Preliminary Site Investigation

Sydenham Bus Layover

Revision: Rev0

Date: 19 March 2024

Client: Hutchison Weller

Project No: RP24029

RARE Environmental

Executive Summary

This executive summary provides an overview of the Preliminary Site Investigation (PSI) conducted by RARE Environmental Pty Ltd (RARE) for the proposed construction of a bus layover facility at 117 Railway Road, Sydenham. The site, spanning 3,511 m2 and owned by Transport for NSW, was assessed for potential contamination risks associated with historical and current activities. The PSI, undertaken at the request of Hutchison Weller, aimed to evaluate soil, groundwater, and surface water contamination risks, crucial for addressing increased public transport demands in Sydenham.

The PSI, issued alongside a preliminary waste classification report (RP24029-WC-RPT-02_Rev0), was commissioned to assess the proposed construction footprint of the Sydenham Bus Layover. Its scope included desktop reviews, site inspections, and preliminary waste classification, aligning with established guidelines. The investigation sought to identify potential contamination sources, necessitating further investigations as needed to ensure site suitability for the intended use.

Through comprehensive analysis, RARE identified potential contamination risks and recommended mitigation measures. This included assessment of soil, groundwater, and surface water conditions, with a focus on identifying any existing hazards and proposing appropriate remedial actions.

Aerial photography from 1930 to 2023 was reviewed, revealing changes in land use over time. Previous contamination assessments and construction activities on and near the site were summarised, along with associated findings and recommendations.

A comprehensive site inspection conducted in February 2024 revealed various observations, including the presence of construction waste, potential asbestos-containing material (PACM), and buried debris.

Based on information gathered, areas of potential contamination risk were identified, both onsite and offsite. Factors contributing to contamination risks were low and included historical industrial activities, onsite storage practices, and adjacent commercial and industrial activities.

A Preliminary Conceptual Site Model (PCSM) was developed, outlining potential contamination mechanisms, contaminants of concern, impacted environmental media, receptors, and associated risk ratings.

The investigation revealed the presence of asbestos-containing material (ACM) in shallow fill, with the extent of contamination yet to be fully determined. Uncontrolled filling, including various debris types, was also identified. A preliminary waste classification report deemed material at the site as General Solid Waste mixed with Special Waste Asbestos and will require further evaluation.

Recommendations include a Detailed Site Investigation (DSI) to assess site suitability for the proposed land use, including groundwater assessment if construction intersects the water table. Additionally, a Remediation Action Plan (RAP) is advised to prepare the site for its intended use. An Asbestos Management Plan (AMP) is necessary to address ACM presence, outlining safety protocols, air monitoring, and clearance procedures. For designs involving groundwater exposure or dewatering, further investigations and a Dewatering Management Plan (DMP) are recommended to mitigate contamination risks and ensure compliance with environmental regulations.

Contents

Acronyms

Acronym	Definition
AASS	Actual Acid Sulfate Soils
ACM	Asbestos Containing Material
AEI	Areas of Environmental Interest
AHD	Australian Height Datum
AMP	Asbestos Management Plan
ANZECC	Australian and New Zealand Environment and Conservation Council
ASS	Acid Sulfate Soils
B(a)P	Benzo(a)pyrene
B(a)P TEQ	Benzo(a)pyrene toxicity equivalence quotient
BTEX	Benzene, toluene, ethylbenzene, xylenes
BTEXN	Benzene, Toluene, Ethylbenzene, Xylenes, and Naphthalene
CEMP	Construction Environmental Management Plan
CLM Act	Contaminated Land Management Act
DMP	Dewatering Management Plan
DVG	Default guideline values
EIL	Environmental Investigation Levels
EMP	Environmental Monitoring Plan
EPA	Environmental Protection Authority
GDE	Groundwater Dependent Ecosystems
HIL	Health Investigation Level
HSL	Health Screening Levels
LAA	Licenced Asbestos Assessor
LGA	Local Government Area
LTEMP	Long-Term Environmental Monitoring Plan
MBGL	Meters Below Ground Level
NEPM	National Environment Protection Measures
NSW	New South Wales
NSW EPA	New South Wales Environmental Protection Authority
PAH	Polycyclic aromatic hydrocarbons
PASS	Potential Acid Sulfate Soils
PCB	Polychlorinated Biphenyls
PCSM	Preliminary Conceptual Site Model
PACM	Presumed Asbestos Containing Material
POEO Act	Protection of the Environment Operations Act
PVC	Polyvinyl chloride
RAP	Remediation Action Plan
RARE	RARE Environmental Pty Ltd
PSI	Preliminary Site Investigation
SMF	Synthetic Mineral Fibre
TfNSW	Transport for NSW
TPZ	Tree protection zones
TRH	Total recoverable hydrocarbons
VENM	Virgin Excavated Natural Material
WH&S	Work Health and Safety

1. Introduction

RARE Environmental Pty Ltd (RARE) was engaged Hutchison Weller to carry out a Preliminary Site Investigation (PSI) of the construction footprint for the construction of Sydenham Bus Layover.

A six-bay bus parking layover area with dedicated drivers' facilities is proposed to be constructed within an existing vacant parcel of land on the corner of Railway Road and Burrows Ave, Sydenham NSW (the proposal).

In support of the proposal, an understanding of the potential extent and nature of contamination (if any) of soil, groundwater and surface water, an assessment of potential risks to human health and environmental receptors in the vicinity of the proposal site, and description and appraisal of mitigation and monitoring measures is required. Accordingly, a PSI was undertaken for the proposal.

The PSI scope involved a site history assessment, including review of past land ownership and usage, review of historical aerial photographs, a comprehensive site inspection, and the preparation of a preliminary waste classification report (RARE 2024 - RP24029-WC-RPT-02_Rev0). The site location for the preliminary waste classification report is presented in **Figure 1**, sample locations in **Figure 2**, and borehole logs and lithologies presented in **Appendix C.**

1.1 The Proposal

An increase in population growth and foot traffic within Sydenham requires an expansion of public transport facilities. With further public transport users expected following the construction of the new Metro Train Station, Sydenham will be utilised as a transport interchange and has been identified as the terminus for future bus routes under the Greater Sydney Bus Network Strategy.

Transport for NSW (TfNSW) proposes to build a six-bay bus parking layover area with dedicated drivers' facilities within an existing vacant parcel of land on the corner of Railway Road and Burrows Ave, Sydenham NSW (the proposal). The proposal is located in the Marrickville Local Government Area (LGA). Aurecon (2024) developed an 80% detailed design report for this project presented in **Appendix B**.

The scope of works included in the proposal include:

- Pavement construction.
- Kerb build outs.
- Drainage works.
- Speed hump installation.
- Utility relocation works.
- Construction of a drivers' facility (amenities building).
- Noise wall between residential properties and the layover facility.
- Footpath.
- Landscaping.
- Sign posting.
- Milling and re-sheeting (asphalt).
- Line marking and pedestrian fencing.

The construction of the proposal is expected to start in mid-2024 and expected to take about 18 months to complete.

1.2 This Report

This PSI was undertaken to assess the qualitative risk (with respect to contamination) associated with potential historical and current contaminating activities and/or operations undertaken on or adjacent to the proposal site. This PSI should be read in conjunction with the preliminary waste classification report (RARE 2024 - RP24029-

WC-RPT-02_Rev0) as they were issued concurrently where chemical testing was conducted and presented in this report.

The PSI was undertaken in general accordance with the following guidelines:

- *National Environment Protection (Assessment of Site Contamination) Measure 1999*, as revised 2013 (NEPM, 2013).
- *NSW EPA (2011) Contaminated Sites: Guidelines for Consultants Reporting on Contaminated Sites* (NSW EPA, 2011).
- NSW EPA (2011) *Guidelines on the Duty to Report Contamination under the Contaminated Land Management Act 1997*
- NSW Roads and Maritime Services (2013) *Guideline for the Management of Contamination*

2. Objectives and Scope of Works

2.1 Objectives

The objectives of the PSI are:

- To identify and document the potential for surface water, groundwater, or soil contamination that could impact upon the proposal, based on a review of current and historical information detailing activities undertaken within and/or adjoining the site.
- To provide preliminary comment on the suitability of the site (with respect to contamination) for the proposal.
- Assess the need for further investigations.

2.2 Scope of works

The scope of works undertaken to address the objectives was as follows:

- A desktop review of information (where available) from the following sources:
  - Historical aerial photographs.
  - Published geological, topographic, soil and acid sulphate soil maps.
  - Available hydrogeological information including a search for groundwater bores along the proposed alignment.
  - Search of the NSW EPA contaminated land database for notices and records pertaining to licensed activities or investigation and/or remediation orders.
  - Other information pertaining to potential contamination as detailed in the Environmental Risk and Planning Reports (Lotsearch LS051184 EP, December 2023).
- Observations from a site inspection to assess potential contaminating activities undertaken within and/or adjacent to the site.
- Preparation of a PSI report presenting the results of the desktop assessment and the site inspection, detailing the potential contamination risks (if any) to human health and environmental receptors, and a description and appraisal of mitigation and monitoring measures required (if any).
- Preparation of a Preliminary Waste Classification report (RARE 2024 - RP24029-WC-RPT-02_Rev0) detailing chemical testing and material classification.

