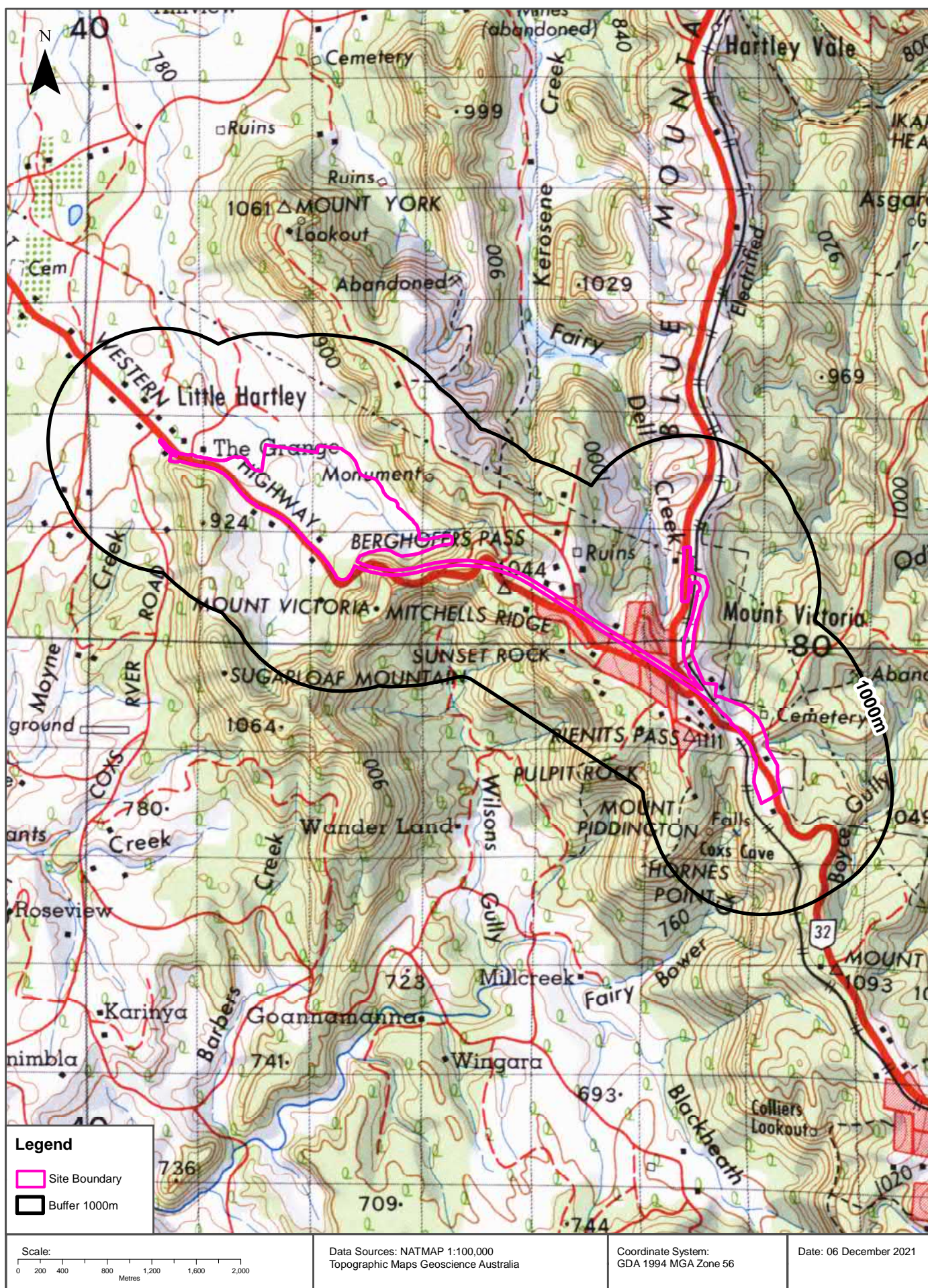
Road Alignment, Blackheath, NSW 2785 (North)





# Historical Map 1972

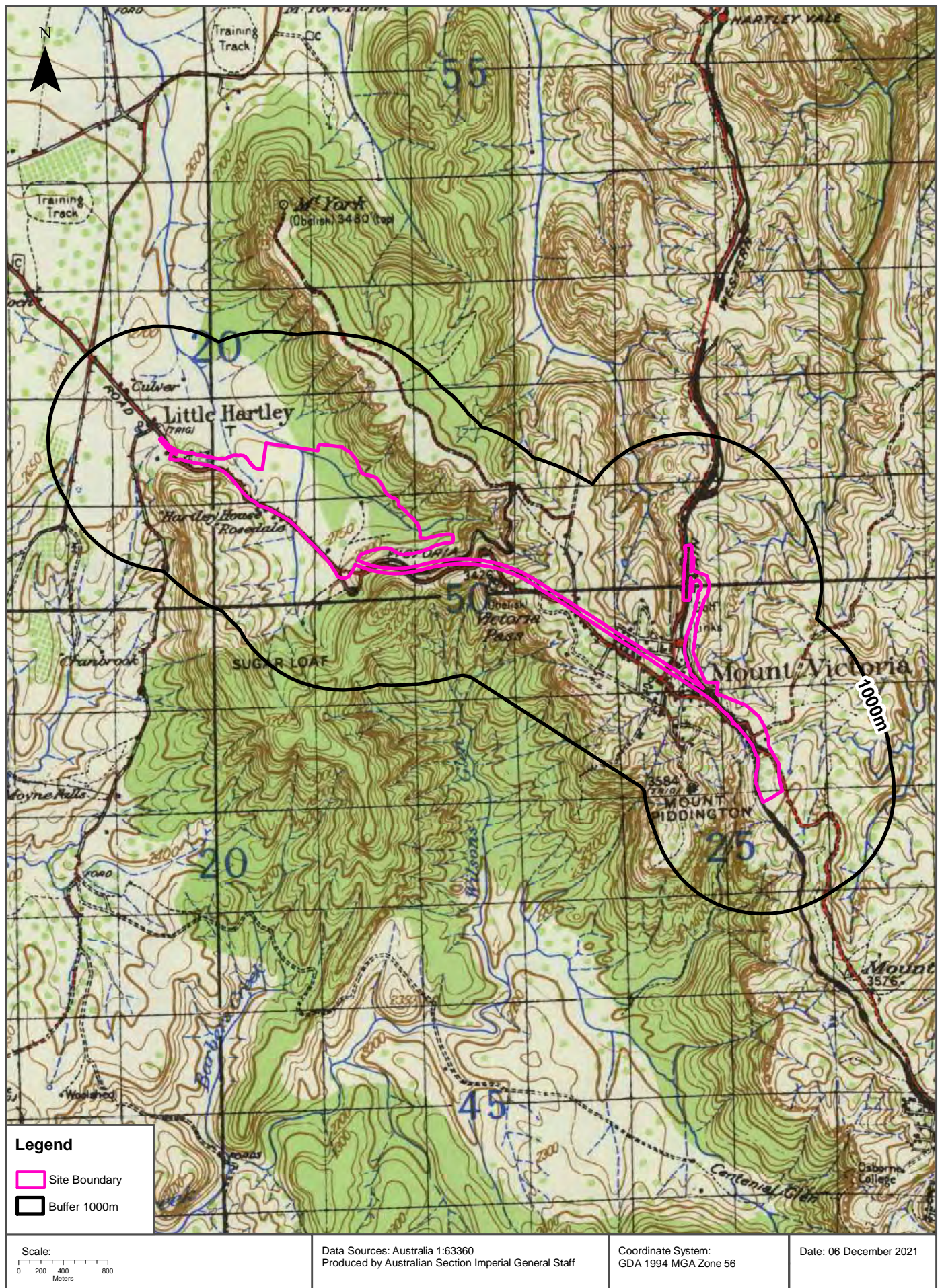
Road Alignment, Blackheath, NSW 2785 (North)





# Historical Map c.1935

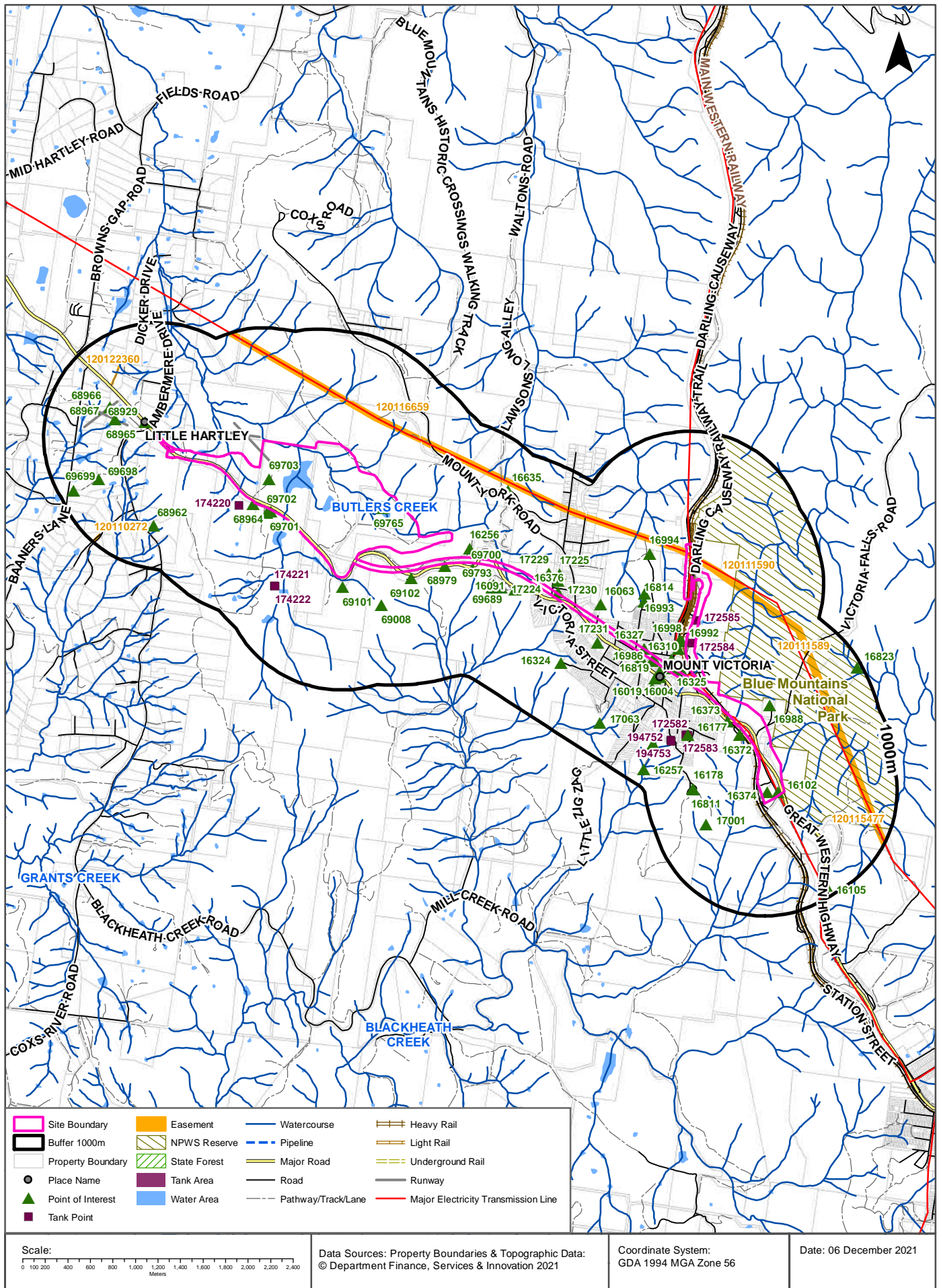
Road Alignment, Blackheath, NSW 2785 (North)





# Topographic Features

Road Alignment, Blackheath, NSW 2785 (North)



# Topographic Features

## Road Alignment, Blackheath, NSW 2785 (North)

### Points of Interest

What Points of Interest exist within the dataset buffer?

Map Id	Feature Type	Label	Distance	Direction
16374	Sports Field	BROWNTOWN OVAL	0m	On-site
69703	Homestead	THE GRANGE	0m	On-site
69765	Manmade Waterbody	BUTLERS CREEK	0m	On-site
16102	Roadside Rest Area	BROWNTOWN OVAL REST AREA	0m	On-site
16325	Park	ROTUNDA PARK	0m	On-site
16986	Park	MOUNT VICTORIA PARK	0m	On-site
16327	Fire Station	MOUNT VICTORIA FIRE STATION	2m	South East
16987	Monument	WAR MEMORIAL	4m	South East
16376	Place Of Worship	CHRISTIAN CHURCH	9m	East
69701	Historic Site	HISTORIC ROSEDALE	14m	West
68964	Homestead	NIOKA	16m	West
68979	Gap / Pass / Saddle	PASS OF VICTORIA	17m	South East
16990	Firestation - Bush	MOUNT VICTORIA RFB	24m	South East
16310	Combined Primary-Secondary School	ONESCHOOL GLOBAL MOUNT VICTORIA CAMPUS	35m	South East
69702	Homestead	LITTLE HARTLEY FARM	38m	West
16998	Railway Station	MOUNT VICTORIA RAILWAY STATION	39m	East
16373	Historic Site	MOUNT VICTORIA TOLL HOUSE	47m	South East
16372	Park	FAIRY BOWER PICNIC AREA	48m	South East
69700	Monument	MITCHELL PASS MONUMENT	48m	South East
16819	Park	MOUNT VICTORIA MEMORIAL PARK	50m	South East
16820	Police Station	MOUNT VICTORIA POLICE STATION	54m	South East
16992	Museum	MOUNT VICTORIA HISTORICAL SOCIETY MUSEUM	60m	East
16985	Park	ERROL BARDEN PARK	63m	East
69102	Boat Ramp	SAFETY RAMP	67m	South
16256	Gap / Pass / Saddle	BERGHOFERS PASS	80m	East
69101	Boat Ramp	SAFETY RAMP	85m	South West
16004	Town	MOUNT VICTORIA	87m	South East
17230	Sports Field	PLAYING FIELD	93m	East
17229	Community Facility	ELTHAM PARK CHRISTIAN CAMP	105m	East
16827	Place Of Worship	ANGLICAN CHURCH	116m	South East
16991	Post Office	MOUNT VICTORIA POST OFFICE	124m	South East

Map Id	Feature Type	Label	Distance	Direction
16063	Sewage Works	Sewage Works	127m	East
16988	Cemetery	MOUNT VICTORIA CEMETERY	129m	South East
16091	Roadside Rest Area	MITCHELLS RIDGE REST AREA	130m	South East
17231	Place Of Worship	CATHOLIC CHURCH	132m	South East
17225	Sports Court	TENNIS COURTS	152m	East
69689	Park	MITCHELLS RIDGE PICNIC AREA	156m	South East
17224	Monument	MITCHELL OBELISK	158m	South East
68929	Village	LITTLE HARTLEY	162m	North West
69793	Lookout	MITCHELLS RIDGE LOOKOUT	181m	South East
16019	Primary School	MOUNT VICTORIA PUBLIC SCHOOL	206m	South East
69008	Mountain Like	MOUNT VICTORIA	293m	South West
16994	Sewage Works	MOUNT VICTORIA SEWAGE TREATMENT WORKS	326m	East
16993	Sports Field	PLAYING FIELD	351m	East
16814	Education Facility	THE GRANGE BARKER COLLEGE OUTDOOR EDUCATION CENTRE	356m	East
16177	Mountain Like	ONE TREE HILL	381m	South East
68965	Landing Ground	Landing Ground	399m	North West
16324	Lookout	SUNSET ROCK	458m	South East
68967	Landing Ground	Landing Ground	488m	North West
17001	Cave	COXS CAVE	554m	South East
16178	Mountain Like	MOUNT PIDDINGTON	566m	South East
16811	Lookout	MOUNT PIDDINGTON LOOKOUT	575m	South East
68966	Landing Ground	Landing Ground	607m	North West
17222	Cave	ROSS CAVE	617m	South East
68962	Homestead	NIANGALA	621m	West
16635	Monument	OBELISK	628m	North East
69698	Homestead	DELORAIN PARK	634m	West
17063	Waterfall	ENGINEERS CASCADE	717m	South East
16257	Gap / Pass / Saddle	RIENITS PASS	857m	South East
69699	Homestead	TATHRA	874m	West
16105	Roadside Rest Area	MT BOYCE REST AREA	898m	South East
16823	Historic Site	BLAIR ATHOL COAL MINE	960m	East

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

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## Topographic Features

### Road Alignment, Blackheath, NSW 2785 (North)

## 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
172584	Water	Operational		09/05/2000	0m	On-site
172585	Water	Operational		09/05/2000	0m	On-site
174220	Water	Operational		13/12/2001	105m	West
172583	Water	Operational		09/05/2000	382m	South East
172582	Water	Operational		09/05/2000	391m	South East
174222	Water	Operational		13/12/2001	493m	West
174221	Water	Operational		13/12/2001	497m	West
194752	Water	Operational		01/05/2020	507m	South East
194753	Water	Operational		01/05/2020	511m	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
120111589	Primary	Undefined		0m	East
120111590	Primary	Undefined		13m	East
120116659	Primary	Undefined		338m	North
120122360	Primary	Undefined		605m	North West
120115477	Primary	Undefined		853m	South East
120110272	Primary	Undefined		910m	West

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

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## Topographic Features

### Road Alignment, Blackheath, NSW 2785 (North)

#### 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
N0004	NATIONAL PARK	Blue Mountains National Park	01/10/1967	0m	East

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

## Road Alignment, Blackheath, NSW 2785 (North)



## Hydrogeology & Groundwater

Road Alignment, Blackheath, NSW 2785 (North)

### 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 aquifers of low to moderate productivity	0m	On-site

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

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### Temporary Water Restriction (Botany Sands Groundwater Source) Order 2018

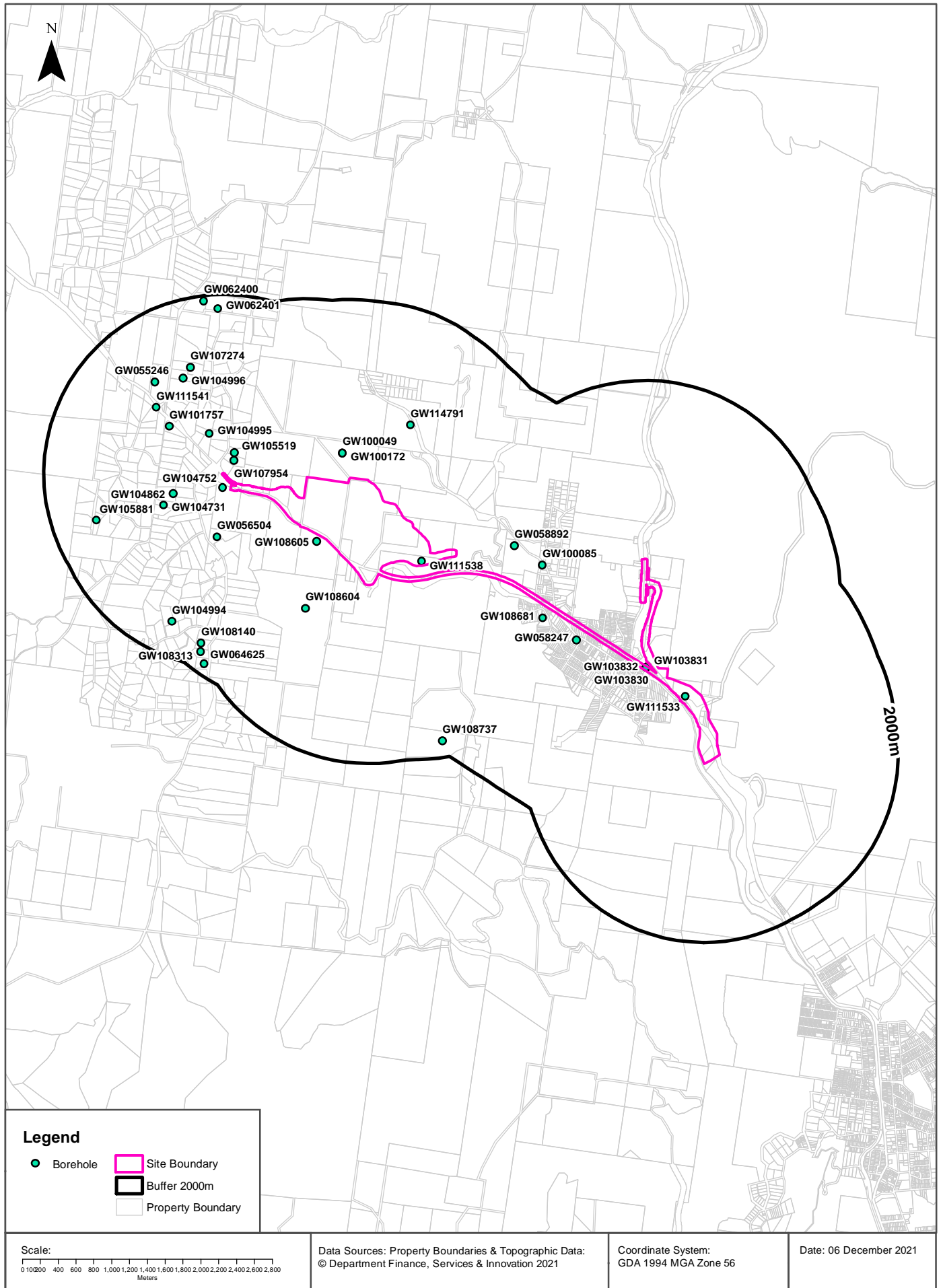
Temporary water restrictions relating to the Botany Sands aquifer within the dataset buffer:

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

Road Alignment, Blackheath, NSW 2785 (North)





# Hydrogeology & Groundwater

Road Alignment, Blackheath, NSW 2785 (North)

## 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
GW103 830	10BL156 659	Bore		Monitoring Bore	Monitoring Bore		11/04/1991	3.30	3.30					0m	On-site
GW103 831	10BL156 659	Bore		Monitoring Bore	Monitoring Bore		16/07/2001	2.50	2.50					0m	On-site
GW103 832	10BL156 659	Bore		Monitoring Bore	Monitoring Bore		11/04/1991	3.35	3.35					0m	On-site
GW111 533	10BL604 859	Bore	Other Govt	Monitoring Bore	Monitoring Bore		07/06/2011	17.30	17.30					0m	On-site
GW111 538	10BL604 698	Bore	Other Govt	Monitoring Bore	Monitoring Bore		03/08/2011	17.78	17.78					0m	On-site
GW108 605	10BL600 606	Bore	Private	Domestic, Stock	Domestic, Stock		23/10/2006	145.00	145.00					74m	West
GW104 752	10BL159 122, 10WA11 6289	Bore	Private	Domestic	Domestic		10/05/1999	46.00	46.00					86m	West
GW108 681	10BL601 510, 10WA11 6365	Bore	Private	Domestic	Domestic		16/12/1989	40.00	40.00			0.600		131m	South East
GW058 247	10BL125 946, 10BL128 760, 10WA11 6212	Bore open thru rock	Private	Domestic	Domestic		01/11/1983	50.00	50.00					132m	South East
GW107 954	10BL161 120, 10WA11 6312	Bore	Private	Domestic, Stock	Domestic, Stock		29/10/2005	50.00	50.00		30.00	0.750		181m	North West
GW105 519	10BL162 032, 10WA11 6321	Bore		Domestic	Domestic		14/10/2003	39.00	39.00		5.00	0.625		255m	North West
GW100 049	10BL156 673, 10WA11 6264	Bore	Private	Domestic	Domestic		31/07/1990	31.20	31.20			0.450		289m	North West
GW100 172	10BL144 939, 10WA11 6254	Bore	Private	Domestic, Stock	Domestic, Stock		14/12/1991	100.60	100.60					289m	North West
GW100 085	10BL143 445	Bore	Private	Domestic, Stock	Domestic, Stock		14/06/1991	93.70	93.70					322m	East
GW058 892	10BL130 710, 10WA11 6224	Bore open thru rock	Private	Domestic, Stock	Domestic, Stock		01/12/1981	83.80	83.80	Good				372m	East
GW104 995	10BL160 455, 10WA11 6308	Bore	Private	Domestic, Stock	Domestic, Stock		28/11/2003	64.00	64.00		6.00	0.505		462m	North West
GW056 504	10BL122 790, 10WA11 6204	Bore open thru rock	Private	Stock	Stock		01/09/1981	60.90	60.90					551m	West
GW104 862	10BL161 458, 10WA11 6317	Bore	Private	Domestic, Stock	Domestic, Stock		08/02/2003	48.00	48.00		16.50	0.500		592m	West
GW108 604	10BL600 607	Bore	Private	Domestic, Stock	Domestic, Stock		12/02/2008	102.00	102.00					706m	West

GW No.	Licence No	Work Type	Owner Type	Authorised Purpose	Intended Purpose	Name	Complete Date	Final Depth (m)	Drilled Depth (m)	Salinity (mg/L)	SWL (m bgl)	Yield (L/s)	Elev (AHD)	Dist	Dir
GW104 731	10BL161 223, 10WA11 6315	Bore	Private	Domestic	Domestic		10/01/2003	42.00	42.00		6.00	0.380		743m	West
GW114 791	10WA11 8843	Bore	Private	Domestic, Stock	Domestic, Stock		24/02/2014	122.00	122.00	250	93.0 0			779m	North
GW101 757	10BL157 325, 10WA11 6274	Bore		Domestic, Stock	Domestic, Stock		26/10/1995	36.00	36.00		9.00	1.000		794m	North West
GW111 541	10BL604 867	Bore	Private	Monitoring Bore	Monitoring Bore		27/05/2011	12.40	12.40					1044m	North West
GW104 996	10BL160 454, 10WA11 6307	Bore	Private	Domestic, Stock	Domestic, Stock		20/08/2001	37.00	37.00		6.00	1.250		1153m	North West
GW107 274	10BL163 416, 10WA11 6332	Bore	Private	Domestic, Stock	Domestic, Stock		07/01/2004	164.00	164.00		84.0 0	1.650		1237m	North West
GW055 246	10BL119 758, 10WA11 6199	Bore	Private	Domestic, Stock	Domestic, Stock		01/05/1981	38.10	38.10					1271m	North West
GW105 881	10BL161 415, 10WA11 6316	Bore		Domestic, Stock			09/05/2005							1500m	West
GW104 994	10BL160 449, 10WA11 6306	Bore	Private	Domestic, Stock	Domestic, Stock		20/01/2002	62.00	62.00			0.300		1618m	West
GW108 140	10BL160 448, 10WA11 6305	Bore		Domestic	Domestic		01/01/2002	50.00			38.0 0	17.80 0		1712m	West
GW108 313	10BL160 447, 10WA11 6304	Bore		Domestic, Stock	Domestic, Stock		01/01/2004	52.00			16.0 0	0.500		1792m	West
GW108 737	10BL600 692, 10WA11 6361	Bore	Private	Domestic, Stock	Domestic, Stock		22/01/2007	49.00	49.00		12.0 0	0.479		1815m	South
GW062 401	10BL133 123	Bore	Private	Domestic, Irrigation	Irrigation		01/08/1985	30.50	30.50	Good				1840m	North West
GW064 625	10BL136 987, 10WA11 6233	Bore	Private	Domestic, Stock	Domestic, Stock		01/02/1988	40.20	40.20	Good				1877m	South West
GW062 400		Bore	Private		Irrigation		01/08/1985	56.70	56.70					1939m	North West

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

## Road Alignment, Blackheath, NSW 2785 (North)

### Driller's Logs

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

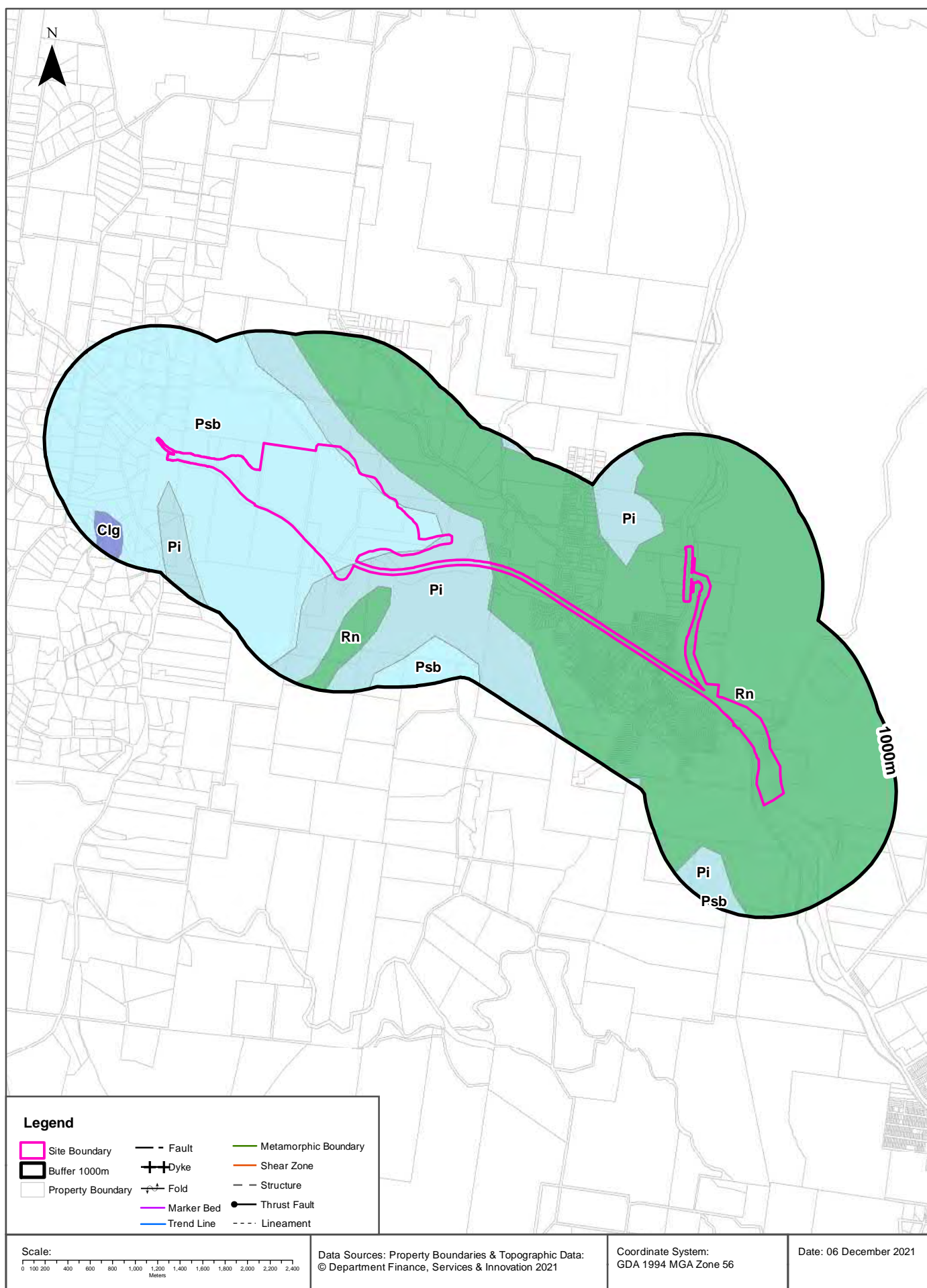
Groundwater No	Drillers Log	Distance	Direction
GW103830	0.00m-1.20m SAND/BROWN,CLAYEY,MOIST 1.20m-2.80m INCREASINGLY CLAYEY,GRE,WET 2.80m-3.30m SANDSTONE,QUARTZOSE,YELLOW	0m	On-site
GW103831	0.00m-0.10m SAND-BROWN,CLAYEY,MOIST 0.10m-1.00m SAND CLAYEY,GRAVELLY,POORLY SORTED 1.00m-2.00m SAND-GRAVELLY,ORANGE TO GREY 2.00m-2.50m SANDSTONE-QUARTZOSE,YELLOW	0m	On-site
GW103832	0.00m-0.20m SAND/CLAYEY,MOIST 0.20m-1.60m SAND-GRAVELLY, MOIST,CLAYEY 1.60m-2.50m SAND-GRAVELLY,WET,BECOMING CLAYEY 2.50m-3.35m SANDSTONE-QUARTZOSE,YELLOW	0m	On-site
GW111533	0.00m-0.50m SILTY SAND: BROWN,FINE-MED SAND 0.50m-1.60m SAND CLAYEY,ORANGE BROWN,FINE MED.SAND 1.60m-11.50m SANDSTONE,PALE GREY,MED.COARSE GRAIN 11.50m-11.78m CLAYSTONE,MASSIVE,PALE GREY-RED 11.78m-15.71m SANDSTONE BROWN GREY,MED.COARSE GRAIN 15.71m-17.20m CLAYSTONE,BROWN GREY,RED 17.20m-17.30m SANDSTONE,PALE GREY,FINE GRAINED	0m	On-site
GW111538	0.00m-0.30m SILTY CLAY:DADDRK BROWN,MED.PLASTICITY 0.30m-2.40m SAND:BROWN-GREY,FINE,COURSE GRAIN 2.40m-3.30m SANDY CLAY:ORANGE-BROWN,FINE-COURSE GRAIN 3.30m-4.00m SAND:ORANGE,BROWN,GREY,FINE COURSE GRAIN 4.00m-7.37m SANDSTONE,ORANGE BROWN,FINE,MED GRAIN 7.37m-8.80m CONGLOMERATE BROWN,FINE COURSE GRAIN 8.80m-17.78m INTERBEDDED CARBONACEOUS SILTSTONE,GREY	0m	On-site
GW108605	0.00m-5.00m clay, brown 5.00m-36.00m shale, grey 36.00m-145.00m sandstone, grey shale bands	74m	West
GW104752	0.00m-1.00m TOPSOIL 1.00m-45.00m SANDSTONE 45.00m-46.00m GRANITE PINK	86m	West
GW108681	0.00m-2.00m topsoil 2.00m-20.00m sandstone, weathered bands light brown 20.00m-21.00m ironstone, very hard weathered water 21.00m-36.00m sandstone, light borwn quartz grey 36.00m-37.00m gravel, brown sandstone, grey clay water 37.00m-40.00m sandstone, weathered very hard, quartz	131m	South East
GW058247	0.00m-21.00m Sandstone 21.00m-22.00m Ironstone 22.00m-24.00m Sandstone 24.00m-25.00m Ironstone 25.00m-26.00m Sandstone 26.00m-32.00m Ironstone 32.00m-34.00m Slate 34.00m-50.00m Sandstone	132m	South East
GW107954	0.00m-0.60m topsoil 0.60m-4.00m clay, sandy 4.00m-44.00m shale, soft grey 44.00m-50.00m granite	181m	North West
GW105519	0.00m-0.40m TOPSOIL 0.40m-2.00m CLAY ORANGE 2.00m-4.00m CLAY SANDY 4.00m-39.00m SHALE SOFT AND GREY	255m	North West
GW100049	0.00m-1.50m SOIL WITH FLOATERS 1.50m-10.00m SANDSTONE 10.00m-10.20m IRONSTONE 10.20m-20.00m SANDSTONE 20.00m-21.00m IRONSTONE 21.00m-31.20m SANDSTONE	289m	North West
GW100172	0.00m-0.30m TOPSOIL 0.30m-1.50m BROWN CLAY 1.50m-15.20m CLOLOURED SANDSTONE 15.20m-100.60m GREY SANDSTONE	289m	North West

Groundwater No	Drillers Log	Distance	Direction
GW100085	0.00m-12.50m SANDSTONE 12.50m-20.30m IRONSTONE 20.30m-93.70m SANDSTONE	322m	East
GW058892	0.00m-0.30m Topsoil 0.30m-0.60m Sandstone Weathered 0.60m-83.80m Sandstone Water Supply	372m	East
GW104995	0.00m-1.00m TOPSOIL 1.00m-3.00m RED CLAY 3.00m-16.00m YELLOW SHALE 16.00m-64.00m GREY SHALE	462m	North West
GW056504	0.00m-0.30m Topsoil 0.30m-5.40m Shale 5.40m-60.90m Granite Water Supply	551m	West
GW104862	0.00m-0.30m TOPSOIL 0.30m-1.00m CLAY 1.00m-48.00m SHALE	592m	West
GW108604	0.00m-6.00m clay, brown 6.00m-32.00m shale, grey 32.00m-102.00m sandstone, grey shale bands	706m	West
GW104731	0.00m-0.20m TOPSOIL 0.20m-1.30m CLAY 1.30m-42.00m SHALE	743m	West
GW114791	0.00m-0.60m SAND/SOIL 0.60m-5.00m CLAYS SOFT 5.00m-22.00m SANDSTONE 22.00m-32.00m SHALE RED 32.00m-60.00m SANDSTONE 60.00m-62.00m SHALE GREY 62.00m-76.00m SANDSTONE YELLOW 76.00m-78.00m SHALE WHITE 78.00m-83.00m SANDSTONE WHITE 83.00m-84.00m SANDSTONE DARK ORANGE 84.00m-108.00m SANDSTONE YELLOW 108.00m-120.00m SHALE SANDY WHITE 120.00m-121.00m COAL 121.00m-122.00m SHALE DARK GREY	779m	North
GW101757	0.00m-0.50m Topsoil 0.50m-2.00m Clay 2.00m-5.00m Sand 5.00m-36.00m Shale	794m	North West
GW111541	0.00m-1.50m CLAY,BROWN TO ORANGE,LOW-MED PLASTICITY 1.50m-5.70m SILTSTONE:MOTTLED,RED-BROWN,WHITE 5.70m-6.40m SANDSTONE/SILTSTONE,GREY W RED/WHITE 6.40m-9.46m SILTSTONE,MOTTLED,RED BROWN,WHITE 9.46m-12.40m SILTSTONE,GREY FG.MG.	1044m	North West
GW104996	0.00m-0.40m TOPSOIL 0.40m-7.00m LIGHT BROWN CLAY 7.00m-34.00m BLACK SHALE 34.00m-37.00m GRANITE	1153m	North West
GW107274	0.00m-5.00m clay 5.00m-32.00m shale 32.00m-34.00m sandstone 34.00m-164.00m granite	1237m	North West
GW055246	0.00m-0.30m Topsoil 0.30m-1.50m Clay Red 1.50m-6.10m Clay White 6.10m-33.50m Shale Soft Water Supply 33.50m-38.10m Granite White	1271m	North West
GW104994	0.00m-0.20m TOPSOIL 0.20m-7.50m BROWN CLAY 7.50m-16.00m BROKEN BROWN SHALE 16.00m-62.00m PORPHYRY	1618m	West
GW108737	0.00m-6.00m shale, brown 6.00m-20.00m shale, grey 20.00m-49.00m sandstone, grey	1815m	South
GW062401	0.00m-0.30m Topsoil 0.30m-2.40m Clay 2.40m-30.50m Shale Water Supply	1840m	North West
GW064625	0.00m-0.30m Topsoil 0.30m-4.60m Sandstone 4.60m-6.70m Shale 6.70m-40.20m Granite Water Supply	1877m	South West

Groundwater No	Drillers Log	Distance	Direction
GW062400	0.00m-2.40m Loam Sandy 2.40m-10.10m Clay Water Supply 10.10m-19.50m Shale 19.50m-32.00m Sandstone Water Supply 32.00m-36.60m Clay 36.60m-38.40m Granite Soft 38.40m-56.70m Sandstone	1939m	North West

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

Road Alignment, Blackheath, NSW 2785 (North)

### Geological Units 1:250,000

What are the Geological Units within the dataset buffer?

Symbol	Description	Unit Name	Group	Sub Group	Age	Dist	Dir
Psb	Shale, conglomerate and sandstone including lenticular development of the Megalong conglomerate	Berry Siltstone	Shoalhaven Group		Palaeozoic	0m	On-site
Rn	Sandstone, interbedded sandstone and siltstone, claystone. conglomerate and sandstone (Widden Brook conglomerate)	Narrabeen Group	Narrabeen Group	Clifton Subgroup	Mesozoic	0m	On-site
Pi	Shale, sandstone, conglomerate and chert with coal and torbanite seams	Illawarra Coal Measures	Illawarra Coal Measures		Palaeozoic	0m	On-site
Cig	Monzogranite and granodiorite				Palaeozoic	698m	West

### Geological Structures 1:250,000

What are the Geological Structures within the dataset buffer?

Feature	Name	Description	Map Sheet	Distance	Direction
N/A	No records in buffer				

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

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## Naturally Occurring Asbestos Potential

Road Alignment, Blackheath, NSW 2785 (North)

## Naturally Occurring Asbestos Potential

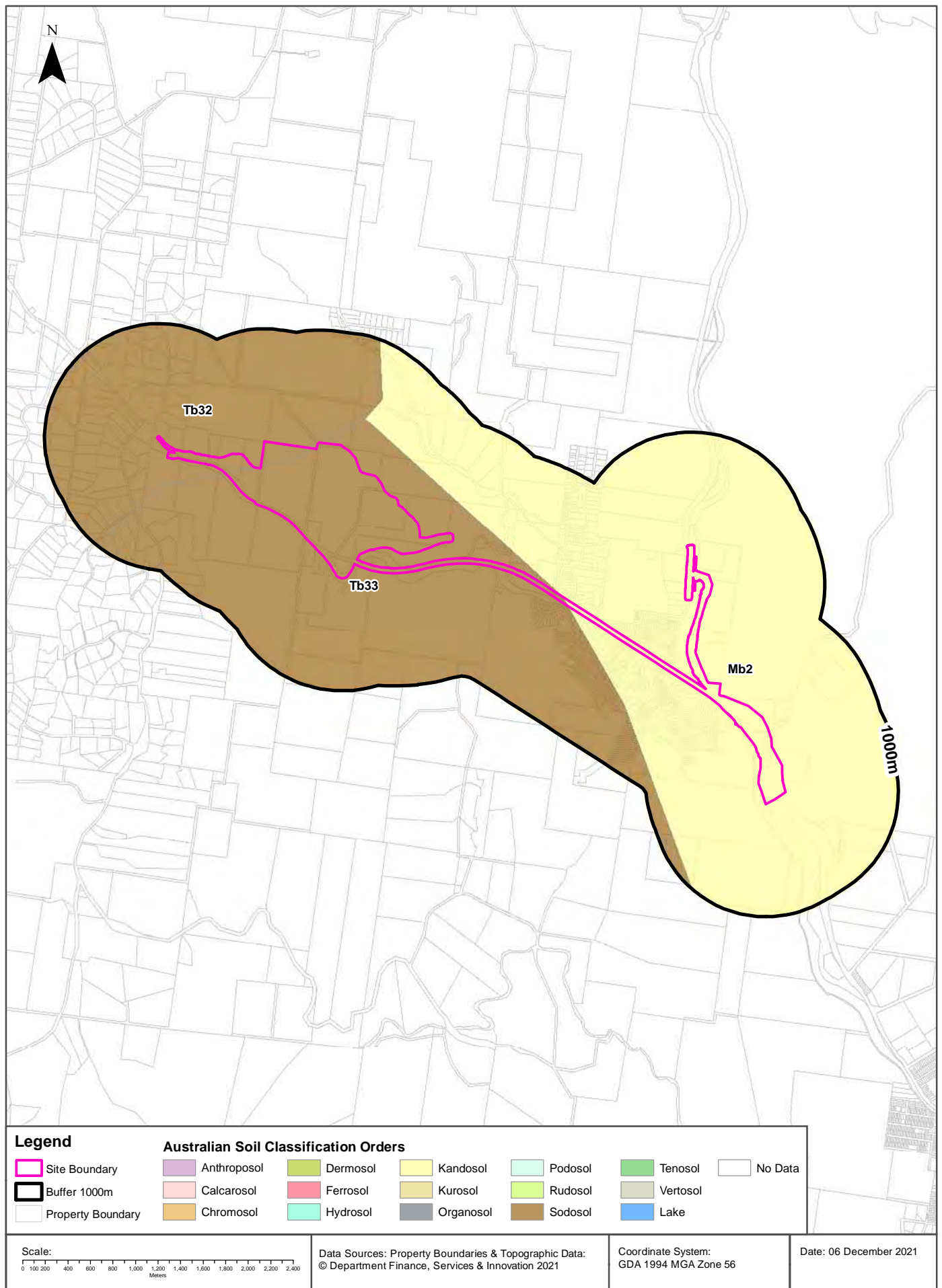
Naturally Occurring Asbestos Potential within the dataset buffer:

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

# Atlas of Australian Soils

Road Alignment, Blackheath, NSW 2785 (North)



# Soils

Road Alignment, Blackheath, NSW 2785 (North)

## 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
Tb33	Sodosol	Dissected plateau: chief soils on undulating ridge crests are hard acidic yellow mottled soils (Dy3.41). Associated are: moderate to steep side slopes of various earths (Gn2), such as (Gn2.14), (Gn2.2), and (Gn2.9); some hilly areas of (Dr2.21), (Dy2.21), (Dy3.41), (Um4.1), and (Um4.2) soils with rock outcrops; some talus slopes of (Uc1.2) and (Uc2.2) soils; and some small flat areas of units Tb32 and Tb39.	0m	On-site
Mb2	Kandosol	Dissected sandstone plateau of moderate to strong relief with sandstone pillars, ledges, and slabs-- level to undulating ridges, irregularly benched slopes, steep ridges, cliffs, canyons, narrow sandy valleys: chief soils are (i) on areas of gentle to moderate relief, acid yellow leached earths (Gn2.74) and (Gn2.34) and acid leached yellow earths (Gn2.24)- sometimes these soils contain ironstone gravel; and (ii) on, or adjacent to, areas of strong relief, siliceous sands (Uc1.2), leached sands (Uc2.12) and (Uc2.2), and shallow forms of the above (Gn2) soils. Associated are: (i) on flat to gently undulating remnants of the original plateau surface, leached sands (Uc2.3), siliceous sands (Uc1.2), sandy earths (Uc5.22), and (Gn2) soils as for (i) above (these areas are in part comparable with unit Cb29); (ii) on flat ironstone gravelly remnants of the original plateau surface, (Gn2) soils as for unit Mb5(i); (iii) on gently undulating ridges where interbedded shales are exposed, shallow, often stony (Dy3.41), (Dr2.21), and related soils similar to unit Tb35; (iv) narrow valleys of (Uc2.3) soils flanked by moderate slopes of (Dy3.41) soils; (v) escarpments of steep hills with shallow (Dy) and (Dr) soils between sandstone pillars; and (vi) shallow (Um) soils, such as (Um6.21) on steep hills of basic rocks. As mapped, minor areas of units Mg20, Mm1, and Mw8 are included. Data are limited.	0m	On-site
Tb32	Sodosol	Gently undulating to flat country (topographical basins): chief soils are hard acidic and neutral yellow mottled soils (Dy3.41 and Dy3.42) with some local saline patches. Other soils may occur. Data are limited.	0m	On-site

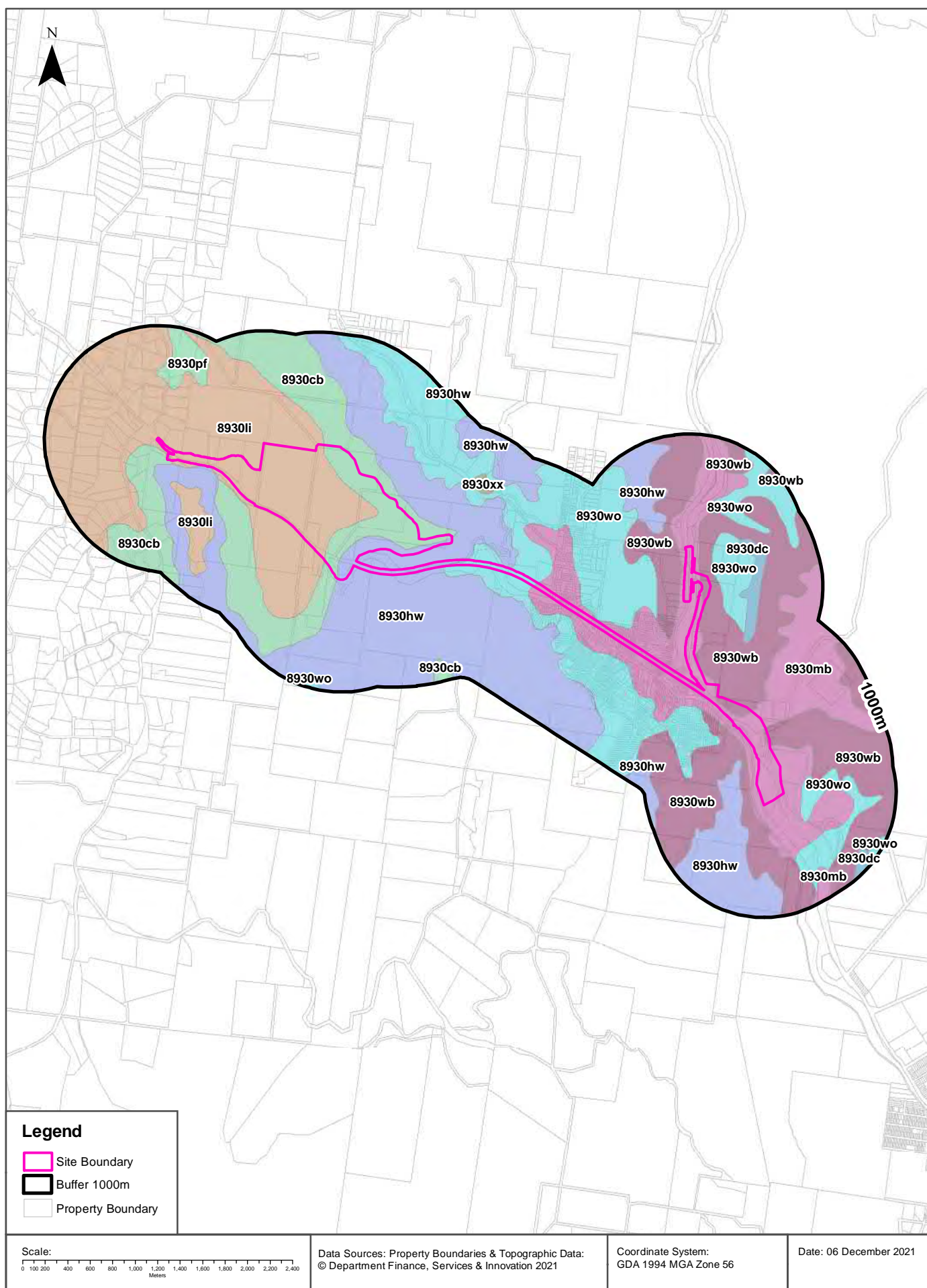
Atlas of Australian Soils Data Source: CSIRO

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# Soil Landscapes of Central and Eastern NSW

Road Alignment, Blackheath, NSW 2785 (North)



## Soils

Road Alignment, Blackheath, NSW 2785 (North)

### Soil Landscapes of Central and Eastern NSW

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

Soil Code	Name	Distance	Direction
<a href="#">8930li</a>	Lithgow	0m	On-site
<a href="#">8930cb</a>	Cullen Bullen	0m	On-site
<a href="#">8930mb</a>	Medlow Bath	0m	On-site
<a href="#">8930hw</a>	Hassans Walls	0m	On-site
<a href="#">8930wb</a>	Warragamba	0m	On-site
<a href="#">8930wo</a>	Wollangambe	0m	On-site
<a href="#">8930dc</a>	Deanes Creek	258m	East
<a href="#">8930pf</a>	Pipers Flat	459m	North West
<a href="#">8930xx</a>	Disturbed Terrain	466m	North East

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

Road Alignment, Blackheath, NSW 2785 (North)

### Environmental Planning Instrument - Acid Sulfate Soils

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

Soil Class	Description	EPI Name
N/A		

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

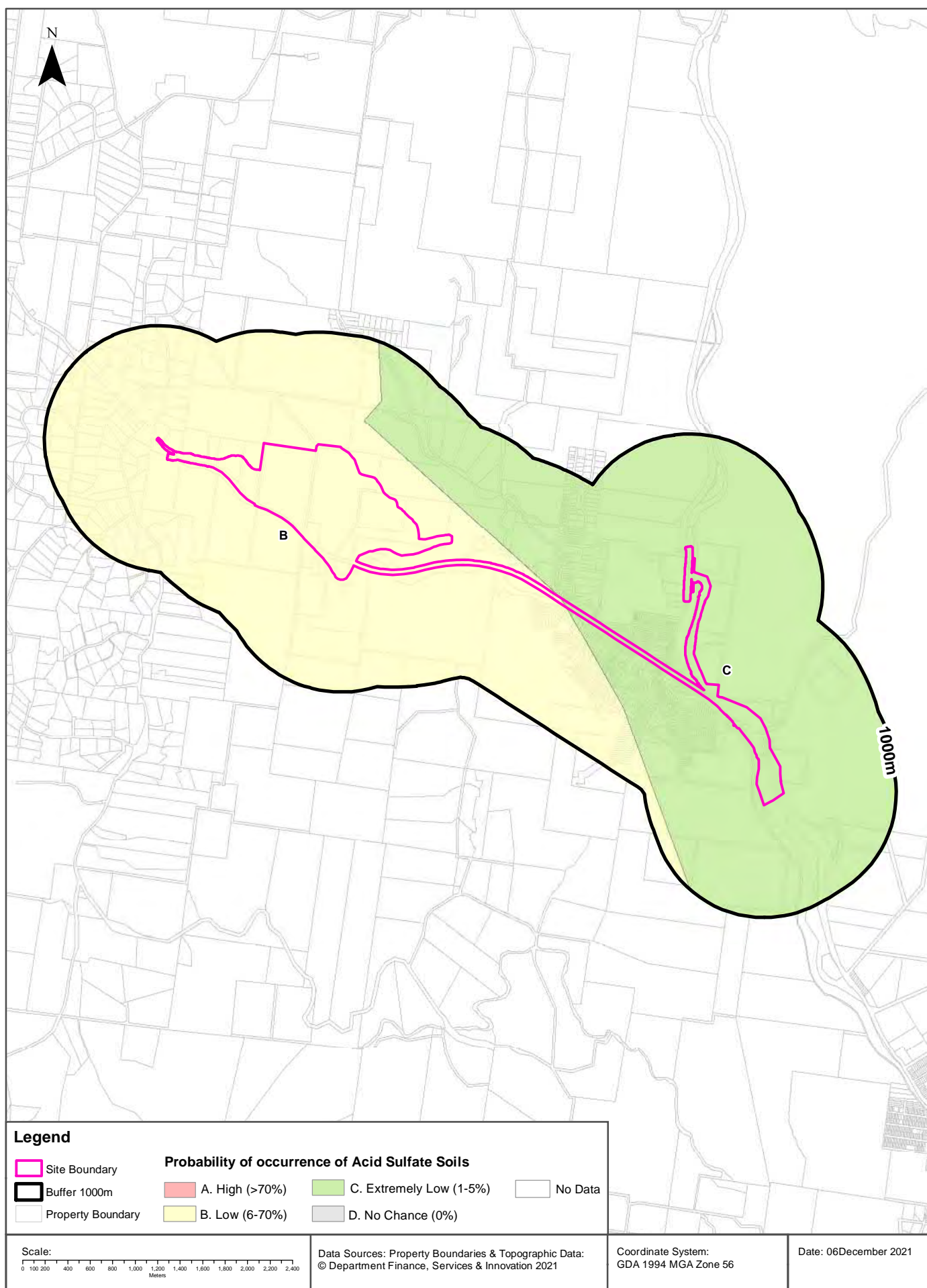
Soil Class	Description	EPI Name	Distance	Direction
N/A				

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# Atlas of Australian Acid Sulfate Soils

Road Alignment, Blackheath, NSW 2785 (North)



## Acid Sulfate Soils

Road Alignment, Blackheath, NSW 2785 (North)

### Atlas of Australian Acid Sulfate Soils

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

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

Road Alignment, Blackheath, NSW 2785 (North)

### Dryland Salinity - National Assessment

Is there Dryland Salinity - National Assessment data onsite?

**No**

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

**No**

What Dryland Salinity assessments are given?

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

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

Road Alignment, Blackheath, NSW 2785 (North)

### Mining Subsidence Districts

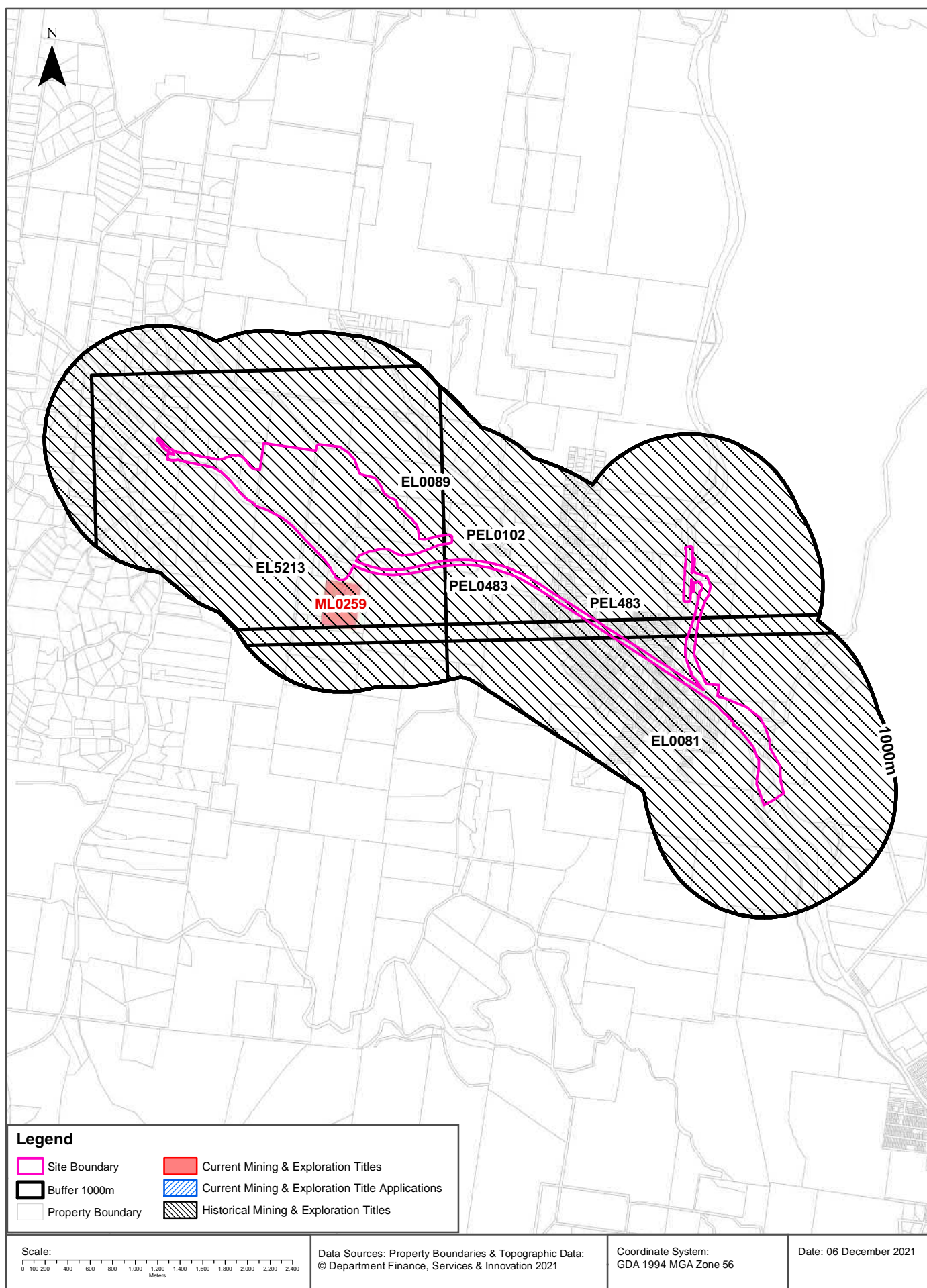
Mining Subsidence Districts within the dataset buffer:

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

Road Alignment, Blackheath, NSW 2785 (North)



## Mining

Road Alignment, Blackheath, NSW 2785 (North)

### 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
ML0259	CSR BUILDING PRODUCTS LIMITED	18/08/1976	18/08/2039	18 Aug 2018	MINING	MINERALS	Clay/Shale, Structural Clay	18m	South West

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

Road Alignment, Blackheath, NSW 2785 (North)

### Historical Mining & Exploration Titles

Historical Mining & Exploration Titles within the dataset buffer:

Title Ref	Holder	Start Date	End Date	Resource	Minerals	Dist	Dir
PEL0483	EAST COAST POWER PTY LTD	6/05/2010	4/11/2011	PETROLEUM	Petroleum	0m	On-site
PEL0102	AUSTRALIAN OIL AND GAS CORPORATION LTD			PETROLEUM	Petroleum	0m	On-site
EL0081	CONTINENTAL OIL CO OF AUSTRALIA LIMITED	01 Feb 1967	01 Feb 1968	MINERALS		0m	On-site
EL5213	MONIER PGH HOLDINGS LIMITED	10 Feb 1997	09 Feb 1999	MINERALS	Clay shale, Brick clay	0m	On-site
PEL483	EAST COAST POWER PTY LTD			MINERALS		0m	On-site
EL0089	CONTINENTAL OIL CO OF AUSTRALIA LIMITED	01 Feb 1967	01 Feb 1968	MINERALS		0m	On-site

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



# State Environmental Planning Policy

Road Alignment, Blackheath, NSW 2785 (North)

## State Significant Precincts

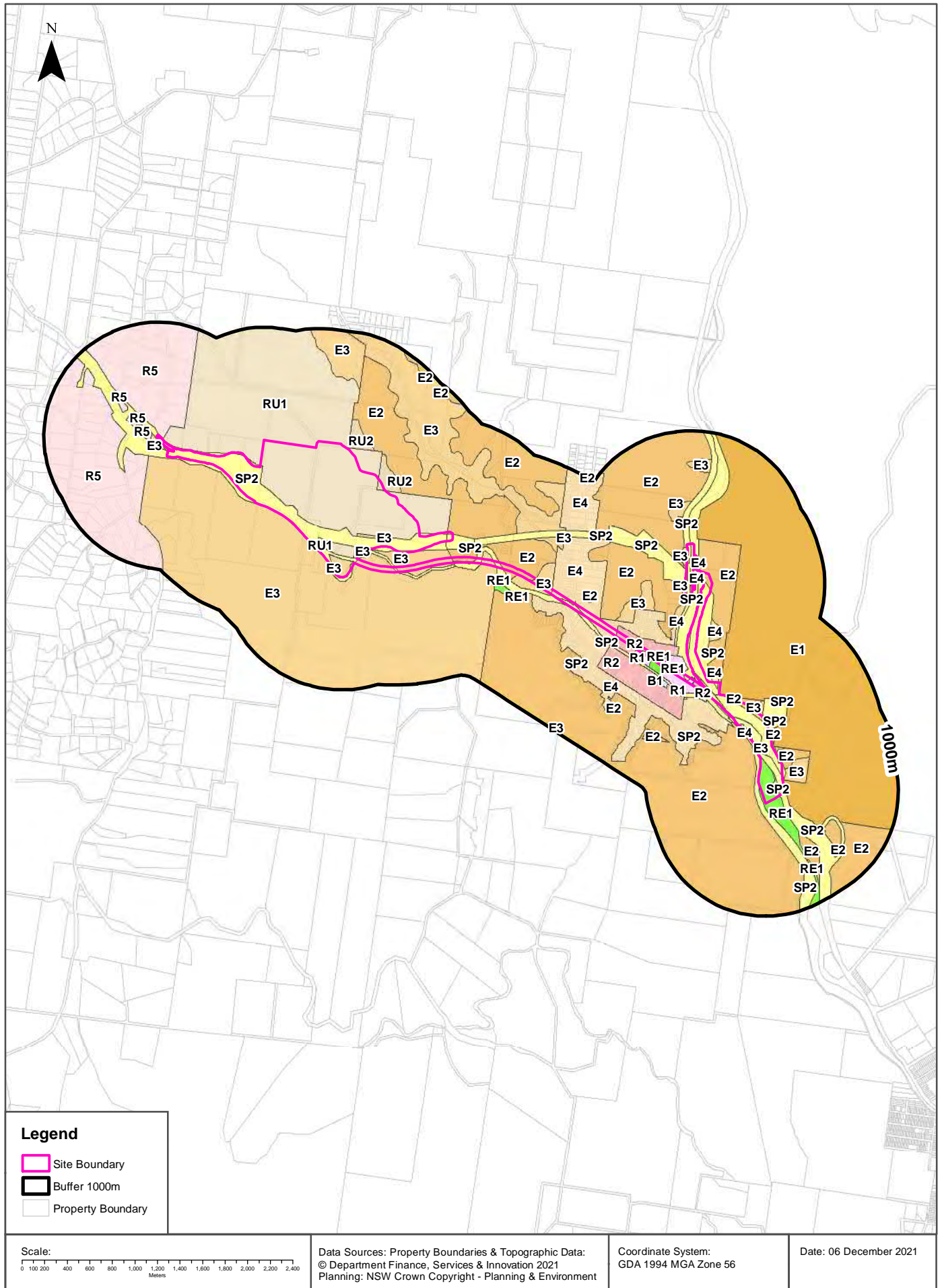
What SEPP State Significant Precincts exist within the dataset buffer?