3. Site Setting

The information presented below is based on a review of readily available government information sources and information provided in Lotsearch Report LS051184 EP (December 2023) for the proposal site area. Copies of the Lotsearch report are provided in **Appendix A.**

3.1 Site Identification

Site identification details associated with the proposal are presented below in **Table 3.1**.

Table 3.1: Site Identification

Item	Details
Street Address	117 Railway Road, Sydenham NSW 2044
Lot and Deposited Plan	Lot 1 DP1039552
Site Owner	Transport for NSW
Local Government Area	Inner West Council
Site Area	Approximately 3511 m^2
Geographic co-ordinates	-33.915599, 151.165605

3.2 Site Zoning and Land Use

The site is comprised of Burrows Ave, Railway Road and a vacant lot at 117 Railway Road, Sydenham NSW.

At the time of undertaking the PSI, the site was adjacent to a combination of land uses including:

- **North:** Rail corridor and industrial area beyond.
- **East:** Low rise residential and commercial land use, Gleeson Avenue, an electrical substation and petrol station on Unwins Bridge Road and public open space including Memory Reserve and Sydenham Green Park.
- **South:** Railway Road, low rise residential and commercial land use and Tillman Park.
- **West:** Rail corridor, Sydenham Control Centre, Fraser Football Club Field and associated infrastructure, Sydenham substation, and commercial and industrial land beyond.

The proposal site is zoned under the following Environmental Planning Instruments:

- Inner West Local Environmental Plan 2022
  - R2 – Low Density Residential
  - R3 – Medium Density Residential

The land adjacent to the site (i.e. Within 200m) is zoned under the following Environmental Planning Instruments:

- Inner West Local Environmental Plan 2022
  - R2 – Low Density Residential
  - E1 – Local Centre
  - RE1 – Public Recreation
  - SP2 – Infrastructure (Drainage)
  - SP2 – Infrastructure (Rail Infrastructure Facilities)
  - SP2 – Infrastructure (Air Transport Facilities)
  - E4 – General Industrial

3.3 Topography and Drainage

Topography data presented by Lotsearch depicts relatively flat land within and surrounding the proposal site. The elevation varies from 8 metres Australian Height Datum (AHD) in the north-east portion of the site and 6 AHD in the south-west.

Natural drainage around the proposal site has been disrupted by the rail corridor. The proposal site is covered by both unsealed (grassed areas and open space adjacent to the road) and sealed areas (Railway Road, Burrows Ave and adjacent residential properties). The topography suggests that rainfall falling onto the unsealed areas is likely to infiltrate directly into site sub-soils. Rain falling onto both the sealed areas of Railway Road, Burrows Ave and adjacent properties is likely to drain into formalised drainage systems running parallel to Railway Road and Burrows Ave in a predominantly southwest direction. A formalised drain was observed at the southeast end of the alignment and what appeared to a non-formalised drainage line was observed towards the northwest. Both drainage lines were located east of Richmond Road.

3.4 Vegetation and Ecology

Review of available information indicates that no native vegetation exists within the project boundary. Estuarine Reedland freshwater wetlands are mapped to occur approximately 781 m southeast of the site.

No groundwater dependant ecosystems (GDE) were identified within 1 km of the site.

3.5 Hydrogeology

3.5.1 Groundwater Bore Search

The Lotsearch (December 2023) search of the NSW Department of Primary Industries – Office of Water registered groundwater bore database indicated that there were 6 registered groundwater bores located onsite or within 500 metres of the proposal site. A summary of key information for these groundwater bores is presented in **Table 3.2**. A high-level review of registered bores identified within 500 metres of the site indicated that groundwater has been encountered at 4 meters below ground level. A full list of all registered bores identified within a 2-kilometre buffer of the site is provided in the Lotsearch report.

Table 3.2: Registered Groundwater Bores within 500m of the site

Well ID	Year of Installation	Registered Use	Total Depth (m)	Standing Water Level	Distance from site
GW115005	2011	Monitoring	6	4	258m
GW115001	2011	Monitoring	6	4	307m
GW115000	2011	Monitoring	6		308m
GW115002	2011	Monitoring	5.5	4	317m
GW115003	2011	Monitoring	5.5	4	348m
GW115004	2011	Monitoring	6	4	355m

3.5.2 Aquifer

The site is situated above the Botany Sands aquifer. The Botany Sands aquifer is a layer of sand comprising a system of interconnected unconfined and semi-confined aquifers covering an area of about 18,300 hectares. The Temporary Water Restriction (Botany Sands Groundwater Source) Order 2018 provides restrictions on accessing groundwater within the area (Prohibition Area No. 2) due to known groundwater contamination. A map showing the extent of Prohibition Area No. 2 in relation to the site is presented in the Lotsearch report (Appendix A). Groundwater within this area cannot be used for:

- Human consumption.
- Consumption by animals.
- Domestic purposes.

- Any other purpose, except if the water is fit for purpose, or it is for remediation, temporary construction dewatering, testing or monitoring purposes.

3.6 Geology

Reference to the Lotsearch (December 2023) geology map indicates the proposal site is underlain by Ashfield Shale geological unit. The Ashfield Shale is part of the Wianamatta group of sedimentary rocks and generally comprises black to light grey shale and laminate of the Middle Triassic.

The Sydney 1:100,000 Geological Sheet indicates a dyke or vein is present 543 m northeast of the site.

3.7 Soils

A review of Atlas of Australian Soils Mapping (Lotsearch, 2023) indicated that the proposal is underlain by the Kurosol (Pb12) geological unit. The Kurosol soils are generally characterised by hard acidic read soils with hard neutral and acidic yellow mottled soils. Reference to the Penrith 1:100,000 Sheet indicates the proposal is situated within the Birrong Soil Landscape, which is made up of deep yellow podzolic soils, yellow solodic soils on older alluvial terraces, deep solodic soils and yellow solonetz on current floodplain.

Review of the available drilling logs for existing bores in the area indicated that the regional geology of the area is generally characterised by clay and sand fill overlaying grey sandy clay.

No naturally occurring asbestos is mapped for the proposal area.

3.8 Acid Sulfate Soils

Acid sulfate soils (ASS) are the common name given to naturally occurring sediments and soils containing iron sulfides (principally iron sulfide or iron disulfide or their precursors). The exposure of the sulfide in these soils to oxygen by drainage or excavation can lead to the generation of sulfuric acid. Areas of ASS can typically be found in low lying and flat locations which are often swampy or prone to flooding.

Review of Lotsearch (2023) Acid Sulfate Soils Mapping indicates that the southwest portion of the proposal is classified as soil Class 2 under the Inner West Local Environmental Plan 2022. ASS Class 2 is defined for areas where works below the natural ground surface and works by which the water table is likely to be lowered present an environmental risk. The northeast section of the proposal is mapped as ASS Class 5, defined as areas where ASS is not typically found.

3.9 Heritage and Cultural Areas of Significance

A review of available information indicated that there were no listed Commonwealth, National, State Heritage items within the site boundary. Similarly, no aboriginal significant land was recorded within the site boundary.

Directly adjacent to the site, in the northwest, Sydenham Station is registered as having State significance since its listing in 1999. Works associated with the proposal are not expected to be undertaken on or directly impact the heritage value of Sydenham Station.

A heritage Interpretation Plan undertaken by Extent (2019) indicated that a stationmaster's residence was constructed at 117 Railway Road (lot of land on the corner of Burrows Ave and Railway Road) as part of the Sydenham Station complex. The unlisted structure was demolished by RailCorp between February and April 2014.

3.10 Sensitive Receptors

The closest sensitive receptor is Cooks River, located approximately 1.3 kilometres to the southwest and the southeast. A channel feeding into Cooks River is situated approximately 100m west of the proposal, with the rail corridor located in between.

This sensitive receiving environment has the potential to be impacted by contamination (if present) as a result of construction and/or the operation of the proposal.

4. Site History

The site area history has been sourced from publicly available information and the Lotsearch Report (2023) which is provided in Appendix A.

4.1 Aerial Photography Review

Aerial imagery was reviewed for the years 1930, 1943, 1951, 1955/1956, 1961, 1965, 1970, 1978, 1982, 1986, 1991, 1994, 2000, 2007, 2011, 2016, 2020 and 2023 to assess the land use and changes in general conditions within and adjacent to the proposal site. The findings of the aerial imagery review are summarised in Table 4.1. Historical imagery is presented in the Lotsearch (2023) report provided in Appendix A.