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

Road Alignment, Blackheath, NSW 2785 (North)



# Environmental Planning Instrument

## Road Alignment, Blackheath, NSW 2785 (North)

### 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
R2	Low Density Residential		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		0m	On-site
RE1	Public Recreation		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		0m	On-site
SP2	Infrastructure	Rail	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		0m	On-site
E4	Environmental Living		Blue Mountains Local Environmental Plan 2015	28/06/2019	28/06/2019	28/06/2019	Amendment No 1	0m	On-site
R1	General Residential		Blue Mountains Local Environmental Plan 2015	28/06/2019	28/06/2019	28/06/2019	Amendment No 1	0m	On-site
E2	Environmental Conservation		Blue Mountains Local Environmental Plan 2015	28/06/2019	28/06/2019	28/06/2019	Amendment No 1	0m	On-site
SP2	Infrastructure	Future Classified Road	Blue Mountains Local Environmental Plan 2015	28/06/2019	28/06/2019	28/06/2019	Amendment No 1	0m	On-site
E4	Environmental Living		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		0m	On-site
SP2	Infrastructure	Classified Road	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		0m	On-site
SP2	Infrastructure	Future Classified Road	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		0m	On-site
E2	Environmental Conservation		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		0m	On-site
RU1	Primary Production		Lithgow Local Environmental Plan 2014	19/12/2014	19/12/2014	17/09/2021		0m	On-site
E3	Environmental Management		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		0m	On-site
E3	Environmental Management		Lithgow Local Environmental Plan 2014	19/12/2014	19/12/2014	17/09/2021		0m	On-site
RU2	Rural Landscape		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		0m	On-site
SP2	Infrastructure	Roads and Traffic Facility	Lithgow Local Environmental Plan 2014	19/12/2014	19/12/2014	17/09/2021		0m	On-site
R5	Large Lot Residential		Lithgow Local Environmental Plan 2014	19/12/2014	19/12/2014	17/09/2021		0m	North West
E2	Environmental Conservation		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		0m	North
E4	Environmental Living		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		0m	South East
E1	National Parks and Nature Reserves		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		0m	East
E3	Environmental Management		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		0m	South East
E3	Environmental Management		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		4m	South East
E3	Environmental Management		Lithgow Local Environmental Plan 2014	19/12/2014	19/12/2014	17/09/2021		6m	West
E2	Environmental Conservation		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		7m	South East
SP2	Infrastructure	Cemetery	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		10m	South East
E2	Environmental Conservation		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		17m	East
RU2	Rural Landscape		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		17m	North West
E2	Environmental Conservation		Blue Mountains Local Environmental Plan 2015	28/06/2019	28/06/2019	28/06/2019	Amendment No 1	22m	East

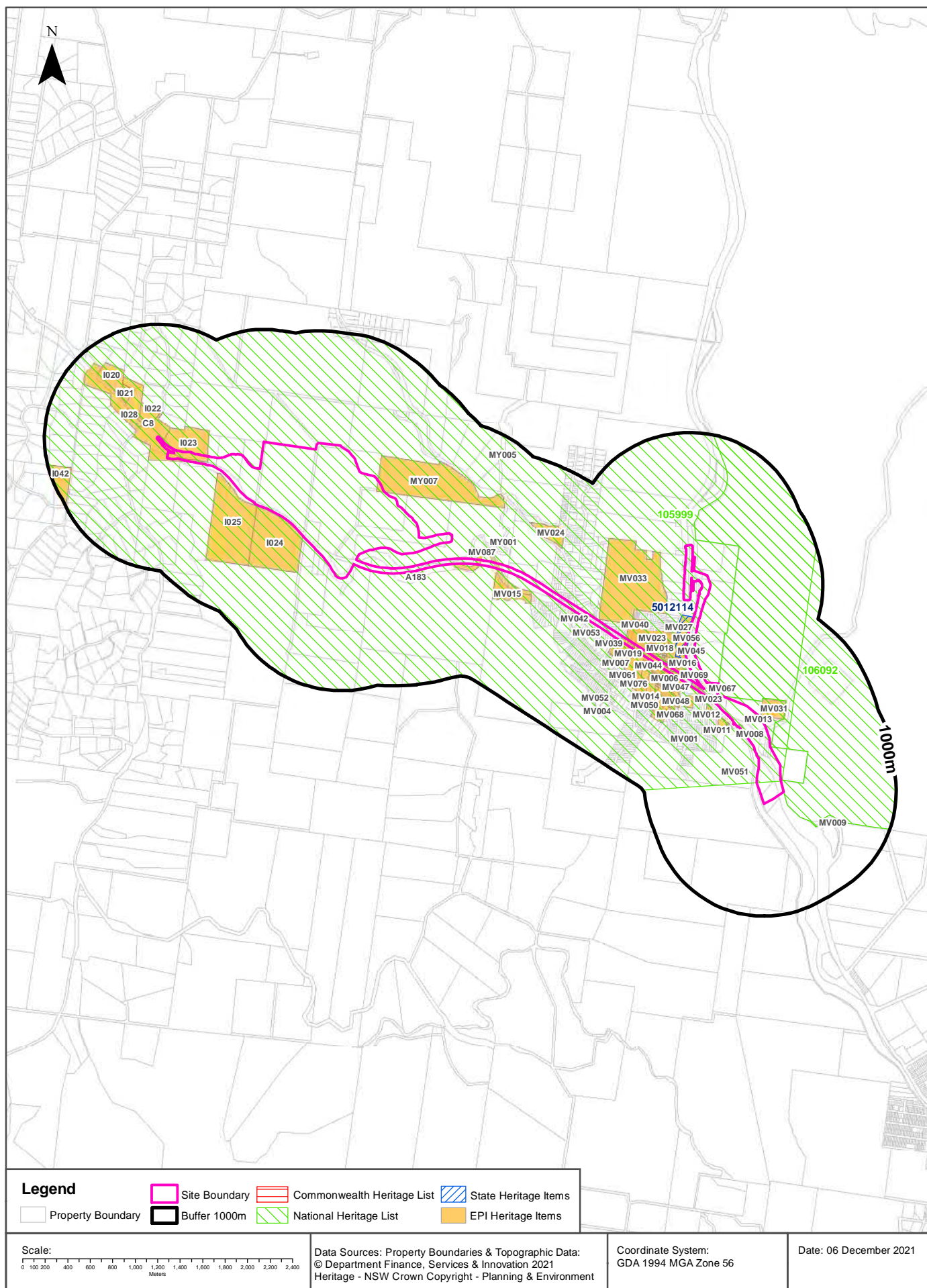
Zone	Description	Purpose	EPI Name	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
R5	Large Lot Residential		Lithgow Local Environmental Plan 2014	19/12/2014	19/12/2014	17/09/2021		45m	West
RE1	Public Recreation		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		55m	South East
E3	Environmental Management		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		74m	East
E2	Environmental Conservation		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		82m	East
E4	Environmental Living		Blue Mountains Local Environmental Plan 2015	28/06/2019	28/06/2019	28/06/2019	Amendment No 1	86m	East
R2	Low Density Residential		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		92m	South East
B1	Neighbourhood Centre		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		93m	South East
SP2	Infrastructure	Future Classified Road Tunnel	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		108m	East
SP2	Infrastructure	Water Supply System	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		112m	South East
RE1	Public Recreation		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		125m	South East
E4	Environmental Living		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		131m	East
RE1	Public Recreation		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		131m	East
R5	Large Lot Residential		Lithgow Local Environmental Plan 2014	19/12/2014	19/12/2014	17/09/2021		158m	West
R5	Large Lot Residential		Lithgow Local Environmental Plan 2014	19/12/2014	19/12/2014	17/09/2021		160m	North West
E3	Environmental Management		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		231m	East
E3	Environmental Management		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		269m	East
E3	Environmental Management		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		284m	North
SP2	Infrastructure	Water Supply System	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		352m	South East
R5	Large Lot Residential		Lithgow Local Environmental Plan 2014	19/12/2014	19/12/2014	17/09/2021		352m	North West
E2	Environmental Conservation		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		356m	South East
SP2	Infrastructure	Stormwater Management	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		369m	South East
E2	Environmental Conservation		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		457m	South East
E4	Environmental Living		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		501m	East
E3	Environmental Management		Lithgow Local Environmental Plan 2014	19/12/2014	19/12/2014	17/09/2021		514m	North
E2	Environmental Conservation		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		533m	South East
E2	Environmental Conservation		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		536m	South East
E2	Environmental Conservation		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		545m	South East
RE1	Public Recreation		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		605m	South East
E3	Environmental Management		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		646m	East
E2	Environmental Conservation		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		928m	North

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# Heritage Items

Road Alignment, Blackheath, NSW 2785 (North)





## Heritage

Road Alignment, Blackheath, NSW 2785 (North)

### 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
<a href="#">106092</a>	Hartley Valley	Great Western Hwy, Hartley NSW	1/14/006/0063	Historic	Nomination now ineligible for PPAL		0m	On-site
<a href="#">105999</a>	The Greater Blue Mountains Area	Greater Western Hwy, Katoomba NSW	1/14/006/0061	Natural	Listed place	21/05/2007	0m	East

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
5012114	Mount Victoria Railway Station group	Main Western railway, Mount Victoria	BLUE MOUNTAINS	02/04/1999	01203	2390	0m	On-site

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
MV039	The Maples	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	0m	On-site
MV082	The Gallery	Item - General	Local	Blue Mountains Local Environmental Plan 2015	28/06/2019	28/06/2019	26/03/2021	0m	On-site

Map Id	Name	Classification	Significance	EPI Name	Published Date	Commenced Date	Currency Date	Distance	Direction
MV044	Mount Victoria Memorial Park	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	0m	On-site
MV069	The Village Green and Parkshelter	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	0m	On-site
MV018	The Manor House	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	0m	On-site
MV067	Weatherboard Cottage	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	0m	On-site
MV038	House	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	0m	On-site
MY007	Marcus Clark Cross (site only)	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	0m	On-site
MV027	Mount Victoria Railway Station	Item - General	State	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	0m	On-site
MV087	Victoria Pass	Item - General	State	Blue Mountains Local Environmental Plan 2015	26/03/2021	26/03/2021	26/03/2021	0m	On-site
MV026	Trains, Planes and Automobiles Gallery, Bay Tree Tea Shop	Item - General	Local	Blue Mountains Local Environmental Plan 2015	28/06/2019	28/06/2019	26/03/2021	0m	On-site
I023	Billesdene Grange	Item - General	Local	Lithgow Local Environmental Plan 2014	19/12/2014	19/12/2014	13/11/2015	0m	On-site
MV025	The Foyle, Lough Swilly, Bank House	Item - General	Local	Blue Mountains Local Environmental Plan 2015	28/06/2019	28/06/2019	26/03/2021	0m	On-site
MV071	Sunnihi	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	0m	On-site
MV080	Blackheath Antiques and Books	Item - General	Local	Blue Mountains Local Environmental Plan 2015	28/06/2019	28/06/2019	26/03/2021	0m	On-site
MV070	Acorn	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	0m	On-site
MV023	Central Mount Victoria Urban Conservation Area	Conservation Area - General	Local	Blue Mountains Local Environmental Plan 2015	19/07/2019	19/07/2019	26/03/2021	0m	On-site
MV023	Central Mount Victoria Urban Conservation Area	Conservation Area - General	Local	Blue Mountains Local Environmental Plan 2015	28/06/2019	28/06/2019	26/03/2021	0m	On-site
MV013	Gatekeeper's Cottage	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	0m	On-site
C8	Little Hartley	Conservation Area - General	Local	Lithgow Local Environmental Plan 2014	19/12/2014	19/12/2014	13/11/2015	0m	On-site
MV042	High Lodge	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	0m	South East
I024	Rosedale	Item - General	Local	Lithgow Local Environmental Plan 2014	19/12/2014	19/12/2014	13/11/2015	0m	West
I025	Nioka	Item - General	Local	Lithgow Local Environmental Plan 2014	19/12/2014	19/12/2014	13/11/2015	0m	West
MV049	Mount Vic Flicks Cinema	Item - General	Local	Blue Mountains Local Environmental Plan 2015	28/06/2019	28/06/2019	26/03/2021	0m	South East
MV083	Shops	Item - General	Local	Blue Mountains Local Environmental Plan 2015	28/06/2019	28/06/2019	26/03/2021	2m	South East
MV031	Mount Victoria Cemetery	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	10m	South East

Map Id	Name	Classification	Significance	EPI Name	Published Date	Commenced Date	Currency Date	Distance	Direction
MV058	Cherished Belongings Arts and Crafts Gallery	Item - General	Local	Blue Mountains Local Environmental Plan 2015	28/06/2019	28/06/2019	26/03/2021	11m	South East
A183	Victoria Pass	Item - Archaeological	Local	Lithgow Local Environmental Plan 2014	19/12/2014	19/12/2014	13/11/2015	12m	South
MV084	Police Station and Lock-up	Item - General	Local	Blue Mountains Local Environmental Plan 2015	28/06/2019	28/06/2019	26/03/2021	13m	South East
MV006	Hotel Imperial	Item - General	Local	Blue Mountains Local Environmental Plan 2015	28/06/2019	28/06/2019	26/03/2021	15m	South East
MV033	The Grange Estate (house & garden)	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	17m	East
MV022	Marie P	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	22m	South East
MV019	Semi-detached cottages	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	22m	South East
MV057	Post War Brick Shop Building	Item - General	Local	Blue Mountains Local Environmental Plan 2015	28/06/2019	28/06/2019	26/03/2021	22m	South East
MV016	Victoria and Albert Guesthouse	Item - General	Local	Blue Mountains Local Environmental Plan 2015	28/06/2019	28/06/2019	26/03/2021	23m	South East
MV015	Mitchell's Ridge Monument Reserve	Conservation Area - Landscape	Local	Blue Mountains Local Environmental Plan 2015	26/03/2021	26/03/2021	26/03/2021	23m	South East
MV047	Ivanhoe	Item - General	Local	Blue Mountains Local Environmental Plan 2015	28/06/2019	28/06/2019	26/03/2021	26m	South East
MV008	Toll House	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	29m	South East
MV012	Exeter	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	38m	South East
MV041	Selsdon	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	43m	South East
MV011	Karawatha House	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	48m	South East
MV053	House	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	52m	South East
MV054	Pump Cottage	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	54m	South East
MV068	Weatherboard Cottage	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	60m	South East
MV089	Stone wall	Item - General	Local	Blue Mountains Local Environmental Plan 2015	26/03/2021	26/03/2021	26/03/2021	75m	South East
MV046	Weatherboard Cottage	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	83m	South East
MV061	Brick House	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	92m	South East
MV014	Mount Victoria Public School	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	92m	South East
MV007	St Peter's Anglican Church	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	94m	South East
MV055	Weatherboard House and Garden	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	94m	South East

Map Id	Name	Classification	Significance	EPI Name	Published Date	Commenced Date	Currency Date	Distance	Direction
MV066	Concrete Steps	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	94m	South East
MV010	Old Vic Post Office Gallery	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	95m	South East
MV062	Mount Victoria Gallery	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	96m	South East
MV063	Cafe and Weatherboard Cottage	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	97m	South East
MV064	Weatherboard Cottage	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	97m	South East
MV065	Weatherboard Shop	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	98m	South East
MV045	Weatherboard Cottage	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	106m	East
MV048	Marthaville	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	124m	South East
MV040	Rossmoyne	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	129m	East
I022	Ambermere	Item - General	Local	Lithgow Local Environmental Plan 2014	19/12/2014	19/12/2014	13/11/2015	131m	North West
MV056	Pressed Metal Cottage	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	138m	East
MV079	Late Federation Weatherboard Cottage	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	159m	South East
I028	Harp of Erin	Item - General	Local	Lithgow Local Environmental Plan 2014	19/12/2014	19/12/2014	13/11/2015	174m	North West
MV051	Track - Fairy Bower and Old Railway Track	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	197m	South East
MY001	Berghofer's Pass	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	202m	East
MV078	Post War Fibro Cottage	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	204m	South East
MV077	Brighthelm	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	204m	South East
MV075	Federation Cottage Group	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	219m	South East
MV072	Stratford	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	219m	South East
MV073	Federation Weatherboard Cottage	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	229m	South East
MV074	Federation Weatherboard Cottage	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	240m	South East
MV076	Post War Fibro Duplex	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	244m	South East
MV050	Fermoy	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	256m	South East
MV001	Trig Station	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	352m	South East

Map Id	Name	Classification	Significance	EPI Name	Published Date	Commenced Date	Currency Date	Distance	Direction
MV024	Closeburn	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	365m	East
I021	House	Item - General	Local	Lithgow Local Environmental Plan 2014	19/12/2014	19/12/2014	13/11/2015	418m	North West
MV009	Soldiers Pinch	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	510m	South East
MV052	Track - Engineer's Cascade and Henry Lawson Walk	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	542m	South East
I020	Meads Farm	Item - General	Local	Lithgow Local Environmental Plan 2014	19/12/2014	19/12/2014	13/11/2015	542m	North West
MV004	Engineers Cascade and Engineers Track	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	633m	South East
I042	Bonnie Blink	Item - General	Local	Lithgow Local Environmental Plan 2014	19/12/2014	19/12/2014	13/11/2015	799m	West
MY005	Lawson's Long Alley	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	842m	North East

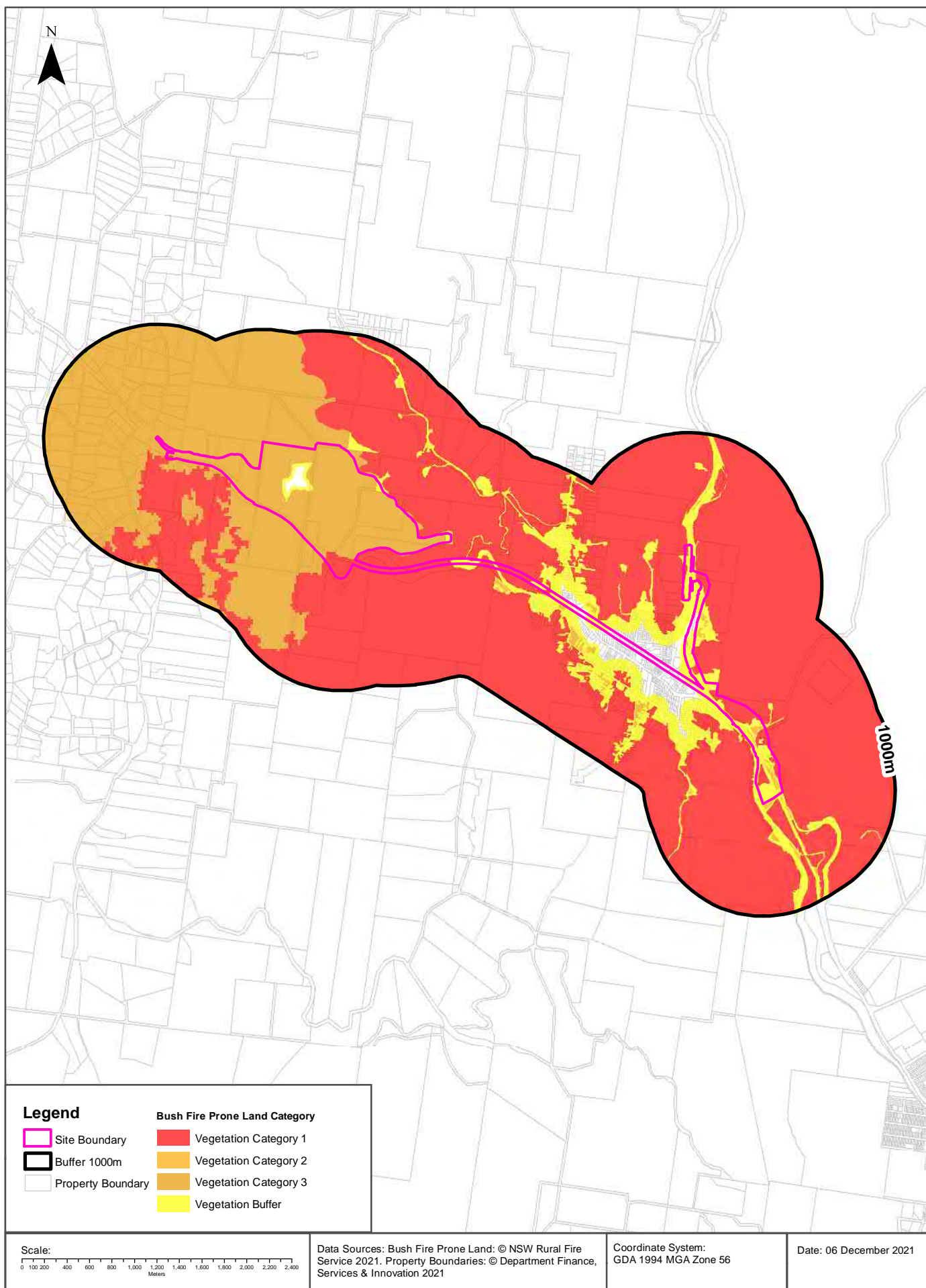
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# Natural Hazards - Bush Fire Prone Land

Road Alignment, Blackheath, NSW 2785 (North)



## Natural Hazards

Road Alignment, Blackheath, NSW 2785 (North)

### 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 Category 3	0m	On-site
Vegetation Category 2	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

Road Alignment, Blackheath, NSW 2785 (North)

### 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

Road Alignment, Blackheath, NSW 2785 (North)



## Ecological Constraints

Road Alignment, Blackheath, NSW 2785 (North)

### Groundwater Dependent Ecosystems Atlas

Type	GDE Potential	Geomorphology	Ecosystem Type	Aquifer Geology	Distance	Direction
Terrestrial	Moderate potential GDE - from national assessment	Deeply dissected sandstone plateaus.	Vegetation	Consolidated sedimentary	0m	On-site
Terrestrial	Low potential GDE - from national assessment	Deeply dissected sandstone plateaus.	Vegetation	Consolidated sedimentary	0m	On-site
Aquatic	Unclassified potential GDE - from regional studies	Deeply dissected sandstone plateaus.	Swamp		0m	On-site
Terrestrial	High potential GDE - from national assessment	Deeply dissected sandstone plateaus.	Vegetation	Consolidated sedimentary	893m	South

Groundwater Dependent Ecosystems Atlas Data Source: The Bureau of Meteorology

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# Ecological Constraints - Inflow Dependent Ecosystems Likelihood

## Road Alignment, Blackheath, NSW 2785 (North)



## Ecological Constraints

Road Alignment, Blackheath, NSW 2785 (North)

### Inflow Dependent Ecosystems Likelihood

Type	IDE Likelihood	Geomorphology	Ecosystem Type	Aquifer Geology	Distance	Direction
Terrestrial	7	Deeply dissected sandstone plateaus.	Vegetation	Consolidated sedimentary	0m	On-site
Terrestrial	6	Deeply dissected sandstone plateaus.	Vegetation	Consolidated sedimentary	0m	On-site
Terrestrial	10	Deeply dissected sandstone plateaus.	Vegetation	Consolidated sedimentary	0m	On-site
Terrestrial	8	Deeply dissected sandstone plateaus.	Vegetation	Consolidated sedimentary	0m	On-site
Aquatic	4	Deeply dissected sandstone plateaus.	Swamp		0m	On-site
Aquatic	3	Deeply dissected sandstone plateaus.	Swamp		0m	On-site
Terrestrial	9	Deeply dissected sandstone plateaus.	Vegetation	Consolidated sedimentary	0m	On-site
Aquatic	2	Deeply dissected sandstone plateaus.	Swamp		861m	South East

Inflow Dependent Ecosystems Likelihood Data Source: The Bureau of Meteorology  
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# Ecological Constraints

## Road Alignment, Blackheath, NSW 2785 (North)

### 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	Heleioporus australiacus	Giant Burrowing Frog	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Amphibia	Mixophyes balbus	Stuttering Frog	Endangered	Category 2	Vulnerable	
Animalia	Amphibia	Pseudophryne australis	Red-crowned Toadlet	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Anthochaera phrygia	Regent Honeyeater	Critically Endangered	Not Sensitive	Critically Endangered	
Animalia	Aves	Apus pacificus	Fork-tailed Swift	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; 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	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 lathami	Glossy Black-Cockatoo	Vulnerable	Category 2	Not Listed	
Animalia	Aves	Chthonicola sagittata	Speckled Warbler	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Climacteris picumnus victoriae	Brown Treecreeper (eastern subspecies)	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Daphoenositta chrysoptera	Varied Sittella	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Gallinago hardwickii	Latham's Snipe	Not Listed	Not Sensitive	Not Listed	ROKAMBA;JAMBA
Animalia	Aves	Geophaps scripta scripta	Squatter Pigeon (southern subspecies)	Critically Endangered	Not Sensitive	Vulnerable	
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	Hieraaetus morphnoides	Little Eagle	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Hirundapus caudacutus	White-throated Needle-tail	Not Listed	Not Sensitive	Vulnerable	ROKAMBA;CAMBA; JAMBA
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	Melithreptus gularis gularis	Black-chinned Honeyeater (eastern subspecies)	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Menura alberti	Albert's Lyrebird	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Ninox connivens	Barking Owl	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Ninox strenua	Powerful Owl	Vulnerable	Category 3	Not Listed	

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Animalia	Aves	Petroica boodang	Scarlet Robin	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Petroica phoenicea	Flame Robin	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Stagonopleura guttata	Diamond Firetail	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Strepera graculina crissalis	Pied Currawong (Lord Howe Is. subsp.)	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Aves	Tyto tenebricosa	Sooty Owl	Vulnerable	Category 3	Not Listed	
Animalia	Insecta	Paralucia spinifera	Purple Copper Butterfly, Bathurst Copper Butterfly	Endangered	Not Sensitive	Vulnerable	
Animalia	Insecta	Petalura gigantea	Giant Dragonfly	Endangered	Not Sensitive	Not Listed	
Animalia	Mammalia	Bettongia gaimardi	Tasmanian Bettong	Presumed Extinct	Not Sensitive	Extinct	
Animalia	Mammalia	Cercartetus nanus	Eastern Pygmy-possum	Vulnerable	Not Sensitive	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	Isodon obesulus obesulus	Southern Brown Bandicoot (eastern)	Endangered	Not Sensitive	Endangered	
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	Petauroides volans	Greater Glider	Not Listed	Not Sensitive	Vulnerable	
Animalia	Mammalia	Petaurus australis	Yellow-bellied Glider	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Petaurus norfolkensis	Squirrel Glider	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Petrogale penicillata	Brush-tailed Rock-wallaby	Endangered	Not Sensitive	Vulnerable	
Animalia	Mammalia	Phascogale cinereus	Koala	Vulnerable	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	Reptilia	Caretta caretta	Loggerhead Turtle	Endangered	Not Sensitive	Endangered	
Animalia	Reptilia	Eulamprus leuraensis	Blue Mountains Water Skink	Endangered	Not Sensitive	Endangered	
Animalia	Reptilia	Hoplocephalus bungaroides	Broad-headed Snake	Endangered	Category 2	Vulnerable	
Fungi	Flora	Hygrocybe austropratensis		Endangered	Not Sensitive	Not Listed	
Plantae	Flora	Acacia bynoeana	Bynoe's Wattle	Endangered	Not Sensitive	Vulnerable	
Plantae	Flora	Acacia flocktoniae	Flockton Wattle	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Acacia meiantha		Endangered	Not Sensitive	Endangered	
Plantae	Flora	Acrophyllum australe		Vulnerable	Not Sensitive	Vulnerable	

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Plantae	Flora	Asterolasia buxifolia		Endangered	Not Sensitive	Not Listed	
Plantae	Flora	Caesia parviflora var. minor	Small Pale Grass-lily	Endangered	Not Sensitive	Not Listed	
Plantae	Flora	Callistemon purpurascens		Critically Endangered	Not Sensitive	Critically Endangered	
Plantae	Flora	Carex klaphakei	Klaphake's Sedge	Endangered	Not Sensitive	Not Listed	
Plantae	Flora	Diuris aequalis	Buttercup Doubletail	Endangered	Category 2	Vulnerable	
Plantae	Flora	Epacris hamiltonii		Endangered	Not Sensitive	Endangered	
Plantae	Flora	Eucalyptus aggregata	Black Gum	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Eucalyptus nicholii	Narrow-leaved Black Peppermint	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Eucalyptus pulverulenta	Silver-leafed Gum	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Euphrasia bowdeniae	Blue Mountains Cliff Eyebright	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Galium australe	Tangled Bedstraw	Endangered	Not Sensitive	Not Listed	
Plantae	Flora	Grammitis stenophylla	Narrow-leaf Finger Fern	Endangered	Category 3	Not Listed	
Plantae	Flora	Isopogon fletcheri	Fletcher's Drumsticks	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Kunzea cabbagei	Cabbage Kunzea	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Leionema lachnaeoides		Endangered	Not Sensitive	Endangered	
Plantae	Flora	Lepidosperma evansianum	Evans Sedge	Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Leucopogon exolasius	Woronora Beard-heath	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Persoonia acerosa	Needle Geebung	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Prasophyllum fuscum	Slaty Leek Orchid	Critically Endangered	Category 2	Vulnerable	
Plantae	Flora	Prasophyllum pallens	Musty Leek Orchid	Vulnerable	Category 2	Not Listed	
Plantae	Flora	Pultenaea glabra	Smooth Bush-Pea	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Tetradlea juncea	Black-eyed Susan	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Velleia perfoliata		Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Veronica blakelyi		Vulnerable	Not Sensitive	Not Listed	

Data does not include NSW category 1 sensitive species.

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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
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As Supplied	Spatial data supplied by provider

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# LOTSEARCH

LOTSEARCH ENVIRO LITE

**Date: 07 Dec 2021 16:42:50**

**Reference: LS027240 EL**

**Address: Road Alignment, Blackheath, NSW 2785 (South)**

**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:

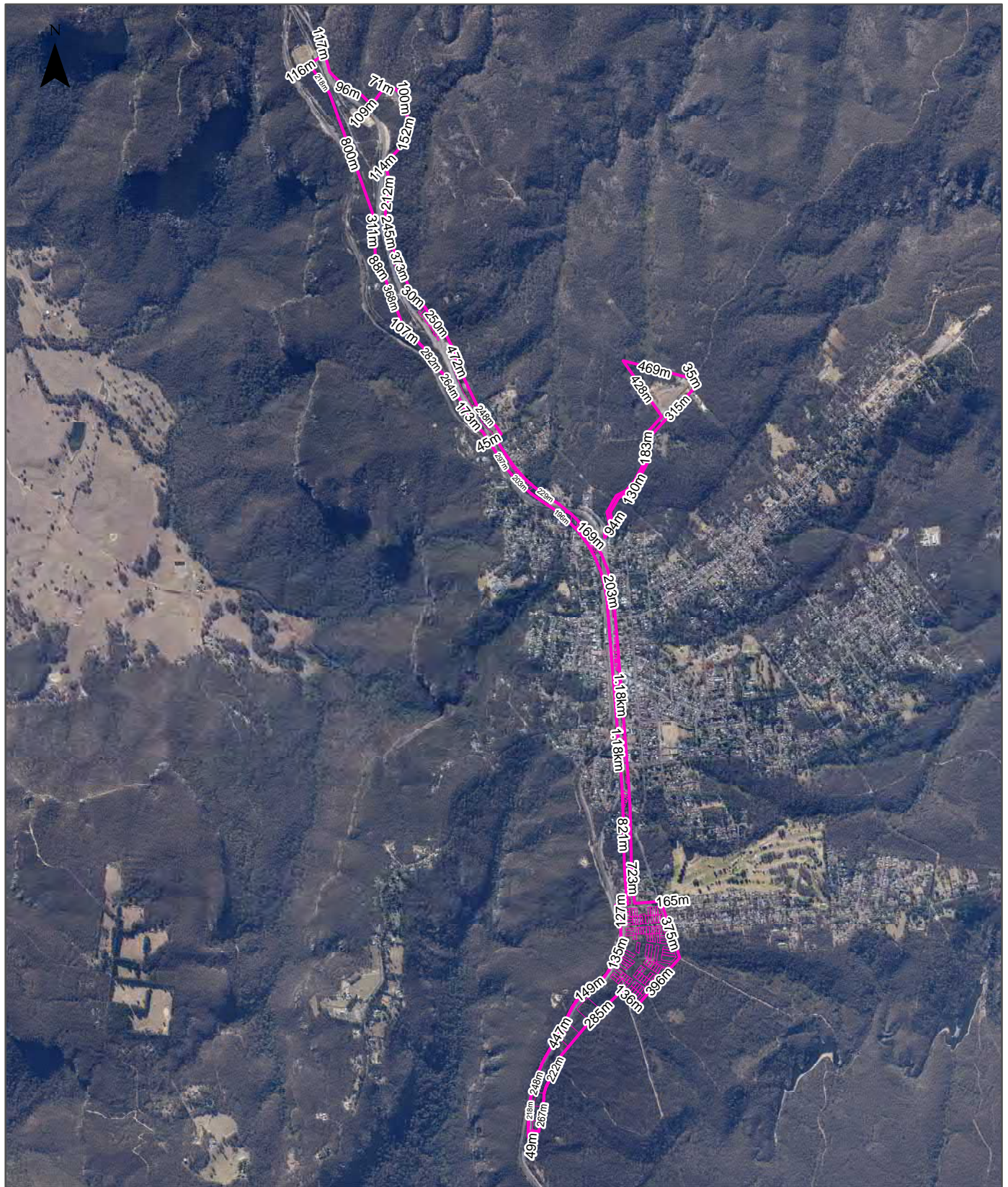
Dataset Name	Custodian	Supply Date	Currency Date	Update Frequency	Dataset Buffer (m)	No. Features On-site	No. Features within 100m	No. Features within Buffer
Cadastre Boundaries	NSW Department of Finance, Services & Innovation	30/06/2021	30/06/2021	Quarterly	-	-	-	-
Topographic Data	NSW Department of Finance, Services & Innovation	25/06/2019	25/06/2019	As required	-	-	-	-
List of NSW contaminated sites notified to EPA	Environment Protection Authority	13/10/2021	11/10/2021	Monthly	1000m	0	0	0
Contaminated Land Records of Notice	Environment Protection Authority	06/12/2021	06/12/2021	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	0
National Liquid Fuel Facilities	Geoscience Australia	15/02/2021	13/07/2012	Annually	1000m	1	1	1
EPA PFAS Investigation Program	Environment Protection Authority	28/10/2021	14/07/2021	Monthly	2000m	0	0	0
Defence PFAS Investigation & Management Program - Investigation Sites	Department of Defence	29/10/2021	29/10/2021	Monthly	2000m	0	0	0
Defence PFAS Investigation & Management Program - Management Sites	Department of Defence	29/10/2021	29/10/2021	Monthly	2000m	0	0	0
Airservices Australia National PFAS Management Program	Airservices Australia	08/10/2021	08/10/2021	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	10/11/2021	10/11/2021	Monthly	1000m	1	1	1
Delicensed POEO Activities still regulated by the EPA	Environment Protection Authority	10/11/2021	10/11/2021	Monthly	1000m	0	0	0
Former POEO Licensed Activities now revoked or surrendered	Environment Protection Authority	10/11/2021	10/11/2021	Monthly	1000m	4	5	6
UBD Business Directories (Premise & Intersection Matches)	Hardie Grant			Not required	150m	137	275	304
UBD Business Directories (Road & Area Matches)	Hardie Grant			Not required	150m	-	281	281
UBD Business Directory Dry Cleaners & Motor Garages/Service Stations (Premise & Intersection Matches)	Hardie Grant			Not required	500m	4	5	5
UBD Business Directory Dry Cleaners & Motor Garages/Service Stations (Road & Area Matches)	Hardie Grant			Not required	500m	-	19	19
Points of Interest	NSW Department of Finance, Services & Innovation	19/08/2021	19/08/2021	Quarterly	1000m	11	28	66
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	4
Major Easements	NSW Department of Finance, Services & Innovation	19/08/2021	19/08/2021	Quarterly	1000m	1	1	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	1	1	1
Hydrogeology Map of Australia	Commonwealth of Australia (Geoscience Australia)	08/10/2014	17/03/2000	As required	1000m	2	2	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	34



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	1	1	3
Geological Structures 1:250,000	NSW Department of Planning, Industry and Environment	20/08/2014		Annually	1000m	0	0	0
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	2
Soil Landscapes of Central and Eastern NSW	NSW Department of Planning, Industry and Environment	14/10/2020	27/07/2020	Annually	1000m	4	4	7
Environmental Planning Instrument Acid Sulfate Soils	NSW Department of Planning, Industry and Environment	15/11/2021	05/11/2021	Monthly	500m	0	-	-
Atlas of Australian Acid Sulfate Soils	CSIRO	19/01/2017	21/02/2013	As required	1000m	1	1	3
Dryland Salinity - National Assessment	National Land and Water Resources Audit	18/07/2014	12/05/2013	None planned	1000m	0	0	0
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	02/11/2021	02/11/2021	Monthly	1000m	0	0	0
Mining Title Applications	NSW Department of Industry	02/11/2021	02/11/2021	Monthly	1000m	0	0	0
Historic Mining Titles	NSW Department of Industry	02/11/2021	02/11/2021	Monthly	1000m	4	4	4
Environmental Planning Instrument SEPP State Significant Precincts	NSW Department of Planning, Industry and Environment	15/11/2021	07/12/2018	Monthly	1000m	0	0	0
Environmental Planning Instrument Land Zoning	NSW Department of Planning, Industry and Environment	15/11/2021	05/11/2021	Monthly	1000m	12	35	82
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	2	2
State Heritage Register - Curtilages	NSW Department of Planning, Industry and Environment	19/08/2021	25/06/2021	Quarterly	1000m	0	1	2
Environmental Planning Instrument Local Heritage	NSW Department of Planning, Industry and Environment	15/11/2021	05/11/2021	Monthly	1000m	28	57	128
Bush Fire Prone Land	NSW Rural Fire Service	26/11/2021	24/11/2021	Weekly	1000m	3	3	3
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	1	1	4
Inflow Dependent Ecosystems Likelihood	Bureau of Meteorology	14/08/2017	15/05/2017	Unknown	1000m	1	2	9
NSW BioNet Species Sightings	NSW Office of Environment & Heritage	02/12/2021	02/12/2021	Weekly	10000m	-	-	-

# Site Diagram

Road Alignment, Blackheath, NSW 2785 (South)



## Legend

- Site Boundary
- Internal Parcel Boundaries

**Total Area:** 967348m<sup>2</sup>

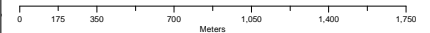
**Total Perimeter:** 19.46km

### 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.

### Scale:



Data Source Aerial Imagery:  
© Aerometrex Pty Ltd

Coordinate System:  
GDA 1994 MGA Zone 56

Date: 06 December 2021



# Contaminated Land

Road Alignment, Blackheath, NSW 2785 (South)

## 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
N/A	No records in buffer								

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

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

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

## Contaminated Land

Road Alignment, Blackheath, NSW 2785 (South)

### 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

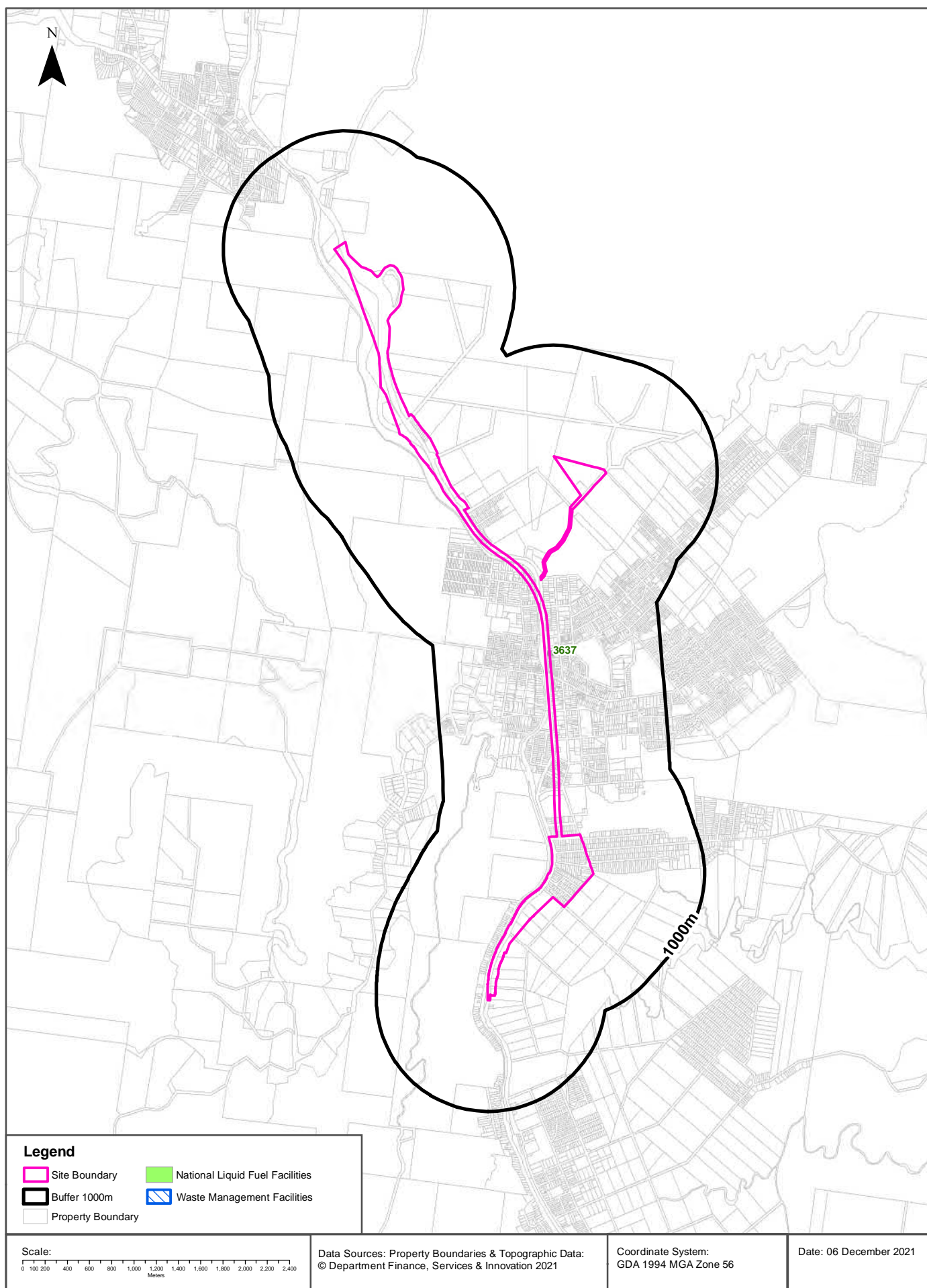
Former Gasworks within the dataset buffer:

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

Road Alignment, Blackheath, NSW 2785 (South)





## Waste Management & Liquid Fuel Facilities

Road Alignment, Blackheath, NSW 2785 (South)

### 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
N/A	No records in buffer											

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
3637	United	Blackheath	263 Great Western Highway	Blackheath	Petrol Station	Operational		25/07/2011	Premise Match	0m	On-site

National Liquid Fuel Facilities Data Source: Geoscience Australia

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# PFAS Investigation & Management Programs

Road Alignment, Blackheath, NSW 2785 (South)

## 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
N/A	No records in buffer				

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

Road Alignment, Blackheath, NSW 2785 (South)

### 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

Road Alignment, Blackheath, NSW 2785 (South)

### 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

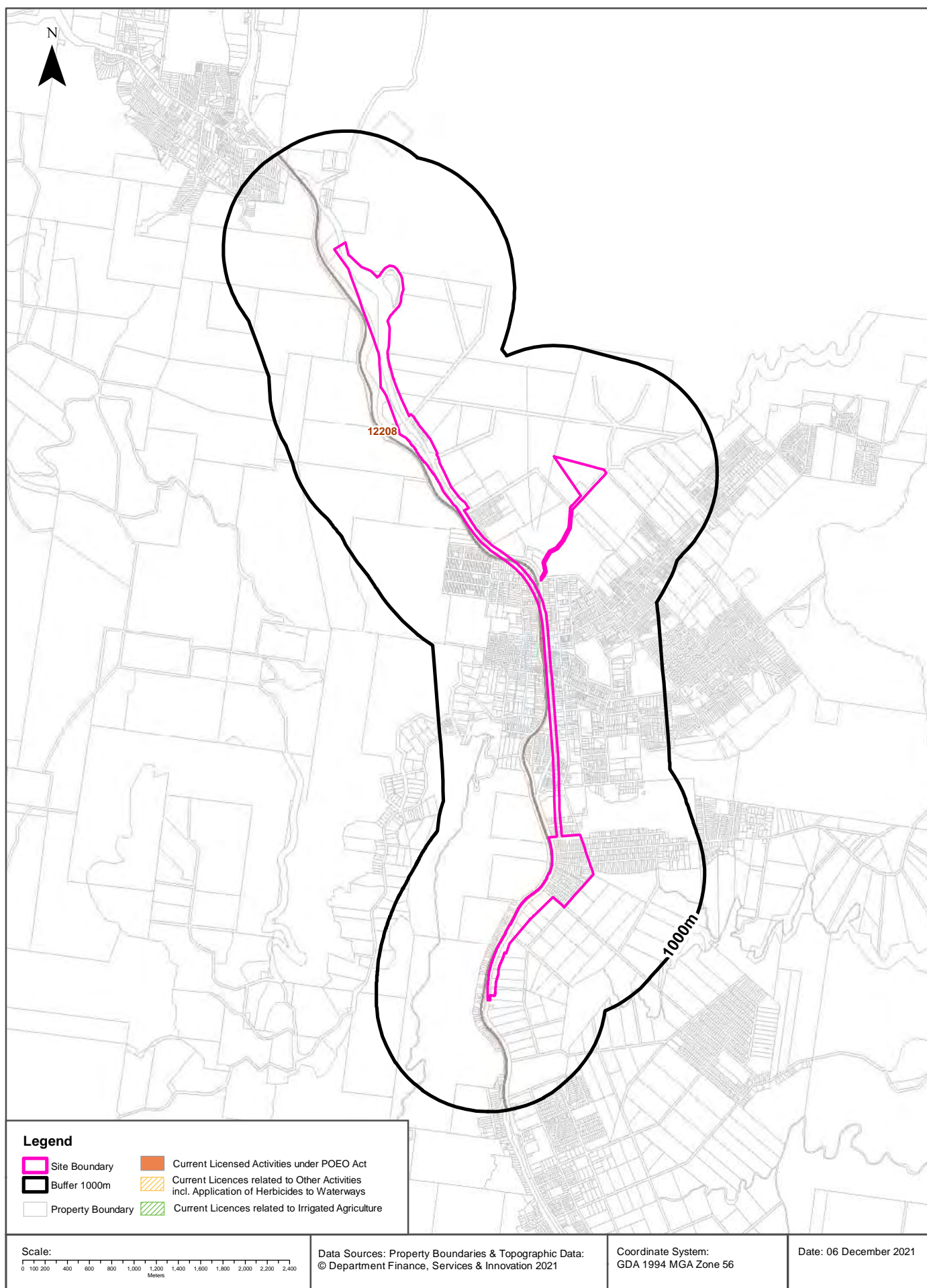
Sites within the dataset buffer:

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  
© State of New South Wales through the Environment Protection Authority

# Current EPA Licensed Activities

## Road Alignment, Blackheath, NSW 2785 (South)





## EPA Activities

Road Alignment, Blackheath, NSW 2785 (South)

## Licensed Activities under the POEO Act 1997

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

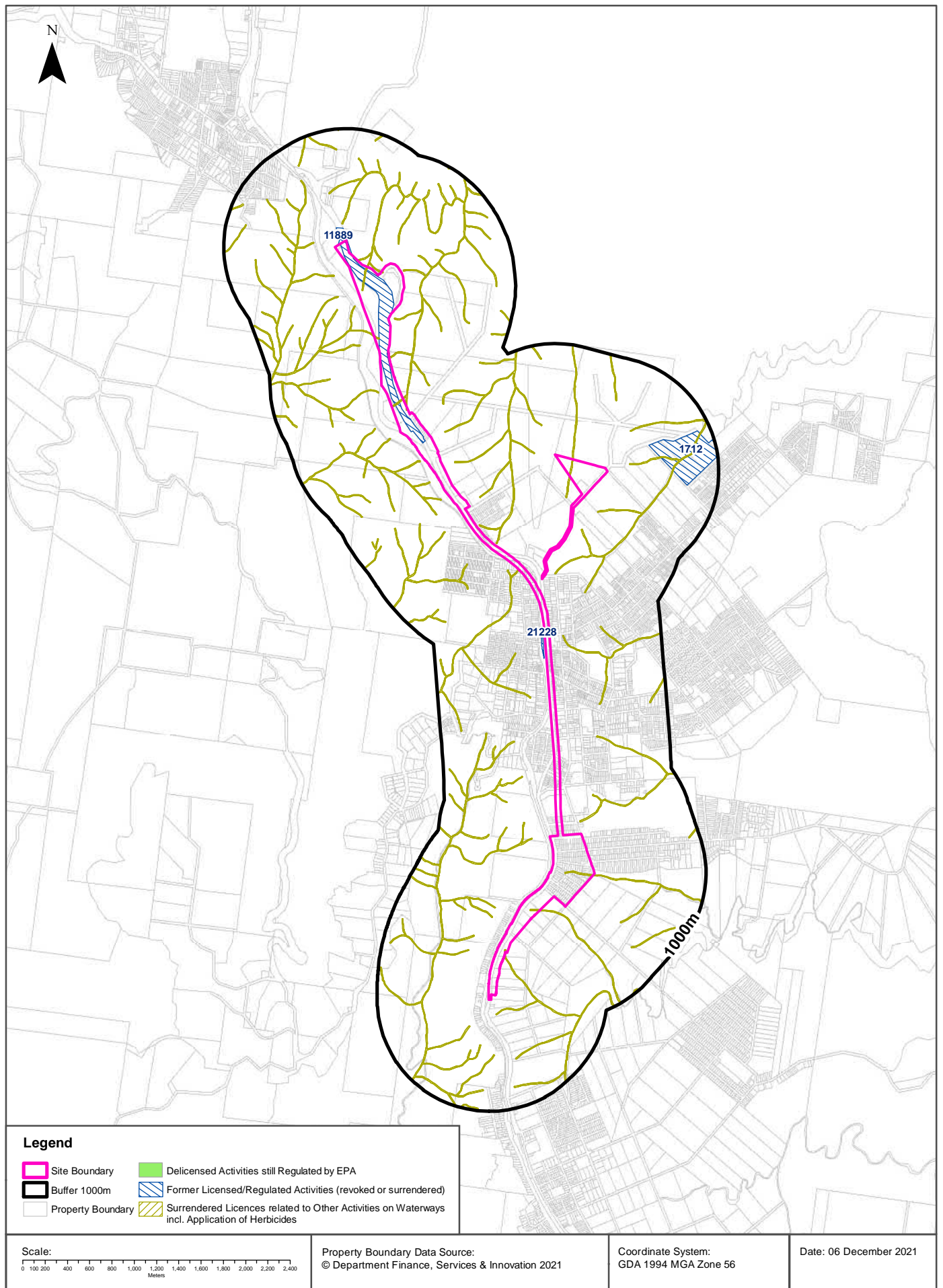
EPL	Organisation	Name	Address	Suburb	Activity	Loc Conf	Distance	Direction
12208	SYDNEY TRAINS		SYDNEY TRAINS, HAYMARKET, NSW 1238		Railway systems activities	Network of Features	0m	On-site

POEO Licence Data Source: Environment Protection Authority

© State of New South Wales through the Environment Protection Authority

# Delicensed & Former Licensed EPA Activities

## Road Alignment, Blackheath, NSW 2785 (South)



## EPA Activities

### Road Alignment, Blackheath, NSW 2785 (South)

## Delicensed Activities still regulated by the EPA

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

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

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

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

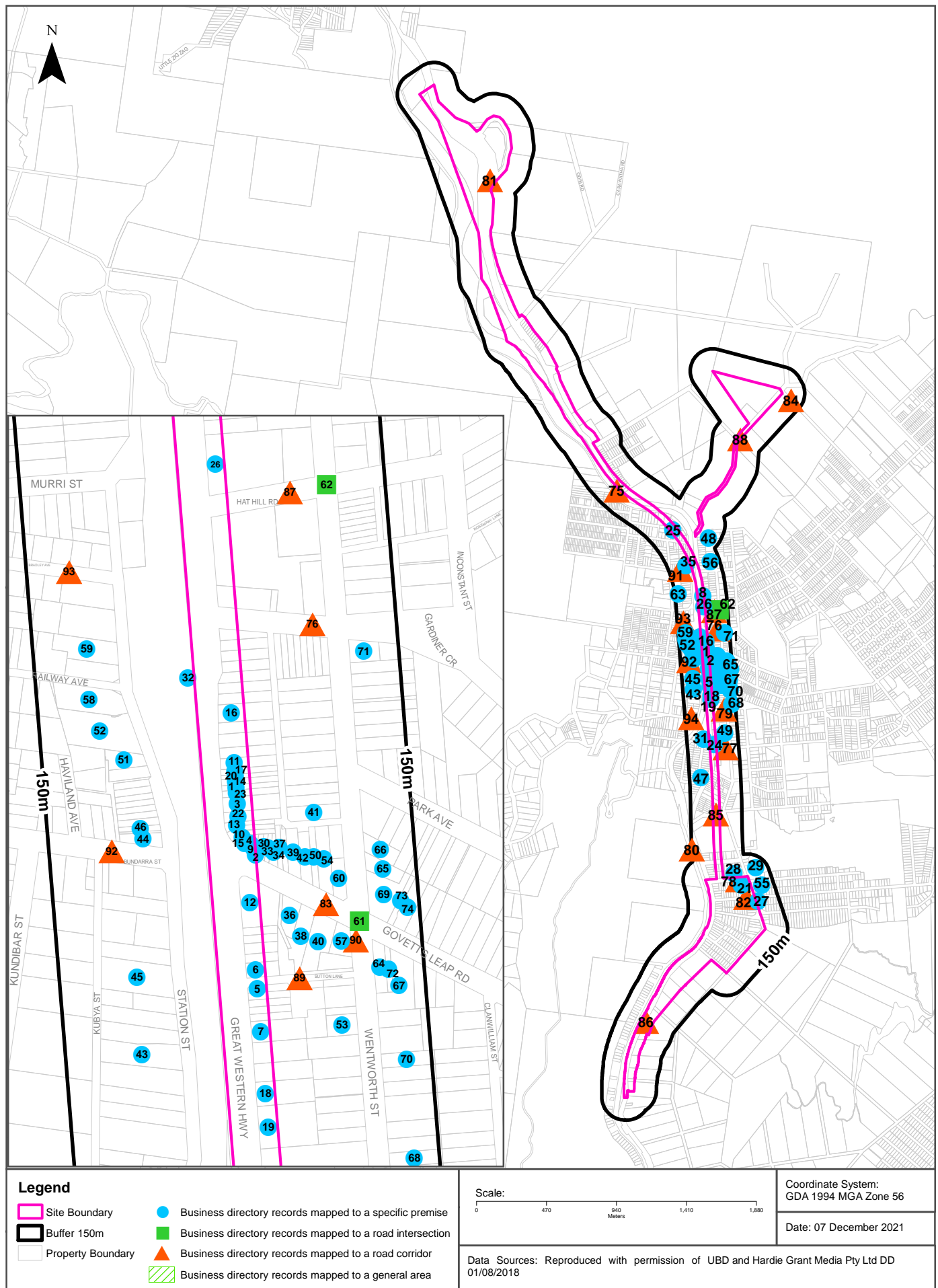
Former Licensed activities under the Protection of the Environment Operations Act 1997, now revoked or surrendered, within the dataset buffer:

Licence No	Organisation	Location	Status	Issued Date	Activity	Loc Conf	Distance	Direction
11889	ACCIONA INFRASTRUCTURE PROJECTS AUSTRALIA PTY LTD	RTA ROAD CORRIDOR, GREAT WESTERN HIGHWAY, SOLDIERS PINCH, KATOOMBA, NSW 2780	Surrendered	21/05/2003	Concrete works	Road Match	0m	On-site
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
21228	CPB CONTRACTORS PTY LIMITED	BLUE MOUNTAINS ROUTE CLEARANCE, KATOOMBA, NSW 2780,	Surrendered	15/02/2019	Railway systems activities	Premise Match	15m	South East
1712	SYDNEY WATER CORPORATION	ROBB AVENUE AND BETTINGTON ROAD, BLACKHEATH, NSW 2785	Surrendered	25/05/2000	Sewage treatment processing by small plants	Premise Match	441m	North East

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

# Historical Business Directories

Road Alignment, Blackheath, NSW 2785 (South)



# Historical Business Directories

## Road Alignment, Blackheath, NSW 2785 (South)

### 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
1	NOT LISTED	Banksia Coffee Lounge. The., 246 Great Western Hwy , Blackheath	121941	1991	Premise Match	0m	On-site
	NOT LISTED	Blackheath Newsagency., 246 Great Wmem Hwy , Blackheath	121962	1991	Premise Match	0m	On-site
	NOT LISTED	Blackheath Newsagency, Newsagnt., 246 Great Western Highway., Blackheath	128569	1982	Premise Match	0m	On-site
	TAXI & HIRE CAR SERVICES	Gledhill, P., 246 Great Western Hghwy. Blackheath	541621	1970	Premise Match	0m	On-site
	FLORIST-RETAIL	Heath Plant & Gift Shop (The), 246 Great Western Hghwy. Blackheath	541538	1970	Premise Match	0m	On-site
	TAXIS & HIRE CARS	Gledhill, P., 246 Great Western Highway., Blackheath	188239	1961	Premise Match	0m	On-site
	ELECTRICAL CONTRACTORS-LICENSED	Salon, Mark, 246 Great Western Highway., Blackheath	188138	1961	Premise Match	0m	On-site
	RADIO & TELEVISION-SALES & SERVICE	Salon, Mark, 246 Great Western Highway., Blackheath	188222	1961	Premise Match	0m	On-site
	CYCLE DEALERS	Harrison Radio, 246 Great Western Highway. Blackheath	144645	1950	Premise Match	0m	On-site
	ELECTRICAL SUPPLIES & APPLIANCES	Harrison Radio, 246 Great Western Highway. Blackheath	144661	1950	Premise Match	0m	On-site
	RADIO &/OR REFRIGERATOR DEALERS & SERVICEMEN	Harrison Radio, 246 Great Western Highway. Blackheath	144771	1950	Premise Match	0m	On-site
2	NOT LISTED	Blackheath Agencies Pty Ltd. 1St Agrt., 8 Govetts Leap Rd , Blackheath	121944	1991	Premise Match	0m	On-site
	NOT LISTED	Wolrige, W. F. & Sons, Est.Agnt., 8 Govetts Leap Rd., Blackheath	128627	1982	Premise Match	0m	On-site
	BOOT & SHOE REPAIRERS	Hopkins, W. E., 8 Govetts Leap Rd. Blackheath	541509	1970	Premise Match	0m	On-site
	BOOT & SHOE REPAIRERS	Hopkins, W. A., 8 Govetts Leap Rd. Blackheath	144614	1950	Premise Match	0m	On-site
3	NOT LISTED	Blackheath Cake Shop., 243 Great Western Hwy, Blackheath	121948	1991	Premise Match	0m	On-site
	NOT LISTED	Ho's Chinese & Seafood Restaurant., 244 Great Western Hwy , Blackheath	122005	1991	Premise Match	0m	On-site
	NOT LISTED	Schindler. C. P. J. Dr., 242 Great Western Hwy , Blackheath	122028	1991	Premise Match	0m	On-site
	NOT LISTED	Blackheath Cake Shop, 243 Great Western Highway., Blackheath	128556	1982	Premise Match	0m	On-site
	NOT LISTED	National Parks & Wildlife Society, 244 Great Western Highway., Blackheath	128608	1982	Premise Match	0m	On-site
	BAKERS	Blackheath Bakeries Pty. Ltd., 243 Great Western Hghwy. Blackheath	541503	1970	Premise Match	0m	On-site
	CAKE SHOPS &/OR PASTRYCOOKS	Blackheath Bakeries Pty. Ltd., 243 Great Western Hghwy. Blackheath	541519	1970	Premise Match	0m	On-site
	NEWSAGENTS-GENERAL	Cather, B. M. & G. N., 244 Great Western Hghwy. Blackheath	541601	1970	Premise Match	0m	On-site
	TOY DEALERS-RETAIL	Cather, B. M. & G. N., 244 Great Western Hghwy. Blackheath	541623	1970	Premise Match	0m	On-site
	HAIRDRESSERS (GENT.'S)	Nugent, K. P., 242 Great Western Hghwy. Blackheath	541555	1970	Premise Match	0m	On-site



Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
3	FANCY GOODS & GIFT SHOPS	Byron, E. J. and Sons, 244 Great Western Highway., Blackheath	188143	1961	Premise Match	0m	On-site
	NEWSAGENTS	Byron, E. J. and Sons, 244 Great Western Highway., Blackheath	188213	1961	Premise Match	0m	On-site
	TOY DEALERS-RETAIL	Byron, E. J. and Sons, 244 Great Western Highway., Blackheath	188243	1961	Premise Match	0m	On-site
	CAFES, TEA ROOMS, COFFEE LOUNGES, ETC.	Field, J., 243 Great Western Highway., Blackheath	188114	1961	Premise Match	0m	On-site
	HAIRDRESSERS (GENT.'S) & TOBACCONISTS	Nugent, K. P., 242 Great Western Highway., Blackheath	188179	1961	Premise Match	0m	On-site
4	NOT LISTED	Blackheath Family Shoe Store., 4 Govetts Leap Rd , Blackheath	121954	1991	Premise Match	0m	On-site
	NOT LISTED	Gilmores Shoe Store.4 Govetts Leap Rd., Blackheath	128585	1982	Premise Match	0m	On-site
	BOOT & SHOE RETAILERS	Gilmore Stores, 4 Govetts Leap Rd. Blackheath	541510	1970	Premise Match	0m	On-site
5	NOT LISTED	Blackheath Fire Station., 220 Great Western Hwy , Blackheath	121955	1991	Premise Match	0m	On-site
6	NOT LISTED	Blackheath Fish Shop., 222 Great Western Hwy , Blackheath	121956	1991	Premise Match	0m	On-site
	NOT LISTED	Blackheath Fish Shop, 222 Great Western Highway., Blackheath	128561	1982	Premise Match	0m	On-site
	MILK BARS &/OR CONFECTIONERS	Jenny's Hamburger Shop, 224 Great Western Highway. Blackheath	144737	1950	Premise Match	0m	On-site
7	NOT LISTED	Blackheath Garage., 216 Great Western Hwy , Blackheath	121957	1991	Premise Match	0m	On-site
8	NOT LISTED	Blackheath Motor Inn., 281 Great Western Hwy , Blackheath	121961	1991	Premise Match	0m	On-site
	NOT LISTED	Blackheath Motor Inn, 281 Great Western Highway., Blackheath	128568	1982	Premise Match	0m	On-site
9	NOT LISTED	Blackhoath Meat Service., 6 Govetts Leap Rd , Blackheath	121940	1991	Premise Match	0m	On-site
	NOT LISTED	Blackheath Meat Service, 6 Govetts Leap Rd., Blackheath	128567	1982	Premise Match	0m	On-site
	BUTCHERS-RETAIL	Blackheath Meat Service, 6 Govetts Leap Rd. Blackheath	541517	1970	Premise Match	0m	On-site
	BUTCHERS-RETAIL	Blackheath Meat Service, 6 Govetts Leap Rd., Blackheath	188110	1961	Premise Match	0m	On-site
	BANKS	Commercial Bank of Australia, 6 Govetts Leap Rd. Blackheath	144603	1950	Premise Match	0m	On-site
10	NOT LISTED	Colliers Gift Shop., 238 Great Western Hwy , Blackheath	121979	1991	Premise Match	0m	On-site
	NOT LISTED	Green P M Chmst., 237 Great Western Hwy , Blackheath	121998	1991	Premise Match	0m	On-site
	NOT LISTED	Green, P. M., Chmst., 237 Great Western Highway., Blackheath	128590	1982	Premise Match	0m	On-site
	CHEMISTS-PHARMACEUTICAL	Green, P. M., 237 Great Western Hghwy. Blackheath	541529	1970	Premise Match	0m	On-site
	CHEMISTS-PHARMACEUTICAL	Johnson, G. J., 237 Great Western Highway., Blackheath	188124	1961	Premise Match	0m	On-site
11	NOT LISTED	Conquest Videos., 250 Great Western Hwy , Blackheath	121981	1991	Premise Match	0m	On-site
	NOT LISTED	Vlazqey G. Dntst., 251 Great Western Hwy , Blackheath	122040	1991	Premise Match	0m	On-site
	NOT LISTED	Wright, Grill & Co., Est.Agnt., 250 Great Western Highway., Blackheath	128628	1982	Premise Match	0m	On-site
12	NOT LISTED	Crafty Mountain Peril. The. Gilt Shop., 233 Great Western Hwy , Blackheath	121983	1991	Premise Match	0m	On-site
	NOT LISTED	Kanimbla Country Pty Ltd. Mnsr., 236 Great Western Hwy , Blackheath	122006	1991	Premise Match	0m	On-site
	NOT LISTED	Tony's Pizza., 234 Great Western Hwy , Blackheath	122039	1991	Premise Match	0m	On-site
	NOT LISTED	New Ivanhoe Hotel:Great Western Highway., Blackheath	128609	1982	Premise Match	0m	On-site
	GIFT, NOVELTY & SOUVENIR SHOPS	McBurnie, Miss A., 234 Great Western Hghwy. Blackheath	541546	1970	Premise Match	0m	On-site

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
12	LIBRARIES-LENDING	McBurnie, Miss A., 234 Great Western Hwy. Blackheath	541578	1970	Premise Match	0m	On-site
	DRESS SHOPS & ACCESSORIES	McBurnie, Miss A., 234 Great Western Hwy. Blackheath	541533	1970	Premise Match	0m	On-site
	HOTELS-LICENSED	New Ivanhoe Hotel, Great Western Hwy. Blackheath	541571	1970	Premise Match	0m	On-site
	FANCY GOODS & GIFT SHOPS	McBurnie, Miss A., 234 Great Western Highway., Blackheath	188146	1961	Premise Match	0m	On-site
	DRAPERS-RETAIL	McBurnie, Miss A., 234 Great Western Highway., Blackheath	188136	1961	Premise Match	0m	On-site
	HABERDASHERY-RETAIL	McBurnie, Miss A., 234 Great Western Highway., Blackheath	188178	1961	Premise Match	0m	On-site
	LIBRARIES-LENDING	McBurnie, Miss A., 234 Great Western Highway., Blackheath	188194	1961	Premise Match	0m	On-site
	HOTELS	New Ivanhoe Hotel (J. J. McEwen, Propr.), Bathurst Rd. Blackheath	144721	1950	Premise Match	0m	On-site
13	NOT LISTED	Dash's Blackhoath Pharmacy., 239 Great Western Hwy , Blackheath	121985	1991	Premise Match	0m	On-site
	NOT LISTED	Dash's Blackheath Pharmacy, 239 Great Western Highway., Blackheath	128579	1982	Premise Match	0m	On-site
	NOT LISTED	Dash's Gift Shop.239 Great Western Highway., Blackheath	128580	1982	Premise Match	0m	On-site
	CHEMISTS-PHARMACEUTICAL	Dash's Blackheath Pharmacy, 239 Great Western Hwy. Blackheath	541528	1970	Premise Match	0m	On-site
	CHEMISTS-PHARMACEUTICAL	Dash, R. R., 239 Great Western Highway., Blackheath	188123	1961	Premise Match	0m	On-site
	FANCY GOODS & GIFT SHOPS	Dash, R. R., 239 Great Western Highway., Blackheath	188144	1961	Premise Match	0m	On-site
14	NOT LISTED	De Losas Fruit Market., 247 Great Western Hwy , Blackheath	121986	1991	Premise Match	0m	On-site
	NOT LISTED	De Losas Fruit Market, 247 Great Western Highway., Blackheath	128581	1982	Premise Match	0m	On-site
	FRUITERERS & GREENGROCERS	De Losa, A., 247 Great Western Hwy. Blackheath	541539	1970	Premise Match	0m	On-site
	MILK BARS & CONFECTIONERY SHOPS	De Losa, A., 247 Great Western Hwy. Blackheath	541584	1970	Premise Match	0m	On-site
	FRUITERERS & GREENGROCERS	De Losa, A., 247 Great Western Rd., Blackheath	188153	1961	Premise Match	0m	On-site
15	NOT LISTED	Drapers Nook. The., 2 Govetts Leap Rd , Blackheath	121987	1991	Premise Match	0m	On-site
	NOT LISTED	Westpac Banking Corporation., 2B Govetts Rd , Blackheath	122044	1991	Premise Match	0m	On-site
	NOT LISTED	Griffith's Drapery. 2 Govetts Leap Rd., Blackheath	128591	1982	Premise Match	0m	On-site
	MILLINERY-RETAIL	Griffith's Drapery, 2 Govetts Leap Rd. Blackheath	541589	1970	Premise Match	0m	On-site
	DRAPERS & HABERDASHERS	Griffiths Drapery, 2 Govetts Leap Rd. Blackheath	541531	1970	Premise Match	0m	On-site
	OUTFITTERS-LADIES' & CHILDREN'S	Griffiths Drapery, 2 Govetts Leap Rd. Blackheath	541604	1970	Premise Match	0m	On-site
	DRAPERS-RETAIL	Collier's Drapery, 2 Govetts Leap Rd., Blackheath	188135	1961	Premise Match	0m	On-site
	OUTFITTERS-LADIES' & CHILDREN'S	Collier's Drapery, 2 Govetts Leap Rd., Blackheath	188215	1961	Premise Match	0m	On-site
	SEWING MACHINE DEALERS	Collier's Drapery, 2 Govetts Leap Rd., Blackheath	188233	1961	Premise Match	0m	On-site
	BABIES' & CHILDREN'S WEAR-RETAIL	Collier, I. M., 2 Govetts Leap Rd, Blackheath	144598	1950	Premise Match	0m	On-site
	OUTFITTERS-LADIES'	Collier, I. M., 2 Govetts Leap Rd. Blackheath	144760	1950	Premise Match	0m	On-site
16	NOT LISTED	Gardner's Inn Hotel., Great Western Hwy , Blackheath	121992	1991	Premise Match	0m	On-site
	NOT LISTED	Gardner's Inn Hotel, Great Western Highway., Blackheath	128584	1982	Premise Match	0m	On-site
	HOTELS-LICENSED	Gardner's Inn Hotel, Western Highway., Blackheath	188187	1961	Premise Match	0m	On-site

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16	HOTELS	Gardiners Inn (W. A. Price, Propr.), Bathurst Rd. Blackheath	144720	1950	Premise Match	0m	On-site
17	NOT LISTED	Great Western Butchery., 249 Great Western Hwy , Blackheath	121997	1991	Premise Match	0m	On-site
18	NOT LISTED	Kenya Service Station., 211 Great Western Hwy , Blackheath	122007	1991	Premise Match	0m	On-site
	AGRICULTURAL MACHINERY HIRERS &/OR DEALERS	Kerry's Service Station, 213 Great Western Hwy. Blackheath	541483	1970	Premise Match	0m	On-site
	BOAT, LAUNCH & YACHT SALES & SERVICE	Kerry's Service Station, 213 Great Western Hwy. Blackheath	541508	1970	Premise Match	0m	On-site
	LAWNMOWER SALES & SERVICE	Kerry's Service Station, 213 Great Western Hwy. Blackheath	541576	1970	Premise Match	0m	On-site
	MOTOR GARAGES & ENGINEERS	Kerry's Service Station, 213 Great Western Hwy. Blackheath	541597	1970	Premise Match	0m	On-site
	MOTOR TOWING SERVICES	Kerry's Service Station, 213 Great Western Hwy. Blackheath	541600	1970	Premise Match	0m	On-site
	OUTBOARD MOTOR SALES & SERVICE	Kerry's Service Station, 213 Great Western Hwy. Blackheath	541603	1970	Premise Match	0m	On-site
	SAWS-GENERAL-SALES & SERVICE	Kerry's Service Station, 213 Great Western Hwy. Blackheath	541611	1970	Premise Match	0m	On-site
	WELDERS-ELECTRIC & OXY	Kerry's Service Station, 213 Great Western Hwy. Blackheath	541626	1970	Premise Match	0m	On-site
	MOTOR CAR & TRUCK DEALERS-NEW & USED	Kerry's Service Station, 213 Great Western Highway., Blackheath	188208	1961	Premise Match	0m	On-site
	MOTOR GARAGES & ENGINEERS	Kerry's Service Station, 213 Great Western Highway., Blackheath	188211	1961	Premise Match	0m	On-site
	MOTOR CAR & TRUCK DEALERS	Hoidens, 213 Great Western Highway. Blackheath	144747	1950	Premise Match	0m	On-site
	MOTOR CAR & TRUCK DEALERS	Kerry's Service Station (Agent, General Motors Blackheath	144746	1950	Premise Match	0m	On-site
	BATTERY DEALERS & SERVICE STATIONS	Kerry's Service Station, 213 Great Western Highway. Blackheath	144608	1950	Premise Match	0m	On-site
	MOTOR ACCESSORIES DEALERS	Kerry's Service Station, 213 Great Western Highway. Blackheath	144744	1950	Premise Match	0m	On-site
	MOTOR GARAGES & ENGINEERS	Kerry's Service Station, 213 Great Western Highway. Blackheath	144749	1950	Premise Match	0m	On-site
	MOTOR SERVICE STATIONS	Kerry's Service Station, 213 Great Western Highway. Blackheath	144755	1950	Premise Match	0m	On-site
	TYRE DEALERS	Kerry's Service Station, 213 Great Western Highway. Blackheath	144808	1950	Premise Match	0m	On-site
19	NOT LISTED	Norwood Motel. & Sleakhouse., 209 Great Western Hwy , Blackheath	122018	1991	Premise Match	0m	On-site
	NOT LISTED	Motel Norwood, 209 Great Western Highway., Blackheath	128605	1982	Premise Match	0m	On-site
	MOTELS	Motel Norwood, Great Western Hwy. Blackheath	541592	1970	Premise Match	0m	On-site
	GUEST HOUSES	Motel Norwood, Great Western Highway., Blackheath	188175	1961	Premise Match	0m	On-site
20	NOT LISTED	Old Piedmont Inn., 248 Great Western Hwy , Blackheath	122019	1991	Premise Match	0m	On-site
	NOT LISTED	Blackheath Insurance Services, 248 Great Western Highway., Blackheath	128565	1982	Premise Match	0m	On-site
21	NOT LISTED	Redleaf Lodge Motel., 15 Brightlands Av , Blackheath	122024	1991	Premise Match	0m	On-site
	NOT LISTED	Redleaf Lodge Motel, 15 Brightlands Ave., Blackheath	128616	1982	Premise Match	0m	On-site
	HOLIDAY ACCOMMODATION	"Redleaf," 15 Brightlands Ave. Blackheath	541564	1970	Premise Match	0m	On-site
	GUEST HOUSES	"Redleaf", 15 Brightlands Ave., Blackheath	188176	1961	Premise Match	0m	On-site
	GUEST HOUSES	"Redleaf", 15 Brightlands Ave. Blackheath	144708	1950	Premise Match	0m	On-site
22	NOT LISTED	Wattle Cafe., 240 Great Western Hwy , Blackheath	122042	1991	Premise Match	0m	On-site
	NOT LISTED	Wattle Cafe. (The), 240 Great Western Highway., Blackheath	128625	1982	Premise Match	0m	On-site

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22	MILK BARS & CONFECTIONERY SHOPS	Wattle Cafe (The), 240 Great Western Hwy. Blackheath	541585	1970	Premise Match	0m	On-site
	CAFES, TEA ROOMS, COFFEE LOUNGES	Wattle Cafe, 240 Great Western Hwy. Blackheath	541518	1970	Premise Match	0m	On-site
	CAFES, TEA ROOMS, COFFEE LOUNGES, ETC.	Wattle Cafe, Great Western Highway., Blackheath	188117	1961	Premise Match	0m	On-site
	CAFES	Wattle Cafe, Bathurst Rd. Blackheath	144631	1950	Premise Match	0m	On-site
	MILK BARS &/OR CONFECTIONERS	Wattle Cafe, Bathurst Rd. Blackheath	144740	1950	Premise Match	0m	On-site
23	NOT LISTED	Cut Price Food Markets.245 Great Western Highway., Blackheath	128578	1982	Premise Match	0m	On-site
	CAFES, TEA ROOMS, COFFEE LOUNGES, ETC.	Blue Bird Milk Bar, 245 Great Western Highway., Blackheath	188112	1961	Premise Match	0m	On-site
	CAFES	Blue Bird Milk Bar, 245 Western Highway. Blackheath	144626	1950	Premise Match	0m	On-site
	MILK BARS &/OR CONFECTIONERS	Blue Bird Milk Bar, 245 Western Highway. Blackheath	144733	1950	Premise Match	0m	On-site
24	NOT LISTED	High Mountains Motel, Great Western Highway., Blackheath	128597	1982	Premise Match	0m	On-site
	MOTELS	High Mountains Motel, Great Western Hwy. Blackheath	541591	1970	Premise Match	0m	On-site
25	NOT LISTED	West, R. J., Fabrctg.Engr., 5 Wombat St., Blackheath	128626	1982	Premise Match	0m	On-site
26	HALLS	Parish Hall, Cnr. Western Highway. and Hat Hill Rd. Blackheath	144714	1950	Premise Match	0m	On-site
27	NOT LISTED	Blackheath Plumbing & Draining Pty. Ltd., 31 Evans Lookout Rd , Blackheath	121964	1991	Premise Match	0m	South
28	NOT LISTED	Graham J. F Bldr., 14 Brightlands Av , Blackheath	121996	1991	Premise Match	0m	South
	NOT LISTED	Graham, J. F., Bldr., 14 Brightlands Ave., Blackheath	128588	1982	Premise Match	0m	South
29	NOT LISTED	Blackheath Golf Club, Brightlands Ave., Blackheath	128564	1982	Premise Match	0m	South
	ASSOCIATIONS, SOCIETIES, CLUBS & SPORTING BODIES	Blackheath Golf Club, Brightlands Ave. Blackheath	541489	1970	Premise Match	0m	South
	CLUBS & SPORTS BODIES	Blackheath Golf Club, Brightlands Ave., Blackheath	188126	1961	Premise Match	0m	South
	CLUBS	Blackheath Golf Club, Brightlands Ave. Blackheath	144642	1950	Premise Match	0m	South
30	NOT LISTED	Govetts Leap Butchery., 10 Govetts Leap Rd , Blackheath	121995	1991	Premise Match	3m	South East
	NOT LISTED	Rothmund's Meats, 10 Govetts Leap Rd., Blackheath	128618	1982	Premise Match	3m	South East
	BUTCHERS-RETAIL	Producers' Meat Supply Co. Pty. Ltd., 10 Govetts Leap Rd., Blackheath	188111	1961	Premise Match	3m	South East
31	NOT LISTED	St. Mount's Guest House., 194 Great Western Hwy , Blackheath	122034	1991	Premise Match	5m	South
32	NOT LISTED	Cameron. J R. Real Estate Valuer., 264 Great Western Hwy , Blackheath	121975	1991	Premise Match	6m	South East
	NOT LISTED	Old Tythe Barn. The Hobby Supls., 266 Great Western Hwy , Blackheath	122020	1991	Premise Match	6m	South East
	NOT LISTED	Richardson & Wrench Bladrheath. 1St. Rant., 264 Great Western Hwy , Blackheath	122026	1991	Premise Match	6m	South East
	NOT LISTED	Hathdl Gallery, Fumtre., 264 Great Western Highway., Blackheath	128595	1982	Premise Match	6m	South East
	NOT LISTED	Old Tythe Barn, Craft Shop, 2 66 Great Western Highway., Blackheath	128610	1982	Premise Match	6m	South East
	POTTERY MFRS./DISTS.	Pottery Workshop, 266 Great Western Hwy. Blackheath	541605	1970	Premise Match	6m	South East
	POTTERY RETAILERS	Pottery Workshop, 266 Great Western Hwy. Blackheath	541606	1970	Premise Match	6m	South East
33	NOT LISTED	Blackheath Cut Price Supermrkt., 12 Govetts Leap St , Blackheath	121951	1991	Premise Match	7m	South East

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33	GROCERS & GENERAL STOREKEEPERS	Buttles Pty. Ltd., 12 Govetts Leap Rd., Blackheath	188162	1961	Premise Match	7m	South East
	GUEST HOUSES	Tinsley's 12 Govett's Leap Road, Blackheath Blackheath	144694	1950	Premise Match	7m	South East
	DELICATESSENS	Tinsleys, 12 Govetts Leap Rd. Blackheath	144649	1950	Premise Match	7m	South East
	GROCERS & GENERAL STOREKEEPERS	Tinsleys, 12 Govetts Leap Rd. Blackheath	144684	1950	Premise Match	7m	South East
34	NOT LISTED	Blackheath Food Centre, 14 Govetts Leap Rd., Blackheath	128562	1982	Premise Match	12m	South East
	GROCERS & SELF SERVICE STORES	Coles Food Store, 14 Govetts Leap Rd. Blackheath	541551	1970	Premise Match	12m	South East
	GROCERS & SELF SERVICE STORES	G. & G. Stores, 14 Govetts Leap Rd. Blackheath	541553	1970	Premise Match	12m	South East
	DRAPERS-RETAIL	Ashleys Buckinghams Pty. Ltd., 14 Govetts Leap Rd., Blackheath	188134	1961	Premise Match	12m	South East
	MERCERS & MEN'S & BOYS' OUTFITTERS	Ashleys Buckinghams Pty. Ltd., 14 Govetts Leap Rd., Blackheath	188199	1961	Premise Match	12m	South East
	OUTFITTERS-LADIES' & CHILDREN'S	Ashleys Buckinghams Pty. Ltd., 14 Govetts Leap Rd., Blackheath	188214	1961	Premise Match	12m	South East
	GROCERS & GENERAL STOREKEEPERS	Mitchell, F. G. Pty. Ltd., 14 Govetts Leap Rd., Blackheath	188166	1961	Premise Match	12m	South East
	DRAPERS-RETAIL	Mitchell, F. G. Pty. Ltd., 14 Govetts Leap Rd. Blackheath	144653	1950	Premise Match	12m	South East
	GROCERS & GENERAL STOREKEEPERS	Mitchell, F. G. Pty. Ltd., 14 Govetts Leap Rd. Blackheath	144682	1950	Premise Match	12m	South East
	MERCERS & MEN'S OUTFITTERS	Mitchell, F. G. Pty. Ltd., 14 Govetts Leap Rd. Blackheath	144731	1950	Premise Match	12m	South East
	BABIES' & CHILDREN'S WEAR-RETAIL	Mitchell, F. G. Pty., 14 Govetts Leap Rd. Blackheath	144599	1950	Premise Match	12m	South East
	OUTFITTERS-LADIES'	Mitchell, F. G. Pty., 14 Govetts Leap Rd. Blackheath	144761	1950	Premise Match	12m	South East
35	NOT LISTED	Blackheath Towing., 3 Thirroul Av , Blackheath	121969	1991	Premise Match	18m	South East
36	NOT LISTED	Craff Workshop. The Victory Theatre., 17 Govetts Leap Rd , Blackheath	121982	1991	Premise Match	18m	South East
	NOT LISTED	Second Hand Theatre The Victory Theatre., 17 Govetts Leap Rd , Blackheath	122030	1991	Premise Match	18m	South East
	PICTURE THEATRES	Victory Theatre, Govett St., Blackheath	188217	1961	Premise Match	18m	South East
	PICTURE THEATRES	Victory Theatre, Govett St. Blackheath	144764	1950	Premise Match	18m	South East
37	NOT LISTED	Hadley's Deli., 20 Govetts Leap Rd , Blackheath	121999	1991	Premise Match	20m	South East
	NOT LISTED	Mealla Rouge Restrnt., 18 Govatti Leap Rd , Blackheath	122013	1991	Premise Match	20m	South East
	NOT LISTED	Pascoe Delicatessen & Health Foods, 20 Govetts Leap Rd., Blackheath	128612	1982	Premise Match	20m	South East
	REAL ESTATE AGENTS & VALUERS (See Stock, Station & Real Estate Agents) RESTAURANTS	Cafe La Boheme, 18 Govetts Leap Rd. Blackheath	541609	1970	Premise Match	20m	South East
	ASSOCIATIONS, SOCIETIES, CLUBS & SPORTING BODIES	Quota Club, 18 Govetts Leap Rd. Blackheath	541497	1970	Premise Match	20m	South East
	BOOT & SHOE RETAILERS	Wadson, C. A., 20 Govetts Leap Rd. Blackheath	541511	1970	Premise Match	20m	South East
	MERCERS & MEN'S & BOYS' OUTFITTERS	Wadson, C. A., 20 Govetts Leap Rd. Blackheath	541583	1970	Premise Match	20m	South East
	BUILDING SOCIETIES & COMPANIES	Blue Mountains Starr-Bowkett Building Co-op. Society, 20 Govetts Leap Rd., Blackheath	188109	1961	Premise Match	20m	South East
	CAFES, TEA ROOMS, COFFEE LOUNGES, ETC.	Cafe La Boheme, 18 Govetts Leap Rd., Blackheath	188113	1961	Premise Match	20m	South East
	CLUBS & SPORTS BODIES	Quota Club, 18 Govetts Leap Rd., Blackheath	188127	1961	Premise Match	20m	South East



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37	FOOTWEAR RETAILERS	Wadson, C. A., 20 Govetts Leap Rd., Blackheath	188151	1961	Premise Match	20m	South East
	MERCERS & MEN'S & BOYS' OUTFITTERS	Wadson, C. A., 20 Govetts Leap Rd., Blackheath	188201	1961	Premise Match	20m	South East
	BUILDING SOCIETIES	(Mrs. M. G. Wadson), 20 Govetts Leap Rd. Blackheath	144623	1950	Premise Match	20m	South East
	SCHOOLS, COLLEGES-GENERAL	C. A. Wadson 20 Govett's Leap Road, Blackheath Blackheath	144786	1950	Premise Match	20m	South East
	DELICATESSENS	Goodlands, 18 Govetts Leap Rd. Blackheath	144647	1950	Premise Match	20m	South East
	GROCERS & GENERAL STOREKEEPERS	Goodlands, 18 Govetts Leap Rd. Blackheath	144680	1950	Premise Match	20m	South East
	FOOTWEAR RETAILERS	Wadson, C. A., 20 Govetts Leap Rd. Blackheath	144666	1950	Premise Match	20m	South East
	MERCERS & MEN'S OUTFITTERS	Wadson, C. A., 20 Govetts Leap Rd. Blackheath	144732	1950	Premise Match	20m	South East
38	NOT LISTED	Blackheath Craft Workshops, 19 Govetts Leap Rd., Blackheath	128559	1982	Premise Match	22m	South East
	GUEST HOUSES	Griffiths, M., 23 Govetts Leap Rd., Blackheath	188172	1961	Premise Match	22m	South East
	GUEST HOUSES	"Normanton" (J. Layfield), 23 Govetts Leap Rd. Blackheath	144705	1950	Premise Match	22m	South East
	GUEST HOUSES	Griffiths, M., 23 Govetts Leap Rd. Blackheath	144702	1950	Premise Match	22m	South East
	CAFES	Normanton Grill Room (J. Layfield), 23 Govetts Leap Rd. Blackheath	144629	1950	Premise Match	22m	South East
39	NOT LISTED	Barrat & Smith. Palmgst., 1/22 Govetts Leap Rd , Blackheath	121942	1991	Premise Match	30m	South East
	NOT LISTED	Elizabeths Exclusive Salon., 22 Govetts Leap Rd , Blackheath	121989	1991	Premise Match	30m	South East
	NOT LISTED	Hairloom Hairdressing Salon The., 22 Govetts Leap Rd , Blackheath	122000	1991	Premise Match	30m	South East
	NOT LISTED	Prestan K. H Acctnt., 2/22 Govetts Leap Rd , Blackheath	122023	1991	Premise Match	30m	South East
	NOT LISTED	Elizabeth's Exclusive Salon, 22 Govetts Leap Rd., Blackheath	128582	1982	Premise Match	30m	South East
	NOT LISTED	Hair Loom Hairdressing Salon. The.22 Govetts Leap Rd., Blackheath	128592	1982	Premise Match	30m	South East
	DRESS SHOPS & ACCESSORIES	Elizabeth Exclusive Frock Salon, 24 Govetts Leap Rd. Blackheath	541532	1970	Premise Match	30m	South East
	BABY & CHILDREN'S WEAR-RETAIL	Elizabeth's Exclusive Salon, 24 Govett's Leap Rd. Blackheath	541502	1970	Premise Match	30m	South East
	MILLINERY-RETAIL	Elizabeth's Exclusive Salon, 24 Govetts Leap Rd. Blackheath	541588	1970	Premise Match	30m	South East
	FROCK & COAT SALONS	Elizabeth Exclusive Frock Salon, 24 Govetts Leap Rd., Blackheath	188152	1961	Premise Match	30m	South East
	MERCERS & MEN'S & BOYS' OUTFITTERS	Napier, E. S. and J. R., 22 Govetts Leap Rd., Blackheath	188200	1961	Premise Match	30m	South East
	MOTOR SERVICE STATIONS	Rolfe Bros., 22 Govetts Leap Rd. Blackheath	144756	1950	Premise Match	30m	South East
	MOTOR TOURS	Rolfe Bros., 22 Govetts Leap Rd. Blackheath	144757	1950	Premise Match	30m	South East
	TOURIST AGENCIES	Rolfe Bros., 22 Govetts Leap Rd. Blackheath	144801	1950	Premise Match	30m	South East
	SCHOOLS, COLLEGES-GENERAL	Rolfe's Motor & Tourist Service 22 Govett's Leap Road, Blackheath Blackheath	144789	1950	Premise Match	30m	South East
	TOURIST CARS	Rolfes Motor Tours, 22 Govetts Leap Rd. Blackheath	144804	1950	Premise Match	30m	South East
40	NOT LISTED	Arcade Candy., Shop 2 Collier Arc 25 Govetts Leap Rd , Blackheath	121938	1991	Premise Match	32m	South East
	NOT LISTED	Blackheath Veterinary Clinic., Shop 3 Collier Arc 25 Govetts Leap Rd , Blackheath	121970	1991	Premise Match	32m	South East
	NOT LISTED	Books A Things., Shop 4 Collier Arc 25 Govetts Leap Rd , Blackheath	121973	1991	Premise Match	32m	South East

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40	NOT LISTED	Heath Coffee Shop The., Shop 5 Collier Arc 25 Govetts Leap Rd , Blackheath	122001	1991	Premise Match	32m	South East
	NOT LISTED	Ribbons. & Rainbows. Shop J. Collier Arc., 25 Govetts Leap Rd , Blackheath	122025	1991	Premise Match	32m	South East
	NOT LISTED	Stanley's Hairdressing., Shop 6 Collier Arc 25 Govetts Leap Rd , Blackheath	122035	1991	Premise Match	32m	South East
41	NOT LISTED	Blackheath Dry Dock Seafood Restaurant., 124 Wentworth St , Blackheath	121952	1991	Premise Match	33m	South East
42	BANKS	Commercial Bank of Aust., 26 Govetts Leap Rd. Blackheath	541504	1970	Premise Match	41m	South East
	FOOTWEAR RETAILERS	Clarke, W, 28 Govetts Leap Rd., Blackheath	188148	1961	Premise Match	41m	South East
	HARDWARE DEALERS & IRONMONGERS	Clarke, W., 28 Govetts Leap Rd., Blackheath	188181	1961	Premise Match	41m	South East
	BANKS	Commercial Bank of Aust., 26 Govetts Leap Rd., Blackheath	188100	1961	Premise Match	41m	South East
43	GUEST HOUSES	"Collaroy", 111 Station St. Blackheath	144697	1950	Premise Match	41m	South
44	NOT LISTED	Gail Sims Hair Studio., 123 Station St , Blackheath	121991	1991	Premise Match	43m	South
	NOT LISTED	Herborn. Kalriona. Dr., 123 Station St , Blackheath	122002	1991	Premise Match	43m	South
	NOT LISTED	Matus Allan J Dr., 123 Station St , Blackheath	122012	1991	Premise Match	43m	South
	RADIO DEALERS &/OR SERVICEMEN	Doolan, A. W., 123 Station St. Blackheath	144769	1950	Premise Match	43m	South
	ELECTRICAL SUPPLIES & APPLIANCES	Radio Centre, 123 Station St. Blackheath	144662	1950	Premise Match	43m	South
	RADIO &/OR REFRIGERATOR DEALERS & SERVICEMEN	Radio Centre, 123 Station St. Blackheath	144772	1950	Premise Match	43m	South
45	NOT LISTED	Goodwin, J. B., Elect/Supls., 116 Station St., Blackheath	128587	1982	Premise Match	43m	South
46	INSURANCE AGENTS	Wolrige, W. F. & Sons, 124 Station St. Blackheath	541573	1970	Premise Match	43m	South
	PRODUCE MERCHANTS- GRAIN & SEED-RETAIL	Wolrige, W. F. & Sons, 124 Station St. Blackheath	541608	1970	Premise Match	43m	South
	STOCK, STATION & REAL ESTATE AGENTS	Wolrige, W. F. & Sons, 124 Station St. Blackheath	541617	1970	Premise Match	43m	South
47	NOT LISTED	Simon; K. & R. M., Elect/. Contrctr., 164 Great Western Highway., Blackheath	128621	1982	Premise Match	45m	South
48	PAINTERS, PAPERHANGERS & DECORATORS	Crum, J. W., 198 Wentworth St. Blackheath	144762	1950	Premise Match	48m	South East
49	NOT LISTED	Crawford. Eh. Taxi., 72 Wentworth St , Blackheath	121984	1991	Premise Match	50m	South
	NOT LISTED	Crawford. F. H., Tari, 72 Wentworth St., Blackheath	128577	1982	Premise Match	50m	South
50	NOT LISTED	T.A.B., 30 Govetts Leap Rd , Blackheath	122037	1991	Premise Match	51m	South East
	FRUITERERS & GREENGROCERS	Rolfe, Mrs. W. E., 30 Govetts Leap Rd., Blackheath	188156	1961	Premise Match	51m	South East
	GROCERS & GENERAL STOREKEEPERS	Rolfe, Mrs. W. E., 30 Govetts Leap Rd., Blackheath	188167	1961	Premise Match	51m	South East
	GUEST HOUSES	B. & W. Rolfe 30 Govett's Leap Road Blackheath	144693	1950	Premise Match	51m	South East
	FRUITERERS & GREENGROCERS	Rolfe, B. and W., 30 Govetts Leap Rd. Blackheath	144670	1950	Premise Match	51m	South East
	GROCERS & GENERAL STOREKEEPERS	Rolfe, B. and W., 30 Govetts Leap Rd. Blackheath	144683	1950	Premise Match	51m	South East
	MILK BARS &/OR CONFECTIONERS	Rolfe, B. and W., 30 Govetts Leap Rd. Blackheath	144739	1950	Premise Match	51m	South East
51	GUEST HOUSES	"Braemar", 133 Station St., Blackheath	188170	1961	Premise Match	51m	South
	GUEST HOUSES	"Braemar", 133 Station St. Blackheath	144690	1950	Premise Match	51m	South

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
52	NOT LISTED	Blackheath Machinery Service., 134 Station St	121918	1991	Premise Match	54m	South
53	CYCLE DEALERS, REPAIRERS & ACCESSORIES	Kembla Radio Service, 110 Wentworth St. and Wollongong	185836	1950	Premise Match	54m	South East
54	NOT LISTED	Blackheath Continental Delicatessen Health Food., 32 Govetts Leap Rd , Blackheath	121950	1991	Premise Match	57m	South East
	NOT LISTED	Blackheath Liquor Cellars., 34 Govetts Leap Rd , Blackheath	121960	1991	Premise Match	57m	South East
	NOT LISTED	Blackheath Sports & Toys., 34 Govetts Leap Rd , Blackheath	121967	1991	Premise Match	57m	South East
	NOT LISTED	Blackheath Continental Delicatessen, 32 Govetts Leap Rd., Blackheath	128558	1982	Premise Match	57m	South East
	NOT LISTED	Blackheath Liquor Supply, 34 Govetts Leap Rd., Blackheath	128566	1982	Premise Match	57m	South East
	HOT WATER INSTALLATIONS & MAINTENANCE	Kinmond, P., 32 Govetts Leap Rd., Blackheath	188186	1961	Premise Match	57m	South East
	RADIO & TELEVISION-SALES & SERVICE	Kinmond, P., 34 Govetts Leap Rd, Blackheath	188221	1961	Premise Match	57m	South East
	ENGINEERS-HOT WATER, HEAT & VENTILATION	Kinmond, P., 34 Govetts Leap Rd., Blackheath	188142	1961	Premise Match	57m	South East
	REFRIGERATOR DEALERS & SERVICEMEN	Kinmond, P., 34 Govetts Leap Rd., Blackheath	188227	1961	Premise Match	57m	South East
	GUEST HOUSES	"Bohemia", 34 Govetts Leap Rd. Blackheath	144689	1950	Premise Match	57m	South East
	NOT LISTED	Siewwright J. E Electri. Nor., 25 Brightlands Av , Blackheath	122032	1991	Premise Match	57m	South
	NOT LISTED	Siewwright J. E. Electc Engr., 25 Brightlands Ave., Blackheath	128619	1982	Premise Match	57m	South
56	GUEST HOUSES	"Cleveland", 178 Wentworth St. Blackheath	144696	1950	Premise Match	59m	South East
57	NOT LISTED	Claes Boutique., 27 Govetts Leap Rd , Blackheath	121976	1991	Premise Match	61m	South East
	NOT LISTED	Handcrafts & Homecrafts, 27 Govetts Leap Rd., Blackheath	128593	1982	Premise Match	61m	South East
58	NOT LISTED	Blackheath Welding & Steel Fabrication., 136 Station St , Blackheath	121971	1991	Premise Match	65m	South
59	NOT LISTED	Blackheath Bush Fire Brigade., 138 Station St , Blackheath	121947	1991	Premise Match	70m	South
60	FOOTWEAR RETAILERS	Williams, R. P., 36 Govetts Leap Rd. Blackheath	144667	1950	Premise Match	70m	South East
	HARDWARE & IRONMONGERY RETAILERS	Williams, R. P., 36 Govetts Leap Rd. Blackheath	144718	1950	Premise Match	70m	South East
61	NOT LISTED	Post Office., 38 Govetts Leap Rd , Blackheath	122022	1991	Road Intersection	93m	South East
	NOT LISTED	Post Office.38 Govetts Leap Rd., Blackheath	128615	1982	Road Intersection	93m	South East
62	UPHOLSTERERS	Blackheath Upholstery, Cnr. Wentworth St. and Hat Hill Rd. Blackheath	144809	1950	Road Intersection	95m	South East
63	RIDING SCHOOLS	Mackenzie, C. K., 41 Warrigal St. Blackheath	144778	1950	Premise Match	102m	South East
64	NOT LISTED	Commonwealth Banking Corporation., 31 Govetts Leap Rd , Blackheath	121980	1991	Premise Match	103m	South East
	NOT LISTED	Elders Real Estate., 31 Govetts Leap Rd , Blackheath	121988	1991	Premise Match	103m	South East
65	NOT LISTED	Macaulay. A. F Dr., 111 Wentworth St , Blackheath	122010	1991	Premise Match	103m	South East
	NOT LISTED	Mansfield. F. M Dr., 111 Wentworth St , Blackheath	122011	1991	Premise Match	103m	South East
	NOT LISTED	Macaulay, A. F.J., Dr., 111 Wentworth St., Blackheath	128602	1982	Premise Match	103m	South East
	NOT LISTED	Mansfield, F. M., Dr., 111 Wentworth Rd., Blackheath	128604	1982	Premise Match	103m	South East
	MEDICAL PRACTITIONERS	McCauley, A. & Mansfield, F., 111 Wentworth St. Blackheath	541581	1970	Premise Match	103m	South East

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
65	MEDICAL PRACTITIONERS	Thompson, 111 Wentworth St., ,,, Blackheath	188197	1961	Premise Match	103m	South East
66	NOT LISTED	Police Station., 119 Wentworth St , Blackheath	122021	1991	Premise Match	103m	South East
	NOT LISTED	Police Station, 119 Wentworth St., Blackheath	128614	1982	Premise Match	103m	South East
	GOVERNMENT DEPARTMENTS	Police Station, Wentworth St. Blackheath	541549	1970	Premise Match	103m	South East
	GOVERNMENT DEPARTMENTS	Police Station, Wentworth St., Blackheath	188160	1961	Premise Match	103m	South East
67	NOT LISTED	Watsons Hardware Supplies., 35 Govetts Leap Rd , Blackheath	122041	1991	Premise Match	103m	South East
68	NOT LISTED	Blackheath Chiropractic & Osteopathic Centre, 89 Wentworth St., Blackheath	128557	1982	Premise Match	103m	South East
69	BEAUTY SALONS & LADIES' HAIRDRESSERS	Snelling, W., 42 Govetts Leap Rd. Blackheath	541506	1970	Premise Match	103m	South East
	BEAUTY SALONS & LADIES' HAIRDRESSERS	Snelling, W., 42 Govetts Leap Rd., Blackheath	188102	1961	Premise Match	103m	South East
	BEAUTY SALONS & LADIES' HAIRDRESSERS	Snelling, W., 42 Govetts Leap Rd. Blackheath	144611	1950	Premise Match	103m	South East
70	MEDICAL PRACTITIONERS	Breitner, L. F., 101 Wentworth St., Blackheath	188196	1961	Premise Match	103m	South East
71	NOT LISTED	Patterson, L. M., Bldr., 131 Wentworth St., Blackheath	128613	1982	Premise Match	104m	South East
72	NOT LISTED	Gerry S Real Estate., 33 Govetts Leap Rd , Blackheath	121993	1991	Premise Match	114m	South East
	SECONDHAND DEALERS	Stuart Secondhand Furniture, 33 Govetts Leap Rd. Blackheath	541615	1970	Premise Match	114m	South East
	FURNITURE DEALERS-SECONDHAND	Stuart, B., 33 Govetts Leap Rd. Blackheath	541545	1970	Premise Match	114m	South East
73	NOT LISTED	Higgins P L. Slcr., 44 Govetts Leap Rd , Blackheath	122003	1991	Premise Match	118m	South East
74	NOT LISTED	Brown, W. A. & Buckley, Acctnt., 46 Govetts Leap Rd., Blackheath	128572	1982	Premise Match	124m	South East
	NOT LISTED	Higgins & Higgins, Skr., 46 Govetts Leap Rd., Blackheath	128596	1982	Premise Match	124m	South East
	SOLICITORS	Hoven, F. H. & Co., 46 Govetts Leap Rd. Blackheath	541616	1970	Premise Match	124m	South East
	SOLICITORS	Houen, E. H. and Co., 46 Govetts Leap Rd., Blackheath	188234	1961	Premise Match	124m	South East
	SOLICITORS	Rouen, E. H., 46 Govetts Leap Rd. Blackheath	144792	1950	Premise Match	124m	South East

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## 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
75	NOT LISTED	Aitkens. J. M Dr., Great Western Hway , Blackheath	121935	1991	Road Match	0m
	NOT LISTED	Ampol Blackheath., Great Western Hway , Blackheath	121937	1991	Road Match	0m
	NOT LISTED	Blackheath Electrical Services R. M. A J. D. Simon., 204 Great Western Hway , Blackheath	121953	1991	Road Match	0m
	NOT LISTED	Blackheath Service Centre, Great Western Hway , Blackheath	121966	1991	Road Match	0m
	NOT LISTED	Braeside Restaurant The., Great Western Hway , Blackheath	121974	1991	Road Match	0m
	NOT LISTED	High Mountains Motor Inn., Great Western Hway , Blackheath	122004	1991	Road Match	0m
	NOT LISTED	Mount Boyce Nurseries Pty. Ltd., Great Western Hway , Blackheath	122014	1991	Road Match	0m
	NOT LISTED	New Ivanhoe Hotel., Great Western Hway , Blackheath	122017	1991	Road Match	0m
	NOT LISTED	Scotch Thistle Gardeners Inn., Great Western Hway , Blackheath	122029	1991	Road Match	0m
	NOT LISTED	Aitken, J. M., Dr., Great Western Highway., Blackheath	128550	1982	Road Match	0m
	NOT LISTED	Ampoi Garden Service Station, Great Western Highway., Blackheath	128551	1982	Road Match	0m
	NOT LISTED	Blackheath Fire Station, Great Western Highway., Blackheath	128560	1982	Road Match	0m
	NOT LISTED	Blackheath Garage.Great Western Highway., Blackheath	128563	1982	Road Match	0m
	NOT LISTED	Kerrys Service Station, Great Western Highway., Blackheath	128599	1982	Road Match	0m
	NOT LISTED	Mount Boyce Nurseries, Great Western Highway., Blackheath	128606	1982	Road Match	0m
	NOT LISTED	Tierney, B., Btchr., Great Western Highway., Blackheath	128624	1982	Road Match	0m
	HOLIDAY ACCOMMODATION	"The Pines" Guest House & Hostel, Great Western Hghwy. Blackheath	541565	1970	Road Match	0m
	MEDICAL PRACTITIONERS	Aitkens, J. M., Great Western Hghwy. Blackheath	541580	1970	Road Match	0m
	FUEL MERCHANTS-COAL, COKE & WOOD	Barker, Great Western Hghwy, Blackheath	541543	1970	Road Match	0m
	ASSOCIATIONS, SOCIETIES, CLUBS & SPORTING BODIES	Blackheath Community Centre, Great Western Hghwy. Blackheath	541488	1970	Road Match	0m
	LOCAL BODIES	Blackheath Fire Station, Great Western Hghwy. Blackheath	541579	1970	Road Match	0m
	INSURANCE AGENTS	Blackheath Garage, Great Western Hghwy, Blackheath	541572	1970	Road Match	0m
	MOTOR BODY BUILDERS &/OR REPAIRERS	Blackheath Garage, Great Western Hghwy. Blackheath	541593	1970	Road Match	0m
	MOTOR GARAGES & ENGINEERS	Blackheath Garage, Great Western Hghwy. Blackheath	541595	1970	Road Match	0m
	MOTOR PAINTERS & PANEL BEATERS	Blackheath Garage, Great Western Hghwy. Blackheath	541598	1970	Road Match	0m
	MOTOR TOWING SERVICES	Blackheath Garage, Great Western Hghwy. Blackheath	541599	1970	Road Match	0m
	TAXI & HIRE CAR SERVICES	Blackheath Garage, Great Western Hghwy. Blackheath	541619	1970	Road Match	0m
	WELDERS-ELECTRIC & OXY	Blackheath Garage, Great Western Hghwy. Blackheath	541625	1970	Road Match	0m



Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
75	LIBRARIES-LENDING	Community Centre, Great Western Hghwy. Blackheath	541577	1970	Road Match	0m
	GROCERS & SELF SERVICE STORES	Foodlands Supermarket, Bathurst Rd. Blackheath	541552	1970	Road Match	0m
	MOTOR GARAGES & ENGINEERS	Garden Service Station, Great Western Hghwy. Blackheath	541596	1970	Road Match	0m
	HOTELS-LICENSED	Gardner's Inn Hotel, Western Hghwy. Blackheath	541570	1970	Road Match	0m
	FRUITERERS & GREENGROCERS	Growers' Market, Great Western Hghwy. Blackheath	541540	1970	Road Match	0m
	NURSERYMEN	Mount Boyce Nursery, Bathurst Rd. Blackheath	541602	1970	Road Match	0m
	ELECTRICAL CONTRACTORS-LICENSED	Simon, K., Great Western Hghwy. Blackheath	541535	1970	Road Match	0m
	HOT WATER INSTALLATIONS & MAINTENANCE	Simons, K., Great Western Hghwy. Blackheath	541569	1970	Road Match	0m
	CAMPING GROUNDS & CARAVAN PARKS	Sutton Park, Great Western Hghwy. Blackheath	541521	1970	Road Match	0m
	HOLIDAY ACCOMMODATION	"The Pines" Guest House & Hostel, Great Western Highway., Blackheath	188184	1961	Road Match	0m
	GUEST HOUSES	"The Pines," Guest House & Hostel, Great Western Highway., Blackheath	188177	1961	Road Match	0m
	MOTOR OIL & SPIRIT DEPOTS	Atlantic Union Oil Co. Ltd., Blackheath	188212	1961	Road Match	0m
	AGRICULTURAL MACHINERY DEALERS	Blackheath Garage, Great Western Highway., Blackheath	188094	1961	Road Match	0m
	INSURANCE AGENTS	Blackheath Garage, Great Western Highway., Blackheath	188189	1961	Road Match	0m
	MOTOR CAR & TRUCK DEALERS-NEW & USED	Blackheath Garage, Great Western Highway., Blackheath	188207	1961	Road Match	0m
	MOTOR GARAGES & ENGINEERS	Blackheath Garage, Great Western Highway., Blackheath	188209	1961	Road Match	0m
	TAXIS & HIRE CARS	Blackheath Garage, Great Western Highway., Blackheath	188238	1961	Road Match	0m
	TRAVEL AGENCIES & BOOKING OFFICES	Blackheath Garage, Great Western Highway., Blackheath	188245	1961	Road Match	0m
	JOINERY MANUFACTURERS	Blackheath Joinery Co., Great Western Highway., Blackheath	188192	1961	Road Match	0m
	ELECTRICAL SUPPLIES & APPLIANCES-RETAILERS	Central Motor Tourist Bureau, Great Western Highway., Blackheath	188140	1961	Road Match	0m
	REFRIGERATOR DEALERS & SERVICEMEN	Central Motor Tourist Bureau, Great Western Highway., Blackheath	188226	1961	Road Match	0m
	ASSOCIATIONS & SOCIETIES	Civil Defence Organization (Blackheath Branch), City of Katoomba, Blackheath	188096	1961	Road Match	0m
	MOTOR GARAGES & ENGINEERS	Garden Service Station, Great Western Highway., Blackheath	188210	1961	Road Match	0m
	TIMBER MERCHANTS & SAWMILLERS	Hume, W. S., Cnr. Station St., & Great Western Highway., Blackheath	188241	1961	Road Match	0m
	FRUITERERS & GREENGROCERS	Lorenzo, E and J., Great Western Highway., Blackheath	188154	1961	Road Match	0m
	REAL ESTATE AGENTS	Montague, Manfred and Co., Great Western Highway., Blackheath	188223	1961	Road Match	0m
	TOBACCONISTS-RETAIL	Ottley, D. E., Great Western Highway., Blackheath	188242	1961	Road Match	0m
	ASSOCIATIONS & SOCIETIES	School of Arts, Bathurst Rd., Blackheath	188098	1961	Road Match	0m
	CAFES, TEA ROOMS, COFFEE LOUNGES, ETC.	Sedges Heath Cafe, Great Western Highway., Blackheath	188115	1961	Road Match	0m
	MILK, FRUIT JUICE BARS & CONFECTIONERS	Sedges Heath Cafe, Great Western Highway., Blackheath	188202	1961	Road Match	0m
	REAL ESTATE AGENTS	Wallace, Wright and Co., Great Western Highway., Blackheath	188225	1961	Road Match	0m
	GUEST HOUSES	"Norwood", Bathurst Rd. Blackheath	144706	1950	Road Match	0m
	GUEST HOUSES	"Pines" (The), Great Western Highway. Blackheath	144707	1950	Road Match	0m
	DRY CLEANERS, DYERS & PRESSERS	Alpine Dry Cleaners, Great Western Highway. Blackheath	144654	1950	Road Match	0m

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
75	SCHOOLS, COLLEGES-GENERAL	Ashcroft, C. G. (Private), Bathurst Rd. Blackheath	144781	1950	Road Match	0m
	INSURANCE AGENTS	Blackheath Garage (Agents, Union Insrnce.), Great Western Highway. Blackheath	144722	1950	Road Match	0m
	TOURIST CARS	Blackheath Garage, Great Western Highway, Blackheath	144803	1950	Road Match	0m
	AGRICULTURAL MACHINERY DEALERS	Blackheath Garage, Great Western Highway. Blackheath	144591	1950	Road Match	0m
	BATTERY DEALERS & SERVICE STATIONS	Blackheath Garage, Great Western Highway. Blackheath	144607	1950	Road Match	0m
	MOTOR ACCESSORIES DEALERS	Blackheath Garage, Great Western Highway. Blackheath	144743	1950	Road Match	0m
	MOTOR CAR & TRUCK DEALERS	Blackheath Garage, Great Western Highway. Blackheath	144745	1950	Road Match	0m
	MOTOR GARAGES & ENGINEERS	Blackheath Garage, Great Western Highway. Blackheath	144748	1950	Road Match	0m
	MOTOR SERVICE STATIONS	Blackheath Garage, Great Western Highway. Blackheath	144752	1950	Road Match	0m
	TAXIS	Blackheath Garage, Great Western Highway. Blackheath	144796	1950	Road Match	0m
	TYRE DEALERS	Blackheath Garage, Great Western Highway. Blackheath	144807	1950	Road Match	0m
	WELDERS	Blackheath Garage, Great Western Highway. Blackheath	144810	1950	Road Match	0m
	RADIO &/OR REFRIGERATOR DEALERS & SERVICEMEN	Central Motor Tourist Bureau, Great Western Highway Blackheath	144770	1950	Road Match	0m
	ELECTRICAL SUPPLIES & APPLIANCES	Central Motor Tourist Bureau, Great Western Highway. Blackheath	144660	1950	Road Match	0m
	MOTOR SERVICE STATIONS	Central Motor Tourist Bureau, Great Western Highway. Blackheath	144753	1950	Road Match	0m
	TAXIS	Central Motor Tourist Bureau, Great Western Highway. Blackheath	144797	1950	Road Match	0m
	MEDICAL PRACTITIONERS	Figtree, Dr. E. R., Bathurst Rd. Blackheath	144729	1950	Road Match	0m
	MOTOR SERVICE STATIONS	Hatswell, R. M., Bathurst Rd. Blackheath	144754	1950	Road Match	0m
	LINGERIE MANUFACTURERS	McClennon and Son, Great Western Highway. Blackheath	144726	1950	Road Match	0m
	SHIPPING AGENTS	Montague, Manfred and Co. (Agents, Shaw Saville Line), Great Western Highway. Blackheath	144790	1950	Road Match	0m
	INSURANCE AGENTS	Montague, Manfred and Co. (Agents, South British Insrnce. Co., Atlas Insrnce. Co., Australia Mutual Fire Insrnce. Ca.), Great Western Highway. Blackheath	144723	1950	Road Match	0m
	REAL ESTATE AGENTS	Montague, Manfred and Co., Great Western Highway Blackheath	144774	1950	Road Match	0m
	AUCTIONEERS	Montague, Manfred and Co., Great Western Highway. Blackheath	144595	1950	Road Match	0m
	COMMISSION AGENTS	Montague, Manfred and Co., Great Western Highway. Blackheath	144643	1950	Road Match	0m
	STOCK & STATION & BUSINESS AGENTS	Montague, Manfred and Co., Great Western Highway. Blackheath	144793	1950	Road Match	0m
	SCHOOLS, COLLEGES-GENERAL	Plunket, D. (Private), Bathurst Rd. Blackheath	144785	1950	Road Match	0m
	BEAUTY SALONS & LADIES' HAIRDRESSERS	Scandritt, Miss F., Bathurst Rd. Blackheath	144610	1950	Road Match	0m
	ASSOCIATIONS & SOCIETIES	School of Arts, Bathurst Rd. Blackheath	144592	1950	Road Match	0m
	BILLIARD SALOONS	School of Arts, Bathurst Rd. Blackheath	144612	1950	Road Match	0m
	HALLS	School of Arts, Bathurst Rd. Blackheath	144715	1950	Road Match	0m
	SCHOOLS, COLLEGES-GENERAL	Wallace & Co., Great Western Highway, Blackheath Blackheath	144788	1950	Road Match	0m
	INSURANCE AGENTS	Wallace and Co. (Agents, Queensland Insrnce.), Great Western Highway. Blackheath	144725	1950	Road Match	0m
	AUCTIONEERS	Wallace and Co., Great Western Highway. Blackheath	144597	1950	Road Match	0m

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
75	COMMISSION AGENTS	Wallace and Co., Great Western Highway. Blackheath	144644	1950	Road Match	0m
	REAL ESTATE AGENTS	Wallace and Co., Great Western Highway. Blackheath	144776	1950	Road Match	0m
76	NOT LISTED	Baby Health Centre., Gardiner Cr , Blackheath	121939	1991	Road Match	0m
	NOT LISTED	Baby Health Centre, Gardiner Cr., Blackheath	128552	1982	Road Match	0m
77	NOT LISTED	Blackheath Bowling Club., Prince George St , Blackheath	121946	1991	Road Match	0m
	ASSOCIATIONS, SOCIETIES, CLUBS & SPORTING BODIES	Blackheath Bowling Club, Prince George St. Blackheath	541486	1970	Road Match	0m
	CLUBS & SPORTS BODIES	Blackheath Bowling Club, Prince George St., Blackheath	188125	1961	Road Match	0m
	CLUBS	Blackheath Bowling Club, Prince George St. Blackheath	144641	1950	Road Match	0m
78	NOT LISTED	Blackheath Golf Club., Brightlands Av , Blackheath	121959	1991	Road Match	0m
79	NOT LISTED	Blackheath Public School., Leichhardt St , Blackheath	121965	1991	Road Match	0m
80	NOT LISTED	Blackheath Timber Merchants., Tmbr Mtrcht Station St , Blackheath	121968	1991	Road Match	0m
	NOT LISTED	Blackheath Bush Fire Brigade, Station St., Blackheath	128555	1982	Road Match	0m
	NOT LISTED	Blackheath Timber Merchants.Station St., Blackheath	128570	1982	Road Match	0m
	RIDING SCHOOLS	Blackheath Riding School, Station St. Blackheath	541610	1970	Road Match	0m
	GLASS MERCHANTS &/OR GLAZIERS	Blackheath Timber Co., Station St. Blackheath	541548	1970	Road Match	0m
	HARDWARE & BUILDERS' SUPPLIES	Blackheath Timber Co., Station St. Blackheath	541557	1970	Road Match	0m
	JOINERY MANUFACTURERS	Blackheath Timber Co., Station St. Blackheath	541575	1970	Road Match	0m
	TIMBER MERCHANTS & SAWMILLERS	Blackheath Timber Co., Station St. Blackheath	541622	1970	Road Match	0m
	RIDING SCHOOLS	Blackheath Riding School, Station St., Blackheath	188228	1961	Road Match	0m
	DENTISTS	Davis, N. B., Dover Hall, Station St., Blackheath	188133	1961	Road Match	0m
	SCHOOLS & COLLEGES-PRIVATE & PUBLIC	Dundee School (Sub-Normal Children), Station St., Blackheath	188230	1961	Road Match	0m
	GOVERNMENT DEPARTMENTS	Forest Office,- Dover Hall, Station St., , Blackheath	188158	1961	Road Match	0m
	JOINERY MANUFACTURERS	Hume,. W. M., Station St., Blackheath	188193	1961	Road Match	0m
	GUEST HOUSES	"Dundee", Station St. Blackheath	144699	1950	Road Match	0m
	RIDING SCHOOLS	Blackheath Riding School, Station St. Blackheath	144777	1950	Road Match	0m
	BOOT & SHOE REPAIRERS	Clark, W., Station St. Blackheath	144613	1950	Road Match	0m
	WOOD MERCHANTS-ALSO COAL &/OR COKE	Davis and Half, Station St. Blackheath	144811	1950	Road Match	0m
	CARRIERS & CARTAGE CONTRACTORS	Davis and Hall, Station St. Blackheath	144635	1950	Road Match	0m
	SAWMILLERS	House Bros., Station St. Blackheath	144779	1950	Road Match	0m
	MOTOR OIL & SPIRIT DEPOTS	Hume, W. S. (Agent, Golden Fleece), Station St. Blackheath	144751	1950	Road Match	0m
	TIMBER MERCHANTS	Hume, W. S., Station St. Blackheath	144799	1950	Road Match	0m
	ELECTRICAL CONTRACTORS & ELECTRICIANS	Radio Centre, Station St. Blackheath	144656	1950	Road Match	0m
	FURNITURE DEALERS	Sandemans New and Used Furniture, Station St. Blackheath	144671	1950	Road Match	0m
81	NOT LISTED	Cedar Lodge Motel & Cabins., Great Western Hwy , Mount Victoria	121390	1991	Road Match	0m

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
81	NOT LISTED	Esso Service Station., Great Western Hwy , Mount Victoria	121392	1991	Road Match	0m
	NOT LISTED	Imperial Hotel., Great Western Hwy , Mount Victoria	121397	1991	Road Match	0m
	NOT LISTED	Mount Victoria General Store., 108 Great Western Hwy , Mount Victoria	121402	1991	Road Match	0m
	NOT LISTED	Post Office., Grest Western Hwy , Mount Victoria	121407	1991	Road Match	0m
	NOT LISTED	Raid John Antg. Dir., Great Western Hwy , Mount Victoria	121408	1991	Road Match	0m
	NOT LISTED	Thompson F Mir. Towg. Srina., Great Western Hwy , Mount Victoria	121411	1991	Road Match	0m
	NOT LISTED	Cedar Lodge Motel & Cabins, Great Western Highway., Mount Victoria	131956	1982	Road Match	0m
	NOT LISTED	Imperial Hotel-Motel.Great Western Highway., Mount Victoria	131962	1982	Road Match	0m
	NOT LISTED	Mount Victoria Crest Service Station., Great Western Highway., Mount Victoria	131966	1982	Road Match	0m
	NOT LISTED	Post Office, Great Western Highway., Mount Victoria	131969	1982	Road Match	0m
	NOT LISTED	Reid, P., Antq.171r., Great Western Highway., Mount Victoria	131970	1982	Road Match	0m
	NEWSAGENTS-GENERAL	Booth, H. J., Bathurst Rd. Mount Victoria	543951	1970	Road Match	0m
	MOTOR SERVICE STATIONS-PETROL, OILS, ETC.	Cedar Lodge Service Station, Bathurst Rd. Mount Victoria	543947	1970	Road Match	0m
	HOTELS-LICENSED	Imperial Hotel, Great Western Hghwy. Mount Victoria	543940	1970	Road Match	0m
	TAXI & HIRE CAR SERVICES	Jones, W. J., Great Western Hghwy. Mount Victoria	543953	1970	Road Match	0m
	CAFES, TEA ROOMS & COFFEE LOUNGES, Etc.	Mountain Top Cafe, Bathurst Rd. Mount Victoria	543928	1970	Road Match	0m
	MILK BARS & CONFECTIONERY SHOPS	Mountain Top Cafe, Bathurst Rd. Mount Victoria	543943	1970	Road Match	0m
	MOTOR SERVICE STATIONS-PETROL, OILS, ETC.	Mt. Victoria Auto Port, Bathurst Rd. Mount Victoria	543948	1970	Road Match	0m
	MOTOR TOWING SERVICES	Mt. Victoria Auto Port, Bathurst Rd. Mount Victoria	543950	1970	Road Match	0m
	MOTELS	Mt. Victoria Motel, Bathurst Rd. Mount Victoria	543945	1970	Road Match	0m
	GOVERNMENT DEPARTMENTS	Post Office, Bathurst Rd. Mount Victoria	543935	1970	Road Match	0m
	ANTIQUA DEALERS	Reid, P., Bathurst Rd. Mount Victoria	543923	1970	Road Match	0m
	ELECTRICAL CONTRACTORS-LICENSED	Smith Bros., Bathurst Rd. Mount Victoria	543931	1970	Road Match	0m
	ENGINEERS-ELECTRICAL	Smith Bros., Bathurst Rd. Mount Victoria	543933	1970	Road Match	0m
	MOTOR ELECTRICIANS	Smith Bros., Bathurst Rd. Mount Victoria	543946	1970	Road Match	0m
	MOTOR SERVICE STATIONS-PETROL, OILS, ETC.	Smith Bros., Bathurst Rd. Mount Victoria	543949	1970	Road Match	0m
	HOLIDAY' CAMPS	Cedar Lodge Holiday Cabins, Great Western Highway. Mount Victoria	133370	1950	Road Match	0m
	CARRIERS & CARTAGE CONTRACTORS	Holden, H., Bathurst Rd. Mount Victoria	133352	1950	Road Match	0m
	WOOD MERCHANTS-COAL &/OR COKE	Holden, H., Bathurst Rd. Mount Victoria	133392	1950	Road Match	0m
	HOTELS	Imperial Hotel (Licensed), (W. R. Thompson, Licensee), Great Western Highway. Mount Victoria	133373	1950	Road Match	0m
	DELICATESSENS	Irland, I. J., Great Western Highway. Mount Victoria	133355	1950	Road Match	0m
	FRUITERERS & GREENGROCERS	Irland, I. J., Great Western Highway. Mount Victoria	133359	1950	Road Match	0m
	GROCERS & GENERAL STOREKEEPERS	Irland, I. J., Great Western Highway. Mount Victoria	133365	1950	Road Match	0m
	MILK BARS & CONFECTIONERS	Irland, I. J., Great Western Highway. Mount Victoria	133378	1950	Road Match	0m

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
81	BAKERS & PASTRYCOOKS	Smeaton, L. R., Bathurst Rd. Mount Victoria	133348	1950	Road Match	0m
	ARMATURE WINDERS	Smith Bros. Electrical Service, Great Western Highway. Mount Victoria	133347	1950	Road Match	0m
	ELECTRICAL APPLIANCES-RETAIL	Smith Bros., Great Western Highway. Mount Victoria	133357	1950	Road Match	0m
	ELECTRICAL CONTRACTORS	Smith Bros., Great Western Highway. Mount Victoria	133358	1950	Road Match	0m
	MOTOR ELECTRICIANS	Smith Bros., Great western Highway. Mount Victoria	133381	1950	Road Match	0m
	NEWSAGENTS & STATIONERS	Smith, C. C. and D., Great western Highway. Mount Victoria	133386	1950	Road Match	0m
	LAMPS & STOVES-SPIRIT	Taylor and Robinson (Agents, Aladdin Lamps), Great Western Highway. Mount Victoria	133375	1950	Road Match	0m
	INSURANCE AGENTS	Taylor and Robinson (Agents, London and Lancashire), Great Western Highway. Mount Victoria	133374	1950	Road Match	0m
	MOTOR ACCESSORIES DEALERS	Taylor and Robinson, Great Western Highway. Mount Victoria	133379	1950	Road Match	0m
	MOTOR CAR & TRUCK DEALERS	Taylor and Robinson, Great Western Highway. Mount Victoria	133380	1950	Road Match	0m
	MOTOR GARAGES & ENGINEERS	Taylor and Robinson, Great Western Highway. Mount Victoria	133382	1950	Road Match	0m
	MOTOR PAINTERS & PANEL BEATERS	Taylor and Robinson, Great Western Highway. Mount Victoria	133384	1950	Road Match	0m
	MOTOR TOWING SERVICES	Taylor and Robinson, Great Western Highway. Mount Victoria	133385	1950	Road Match	0m
	RADIO & REFRIGERATOR DEALERS & SERVICEMEN	Taylor and Robinson, Great Western Highway. Mount Victoria	133387	1950	Road Match	0m
	TYRE DEALERS, RETREADERS & VULCANIZERS	Taylor and Robinson, Great Western Highway. Mount Victoria	133390	1950	Road Match	0m
	WELDERS-ELECTRIC & OXY	Taylor and Robinson, Great Western Highway. Mount Victoria	133391	1950	Road Match	0m
82	NOT LISTED	Neate's Glen. The Cafe., Evans Lookout Rd , Blackheath	122016	1991	Road Match	0m
83	NOT LISTED	Bennett, T. & Co. Pty. Ltd., Hrdwre.Supp/s., Govetts Leap Rd., -, Blackheath	128554	1982	Road Match	0m
	NOT LISTED	Commercial Bank of Australia Ltd., Govetts Leap Rd., Blackheath	128575	1982	Road Match	0m
	NOT LISTED	Commonwealth Banking Corporation, Govetts Leap Rd., Blackheath	128576	1982	Road Match	0m
	NOT LISTED	Parklands Hotel, Govetts Leap Rd., Blackheath	128611	1982	Road Match	0m
	NOT LISTED	T.A.B., Govetts Leap Rd., Blackheath	128622	1982	Road Match	0m
	BOTTLED GAS SUPPLIERS &/OR REFILLERS	Bennett, T. & Co. Pty. Ltd., Govetts Leap Rd. Blackheath	541512	1970	Road Match	0m
	HARDWARE & BUILDERS' SUPPLIES	Bennett, Tom and Co. Pty. Ltd., Govetts Leap Rd. Blackheath	541556	1970	Road Match	0m
	PRODUCE MERCHANTS- GRAIN & SEED-RETAIL	Bennett, Tom and Co. Pty. Ltd., Govetts Leap Rd. Blackheath	541607	1970	Road Match	0m
	ANTIQUE DEALER	Blue Mountain Blinds, Govetts Leap Rd. Blackheath	541484	1970	Road Match	0m
	BLIND MANUFACTURER &/OR SPECS.	Blue Mountain Blinds, Govetts Leap Rd. Blackheath	541507	1970	Road Match	0m
	BANKS	Commonwealth Bank of Australia, Govetts Leap Rd. Blackheath	541505	1970	Road Match	0m
	HOLIDAY ACCOMMODATION	Gienella Guest House, Govetts Leap Rd. Blackheath	541560	1970	Road Match	0m
	FRUITERERS & GREENGROCERS	Lorenzo, E. & J., Govetts Leap Rd. Blackheath	541541	1970	Road Match	0m
	HOLIDAY ACCOMMODATION	Parklands Guest House, Govetts Leap Rd. Blackheath	541563	1970	Road Match	0m
	GOVERNMENT DEPARTMENTS	Post Office, Govetts Leap Rd. Blackheath	541550	1970	Road Match	0m
	ASSOCIATIONS, SOCIETIES, CLUBS & SPORTING BODIES	R.S.L., Govetts Leap Rd. Blackheath	541499	1970	Road Match	0m



Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
83	GUEST HOUSES	"Glenella", Govetts Leap Rd., Blackheath	188171	1961	Road Match	0m
	BUILDERS' SUPPLIES	Bennett, Tom and Co. Pty. Ltd., Govetts Leap Rd., Blackheath	188108	1961	Road Match	0m
	HARDWARE DEALERS & IRONMONGERS	Bennett, Tom and Co. Pty. Ltd., Govetts Leap Rd., Blackheath	188180	1961	Road Match	0m
	PRODUCE MERCHANTS- GRAIN & SEED-RETAIL	Bennett, Tom and Co. Pty. Ltd., Govetts Leap Rd., Blackheath	188220	1961	Road Match	0m
	GROCERS & GENERAL STOREKEEPERS	Carlisles Pty. Ltd., Govetts Leap Rd., Blackheath	188163	1961	Road Match	0m
	BANKS	Commonwealth Bank of Australia, Govetts Leap Rd., Blackheath	188101	1961	Road Match	0m
	HOLIDAY ACCOMMODATION	Glenella Guest House, Govetts Leap Rd., Blackheath	188183	1961	Road Match	0m
	FOOTWEAR RETAILERS	Gllimore St Sons, & Govetts Leap Rd., Blackheath	188149	1961	Road Match	0m
	BOOT & SHOE REPAIRERS	Hopkins, W. A., Q Govetts Leap Rd., Blackheath	188103	1961	Road Match	0m
	GUEST HOUSES	Karaveera, Govetts Leap Rd., Blackheath	188173	1961	Road Match	0m
	TAXIS & HIRE CARS	McMonical, H., Govetts Leap Rd., Blackheath	188240	1961	Road Match	0m
	GOVERNMENT DEPARTMENTS	Post Office, Govetts Leap Rd., Blackheath	188161	1961	Road Match	0m
	GUEST HOUSES	"Glenella", Govetts Leap Rd. Blackheath	144701	1950	Road Match	0m
	GUEST HOUSES	"Inglebar", Govetts Leap Rd. Blackheath	144703	1950	Road Match	0m
	CAFES	Cafe La Boheme, Govetts Leap Rd. Blackheath	144627	1950	Road Match	0m
	DELICATESSENS	Carlisles Pty. Ltd., Govetts Leap Rd. Blackheath	144646	1950	Road Match	0m
	GROCERS & GENERAL STOREKEEPERS	Carlisles Pty. Ltd., Govetts Leap Rd. Blackheath	144678	1950	Road Match	0m
	GIFT SHOPS	Clarke's Novelty Shop, Govetts Leap Rd. Blackheath	144673	1950	Road Match	0m
	TOY DEALERS-RETAIL	Clarks Novelty Shoppe, Govetts Leap Rd. Blackheath	144806	1950	Road Match	0m
	BANKS	Commonwealth Bank of Australia, Govetts Leap Rd. Blackheath	144604	1950	Road Match	0m
	BANKS	Commonwealth Savings Bank of Australia, Govetts Leap Rd. Blackheath	144605	1950	Road Match	0m
	BUILDERS & BUILDING CONTRACTORS	Donoghue and Sims, "Willawa", Govetts Leap Rd. Blackheath	144616	1950	Road Match	0m
	GOVERNMENT DEPARTMENTS	Forest Office, Govetts Leap Rd. Blackheath	144675	1950	Road Match	0m
	HARDWARE & IRONMONGERY RETAILERS	House Bros., Govetts Leap Rd. Blackheath	144716	1950	Road Match	0m
	PRODUCE MERCHANTS- RETAIL	House Bros., Govetts Leap Rd. Blackheath	144768	1950	Road Match	0m
	TIMBER MERCHANTS	House Bros., Govetts Leap Rd. Blackheath	144798	1950	Road Match	0m
	DENTISTS	Hutchinson, W. F., Govetts Leap Rd. Blackheath	144651	1950	Road Match	0m
	BUILDERS & BUILDING CONTRACTORS	Jackson, A. C., Govetts Leap Rd. Blackheath	144619	1950	Road Match	0m
	BUILDERS', PAINTERS' & PLUMBERS' SUPPLIES	MOM Bros., Govetts Leap Rd, Blackheath	144624	1950	Road Match	0m
	BAKERS &/OR PASTRYCOOKS	Smeaton, L. R., Govetts Leap Rd. Blackheath	144601	1950	Road Match	0m
	BAKERS &/OR PASTRYCOOKS	Smith, C. C., Govetts Leap Rd. Blackheath	144602	1950	Road Match	0m
	GROCERS & GENERAL STOREKEEPERS	Tuck, J. C., Govetts Leap Rd. Blackheath	144685	1950	Road Match	0m
84	NOT LISTED	Hastings, J. S., Wirewks., Connaught St., Blackheath	128594	1982	Road Match	0m
	WIRE WORKERS-GENERAL	Hastings, J. S., Connaught Rd. Blackheath	541628	1970	Road Match	0m
	MILK VENDORS	Hodgkinson, W. L., Connaught Rd. Blackheath	541587	1970	Road Match	0m

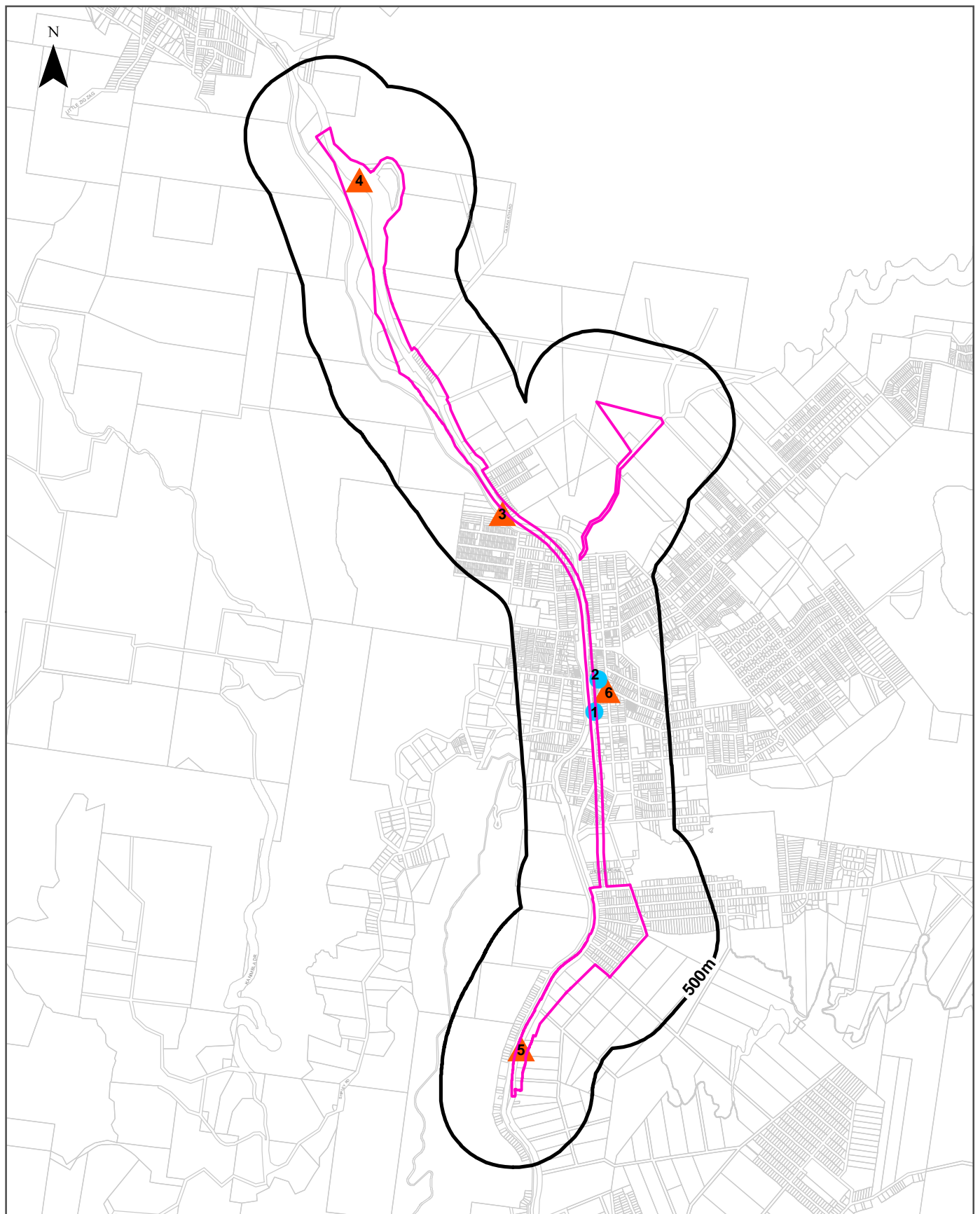
Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
84	MILK VENDORS	Hodgkinson, W. L., Connaught Rd., Blackheath	188205	1961	Road Match	0m
	MILK VENDORS	Hodgkinson, Wm. L., Connaught Rd. Blackheath	144741	1950	Road Match	0m
85	HOLIDAY ACCOMMODATION	Belvidere House Pty. Ltd., Hargreaves St. Blackheath	541559	1970	Road Match	0m
	GUEST HOUSES	Belvidere House Pty. Ltd., Hargreaves St., Blackheath	188169	1961	Road Match	0m
	GUEST HOUSES	"Belvedere House", Hargreaves St. Blackheath	144688	1950	Road Match	0m
86	MOTOR OIL & SPIRIT DEPOTS	Caltex Oil Aust. Pty. Ltd., Great Western Hghwy. Medlow Bath	543920	1970	Road Match	0m
	MIXED BUSINESSES	Crowe, P. & E., Great Western Hghwy. Medlow Bath	543915	1970	Road Match	0m
	NEWSAGENTS-GENERAL	Crowe, P. & E., Great Western Hghwy. Medlow Bath	543921	1970	Road Match	0m
	MOTOR GARAGES & ENGINEERS	Hydro Service Station, Great Western Hghwy. Medlow Bath	543916	1970	Road Match	0m
	MOTOR GARAGES & ENGINEERS	Medlow Bath Service Station, Great Western Hghwy. Medlow Bath	543917	1970	Road Match	0m
	MOTOR GARAGES & ENGINEERS	Total Service Station, Great Western Hghwy. Medlow Bath	543918	1970	Road Match	0m
	CAFES, TEA ROOMS, COFFEE LOUNGES, Etc.	Domanski, V., Great Western Rd., Medlow Bath	214066	1961	Road Match	0m
	FANCY GOODS & GIFT SHOPS	Hydro Shop, Great Western Rd., Medlow Bath	214068	1961	Road Match	0m
	MOTOR GARAGES & ENGINEERS	Medlow Bath Service Station, Great Western Highway., Medlow Bath	214074	1961	Road Match	0m
	CAFES, TEA ROOMS & COFFEE LOUNGES	Closen, G. Great Western Highway. Medlow Bath	128476	1950	Road Match	0m
	MOTOR GARAGES	Medlow Bath Service Station, Great Western Highway. Medlow Bath	128482	1950	Road Match	0m
	HOTELS	Old Gold Read Bar, Great Western Highway. Medlow Bath	128481	1950	Road Match	0m
87	SCHOOLS & COLLEGES-PRIVATE & PUBLIC	Convent of Mercy, Hat Hill Rd. Blackheath	541613	1970	Road Match	0m
	SCHOOLS & COLLEGES-PRIVATE & PUBLIC	Blackheath Public School Convent of Mercy, Hat Hill Rd., Blackheath	188229	1961	Road Match	0m
	MILK VENDORS	Doktor, L., Hat Hill Rd., Blackheath	188203	1961	Road Match	0m
	MILK VENDORS	Vanhoren, A., Hat Hill Rd., Blackheath	188206	1961	Road Match	0m
	GUEST HOUSES	"Calamondah" (S. Phillips, Propr.), Hat Hill Rd. Blackheath	144691	1950	Road Match	0m
	SCHOOLS, COLLEGES-GENERAL	Convent of Mercy, Hat Hill Rd. Blackheath	144783	1950	Road Match	0m
	BUILDERS & BUILDING CONTRACTORS	Gibbon, H. E., Hat Hill Rd. Blackheath	144617	1950	Road Match	0m
	SAWMILLERS	Jenolan Timber Co. Hat Hill Rd. Blackheath	144780	1950	Road Match	0m
	TIMBER MERCHANTS	Jenolan Timber Co., Hat Hill Rd. Blackheath	144800	1950	Road Match	0m
	SIGNWRITERS	Richardson, E. C., "Oldbury", Hat Hill Rd. Blackheath	144791	1950	Road Match	0m
	GUEST HOUSES	Simmons, O., Hat Hill Rd. Blackheath	144709	1950	Road Match	0m
	ELECTRICAL CONTRCTORS & ELECTRICIANS	Simon, K., Hat Hill Rd. Blackheath	144658	1950	Road Match	0m
	CARRIERS & CARTAGE CONTRACTORS	Withers, M. N., Hat Hill Rd. Blackheath	144639	1950	Road Match	0m
	WOOD MERCHANTS-ALSO COAL &/OR COKE	Withers, M. N., Hat Hill Rd. Blackheath	144812	1950	Road Match	0m
88	MILK VENDORS	Finckh, M., Ridgewell Rd. Blackheath	541586	1970	Road Match	0m
	MILK VENDORS	Flnkh, M., Ridgewell Rd., Blackheath	188204	1961	Road Match	0m
	ELECTRICAL CONTRCTORS & ELECTRICIANS	Tonking, F. G., Ridgwell Rd. Blackheath	144659	1950	Road Match	0m

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
89	ENGINEERS-FABRICATING	West, R. J., Sutton Lane Blackheath	541536	1970	Road Match	0m
	TRAILER & SEMI-TRAILER MANUFACTURERS/DISTRIBUTORS	West, R. J., Sutton Lane Blackheath	541624	1970	Road Match	0m
	WELDERS-ELECTRIC & OXY	West, R. J., Sutton Lane Blackheath	541627	1970	Road Match	0m
	WROUGHT IRON WORKERS	West, R. J., Sutton Lane Blackheath	541629	1970	Road Match	0m
90	NOT LISTED	Alpine Dry Cleaners., Wentworth St , Blackheath	121936	1991	Road Match	7m
	DRY CLEANERS, DYERS & PRESSERS	Alpine Dry Cleaners, Wentworth St., Blackheath	188137	1961	Road Match	7m
	GOVERNMENT DEPARTMENTS	Forestry Commission Office, Wentworth St., Blackheath	188159	1961	Road Match	7m
	SCHOOLS & COLLEGES-PRIVATE & PUBLIC	Kookaburra Pre-School Kindergarten, Wentworth St., Blackheath	188231	1961	Road Match	7m
	GUEST HOUSES	"Yabba Yabba", Wentworth St. Blackheath	144712	1950	Road Match	7m
	POLISH MANUFACTURERS	Blue Mountains Polishing Co., Wentworth Rd. Blackheath	144766	1950	Road Match	7m
	GUEST HOUSES	Cruikshank, Mrs. E., Wentworth St. Blackheath	144698	1950	Road Match	7m
	MEDICAL PRACTITIONERS	Richards, Dr. R. W., Wentworth St. Blackheath	144730	1950	Road Match	7m
91	NOT LISTED	Sewing Machine Men. The (David Burred)., 28 Thirroul Av , Blackheath	122031	1991	Road Match	15m
92	SCHOOLS-SPECIAL	Mataven School (Sub-normal Boys), Bundarra St. Blackheath	541614	1970	Road Match	43m
93	WOODYARDS	Ford, J., Bradley Ave. Blackheath	144813	1950	Road Match	70m
94	NOT LISTED	Abel. J. F. Bldr., Shipley Rd , Blackheath	121934	1991	Road Match	76m

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# Dry Cleaners, Motor Garages & Service Stations

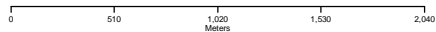
Road Alignment, Blackheath, NSW 2785 (South)



## Legend

- Site Boundary
- Buffer 500m
- 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: 07 December 2021

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

# Historical Business Directories

## Road Alignment, Blackheath, NSW 2785 (South)

### 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
1	MOTOR GARAGES & ENGINEERS	Kerry's Service Station, 213 Great Western Hwy. Blackheath	541597	1970	Premise Match	0m	On-site
	MOTOR GARAGES & ENGINEERS	Kerry's Service Station, 213 Great Western Highway., Blackheath	188211	1961	Premise Match	0m	On-site
	MOTOR GARAGES & ENGINEERS	Kerry's Service Station, 213 Great Western Highway. Blackheath	144749	1950	Premise Match	0m	On-site
	MOTOR SERVICE STATIONS	Kerry's Service Station, 213 Great Western Highway. Blackheath	144755	1950	Premise Match	0m	On-site
2	MOTOR SERVICE STATIONS	Rolfe Bros., 22 Govetts Leap Rd. Blackheath	144756	1950	Premise Match	30m	South East

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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.