Table 4.1: Aerial photography review

Year/Period	Site	Surrounding Area
1930	The proposal site consists of Railway Rd and Burrows Ave and a small area of what appears to be vacant land. Adjacent to the roads is residential land.	The areas surrounding the proposal site appear to consist largely of rail corridor to the north, residential and commercial land with some vacant land/open space to the southwest.
1943	A residential building appears to have been built in the central portion of the site on the eastern boundary. A small structure is also visible to the north of the building.	The areas surrounding the proposal site appear to be largely the same as 1930 imagery.
1951	The proposal site area appears largely unchanged from the 1943 imagery.	The areas surrounding the proposal site appear to be largely the same as 1943 imagery.
1955/1956	The proposal site area appears largely unchanged from the 1951 imagery.	The areas surrounding the proposal site appear to be largely the same as 1951 imagery with the exception of a building being demolished east of the site, on the corner of Unwins Bridge Rd and Gleeson Ave.
1961	The proposal site area appears largely unchanged from the 1955/1956 imagery.	The areas surrounding the proposal site appear to be largely the same as 1955/1956 imagery.
1965	The proposal site area appears largely unchanged from the 1961 imagery.	The areas surrounding the proposal site appear to be largely the same as 1961 imagery.
1970	The proposal site area appears largely unchanged from the 1965 imagery with the exception of a large number of vehicles lining the streets.	The roads over the bridge at Sydenham Station appear to have been improved with new markings. Vacant land north of the site has been developed into more commercial and industrial land. Construction of some residential properties on vacant land south of the site adjacent to railway bridge.
1978	The proposal site area appears largely unchanged from the 1970 imagery.	The areas surrounding the proposal site appear to be largely the same as 1970 imagery.
1982	The proposal site area appears largely unchanged from the 1978 imagery.	A structure and driveway have been constructed in the southwest corner of Tillman Park (in the location of present-day Tillman Park Early Learning Centre). A shed or warehouse has been constructed west of the proposal site and north of the rail corridor.
1986	The proposal site area appears largely unchanged from the 1982 imagery.	The areas surrounding the proposal site appear to be largely the same as 1982 imagery.
1991	The proposal site area appears largely unchanged from the 1986 imagery.	Sydenham Train Station renovations occurred sometime between 1986 – 1991.
1994	The proposal site area appears largely unchanged from the 1991 imagery.	The areas surrounding the proposal site appear to be largely the same as 1991 imagery with the exception of construction of playground in Tillman Park.
2000	The proposal site area appears largely unchanged from the 1994 imagery with the exception of	Demolition of residential properties southeast of the site on Rowe Ln and Railway Road.

	planted trees adjacent to the property in the centre of the site.	
2007	The proposal site area appears largely unchanged from the 2000 imagery.	The areas surrounding the proposal site appear to be largely the same as 2000 imagery.
2011	The proposal site area appears largely unchanged from the 2007 imagery.	The areas surrounding the proposal site appear to be largely the same as 2007 imagery.
2016	The property onsite was demolished and trees removed sometime between 2011 and 2016. The land where the property was situated is now vacant. A title search indicates that Rail Corporation NSW was the registered owner of the land from 2007 to 2020.	Sydenham Train Station renovations occurred sometime between 2011 – 2016.
2020	Trees have grown on the vacant land onsite and storage of a small amount of building materials.	Renovations underway at Sydenham Station including railway pedestrian overpass. Demolition of structures west of Sydenham Station and north of the site.
2023	Site appears to be used as a storage area with a large tarp underneath a pile of what appears to be gravel/aggregate. Trailers and other equipment can be seen as well as four structures in the north of the grassed area (potentially site sheds).	Renovations on Sydenham Station complete sometime between 2020 and 2023.

4.2 Historical Maps

Historical maps were reviewed for the years 1917, 1936, 1975 and 2015 to assess land use and changes in general conditions within and adjacent to the site. The findings of the historical map review are summarised in Table 4.2. Historical maps are presented in the Lotsearch (December 2023) report.

Table 4.2: Summary of historical maps

Year/Period	Site	Surrounding Area
1917	Little detail on the site.	Sydenham Train Station immediately north of the site. Steelworks present north of the site. Brickworks are present to the northwest and east.
1936	Little detail on the site.	Urban areas east, south and north of the site. Vacant lot south/southwest of the site. Clay pits to the northeast near Erskineville. Golf course south of Cooks River.
1975	Little detail on the site.	Increased urban area surrounding site.
2015	Little detail on the site.	Increased urban area surrounding site.

4.3 NSW Contaminated Land Registers

A search of the list of contaminated sites notified to the NSW Environmental Protection Authority (EPA) under section 60 of the *Contaminated Land Management Act 1997* (CLM Act, 1997) and the NSW EPA record of notices issued under section 58 of the CLM Act 1997 was conducted. A total of three current and three former sites were identified within 500 meters of the proposal site, with details provided in Table 4.3.

A full list of sites identified within 1 kilometre of the site are presented in the Lotsearch Report in Appendix A.

Table 4.3: Summary of contaminated sites listed under section 58 and 60 of the CLM Act.

Site	License No.	Adress	Activity	Management Class	Status	Relative Location
SRA Land		177 Railway Parade, Sydenham	Other Industry SRA Land	Regulation under CLM Act not required	Current EPA List.	Directly north of the site
Sydenham		Way Street, Sydenham	Other Industry	Regulation under CLM Act	Current EPA List.	39m West

XPT Maintenance Facility				not required		
Sydenham XPT Maintenance Centre	3952	Way Street, Sydenham	Hazardous, Industrial or Group A Waste Generation or Storage	Regulated activity by the EPA	Delicensed	39m West
Bioclone	6525	71-73 Railway Parade, Marrickville	Hazardous, Industrial or Group A Waste Generation or Storage	Regulated activity by the EPA	Delicensed	127m North
2 Carrington Road		2 Carrington Road, Marrickville	Unclassified	Regulation under CLM Act	Current EPA List.	403m West
Hallmark Platers (Vermadell Pty Limited)	6738	58 Meeks Road, Marrickville	Hazardous, Industrial or Group A Waste Generation or Storage	Regulation under CLM Act	Current EPA List.	442m Northwest

4.4 Environmental Protection License Premises

A review of NSW EPA Public Register under section 308 of the *Protection of the Environment Operations Act 1997* (POEO Act) identified a total of four currently licenced and six formerly licensed premises within the proposal site or within approximately 500 metres of the proposal site. These sites are detailed in Table 4.4.

A map of the POEO licensed premises and a full list of sites identified within 1 kilometre of the site is presented in the Lotsearch Report in Appendix A.

Table 4.4: Environmental protection licensed premises.

License No.	License Holder	Activity Type	Adress	Status	Relative Location
21147	Laing O'Rourke Australia Construction Pty Ltd	Railway systems activities	Sydenham Station Junction Works Project Site at Sydenham Station, Sydenham, NSW 2044	Current	Directly North
3142	Australian Rail Track Corporation Limited	Railway systems activities	Australian Rail Track Corporation (ARTC) Network, Sydney, NSW 2001	Current	Directly North
12208	Sydney Trains	Railway systems activities	Sydney Trains Haymarket NSW 1238	Current	Directly North
21247	Metro Trains Sydney Pty Ltd	Railway systems activities	Sydney Metro, Rouse Hill, NSW 2155	Current	16m North
4653	Luhrmann Environment Management Pty Ltd	Other Activities / Non-Scheduled Activity - Application of Herbicides	Waterways throughout NSW	Surrendered	83m West
4838	Robert Orchard	Other Activities / Non-Scheduled	Waterways throughout NSW, Sydney NSW 2000	Surrendered	83m West

		Activity - Application of Herbicides			
6630	Sydney Weed & Pest Management Pty Ltd	Other Activities / Non-Scheduled Activity - Application of Herbicides	Waterways throughout NSW, Prospect NSW 2248	Surrendered	83m West
11335	Network Graphics Pty Ltd	Hazardous, Industrial or Group A Waste Generation or Storage	42 Sydenham Road, Marrickville NSW 2204	Surrendered	320m Southeast
20772	CPB Contractors Pty Ltd	Road construction	WestConnex New M5, between Beverly Hills and St Peters, Beverly Hills NSW 2209	Surrendered	349m Northeast
20971	John Holland Pty Ltd	Concrete works, Railway systems activities	Sydney Metro City & Southwest Tunnels and Excavation Works, locations between Chatswood railway station and Sydenham railway station, SYDNEY, NSW 2000, SYDNEY, NSW	Surrendered	349m Northeast

Two sites have been identified within 500 metres of the proposal to have received EPA Penalty Notices under the POEO Act, with details in Table 4.5.

Table 4.5: EPA Penalty Notices within 500m of the proposal

Number	Name	Address	Status	Issue Date	Act	Offence	Offence Date	Relative Location
3173530755	Sydney trains	Sydney Trains, Haymarket, NSW 1238	Issued	10/11/2021	POEO ACT - 64(1)	Contravene condition of licence - Corporation	31/05/2021	Network of Features immediately north of the proposal
3085781252	CPB Contractors Pty Ltd	Between Beverly Hills and St Peters, Beverly Hills, NSW 2209	Issued	20/06/2017	POEO ACT - 64(1)	Contravene condition of licence - Corporation	2/11/2016	Road match 337m southeast

4.5 National Waste Management Site Database

Two waste sites were reported within one kilometres of the proposal site boundary, with details in Table 4.6.

Table 4.6: National waste sites within 1km of the proposal.

Owner	Name	Address	Class	Status	Relative Location
Marrickville Council	Tempy Landfill	South Street, Tempe	Landfill	Operational	533m South
Alexandria Landfill Pty Ltd	Alexandria Landfill	Albert Street, St Peters	Multi-purpose	Operational	879m East

4.6 National Liquid Fuel Facilities

Lotsearch completed a search of records for liquid fuel facilities within a one-kilometre radius of the proposal site boundary. A total of six were identified within the within one kilometre of the proposal site boundary, with details included in Table 4.7.

Table 4.7: National liquid fuel facilities within 1km of the site.

Owner	Name	Address	Class	Status	Relative Location
Independent	Payless Fuel Sydenham	31-35 Unwins Bridge, Sydenham	Petrol Station	Operational	206m East
Independent	Independent Marrickville	73-81 Marrickville Road, Marrickville	Petrol Station	Operational	375m Northwest
Metro Fuel	Metro Tempe	531 Princes Highway, Tempe	Petrol Station	Operational	454m South
Metro Fuel	Metro Marrickville	103 Sydenham Road, Marrickville	Petrol Station	Operational	582m North
BP	BP Connect Sydenham	14 Grove Street, St Peters	Petrol Station	Operational	587m East
BP	BP Sydenham	339 Princes Highway, Sydenham	Petrol Station	Operational	587m east

4.7 PFAS Investigation and Management Program Areas

Lotsearch (2023) conducted a search of sites within two kilometres of the proposal site that are a part of EPA, Defence or Airservices PFAS investigation programs. A total of two sites were identified and outlined in Table 4.8.

Table 4.8: Known PFAS investigation and management areas within 2km of the proposal.

Site	Adress	Type	Impacts	Relative Location
Botany Bay area	Botany Bay area and Georges River	EPA PFAS Investigation Program	Not specified	798m Southeast
Sydney Airport	Sydney Airport, NSW	Airservices Australia National PFAS Management Program	Confirmed at fire station and fire training ground	1250m South

Potential contamination issues associated with the PFAS investigation sites include potential impacts to groundwater as a result of offsite migration of chemicals (via infiltration into underlying groundwater). The location of the PFAS investigation sites within one kilometre of the site are likely to be hydraulically cross and down gradient of the site. In consideration of the above information, the potential for PFAS to impact upon groundwater beneath the site is likely to be low.

4.8 Historical Business Directories

Lotsearch completed a search of records from historical business directories and a number of businesses were identified that may be associated with potential contaminating activities within, adjacent to or within 500 metres of the site. A summary of the businesses of interest are summarised in Table 4.9.

When historic street numbers from historical business directories cannot be reconciled with current street numbering, the business is mapped to a road and not to a specific premise. Subsequently, there are a number of

businesses that are recorded on roads that do not have street addresses, therefore, their specific location is unknown.

Table 4.9: Summary of historical businesses of interest within 500m of the site

Premise	Year of record	Business Activity	Distance to Road Corridor or Proposal
M T. Service Station, 103 Railway Rd., Sydenham. 2044	1986, 1982, 1970, 1971, 1972,1975, 19761978 - 1990,	Motor Garages, or Engineers or Service Stations	3m Southeast
Sydenham Mechanical Repairs, 103 Railway Rd., Sydenham 2044	1991	Motor Garages and Service Stations	3m Southeast
Thompsons Corner Service Station., 103 Railway Rd Sydenham	1969, 1968	Motor Service Stations - Petrol, Oil, etc.	3m Southeast
Wheeler's Service Station, 103 Railway Rd. Sydenham	1958, 1959, 1961, 1962, 1964, 1965, 1967, 1968, 1969	Motor Service Stations - Petrol, Oil, etc.	3m Southeast
Sydenham Auto Repair, Cnr. Gleeson Ave. and Railway Rd., St. Peters	1950, 1952-1956, 1958,	Motor Service Stations – petrol, motor electricians, motor garages and or engineers, motor towing services	34m Southeast
Buckley Bros. Pty. Ltd., 11 Gleeson Ave., Sydenham	1950, 1961	Engineers – electrical, winders, electric motors, electrical appliance supplies, electrical element manufacturers and or distributors, vacuum cleaner sales.	38m East
Carr A. E., 268 Unwins Bridge Rd., St Peters	1950, 1952	Dry cleaners, pressers and dryers	64m Southeast
Jones, Dry Cleaners Pty. Ltd. 268 Unwin's Bridge Rd., St. Peters	1950, 1948-49	Dry cleaners, pressers and dryers	64m Southeast
Sydney Valet Service, 256 Unwin's Bridge Rd., Sydenham	1950, 1948-49	Dry cleaners, pressers and dryers	71m Southeast
Orbit Dry Cleaners., 33 Marrickville Rd., Marrickville	1964	Dry cleaners, pressers and dryers	171m Southeast
Olympic Motor Centre, 31 Unwins Bridge Rd., Sydenham 2044	1985-1991	Motor Garages & Service Stations	216m East
Esso Sydenham Service Station, 31 Unwins Bridge Rd., Sydenham. 2044	1964-1984	Motor Garages &/or Service Stations &/or Engineers	216m East
Sydenham Station Auto Port (Shell)., 90 Marrickville Rd., Marrickville 2204	1964-1975	Motor Garages &/or Service Stations &/or Engineers	231m Northwest

Rofo Electrical Products Pty. Ltd., 20-22 Sydenham Rd. Marrickville	1961	Motor Garages & Engineers	244m North
Caltex Service Station., 56 Marrickville Rd Marrickville	1972, 1971	Motor Service Stations - Petrol, Oil, etc.	71m (road match)
Greens (Ampol) Garage., Marrickville Rd Marrickville	1972, 1971	Motor Service Stations - Petrol, Oil, etc.	71m (road match)
Mobil Marrickville Service Station, Sydenham Rd., Marrickville. 2204	1981-1989	Motor Garages & Service Stations	217m (road match)
B.P. Park Service Station., Sydenham Rd Marrickville	1967	Motor Garages & Engineers	217m (road match)

4.9 Title Information

A title search for the proposal site was undertaken by Lotsearch (2023). The title search was provided for Lot 1 DP1039552. The lot was previously separated into parts 1, 2 and 3 which is shown within the complete title records provided in Appendix A.

Part three was formerly part of two roads (Junction Street and St Peters Street) and it appears the Railway may have been in possession of the land since prior to 1900.

No leases were recorded within the title records.

A summary of the findings from the review of the title information is detailed in Table 4.10.

Table 4.10: Title information summary

Lot	Part	Date	Owner
Lot 1 DP1039552	1	21.12.1880	Lucy Jane Marsh (Spinster)
Lot 1 DP1039552	1	29.05.1884	Carl Franc Fischer (Doctor of Medicine
Lot 1 DP1039552	1	20.03.1885	The Commissioner for Railways Then Intervening Name Changes Now State Rail Authority of NSW
Lot 1 DP1039552	2	20.02.1880	The Commissioner for Railways Then Intervening Name Changes Now State Rail Authority of NSW
Lot 1 DP1039552	3	Circa 1912	Chief Commissioner for Railways and Tramways Then Intervening Name Changes Now State Rail Authority of NSW
Lot 1 DP1039552	3	20.08.2001	State Rail Authority of NSW (Acknowledgement of right, title and interest pursuant to Section 11 of the Government Railways Act of 1912)
Lot 1 DP1039552	Continued as the whole lot	28.08.2007	Rail Corporation New South Wales
Lot 1 DP1039552	Whole lot	02.12.2020	Transport Asset Holding Entity of New South Wales
Lot 1 DP1039552	Whole lot	29.06.2023	Transport for NSW (Current proprietor)

4.10 Previous Determinations for 177 Railway Road, Sydenham

A Development Assessment Committee Meeting Report No: D0411 Item 8 (dated 5 April 2011) details a discussion regarding a development application (DA201000599) for 117 Railway Road, Sydenham (the proposal).

The application was to demolish the existing improvements, including the former station master's cottage, remove 21 trees and remediate the land.

The application received significant community objection and was not supported by the Development Assessment Officer due to insufficient information being submitted with the application to enable a proper assessment under the Environmental Planning and Assessment Act.

Additional provided after the submission date in relation to ASS and a letter addressing concerns raised in submissions.

A previous determination (No. 200500503) dated 13 September 2005 approved an application to demolish part of the existing structures and carry out category 1 remediation works of contaminated soil and remove six trees. This consent did not include the demolition of the station master's cottage onsite and did not address the required for the remediation of the area under the cottage. The consent was not acted upon, and consent lapsed.

A Remedial Action Plan (RAP) was prepared by GHD (2010) and was included as part of the application. The Committee Meeting Report states the following is indicated from the RAP:

- Soils onsite are comprised of contaminated fill material.
- The source of the fill material is unknown; however, the contaminants of concern are elevated concentrations of heavy metals (primarily lead but also arsenic, cadmium, copper, mercury and zinc), benzo(a)pyrene and polycyclic aromatic hydrocarbons (PAHs).
- "The horizontal distribution of contamination does not appear to be isolated to an easily defined portion of the site and is assumed to encompass the majority of the site area (926.4 m^2)."
- "The vertical extent of the heavy metal and PAH impact appears to be limited to the fill horizon, which extends to a maximum depth of 0.8 metres and is visually distinct from the residual clay horizons".
- No groundwater was encountered to 0.8 metres.
- The RAP made recommendations for a Remediation Environmental Management Plan and for further investigation into the extent of contamination of the surface soils beneath the existing buildings on site, once those structures have been demolished.
- Elevated arsenic impacts identified under the cottage veranda identified by Hazardous Building Materials Survey (HLA Envirosciences, 2003) appear to be localised and likely associated with spraying of termites.