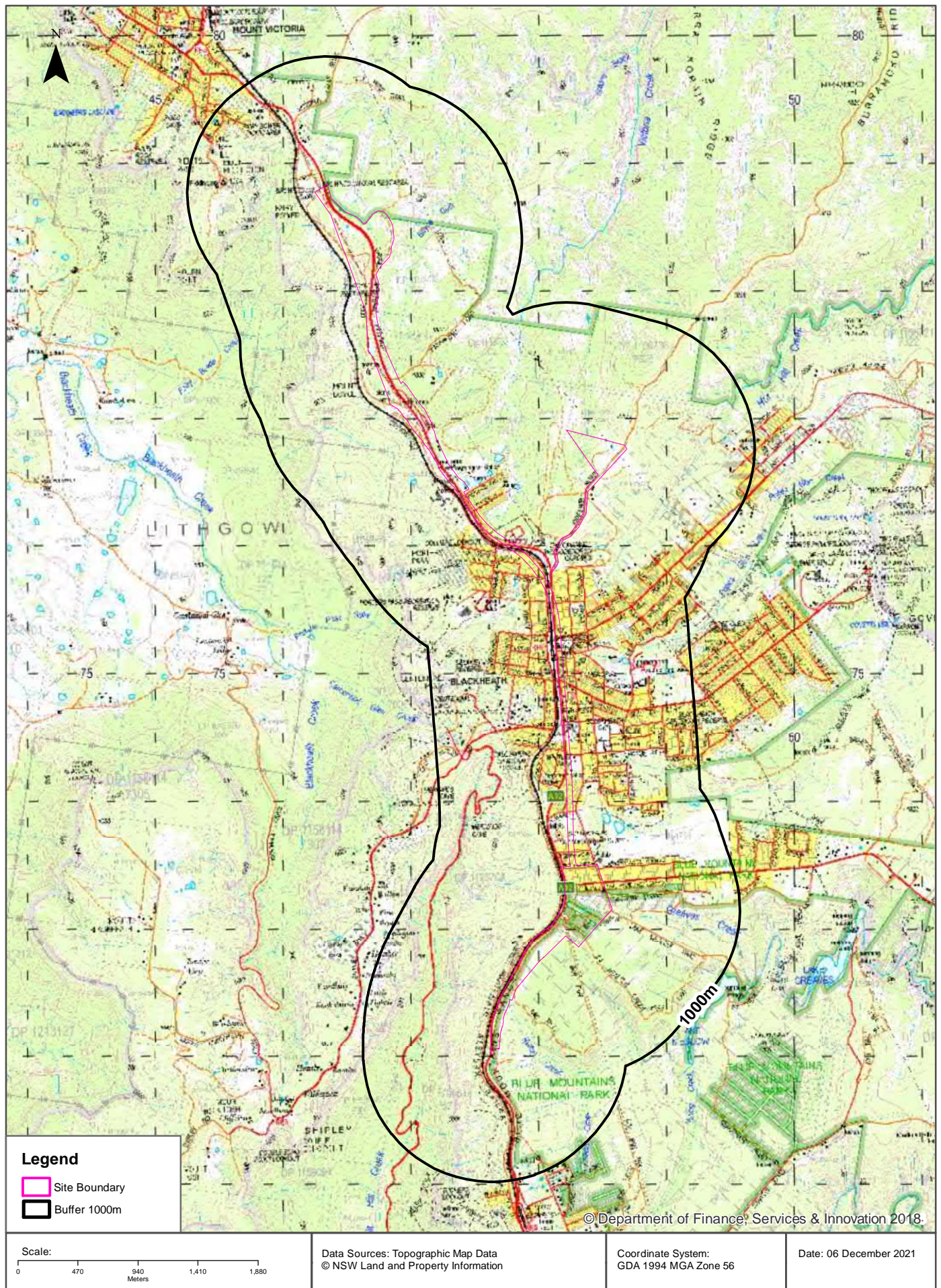
Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
3	MOTOR GARAGES & ENGINEERS	Blackheath Garage, Great Western Hghwy. Blackheath	541595	1970	Road Match	0m
	MOTOR GARAGES & ENGINEERS	Garden Service Station, Great Western Hghwy. Blackheath	541596	1970	Road Match	0m
	MOTOR GARAGES & ENGINEERS	Blackheath Garage, Great Western Highway., Blackheath	188209	1961	Road Match	0m
	MOTOR GARAGES & ENGINEERS	Garden Service Station, Great Western Highway., Blackheath	188210	1961	Road Match	0m
	DRY CLEANERS, DYERS & PRESSERS	Alpine Dry Cleaners, Great Western Highway. Blackheath	144654	1950	Road Match	0m
	MOTOR GARAGES & ENGINEERS	Blackheath Garage, Great Western Highway. Blackheath	144748	1950	Road Match	0m
	MOTOR SERVICE STATIONS	Blackheath Garage, Great Western Highway. Blackheath	144752	1950	Road Match	0m
	MOTOR SERVICE STATIONS	Central Motor Tourist Bureau, Great Western Highway. Blackheath	144753	1950	Road Match	0m
	MOTOR SERVICE STATIONS	Hatswell, R. M., Bathurst Rd. Blackheath	144754	1950	Road Match	0m
4	MOTOR SERVICE STATIONS-PETROL, OILS, ETC.	Cedar Lodge Service Station, Bathurst Rd. Mount Victoria	543947	1970	Road Match	0m
	MOTOR SERVICE STATIONS-PETROL, OILS, ETC.	Mt. Victoria Auto Port, Bathurst Rd. Mount Victoria	543948	1970	Road Match	0m
	MOTOR SERVICE STATIONS-PETROL, OILS, ETC.	Smith Bros., Bathurst Rd. Mount Victoria	543949	1970	Road Match	0m
	MOTOR GARAGES & ENGINEERS	Taylor and Robinson, Great Western Highway. Mount Victoria	133382	1950	Road Match	0m
5	MOTOR GARAGES & ENGINEERS	Hydro Service Station, Great Western Hghwy. Medlow Bath	543916	1970	Road Match	0m
	MOTOR GARAGES & ENGINEERS	Medlow Bath Service Station, Great Western Hghwy. Medlow Bath	543917	1970	Road Match	0m
	MOTOR GARAGES & ENGINEERS	Total Service Station, Great Western Hghwy. Medlow Bath	543918	1970	Road Match	0m
	MOTOR GARAGES & ENGINEERS	Medlow Bath Service Station, Great Western Highway., Medlow Bath	214074	1961	Road Match	0m
	MOTOR GARAGES	Medlow Bath Service Station, Great Western Highway. Medlow Bath	128482	1950	Road Match	0m
6	DRY CLEANERS, DYERS & PRESSERS	Alpine Dry Cleaners, Wentworth St., Blackheath	188137	1961	Road Match	7m

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# Topographic Map 2015

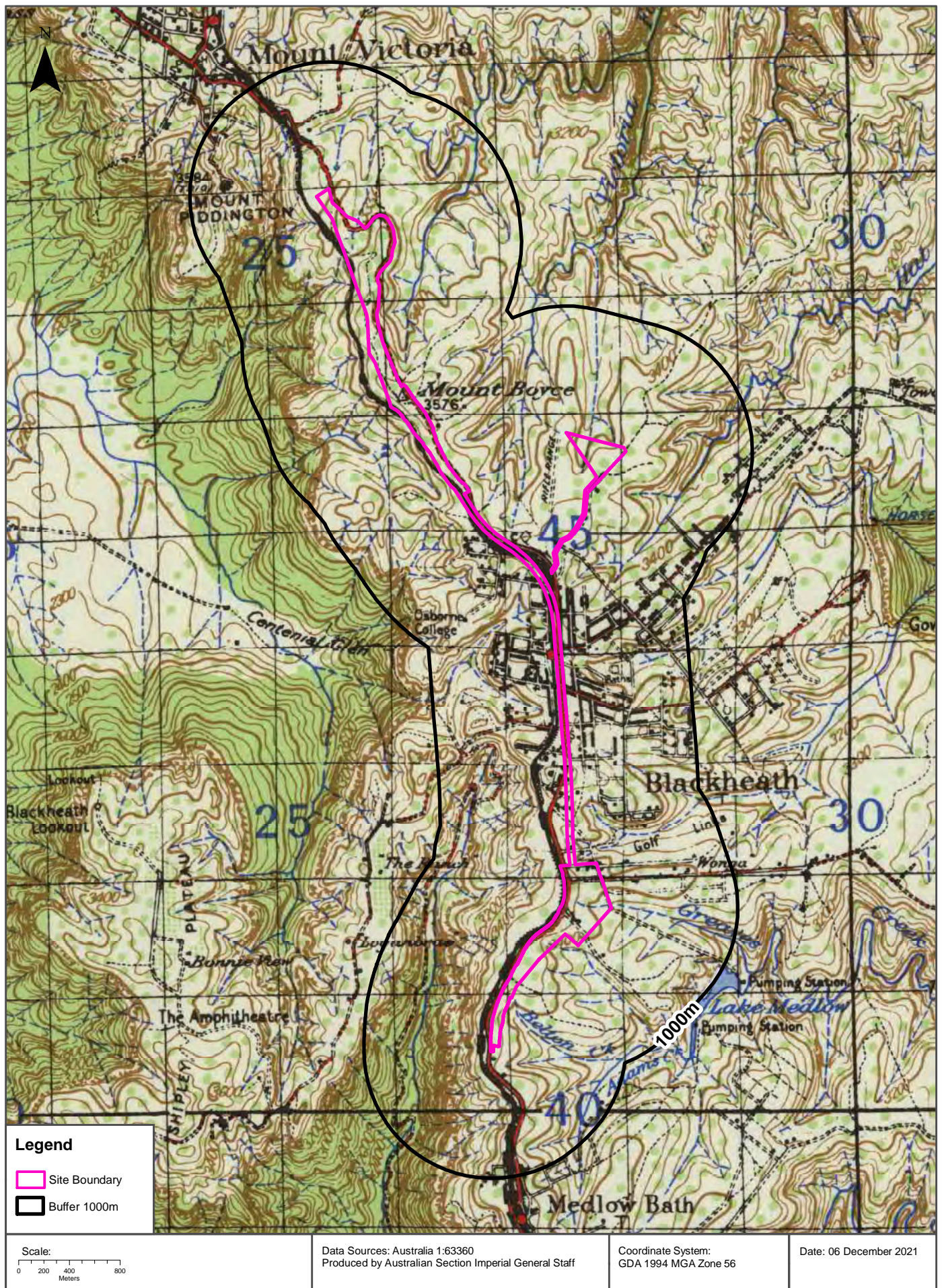
Road Alignment, Blackheath, NSW 2785 (South)





# Historical Map c.1935

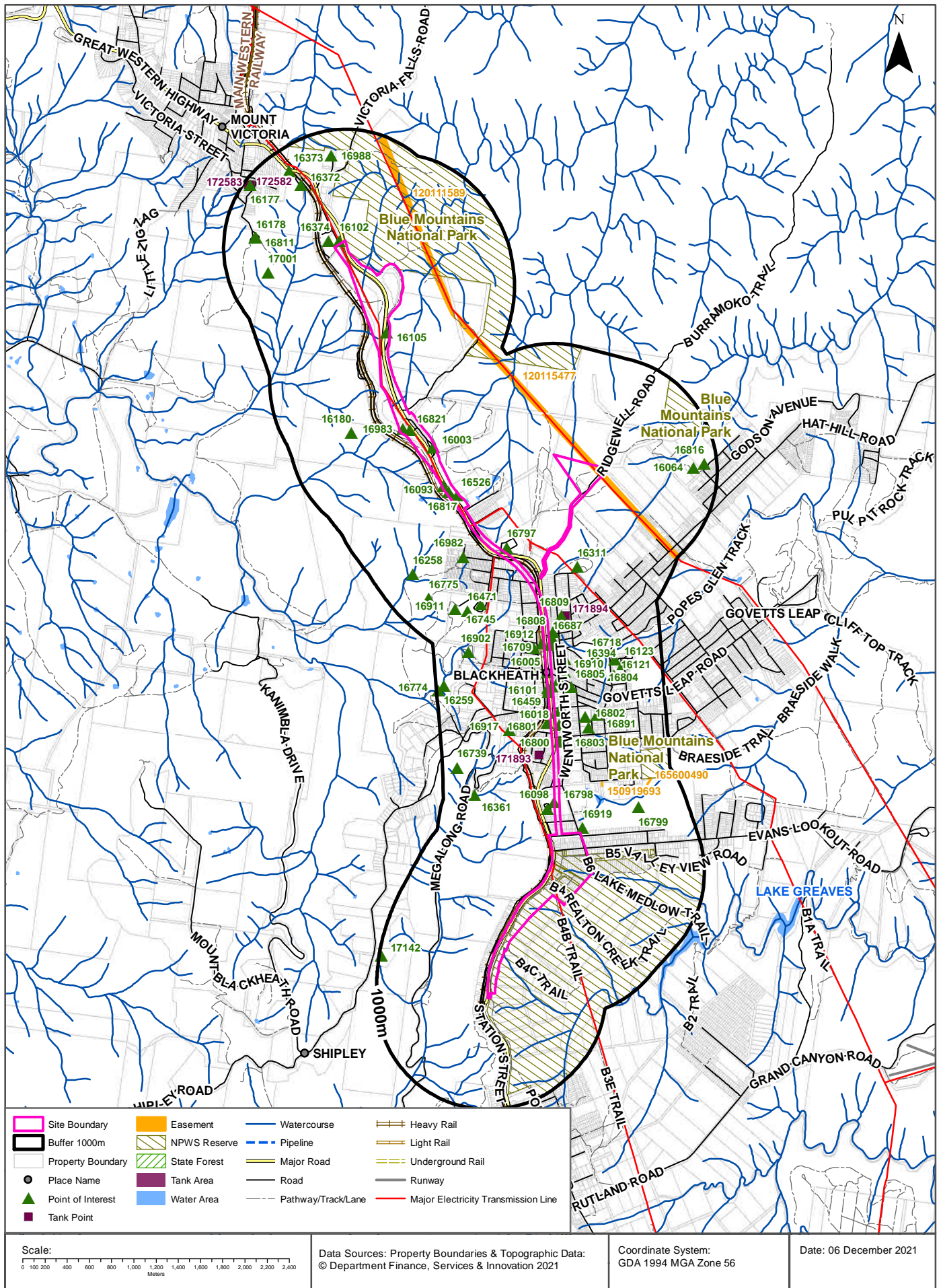
Road Alignment, Blackheath, NSW 2785 (South)





# Topographic Features

Road Alignment, Blackheath, NSW 2785 (South)



# Topographic Features

## Road Alignment, Blackheath, NSW 2785 (South)

### Points of Interest

What Points of Interest exist within the dataset buffer?

Map Id	Feature Type	Label	Distance	Direction
16817	Observatory	METEOROLOGICAL STATION	0m	On-site
16983	Picnic Area	MOUNT BOYCE PICNIC AREA	0m	On-site
16005	Town	BLACKHEATH	0m	On-site
16105	Roadside Rest Area	MT BOYCE REST AREA	0m	On-site
16093	Roadside Rest Area	REST AREA	0m	On-site
16821	Monument	ARCHDEACON BOYCE	0m	On-site
16526	Homestead	MOUNT BOYCE NURSERY	0m	On-site
16003	Heavy Vehicle Check Station	Heavy Vehicle Check Station	0m	On-site
16381	Monument	LEGEND OF GOVETTS LEAP	0m	On-site
16101	Roadside Rest Area	NEATES PARK REST AREA	0m	On-site
16686	Fire Station	BLACKHEATH FIRE STATION	0m	On-site
16798	Park	SUTTON PARK	4m	South
16459	Sports Court	SKATE PARK	11m	South
16913	Library	BLACKHEATH LIBRARY	12m	South East
16709	Railway Station	BLACKHEATH RAILWAY STATION	19m	South East
16800	Park	WHITLEY PARK	24m	South
16102	Roadside Rest Area	BROWNTOWN OVAL REST AREA	26m	North West
16801	Park	NEATE PARK	29m	South
17053	Sports Court	Sports Court	30m	South
16687	Park	THE GARDENS	37m	South East
16018	Primary School	BLACKHEATH PUBLIC SCHOOL	41m	South
16808	Place Of Worship	ANGLICAN CHURCH	42m	South East
16797	Cemetery	BLACKHEATH CEMETERY	45m	North East
16919	Club	BLACKHEATH GOLF CLUB	47m	South
16916	Post Office	BLACKHEATH POST OFFICE	60m	South East
16098	Roadside Rest Area	SUTTON PARK REST AREA	65m	South
16374	Sports Field	BROWNTOWN OVAL	82m	North West
16912	Firestation - Bush	BLACKHEATH RFB	96m	South
16905	Place Of Worship	BAPTIST CHURCH	112m	South
16910	Police Station	BLACKHEATH POLICE STATION	117m	South East
16806	Place Of Worship	PRESBYTERIAN CHURCH	129m	South East



Map Id	Feature Type	Label	Distance	Direction
16809	Place Of Worship	CATHOLIC CHURCH	133m	South East
16805	Place Of Worship	UNITING CHURCH	168m	South East
16982	Lookout	COLLIERS LOOKOUT	220m	West
16311	Park	RHODODENDRON GARDEN	250m	East
16802	Sports Field	BLACKHEATH OVAL	270m	South East
16803	Sports Court	TENNIS COURTS	292m	South East
16917	Lookout	PAUL HARRIS MEMORIAL LOOKOUT	376m	South
16891	Park	JUBILEE PARK	379m	South East
16718	Swimming Pool	MEMORIAL PARK SWIMMING POOL	403m	South East
16180	Mountain Like	MOUNT BOYCE	418m	North West
16804	Park	MEMORIAL PARK	433m	South East
16745	Sports Field	PLAYING FIELDS	460m	South
16121	Tourist Park / Home Village	LAKEVIEW HOLIDAY PARK	558m	South East
16799	Golf Course	BLACKHEATH GOLF COURSE	575m	South East
16123	Tourist Park / Home Village	BLACKHEATH CARAVAN PARK	578m	South East
16471	Combined Primary-Secondary School	MOUNTAINS CHRISTIAN COLLEGE	580m	South West
16911	Sports Field	PLAYING FIELDS	629m	South West
16372	Park	FAIRY BOWER PICNIC AREA	638m	North West
17001	Cave	COXS CAVE	641m	North West
16394	Camping Ground	H J COLLIER MEMORIAL CAMPING GROUND	649m	South East
16258	Gap / Pass / Saddle	PORTERS PASS	667m	West
16902	Park	DELANEY RESERVE	687m	South
16775	Park	PORTERS PASS RECREATION RESERVE	707m	South West
16178	Mountain Like	MOUNT PIDDINGTON	713m	North West
16361	Cave	MERMAIDS CAVE	718m	South
16811	Lookout	MOUNT PIDDINGTON LOOKOUT	723m	North West
16988	Cemetery	MOUNT VICTORIA CEMETERY	777m	North West
16064	Sewage Works	Sewage Works	787m	North East
16373	Historic Site	MOUNT VICTORIA TOLL HOUSE	796m	North West
16739	Park	MERMAIDS CAVE RECREATION RESERVE	866m	South
16816	Sewage Works	BLACKHEATH SEWAGE TREATMENT WORKS	889m	North East
16259	Gap / Pass / Saddle	CENTENNIAL PASS	931m	South West
16177	Mountain Like	ONE TREE HILL	948m	North West
17142	Homestead	LITTLE PIGHTLE	980m	South
16774	Park	CENTENNIAL PASS RECREATION RESERVE	984m	South West

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

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## Topographic Features

### Road Alignment, Blackheath, NSW 2785 (South)

## 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
171893	Water	Operational		01/02/1999	126m	South
171894	Water	Operational		01/02/1999	169m	South East
172583	Water	Operational		09/05/2000	943m	North West
172582	Water	Operational		09/05/2000	961m	North West

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
120115477	Primary	Undefined		0m	On-site
120111589	Primary	Undefined		269m	North
150919693	Primary	Right of way	4.5	385m	South East
165600490	Primary	Right of way	5m & Variable	688m	South East

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

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## Topographic Features

### Road Alignment, Blackheath, NSW 2785 (South)

#### 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?

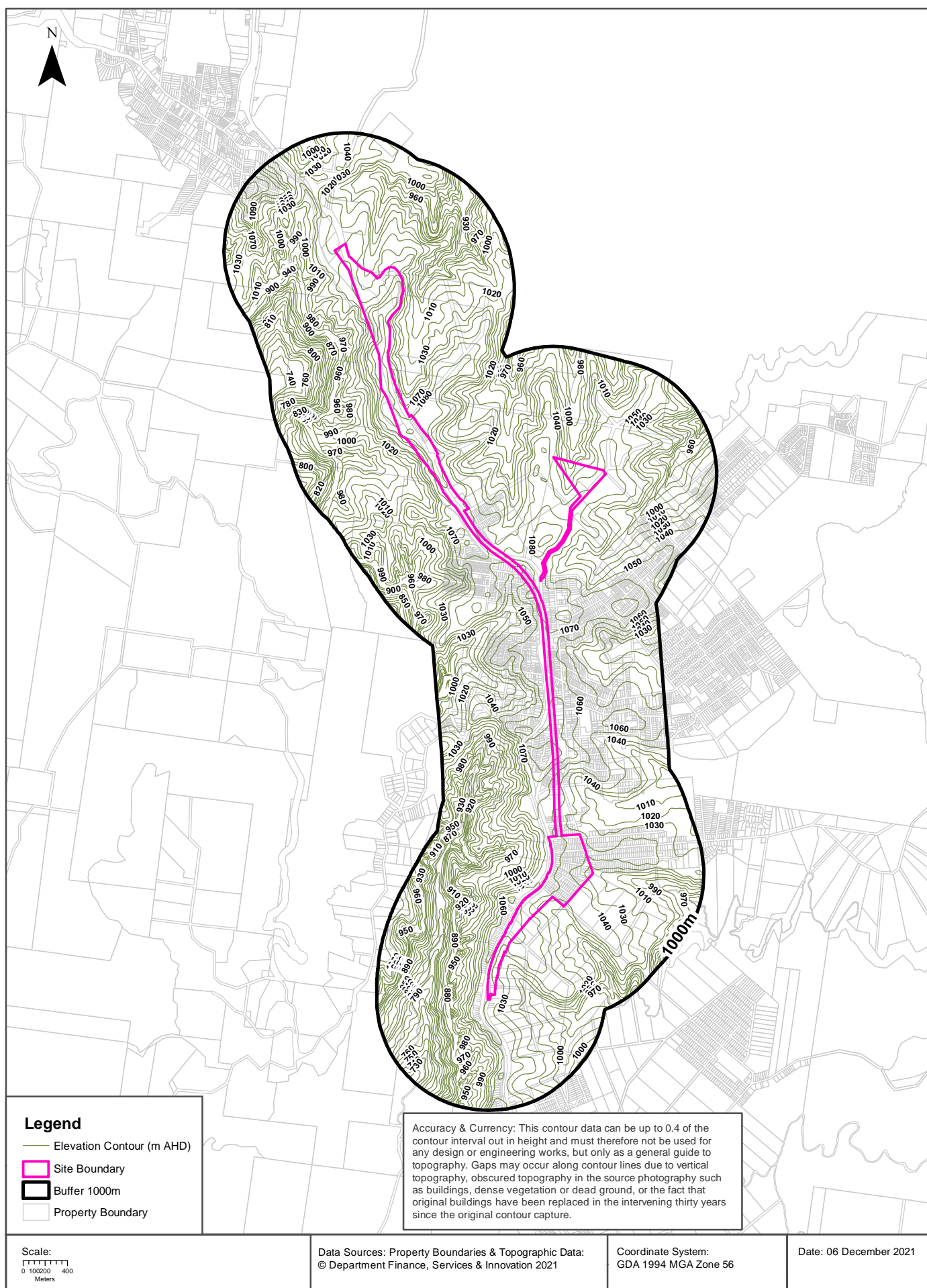
Reserve Number	Reserve Type	Reserve Name	Gazetted Date	Distance	Direction
N0004	NATIONAL PARK	Blue Mountains National Park	01/10/1967	0m	On-site

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

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# Elevation Contours (m AHD)

## Road Alignment, Blackheath, NSW 2785 (South)



## Hydrogeology & Groundwater

Road Alignment, Blackheath, NSW 2785 (South)

### Hydrogeology

Description of aquifers within the dataset buffer:

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

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:

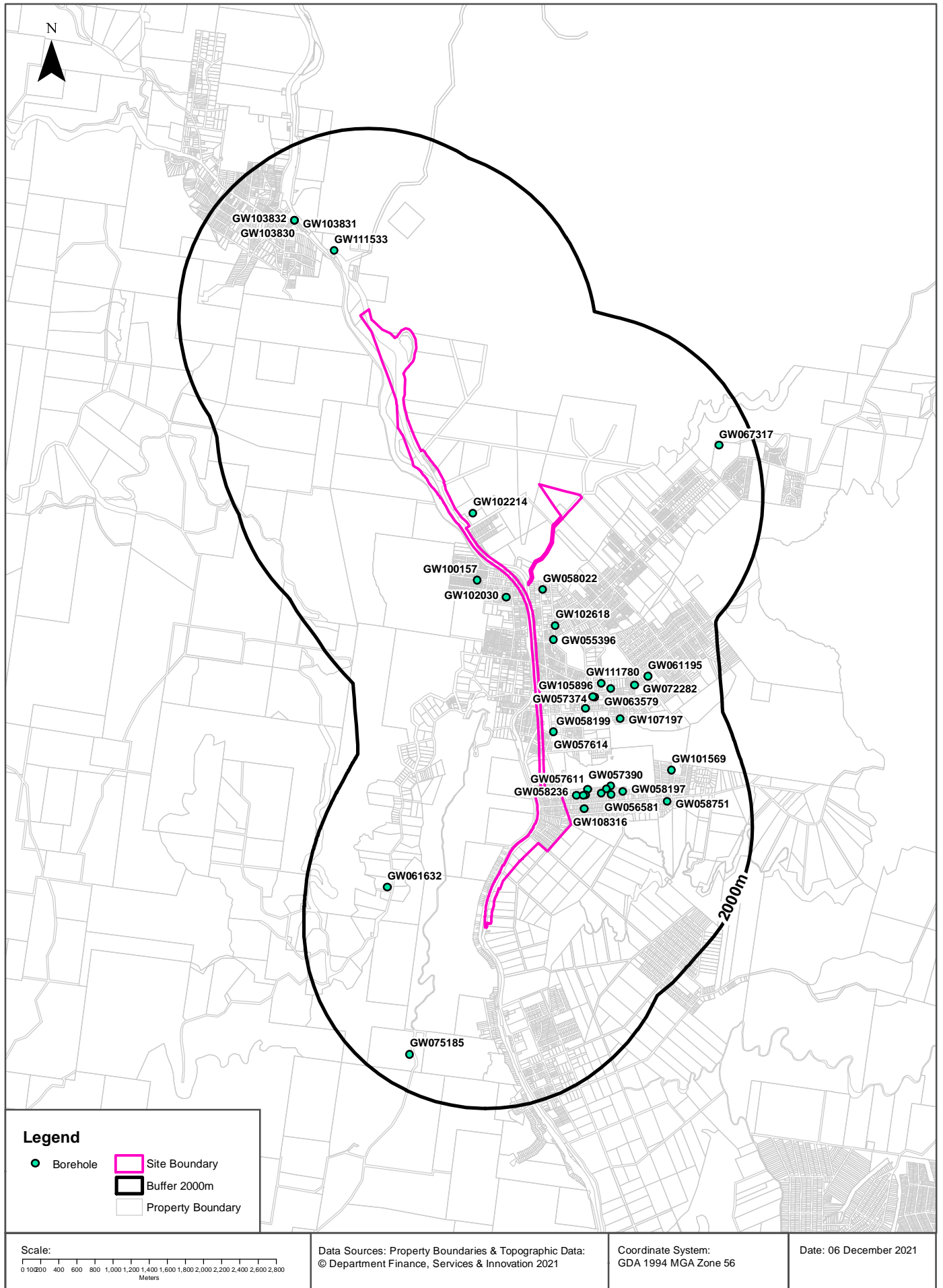
Prohibition Area No.	Prohibition	Distance	Direction
N/A	No records in buffer		

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



# Groundwater Boreholes

Road Alignment, Blackheath, NSW 2785 (South)



# Hydrogeology & Groundwater

Road Alignment, Blackheath, NSW 2785 (South)

## 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
GW102 214	10BL158 289, 10WA10 7925	Bore	Private	Domestic	Domestic		01/01/1998	62.50	62.50			0.900		115m	North
GW057 614	10BL126 079, 10WA10 7824	Bore	Private	Domestic	General Use		01/09/1982	66.00	66.00					123m	South
GW058 236	10BL125 148, 10WA10 7810	Bore	Private	Domestic	General Use		01/12/1982	31.00	31.00					156m	South
GW058 022	10BL126 521, 10WA10 7833	Bore	Private	Domestic	General Use		01/02/1983	60.00	60.00					157m	South East
GW102 030	10BL156 673, 10WA11 6264	Bore		Domestic	Domestic, Stock		14/07/1998	78.00	78.00	Fresh	15.00	0.330		164m	South
GW108 316	10BL600 600, 10WA10 8020	Bore	Private	Domestic	Domestic		28/11/2006	60.00	60.00			0.600		194m	South
GW055 396	10BL120 319, 10WA10 7802	Bore	Private	Domestic	General Use		01/05/1981	32.00						202m	South East
GW059 737	10BL127 753, 10WA10 7845	Bore	Private	Domestic	Domestic		01/03/1983	30.00	30.00					230m	South
GW102 618	10BL158 170, 10WA10 7921	Bore		Domestic	Domestic, Stock		17/10/1997	93.70	93.70		71.80	0.300		236m	South East
GW100 157	10BL143 261, 10WA11 6248	Bore	Private	Domestic, Stock	Domestic, Stock		22/05/1991	62.50	62.50		44.00	0.400		243m	South West
GW058 193	10BL126 873, 10WA10 7837	Bore	Private	Domestic	Domestic		01/01/1983	33.00	33.00					253m	South
GW057 611	10BL126 076, 10WA10 7823	Bore	Private	Domestic	General Use		01/04/1983	30.00	30.00					297m	South East
GW072 891		Bore	Private		Domestic		07/12/1994	50.00	50.00					424m	South East
GW059 727		Bore	Private		Not Known		01/12/1982	66.00	66.00			0.150		493m	South East
GW058 199	10BL126 879, 10WA10 7840	Bore	Private	Domestic	General Use		01/10/1982	33.00	33.00					495m	South East
GW056 581	10BL122 495, 10WA10 7805	Bore	Private	Domestic	General Use		01/03/1982	43.00	43.00					525m	South East

GW No.	Licence No	Work Type	Owner Type	Authorised Purpose	Intended Purpose	Name	Complete Date	Final Depth (m)	Drilled Depth (m)	Salinity (mg/L)	SWL (m bgl)	Yield (L/s)	Elev (AHD)	Dist	Dir
GW057 390	10BL125 310, 10WA10 7813	Bore	Private	Domestic	General Use		01/12/1982	44.00	44.00					552m	South East
GW105 896	10BL162 671, 10WA10 7971	Bore		Domestic			10/05/2005							586m	South East
GW057 374	10BL125 159	Bore	Private	Domestic	General Use		01/11/1982	57.00	57.00					604m	South East
GW058 197	10BL126 875, 10WA10 7838	Bore	Private	Domestic	General Use		01/04/1982	46.00	46.00					657m	South East
GW111 780	10BL165 716, 10WA10 8013	Bore	Private	Domestic	Domestic		07/11/2005	63.00	63.00					693m	South East
GW111 533	10BL604 859	Bore	Other Govt	Monitoring Bore	Monitoring Bore		07/06/2011	17.30	17.30					753m	North West
GW063 579	10BL134 373, 10WA10 7874	Bore open thru rock	Private	Domestic, Stock	Domestic, Stock		01/01/1987	49.00	49.00	Good				790m	South East
GW107 197	10BL165 300, 10WA10 8006	Bore	Private	Domestic	Domestic, Stock		25/11/2003	47.00	47.00					870m	South East
GW072 282		Bore	Private		Domestic, Stock		15/12/1994	59.30	59.30					1053m	South East
GW058 751	10BL130 355, 10WA10 7862	Bore	Private	Domestic	General Use		01/11/1982	61.00	61.00	Good				1095m	South East
GW061 632	10BL133 883, 10WA11 6226	Bore open thru rock	Private	Domestic	Domestic		01/02/1986	93.70	93.70					1108m	South
GW061 195	10BL133 018, 10WA10 7871	Bore	Private	Domestic, Stock	Domestic, Stock		01/08/1985	53.10	53.10	0-500 ppm				1208m	South East
GW101 569	10BL144 426, 10WA10 7891	Bore		Domestic, Stock	Domestic, Stock		28/10/1991	37.50	37.50		25.00	0.600		1241m	South East
GW103 830	10BL156 659	Bore		Monitoring Bore	Monitoring Bore		11/04/1991	3.30	3.30					1269m	North West
GW103 831	10BL156 659	Bore		Monitoring Bore	Monitoring Bore		16/07/2001	2.50	2.50					1269m	North West
GW103 832	10BL156 659	Bore		Monitoring Bore	Monitoring Bore		11/04/1991	3.35	3.35					1269m	North West
GW067 317		Bore			Test Bore			65.00	65.00			0.300	1007.50	1624m	North East
GW075 185	10CA11 7211, 10CA11 7212, 10CA11 7213, 10CA11 7219, 10WM00 0003	Bore	Other Govt	Town Water Supply	Test Bore, Town Water Supply		01/02/2006	187.00	187.00		11.00			1633m	South

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

## Road Alignment, Blackheath, NSW 2785 (South)

### Driller's Logs

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

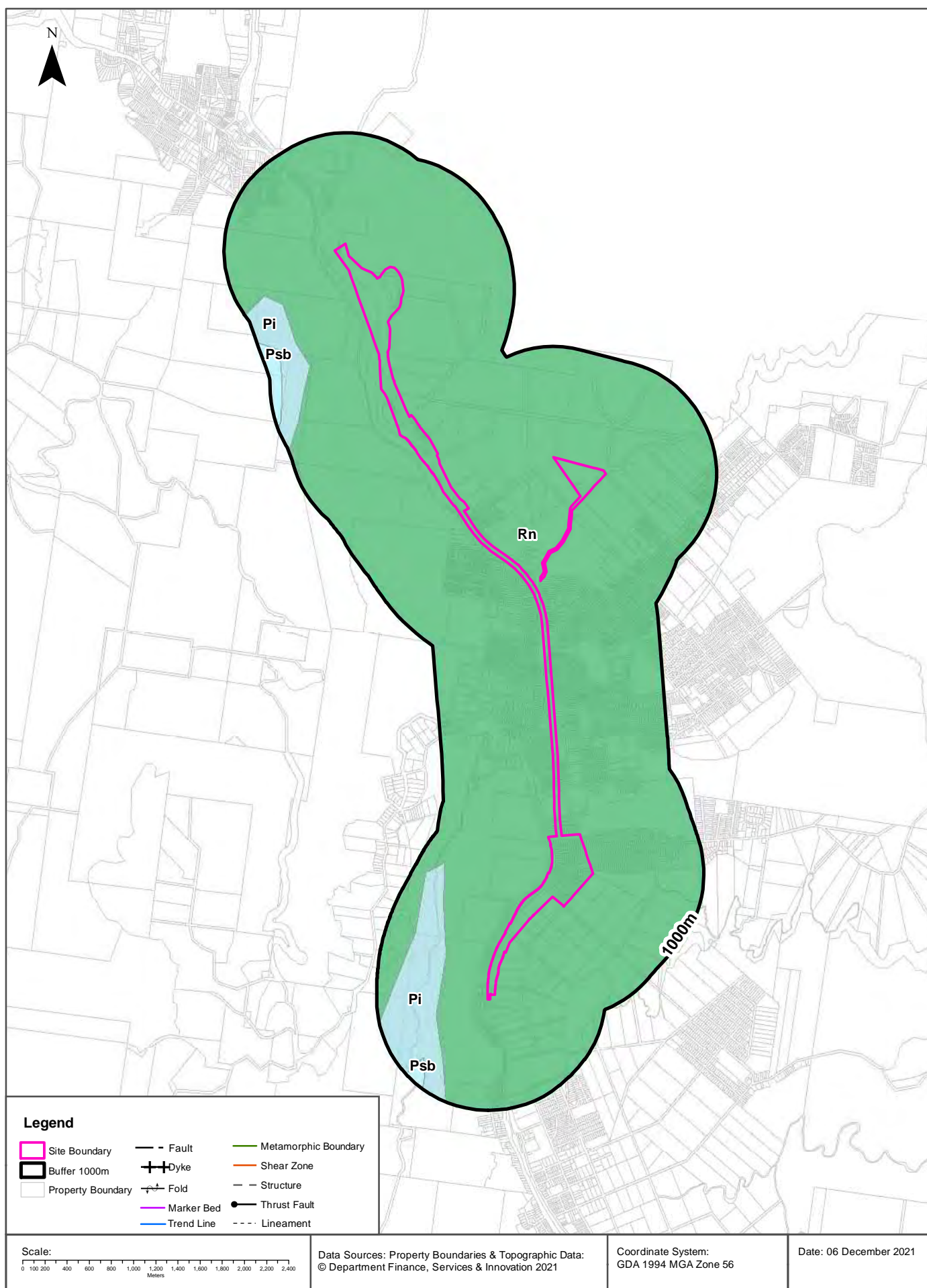
Groundwater No	Drillers Log	Distance	Direction
GW102214	0.00m-6.00m SAND AND LOOSE MATERIAL 6.00m-62.50m SANDSTONE	115m	North
GW057614	0.00m-66.00m Sandstone Water Supply 0.00m-66.00m Ironstone Bands	123m	South
GW058236	0.00m-31.00m Ironstone Nominal Water Supply, Sandstone Nominal, Quartz Nominal	156m	South
GW058022	0.00m-60.00m Sandstone Nominal Water Supply, Quartz Nominal, Ironstone Nominal	157m	South East
GW102030	0.00m-0.20m Topsoil 0.20m-6.50m Cemented Gravel 6.50m-8.90m White Clay 8.90m-41.90m Yellow Sandstone 41.90m-43.00m Yellow Sandstone W. B. 43.00m-46.50m Shale 46.50m-54.90m Yellow Sandstone 54.90m-58.00m Shale 58.00m-63.10m Grey Sandstone 63.10m-65.00m Grey Sandstone W. B. 65.00m-78.00m Grey Sandstone	164m	South
GW108316	0.00m-1.00m topsoil, ironstone layers 1.00m-10.00m sandstone, ironstone bands 10.00m-12.00m ironstone 12.00m-50.00m sandstone 50.00m-55.00m gravel 55.00m-60.00m sandstone, weathered	194m	South
GW059737	0.00m-3.00m Topsoil Sandstone 3.00m-4.00m Clay 4.00m-30.00m Sandstone Some Layers Water Supply 4.00m-30.00m Ironstone Layers	230m	South
GW102618	0.00m-29.60m SANDSTONE 29.60m-31.20m SHALE 31.20m-93.70m SANDSTONE	236m	South East
GW100157	0.00m-22.00m SANDSTONE 22.00m-22.50m IRONSTONE 22.50m-27.00m SANDSTONE 27.00m-27.50m IRONSTONE 27.50m-62.50m SANDSTONE	243m	South West
GW058193	0.00m-33.00m Ironstone Layers Nominal Water Supply, Quartz Layers Nominal, Sandstone Nominal	253m	South
GW057611	0.00m-30.00m Ironstone Nominal, Quartz Nominal, Sandstone Nominal	297m	South East
GW072891	0.00m-10.00m 10.00m-10.50m 10.50m-20.00m 20.00m-21.00m 21.00m-32.00m 32.00m-32.30m 32.30m-50.00m	424m	South East
GW059727	0.00m-66.00m Sandstone Some Ironstone Water Supply 0.00m-66.00m Layers	493m	South East
GW058199	0.00m-33.00m Sandstone Water Supply 0.00m-33.00m Ironstone Layers	495m	South East
GW056581	0.00m-1.00m Topsoil 1.00m-38.00m Sandstone Water Supply 1.00m-38.00m Ironstone Thin Layers Some 38.00m-39.00m Ironstone Water Supply 39.00m-43.00m Sandstone Water Supply	525m	South East
GW057390	0.00m-44.00m Ironstone Nominal 0.00m-44.00m Sandstone Nominal Water Supply	552m	South East
GW057374	0.00m-57.00m Ironstone Nominal 0.00m-57.00m Sandstone Nominal Water Supply	604m	South East
GW058197	0.00m-46.00m Sandstone Nominal Water Supply, Quartz Nominal, Ironstone Nominal	657m	South East

Groundwater No	Drillers Log	Distance	Direction
GW111533	0.00m-0.50m SILTY SAND: BROWN,FINE-MED SAND 0.50m-1.60m SAND CLAYEY,ORANGE BROWN,FINE MED.SAND 1.60m-11.50m SANDSTONE,PALE GREY,MED.COARSE GRAIN 11.50m-11.78m CLAYSTONE,MASSIVE,PALE GREY-RED 11.78m-15.71m SANDSTONE BROWN GREY,MED.COARSE GRAIN 15.71m-17.20m CLAYSTONE,BROWN GREY,RED 17.20m-17.30m SANDSTONE,PALE GREY,FINE GRAINED	753m	North West
GW063579	0.00m-1.00m Soil 1.00m-7.00m Clay Sandy 7.00m-15.00m Sandstone Soft Clay Bands 15.00m-49.00m Sandstone Water Supply	790m	South East
GW107197	0.00m-0.50m tospoil 0.50m-2.00m ironstone 2.00m-26.00m sandstone, light brown with layers of ironstone 26.00m-47.00m ironstone, quartz shale with white sandstone layers	870m	South East
GW072282	0.00m-43.70m 43.70m-45.30m 45.30m-59.30m	1053m	South East
GW058751	0.00m-0.61m Topsoil 0.61m-3.66m Sandstone Weathered 3.66m-60.96m Sandstone Water Supply	1095m	South East
GW061632	0.00m-14.00m Sandstone 14.00m-15.60m Ironstone 15.60m-28.10m Sandstone 28.10m-39.00m Ironstone 39.00m-93.70m Sandstone Water Supply	1108m	South
GW061195	0.00m-20.30m Sandstone 20.30m-21.80m Ironstone 21.80m-37.50m Sandstone Water Supply 37.50m-39.00m Ironstone 39.00m-40.60m Shale 40.60m-51.50m Sandstone Water Supply 51.50m-52.00m Ironstone 52.00m-53.10m Sandstone	1208m	South East
GW101569	0.00m-1.00m Sandstone 1.00m-3.00m Ironstone 3.00m-10.00m Sandstone 10.00m-11.00m Ironstone 11.00m-37.50m Sandstone	1241m	South East
GW103830	0.00m-1.20m SAND/BROWN,CLAYEY,MOIST 1.20m-2.80m INCREASINGLY CLAYEY,GRE,WET 2.80m-3.30m SANDSTONE,QUARTZOSE,YELLOW	1269m	North West
GW103831	0.00m-0.10m SAND-BROWN,CLAYEY,MOIST 0.10m-1.00m SAND CLAYEY,GRAVELLY,POORLY SORTED 1.00m-2.00m SAND-GRAVELLY,ORANGE TO GREY 2.00m-2.50m SANDSTONE-QUARTZOSE,YELLOW	1269m	North West
GW103832	0.00m-0.20m SAND/CLAYEY,MOIST 0.20m-1.60m SAND-GRAVELLY, MOIST,CLAYEY 1.60m-2.50m SAND-GRAVELLY,WET,BECOMING CLAYEY 2.50m-3.35m SANDSTONE-QUARTZOSE,YELLOW	1269m	North West
GW075185	0.00m-2.50m Clay, orange with gre red mottling, minor sand, slightly moist, crumbles, occasional bands of very hard grey Shale 2.50m-6.00m Sandstone/Mudstone/Shale, dark grey, soft, fine grained 6.00m-30.00m Mudstone/Shale, brown for 500mm then back to grey, soft, fine grained 30.00m-104.00m Mudstone/Shale, grey, soft, fine grained, Fractured zone at 55m, minor seepage 104.00m-130.00m Mudstone/Shale, grey, as above, minor quartz & sandstone fragments at 104m, seepage = 50L/day, minor wbz at 109m 130.00m-171.00m Shale & Sandstone interbedded, water cut at 130m - 341L/hr 171.00m-184.00m Shale & Sandstone interbedded, quartz inclusions with Shale 184.00m-187.00m Granite, light, pue with a few green inclusions, large quartz content	1633m	South

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

Road Alignment, Blackheath, NSW 2785 (South)





## Geology

Road Alignment, Blackheath, NSW 2785 (South)

### Geological Units 1:250,000

What are the Geological Units within the dataset buffer?

Symbol	Description	Unit Name	Group	Sub Group	Age	Dist	Dir
Rn	Sandstone, interbedded sandstone and siltstone, claystone. conglomerate and sandstone (Widden Brook conglomerate)	Narrabeen Group	Narrabeen Group	Clifton Subgroup	Mesozoic	0m	On-site
Pi	Shale, sandstone, conglomerate and chert with coal and torbanite seams	Illawarra Coal Measures	Illawarra Coal Measures		Palaeozoic	407m	South
Psb	Shale, conglomerate and sandstone including lenticular development of the Megalong conglomerate	Berry Siltstone	Shoalhaven Group		Palaeozoic	787m	North West

### Geological Structures 1:250,000

What are the Geological Structures within the dataset buffer?

Feature	Name	Description	Map Sheet	Distance	Direction
N/A	No records in buffer				

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

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## Naturally Occurring Asbestos Potential

Road Alignment, Blackheath, NSW 2785 (South)

## Naturally Occurring Asbestos Potential

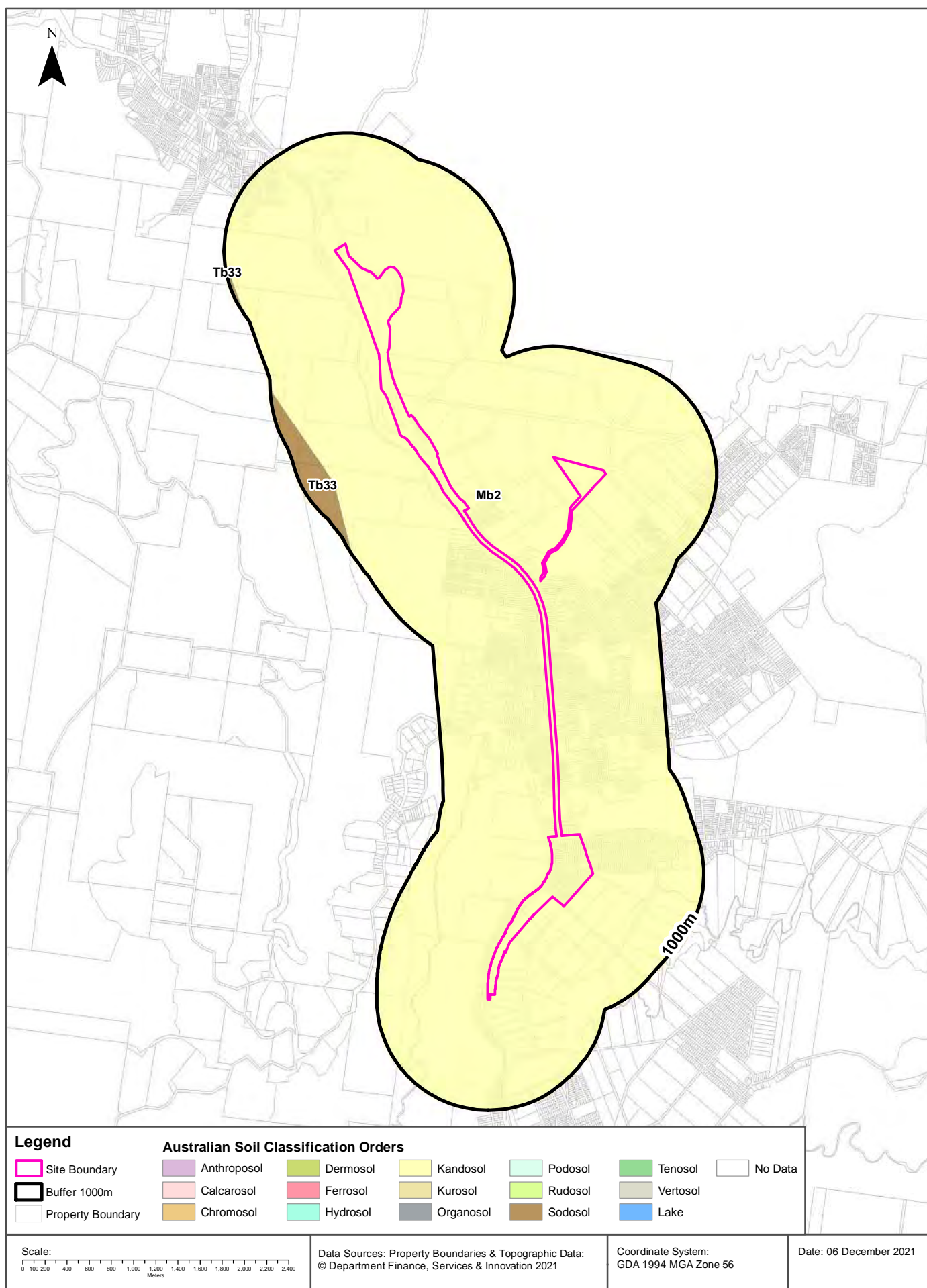
Naturally Occurring Asbestos Potential within the dataset buffer:

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

# Atlas of Australian Soils

Road Alignment, Blackheath, NSW 2785 (South)



# Soils

Road Alignment, Blackheath, NSW 2785 (South)

## Atlas of Australian Soils

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

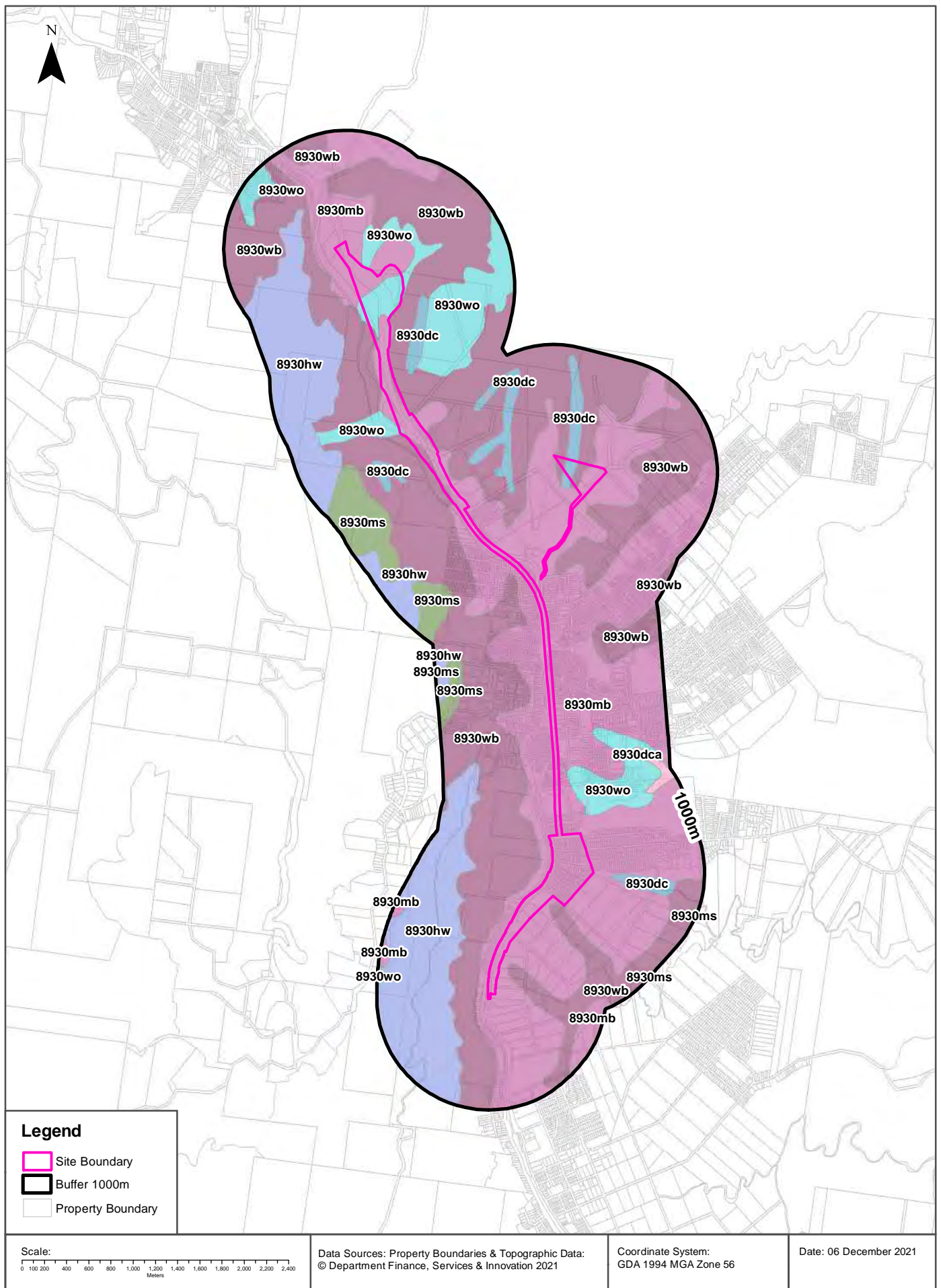
Map Unit Code	Soil Order	Map Unit Description	Distance	Direction
Mb2	Kandosol	Dissected sandstone plateau of moderate to strong relief with sandstone pillars, ledges, and slabs-- level to undulating ridges, irregularly benched slopes, steep ridges, cliffs, canyons, narrow sandy valleys: chief soils are (i) on areas of gentle to moderate relief, acid yellow leached earths (Gn2.74) and (Gn2.34) and acid leached yellow earths (Gn2.24)- sometimes these soils contain ironstone gravel; and (ii) on, or adjacent to, areas of strong relief, siliceous sands (Uc1.2), leached sands (Uc2.12) and (Uc2.2), and shallow forms of the above (Gn2) soils. Associated are: (i) on flat to gently undulating remnants of the original plateau surface, leached sands (Uc2.3), siliceous sands (Uc1.2), sandy earths (Uc5.22), and (Gn2) soils as for (i) above (these areas are in part comparable with unit Cb29); (ii) on flat ironstone gravelly remnants of the original plateau surface, (Gn2) soils as for unit Mb5(i); (iii) on gently undulating ridges where interbedded shales are exposed, shallow, often stony (Dy3.41), (Dr2.21), and related soils similar to unit Tb35; (iv) narrow valleys of (Uc2.3) soils flanked by moderate slopes of (Dy3.41) soils; (v) escarpments of steep hills with shallow (Dy) and (Dr) soils between sandstone pillars; and (vi) shallow (Um) soils, such as (Um6.21) on steep hills of basic rocks. As mapped, minor areas of units Mg20, Mm1, and Mw8 are included. Data are limited.	0m	On-site
Tb33	Sodosol	Dissected plateau: chief soils on undulating ridge crests are hard acidic yellow mottled soils (Dy3.41). Associated are: moderate to steep side slopes of various earths (Gn2), such as (Gn2.14), (Gn2.2), and (Gn2.9); some hilly areas of (Dr2.21), (Dy2.21), (Dy3.41), (Um4.1), and (Um4.2) soils with rock outcrops; some talus slopes of (Uc1.2) and (Uc2.2) soils; and some small flat areas of units Tb32 and Tb39.	737m	North West

Atlas of Australian Soils Data Source: CSIRO

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# Soil Landscapes of Central and Eastern NSW

Road Alignment, Blackheath, NSW 2785 (South)



## Soils

Road Alignment, Blackheath, NSW 2785 (South)

### Soil Landscapes of Central and Eastern NSW

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

Soil Code	Name	Distance	Direction
<a href="#">8930mb</a>	Medlow Bath	0m	On-site
<a href="#">8930wb</a>	Warragamba	0m	On-site
<a href="#">8930dc</a>	Deanes Creek	0m	On-site
<a href="#">8930wo</a>	Wollangambe	0m	On-site
<a href="#">8930hw</a>	Hassans Walls	252m	North West
<a href="#">8930ms</a>	Mount Sinai	501m	West
<a href="#">8930dca</a>	Deanes Creek variant a	669m	South East

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

Road Alignment, Blackheath, NSW 2785 (South)

### Environmental Planning Instrument - Acid Sulfate Soils

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

Soil Class	Description	EPI Name
N/A		

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

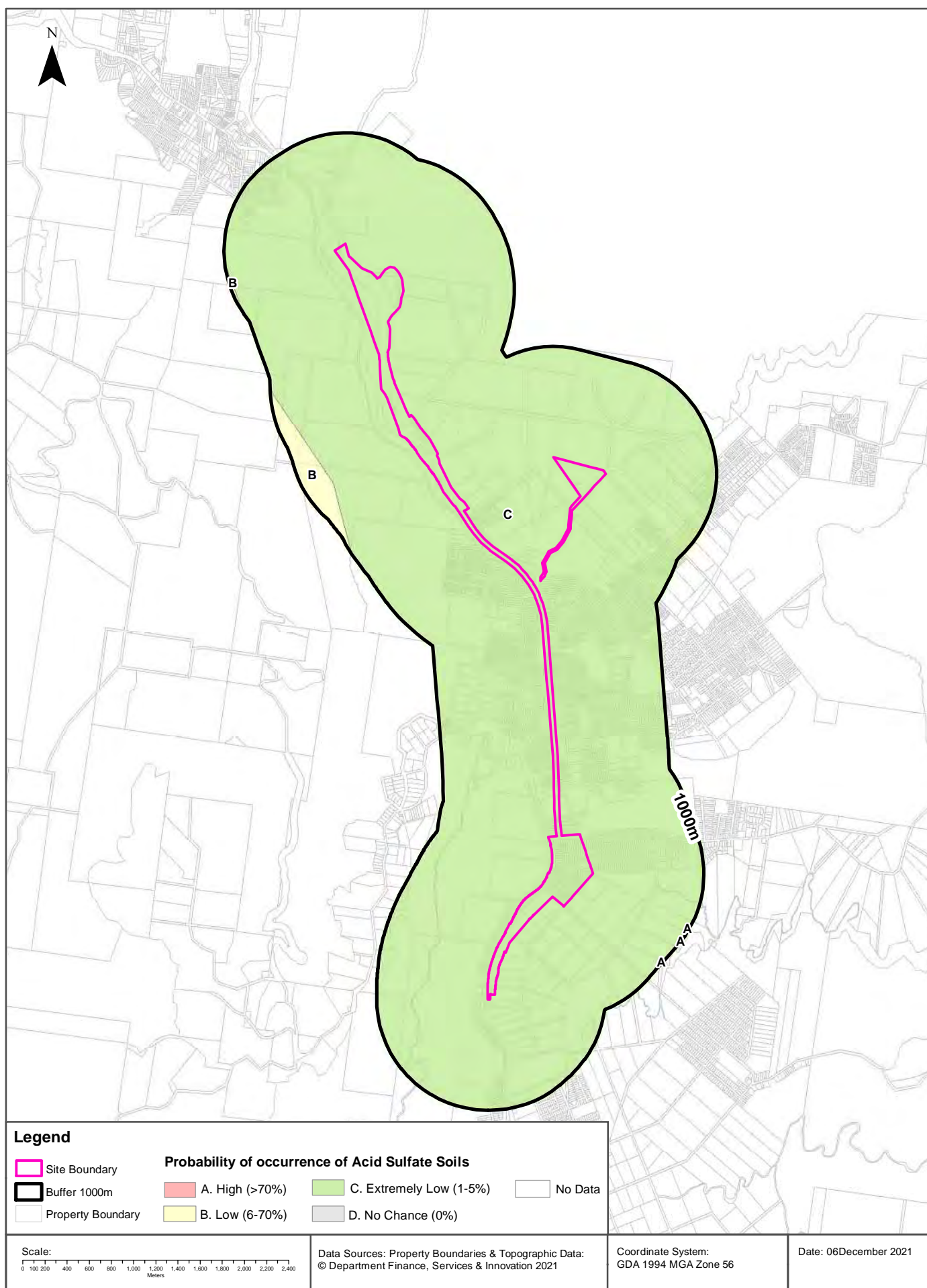
Soil Class	Description	EPI Name	Distance	Direction
N/A				

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# Atlas of Australian Acid Sulfate Soils

Road Alignment, Blackheath, NSW 2785 (South)



## Acid Sulfate Soils

Road Alignment, Blackheath, NSW 2785 (South)

### 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
B	Low Probability of occurrence. 6-70% chance of occurrence.	738m	North West
A	High Probability of occurrence. >70% chance of occurrence.	973m	South East

Atlas of Australian Acid Sulfate Soils Data Source: CSIRO

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## Dryland Salinity

Road Alignment, Blackheath, NSW 2785 (South)

### Dryland Salinity - National Assessment

Is there Dryland Salinity - National Assessment data onsite?

**No**

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

**No**

What Dryland Salinity assessments are given?

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

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

Road Alignment, Blackheath, NSW 2785 (South)

### Mining Subsidence Districts

Mining Subsidence Districts within the dataset buffer:

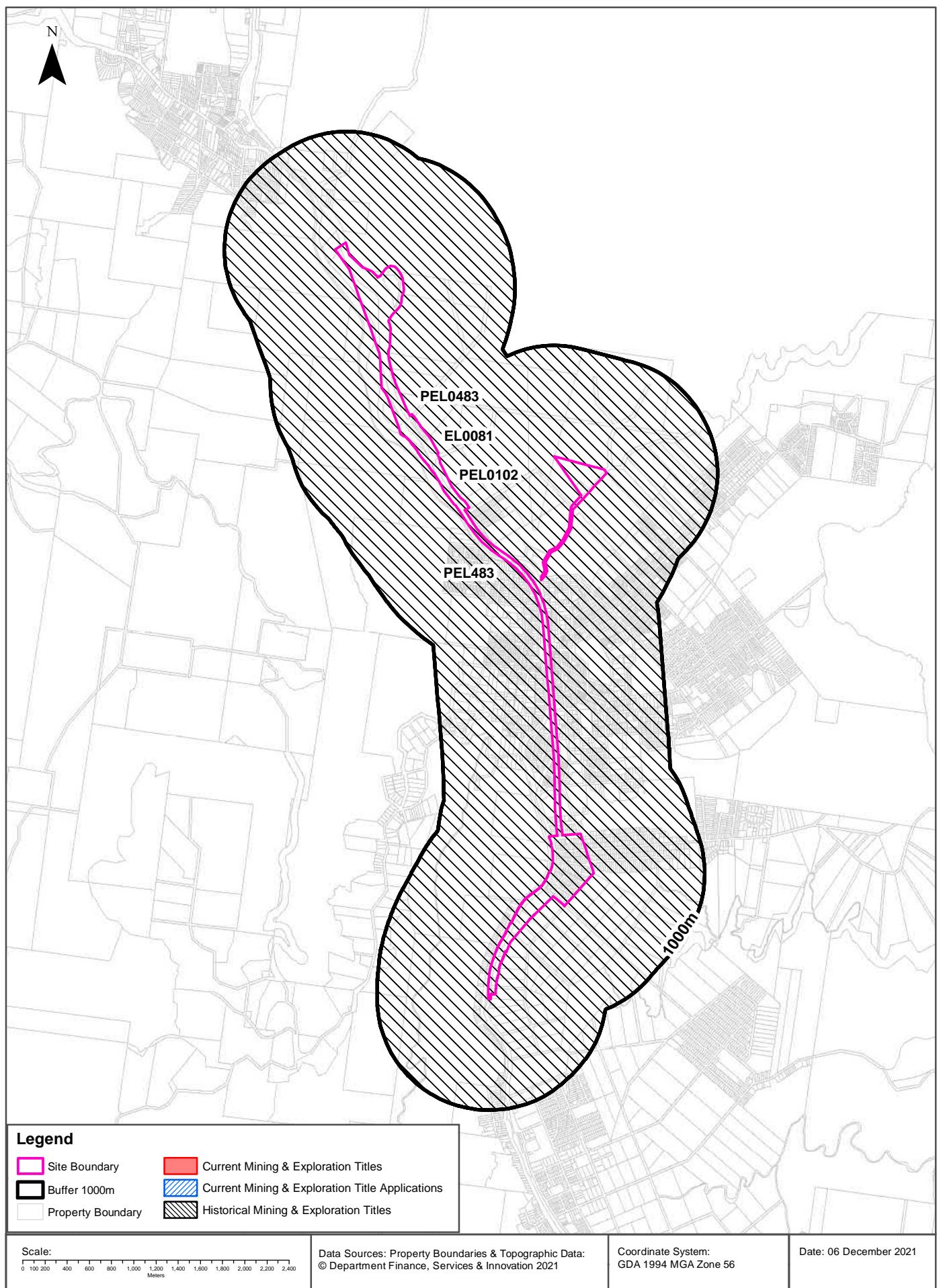
District	Distance	Direction
There are no Mining Subsidence Districts within the report buffer		

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

Road Alignment, Blackheath, NSW 2785 (South)



## Mining

Road Alignment, Blackheath, NSW 2785 (South)

### 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

Road Alignment, Blackheath, NSW 2785 (South)

### Historical Mining & Exploration Titles

Historical Mining & Exploration Titles within the dataset buffer:

Title Ref	Holder	Start Date	End Date	Resource	Minerals	Dist	Dir
PEL0102	AUSTRALIAN OIL AND GAS CORPORATION LTD			PETROLEUM	Petroleum	0m	On-site
EL0081	CONTINENTAL OIL CO OF AUSTRALIA LIMITED	01 Feb 1967	01 Feb 1968	MINERALS		0m	On-site
PEL483	EAST COAST POWER PTY LTD			MINERALS		0m	On-site
PEL0483	EAST COAST POWER PTY LTD	6/05/2010	4/11/2011	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

Road Alignment, Blackheath, NSW 2785 (South)

## State Significant Precincts

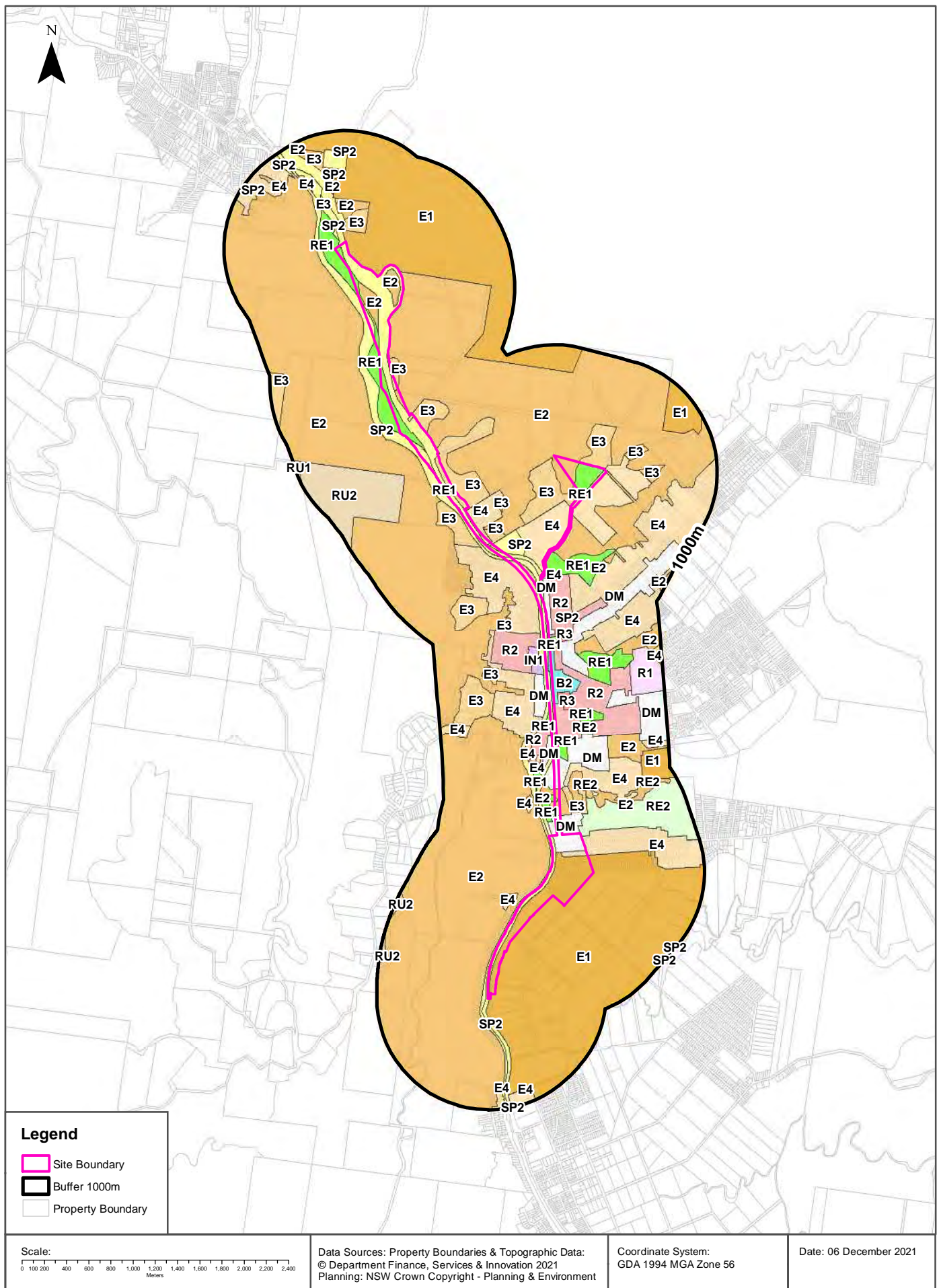
What SEPP State Significant Precincts exist within the dataset buffer?

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

Road Alignment, Blackheath, NSW 2785 (South)





# Environmental Planning Instrument

## Road Alignment, Blackheath, NSW 2785 (South)

### 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
E3	Environmental Management		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		0m	On-site
SP2	Infrastructure	Rail	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		0m	On-site
SP2	Infrastructure	Classified Road	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		0m	On-site
DM	Deferred Matter		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		0m	On-site
E1	National Parks and Nature Reserves		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		0m	On-site
E4	Environmental Living		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		0m	On-site
DM	Deferred Matter		Blue Mountains Local Environmental Plan 2015	28/06/2019	28/06/2019	28/06/2019	Amendment No 1	0m	On-site
E2	Environmental Conservation		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		0m	On-site
SP2	Infrastructure	Cemetery	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		0m	On-site
RE1	Public Recreation		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		0m	On-site
B2	Local Centre		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		0m	On-site
R2	Low Density Residential		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		0m	On-site
E3	Environmental Management		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		0m	North East
RE1	Public Recreation		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		0m	East
RE2	Private Recreation		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		0m	South East
R2	Low Density Residential		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		0m	South East
RE1	Public Recreation		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		2m	South
R2	Low Density Residential		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		5m	South
DM	Deferred Matter		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		5m	South
E2	Environmental Conservation		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		10m	South West
E3	Environmental Management		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		17m	North West
E3	Environmental Management		Blue Mountains Local Environmental Plan 2015	28/06/2019	28/06/2019	28/06/2019	Amendment No 1	21m	South
DM	Deferred Matter		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		27m	South
IN1	General Industrial		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		27m	South
R2	Low Density Residential		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		31m	South
R3	Medium Density Residential		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		34m	South East
E4	Environmental Living		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		36m	South East
SP2	Infrastructure	Future Classified Road	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		37m	North West

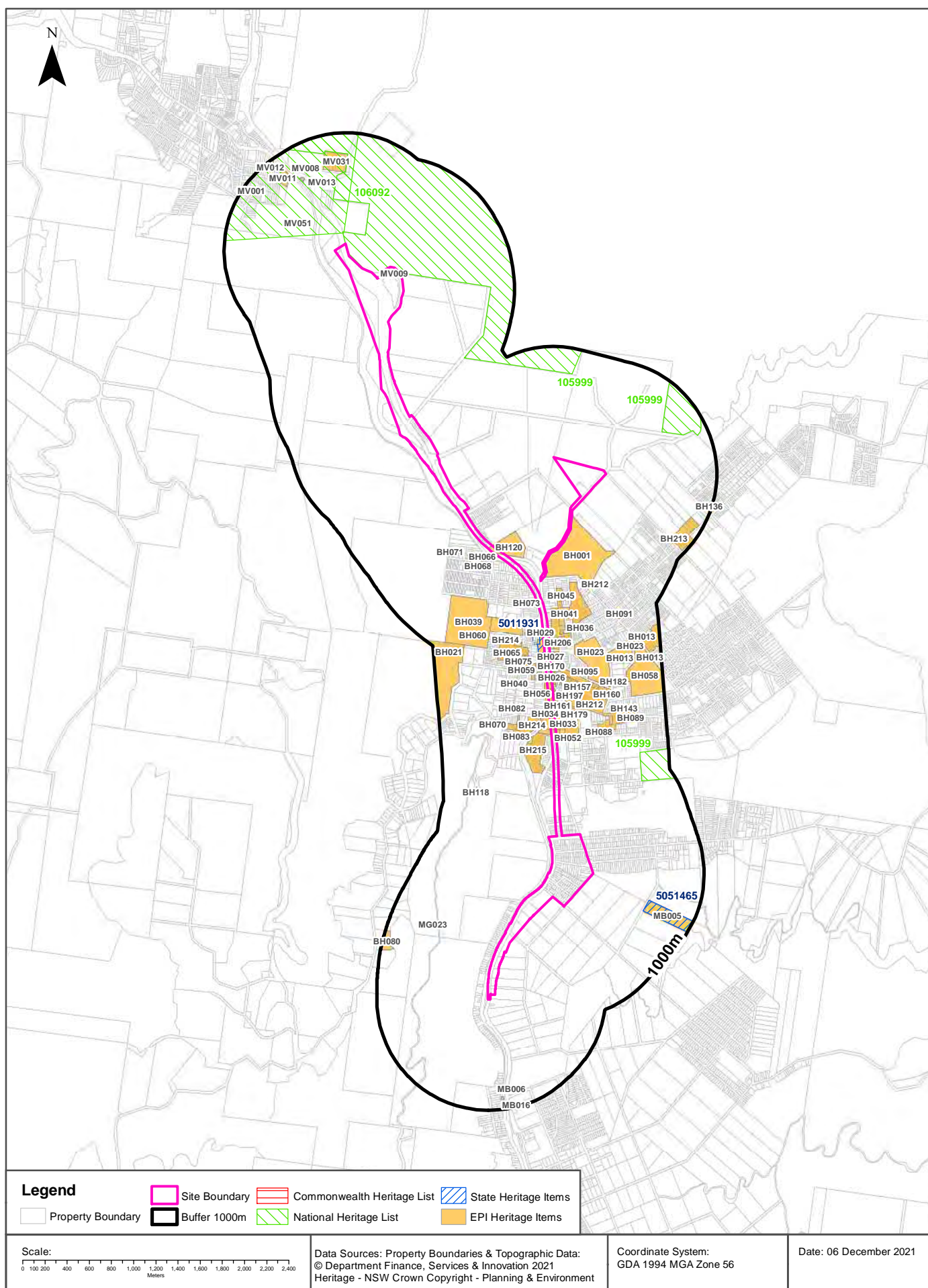
Zone	Description	Purpose	EPI Name	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
E4	Environmental Living		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		66m	East
E4	Environmental Living		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		67m	South
E4	Environmental Living		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		68m	South
E2	Environmental Conservation		Blue Mountains Local Environmental Plan 2015	28/06/2019	28/06/2019	28/06/2019	Amendment No 1	75m	South East
E4	Environmental Living		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		76m	South
DM	Deferred Matter		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		84m	East
R3	Medium Density Residential		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		84m	South East
E3	Environmental Management		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		102m	North West
SP2	Infrastructure	Water Supply System	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		108m	South
RE1	Public Recreation		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		108m	South
SP2	Infrastructure	Future Classified Road	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		109m	North West
SP2	Infrastructure	Water Supply System	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		157m	South East
E4	Environmental Living		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		167m	South
E4	Environmental Living		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		197m	South
E4	Environmental Living		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		201m	East
E2	Environmental Conservation		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		204m	North West
E3	Environmental Management		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		217m	North East
RU2	Rural Landscape		Lithgow Local Environmental Plan 2014	19/12/2014	19/12/2014	17/09/2021		219m	North West
RE2	Private Recreation		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		222m	South East
RE1	Public Recreation		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		222m	South East
RE1	Public Recreation		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		231m	South East
RE2	Private Recreation		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		233m	South
E3	Environmental Management		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		245m	North
E3	Environmental Management		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		260m	North West
E3	Environmental Management		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		278m	South
E3	Environmental Management		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		294m	North East
E3	Environmental Management		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		353m	North West
E3	Environmental Management		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		363m	North West
E3	Environmental Management		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		372m	South West
E2	Environmental Conservation		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		391m	East
E3	Environmental Management		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		432m	South
E2	Environmental Conservation		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		432m	North West
E2	Environmental Conservation		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		449m	South East
DM	Deferred Matter		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		463m	South East

Zone	Description	Purpose	EPI Name	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
E3	Environmental Management		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		482m	South
E4	Environmental Living		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		535m	North West
E3	Environmental Management		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		629m	North West
SP2	Infrastructure	Cemetery	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		635m	North
E4	Environmental Living		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		692m	North West
R1	General Residential		Blue Mountains Local Environmental Plan 2015	14/12/2018	14/12/2018	28/06/2019	Amendment No 3	700m	South East
RE2	Private Recreation		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		709m	South East
E4	Environmental Living		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		719m	South
E2	Environmental Conservation		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		741m	South East
E4	Environmental Living		Blue Mountains Local Environmental Plan 2015	28/06/2019	28/06/2019	28/06/2019	Amendment No 1	758m	South East
E4	Environmental Living		Blue Mountains Local Environmental Plan 2015	14/12/2018	14/12/2018	28/06/2019	Amendment No 3	758m	South
SP2	Infrastructure	Classified Road	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		781m	North West
E2	Environmental Conservation		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		786m	North West
E3	Environmental Management		Lithgow Local Environmental Plan 2014	19/12/2014	19/12/2014	17/09/2021		846m	North West
E4	Environmental Living		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		863m	South
E4	Environmental Living		Blue Mountains Local Environmental Plan 2015	14/12/2018	14/12/2018	28/06/2019	Amendment No 3	900m	South East
SP2	Infrastructure	Water Supply System	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		912m	North West
RU2	Rural Landscape		Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		927m	South
RU1	Primary Production		Lithgow Local Environmental Plan 2014	19/12/2014	19/12/2014	17/09/2021		950m	North West
SP2	Infrastructure	Water Supply System	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	28/06/2019		984m	South East

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# Heritage Items

Road Alignment, Blackheath, NSW 2785 (South)



## Heritage

### Road Alignment, Blackheath, NSW 2785 (South)

## 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
<a href="#">105999</a>	The Greater Blue Mountains Area	Greater Western Hwy, Katoomba NSW	1/14/006/0061	Natural	Listed place	21/05/2007	0m	North
<a href="#">106092</a>	Hartley Valley	Great Western Hwy, Hartley NSW	1/14/006/0063	Historic	Nomination now ineligible for PPAL		97m	North West

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
5011931	Blackheath Railway Station Group	Main Western railway, Blackheath	BLUE MOUNTAINS	02/04/1999	01088	2531	1m	South East
5051465	Medlow Dam	Beauchamp Road, Medlow Bath	BLUE MOUNTAINS	18/11/1999	01366	2966	557m	South East

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
BH027	Gardners Inn	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	0m	On-site
BH174	Rotary Directory	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	0m	On-site



Map Id	Name	Classification	Significance	EPI Name	Published Date	Commenced Date	Currency Date	Distance	Direction
BH099	Wattle Cafe/Blackheath Florist	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	0m	On-site
BH030	Macquarie Monument	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	0m	On-site
BH165	The Annex Antiques	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	0m	On-site
BH034	Site of Blackheath Stockade	Conservation Area - Archaeological	Local	Blue Mountains Local Environmental Plan 2015	26/03/2021	26/03/2021	26/03/2021	0m	On-site
BH206	Blackheath Memorial Gardens	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	0m	On-site
MV009	Soldiers Pinch	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	0m	On-site
BH120	Blackheath General Cemetery	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	0m	On-site
BH170	Cafe Banksia/De Losa's/Piedmont Inn/Blackheath Charcoal Chicken	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	0m	On-site
BH056	Norwood	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	0m	On-site
BH169	Former Butcher's Shop	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	0m	On-site
BH162	IGA (Kerry's Service Station)	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	0m	On-site
BH167	Yarralumla Flats	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	0m	On-site
BH212	Blackheath Village and its Setting Heritage Conservation Area	Conservation Area - General	Local	Blue Mountains Local Environmental Plan 2015	19/07/2019	19/07/2019	26/03/2021	0m	On-site
BH166	Fire Station	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	0m	On-site
BH172	Shelter	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	0m	On-site
BH026	New Ivanhoe Hotel	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	0m	On-site
BH168	Dash's Pharmacy	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	0m	On-site
BH149	Neates Building	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	0m	On-site
BH123	The Gardens War Memorial	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	0m	On-site
BH171	Community Centre	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	0m	On-site
BH033	Blackheath Public School	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	0m	On-site
BH173	Shops adjacent to the Station	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	0m	On-site
BH161	Former teacher's residence	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	0m	On-site
BH164	Blackheath Automotive	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	0m	On-site

Map Id	Name	Classification	Significance	EPI Name	Published Date	Commenced Date	Currency Date	Distance	Direction
BH134	Horse Trough	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	0m	On-site
BH163	Kia Ora	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	0m	On-site
BH001	The Campbell Rhododendron Gardens	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	0m	East
BH029	Blackheath Railway Station	Item - General	State	Blue Mountains Local Environmental Plan 2015	26/03/2021	26/03/2021	26/03/2021	1m	South East
BH052	St Mounts	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	5m	South
BH215	Lookout Hill Heritage Conservation Area	Conservation Area - General	Local	Blue Mountains Local Environmental Plan 2015	19/07/2019	19/07/2019	26/03/2021	5m	South
BH150	Ashcroft's/Irene's Deli on Govett	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	20m	South East
BH094	Victory Theatre Antiques	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	25m	South East
BH151	Shop Fronts	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	30m	South East
BH195	House and Garden	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	31m	South
BH148	Brick Bungalow	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	33m	South East
BH204	Brick Duplex	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	33m	South East
BH199	Normandie Restaurant	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	33m	South East
BH202	Brick House	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	33m	South East
BH205	Group of Houses	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	33m	South East
BH203	Brick House	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	33m	South East
BH200	California Bungalow	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	33m	South East
BH212	Blackheath Village and its Setting Heritage Conservation Area	Conservation Area - General	Local	Blue Mountains Local Environmental Plan 2015	19/07/2019	19/07/2019	26/03/2021	34m	South East
BH067	Station Master's House	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	37m	South East
BH192	Dover Hall	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	43m	South
BH075	Braemar	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	48m	South
BH073	Group Listing of Five Houses	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	53m	South East
BH152	Kenmare Buildings	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	61m	South East
BH146	California Bungalow	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	69m	South East

Map Id	Name	Classification	Significance	EPI Name	Published Date	Commenced Date	Currency Date	Distance	Direction
BH024	Post Office	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	70m	South East
BH066	Currong	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	72m	West
BH214	Blackheath West Heritage Conservation Area	Conservation Area - General	Local	Blue Mountains Local Environmental Plan 2015	19/07/2019	19/07/2019	26/03/2021	82m	South
BH175	Cottage	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	87m	South
BH176	Semi-detached Cottage	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	90m	South
BH074	Weatherboard Semi-detached Cottage	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	91m	South
BH181	Bungalow	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	92m	South
BH178	Federation Cottage	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	101m	South East
BH050	Masonic Temple	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	103m	South East
BH196	Fibro House	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	103m	South East
BH198	Former IOOF Hall	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	103m	South East
BH157	Former Residences Group Listing	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	103m	South East
BH154	Commonwealth Bank	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	103m	South East
BH197	California Bungalow	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	103m	South East
BH153	Cascade Antiques	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	103m	South East
BH049	Former Church of Christ	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	103m	South East
BH194	Vailima	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	104m	South
BH036	Duddington	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	104m	South East
BH145	Cottage	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	104m	South East
BH041	Sacred Heart Roman Catholic Church	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	105m	South East
BH040	Baptist Church	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	108m	South
BH045	Yabba Yabba and Garden	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	130m	South East
BH214	Blackheath West Heritage Conservation Area	Conservation Area - General	Local	Blue Mountains Local Environmental Plan 2015	19/07/2019	19/07/2019	26/03/2021	130m	South
BH155	Oakdene	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	134m	South East

Map Id	Name	Classification	Significance	EPI Name	Published Date	Commenced Date	Currency Date	Distance	Direction
BH068	Magellan	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	138m	West
BH051	Uniting Church	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	138m	South East
BH071	Montana	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	143m	West
BH191	Group of Cottages	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	145m	South
BH187	Faversham	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	145m	South
BH179	Timber Bungalow	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	152m	South East
BH059	Guinness Lodge/Evanville	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	152m	South
BH147	Corner Cottage	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	153m	South East
BH069	Majorca	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	155m	West
BH095	Glenella	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	155m	South East
BH188	Tarro	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	160m	South
BH096	Gwandoban	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	167m	South
BH189	Como	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	174m	South
BH060	Ban Tigh, Brewery Site and Garden	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	181m	South
BH180	Killarney	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	182m	South East
BH190	Weatherboard Cottage	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	186m	South
BH156	Ribbons and Rainbows	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	196m	South East
BH193	Brick Cottage	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	200m	South
BH023	Memorial Park	Item - General	Local	Blue Mountains Local Environmental Plan 2015	26/03/2021	26/03/2021	26/03/2021	225m	South East
BH082	Gowan-Brae and Garden	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	270m	South
BH083	Thorington and Garden	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	271m	South
BH065	Tree Tops and Garden	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	301m	South
BH182	Colonia	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	352m	South East
BH070	Paul Harris Lookout	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	366m	South

Map Id	Name	Classification	Significance	EPI Name	Published Date	Commenced Date	Currency Date	Distance	Direction
BH158	Fibro Cottage	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	370m	South East
BH039	Osborne College (site only)	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	372m	South West
BH183	Brighton	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	392m	South East
MV051	Track - Fairy Bower and Old Railway Track	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	417m	North West
BH159	Former Shop	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	443m	South East
BH160	Weatherboard Cottage	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	462m	South East
BH088	Heatherton	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	486m	South East
BH013	Popes Glen Creek Reserves	Conservation Area - Landscape	Local	Blue Mountains Local Environmental Plan 2015	26/03/2021	26/03/2021	26/03/2021	518m	South East
BH023	Memorial Park	Item - General	Local	Blue Mountains Local Environmental Plan 2015	26/03/2021	26/03/2021	26/03/2021	518m	South East
MB005	Lake Medlow	Item - General	Local	Blue Mountains Local Environmental Plan 2015	26/03/2021	26/03/2021	26/03/2021	556m	South East
BH143	Dulwich and Dairy Shed	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	609m	South East
BH091	Navara and Garden	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	613m	South East
MG023	Blackheath Glen Coal Mine	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	614m	South
BH089	Carcoola	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	638m	South East
MV031	Mount Victoria Cemetery	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	650m	North
MV013	Gatekeeper's Cottage	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	670m	North West
BH058	Grounds - Parklands	Item - General	Local	Blue Mountains Local Environmental Plan 2015	26/03/2021	26/03/2021	26/03/2021	670m	South East
BH118	Track - Mermaids Cave and Off Megalong Road Swamp	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	705m	South
BH021	Centennial Pass and Porters Pass Reserves Heritage Conservation Area	Conservation Area - Landscape	Local	Blue Mountains Local Environmental Plan 2015	26/03/2021	26/03/2021	26/03/2021	717m	South West
MV011	Karawatha House	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	726m	North West
MV008	Toll House	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	732m	North West
BH013	Popes Glen Creek Reserves	Conservation Area - Landscape	Local	Blue Mountains Local Environmental Plan 2015	26/03/2021	26/03/2021	26/03/2021	761m	South East
BH013	Popes Glen Creek Reserves	Conservation Area - Landscape	Local	Blue Mountains Local Environmental Plan 2015	26/03/2021	26/03/2021	26/03/2021	801m	South East
BH213	Hat Hill Road Heritage Conservation Area	Conservation Area - General	Local	Blue Mountains Local Environmental Plan 2015	19/07/2019	19/07/2019	26/03/2021	817m	East



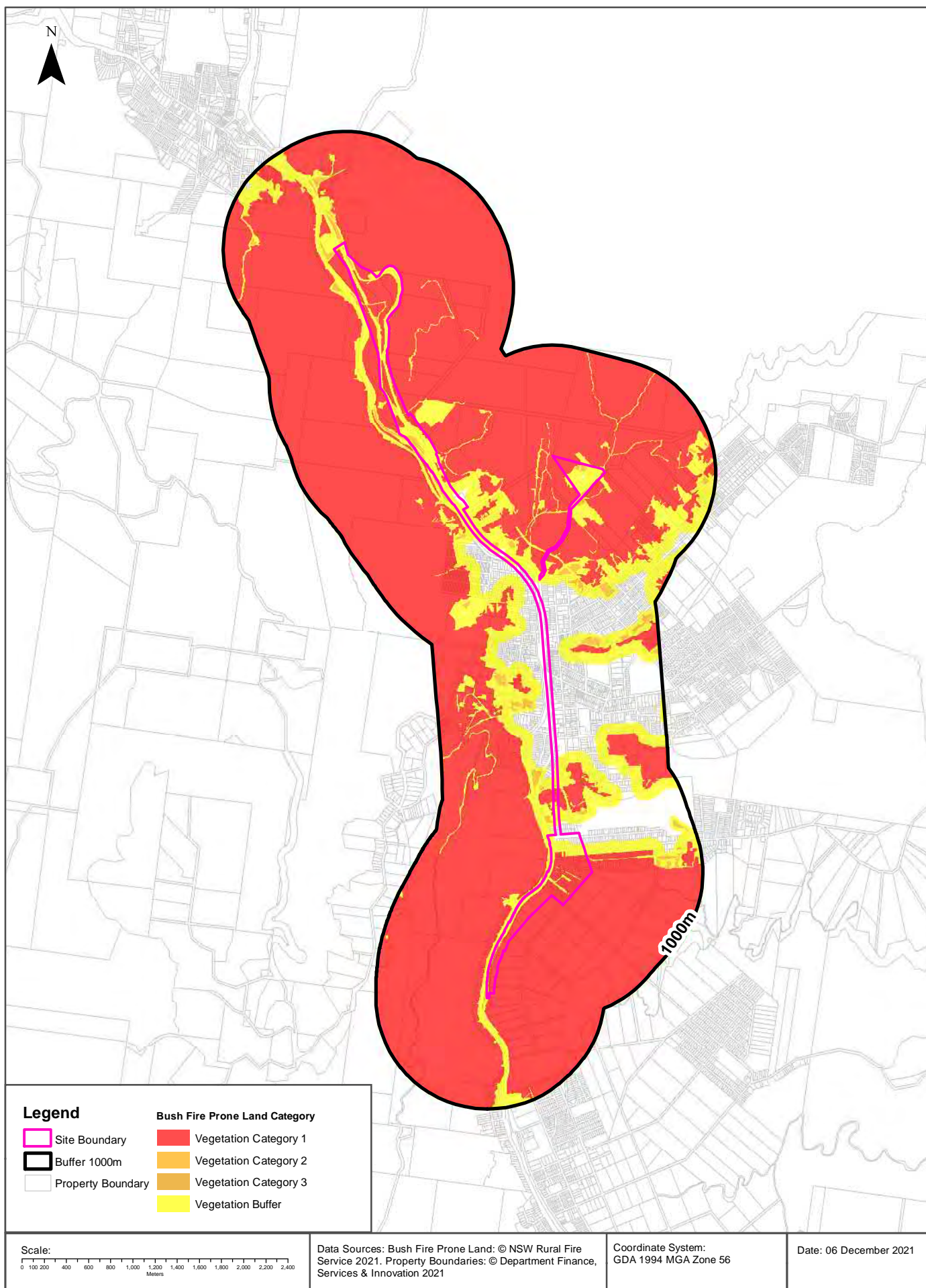
Map Id	Name	Classification	Significance	EPI Name	Published Date	Commenced Date	Currency Date	Distance	Direction
MB006	Gatekeeper's Cottage	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	881m	South
BH080	Narkoolah	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	889m	South
MV001	Trig Station	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	911m	North West
BH136	St Elmo and Garden	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	927m	East
MV012	Exeter	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	927m	North West
MB016	The Pines	Item - General	Local	Blue Mountains Local Environmental Plan 2015	21/12/2015	15/02/2016	26/03/2021	965m	South

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# Natural Hazards - Bush Fire Prone Land

Road Alignment, Blackheath, NSW 2785 (South)



## Natural Hazards

Road Alignment, Blackheath, NSW 2785 (South)

### 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 Category 2	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

Road Alignment, Blackheath, NSW 2785 (South)

### Ramsar Wetlands

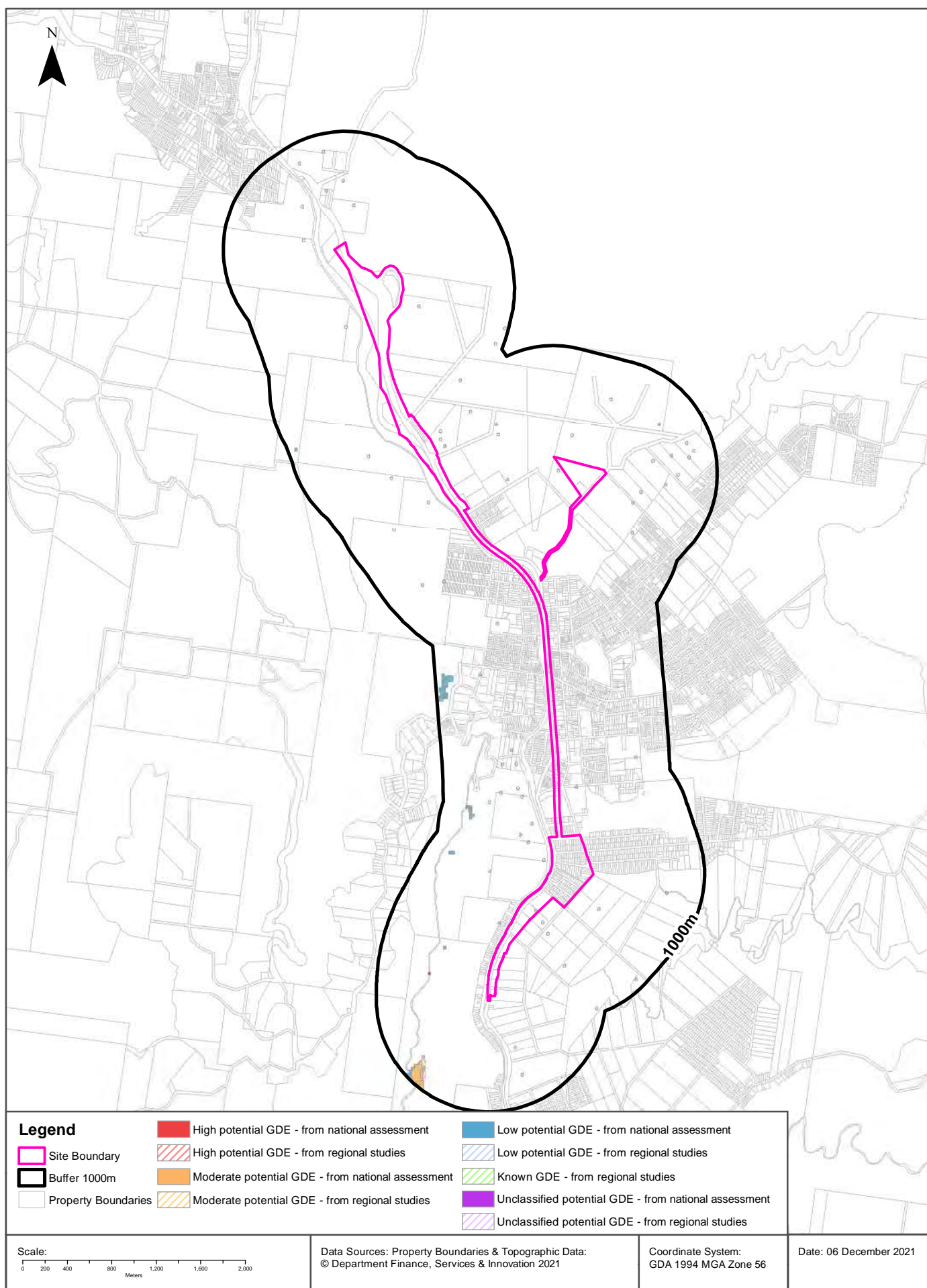
What Ramsar Wetland areas exist within the dataset buffer?

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

Road Alignment, Blackheath, NSW 2785 (South)





## Ecological Constraints

Road Alignment, Blackheath, NSW 2785 (South)

### Groundwater Dependent Ecosystems Atlas

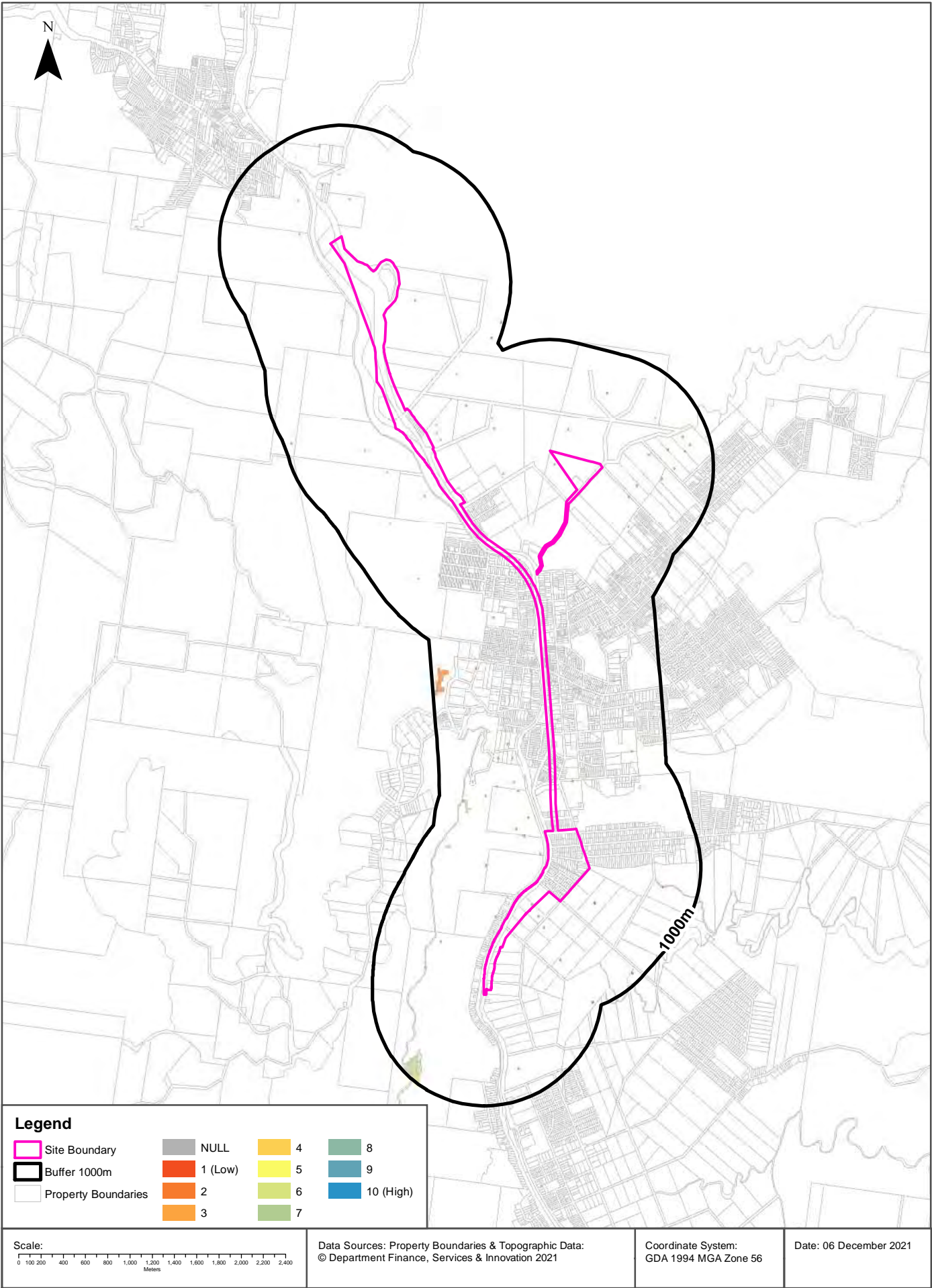
Type	GDE Potential	Geomorphology	Ecosystem Type	Aquifer Geology	Distance	Direction
Aquatic	Unclassified potential GDE - from regional studies	Deeply dissected sandstone plateaus.	Swamp		0m	On-site
Terrestrial	Low potential GDE - from national assessment	Deeply dissected sandstone plateaus.	Vegetation	Consolidated sedimentary	430m	South
Terrestrial	High potential GDE - from national assessment	Deeply dissected sandstone plateaus.	Vegetation	Consolidated sedimentary	519m	South
Terrestrial	Moderate potential GDE - from national assessment	Deeply dissected sandstone plateaus.	Vegetation	Consolidated sedimentary	754m	South

Groundwater Dependent Ecosystems Atlas Data Source: The Bureau of Meteorology

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# Ecological Constraints - Inflow Dependent Ecosystems Likelihood

## Road Alignment, Blackheath, NSW 2785 (South)



## Ecological Constraints

Road Alignment, Blackheath, NSW 2785 (South)

### Inflow Dependent Ecosystems Likelihood

Type	IDE Likelihood	Geomorphology	Ecosystem Type	Aquifer Geology	Distance	Direction
Aquatic	2	Deeply dissected sandstone plateaus.	Swamp		0m	On-site
Aquatic	3	Deeply dissected sandstone plateaus.	Swamp		73m	North West
Aquatic	1	Deeply dissected sandstone plateaus.	Swamp		226m	South
Terrestrial	8	Deeply dissected sandstone plateaus.	Vegetation	Consolidated sedimentary	430m	South
Aquatic	5	Deeply dissected sandstone plateaus.	Swamp		461m	South
Terrestrial	7	Deeply dissected sandstone plateaus.	Vegetation	Consolidated sedimentary	692m	South
Terrestrial	2	Deeply dissected sandstone plateaus.	Vegetation	Consolidated sedimentary	767m	South
Aquatic	4	Deeply dissected sandstone plateaus.	Swamp		811m	North West
Terrestrial	4	Deeply dissected sandstone plateaus.	Vegetation	Consolidated sedimentary	925m	South

Inflow Dependent Ecosystems Likelihood Data Source: The Bureau of Meteorology  
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# Ecological Constraints

## Road Alignment, Blackheath, NSW 2785 (South)

### 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	Heleioporus australiacus	Giant Burrowing Frog	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Amphibia	Mixophyes balbus	Stuttering Frog	Endangered	Category 2	Vulnerable	
Animalia	Amphibia	Pseudophryne australis	Red-crowned Toadlet	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Anthochaera phrygia	Regent Honeyeater	Critically Endangered	Not Sensitive	Critically Endangered	
Animalia	Aves	Apus pacificus	Fork-tailed Swift	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; 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	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 lathami	Glossy Black-Cockatoo	Vulnerable	Category 2	Not Listed	
Animalia	Aves	Chthonicola sagittata	Speckled Warbler	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Climacteris picumnus victoriae	Brown Treecreeper (eastern subspecies)	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Daphoenositta chrysoptera	Varied Sittella	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Dasyornis brachypterus	Eastern Bristlebird	Endangered	Category 2	Endangered	
Animalia	Aves	Gallinago hardwickii	Latham's Snipe	Not Listed	Not Sensitive	Not Listed	ROKAMBA;JAMBA
Animalia	Aves	Geophaps scripta scripta	Squatter Pigeon (southern subspecies)	Critically Endangered	Not Sensitive	Vulnerable	
Animalia	Aves	Glossopsitta pusilla	Little Lorikeet	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Hieraaetus morphnoides	Little Eagle	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Hirundapus caudacutus	White-throated Needle-tail	Not Listed	Not Sensitive	Vulnerable	ROKAMBA;CAMBA; JAMBA
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	Melithreptus gularis gularis	Black-chinned Honeyeater (eastern subspecies)	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Menura alberti	Albert's Lyrebird	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Ninox connivens	Barking Owl	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Ninox strenua	Powerful Owl	Vulnerable	Category 3	Not Listed	

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Animalia	Aves	Pachycephala inornata	Gilbert's Whistler	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	Pomatostomus temporalis temporalis	Grey-crowned Babbler (eastern subspecies)	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Stagonopleura guttata	Diamond Firetail	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Tyto tenebricosa	Sooty Owl	Vulnerable	Category 3	Not Listed	
Animalia	Insecta	Petalura gigantea	Giant Dragonfly	Endangered	Not Sensitive	Not Listed	
Animalia	Mammalia	Bettongia gaimardi	Tasmanian Bettong	Presumed Extinct	Not Sensitive	Extinct	
Animalia	Mammalia	Cercartetus nanus	Eastern Pygmy-possum	Vulnerable	Not Sensitive	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	Isodon obesulus obesulus	Southern Brown Bandicoot (eastern)	Endangered	Not Sensitive	Endangered	
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	Petauroides volans	Greater Glider	Not Listed	Not Sensitive	Vulnerable	
Animalia	Mammalia	Petaurus australis	Yellow-bellied Glider	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Petaurus norfolcensis	Squirrel Glider	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Petrogale penicillata	Brush-tailed Rock-wallaby	Endangered	Not Sensitive	Vulnerable	
Animalia	Mammalia	Phascogale cinerea	Koala	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Mammalia	Pteropus poliocephalus	Grey-headed Flying-fox	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Mammalia	Scoteanax rueppellii	Greater Broad-nosed Bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Reptilia	Caretta caretta	Loggerhead Turtle	Endangered	Not Sensitive	Endangered	
Animalia	Reptilia	Eulamprus leuraensis	Blue Mountains Water Skink	Endangered	Not Sensitive	Endangered	
Animalia	Reptilia	Hoplocephalus bungaroides	Broad-headed Snake	Endangered	Category 2	Vulnerable	
Fungi	Flora	Hygrocybe austropratensis		Endangered	Not Sensitive	Not Listed	
Plantae	Flora	Acacia baueri subsp. aspera		Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Acacia bynoeana	Bynoe's Wattle	Endangered	Not Sensitive	Vulnerable	
Plantae	Flora	Acacia flocktoniae	Flockton Wattle	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Acrophyllum australe		Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Caesia parviflora var. minor	Small Pale Grass-lily	Endangered	Not Sensitive	Not Listed	



Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Plantae	Flora	Callistemon megalongensis	Megalong Valley Bottlebrush	Critically Endangered	Not Sensitive	Critically Endangered	
Plantae	Flora	Callistemon purpurascens		Critically Endangered	Not Sensitive	Critically Endangered	
Plantae	Flora	Carex klaphakei	Klaphake's Sedge	Endangered	Not Sensitive	Not Listed	
Plantae	Flora	Diuris aequalis	Buttercup Doubletail	Endangered	Category 2	Vulnerable	
Plantae	Flora	Epacris hamiltonii		Endangered	Not Sensitive	Endangered	
Plantae	Flora	Eucalyptus aggregata	Black Gum	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Eucalyptus copulans		Endangered	Category 3	Endangered	
Plantae	Flora	Eucalyptus nicholii	Narrow-leaved Black Peppermint	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Eucalyptus pulverulenta	Silver-leafed Gum	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Euphrasia bowdeniae	Blue Mountains Cliff Eyebright	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Galium australe	Tangled Bedstraw	Endangered	Not Sensitive	Not Listed	
Plantae	Flora	Grammitis stenophylla	Narrow-leaf Finger Fern	Endangered	Category 3	Not Listed	
Plantae	Flora	Grevillea acanthifolia subsp. paludosa	Bog Grevillea	Endangered	Not Sensitive	Endangered	
Plantae	Flora	Isopogon fletcheri	Fletcher's Drumsticks	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Kunzea cabbagei	Cabbage Kunzea	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Leionema lachnaeoides		Endangered	Not Sensitive	Endangered	
Plantae	Flora	Lepidosperma evansianum	Evans Sedge	Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Leucopogon exolasius	Woronora Beard-heath	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Persoonia acerosa	Needle Geebung	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Ptherosphaera fitzgeraldii	Dwarf Mountain Pine	Endangered	Not Sensitive	Endangered	
Plantae	Flora	Prasophyllum fuscum	Slaty Leek Orchid	Critically Endangered	Category 2	Vulnerable	
Plantae	Flora	Prasophyllum pallens	Musty Leek Orchid	Vulnerable	Category 2	Not Listed	
Plantae	Flora	Pultenaea glabra	Smooth Bush-Pea	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Senecio linearifolius var. dangarensis		Endangered	Not Sensitive	Not Listed	
Plantae	Flora	Tetradlea juncea	Black-eyed Susan	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Velleia perfoliata		Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Veronica blakelyi		Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Xanthosia scopulicola		Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Zieria covenyi	Coveny's Zieria	Endangered	Not Sensitive	Endangered	
Plantae	Flora	Zieria involucreata		Endangered	Not Sensitive	Vulnerable	

Data does not include NSW category 1 sensitive species.

NSW BioNet: © State of NSW and Office of Environment and Heritage

## 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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 irrespective of how that liability arises including in contract or tort, liability under indemnity or for any other common law, equitable or statutory cause of action or otherwise.
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**Date: 06 Dec 2021**

**Reference: LS027241 EA**

**Address: Road Alignment, Blackheath, NSW 2785 (1 of 10)**



# Aerial Imagery 2020

Road Alignment, Blackheath, NSW 2785 (1 of 10)





# Aerial Imagery 2015

Road Alignment, Blackheath, NSW 2785 (1 of 10)





## Aerial Imagery 2007

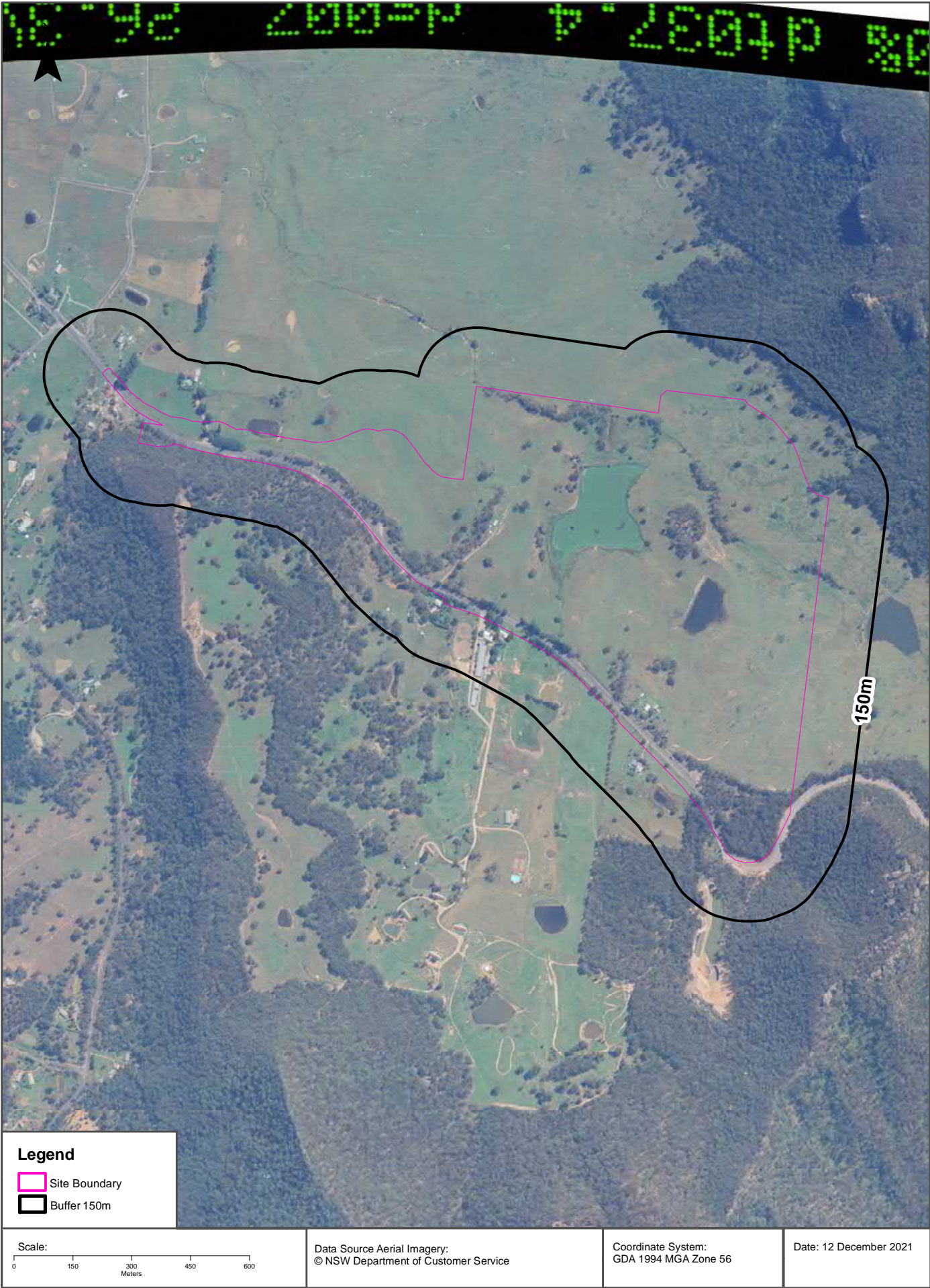
Road Alignment, Blackheath, NSW 2785 (1 of 10)





Aerial Imagery 1999

Road Alignment, Blackheath, NSW 2785 (1 of 10)





Aerial Imagery 1994

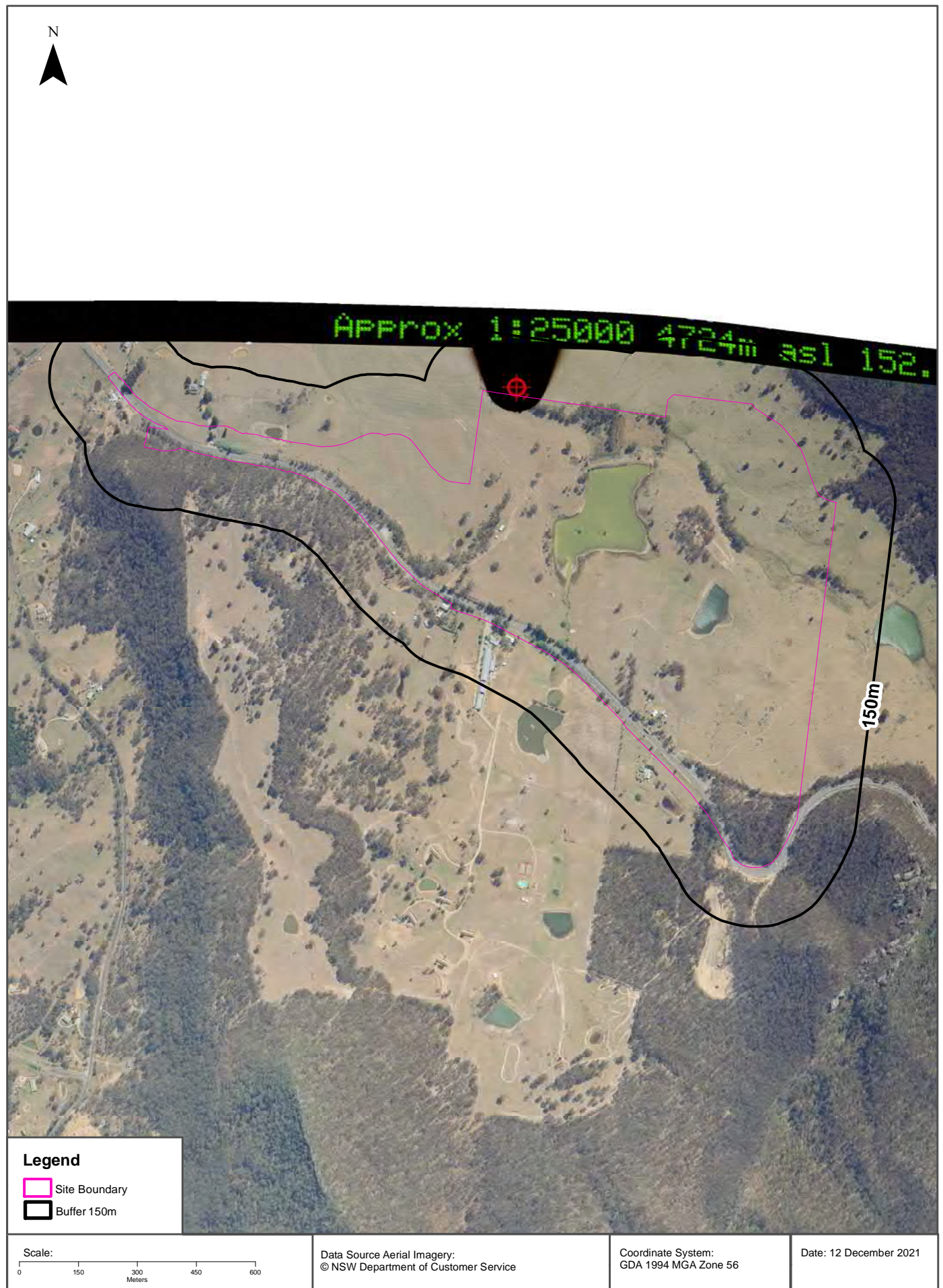
Road Alignment, Blackheath, NSW 2785 (1 of 10)





# Aerial Imagery 1994

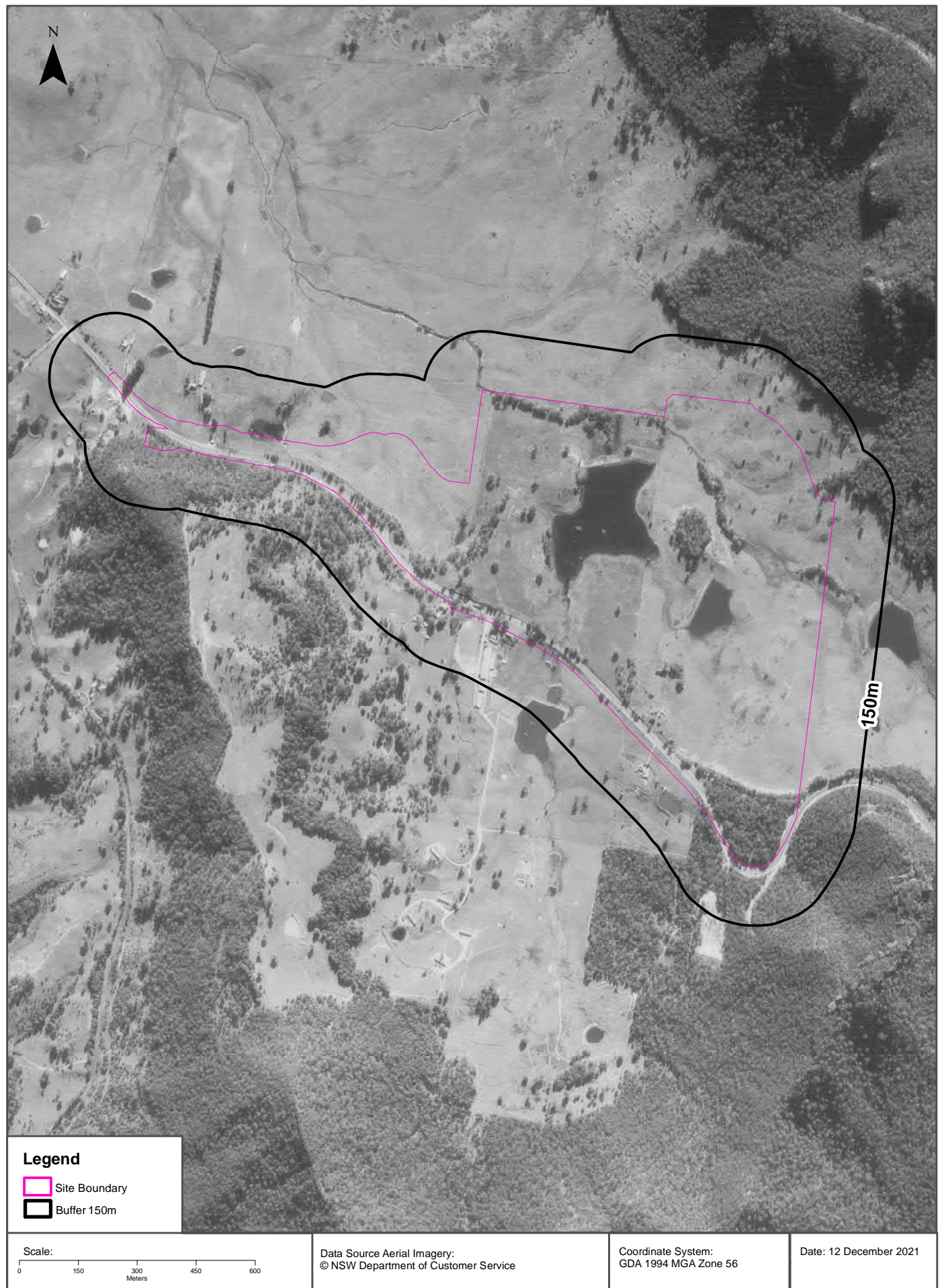
Road Alignment, Blackheath, NSW 2785 (1 of 10)





# Aerial Imagery 1984

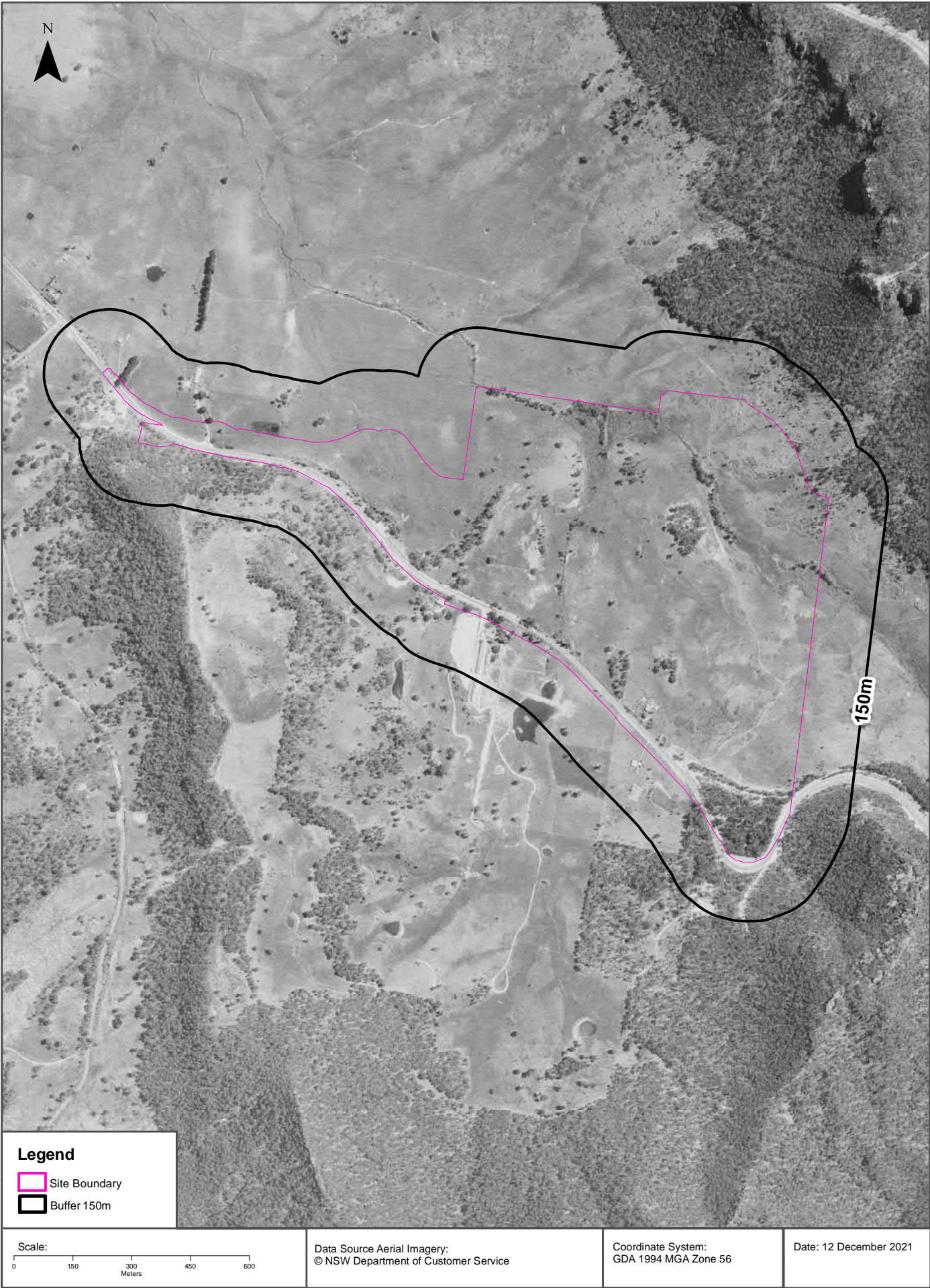
Road Alignment, Blackheath, NSW 2785 (1 of 10)





Aerial Imagery 1975

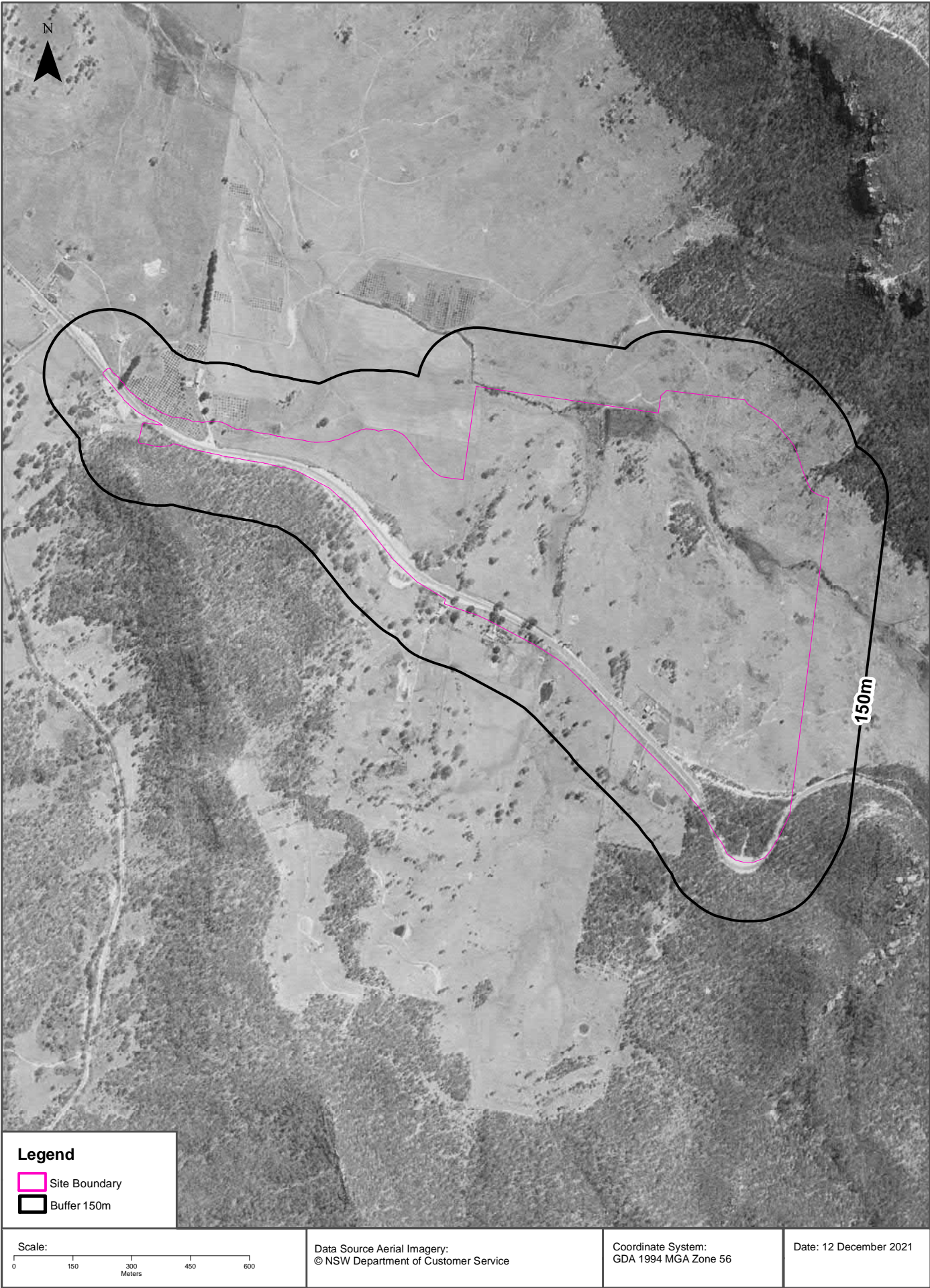
Road Alignment, Blackheath, NSW 2785 (1 of 10)





Aerial Imagery 1966

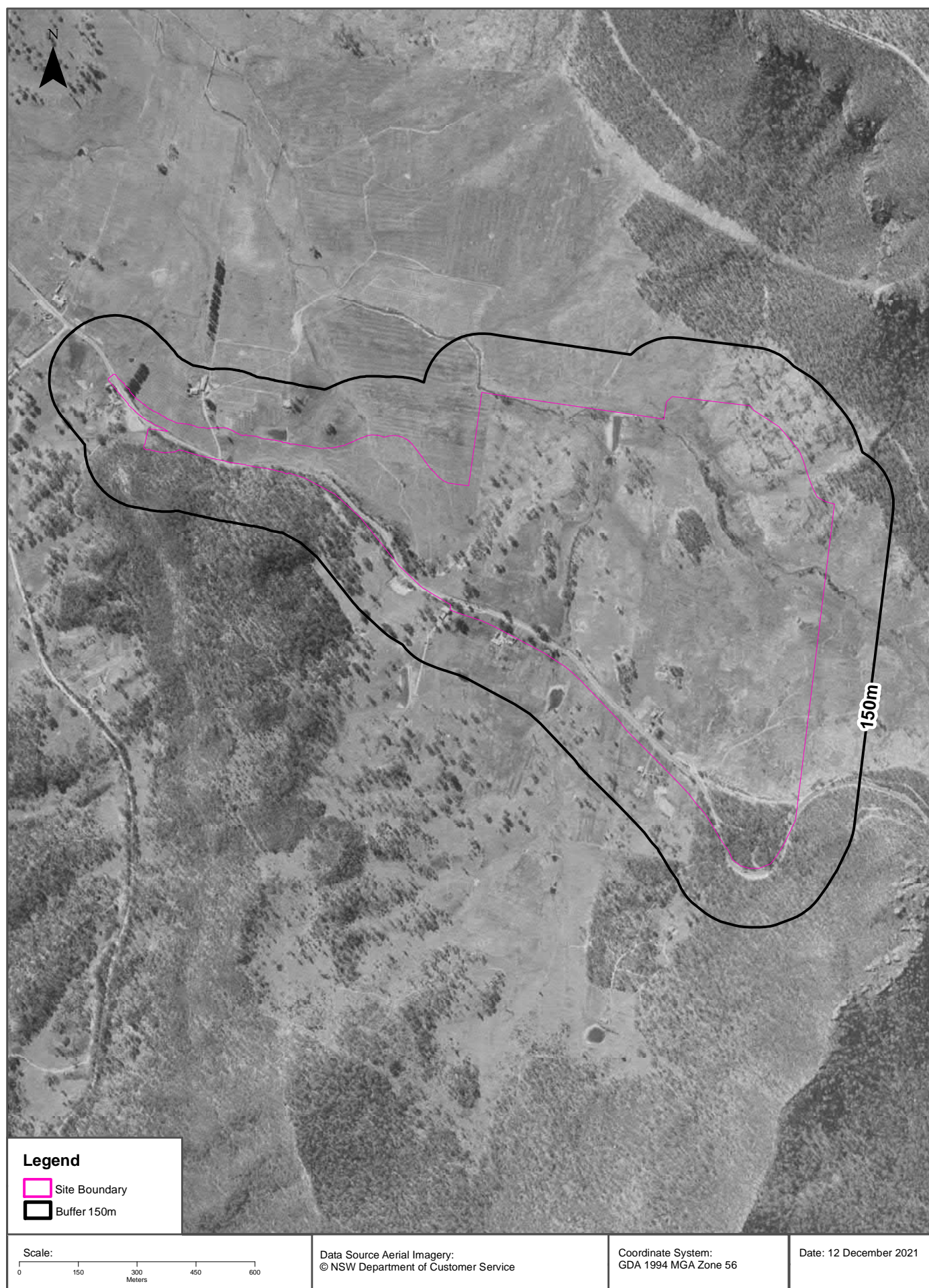
Road Alignment, Blackheath, NSW 2785 (1 of 10)





# Aerial Imagery 1958

Road Alignment, Blackheath, NSW 2785 (1 of 10)





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**Date: 06 Dec 2021**

**Reference: LS027242 EA**

**Address: Road Alignment, Blackheath, NSW 2785 (2 of 10)**







# Aerial Imagery 2015

Road Alignment, Blackheath, NSW 2785 (2 of 10)





# Aerial Imagery 2007

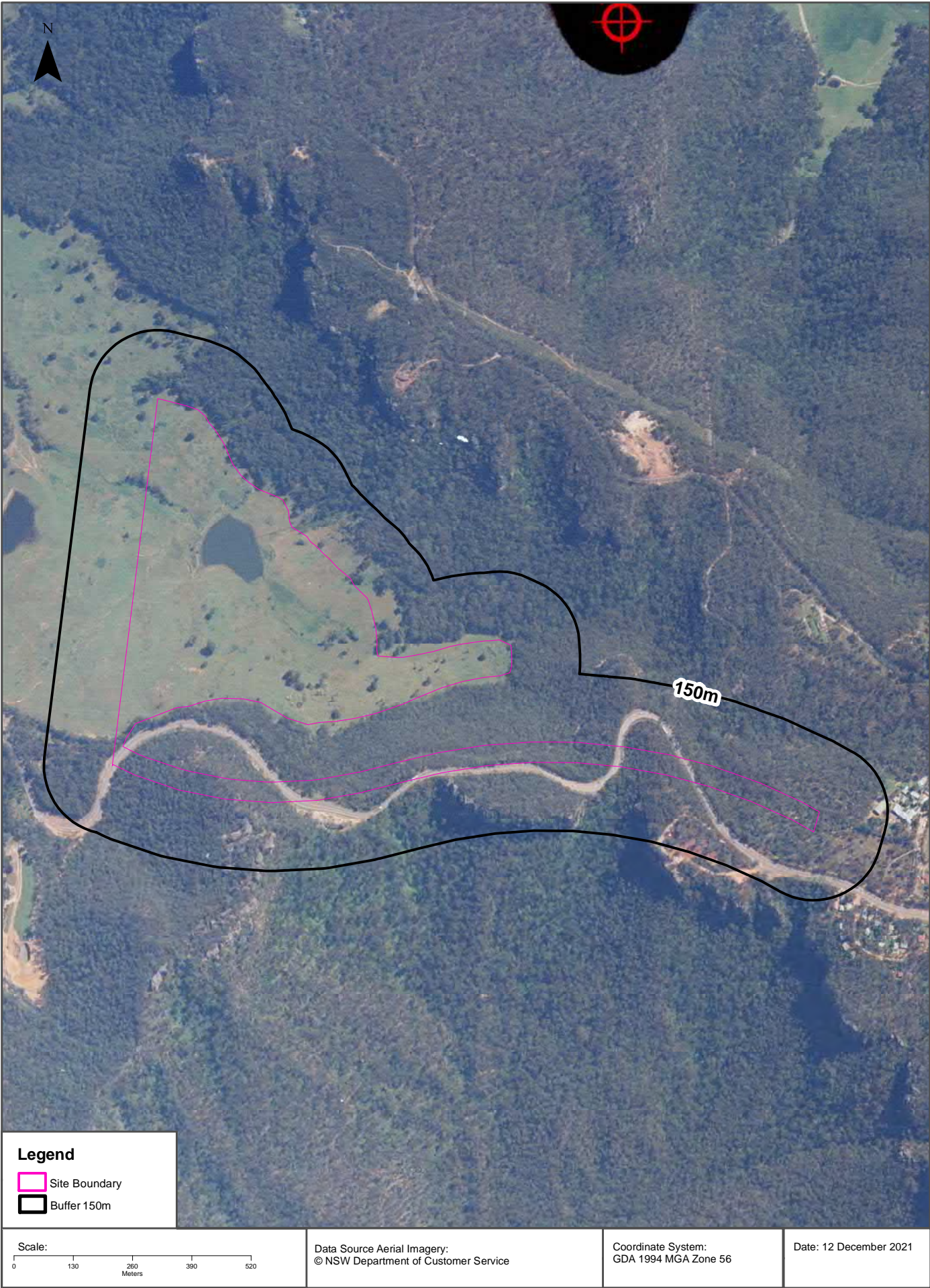
Road Alignment, Blackheath, NSW 2785 (2 of 10)





Aerial Imagery 1999

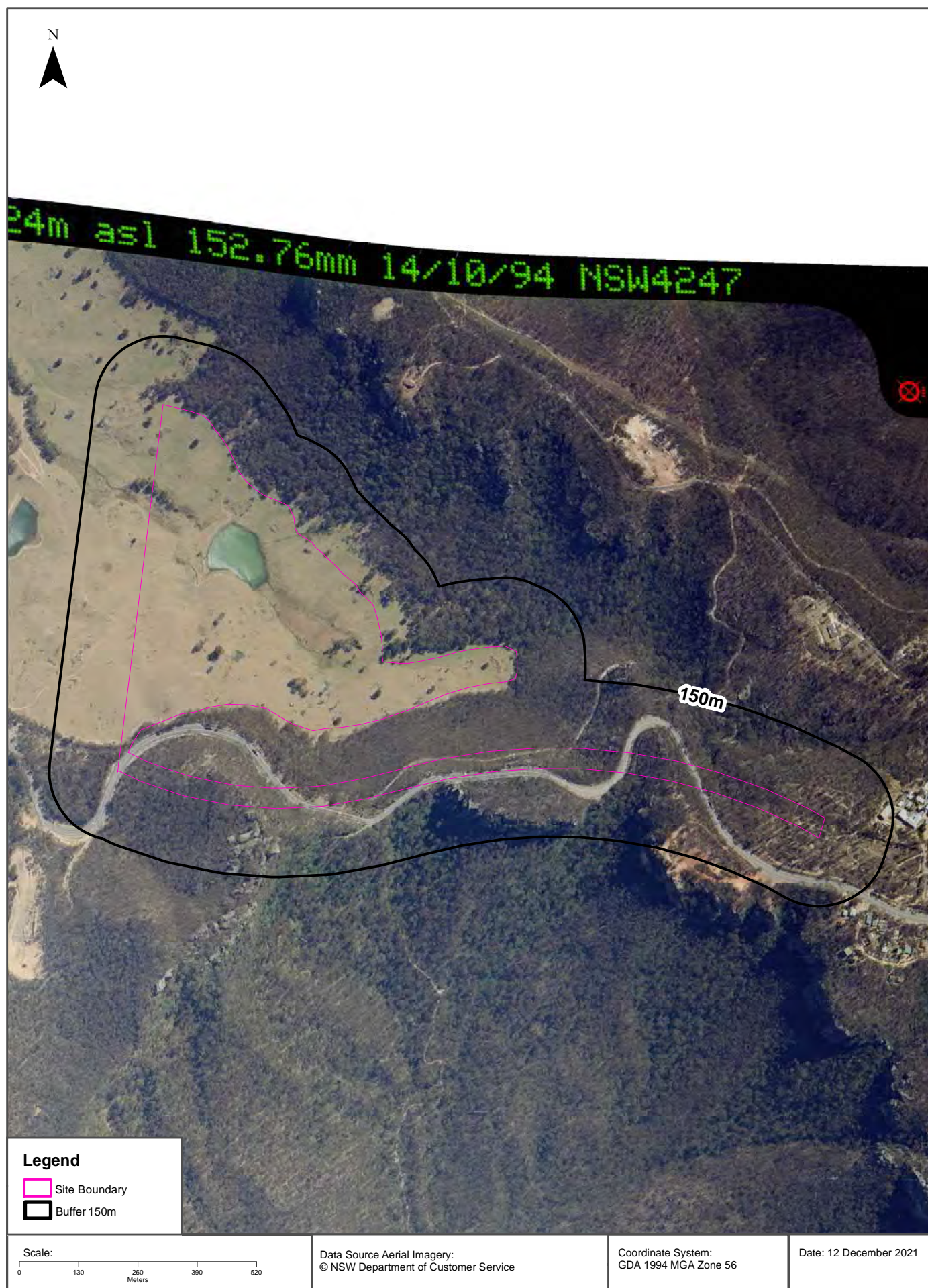
Road Alignment, Blackheath, NSW 2785 (2 of 10)