The Committee Meeting Report summarises the findings of the Hazardous Building Materials Survey by HLA Envirosciences (2003):

- All asbestos and synthetic mineral fibre (SMF) identified in the cottage and other structures onsite were of good condition and unlikely to pose a risk to building occupants while they remain insitu, undisturbed.
- Lead was identified in dust and exterior and interior paintwork.
- Some SMF was identified around hot water unit, and
- No PCBs were identified in the dwelling.

RARE was not provided with the referenced reports associated with the DA and/or the subsequent validation report which would have been required following remediation.

4.11 Previous Site Investigations

The following publicly available investigations and contamination information were reviewed by RARE:

- Lang O'Rourke and John Holland (2017) C*onstruction Soil and Water Management Plan – Sydenham Station and Junction*, updated 19/07/2023.

- Lang O'Rourke and John Holland (2021) *Construction Monitoring Report 5 – September 2020 to February 2021.*
- ADE Consulting PTY LTD (2023) *Preliminary Site Investigation – 117 Railway Road, Sydenham NSW 3037*

A summary of the relevant reports is presented in Table 4.11 and Table 4.12, and Table 4.13.

Table 4.11: Review of Lang O'Rourke and John Holland (2017)

Document Title:	**Construction Soil and Water Management Plan – Sydenham Station and Junction**
Prepared by:	Lang O'Rourke and John Holland
Dated:	29/11/2017 – updated 19/07/2023
Key Objectives:	
The Construction Soil and Water Management Plan (CSWMP) details mitigation measures for risks associated with soil and water during the Sydenham Metro Upgrade. The client for the project was Sydney Metro West & Southwest. The Key objectives included: • Prevent pollution of surface water through appropriate erosion and sediment control. • Maintain existing water quality of surrounding surface watercourses. • Source construction water from non-potable sources, where feasible and reasonable. • Construct the project in accordance with the NSW Water Quality Objectives.	
Scope of Works	
The project site stretched several hundred metres either side of Sydenham Station and also included 11 Sydenham Road, Marrickville, NSW, the Sydenham Pit and Drainage Pump Station and future precinct areas on Railway Parade and Burrows Avenue, Sydenham, NSW. The works involve the Sydenham Train Station Upgrade for Metro and future precinct areas. The report reviewed available information about the site and project and outlined mitigation measures and risks associated with soil and water during the works.	
Findings	
A summary of previous works (with respect to contamination) is provided in the report: **Sydenham Station and Junction Preliminary Contamination Assessment (GHD, 2017)** • Identified elevated heavy metals in groundwater. The authors noted that these results were likely to be representative of the background aquifer. Concentrations of other contaminants of concern including BTEX, TRH, PAH, Phenols, OCP, OPP and PCB were less than the laboratory limit of reporting or the adopted screening criteria. • A number of weathered fibre cement fragments were found within a borehole at the Sydenham Signal Centre. • ASS and PASS were detected within the site between 0.5 – 4.2 meters below ground level (mbgl). • It was recommended that additional waste classification of material excavated from Platforms 2 and 3 be undertaken, prior to off-site disposal. **Combined Phase I Preliminary Site Investigation & Phase II Detailed Site Investigation (ADE, 2019)** • PASS was detected in four boreholes at 11 Sydenham Rd between 0.1 and 2.2 mbgl. An Acid Sulfate Soils Management Plan was recommended. • Fragments of asbestos were identified in the fill layer at the 11 Sydenham Rd site. **Groundwater Quality Assessment and Groundwater Discharge Volume Evaluation at the Ausgrid Underbores Site, Sydenham Station (ADE, 2020)** • ADE Consulting Group Pty Ltd were engaged by Lang O'Rourke and John Holland to undertake an investigation into potential interaction with underbore works and groundwater in the area. • ADE installed 4 monitoring wells (MW01, MW02, MW03, MW04).	

- Perched groundwater is unconfined and varies in depth across the site from 2 to under 6 mbgl. The perched groundwater sits above the shales which are known to be 9 mbgl (RL of -4 to -5 AHD) onsite. ADE considered the groundwater to be low transmissivity.
- MW04 (located on Hogan Ave, Sydenham) had standing water level of approximately -2 AHD.
- Groundwater sampling undertaken prior to the underboring works reported elevated levels of ammonia, cyanide, copper and zinc.
- Elevated cyanide of 0.187 mg/L was reported in MW02 (11 Sydenham Rd site – north side of the station) and secondary testing confirmed the concentration levels.

Following Lang O'Rourke and John Holland's review of Contamination Investigations on the project site they concluded that contamination detected on the site to date does not warrant further investigation. The contaminants of concern at the site were asbestos, hydrocarbons, cyanides, volatile organic compounds, heavy metals and herbicides.

Table 4.12: Lang O'Rourke and John Holland (2021)

Document Title:	**Construction Monitoring Report 5 – September 2020 to February 2021**
Prepared by:	Lang O'Rourke and John Holland
Dated:	8/4/2021
Key Objectives:	
The objective of the construction monitoring programs reports were to document the results of the construction monitoring program being implemented to monitor impacts on surrounding surface water quality and noise and vibration during works for the Sydenham Metro Upgrade. The report was to be submitted to the NSW EPA, Inner West Council and DPIE.	
Scope of Works	
The following scope (with respect to contamination) was completed: • Excavation of two adjacent launch pits at 11 Sydenham Rd Marrickville and two receiving pits - one pit on Hogan Ave (Underbore 2) and one pit adjacent to Sydenham Rd (Underbore 1). • Groundwater samples were taken during 8 monitoring events between 21st October and 10th December 2020. • A total of 10 groundwater samples were taken from the two underbore pits. • Groundwater samples were analysed for pH, Total Cyanide and Cyanogen Chlorine to confirm levels found occurring within the works area.	
Findings	
• During pit excavations for underboring, water was observed in clay at approximately 5.4 mbgl. JHL state this was not an aquifer but a water bearing zone with low transmissivity. • Total Cyanide concentrations at Underbore 2 (Hogan Ave, Sydenham) were detected above NHMRC 2008 Human Health Recreational Water guidelines (>0.08mg/L) ANZG 2018 recreational guideline (0.1 mg/L) on three occasions during November and December 2020. The authors suggest the total cyanide levels are likely associated with background perched groundwater contamination in Sydenham due to historical industrial activity. • pH levels in both pits reported exceedances of NHMRC 2008 Recreational Water guidance levels. (i.**e.** >8.5 pH) • All encountered groundwater was disposed of to a licensed liquid waste facility. • No further groundwater monitoring was proposed for the project.	

Table 4.13: Review of ADE Consulting PSI (2023)

Document Title:	**Preliminary Site Investigation – 117 Railway Road, Sydenham NSW 3037**
Prepared by:	ADE Consulting Group Pty Ltd
Dated:	26/10/2023
Key Objectives:	
To assess the site for potential contamination due to historic uses or activities after remediation in 2014 and to provide a baseline environmental condition for the proposed use.	
Scope of Works	
• Desktop review of previous site reports, review of past aerial photographs, public records, a site walkover, and preparation of the PSI report.	
Findings	
• Site History: The site was historically used for residential purposes and underwent remediation by WSP in 2014 to remove contaminated fill materials. During the remediation WSP oversaw the site remediation and validation process from January to September 2014. Their role included monitoring and ensuring compliance with the Remedial Action Plan (RAP). During the remediation vegetation was cleared from the site, existing structures were demolished, contaminated soils were excavated to a depth of approximately 0.8 metres mbgl or to the natural clay material underneath the fill horizon, and a mixture of VENM, topsoil, and turf was used to restore the site. Despite remediation efforts, some residual fill materials remained around the site's perimeter. • Site Audit Report: The site auditor (ENVIRON 2014) concluded that the residual fill material along the site boundaries does not pose an unacceptable risk to human health. Additionally, considering the medium density zoning and surrounding site use, it is unlikely to pose an unacceptable risk to ecological receptors. • Current Condition: A recent site walkover revealed building waste material and potential asbestos-containing material (PACM) in the southern portion of the site. • Potential Risks: Identified risks include residual fill materials around the site's perimeter and surficial asbestos-containing material (ACM). • Recommendations: A targeted assessment of disturbed soils and removal of ACM with a clearance certificate is recommended before using the site as a temporary construction site compound.	

5. Site Inspection

During the site visit of the site on the 22nd of February 2024 several findings were encountered and summarised in **Table 5.1.** A full perimeter walk was conducted, the condition of the fencing was observed, locks and gates were tested, where safe concealed objects under terrestrial flora were inspected, as well as their health, and a general idea of the site was logged.