# Aerial Imagery 1994

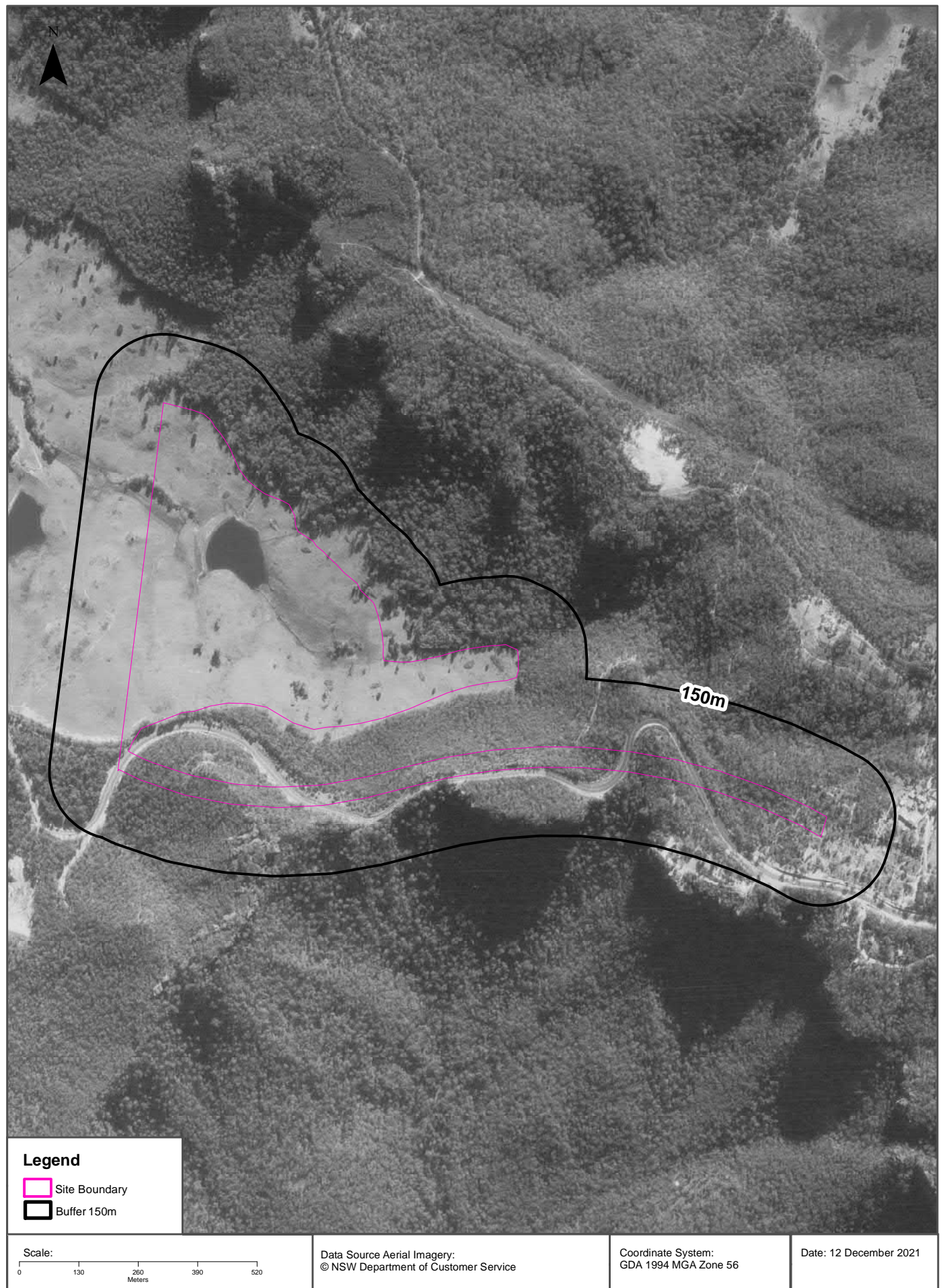
Road Alignment, Blackheath, NSW 2785 (2 of 10)





# Aerial Imagery 1984

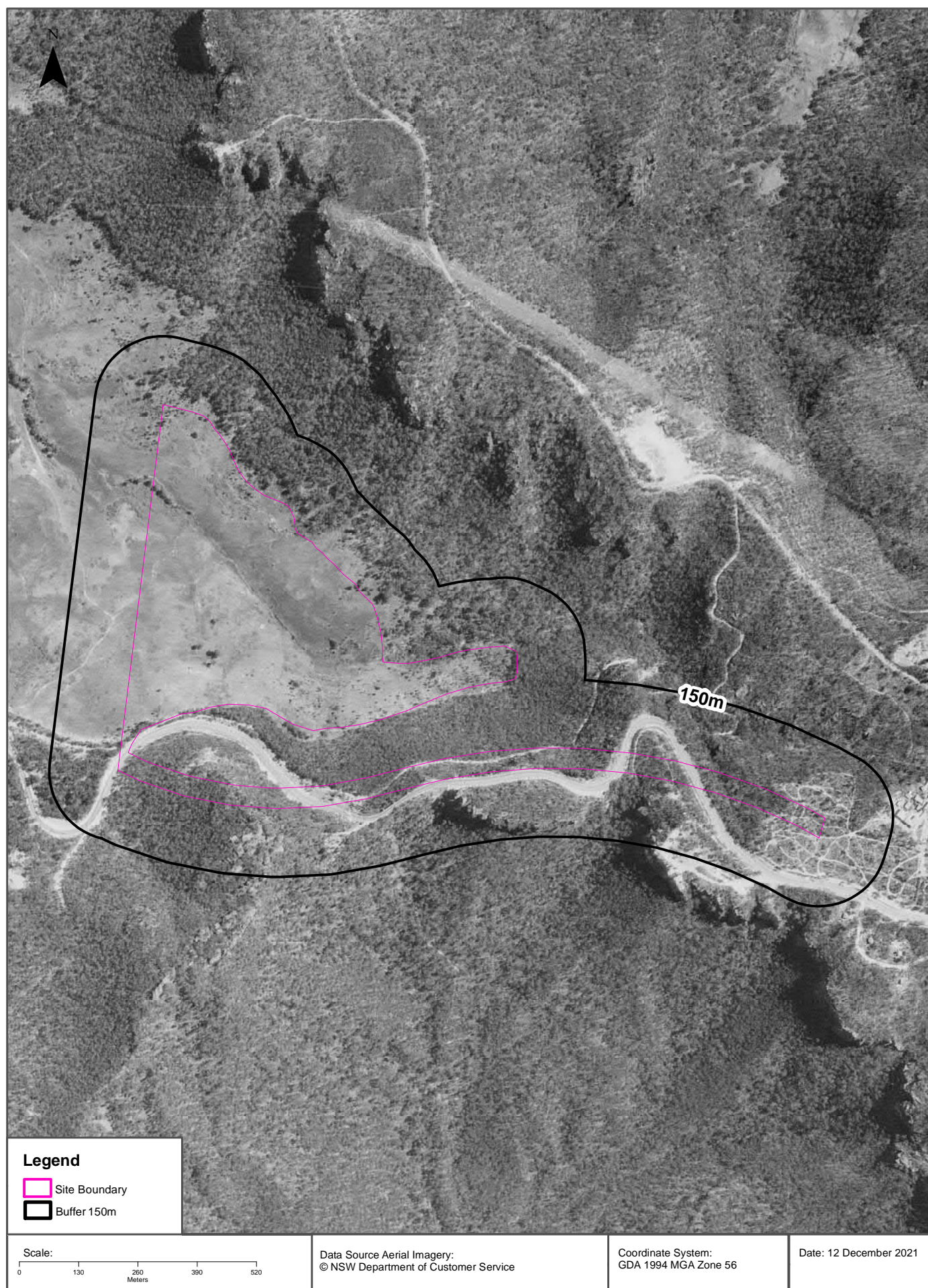
Road Alignment, Blackheath, NSW 2785 (2 of 10)





# Aerial Imagery 1975

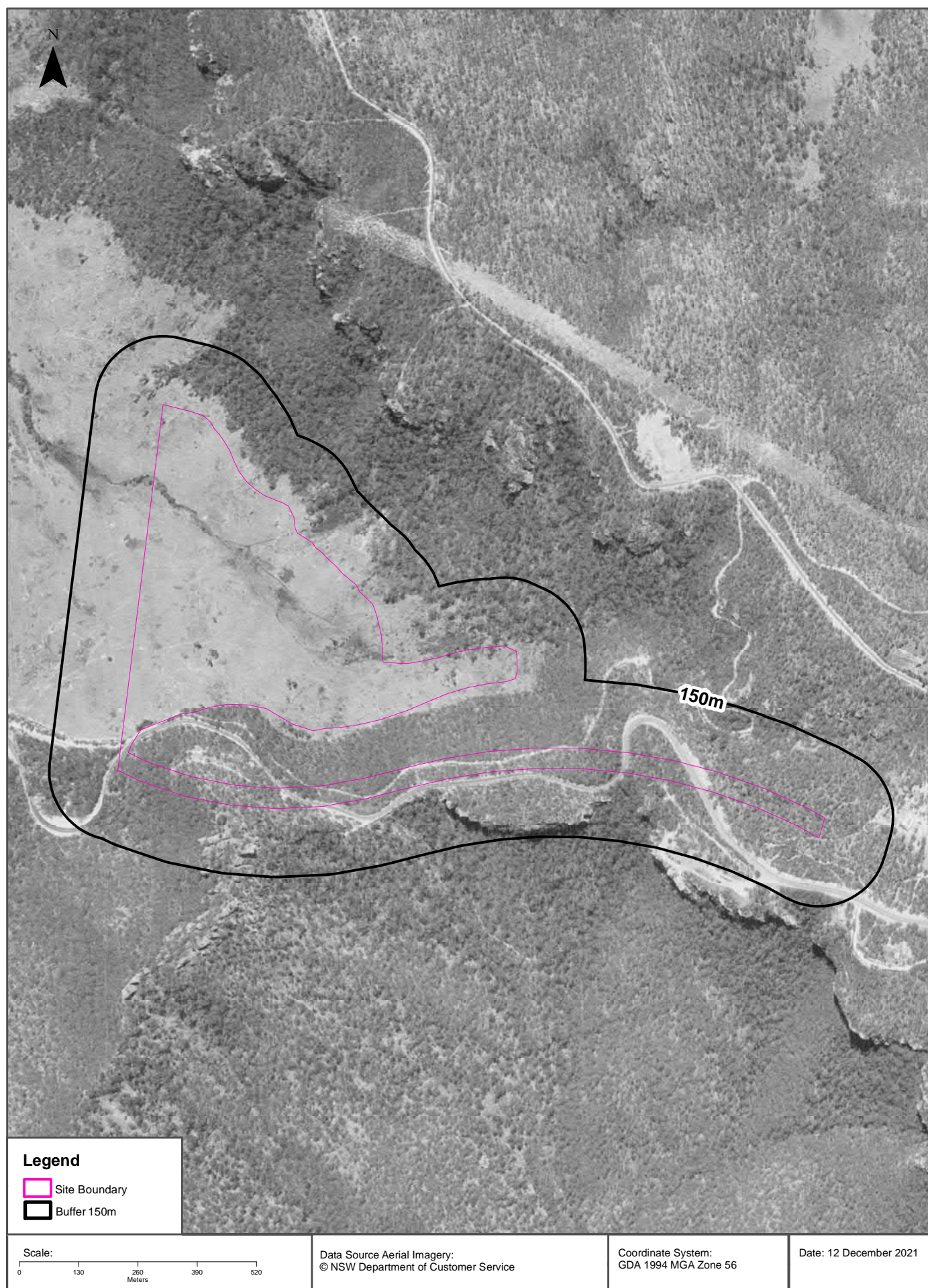
Road Alignment, Blackheath, NSW 2785 (2 of 10)





# Aerial Imagery 1966

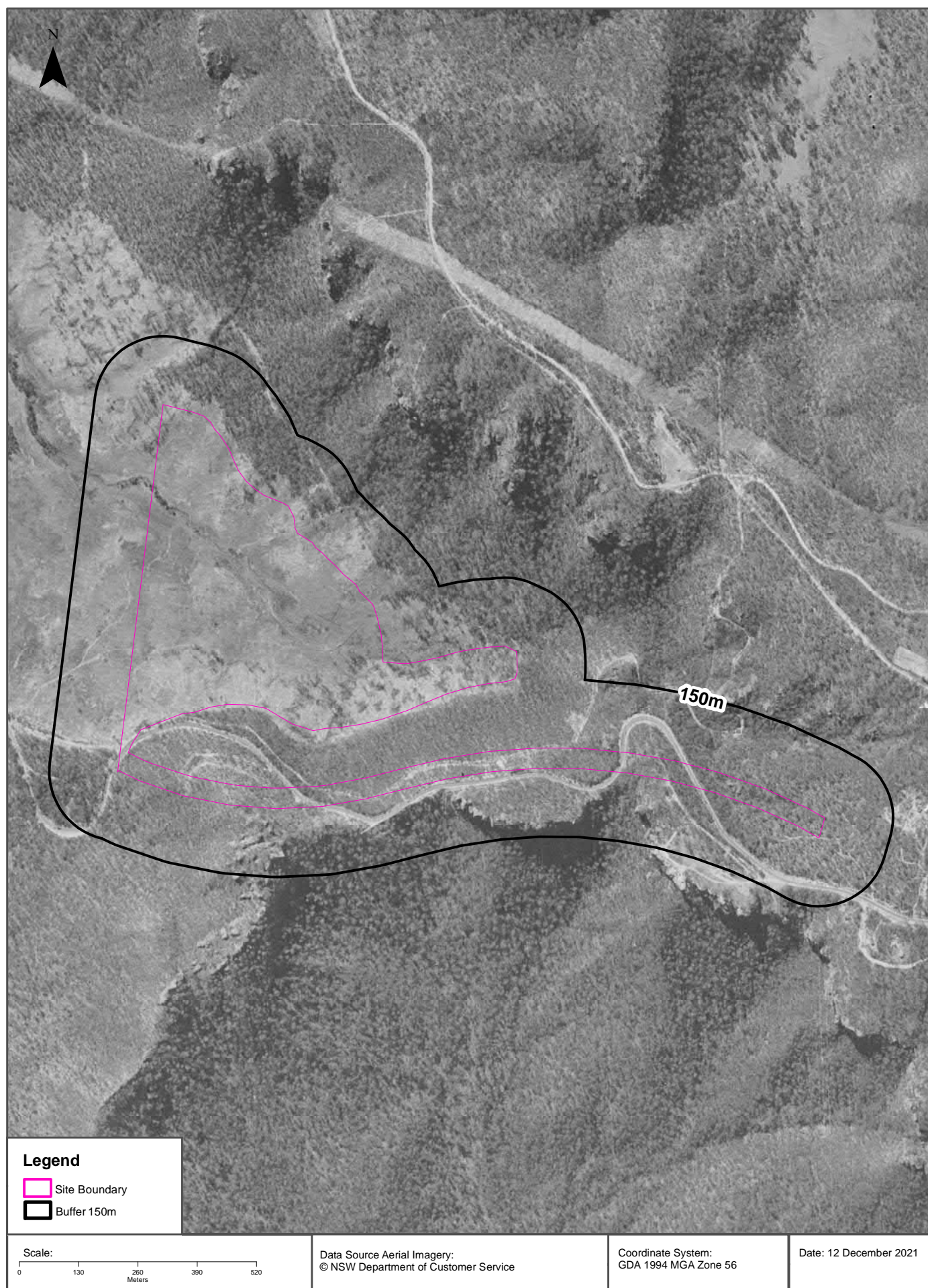
Road Alignment, Blackheath, NSW 2785 (2 of 10)





# Aerial Imagery 1958

Road Alignment, Blackheath, NSW 2785 (2 of 10)



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    - (a) any indirect, incidental, consequential, special or exemplary damages arising out of or in relation to the Report or these Terms; or
    - (b) any loss of profit, loss of revenue, loss of interest, loss of data, loss of goodwill or loss of business opportunities, business interruption arising directly or indirectly out of or in relation to the Report or these Terms,irrespective of how that liability arises including in contract or tort, liability under indemnity or for any other common law, equitable or statutory cause of action or otherwise.
  12. These Terms are subject to New South Wales law.



# LOTSEARCH

LOTSEARCH AERIALS

**Date: 06 Dec 2021**

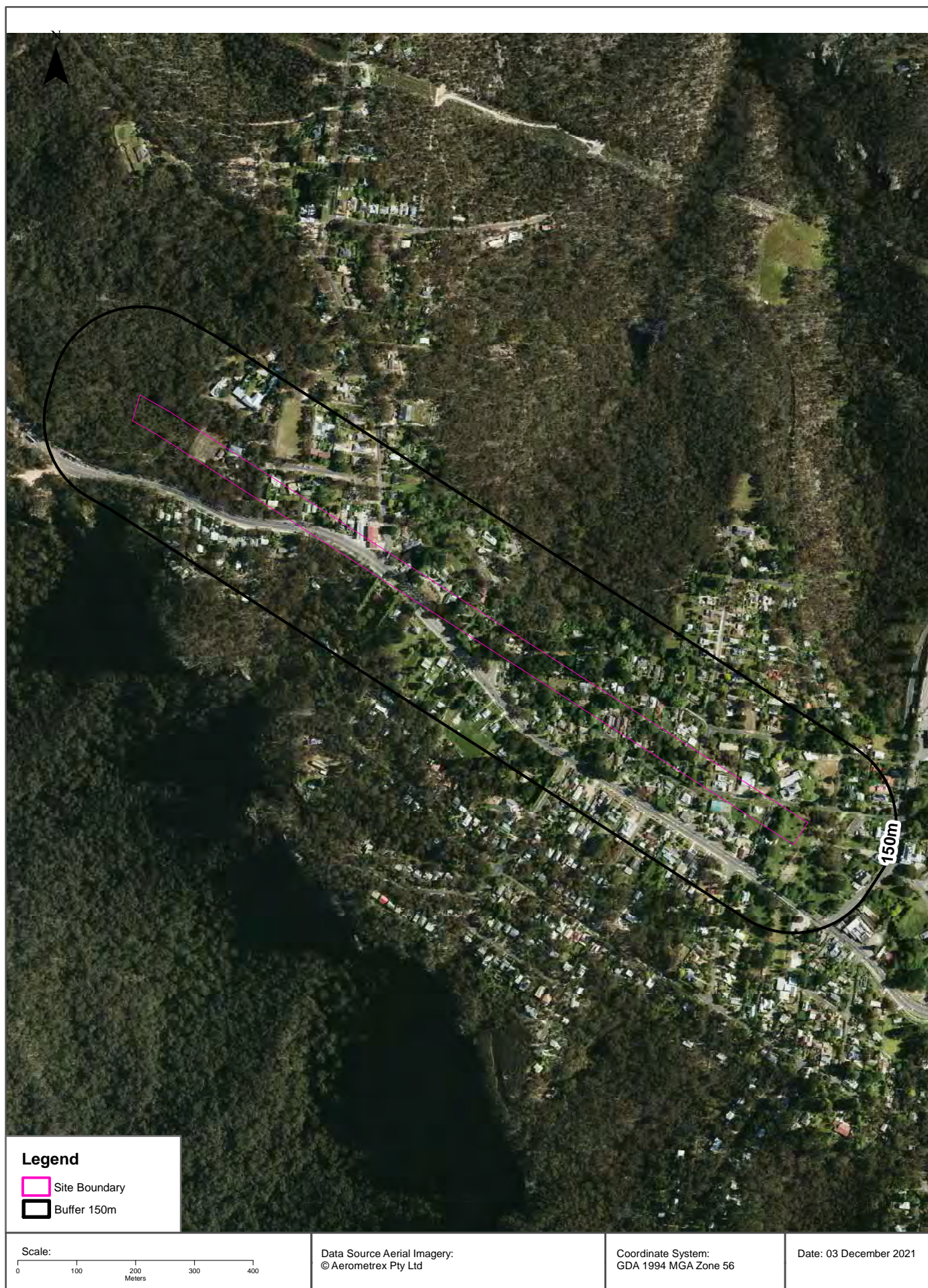
**Reference: LS027243 EA**

**Address: Road Alignment, Blackheath, NSW 2785 (3 of 10)**



# Aerial Imagery 2020

Road Alignment, Blackheath, NSW 2785 (3 of 10)





# Aerial Imagery 2015

Road Alignment, Blackheath, NSW 2785 (3 of 10)





## Aerial Imagery 2007

Road Alignment, Blackheath, NSW 2785 (3 of 10)





Aerial Imagery 1999

Road Alignment, Blackheath, NSW 2785 (3 of 10)





Aerial Imagery 1994

Road Alignment, Blackheath, NSW 2785 (3 of 10)



Scale: 0 100 200 300 400 Meters	Data Source Aerial Imagery: © NSW Department of Customer Service	Coordinate System: GDA 1994 MGA Zone 56	Date: 12 December 2021
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Aerial Imagery 1984

Road Alignment, Blackheath, NSW 2785 (3 of 10)





Aerial Imagery 1975

Road Alignment, Blackheath, NSW 2785 (3 of 10)

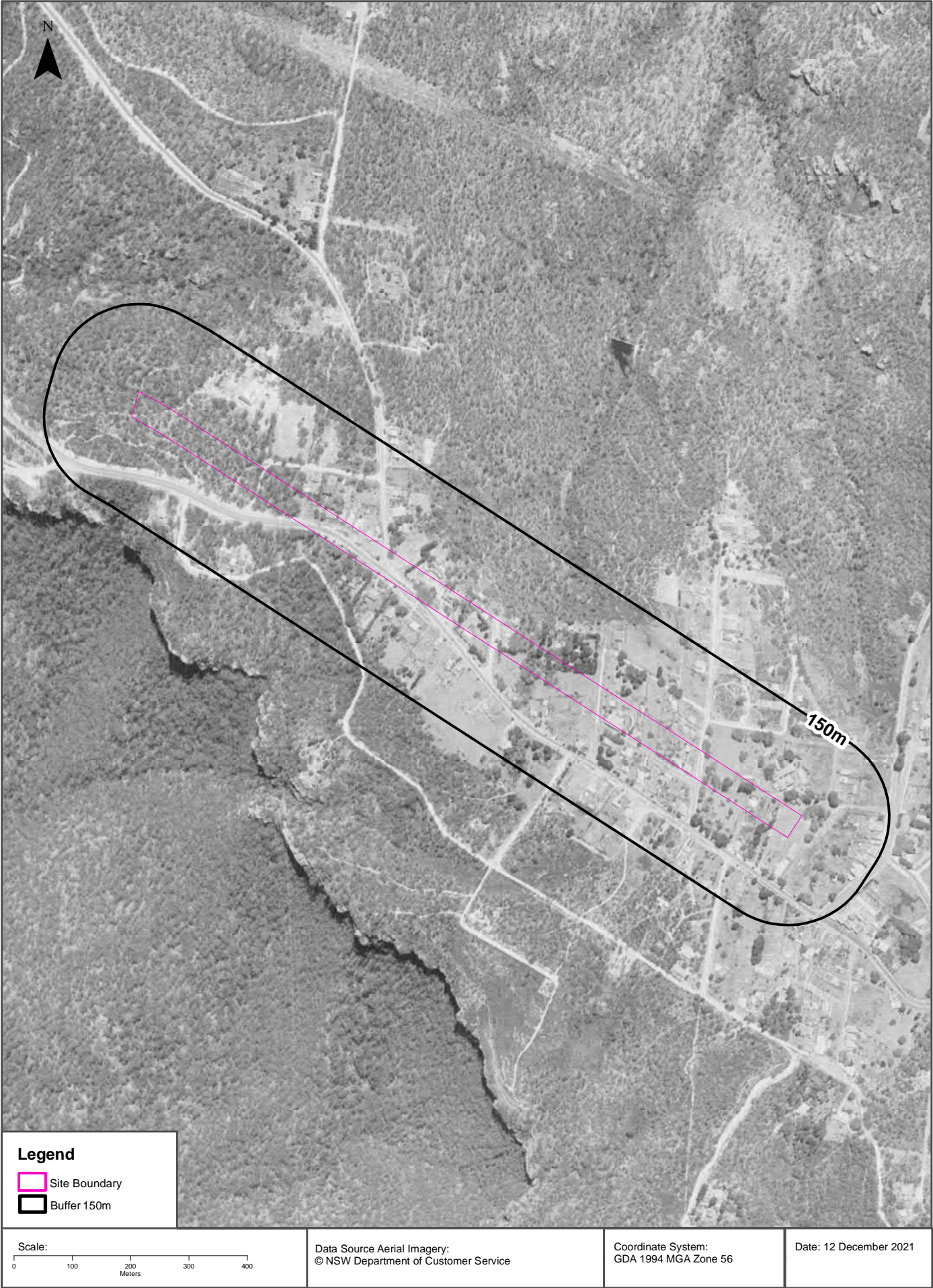


Scale: 0 100 200 300 400 Meters	Data Source Aerial Imagery: © NSW Department of Customer Service	Coordinate System: GDA 1994 MGA Zone 56	Date: 12 December 2021
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Aerial Imagery 1966

Road Alignment, Blackheath, NSW 2785 (3 of 10)





Aerial Imagery 1958

Road Alignment, Blackheath, NSW 2785 (3 of 10)





# Aerial Imagery 1943

Road Alignment, Blackheath, NSW 2785 (3 of 10)



## USE OF REPORT - APPLICABLE TERMS

The following terms apply to any person (End User) who is given the Report by the person who purchased the Report from Lotsearch Pty Ltd (ABN: 89 600 168 018) (Lotsearch) or who otherwise has access to the Report (Terms). The contract terms that apply between Lotsearch and the purchaser of the Report are specified in the order form pursuant to which the Report was ordered and the terms set out below are of no effect as between Lotsearch and the purchaser of the Report.

1. End User acknowledges and agrees that:
  - (a) the Report is compiled from or using content (**Third Party Content**) which is comprised of:
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    - (ii) content which is derived from content described in paragraph (i);
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  - (c) the Third Party Content Suppliers do not constitute an exhaustive set of all repositories or sources of information available in relation to the property which is the subject of the Report (**Property**) and accordingly neither Lotsearch nor Third Party Content Suppliers gives any warranty in relation to the accuracy or completeness of the Third Party Content incorporated into the report including any contaminated land assessment or other assessment included as part of a Report;
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  - (i) the Report should not be used or taken to indicate or exclude actual fitness or unfitness of Land or Property for any particular purpose
  - (j) the Report should not be relied upon for determining saleability or value or making any other decisions in relation to the Property and in particular should not be taken to be a rating or assessment of the desirability or market value of the property or its features; and
  - (k) the End User should undertake its own inspections of the Land or Property to satisfy itself that there are no defects or failures
2. The End User may not make the Report or any copies or extracts of the report or any part of it available to any other person. If End User wishes to provide the Report to any other person or make extracts or copies of the Report, it must contact the purchaser of the Report before doing so to ensure the proposed use is consistent with the contract terms between Lotsearch and the purchaser.
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  - (c) releases each Third Party Content Supplier from any claim it may have otherwise had in connection with the Report, or the negotiation of, entry into, performance of, or termination of these Terms.
5. The End User acknowledges that any Third Party Supplier shall be entitled to plead the benefits conferred on it under clause 4, despite not being a party to these terms.
  6. End User must not remove any copyright notices, trade marks, digital rights management information, other embedded information, disclaimers or limitations from the Report or authorise any person to do so.
  7. End User acknowledges and agrees that Lotsearch and Third Party Content Suppliers retain ownership of all copyright, patent, design right (registered or unregistered), trade marks (registered or unregistered), database right or other data right, moral right or know how or any other intellectual property right in any Report or any other item, information or data included in or provided as part of a Report.
  8. To the extent permitted by law and subject to paragraph 9, all implied terms, representations and warranties whether statutory or otherwise relating to the subject matter of these Terms other than as expressly set out in these Terms are excluded.
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# LOTSEARCH

LOTSEARCH AERIALS

**Date: 06 Dec 2021**

**Reference: LS027244 EA**

**Address: Road Alignment, Blackheath, NSW 2785 (4 of 10)**



# Aerial Imagery 2020

Road Alignment, Blackheath, NSW 2785 (4 of 10)





# Aerial Imagery 2015

Road Alignment, Blackheath, NSW 2785 (4 of 10)





# Aerial Imagery 2007

Road Alignment, Blackheath, NSW 2785 (4 of 10)





Aerial Imagery 1999

Road Alignment, Blackheath, NSW 2785 (4 of 10)





## Aerial Imagery 1994

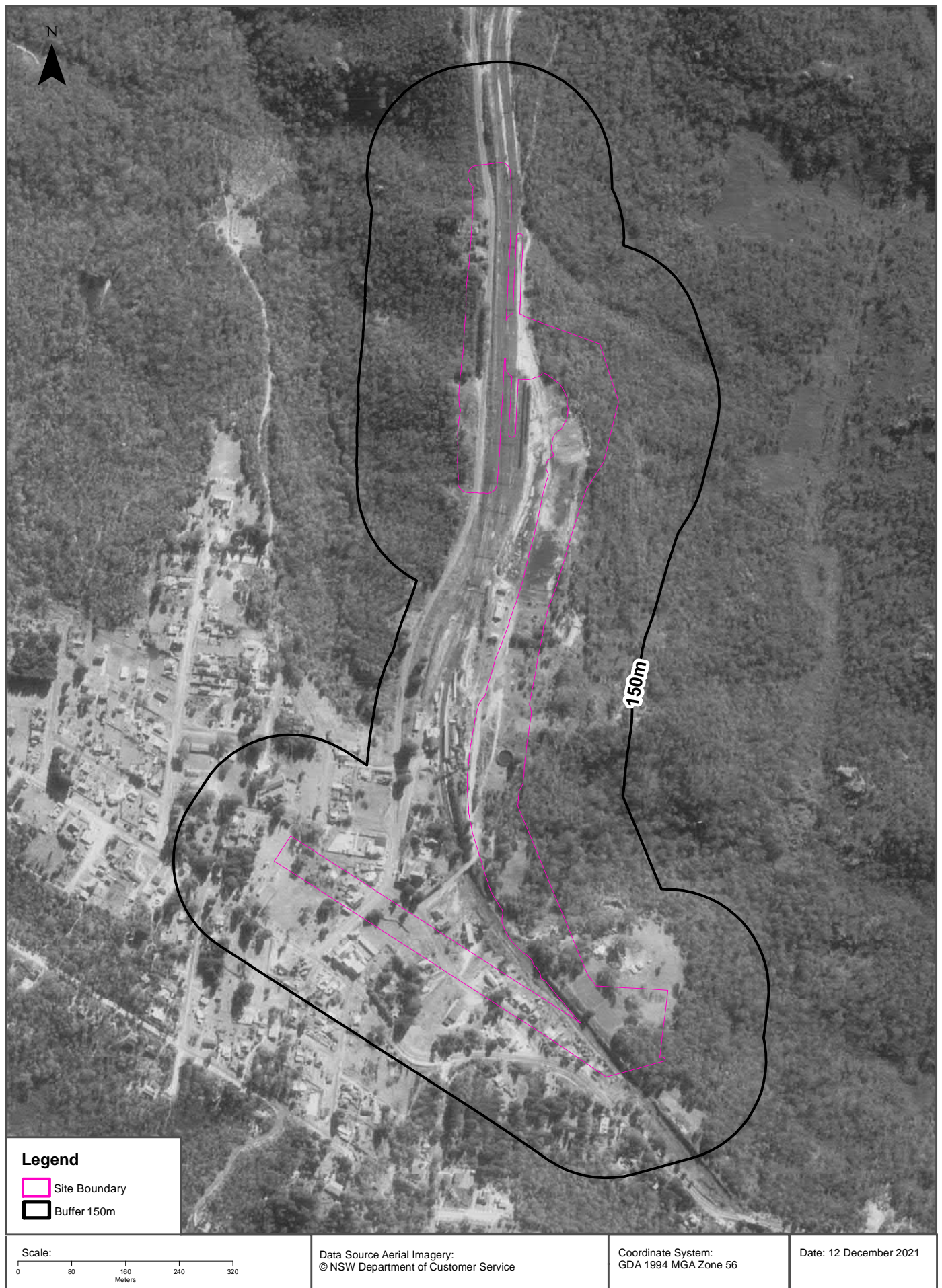
Road Alignment, Blackheath, NSW 2785 (4 of 10)





## Aerial Imagery 1984

Road Alignment, Blackheath, NSW 2785 (4 of 10)





Aerial Imagery 1975

Road Alignment, Blackheath, NSW 2785 (4 of 10)



Data Source Aerial Imagery: © NSW Department of Customer Service	Coordinate System: GDA 1994 MGA Zone 56	Date: 12 December 2021
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Aerial Imagery 1966

Road Alignment, Blackheath, NSW 2785 (4 of 10)





Aerial Imagery 1958

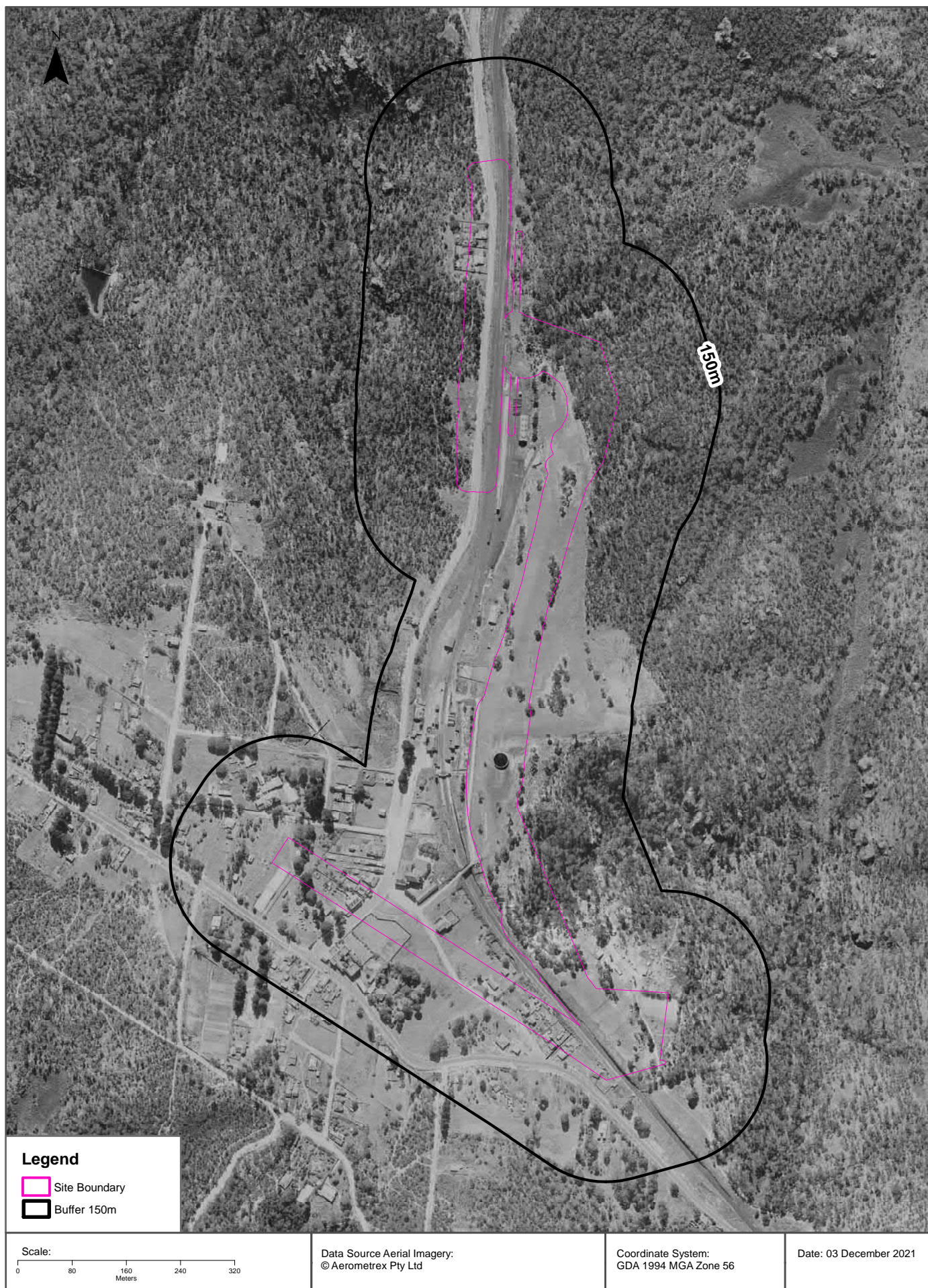
Road Alignment, Blackheath, NSW 2785 (4 of 10)





## Aerial Imagery 1943

Road Alignment, Blackheath, NSW 2785 (4 of 10)



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  6. End User must not remove any copyright notices, trade marks, digital rights management information, other embedded information, disclaimers or limitations from the Report or authorise any person to do so.
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**Date: 07 Dec 2021**

**Reference: LS027246 EA**

**Address: Road Alignment, Blackheath, NSW 2785 (5 of 10)**



# Aerial Imagery 2021

Road Alignment, Blackheath, NSW 2785 (5 of 10)





# Aerial Imagery 2015

Road Alignment, Blackheath, NSW 2785 (5 of 10)





## Aerial Imagery 2007

Road Alignment, Blackheath, NSW 2785 (5 of 10)





Aerial Imagery 1999

Road Alignment, Blackheath, NSW 2785 (5 of 10)





Aerial Imagery 1994

Road Alignment, Blackheath, NSW 2785 (5 of 10)





Aerial Imagery 1984

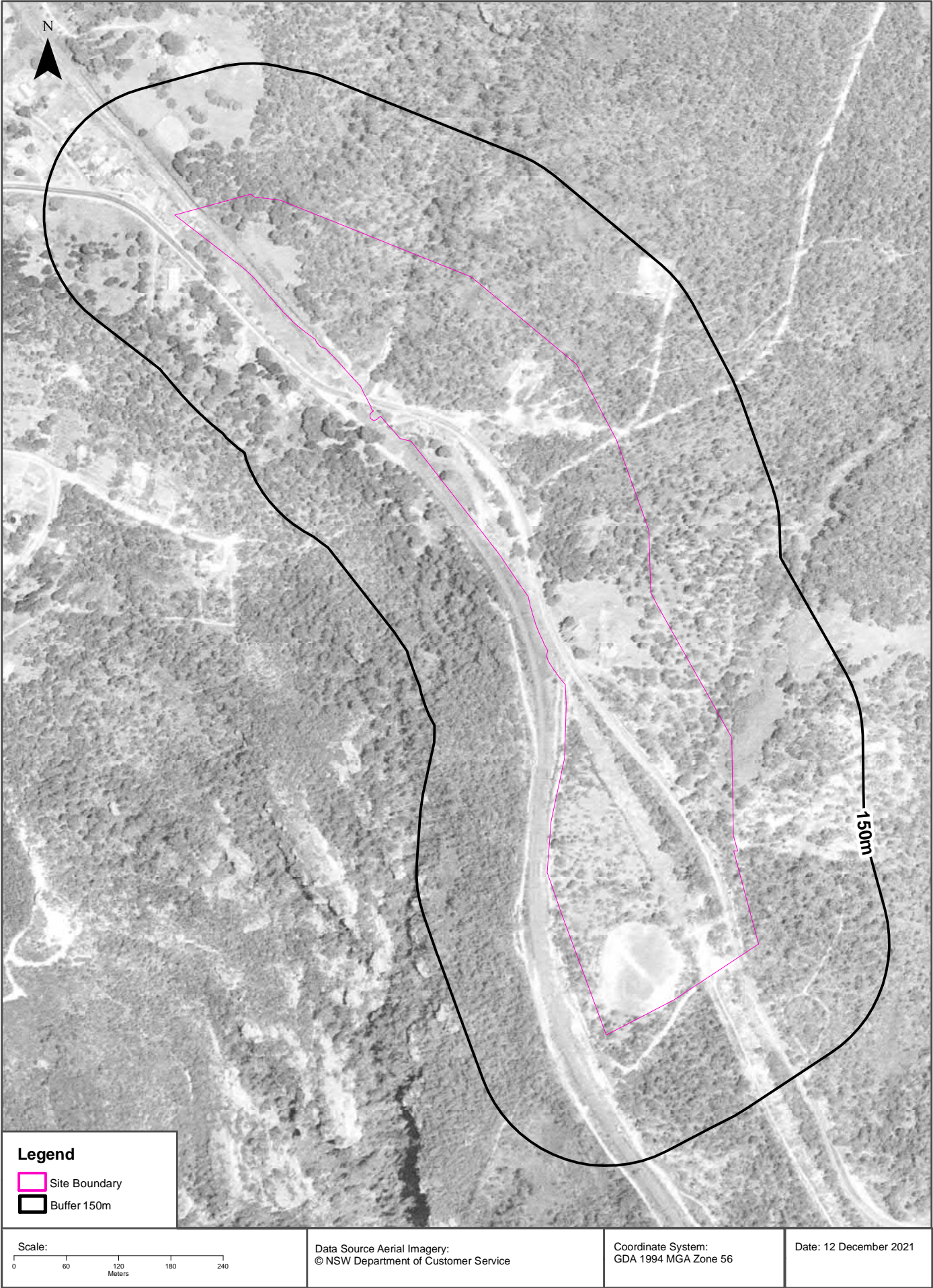
Road Alignment, Blackheath, NSW 2785 (5 of 10)





Aerial Imagery 1975

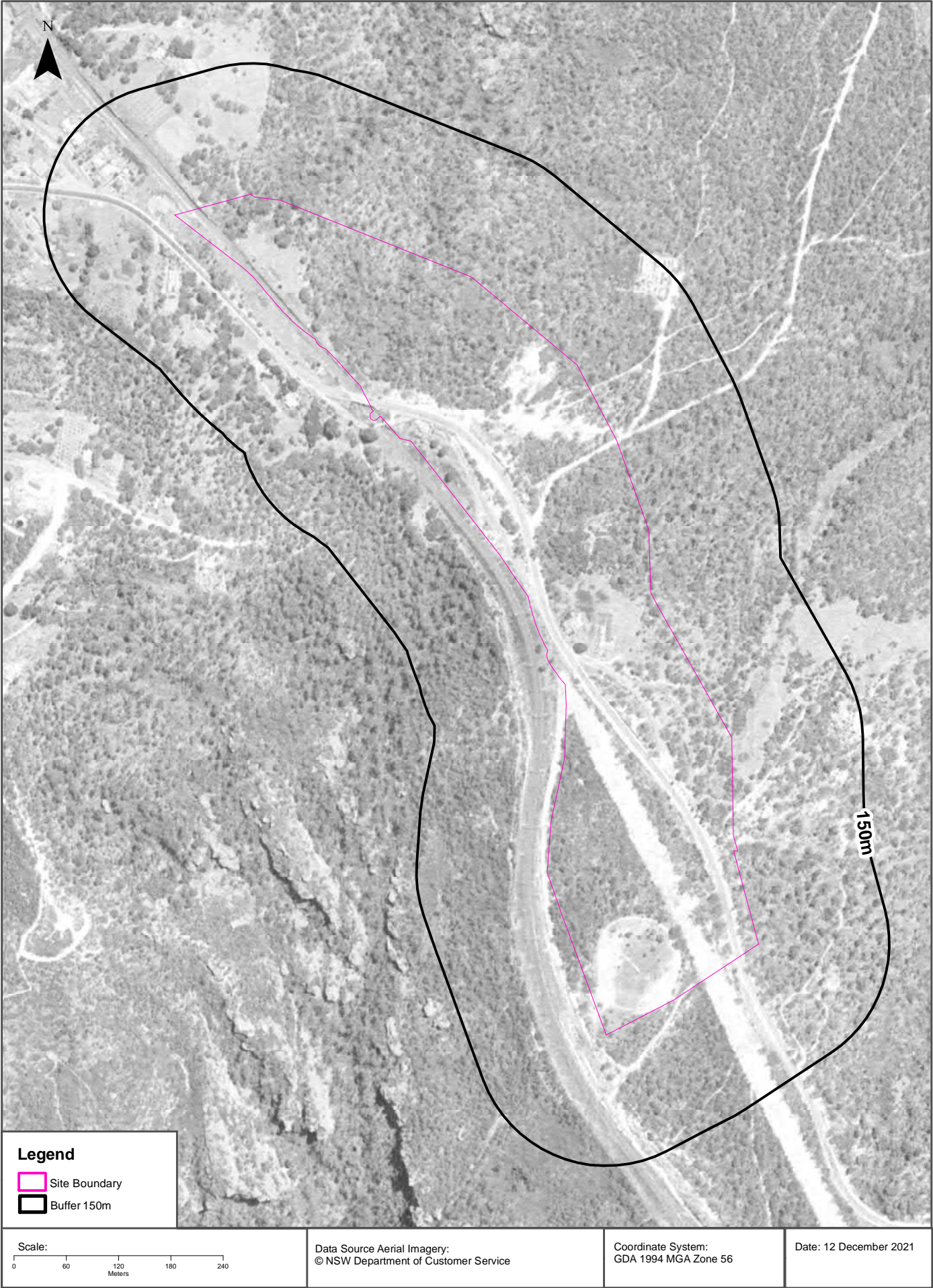
Road Alignment, Blackheath, NSW 2785 (5 of 10)





Aerial Imagery 1966

Road Alignment, Blackheath, NSW 2785 (5 of 10)





Aerial Imagery 1958

Road Alignment, Blackheath, NSW 2785 (5 of 10)



**Legend**

- Site Boundary
- Buffer 150m

Scale: 0 60 120 180 240 Meters	Data Source Aerial Imagery: © NSW Department of Customer Service	Coordinate System: GDA 1994 MGA Zone 56	Date: 12 December 2021
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## Aerial Imagery 1943

Road Alignment, Blackheath, NSW 2785 (5 of 10)



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**LOTSEARCH**  
LOTSEARCH AERIALS

**Date: 07 Dec 2021**

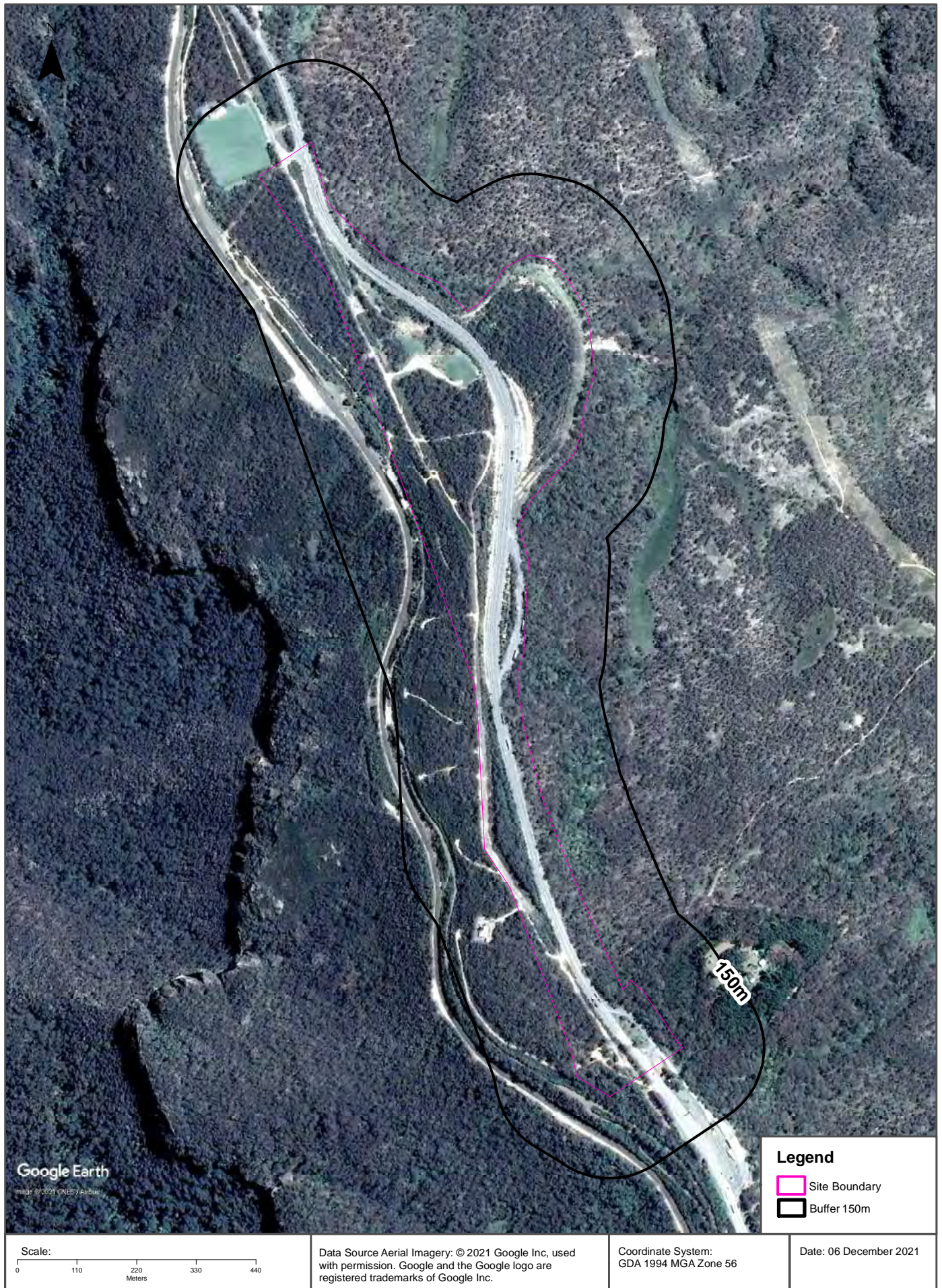
**Reference: LS027247 EA**

**Address: Road Alignment, Blackheath, NSW 2785 (6 of 10)**



# Aerial Imagery 2021

Road Alignment, Blackheath, NSW 2785 (6 of 10)





# Aerial Imagery 2015

Road Alignment, Blackheath, NSW 2785 (6 of 10)









# Aerial Imagery 1999

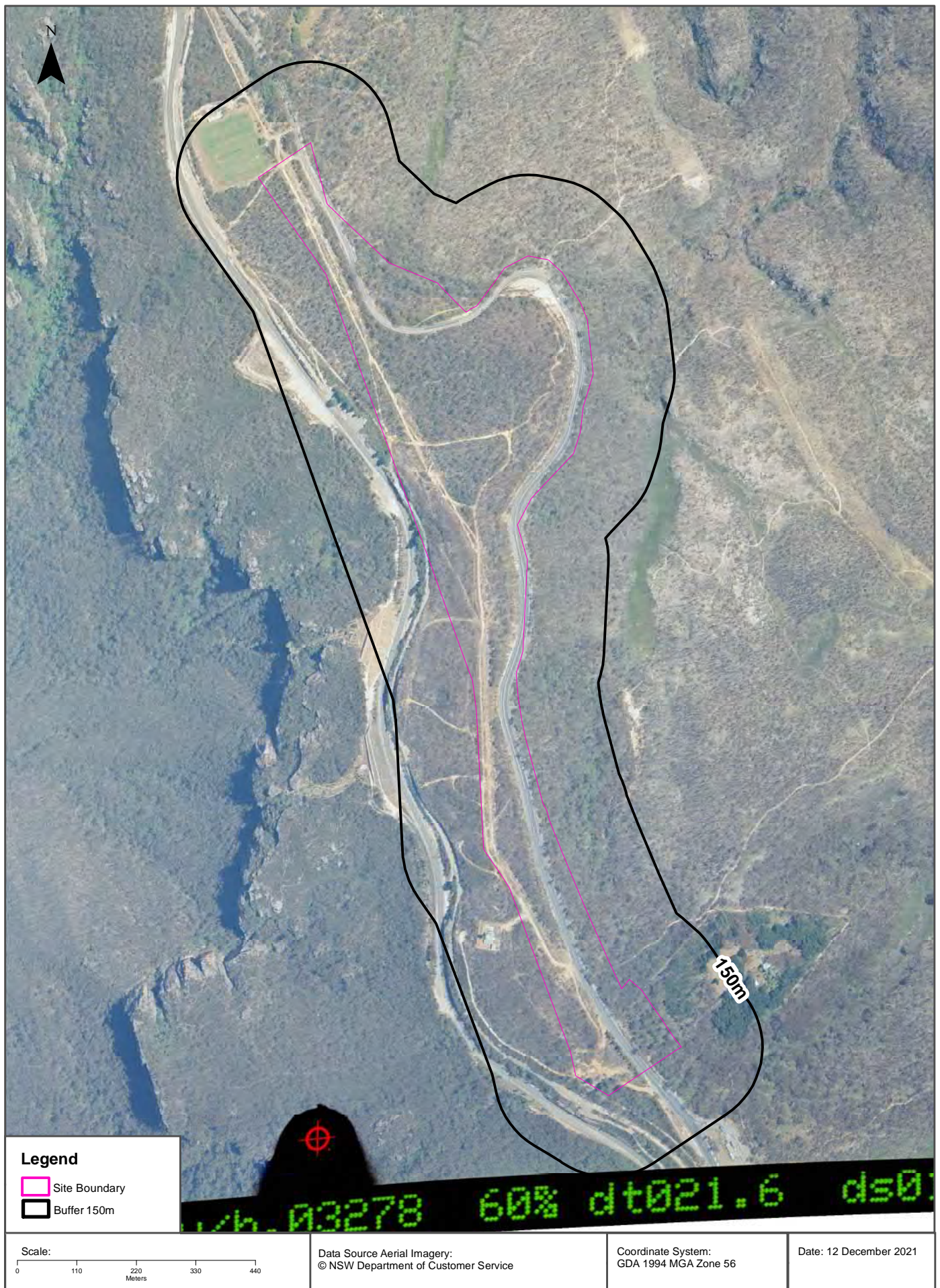
Road Alignment, Blackheath, NSW 2785 (6 of 10)





# Aerial Imagery 1994

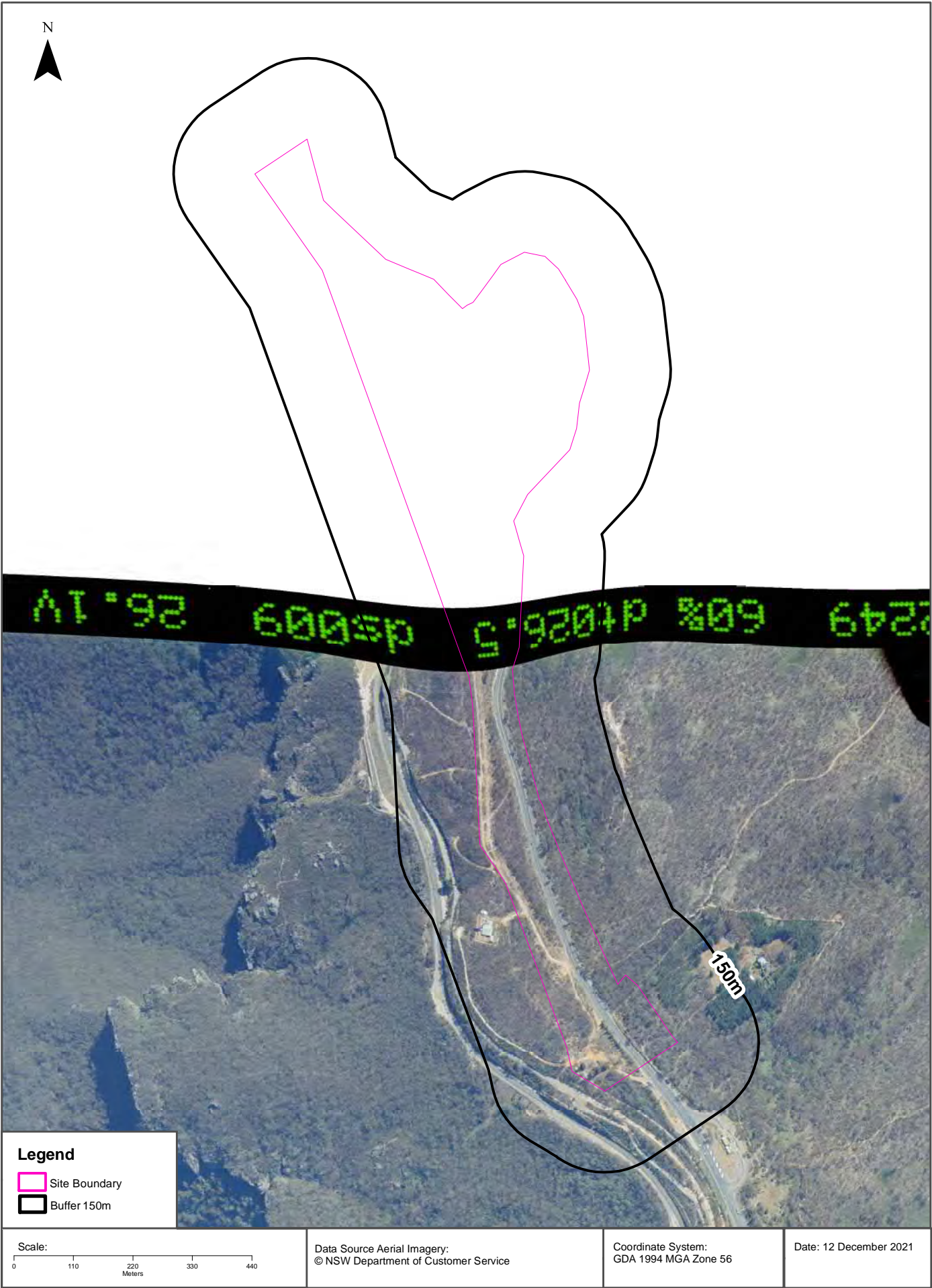
Road Alignment, Blackheath, NSW 2785 (6 of 10)





Aerial Imagery 1994

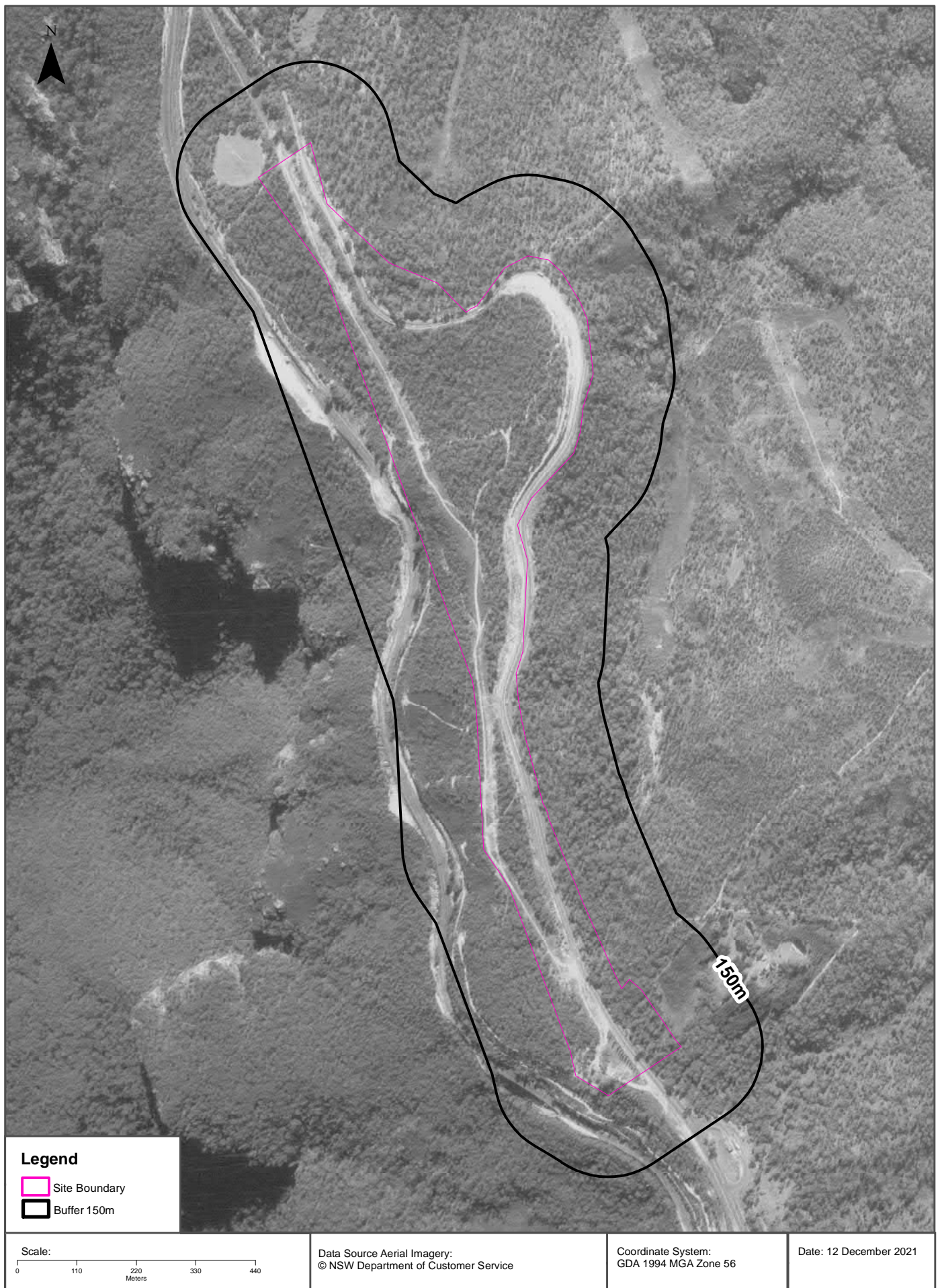
Road Alignment, Blackheath, NSW 2785 (6 of 10)





## Aerial Imagery 1984

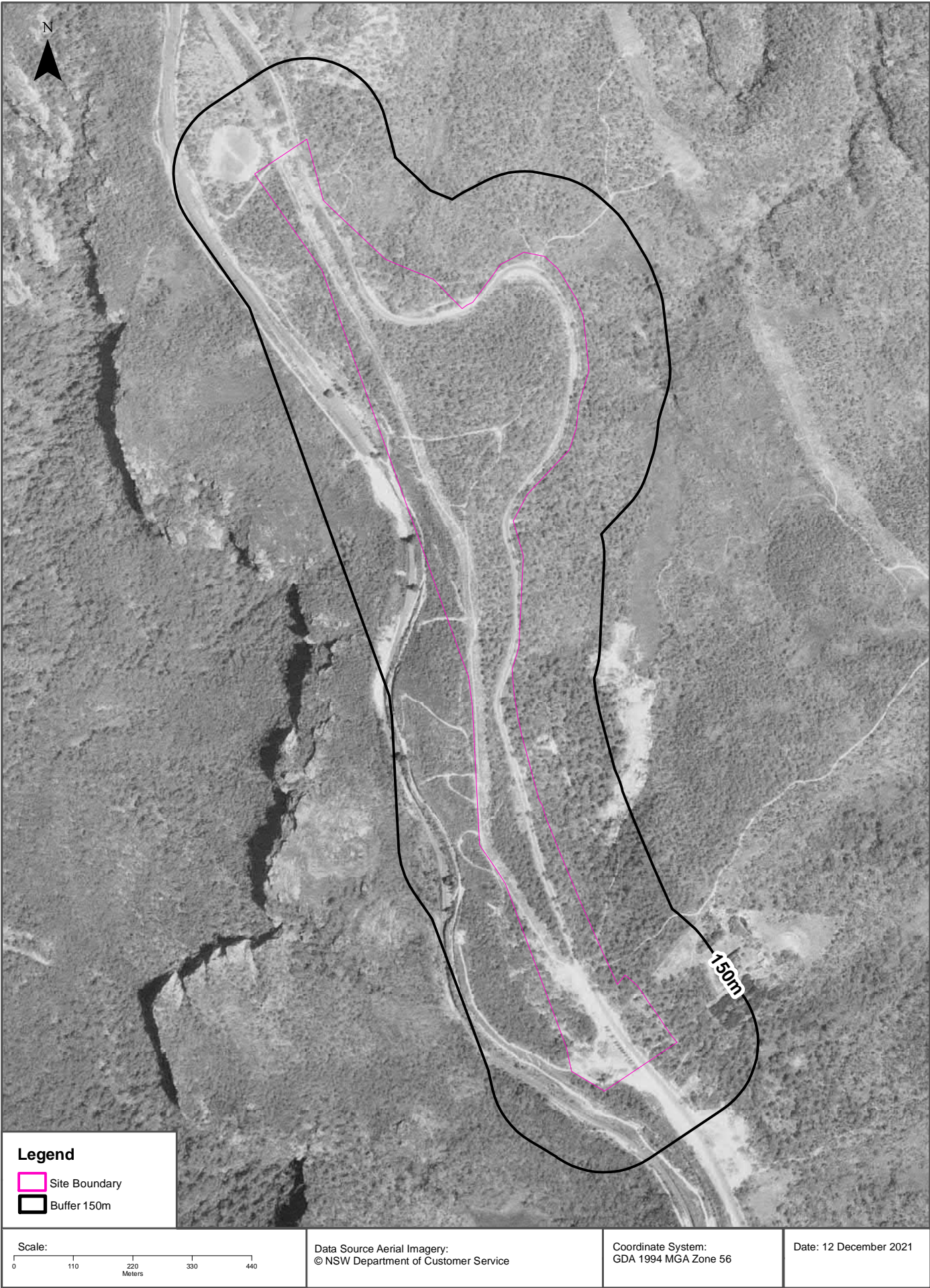
Road Alignment, Blackheath, NSW 2785 (6 of 10)





Aerial Imagery 1975

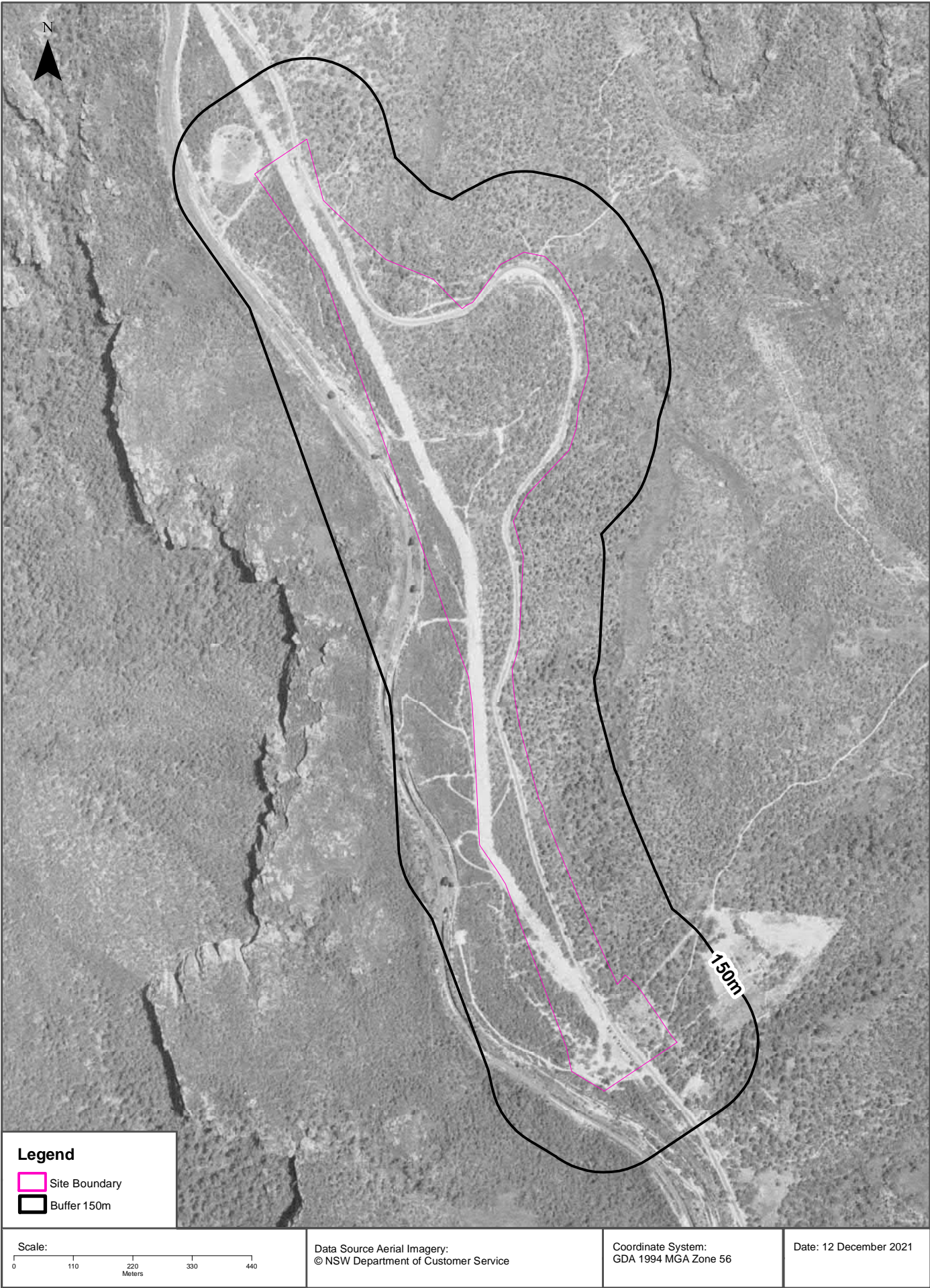
Road Alignment, Blackheath, NSW 2785 (6 of 10)





Aerial Imagery 1966

Road Alignment, Blackheath, NSW 2785 (6 of 10)





# Aerial Imagery 1958

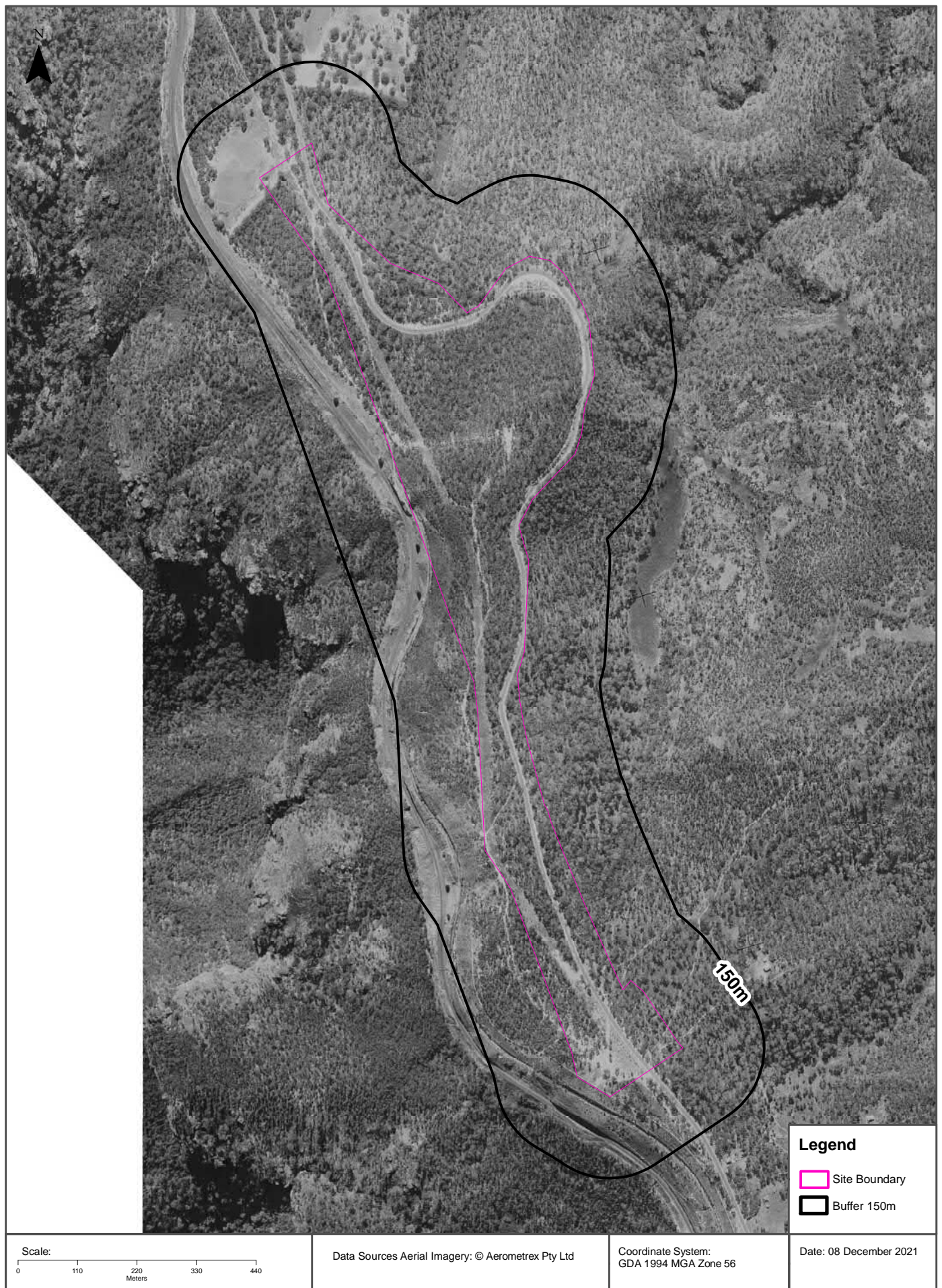
Road Alignment, Blackheath, NSW 2785 (6 of 10)





## Aerial Imagery 1943

Road Alignment, Blackheath, NSW 2785 (6 of 10)





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  - (j) the Report should not be relied upon for determining saleability or value or making any other decisions in relation to the Property and in particular should not be taken to be a rating or assessment of the desirability or market value of the property or its features; and
  - (k) the End User should undertake its own inspections of the Land or Property to satisfy itself that there are no defects or failures
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5. The End User acknowledges that any Third Party Supplier shall be entitled to plead the benefits conferred on it under clause 4, despite not being a party to these terms.
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  8. To the extent permitted by law and subject to paragraph 9, all implied terms, representations and warranties whether statutory or otherwise relating to the subject matter of these Terms other than as expressly set out in these Terms are excluded.
  9. Subject to paragraph 6, Lotsearch excludes liability to End User for loss or damage of any kind, however caused, due to Lotsearch's negligence, breach of contract, breach of any law, in equity, under indemnities or otherwise, arising out of all acts, omissions and events whenever occurring.
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  12. These Terms are subject to New South Wales law.