Table 5.1: Summary of Findings

Summary of Findings
• During permitter walk around the fence and site boundary, no signs were posted on the inside or outside of the fence. No breaches in the fence were observed. • There were 2 entries to the site. One gate that allowed a light vehicle or small truck from Wright Street, and a pedestrian gate from Burrows Avenue. Both gates were padlocked and required a code for access. The side pedestrian gate was jammed shut and required some force to open / close. • The site was vacant, and footprints of what looked like 3-6 containers were observed (dead turf patches). None of the containers remained. Aggregate was spread in the middle of the site on top of geotextile fabric, presumably to allow access to and from storage containers. • A number of small trees and shrubs were encountered. One of the larger trees on the southwestern boundary appeared unhealthy with several dead branches adjacent. • The eastern and southeastern portions of the site appeared to have a significant amount of buried construction and demolition waste. • Debris (plastic, vapes, wrappers, bottles) scattered along the site boundary near fence line. • Slab of concrete (good condition) remained on the northern tip of the site next to abandoned garden beds adjacent 5 Wright Street. • No amenities existed on the site. • Remains of a functioning stormwater pipe on the eastern portion of the site adjacent gate leading south. • Construction and demolition waste buried in a portion of the site adjacent 115 Railway Road. Hand auger hit refusal during attempts to drill boreholes in this portion. • No services encountered on site, verified by DBYDs and a service locator. • ACM and several PACM fragments were encountered in a small pile on the southern portion of the site.

6. Preliminary Waste Classification Assessment

During the site visit of the site on the 22nd of February 2024, RARE conducted sampling for a preliminary waste classification report (RP24029-WC-RPT-02) and proceeded with an intrusive investigation. Soil sampling locations are provided in **Figure 2**. Borehole logs are provided in **Appendix C**. During intrusive investigations, fill soils were recorded across the site from surface levels to a depth between 0.0-1.0 mbgl. Fill soils were generally comprised of silty and gravelly sands, dark brown, moist and heterogenous with inclusions of iron and other anthropogenic material. Visible surface fragments of ACM were detected atop buried construction and demolition waste within the vicinity of boreholes 3 and 4 and marked up on **Figure 7.1**: Areas of Environmental Interest (AEI) The identified ACM generally comprised of non-friable sheeting fragments. ACM identified was observed to be in sound condition and not friable.

Fill soils were underlain by natural materials, generally comprising of clay, orange/white. No staining or odours were identified within the advanced borehole locations.

6.1 Asbestos

During investigation works, material from each borehole location was thoroughly inspected for asbestos. Visible ACM was also noted at the surface level atop buried construction and demolition waste. Selected soil samples from the boreholes conducted were submitted for laboratory asbestos analysis (presence / absence). Samples submitted for asbestos in soil analysis reported concentrations below the laboratory limits. One ACM fragment was submitted for asbestos in bulk and confirmed to contain chrysotile asbestos.

6.2 Chemical Testing

Select samples were submitted for Total recoverable hydrocarbons (TRH); benzene, toluene, ethylbenzene, xylenes & naphthalene (BTEXN), heavy metals, PAH and Per- and polyfluoroalkyl substances (PFAS) analysis. Concentrations encountered were below the laboratory limit apart from heavy metals. It is noted that detectable levels of lead exceeded CT1 criteria for General Solid Waste (GSW) for samples BH03_0.0-0.1 and BH04_0.0-0.1.

BH03_0.0-0.1 and BH04_0.0-0.1 were submitted for Toxicity Characteristic Leaching Procedure (TCLP) - Lead analysis. The concentrations encountered were below TCLP1 criteria.

6.3 Preliminary Waste Classification

Based on the soil and TCLP analytical results discussed above, soils at the site are preliminarily classified as General Solid Waste – Special Waste Asbestos in accordance with EPA (2014). Refer to RP24029-WC-RPT-02 for the full report and statistical output.

Separate waste classification advice will be required to confirm these classifications prior to offsite disposal.

7. Identification of Areas of Environmental Interest

Based on the inputs of the information review and site inspection, Areas of Environmental Interest (AEI) were identified and assigned a qualitative risk ranking based on the potential contamination risk posed to construction and operation of the proposal. Based on the information presented in Sections 3-5, AEIs have been identified and are detailed below and those identified with a risk ranking of medium or high are presented in **Figure 7.1**.

Risk could be related to harm to human health (construction workers and wider public), environmental impacts and impacts on building materials durability. Construction related risks may also arise relating to the management of surplus soil.

Figure 7.1: Areas of Environmental Interest (AEI)

Figure 7.1 showing areas that have been identified as a potential risk. Large square label marking buried construction waste. Circle marking ACM fragments. Polygon marking concrete slab and potentially contaminated fill.

7.1.1 Off-Site Potential Sources of Contamination

The rail corridor north of the proposal has been used for rail infrastructure since at least 1930, surrounded by a mix of commercial, industrial and residential areas.

Sydenham Station has been renovated on at least two occasions between 2011 and 2023 with the commercial buildings on the northeastern portion of Sydenham Station being extended. There is potential for groundwater contamination from the neighbouring industry following renovation activities and historical use.

7.1.2 On-site Potential Sources of Contamination

The site was remediated in 2014, so the risk from activity related to demolition of historic building is low (refer **Section 4.10**).

Potential sources related to storage within containers onsite in 2023 and early 2024.

Potential sources related to buried waste. A compilation of aerial photographs from, presented in **Appendix E,** shows an area where construction and demolition waste appear to have been brought to site between March 2023 and May 2023 and buried. This area is highlighted in the large rectangle shown in **Figure 7.1**.

8. Preliminary Conceptual Site Model

RARE has developed the following Preliminary Conceptual Site Model (PCSM) for the Site based on the information obtained during the desktop review, Site inspection, and RARE's understanding of the Site setting, potential contamination associated with known historical and current Site uses, and potential receptors to contamination.

The PCSM is presented below Table 8.1.

8.1 Pathways and Transport Mechanisms

Identified potential pathways for contaminant transport include the following:

- Direct contact (ingestion, inhalation, dermal).
- Indirect contact (i.e., inhalation of friable asbestos fragments or dust).
- Dissolution and migration in water (lateral and vertical).
- Migration of dissolved contaminants through preferential pathways (including underground services, stormwater runoff channels and groundwater).

Table 8.1: Preliminary Conceptual Site Model

Activity/AEI	Contamination Mechanism	Contaminants of concern	Potentially Impacted Environmental Media	Potential Receptors and Exposure Pathway	Risk Rating
Onsite					
Construction and demolition of historical structures onsite	Demolition of historical buildings Degradation of building materials	Heavy metals, asbestos, TRH, BTEXN, PAH, PCBs.	Onsite soils	On-site users (current and future) including construction and maintenance workers - Soil ingestion/dermal contact/dust. Neighbouring site users - dust emissions (inhalation), namely asbestos. Onsite environmental receptors – Uptake by terrestrial flora and fauna. Cooks River/its channels aquatic ecology.	**Low** – Historical buildings are known to have been present on-site and demolished prior to its current use. Considering when the building was demolished (i.e. Between 2011 and 2016), it is possible that the building could have been demolished in accordance with appropriate codes of practice. Surficial contamination (if present) would have been exposed during excavation of surface materials and remediation of the site in 2014.
Uncontrolled filling/dumping of material onsite	Burial of impacted material Degradation of dumped materials	Heavy metals, asbestos, TRH, BTEXN, PAH, PCBs.	Onsite soils	On-site users (current and future) including construction and maintenance workers - Soil ingestion/dermal contact/dust. Neighbouring site users - dust emissions (inhalation), namely asbestos. Onsite environmental receptors – Uptake by terrestrial flora and fauna. Cooks River/its channels aquatic ecology.	**Medium** – Surficial contamination (namely asbestos) would be exposed during excavation of surface materials. Excavation works undertaken in the southwest portion have risk of exposing ACM.
Acid Sulfate Soils The southwest section of the proposal is mapped as Class 2 ASS.	Exposure of the sulfide in ASS soils to oxygen by drainage or excavation leads to the generation of sulfuric acid. Direct disturbance or lowering of groundwater table in areas containing ASS may result	Sulfide, sulfate	Onsite soils, groundwater	On-site users (current and future) including construction and maintenance workers - Soil ingestion/dermal contact/dust. Dermal contact or ingestion of impacted groundwater.	**Low** – Excavation works undertaken in the southwest portion of the proposal have risk of exposing ASS in natural soils.

	in acidic waters impacting water quality, infrastructure and ecosystems.			Onsite environmental receptors – Uptake by terrestrial flora and fauna. Cooks River/its channels aquatic ecology.	
Onsite sub-surface building foundations/structures	Application of pesticides to foundations during construction and occupation of buildings. Storage and use of chemicals	Heavy metals, TRH, OCP.	Onsite surface soils	On-site users (current and future) including construction and maintenance workers - Soil ingestion/dermal contact/dust. Onsite environmental receptors – Uptake by terrestrial flora and fauna.	**Low** – no structures were present on site during the investigation.
Historical widespread groundwater contamination within Sydenham area	Due to the industrial nature of land use in Sydenham area, groundwater contamination is known to have occurred over the wider area. The site is situated in a groundwater prohibition area.	Heavy metals TRH, PFAS, BTEXN, cyanide, nutrients.	Groundwater	On-site users (current and future) including onsite construction and maintenance workers – Dermal contact or ingestion of impacted groundwater. Onsite environmental receptors – Uptake by terrestrial flora and fauna.	**Medium** – Groundwater sampling undertaken north of the proposal in Sydenham (Lang O'Rourke, 2017), identified elevated concentrations of ammonia, cyanide, copper and zinc. Groundwater (and contamination if present) may be exposed during construction. Model needs updating with final design.
Off-site					
Historical and current motor service station and garage at 103 Railway Rd, Sydenham	Poor housekeeping practices, spills and leaks. Storage and use of chemicals.	PAH, TRH, BTEXN, PFAS, heavy metals, oil and grease solvents.	Localised shallow soil and deeper groundwater contamination. Shallow and deeper vapour contamination	On-site users (current and future) including onsite construction and maintenance workers – Dermal contact or ingestion of impacted groundwater. Onsite environmental receptors – Uptake by terrestrial flora and fauna.	**Medium** – Groundwater (and contamination if present) may be exposed during construction. Model needs updating with final design.
Railway corridor north of the site	Activities related to over 130 years of rail usage adjacent to the site. Leaks of fuels and oils. Renovations to commercial buildings at Sydenham Station.	Heavy metals, TRH, PAH, BTEXN, phenols, OCP, carbamates.	Localised shallow soil and deeper groundwater contamination.	On-site users (current and future) including onsite construction and maintenance workers – Dermal contact or ingestion of impacted groundwater. Onsite environmental receptors – Uptake by terrestrial flora and fauna.	**Low** – Rail and associated **a**ctivities located off-site and likely to be hydraulically down gradient. Groundwater (and contamination if present) may be exposed during construction. Model needs updating with final design.

Commercial and industrial activities – North of the site (off-site)	Poor housekeeping practices, spills and leaks. Storage and use of chemicals.	Heavy metals, TRH, PAH, BTEXN, solvents	Localised shallow soil and deeper groundwater contamination.	On-site users (current and future) including onsite construction and maintenance workers – Dermal contact or ingestion of impacted groundwater. Onsite environmental receptors – Uptake by terrestrial flora and fauna.	**Low** – Commercial/industrial activities located off-site and likely to be hydraulically downgradient. Groundwater (and contamination if present) may be exposed during construction. Model needs updating with final design.
Electrical Substations (approx. 230 m east and 400m southeast from proposal)	Poor housekeeping practices, spills and leaks. Polychlorinated biphenyls (PCB) were commonly used in transformer oil pre-1975.	TRH, PAH, PCBs, oil and grease	Localised shallow soil and deeper groundwater contamination.	On-site users (current and future) including onsite construction and maintenance workers – Dermal contact or ingestion of impacted groundwater. Onsite environmental receptors – Uptake by terrestrial flora and fauna.	**Low** – substations located hydraulically downgradient.
Historical dry cleaners located southeast of the site on Unwins Bridge Road	Poor housekeeping practices, spills and leaks. Storage and use of chemicals.	Solvents, VOCs, PFAS.	Localised shallow soil and deeper groundwater contamination.	On-site users (current and future) including onsite construction and maintenance workers – Dermal contact or ingestion of impacted groundwater. Onsite environmental receptors – Uptake by terrestrial flora and fauna.	**Medium** – Groundwater (and contamination if present) may be exposed during construction. Model to be updated once design is updated. Proposal site appears upgradient of AEI.

Notes: TRH: Total recoverable hydrocarbons; BTEXN: benzene, toluene, ethylbenzene, xylenes & naphthalene, PAH: polycyclic aromatic hydrocarbons, OCP: organochlorine pesticides, PCB: polychlorinated biphenyls. PFAS: Per- and polyfluoroalkyl substances, VOCs: Volatile organic compounds.

9. Conclusions and Recommendations

9.1 Findings

RARE was commissioned by Hutchison Weller to conduct the PSI for the proposed construction footprint of the Sydenham Bus Layover, located at 117 Railway Road, Sydenham NSW (the site). The proposed project involves constructing a six-bay bus parking layover area with drivers' facilities and is crucial due to increased public transport demands in Sydenham. The proposal site spans approximately 3,511 m^2 and is owned by Transport for NSW, located in the Inner West LGA.

The objective of the PSI was to assess whether there was potential for contamination to be present at the site as a result of current and historical land uses, and if so, whether it posed a potentially significant risk to human health or ecological receptors. The scope included a desktop review, site inspection, limited soil investigation for the purpose of preliminary waste classification and preparation of a PSI report.

The proposal site is underlain by Ashfield Shale geological unit. The Ashfield Shale is part of the Wianamatta group of sedimentary rocks and generally comprises black to light grey shale and laminate of the Middle Triassic. Review of the available drilling logs for existing bores in the area indicated that the regional geology of the area is generally characterised by clay and sand fill overlaying grey sandy clay. The southwest portion of the proposal is classified as soil ASS Class 2 under the Inner West Local Environmental Plan 2022.

Aerial photography from Lotsearch LS051184 and Nearmap indicates that a building constructed between 1930 and 1943 was demolished between 2011 and 2014, the site was otherwise largely vacant. More recent Nearmap images from May 2023 indicates a disturbed portion of the site with uncontrolled fill.

Potentially contaminating surround land uses include a former dry cleaner and loading dock, Sydenham Station maintenance facility, and an automotive mechanical repair and service station. ADE undertook analysis of groundwater during previous investigations at Sydenham Station (Lang O'Rourke and John Holland - 2020). Groundwater testing indicated elevated levels of Ammonia, Cyanide, Copper and Zinc were present.

The site inspection identified the presence of uncontrolled filling including bricks, concrete, PACM fragments and buried debris. A fragment of PACM was analysed and confirmed the presence of asbestos.

The preliminary waste classification assessment included the advancement of 5 boreholes to a maximum depth of 1.5 mbgl. Groundwater was encountered in Borehole BH01 at approximately 1 mbgl. Fill was identified from surface to 1.1 mbgl. Select samples were collected and analysed for TRH, TPH, BTEXN, PAH, PFAS, Heavy Metals, and Asbestos. The laboratory provided analytical results reported concentrations below the CT1 threshold for all analytes, with the exception of Lead which exceeded CT1 however was below the TCLP1 threshold. Asbestos was identified in a fragment of material sampled from the surface of the site, no asbestos in soil was identified. Detailed findings provided in RARE report RP24029-WC-RPT-02_Rev0 (2024).

A PCSM was developed based on the findings of the desktop review, site inspection and preliminary waste classification assessment, outlining areas potential environmental interest, potential contamination mechanisms, contaminants of concern, impacted environmental media, receptors, and associated risk ratings.

Based on the findings of the PSI assessment, several AEI were identified that have the potential to pose a risk to human health and/or the environment and will require further assessment and/or remediation.

9.2 Conclusions

Based on the findings of this investigation, the following conclusions were made:

- Asbestos containing material is present in shallow fill onsite, the extent of ACM contamination is not yet clear.
- Uncontrolled filling exists at the site.
- Soil assessed as part of this PSI are preliminarily classified as General Solid Waste non-putrescible mixed with Special Waste Asbestos. Additional assessment is required prior to offsite disposal to confirm classification. Noting this is a preliminary assessment lacking clarity on final estimated volumes, depths, stockpiling activities, etc.

9.3 Recommendations

It is recommended that:

- A Detailed Site Investigation (DSI) is prepared to assess site suitability based on the proposed land use. The investigation should include a groundwater assessment should the proposed construction extent intercept the groundwater table.
- A Remediation Action Plan (RAP) is prepared to outline the remediation required to make the site suitable for the proposed end use.
- An Asbestos Management Plan (AMP) is prepared that outlines the location of asbestos, safe work procedures and control measures, persons responsible, and safety representatives. In the plan outline how asbestos risks will be controlled, air monitoring requirements, and clearance certificates.
- Should the final design include exposure to groundwater or dewatering, a groundwater investigation undertaken to assess potential groundwater contamination. Should dewatering be required, a Dewatering Management Plan (DMP) prepared that outlines monitoring procedures regarding the periodic measurements of estimated groundwater levels, flow and discharge volume, as well as the required measures to minimise risks of contamination, or other interference of the local aquifer system. The DMP will provide management procedures that will ensure any pumped-out groundwater discharged from site will be of an acceptable quality and complies with the requirements of the Protection of the Environment Operations Act 1997 (POEO 1997).