**Date: 06 Dec 2021**

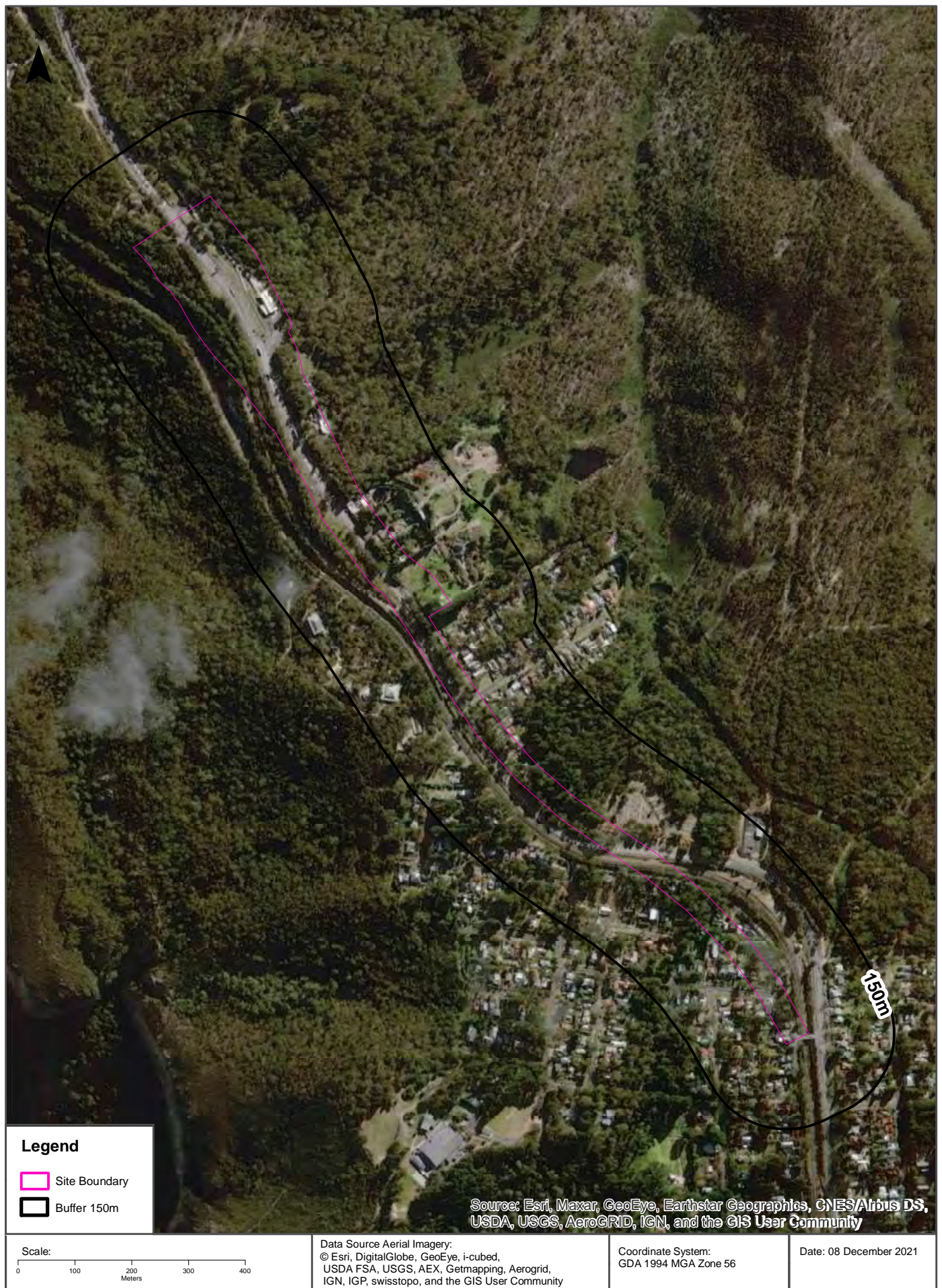
**Reference: LS027248 EA**

**Address: Road Alignment, Blackheath, NSW 2785 (7 of 10)**



# Aerial Imagery 2020

Road Alignment, Blackheath, NSW 2785 (7 of 10)







Data Sources Aerial Imagery: © Aerometrex Pty Ltd	Coordinate System: GDA 1994 MGA Zone 56	Date: 08 December 2021
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## Aerial Imagery 2007

Road Alignment, Blackheath, NSW 2785 (7 of 10)





## Aerial Imagery 2002

Road Alignment, Blackheath, NSW 2785 (7 of 10)



Scale:  
0 100 200 300 400  
Meters

Data Source Aerial Imagery:  
© NSW Department of Customer Service

Coordinate System:  
GDA 1994 MGA Zone 56

Date: 08 December 2021



## Aerial Imagery 1994

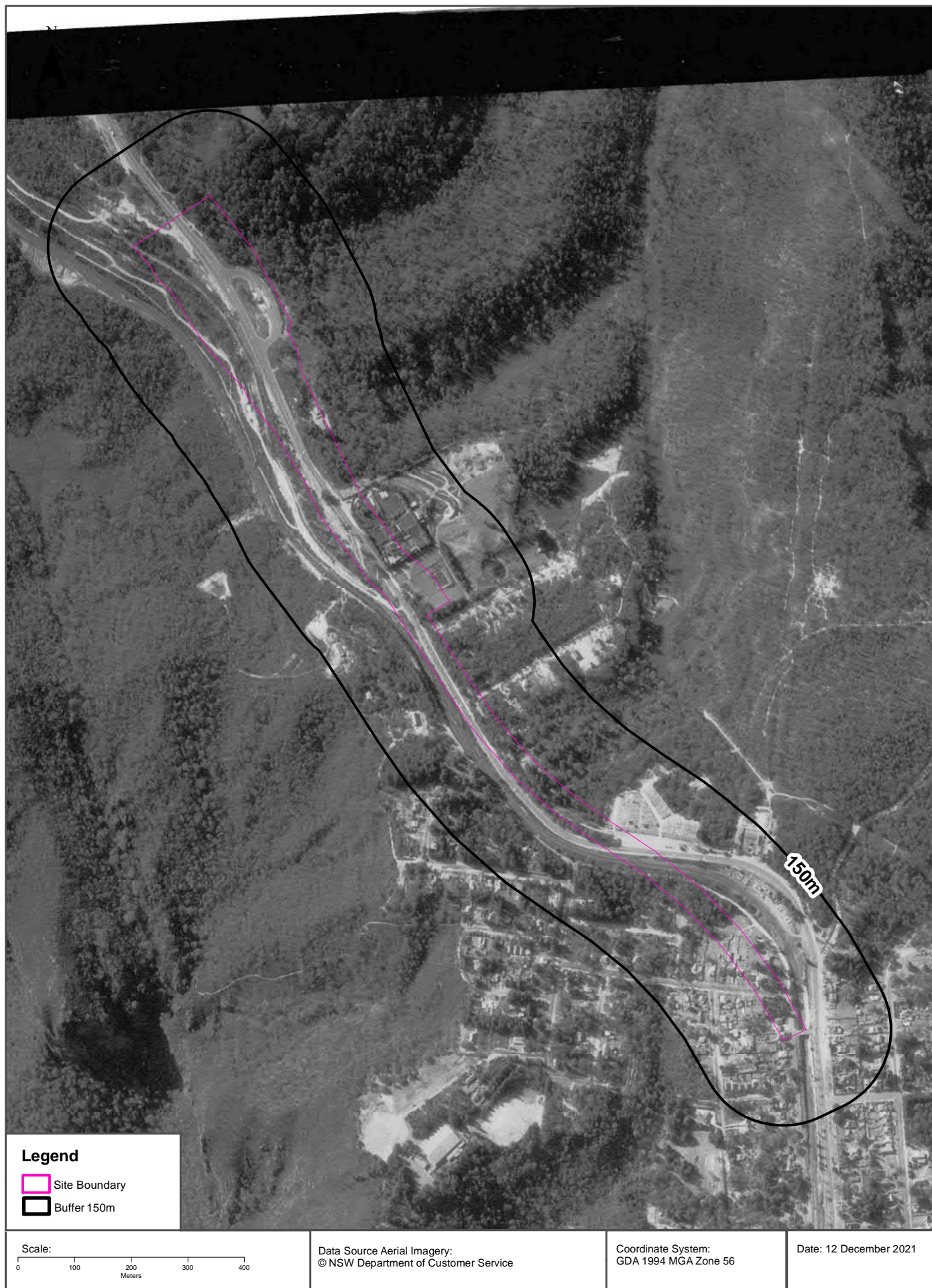
Road Alignment, Blackheath, NSW 2785 (7 of 10)





Aerial Imagery 1983

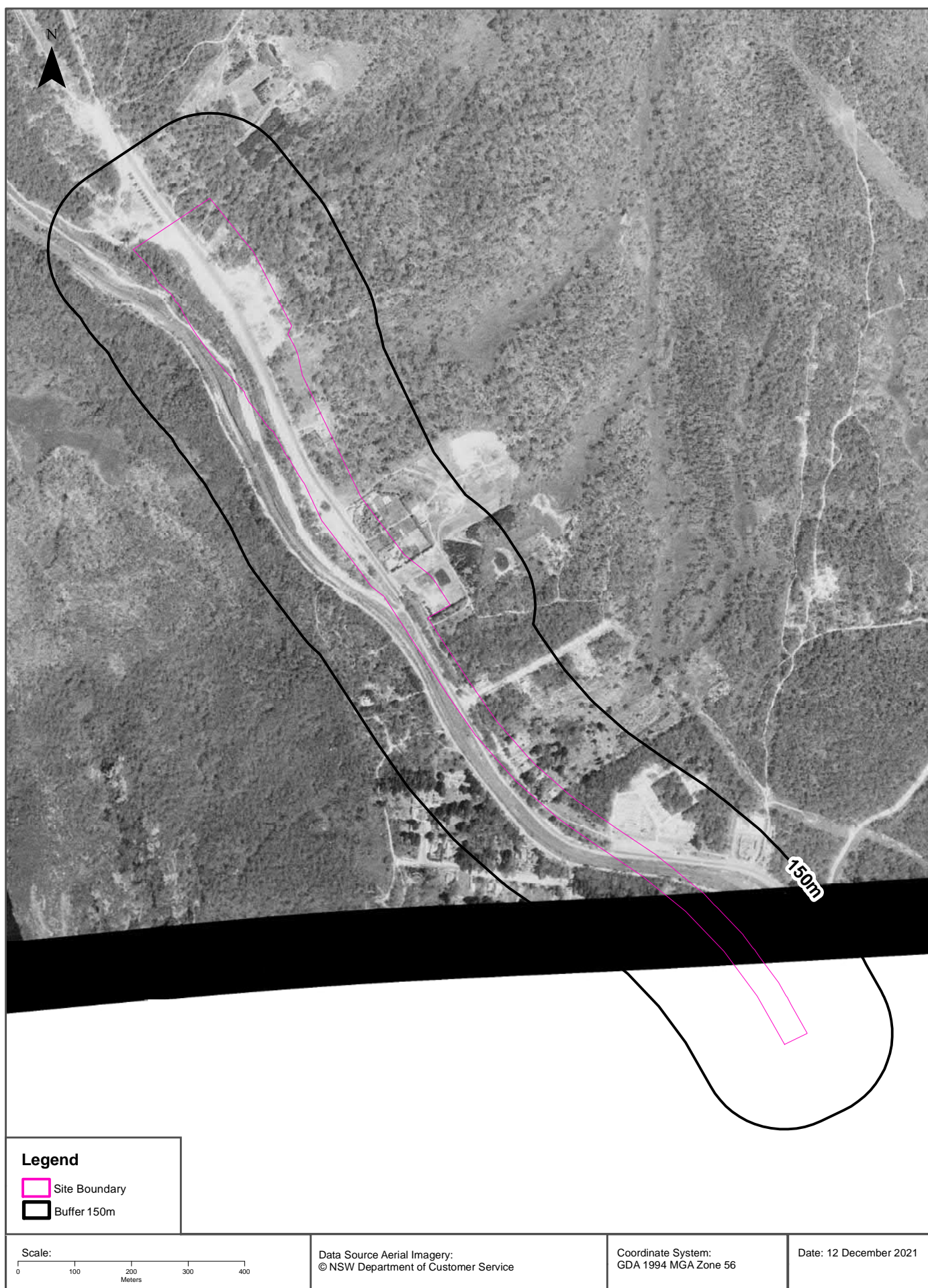
Road Alignment, Blackheath, NSW 2785 (7 of 10)





## Aerial Imagery 1975

Road Alignment, Blackheath, NSW 2785 (7 of 10)





Aerial Imagery 1975

Road Alignment, Blackheath, NSW 2785 (7 of 10)



Scale: 0 100 200 300 400 Meters	Data Source Aerial Imagery: © NSW Department of Customer Service	Coordinate System: GDA 1994 MGA Zone 56	Date: 12 December 2021
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## Aerial Imagery 1966

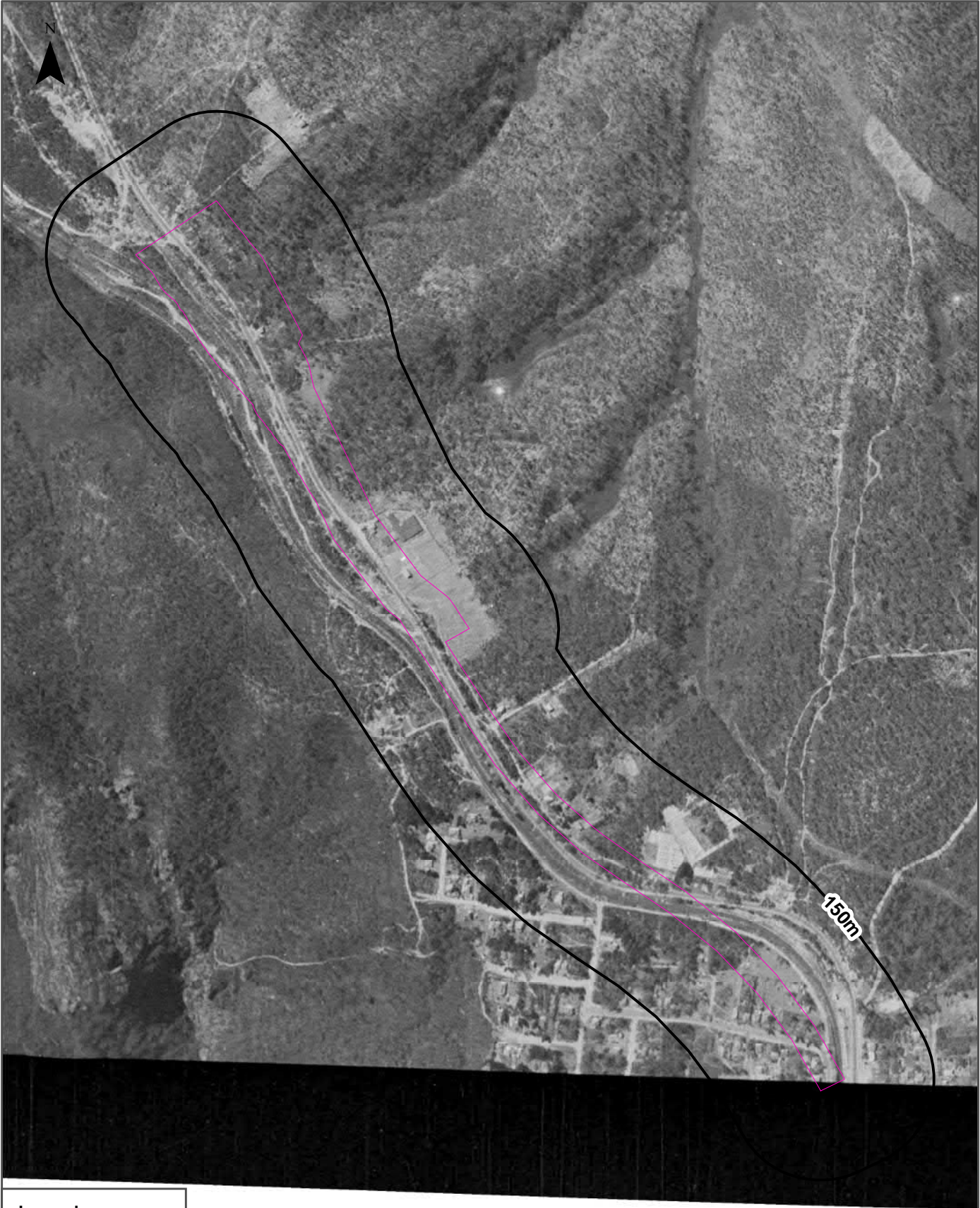
Road Alignment, Blackheath, NSW 2785 (7 of 10)





Aerial Imagery 1958

Road Alignment, Blackheath, NSW 2785 (7 of 10)



<b>Legend</b> <div><div></div> Site Boundary</div> <div><div></div> Buffer 150m</div>			
Scale: 0 100 200 300 400 Meters	Data Source Aerial Imagery: © NSW Department of Customer Service	Coordinate System: GDA 1994 MGA Zone 56	Date: 12 December 2021

Aerial Imagery 1958

Road Alignment, Blackheath, NSW 2785 (7 of 10)





## Aerial Imagery 1943

Road Alignment, Blackheath, NSW 2785 (7 of 10)





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# LOTSEARCH

LOTSEARCH AERIALS

**Date: 06 Dec 2021**

**Reference: LS027249 EA**

**Address: Road Alignment, Blackheath, NSW 2785 (8 of 10)**



# Aerial Imagery 2020

Road Alignment, Blackheath, NSW 2785 (8 of 10)





# Aerial Imagery 2015

Road Alignment, Blackheath, NSW 2785 (8 of 10)









## Aerial Imagery 2002

Road Alignment, Blackheath, NSW 2785 (8 of 10)





## Aerial Imagery 1994

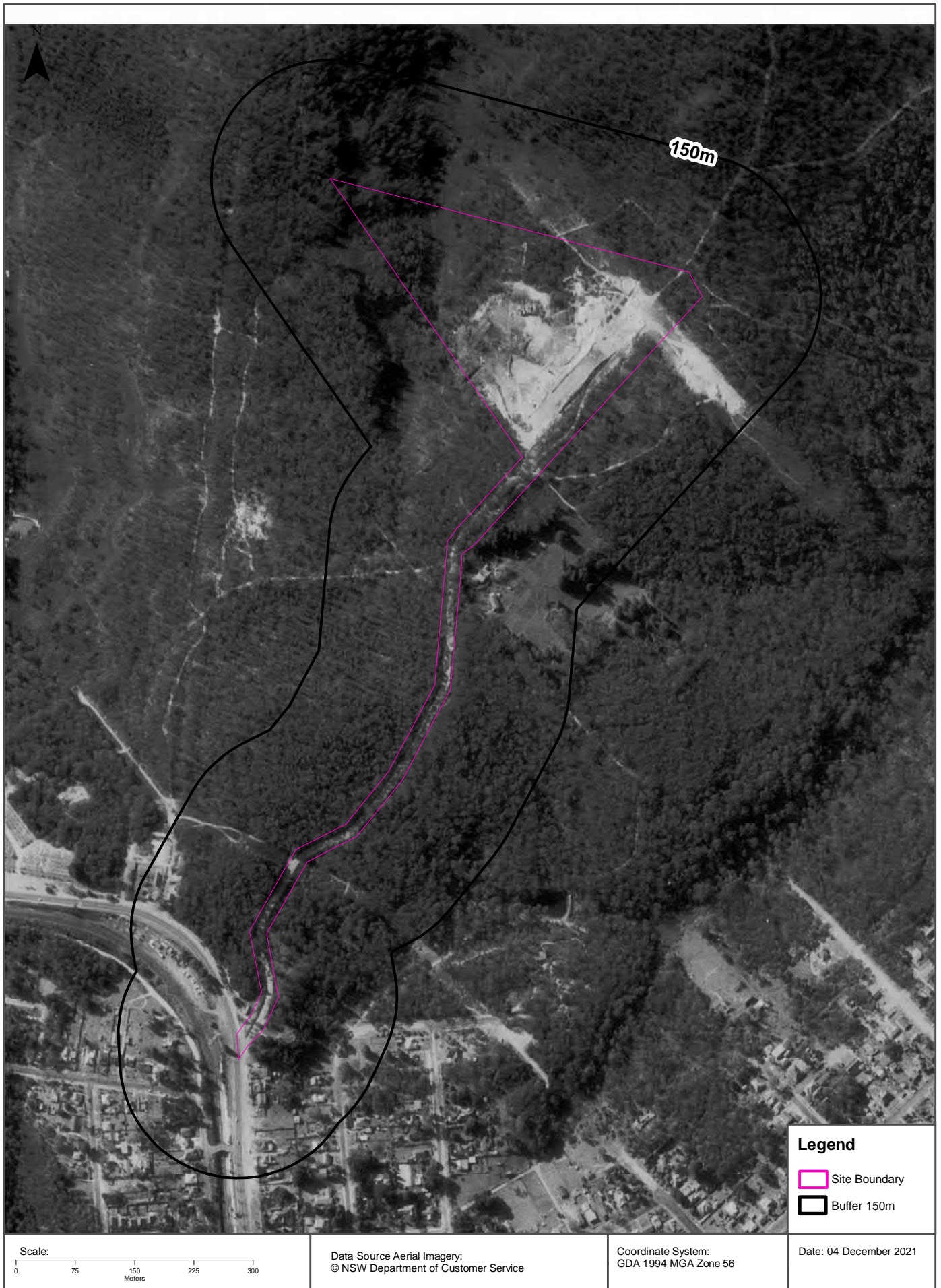
Road Alignment, Blackheath, NSW 2785 (8 of 10)





## Aerial Imagery 1983-1984

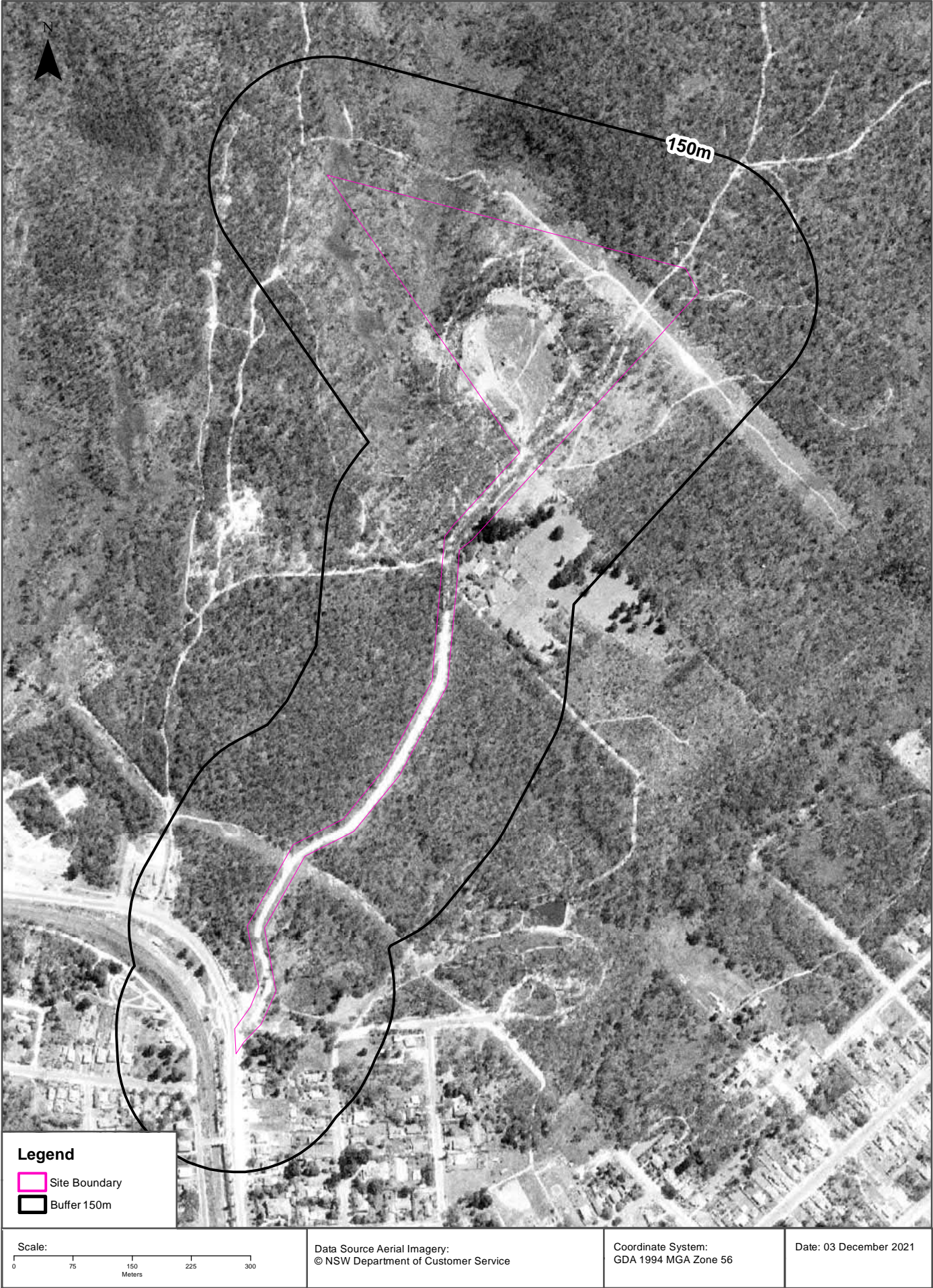
Road Alignment, Blackheath, NSW 2785 (8 of 10)





Aerial Imagery 1975

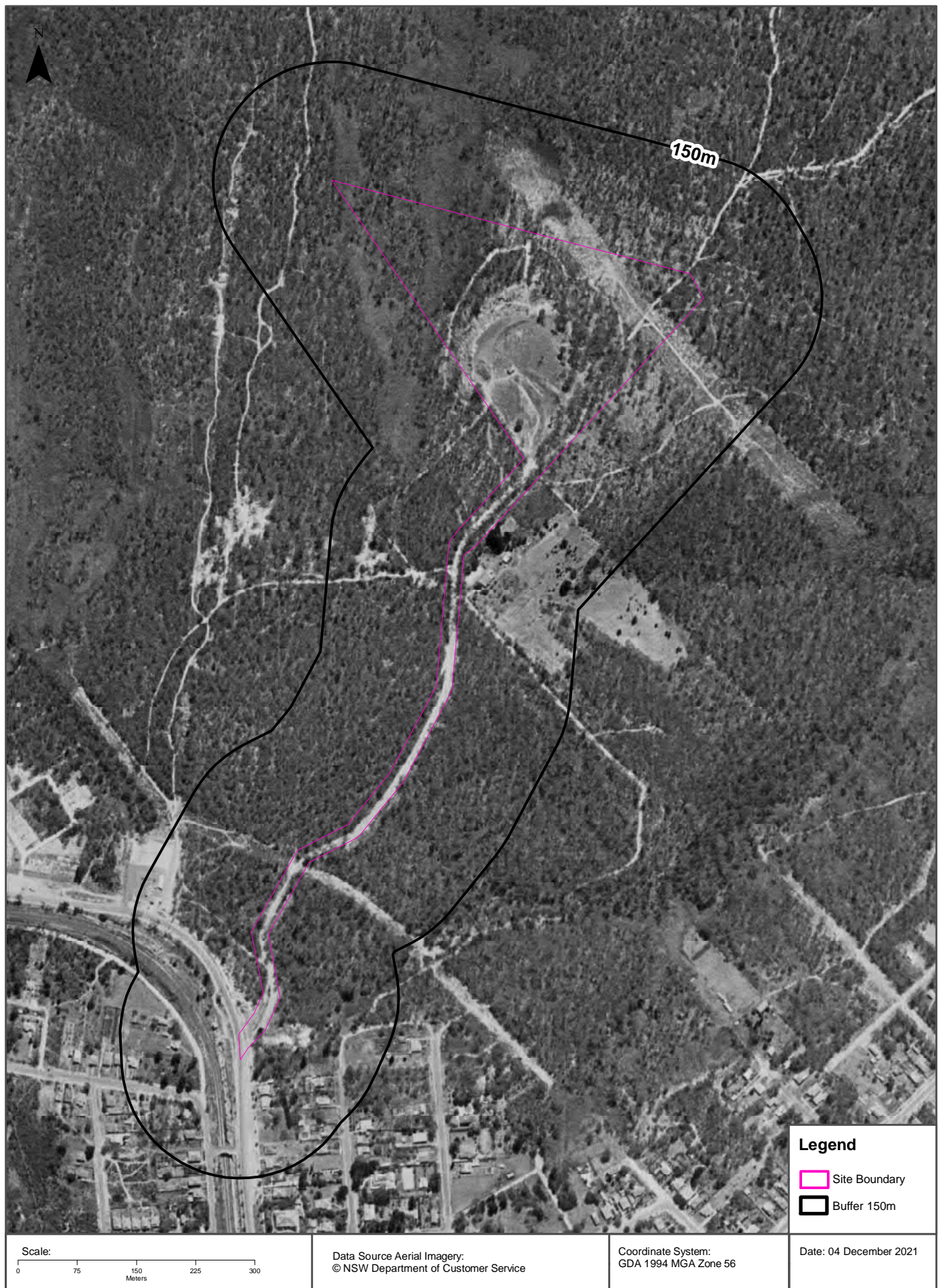
Road Alignment, Blackheath, NSW 2785 (8 of 10)





## Aerial Imagery 1966

Road Alignment, Blackheath, NSW 2785 (8 of 10)







Aerial Imagery 1958

Road Alignment, Blackheath, NSW 2785 (8 of 10)



**Legend**

 Site Boundary

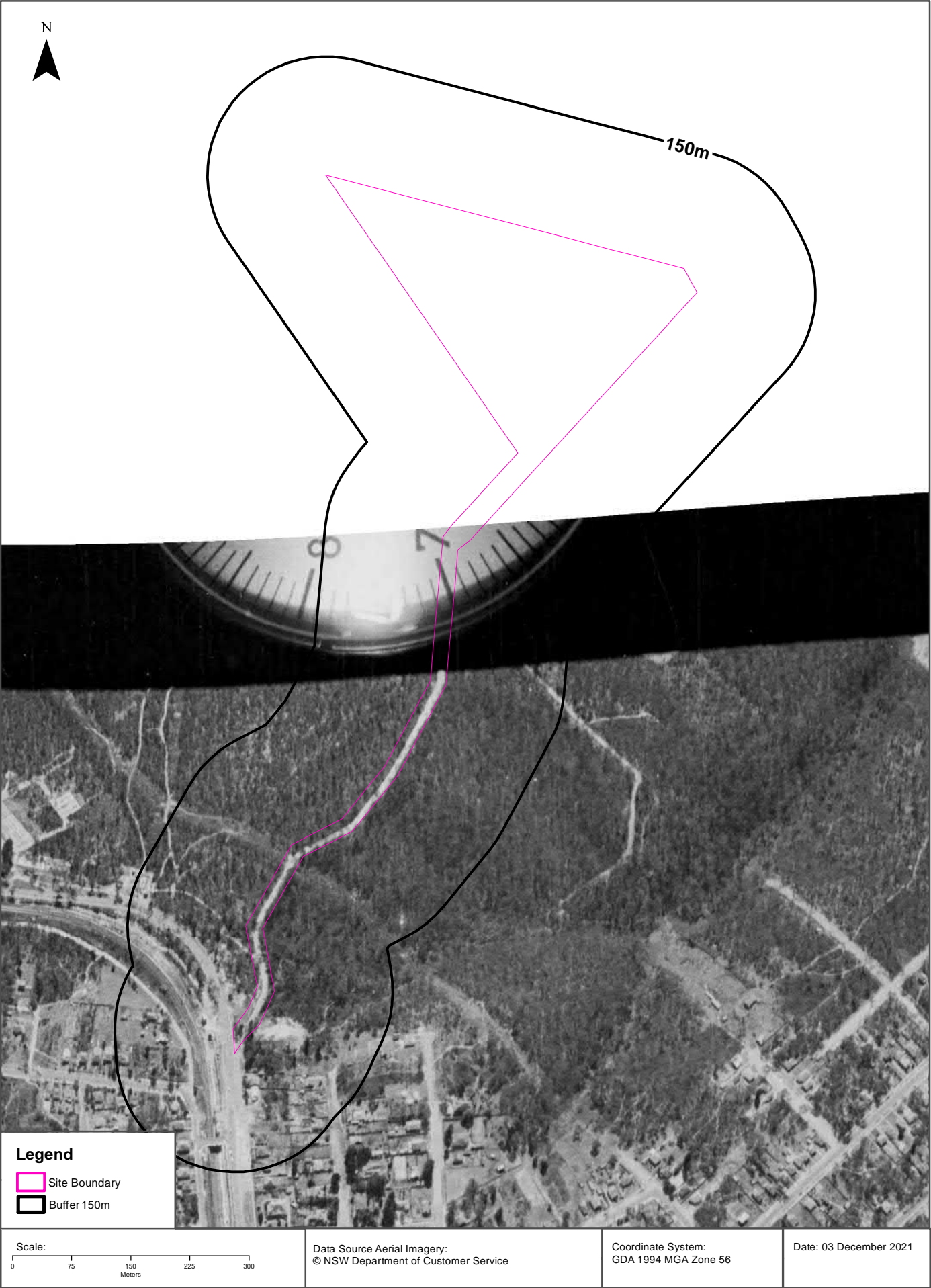
 Buffer 150m

<p>Scale:</p> <p>0 75 150 225 300</p> <p>Meters</p>	<p>Data Source Aerial Imagery:</p> <p>© NSW Department of Customer Service</p>	<p>Coordinate System:</p> <p>GDA 1994 MGA Zone 56</p>	<p>Date: 03 December 2021</p>
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Aerial Imagery 1958

Road Alignment, Blackheath, NSW 2785 (8 of 10)



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LOTSEARCH AERIALS

**Date: 07 Dec 2021**

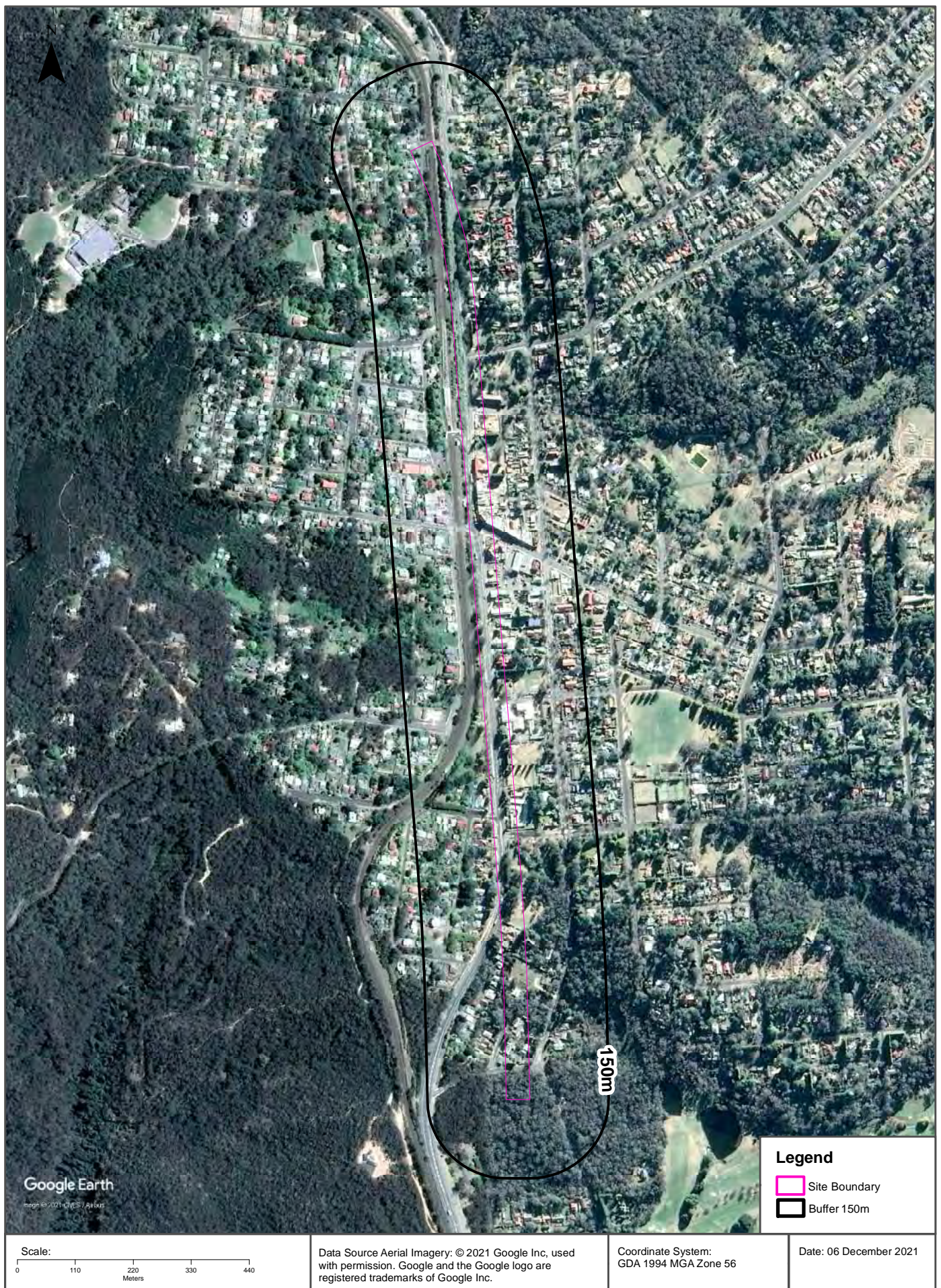
**Reference: LS027250 EA**

**Address: Road Alignment, Blackheath, NSW 2785 (9 of 10)**



# Aerial Imagery 2021

Road Alignment, Blackheath, NSW 2785 (9 of 10)





# Aerial Imagery 2015

Road Alignment, Blackheath, NSW 2785 (9 of 10)









## Aerial Imagery 2002

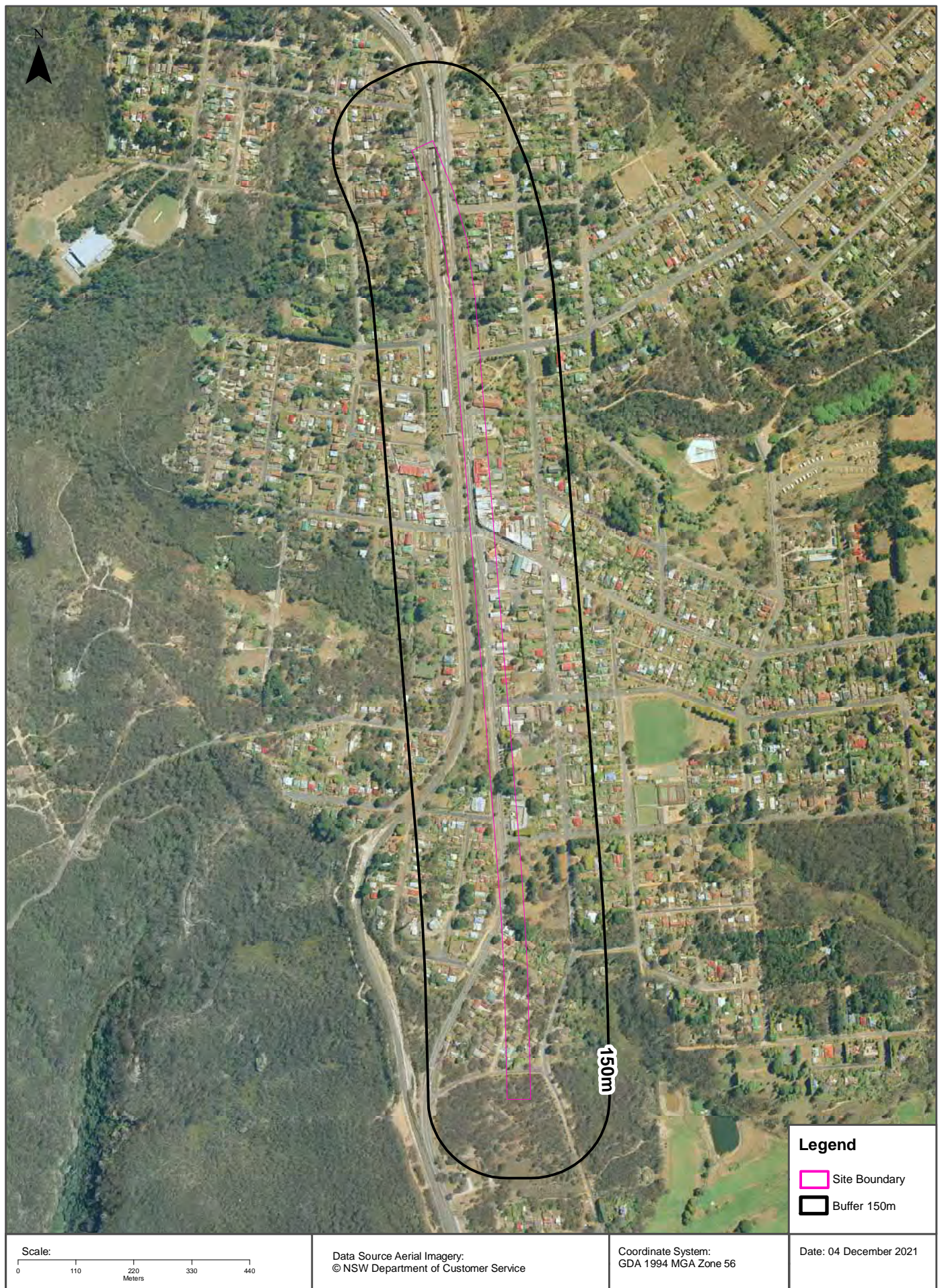
Road Alignment, Blackheath, NSW 2785 (9 of 10)





## Aerial Imagery 1994

Road Alignment, Blackheath, NSW 2785 (9 of 10)





## Aerial Imagery 1983-1984

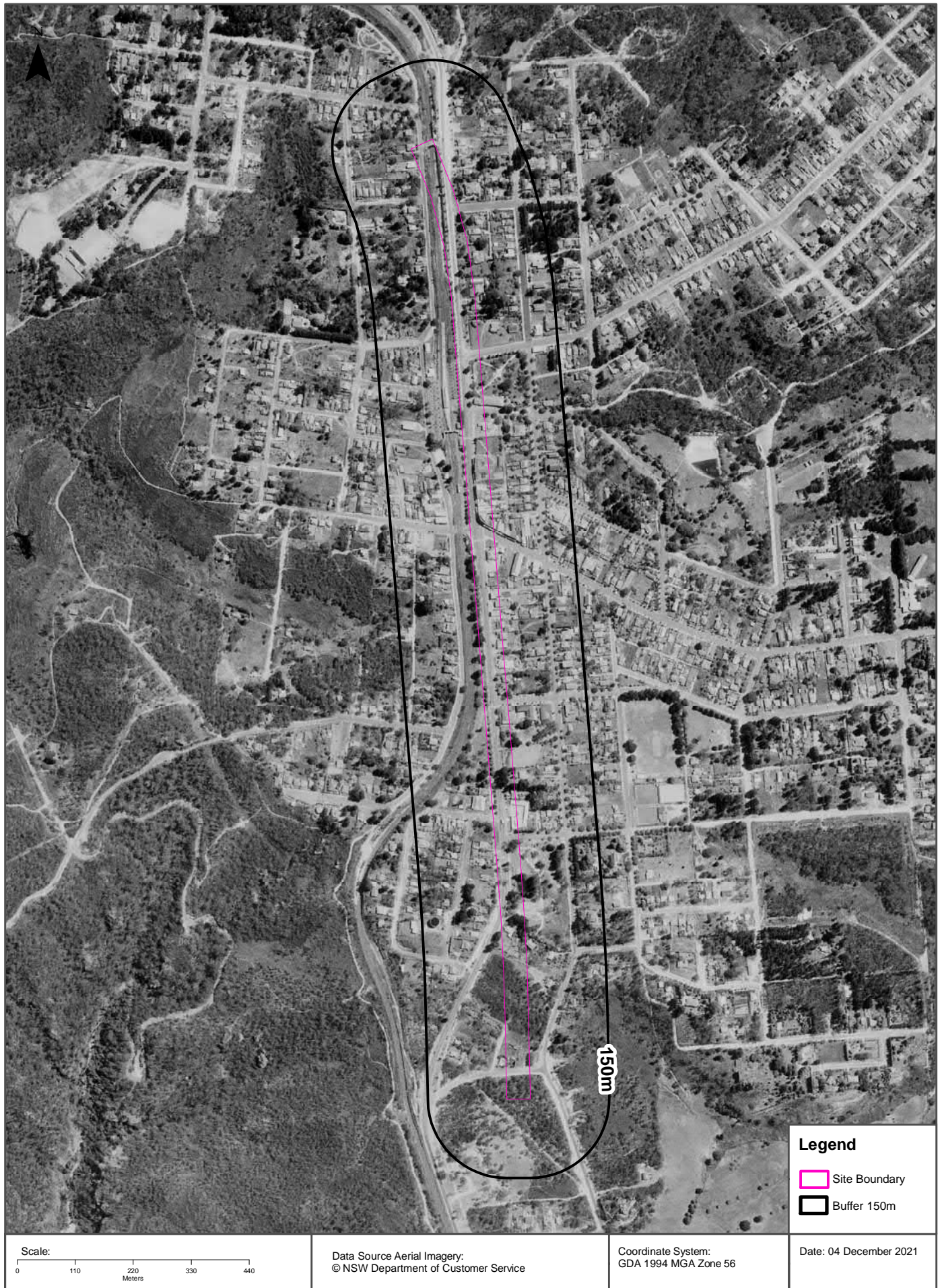
Road Alignment, Blackheath, NSW 2785 (9 of 10)





## Aerial Imagery 1975

Road Alignment, Blackheath, NSW 2785 (9 of 10)





# Aerial Imagery 1966

Road Alignment, Blackheath, NSW 2785 (9 of 10)



<p>Scale:</p> <p>0 110 220 330 440</p> <p>Meters</p>	<p>Data Source Aerial Imagery:</p> <p>© NSW Department of Customer Service</p>	<p>Coordinate System:</p> <p>GDA 1994 MGA Zone 56</p>	<p>Date: 04 December 2021</p>
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## Aerial Imagery 1958

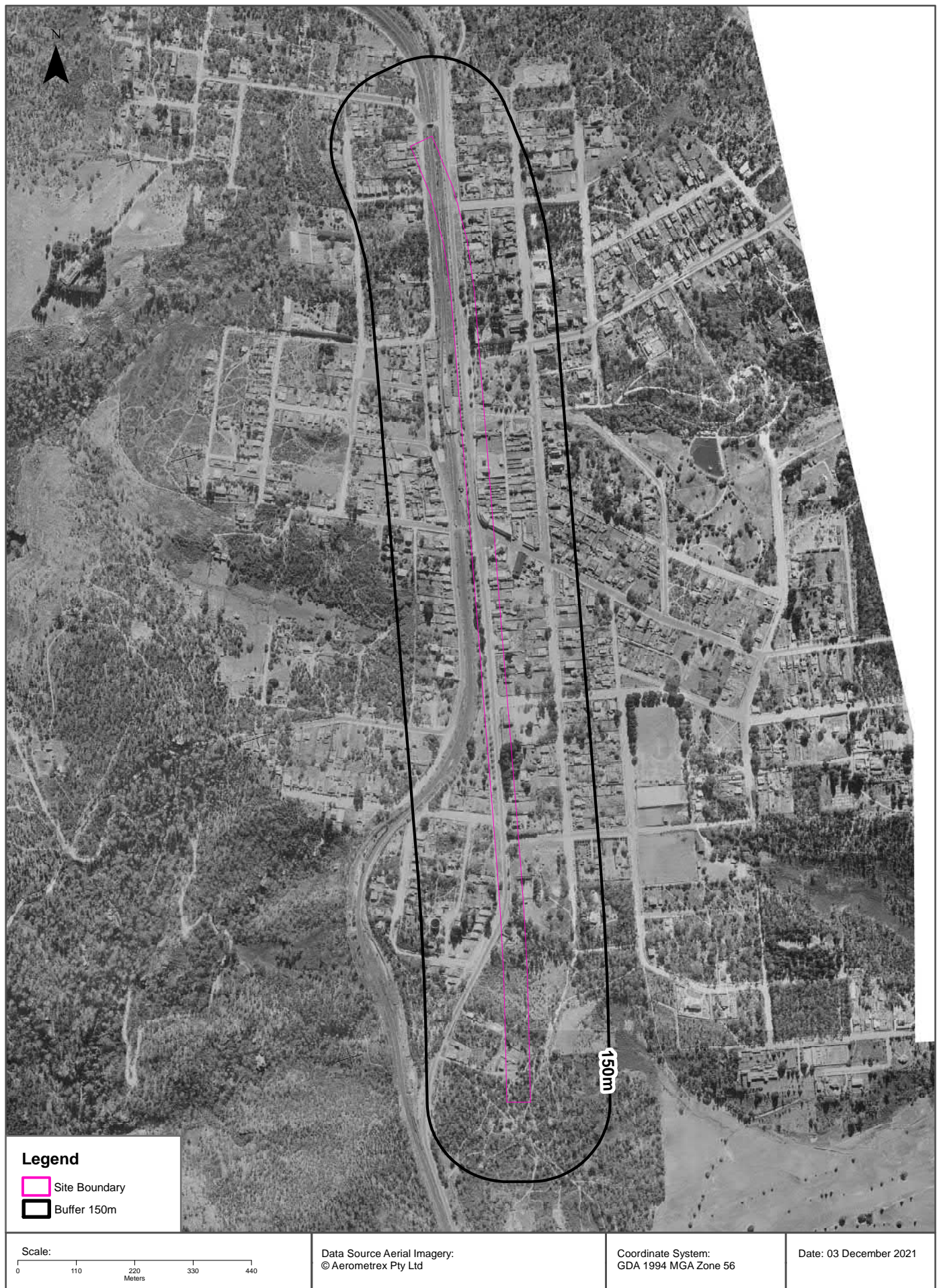
Road Alignment, Blackheath, NSW 2785 (9 of 10)





## Aerial Imagery 1943

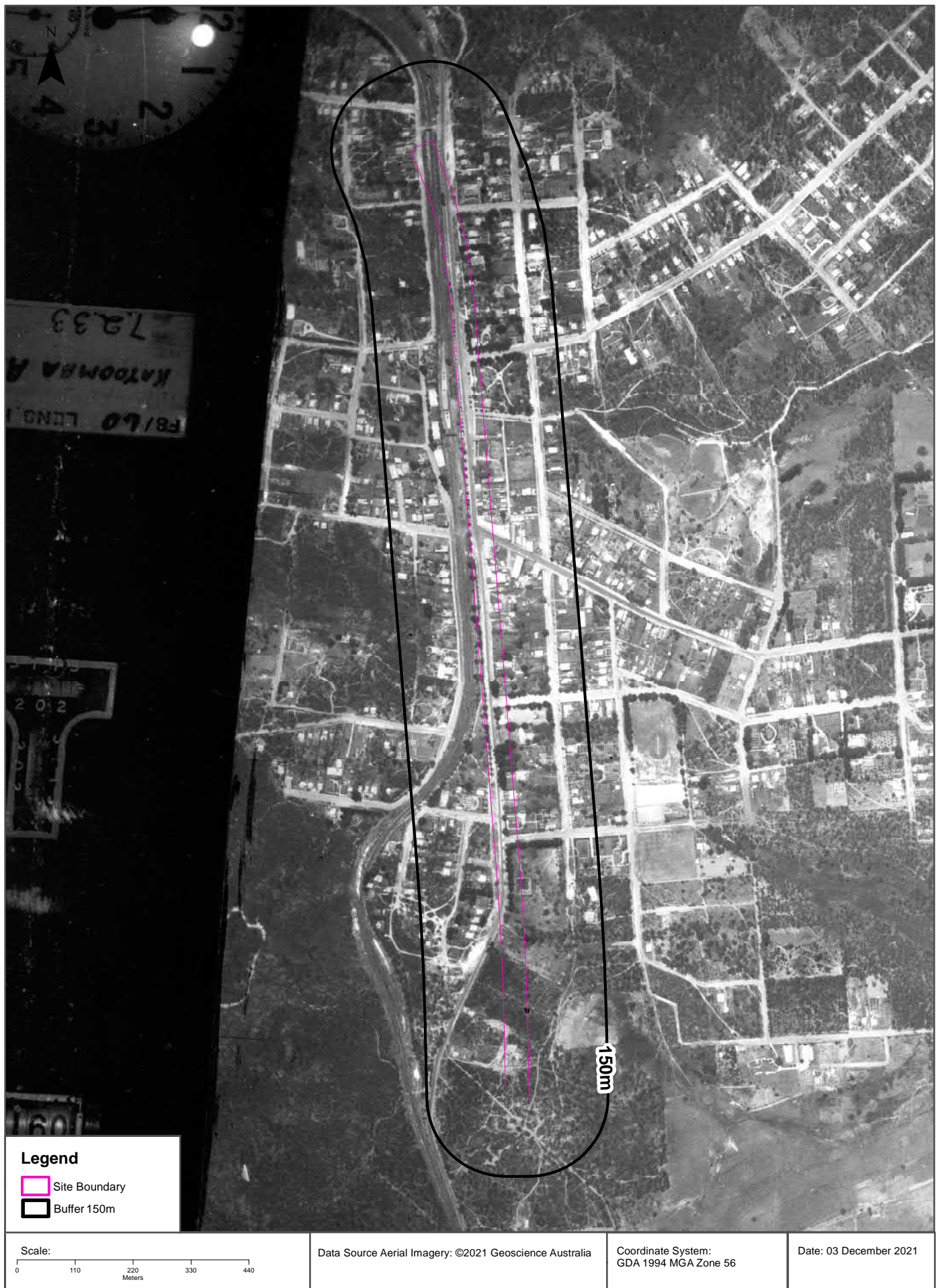
Road Alignment, Blackheath, NSW 2785 (9 of 10)





# Aerial Imagery 1933

Road Alignment, Blackheath, NSW 2785 (9 of 10)





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



# LOTSEARCH

LOTSEARCH AERIALS

**Date: 06 Dec 2021**

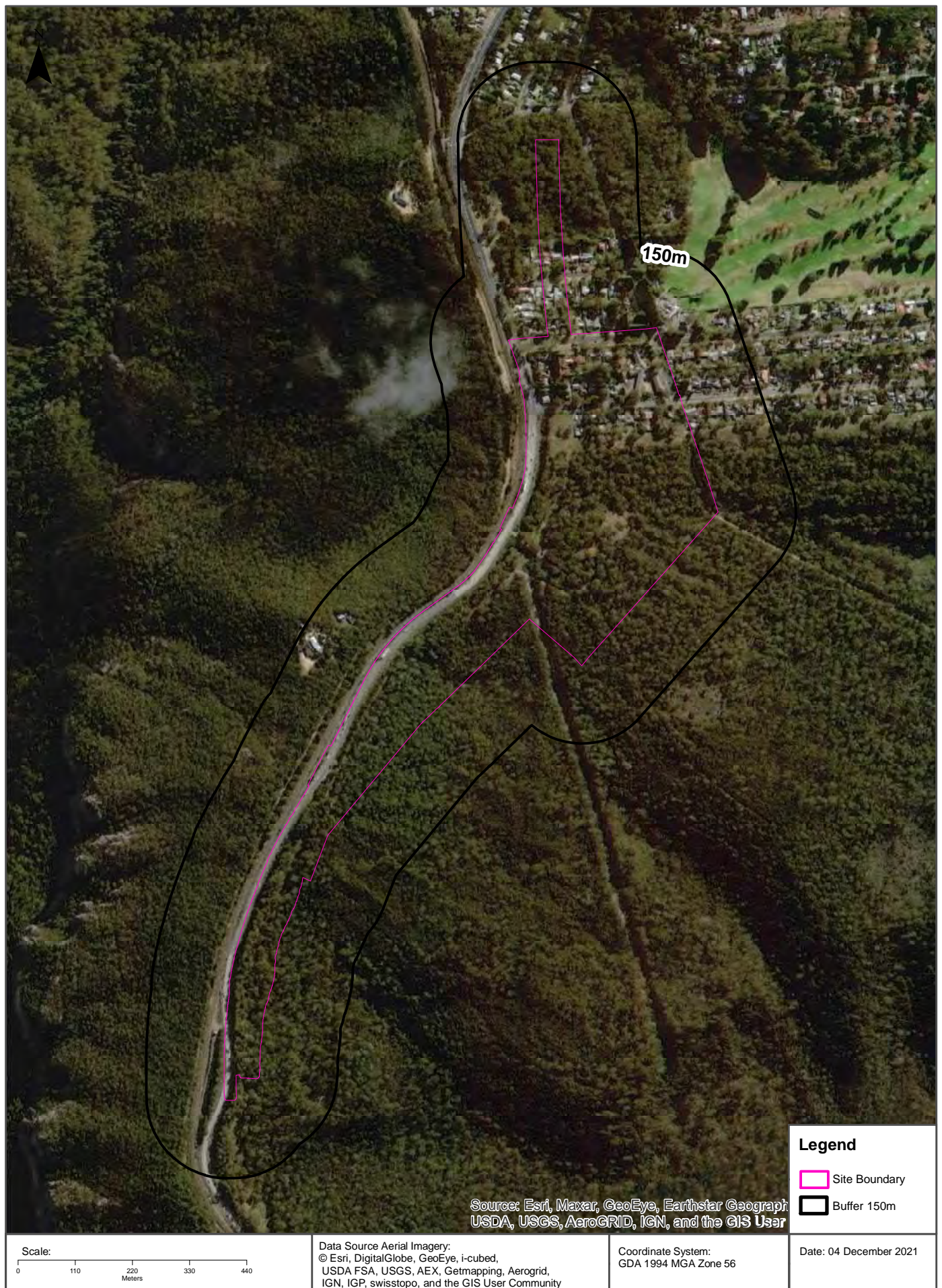
**Reference: LS027251 EA**

**Address: Road Alignment, Blackheath, NSW 2785 (10 of 10)**



# Aerial Imagery 2020

Road Alignment, Blackheath, NSW 2785 (10 of 10)







<p>Scale:</p> <p>0 110 220 330 440</p> <p>Meters</p>	<p>Data Sources Aerial Imagery: © Aerometrex Pty Ltd</p>	<p>Coordinate System:</p> <p>GDA 1994 MGA Zone 56</p>	<p>Date: 04 December 2021</p>
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Scale: 0 110 220 330 440 Meters	Data Sources Aerial Imagery: © Aerometrex Pty Ltd	Coordinate System: GDA 1994 MGA Zone 56	Date: 04 December 2021
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Aerial Imagery 2002

Road Alignment, Blackheath, NSW 2785 (10 of 10)



Scale: 0 110 220 330 440 Meters	Data Source Aerial Imagery: © NSW Department of Customer Service	Coordinate System: GDA 1994 MGA Zone 56	Date: 04 December 2021
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## Aerial Imagery 1994

Road Alignment, Blackheath, NSW 2785 (10 of 10)





Aerial Imagery 1983-1984

Road Alignment, Blackheath, NSW 2785 (10 of 10)



Scale: 0 110 220 330 440 Meters	Data Source Aerial Imagery: © NSW Department of Customer Service	Coordinate System: GDA 1994 MGA Zone 56	Date: 04 December 2021
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# Aerial Imagery 1975

Road Alignment, Blackheath, NSW 2785 (10 of 10)

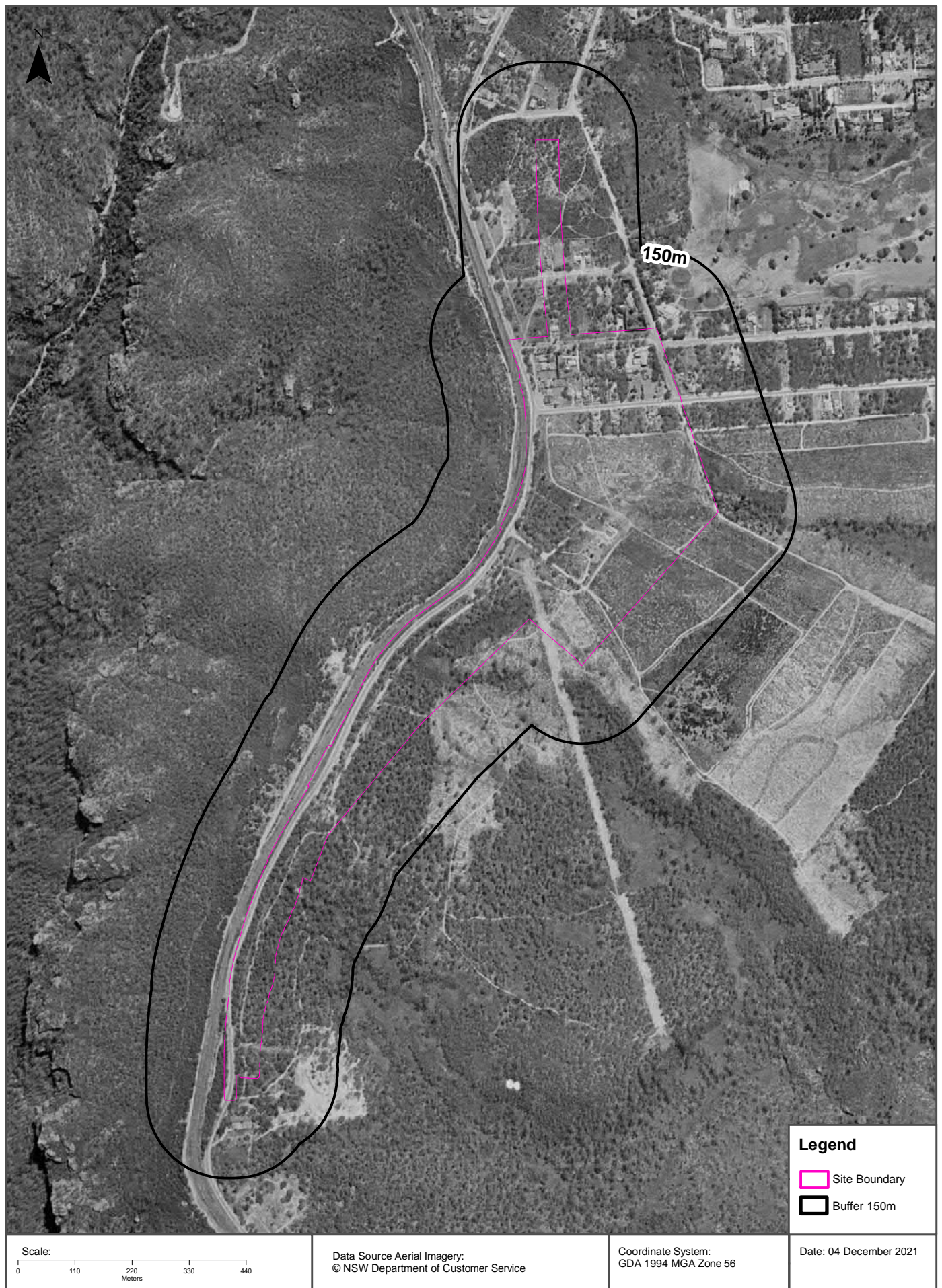


Scale: 0 110 220 330 440 Meters	Data Source Aerial Imagery: © NSW Department of Customer Service	Coordinate System: GDA 1994 MGA Zone 56	Date: 04 December 2021
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## Aerial Imagery 1966

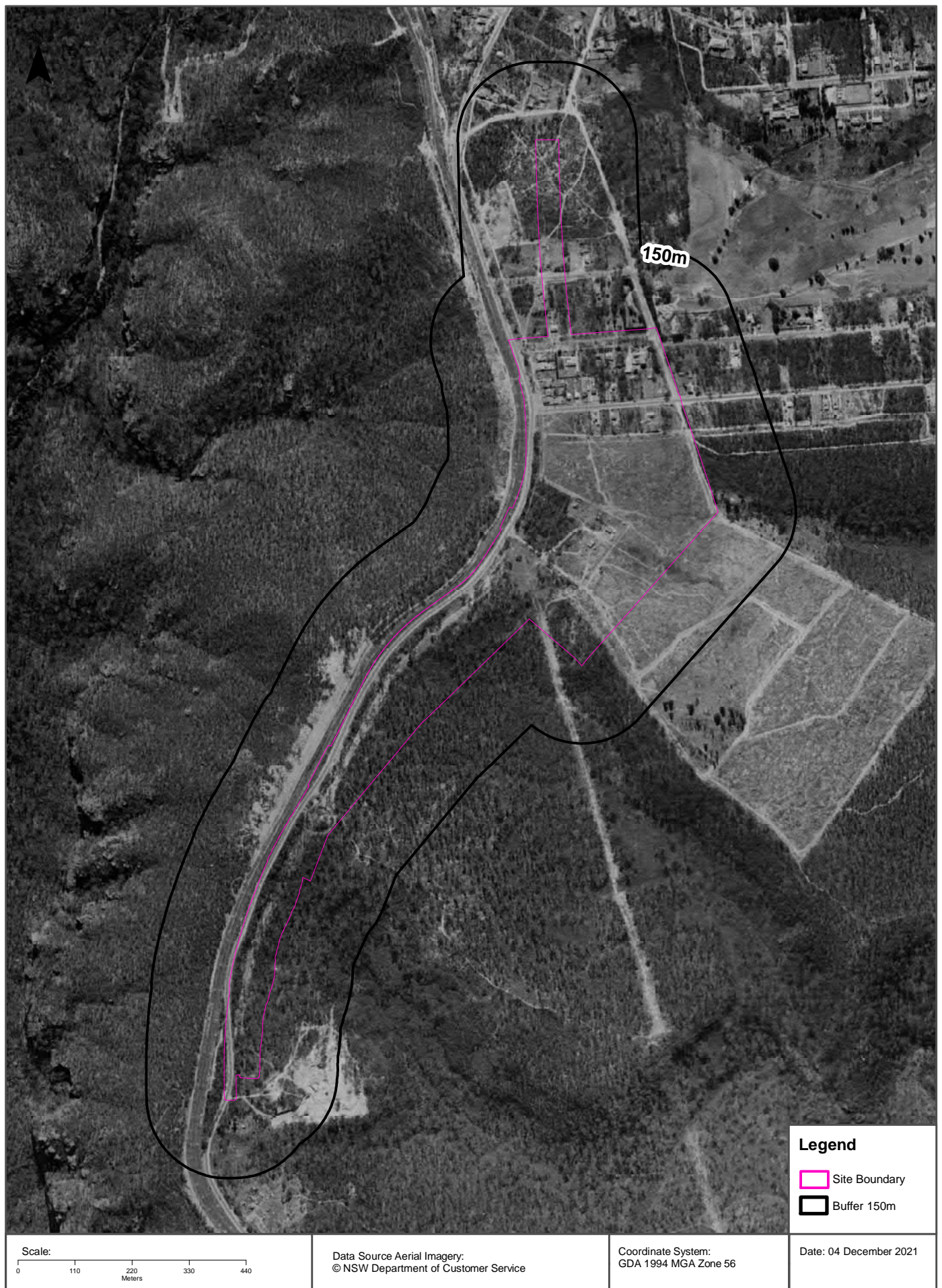
Road Alignment, Blackheath, NSW 2785 (10 of 10)



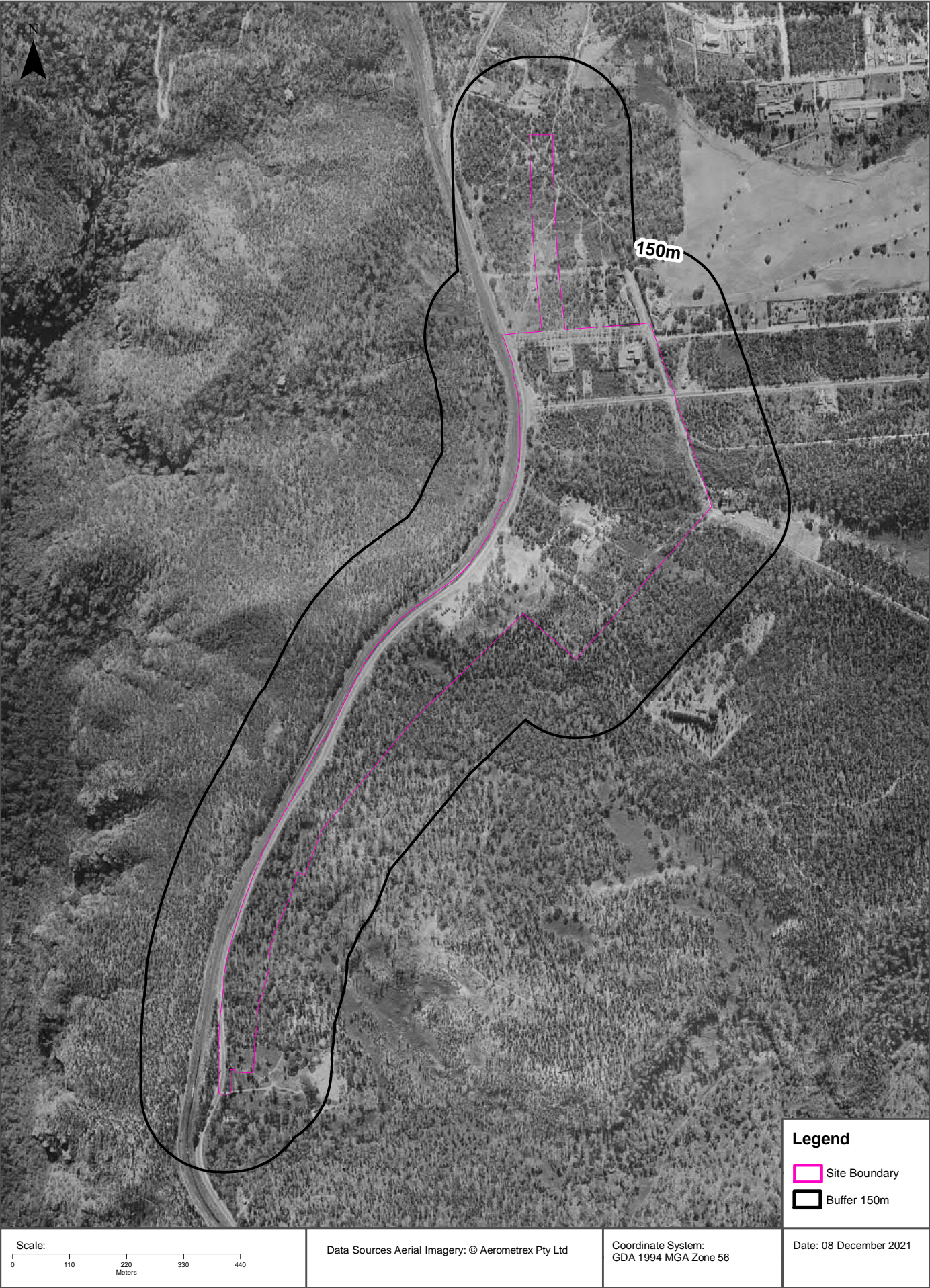


## Aerial Imagery 1958

Road Alignment, Blackheath, NSW 2785 (10 of 10)









## Aerial Imagery 1932-1933

Road Alignment, Blackheath, NSW 2785 (10 of 10)



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# **Annexure B**

**Areas of environmental  
interest and proposed  
sampling locations**

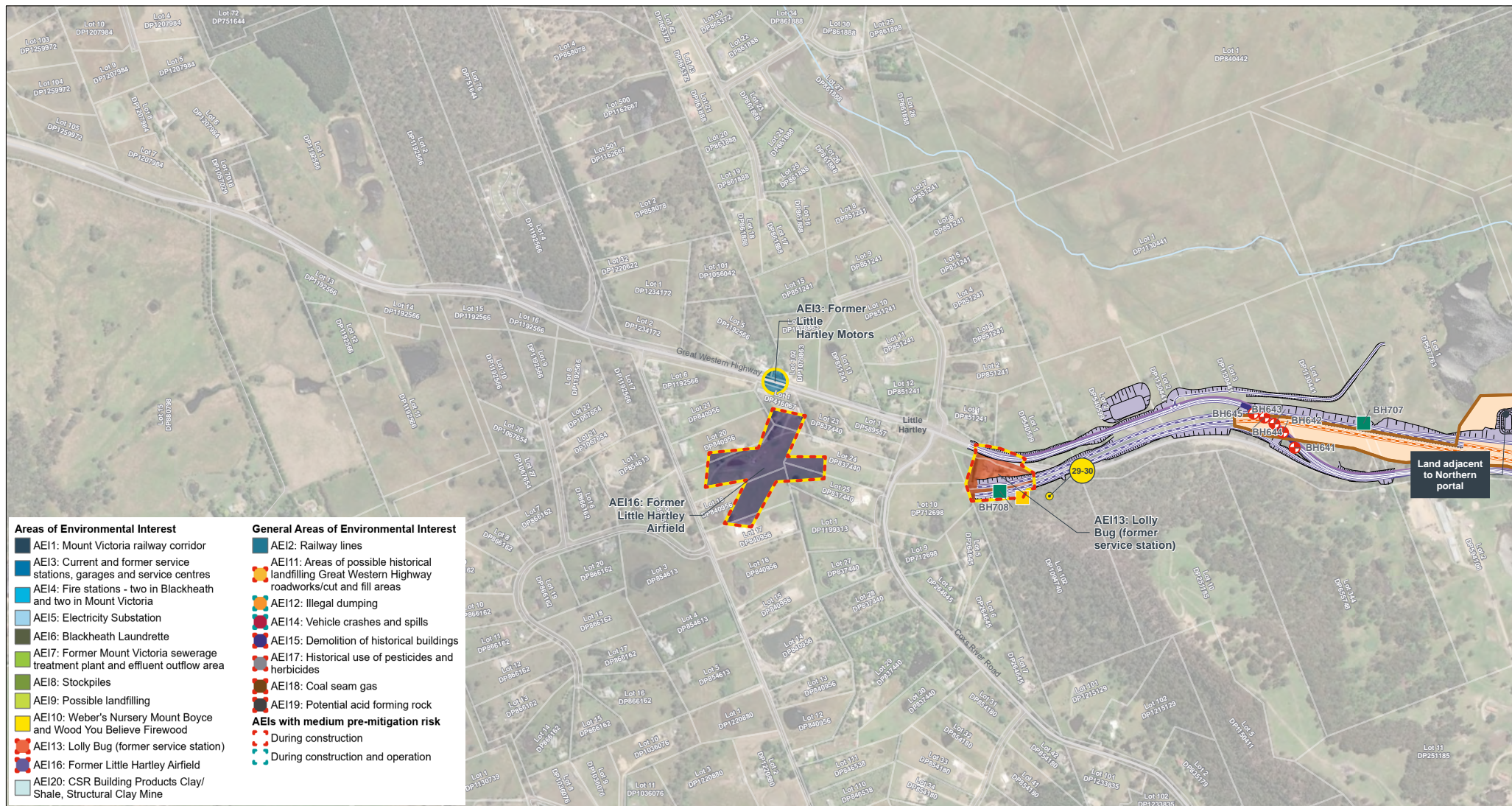
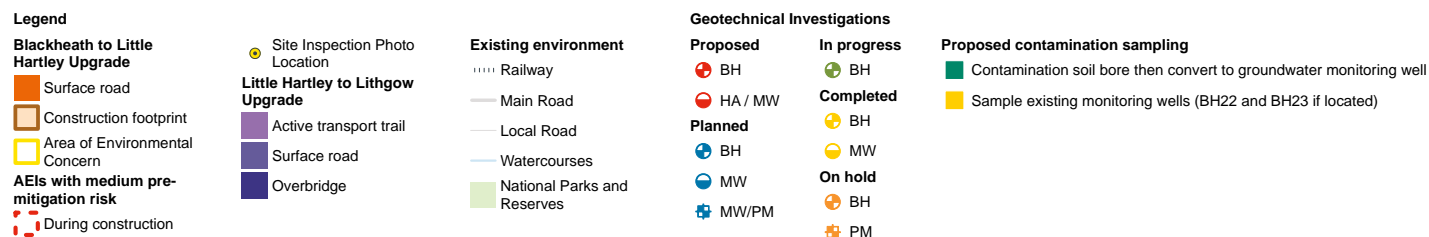


FIGURE B-1: AREA OF ENVIRONMENTAL INTEREST AND PROPOSED SAMPLE LOCATIONS



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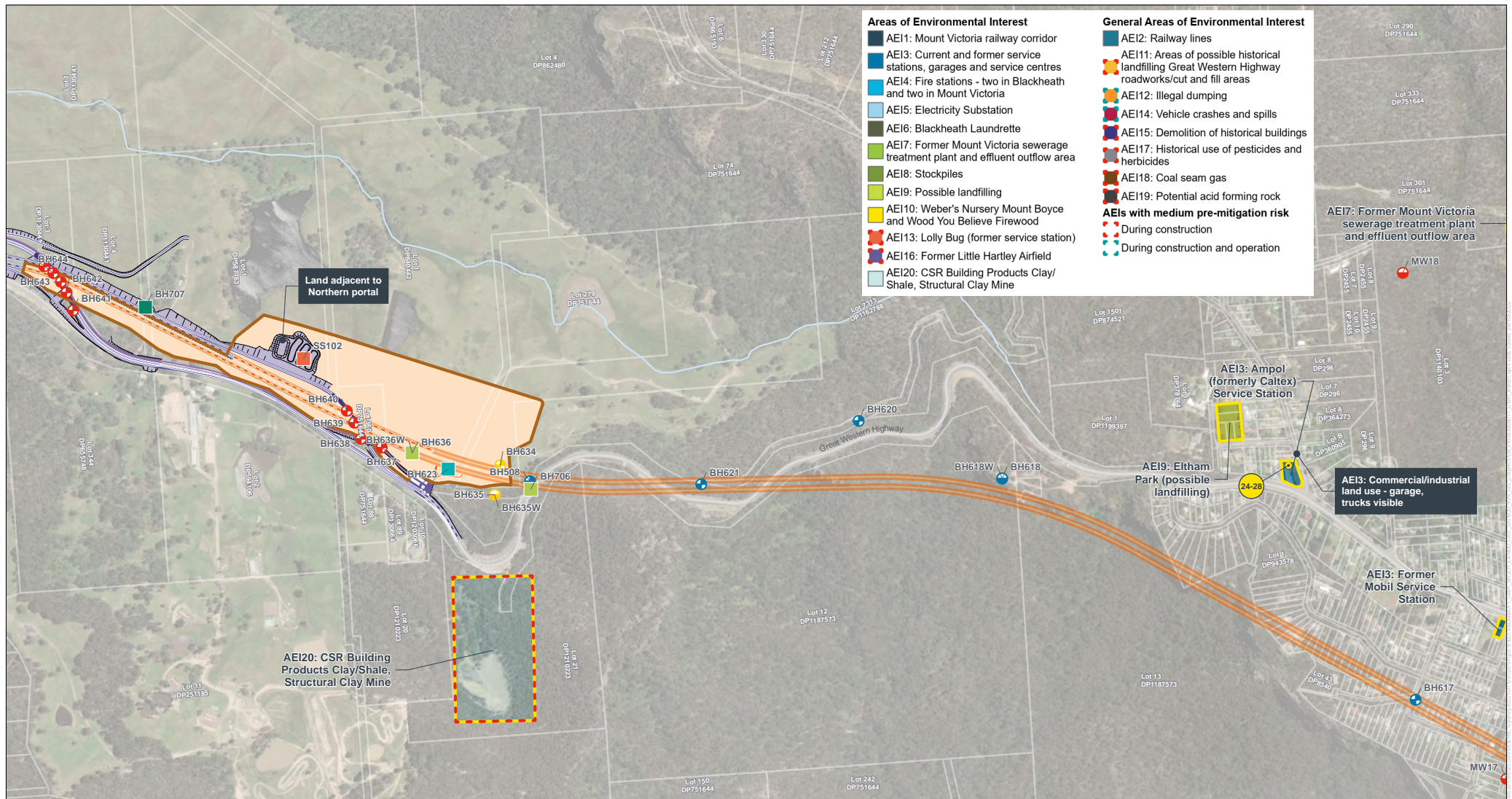
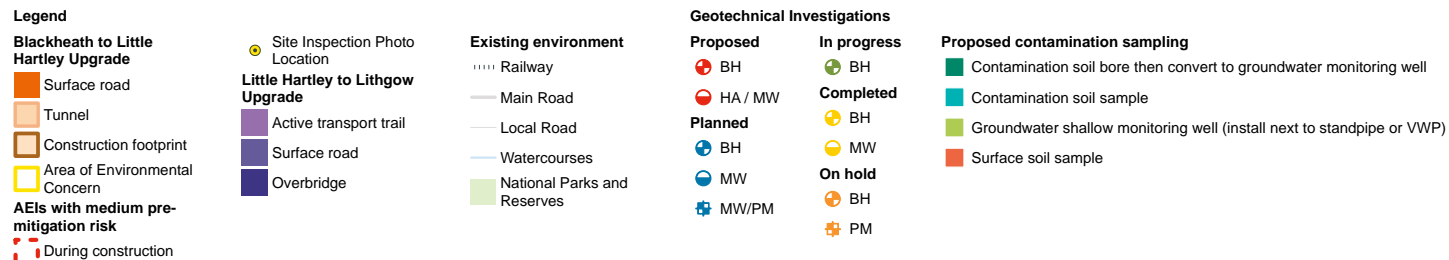


FIGURE B-2: AREA OF ENVIRONMENTAL INTEREST AND PROPOSED SAMPLE LOCATIONS



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Source: Maxar



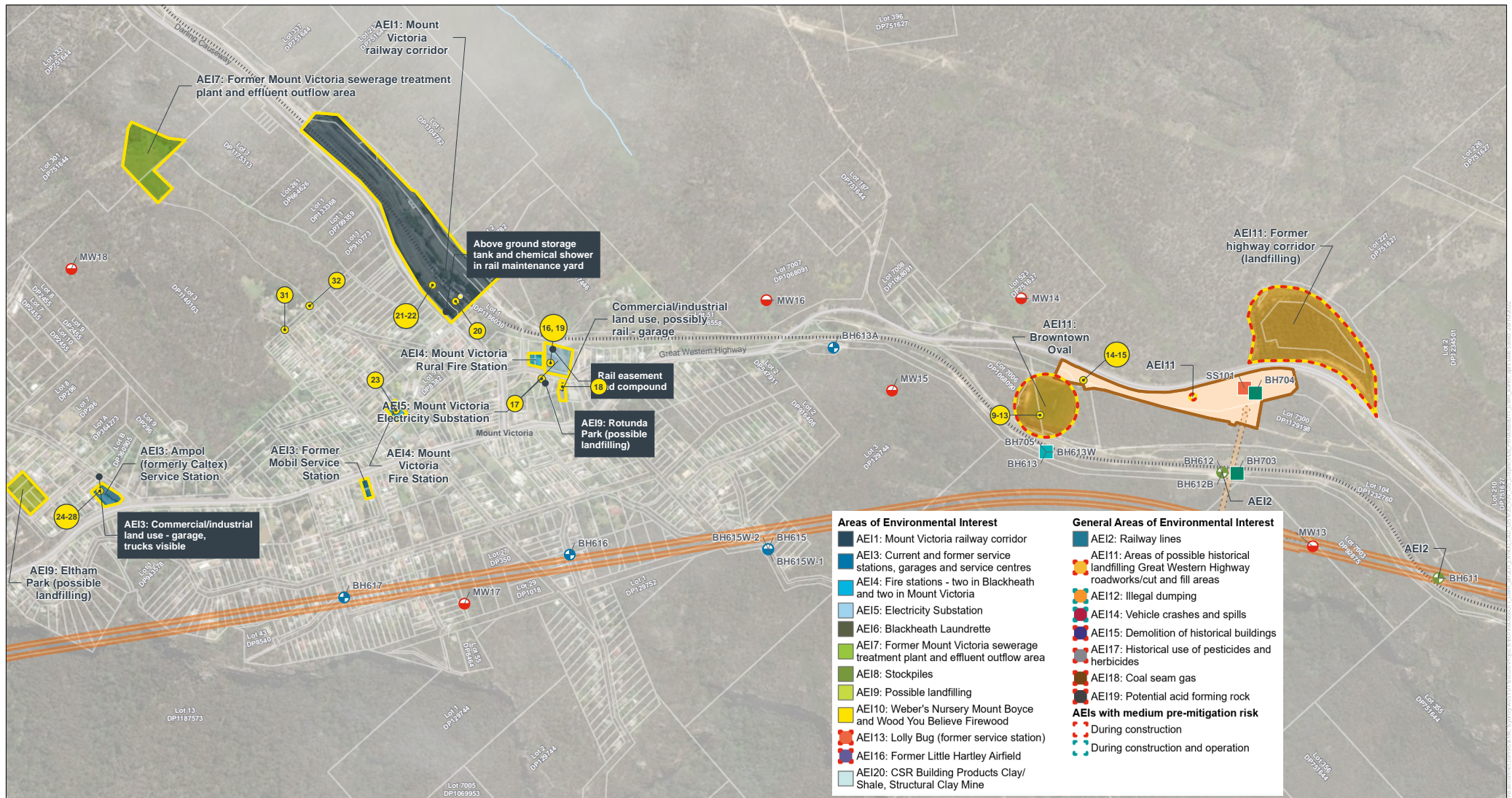
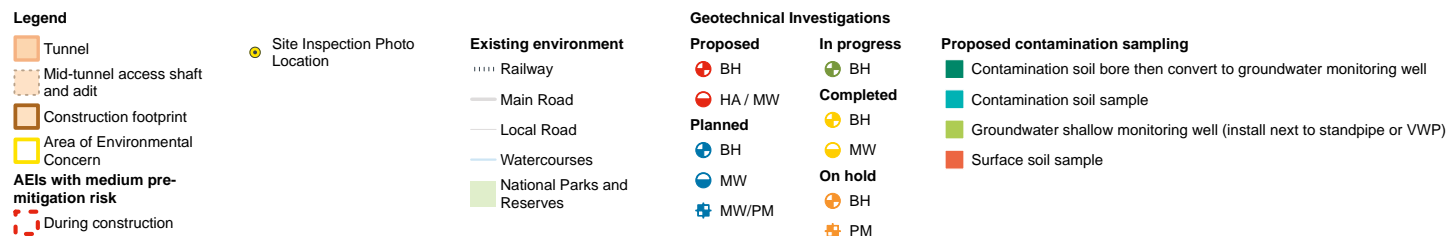


FIGURE B-3: AREA OF ENVIRONMENTAL INTEREST AND PROPOSED SAMPLE LOCATIONS



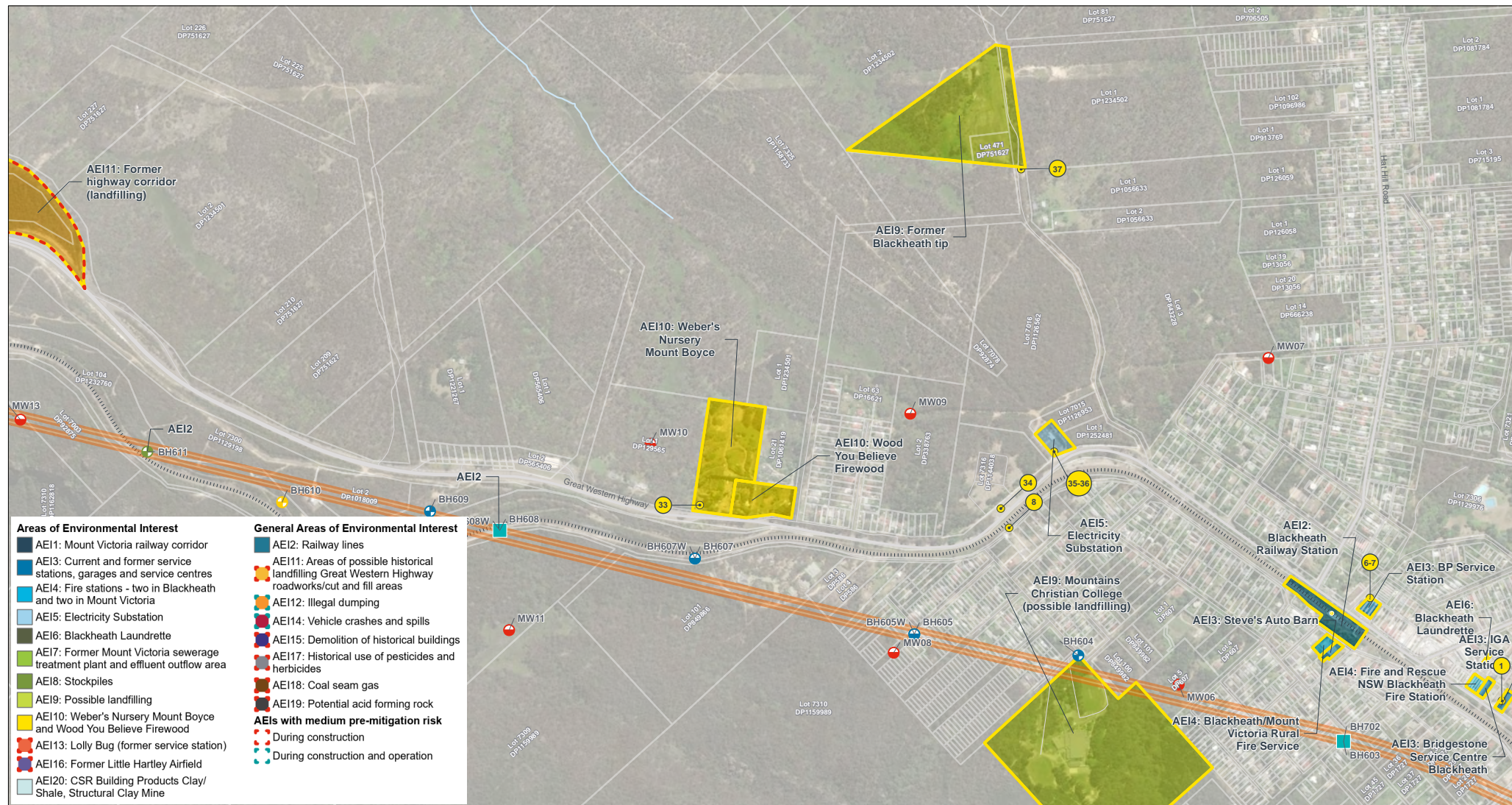
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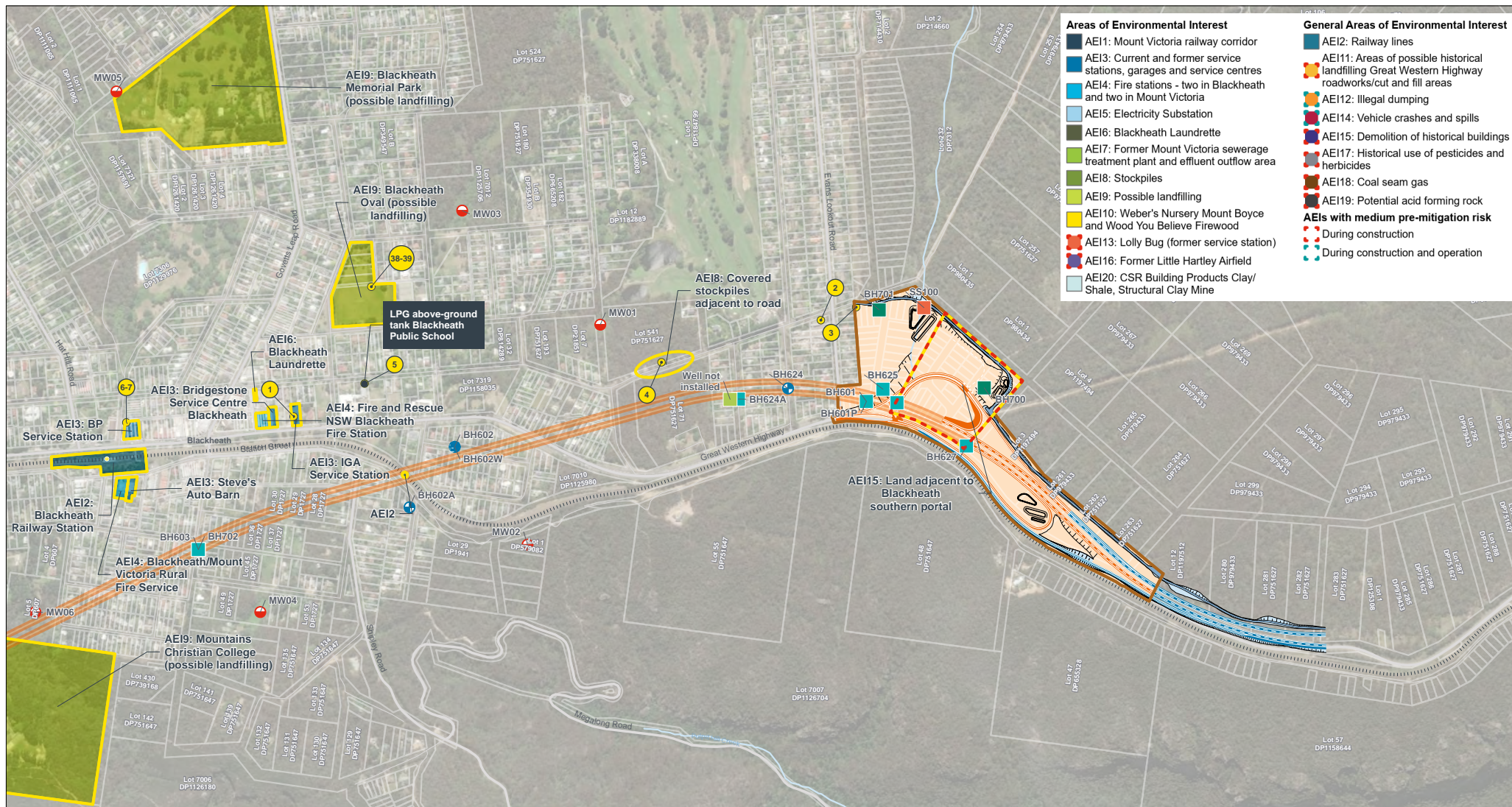


FIGURE B-5: AREA OF ENVIRONMENTAL INTEREST AND PROPOSED SAMPLE LOCATIONS



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Source: Maxar

# Annexure C


Site inspection  
photographs



PHOTOGRAPHIC LOG		
<b>Client Name:</b> TfNSW		<b>Site Location:</b> Great Western Highway, Blackheath to Little Hartley NSW
<b>Project No.</b> 60668011		
<b>Photo No.</b> 1	<b>Date:</b> 17/12/2021	
<b>Direction Photo Taken:</b> South-east		
<b>Description:</b> IGA Service Station opposite Blackheath Station on Great Western Highway		


<b>Photo No.</b> 2	<b>Date:</b> 17/12/2021	
<b>Direction Photo Taken:</b> North-west		
<b>Description:</b> Kyah boutique hotel formerly Redleaf Resort currently undergoing renovations		



PHOTOGRAPHIC LOG		
<b>Client Name:</b> TfNSW		<b>Site Location:</b> Great Western Highway, Blackheath to Little Hartley NSW
<b>Project No.</b> 60668011		
<b>Photo No.</b> <b>3</b>	<b>Date:</b> 17/12/2021	
<b>Direction Photo Taken:</b> South		
<b>Description:</b> Land adjacent to Blackheath southern portal at rear of residential – fire break, restricted access drinking water catchment		


<b>Photo No.</b> <b>4</b>	<b>Date:</b> 17/12/2021	
<b>Direction Photo Taken:</b> North-east		
<b>Description:</b> Covered stockpiles on northern side of Valley View Road near Sutton Park		



PHOTOGRAPHIC LOG		
<b>Client Name:</b> TfNSW		<b>Site Location:</b> Great Western Highway, Blackheath to Little Hartley NSW
		<b>Project No.</b> 60668011
<b>Photo No.</b> <b>5</b>	<b>Date:</b> 17/12/2021	
<b>Direction Photo Taken:</b> West		
<b>Description:</b> LPG Above-ground Storage Tank at rear of Blackheath Public School on Wentworth Street Blackheath		

<b>Photo No.</b> <b>6</b>	<b>Date:</b> 17/12/2021	
<b>Direction Photo Taken:</b> South		
<b>Description:</b> Remediated/upgraded BP Service Station corner Gardiners Crescent and Great Western Highway		



PHOTOGRAPHIC LOG		
<b>Client Name:</b> TfNSW		<b>Site Location:</b> Great Western Highway, Blackheath to Little Hartley NSW
		<b>Project No.</b> 60668011
<b>Photo No.</b> <b>7</b>	<b>Date:</b> 17/12/2021	
<b>Direction Photo Taken:</b> South		
<b>Description:</b> Remediated/upgraded BP Service Station corner Gardiners Crescent and Great Western Highway		

<b>Photo No.</b> <b>8</b>	<b>Date:</b> 17/12/2021	
<b>Direction Photo Taken:</b> East		
<b>Description:</b> Station Street Blackheath above tunnel alignment		




PHOTOGRAPHIC LOG		
<b>Client Name:</b> TfNSW		<b>Site Location:</b> Great Western Highway, Blackheath to Little Hartley NSW
<b>Project No.</b> 60668011		
<b>Photo No.</b> <b>9</b>	<b>Date:</b> 17/12/2021	
<b>Direction Photo Taken:</b> North-west		
<b>Description:</b> Browntown Oval used for archery club, possible landfilling		

<b>Photo No.</b> <b>10</b>	<b>Date:</b> 17/12/2021	
<b>Direction Photo Taken:</b> South-West		
<b>Description:</b> Looking across Browntown Oval to the archery stop butt		

PHOTOGRAPHIC LOG



<b>Client Name:</b> TfNSW		<b>Site Location:</b> Great Western Highway, Blackheath to Little Hartley NSW	<b>Project No.</b> 60668011
<b>Photo No.</b> <b>11</b>	<b>Date:</b> 17/12/2021		
<b>Direction Photo Taken:</b> West			
<b>Description:</b> Possible septic tank adjacent amenities buildings – Browntown Oval			

<b>Photo No.</b> <b>12</b>	<b>Date:</b> 17/12/2021
<b>Direction Photo Taken:</b> North	
<b>Description:</b> Air quality monitoring station	



**PHOTOGRAPHIC LOG**





<b>Client Name:</b> TfNSW		<b>Site Location:</b> Great Western Highway, Blackheath to Little Hartley NSW	<b>Project No.</b> 60668011
<b>Photo No.</b> <b>13</b>	<b>Date:</b> 17/12/2021		
<b>Direction Photo Taken:</b> South			
<b>Description:</b> Archery stop butt at end of Browntown Oval			


<b>Photo No.</b> <b>14</b>	<b>Date:</b> 17/12/2021	
<b>Direction Photo Taken:</b> South-East		
<b>Description:</b> Sydney Water tanker filling point at turn off to Browntown Oval		

**PHOTOGRAPHIC LOG**



<b>Client Name:</b> TfNSW		<b>Site Location:</b> Great Western Highway, Blackheath to Little Hartley NSW	<b>Project No.</b> 60668011
<b>Photo No.</b> <b>15</b>	<b>Date:</b> 17/12/2021		
<b>Direction Photo Taken:</b> East			
<b>Description:</b> Great Western Highway looking east at turn off to Browntown Oval Mount Victoria			
<b>Photo No.</b> <b>16</b>	<b>Date:</b> 17/12/2021		
<b>Direction Photo Taken:</b> East			
<b>Description:</b> Substation adjacent movie theatre (Vic Flicks), Mount Victoria Fire Station and Rail Easement/Compound on Little Harley Street, Mount Victoria			
<b>PHOTOGRAPHIC LOG</b>			



<b>Client Name:</b> TfNSW		<b>Site Location:</b> Great Western Highway, Blackheath to Little Hartley NSW	<b>Project No.</b> 60668011
<b>Photo No.</b> <b>17</b>	<b>Date:</b> 17/12/2021		
<b>Direction Photo Taken:</b> West			
<b>Description:</b> Vacant land (possible landfilling) opposite substation adjacent movie theatre (Vic Flicks), Mount Victoria Fire Station and Rail Easement/Compound on Little Harley Street, Mount Victoria proposed BH616 location			

<b>Photo No.</b> <b>18</b>	<b>Date:</b> 17/12/2021	
<b>Direction Photo Taken:</b> South-west		
<b>Description:</b> Commercial/industrial land use opposite Rail Easement/Compound on Little Harley Street, Mount Victoria		

PHOTOGRAPHIC LOG





<b>Client Name:</b> TfNSW		<b>Site Location:</b> Great Western Highway, Blackheath to Little Hartley NSW	<b>Project No.</b> 60668011
<b>Photo No.</b> <b>19</b>	<b>Date:</b> 17/12/2021		
<b>Direction Photo Taken:</b> East			
<b>Description:</b> Rail Easement/Compound on Little Harley Street, Mount Victoria			

<b>Photo No.</b> <b>20</b>	<b>Date:</b> 17/12/2021	
<b>Direction Photo Taken:</b> South-east		
<b>Description:</b> Mount Victoria Rail Station with gas tanks		

**PHOTOGRAPHIC LOG**




<b>Client Name:</b> TfNSW		<b>Site Location:</b> Great Western Highway, Blackheath to Little Hartley NSW	<b>Project No.</b> 60668011
<b>Photo No.</b> <b>21</b>	<b>Date:</b> 17/12/2021		
<b>Direction Photo Taken:</b> West			
<b>Description:</b> AST and chemical shower adjacent entrance to rail maintenance yard Mount Victoria			
<b>Photo No.</b> <b>22</b>	<b>Date:</b> 17/12/2021		
<b>Direction Photo Taken:</b> West			
<b>Description:</b> Rail maintenance yards Mount Victoria station			
<b>PHOTOGRAPHIC LOG</b>			



<b>Client Name:</b> TfNSW		<b>Site Location:</b> Great Western Highway, Blackheath to Little Hartley NSW	<b>Project No.</b> 60668011
<b>Photo No.</b> <b>23</b>	<b>Date:</b> 17/12/2021		
<b>Direction Photo Taken:</b> South-east			
<b>Description:</b> Mount Victoria Fire Station			
<b>Photo No.</b> <b>24</b>	<b>Date:</b> 17/12/2021		
<b>Direction Photo Taken:</b> North-west			
<b>Description:</b> Ampol service station Mount Victoria			
<b>PHOTOGRAPHIC LOG</b>			



<b>Client Name:</b> TfNSW		<b>Site Location:</b> Great Western Highway, Blackheath to Little Hartley NSW	<b>Project No.</b> 60668011
<b>Photo No.</b> <b>25</b>	<b>Date:</b> 17/12/2021		
<b>Direction Photo Taken:</b> West			
<b>Description:</b> Service Centre possibly disused at Ampol Mount Victoria Service Station			

<b>Photo No.</b> <b>26</b>	<b>Date:</b> 17/12/2021
<b>Direction Photo Taken:</b> North-west	
<b>Description:</b> Rear of Ampol Mount Victoria Service Station on Mount York Road	

A photograph showing the rear of a white, single-story building with three red-tiled chimneys. The building is surrounded by greenery, including trees and bushes. A red structure is visible in the background. The foreground shows a paved area and a road.

**PHOTOGRAPHIC LOG**



<b>Client Name:</b> TfNSW		<b>Site Location:</b> Great Western Highway, Blackheath to Little Hartley NSW	<b>Project No.</b> 60668011
<b>Photo No.</b> <b>27</b>	<b>Date:</b> 17/12/2021		
<b>Direction Photo Taken:</b> North			
<b>Description:</b> Rear of Ampol Mount Victoria Service Station on Mount York Road			
<b>Photo No.</b> <b>28</b>	<b>Date:</b> 17/12/2021		
<b>Direction Photo Taken:</b> North			
<b>Description:</b> Rear of Ampol Mount Victoria Service Station on Mount York Road			
<b>PHOTOGRAPHIC LOG</b>			



<b>Client Name:</b> TfNSW		<b>Site Location:</b> Great Western Highway, Blackheath to Little Hartley NSW	<b>Project No.</b> 60668011
<b>Photo No.</b> <b>29</b>	<b>Date:</b> 17/12/2021		
<b>Direction Photo Taken:</b> North-west			
<b>Description:</b> Lolly Bug Little Hartley, former service station			
<b>Photo No.</b> <b>30</b>	<b>Date:</b> 17/12/2021		
<b>Direction Photo Taken:</b> East			
<b>Description:</b> Lolly Bug Little Hartley, former service station, possible former bowisers			
<b>PHOTOGRAPHIC LOG</b>			




<b>Client Name:</b> TfNSW		<b>Site Location:</b> Great Western Highway, Blackheath to Little Hartley NSW	<b>Project No.</b> 60668011
<b>Photo No.</b> <b>31</b>	<b>Date:</b> 17/12/2021		
<b>Direction Photo Taken:</b> East			
<b>Description:</b> Entrance to Sydney Water Mount Victoria sewage treatment plant and effluent outflow area			
<b>Photo No.</b> <b>32</b>	<b>Date:</b> 17/12/2021		
<b>Direction Photo Taken:</b> South-east			
<b>Description:</b> Carparking on Great Western Highway outside Weber's Nursery			
<b>PHOTOGRAPHIC LOG</b>			



<b>Client Name:</b> TfNSW		<b>Site Location:</b> Great Western Highway, Blackheath to Little Hartley NSW	<b>Project No.</b> 60668011
<b>Photo No.</b> <b>33</b>	<b>Date:</b> 17/12/2021		
<b>Direction Photo Taken:</b> West			
<b>Description:</b> Terratest drilling rig outside Mount Victoria Cemetery			

<b>Photo No.</b> <b>34</b>	<b>Date:</b> 17/12/2021
<b>Direction Photo Taken:</b> North-west	
<b>Description:</b> Endeavour Electricity substation Mount Victoria with HAZCHEM Combustible liquids sign on fence	


A photograph of a fenced-in area, likely an electricity substation. The fence is made of black metal mesh and has several warning signs. On the left, a sign reads "HAZCHEM COMBUSTIBLE LIQUIDS". In the center, a sign reads "HIGH VOLTAGE KEEP OUT" with a red circle and a diagonal line through it. To the right of the gate, a sign reads "WARNING! POLICE" with a red circle and a diagonal line through it. Further right, a sign reads "WARNING! HIGH VOLTAGE" with a red circle and a diagonal line through it. The gate is open, and a concrete path leads through it. In the background, there are power lines, a tall antenna tower, and some trees. The sky is blue with some clouds.

**PHOTOGRAPHIC LOG**



<b>Client Name:</b> TfNSW		<b>Site Location:</b> Great Western Highway, Blackheath to Little Hartley NSW	<b>Project No.</b> 60668011
<b>Photo No.</b> 35	<b>Date:</b> 17/12/2021		
<b>Direction Photo Taken:</b> North-west			
<b>Description:</b> Endeavour Electricity substation on Great Western Highway Mount Victoria			
<b>Photo No.</b> 36	<b>Date:</b> 17/12/2021		
<b>Direction Photo Taken:</b> North-east			
<b>Description:</b> Former Blackheath Tip, Asbestos warning sign on locked gate			
<b>PHOTOGRAPHIC LOG</b>			



<b>Client Name:</b> TfNSW		<b>Site Location:</b> Great Western Highway, Blackheath to Little Hartley NSW	<b>Project No.</b> 60668011
<b>Photo No.</b> <b>37</b>	<b>Date:</b> 17/12/2021		
<b>Direction Photo Taken:</b> North-east			
<b>Description:</b> Blackheath Oval/Jubilee Park (possible landfilling)			

<b>Photo No.</b> <b>38</b>	<b>Date:</b> 17/12/2021	
<b>Direction Photo Taken:</b> North		
<b>Description:</b> Blackheath Oval/Jubilee Park (possible landfilling)		



# **Annexure D**

**Previous environmental  
investigations**

Table D-1 Summary of Previous Investigations

Background/objective	Scope	Results relevant to this assessment	Conclusion/recommendation
Roads and Traffic Authority/Parsons Brinckerhoff/Sinclair Knight Mertz (2011) Great Western Highway Upgrade, Mount Victoria to Lithgow Alliance Environmental Corridor Study Groundwater, Revision D, 13 October			
<p>The report covers the portion of the project from Mount Victoria to Little Hartley and northwest of the project to Lithgow.</p> <p>The report details the desktop groundwater assessment and preliminary field investigations undertaken to assess the preferred route corridor for the Mount Victoria to Lithgow Great Western Highway upgrade project.</p> <p>The report assesses groundwater conditions and outlines potential risks on groundwater conditions and groundwater users, including groundwater dependent ecosystems, to inform the development of the concept design for the project.</p>	<p>Groundwater field investigations were undertaken along the preferred route corridor in May 2011. During the field investigations, previously installed RTA monitoring bores were gauged and sampled.</p>	<p>The main findings of the field investigations were:</p> <ul style="list-style-type: none"> <li>the main aquifer systems that are present along the route are the sandstone aquifers of the Narrabeen Group (Mount Victoria) and Illawarra Coal Measures (Little Hartley) and granite fractured rock aquifers of the Kanimbla Batholith (east of the project). Alluvium around the major rivers intersected is minor in extent.</li> <li>groundwater levels ranged between 6.06 m bgl and 23.07 m bgl at Mount Victoria and ranged between 14.2 m bgl to 16.27 m bgl at Little Hartley</li> <li>groundwater elevations ranged from 815.99 m AHD at Little Hartley to 1032.04 m AHD at Mount Victoria</li> <li>highest electrical conductivities were recorded at Little Hartley (Shoalhaven Group) and lowest at Mount Victoria (Narrabeen Group).</li> </ul> <p>Potential risks to groundwater during construction and operation may include:</p>	<p>The report noted that taking ground conditions and groundwater flow into consideration during concept and detailed design development will assist in preventing and alleviating potential impacts that may arise from the road upgrade construction and operation. Risk management measures include incorporating bridges and appropriate drainage into road design to minimise impacts to landholder bores and groundwater dependent ecosystems.</p> <p>It was noted that a more detailed groundwater assessment would be undertaken as part of the planning approval process for the upgrade east of Victoria Pass to South Bowenfels in the west.</p>

Background/objective	Scope	Results relevant to this assessment	Conclusion/recommendation
		<ul style="list-style-type: none"> <li>ground compaction at embankments may induce changes to shallow aquifer conditions and impact on local ecosystems</li> <li>localised dewatering of groundwater systems at road cuts and tunnels may impact on landholder bores and groundwater dependent ecosystems, including hanging swamps</li> <li>accidental spills or leakage may release hazardous materials (e.g., fuels, chemicals) to groundwater</li> <li>construction activities may destroy or damage landholder bores.</li> </ul> <p>Groundwater may pose a risk to road construction and operation as follows:</p> <ul style="list-style-type: none"> <li>ground compaction may result in impediment of the natural groundwater flow and cause localised water logging and ponding</li> <li>groundwater discharge at road cuts and tunnels where fracture zones or joint/fault zones are intersected may result in the requirement for drainage during construction and longer-term operation</li> <li>groundwater discharge at road cuts and tunnels may be saline or have high concentrations of iron</li> </ul>	



Background/objective	Scope	Results relevant to this assessment	Conclusion/recommendation
		<p>and manganese and require treatment before it can be disposed</p> <ul style="list-style-type: none"> <li>groundwater in the vicinity of deep piles and tunnels may have high pH, high sulphate and high chloride and aggressive to concrete.</li> </ul>	
Roads and Traffic Authority/Parsons Brinckerhoff/Sinclair Knight Mertz (2011) Great Western Highway Upgrade, Mount Victoria to Lithgow Alliance Environmental Corridor Report Water Quality, Revision E, 13 October			
<p>The corridor study was prepared as part of the concept design development process to identify potential constraints associated with the Great Western Highway proposed upgrade between Mount Victoria and Lithgow.</p> <p>The study documents the water quality investigations that have been undertaken as part of the concept design development and includes opportunities that may exist for the concept design.</p> <p>The objectives of the water quality assessment were to identify potential opportunities and constraints, as well as the potential impacts associated with the concept design. The assessment aimed to identify the type and required footprint of the potential mitigation measures for the construction and operational phases of the Great Western Highway upgrade.</p>	<p>The study compiled data from previous studies to provide background information on existing water quality conditions. It identifies the water quality guidelines and objectives in the context of the Great Western Highway proposed upgrade. In addition, it outlines the potential water quality constraints and associated management strategies.</p>	<p>The study identified that during the construction stage, there are two areas of the proposed upgrade where mitigation of the effects of the construction on water quality could present a challenge. These are in the areas of River Lett and Coks Creek, and further work will be done during detailed design to find solutions.</p> <p>The management of potential water quality impacts would be further developed following comments received from the public and the stakeholder agency consultation process. Detailed erosion and sediment control plans and operational stormwater management strategies would be developed during detailed design. During the development of the detailed design, the sizes, locations and footprints of the proposed sediment control basins and water quality ponds would be reviewed.</p>	<p>It was noted that the management of potential water quality impacts would be further developed following comments received from the public and the stakeholder agency consultation process. In addition, as the concept and detailed design of proposed sediment basins would be reviewed continuously as the concept and detailed design are developed. It was noted that the next steps in the environmental assessment that would be undertaken included impact assessment, proposed mitigation measures to address identified impacts and recommendations.</p>

Background/objective	Scope	Results relevant to this assessment	Conclusion/recommendation
Roads and Traffic Authority/Parsons Brinckerhoff/Sinclair Knight Mertz (2011) Great Western Highway Upgrade, Mount Victoria to Lithgow Alliance Corridor Study Contaminated Land, Revision B, 14 October			
<p>The report covers the portion of the project from Mount Victoria to Little Hartley and northwest of the project to Lithgow.</p> <p>The corridor study was prepared as part of the concept design process to identify potential constraints, with respect to contamination, associated with the proposed Great Western Highway upgrade between Mount Victoria and Lithgow.</p>	<p>The corridor study was developed from a review of a number of information sources including previous reports, aerial photographs and site inspections and identified potential contaminated land constraints that could exist within the corridor area and which could impact upon the construction and the design/alignment and construction of the proposed road.</p>	<p>Based on the review, a number of potential areas of environmental interest were identified which could represent constraints to the construction, design or alignment of the proposed upgrade. These include:</p> <ul style="list-style-type: none"> <li>• former service station, Log Cabin Farmhouse, Little Hartley</li> <li>• Stockpiled materials (predominantly road construction materials with some evidence of other general waste materials) along existing road</li> <li>• the Great Western Highway road corridor</li> <li>• regional agricultural land use within the corridor area including the use of chemicals, storage and use of fuels, fill, stock dips and waste disposal practices.</li> <li>• the Mount Victoria railway corridor</li> <li>• former Sewage Treatment Plant and effluent outflow area, Mount Victoria</li> <li>• airfield, Little Hartley.</li> </ul>	<p>The potential areas of environmental interest identified were considered to be a negligible low constraint to the design and construction to the upgraded highway.</p> <p>It was recommended that the potential contamination constraints associated with the former service station site at Little Hartley be quantified through a Stage 2 sub-surface investigation per the RTA Contaminated Land Management Guidelines April 2005. Other potential areas of interest could be managed during construction in accordance with a Construction Environmental Management Plan (CEMP) and Unexpected Finds Protocol.</p>

Background/objective	Scope	Results relevant this assessment	Conclusion/ recommendation
Roads and Traffic Authority/Parsons Brinckerhoff/Sinclair Knight Mertz (2012) Great Western Highway Upgrade, Mount Victoria to Lithgow Alliance Groundwater Monitoring Report, Revision B, 29 February			
<p>The report covers the portion of the project from Mount Victoria to Little Hartley and northwest of the project to Lithgow.</p> <p>The report details the groundwater monitoring undertaken to inform the Environmental Impact Assessment for the preferred route corridor for the Mount Victoria to Lithgow Great Western Highway upgrade.</p>	<p>The scope of work comprised installation of eight groundwater monitoring bores along the preferred route corridor between May and August 2011. Groundwater monitoring was undertaken in August and September 2011. Depths to groundwater were gauged and groundwater samples were collected for analysis of major anions, cations and dissolved metals – manganese and iron. Analytical results were assessed against Australian Drinking Water Guidelines (ADWG) (2011) – Health and Aesthetic and Australian and New Zealand Environmental Conservation Council (ANZECC, 2000) Water Quality Guidelines for freshwater ecosystems</p>	<p>The key findings of the investigation were:</p> <ul style="list-style-type: none"> <li>three groundwater monitoring bores were installed within the project area BH103 (Mount Victoria) screened within Sandstone/Claystone, BH115 and BH123 (Little Hartley) screened within Siltstone</li> <li>standing water levels ranged between 2.625 and 8.41 m below ground level (m bgl) and 9.97 m bgl at Mount Victoria</li> <li>groundwater levels ranged between 822.575 m AHD to 854.09 m AHD in Little Hartley and 1020.03 m AHD in Mount Victoria</li> <li>groundwater pH was acidic in all three monitoring bores</li> <li>groundwater analytical results indicated that concentrations of manganese and iron were above ADWG (2011) aesthetic guidelines.</li> </ul>	<p>It was concluded that the results were consistent with monitoring undertaken in May 2011 and as such supported the conceptual hydrogeological model in the Environmental Corridor Groundwater Study.</p>



Background/objective	Scope	Results relevant this assessment	Conclusion/ recommendation
Roads and Traffic Authority/Parsons Brinckerhoff/Sinclair Knight Mertz (2013) Great Western Highway Upgrade, Mount Victoria to Lithgow Alliance Environmental Corridor Report Water Quality, Revision C, 3 June			
<p>The report was prepared as part of the concept design development process to identify potential constraints associated with the Great Western Highway proposed upgrade between Mount Victoria and Lithgow.</p> <p>The study documents the water quality investigations that have been undertaken as part of the concept design development and includes opportunities that may exist for the concept design.</p> <p>The objectives of the water quality assessment were to identify potential opportunities and constraints, as well as the potential impacts associated with the concept design. The assessment aimed to identify the type and required footprint of the potential mitigation measures for the construction and operational phases of the Great Western Highway upgrade.</p>	<p>The study compiled data from previous studies to provide background information on existing water quality conditions. It identifies the water quality guidelines and objectives in the context of the Great Western Highway proposed upgrade. In addition, it outlines the potential water quality constraints and associated management strategies.</p>	<p>The study identified that during the construction stage, there are two areas of the proposed upgrade where mitigation of the effects of the construction on water quality could present a challenge. These are in the areas of River Lett and Coks Creek, and further work will be done during detailed design to find solutions.</p> <p>The management of potential water quality impacts would be further developed following comments received from the public and the stakeholder agency consultation process. Detailed erosion and sediment control plans and operational stormwater management strategies would be developed during detailed design. During the development of the detailed design, the sizes, locations and footprints of the proposed sediment control basins and water quality ponds would be reviewed.</p>	<p>It was noted that the management of potential water quality impacts would be further developed following comments received from the public and the stakeholder agency consultation process. In addition, as the concept and detailed design of proposed sediment basins would be reviewed continuously as the concept and detailed design are developed.</p>

Background/objective	Scope	Results relevant to this assessment	Conclusion/ recommendation
<b>Hills Environmental and Roads and Maritime Services (2019) Great Western Highway Katoomba to Mount Victoria Preliminary Environmental Investigation, 28 February</b>			
<p>The report covers the portion of the project from Blackheath to Mount Victoria.</p> <p>This report provides a preliminary environmental investigation for the proposed upgrade of the Great Western Highway between Katoomba and Mount Victoria. The purpose of the report is to identify at an early stage of the project's development, potential environmental and social issues and opportunities and to make recommendations for the concept design stage of the proposal.</p>	<p>The report reviewed available desktop information related to the project to provide information on:</p> <ul style="list-style-type: none"> <li>• statutory and planning framework</li> <li>• stakeholder engagement and community consultation</li> <li>• environmental issues including biodiversity, non-Aboriginal heritage, Aboriginal heritage, geology, soils and contamination, hydrology and water quality, air quality, noise and vibration, socio-economic and land use, landscape character and visual and cumulative impacts.</li> </ul>	<p>The main environmental issues associated with a road upgrade proposal within the investigation area were:</p> <ul style="list-style-type: none"> <li>• potential impacts on Blue Mountains Swamps in the Sydney Basin Bioregion which are listed as vulnerable under the <i>Biodiversity Conservation Act 2016</i> and as endangered under the <i>Environment Protection and Biodiversity Conservation Act 1999</i></li> <li>• likely occurrence of threatened flora and fauna species and migratory species (and their habitats) within the area likely to be affected by the proposal</li> <li>• expansion of existing edge effects, including weed invasion and soil disturbance</li> <li>• further reduction in fauna connectivity between large areas of native vegetation to the east and west of the existing highway</li> <li>• potential direct and indirect impacts on the State Heritage Register listed Medlow Bath Railway Station and Blackheath Railway Station Group, as well as other locally listed and other heritage items</li> <li>• potential presence of historic archaeological materials associated with the construction of the Great Western Highway and its alignment</li> <li>• potential presence of Aboriginal objects or places outside the disturbed urban areas</li> <li>• presence of potentially contaminated sites (including the highway corridor, the rail corridor and current and former service station sites)</li> <li>• potential impacts on existing surface water flow patterns including within the Sydney drinking water catchment</li> <li>• potential for erosion and sedimentation during construction</li> </ul>	<p>The report recommended that detailed environmental assessment, options development and evaluation and concept design be required to address the environmental impacts.</p>

Background/objective	Scope	Results relevant to this assessment	Conclusion/ recommendation
		<ul style="list-style-type: none"><li>• potential for air quality impacts during construction and operation</li><li>• construction and operational noise impacts on noise sensitive receivers and environments</li><li>• positive and negative socio-economic impacts due to road infrastructure improvements and associated construction impacts. During construction there is the potential for reduced urban amenity due to noise, traffic and visual impacts. Once complete socio-economic benefits would include reduced travel time and improved amenity due to the separation of through traffic from local traffic and areas with high pedestrian activity</li><li>• landscape character and visual impacts associated with the widened road and new structures.</li></ul>	



Background/objective	Scope	Results relevant to this assessment	Conclusion/ recommendation
<b>Hills Environmental on behalf of Transport for NSW (2020) Great Western Highway Upgrade, Katoomba to Lithgow Preliminary Environmental Investigation, Version 2, 30 September</b>			
<p>The report covers the project area plus areas southeast and northwest. The report was prepared for the Great Western Highway Upgrade Katoomba to Lithgow. The purpose of the report was to:</p> <ul style="list-style-type: none"> <li>identify potential environmental, social and planning issues and opportunities for the proposal</li> <li>provide recommendations to inform future stages of proposal development</li> <li>integrate environmental, economic and social outcomes into decision making</li> <li>assist in applying the principles of Ecologically Sustainable Development.</li> </ul> <p>The information and recommendations from the report will be used to inform the ongoing design process for the proposal with an aim to minimise environmental and social impacts wherever possible. It was noted that once a preferred option was identified and a concept design developed, a detailed environmental impact assessment would be prepared and would detail environmental safeguards and management</p>	<p>The report reviewed available desktop information related to the project to provide information on:</p> <ul style="list-style-type: none"> <li>statutory and planning framework</li> <li>stakeholder engagement and community consultation</li> <li>environmental issues including biodiversity, non-Aboriginal heritage, Aboriginal heritage, geology, soils and contamination, hydrology and water quality, air quality, noise and vibration, socio-</li> </ul>	<p>The main environmental issues identified with the project were:</p> <ul style="list-style-type: none"> <li>presence of land managed under the <i>National Parks and Wildlife Act 1979</i> which would require an Act of Parliament to revoke the conservation agreement</li> <li>presence of land affected by Native Title Claim under the <i>Native Title Act 1993</i></li> <li>presence of land potentially affected by Aboriginal land claims under the <i>Aboriginal Land Rights Act 1983</i></li> <li>potential impacts on three listed threatened ecological communities, threatened flora and fauna species (including critically endangered flora) and migratory species under the <i>Biodiversity Conservation Act 2016</i> and the <i>Environment Protection and Biodiversity Conservation Act 1999</i></li> <li>presence of groundwater dependent ecosystems and key fish habitat</li> <li>presence of Aboriginal heritage sites, particularly west of Mount Victoria</li> <li>presence of non-Aboriginal heritage items, including Greater Blue Mountains Area, Medlow Bath Railway Station, Blackheath Railway Station Group, Mount Victoria Railway Station Group, Hartley Historic Site, Fernhill, Bowenfels National School Site</li> <li>presence of potentially contaminated sites (including the highway corridor, the rail corridor and current and former service station sites)</li> <li>potential impacts on existing surface water flow patterns including within the Sydney drinking water catchment</li> <li>potential for erosion and sedimentation during construction</li> <li>potential for air quality impacts during construction and operation</li> <li>construction and operational noise impacts on noise sensitive receivers and environments</li> </ul>	<p>The report recommended that detailed environmental assessment, options development and evaluation and concept design be required to address the environmental impacts.</p>

Background/objective	Scope	Results relevant to this assessment	Conclusion/ recommendation
measures that would be implemented.	economic and land use, landscape character and visual and cumulative impacts.	<ul style="list-style-type: none"><li>positive and negative socio-economic impacts due to road infrastructure improvements and associated construction impacts. During construction there is the potential for reduced urban amenity due to noise, traffic and visual impacts. Once complete socio-economic benefits would include reduced travel time and improved amenity due to the separation of through traffic from local traffic and areas with high pedestrian activity</li><li>landscape character and visual impacts associated with the widened road and new structures.</li></ul>	

Background/Objective	Scope	Results relevant to the project	Conclusion/ recommendation
<b>Golder (2021) Great Western Highway Upgrade Project Katoomba to Little Hartley Conceptual Hydrogeological Model, Revision 0, 22 April</b>			
<p>The report covers the project area plus areas southeast.</p> <p>The report provides the results of a hydrogeological desktop study completed for the section of the Great Western Highway Upgrade between Katoomba and Little Hartley.</p>	<p>The scope of work referred to a proposal provided by Golder dated 12 September 2020. It is understood the scope comprised a desktop review of available information relevant to the hydrogeology of the site.</p>	<p>The report noted that there are no lands in the project alignment declared as either a significantly contaminated site, subject of a Preliminary Investigation Order, or subject of an ongoing maintenance order in the NSW Environment Protection Authority online data base (accessed 10 November 2020), hence known groundwater contamination is not expected. However, groundwater in the vicinity of the planned project alignment is likely to have been impacted by anthropogenic activities associated with the urbanisation and commercial growth of Blackheath and Mount Victoria. Contaminants that may be encountered in groundwater include:</p> <ul style="list-style-type: none"> <li>heavy metals associated with imported fill materials, wastes and the railway (including train marshalling yards at Mount Victoria)</li> <li>petroleum hydrocarbons and polycyclic aromatic hydrocarbons (PAHs) associated with imported fill materials and the use, storage and distribution of fuels and oils at service stations, car yards and workshops</li> <li>solvents (including chlorinated and non-chlorinated solvents) associated with the use and storage of lubricating and hydraulic oils and degreasers from workshops and car washes</li> <li>pesticides and/or herbicides associated with spraying for weeds and pests and any agricultural activity</li> <li>polychlorinated biphenyls (PCBs) associated with electrical substations, transformers and general fill.</li> </ul> <p>The report noted that for a full assessment of potential groundwater contamination an environmental site history assessment is required.</p>	<p>The report proposed further investigations including drilling of boreholes, hydraulic testing and collection of measurements and groundwater samples for analysis to allow for data collection to close data gaps identified within the report.</p>



Background/Objective	Scope	Results relevant to the project	Conclusion/ recommendation
Jacobs Arcadis Joint Venture (2021) Great Western Highway Upgrade Program Design and Environmental Assessment Services West Package Technical Working Paper Stage 1 Contamination Assessment, Revision 1, 2 June			
<p>The report covers the project area plus areas southeast and northwest.</p> <p>The Stage 1 Contamination Assessment was prepared as part of the REF. The purpose of the report was to identify whether land within or adjacent to the construction footprint is potentially or known to be contaminated, whether potential/known contamination could impact upon human health or the environment in the context of the proposed construction and operation and where mitigation or management measures are required to manage identified potential contamination.</p>	<p>The methodology for the Stage 1 contamination assessment comprised:</p> <ul style="list-style-type: none"> <li>desktop review of available information sources and observations from site inspections to understand the existing environment and potential for contamination within the study area</li> <li>a high-level prioritisation exercise including identification of areas of environmental interest (with respect to contamination) and assessment of potential impacts to construction or operation from contamination (with no mitigation measures) to environmental and human receptors in the context of proposed</li> </ul>	<p>The following constructions areas/activities were identified as having moderate to high potential for contamination impacts during construction:</p> <ul style="list-style-type: none"> <li>cutting, bridge construction (potential piling) and construction of water quality control basins near Cox River Road intersection have a high impact potential to construction worker health and the environment associated with soil and/or groundwater contamination and contaminated vapour that may be present from underground fuel storage (RTA in 2011 identified that below ground fuel storage tanks and refuelling infrastructure remained) associated with the former service station adjacent to the alignment</li> <li>disturbance of soil stockpiles is considered to represent a moderate impact potential to construction worker health or the environment (if contamination is present)</li> <li>disturbance of soil near and within the former Little Hartley Airfield is considered to represent a moderate impact potential to construction worker health or the environment (if contamination is present)</li> <li>if groundwater is intersected within the cut adjacent to the Hartley Cemetery, contamination (if present) is considered to represent a moderate risk to construction worker health or the environment</li> <li>disturbance of soil through agricultural areas is considered to represent a moderate impact potential to construction worker health or the environment if waste dumping/burial, sheep/cattle dips, septic tanks and chemical or fuel use and storage are disturbed during construction</li> <li>disturbance of contaminated soil or groundwater (if present) in the vicinity of the River Lett during construction</li> </ul>	<p>The report recommended a Stage 2 investigation at the sites assessed as having a moderate to high contamination impact to address uncertainties regarding the potential for contamination to be present and to refine the impact assessment based on the nature and extent of contamination (if present)</p>

Background/Objective	Scope	Results relevant to the project	Conclusion/ recommendation
	<p>construction activities</p> <ul style="list-style-type: none"> <li>• identification of appropriate mitigation and management responses for contamination, or where further investigation or remediation may be required.</li> </ul>	<p>(cutting or construction of the new bridge) or as a result of ongoing groundwater seepage during operation due to historic mining operations (exact location unknown) has been assessed as representing a moderate impact potential to construction worker health or the environment</p> <ul style="list-style-type: none"> <li>• previously reported groundwater contamination from the former service station in South Bowenfels has been assessed as representing a moderate impact potential to construction worker or environmental health.</li> </ul> <p>Potential operational activities that have been identified as having a moderate to high potential for contamination impacts relate to:</p> <ul style="list-style-type: none"> <li>• reuse of potentially contaminated soil (for example stockpiles) within operational areas of the project where human or environmental receptors could be exposed to contamination</li> <li>• ongoing seepage of potentially contaminated groundwater in cuttings (if groundwater intercepted), such as related to the former service station alignment in Little Hartley or Hartley Cemetery</li> <li>• ongoing vapour ingress where volatile contaminants remain present in soil and/or groundwater adjacent to or within the project during operation.</li> </ul> <p>Mitigation measures were provided for sites based on contamination potential assessment of which is dependent on the findings of this report and subsequent stages of investigation.</p>	

Background/ Objective	Scope	Results relevant to the project	Conclusion/ recommendation
Jacobs Arcadis Joint Venture (JAJV) (13 April 2022) Great Western Highway Upgrade Program: Little Hartley to Lithgow (West Section) Technical Working Paper Stage 2 Contamination Assessment			
The Stage 2 Contamination Assessment was prepared to support the REF and to identify whether land within or adjacent to the construction footprint is potentially or known to be contaminated, whether potential/known contamination could impact upon human health or the environment in the context of the proposed construction and operation of the project, and where mitigation or management measures are required to manage identified potential/known contamination.	<p>Scope of work comprised:</p> <ul style="list-style-type: none"> <li>14 soil boreholes ranging in depth from 0.7 to 13.5 metres below ground level and collection of soil samples</li> <li>27 surface soil samples</li> <li>soil samples were generally analysed for</li> <li>installation of 6 groundwater monitoring wells and collection of groundwater samples</li> <li>groundwater samples were generally analysed for dissolved heavy metals, TRH, BTEXN, PAHs, formaldehyde, nutrients, pesticides, microbiological total coliforms</li> <li>collection of asphalt samples from selected pavement cores to analyse for the presence of coal tar</li> </ul>	<p>Soil</p> <ul style="list-style-type: none"> <li>soil contamination across four study areas is expected to pose a low risk to human health and ecological receptors</li> <li>elevated concentrations of total coliforms due to presence of livestock and fauna</li> <li>PFOS was detected in surface soil samples SS07 and SS09 at the former Little Hartley airfield, did not exceed the adopted assessment criteria</li> <li>no potential asbestos containing materials observed and no asbestos detected in soil samples analysed</li> <li>minor organic and hydrocarbon odours were noted during sampling</li> </ul> <p>Coal Tar</p> <ul style="list-style-type: none"> <li>coal tar was present in asphalt at selected locations and depths within the existing road corridor</li> </ul> <p>Groundwater</p> <ul style="list-style-type: none"> <li>concentrations of selected heavy metals, total nitrogen, formaldehyde and total coliforms were detected at selected wells above the adopted human health and ecological assessment criteria for drinking water and protection of aquatic ecosystems. Groundwater at the majority of locations unlikely to be intersected as part of the proposed construction and operation</li> <li>groundwater monitoring well GW01 at the rear of the Lolly Bug (former service station) site reported concentrations of heavy metals (Cadmium and</li> </ul>	<p>Based on the results of the Stage 2 Contamination Assessment, JAJV concluded that the site was suitable for construction and commercial/industrial land use as per the requirements outlined in the National Environment Protection Council (NEPC) National Environment Protection (Assessment of Site Contamination) Measure (ASC NEPM) 1999 as revised 2013. The following recommendations were made:</p> <ul style="list-style-type: none"> <li>a CEMP including unexpected finds protocol should be prepared to manage construction activities</li> <li>the CEMP should include procedures for management of groundwater encountered during excavations and dewatering, including requirements for testing</li> <li>the CEMP should include procedures for management and disposal of coal tar</li> <li>the CEMP should include locations of known or potential contamination and contingency measures</li> <li>preparation of a Contaminated Land Management Plan which documents location specific mitigations measures</li> <li>areas which couldn't be investigated as part of the Stage 2 Contamination Assessment due to access constraints should be managed as per similar areas of interest</li> </ul>



Background/ Objective	Scope	Results relevant to the project	Conclusion/ recommendation
		<p>Zinc) above ecological criteria and detections of TPH C10-C14 and C15-C28 and TRH C10-C16 and C16-C34</p> <ul style="list-style-type: none"><li>• potential for contamination from septic tanks was unable to be assessed due to project constraints</li></ul> <p>Overall based on the results the contamination impacts to human health and ecological receptors during construction and operation of the site are likely to be low with specific areas of moderate impact requiring application of mitigation measures:</p> <ul style="list-style-type: none"><li>• Groundwater at the former service station at Little Hartley</li><li>• Soil in agricultural areas where five sample locations reported elevated concentrations</li></ul>	<p>investigated or undertaken the proposed investigations once access is granted</p>