10. References

- ADE (2023) *Preliminary Site Investigation – 117 Railway Road, Sydenham NSW 3037*
- Aurecon (2024) Sydenham Station Bus Layover – %80 Detailed Design Report
- EXTENT (2019) *Sydenham Metro Upgrade Project Heritage Interpretation Project*
- Lang O'Rourke and John Holland (2021) *Construction Monitoring Report 5 – September 2020 to February 2021*
- Lang O'Rourke and John Holland (2017) *Construction Soil and Water Management Plan – Sydenham Station and Junction (Updated 2023)*
- Lotsearch (2023) *Report Reference: LS051184 EP*
- Marrickville Council (2011) *Development Assessment Committee Meeting 117 RAILWAY ROAD, SYDENHAM*
- *National Environment Protection (Assessment of Site Contamination) Measure 1999*, as revised 2013 (NEPM, 2013).
- *NSW EPA (2011) Contaminated Sites: Guidelines for Consultants Reporting on Contaminated Sites* (NSW EPA, 2011).
- NSW EPA (2011) *Guidelines on the Duty to Report Contamination under the Contaminated Land Management Act 1997*
- NSW Roads and Maritime Services (2013) *Guideline for the Management of Contamination*
- Protection of the Environment Operations Act No 156 NSW (POEO 1997)

Limitations

The sole purpose of this report and associated services performed by RARE was to provide a Preliminary Site Investigation report for the Sydenham Bus Layover in accordance with the agreed scope between RARE and Hutchison Weller.

This report has been prepared on behalf of, and for the exclusive use of, RARE's Client. RARE accepts no liability or responsibility whatsoever for, or in respect of, any use of, or reliance upon, this report by any third party.

This report should not be used for any other purpose without our prior written consent. Accordingly, neither RARE nor any member or employee of RARE accepts responsibility or liability in any way whatsoever for the use of this report for any purpose other than that for which it has been prepared.

RARE has relied upon and presumed accurate information provided by third parties (or absence thereof) in making the assumptions made in this report. Except as otherwise stated in the report, RARE has not attempted to verify the accuracy or completeness of any such information. We have assumed this information to be both adequate and accurate for the purposes of this report.

Some uncertainty is inherent in all site investigations. Professional judgment and interpretation are inherent in the process, and even when exercised in accordance with objective scientific principles, uncertainty is inevitable.

Figures

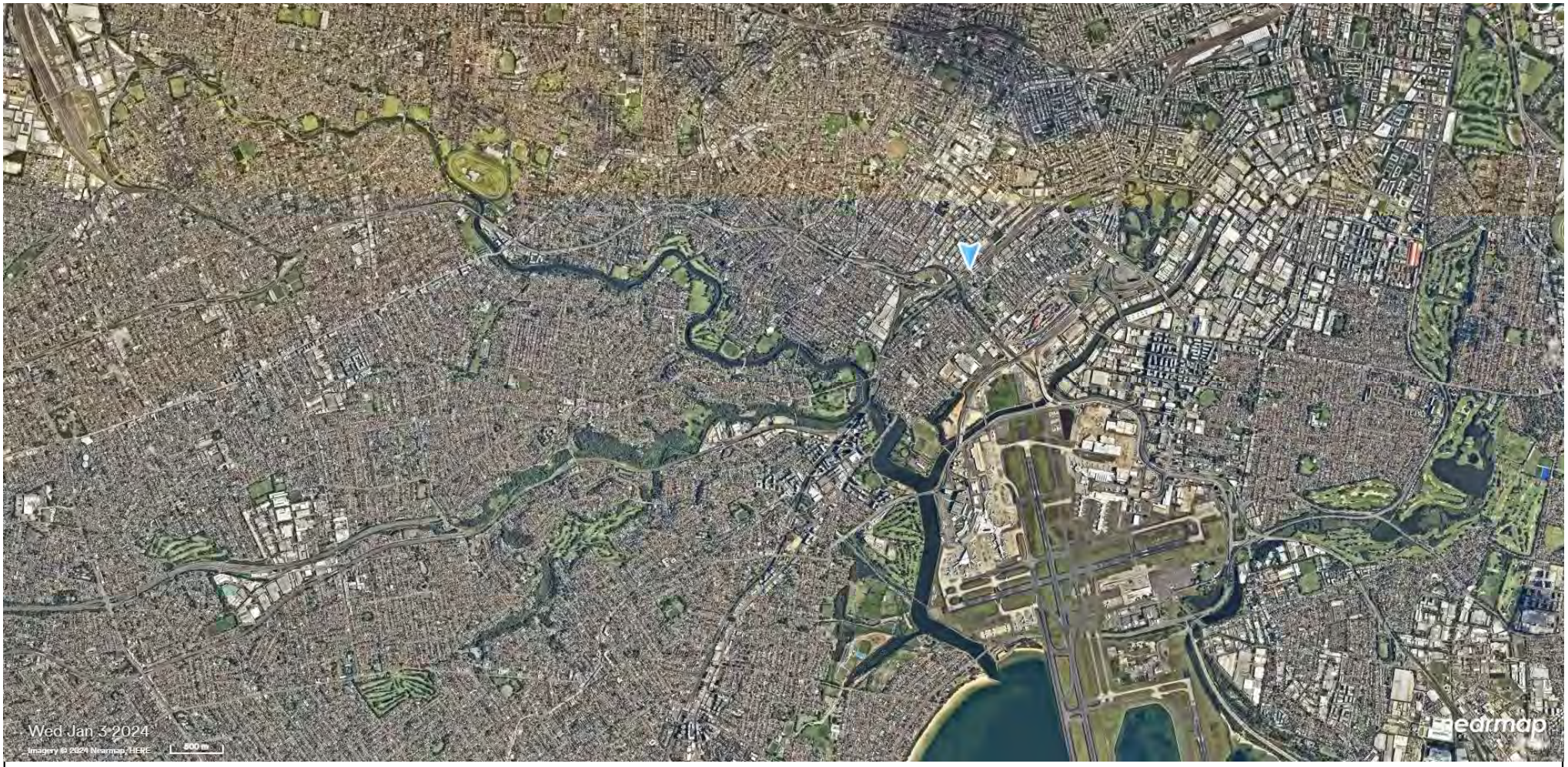


Figure 1: Site location

Sydenham Bus Layover - 117 Railway Rd, Sydenham

LEGEND			
		Approximate site location	RARE Environmental

Figure 2. Sample Locations

Sydenham Bus Layover - 117 Railway Rd, Sydenham

LEGEND		
	Site Boundary	
	Sample Locations	

Appendix A. Lotsearch Report LS051184 EP

LOTSEARCH

LOTSEARCH ENVIRO PROFESSIONAL

Date: 19 Dec 2023 12:24:05

Reference: LS051184 EP

Address: Burrows Ave and Railway Road, Sydenham, NSW 2044

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 Customer Service - Spatial Services	14/09/2023	14/09/2023	Quarterly	-	-	-	-
Topographic Data	NSW Department of Customer Service - Spatial Services	22/08/2022	22/08/2022	Annually	-	-	-	-
List of NSW contaminated sites notified to EPA	Environment Protection Authority	27/11/2023	09/11/2023	Monthly	1000m	1	2	11
Contaminated Land Records of Notice	Environment Protection Authority	27/11/2023	27/11/2023	Monthly	1000m	0	0	3
Former Gasworks	Environment Protection Authority	16/10/2023	14/07/2021	Quarterly	1000m	0	0	0
Notices under the POEO Act 1997	Environment Protection Authority	01/12/2023	01/12/2023	Monthly	1000m	1	1	23
National Waste Management Facilities Database	Geoscience Australia	26/05/2022	07/03/2017	Annually	1000m	0	0	2
National Liquid Fuel Facilities	Geoscience Australia	20/09/2023	07/09/2020	Annually	1000m	0	0	7
EPA PFAS Investigation Program	Environment Protection Authority	28/11/2023	21/11/2023	Monthly	2000m	0	0	1
Defence PFAS Investigation & Management Program - Investigation Sites	Department of Defence	28/11/2023	28/11/2023	Monthly	2000m	0	0	0
Defence PFAS Investigation & Management Program - Management Sites	Department of Defence	28/11/2023	28/11/2023	Monthly	2000m	0	0	0
Airservices Australia National PFAS Management Program	Airservices Australia	28/11/2023	28/11/2023	Monthly	2000m	0	0	1
Defence Controlled Areas	Department of Defence	10/10/2023	10/10/2023	Quarterly	2000m	0	0	0
Defence 3 Year Regional Contamination Investigation Program	Department of Defence	19/10/2023	02/09/2022	Quarterly	2000m	0	0	0
National Unexploded Ordnance (UXO)	Department of Defence	10/10/2023	10/10/2023	Quarterly	2000m	0	0	0
EPA Other Sites with Contamination Issues	Environment Protection Authority	13/11/2023	15/12/2022	Annually	1000m	0	0	0
Licensed Activities under the POEO Act 1997	Environment Protection Authority	28/11/2023	28/11/2023	Monthly	1000m	3	4	12
Delicensed POEO Activities still regulated by the EPA	Environment Protection Authority	28/11/2023	28/11/2023	Monthly	1000m	0	1	4
Former POEO Licensed Activities now revoked or surrendered	Environment Protection Authority	28/11/2023	28/11/2023	Monthly	1000m	0	3	20
UBD Business Directories (Premise & Intersection Matches)	Hardie Grant			Not required	100m	0	251	251
UBD Business Directories (Road & Area Matches)	Hardie Grant			Not required	100m	-	77	77
UBD Business Directory Dry Cleaners & Motor Garages/Service Stations (Premise & Intersection Matches)	Hardie Grant			Not required	250m	0	41	103
UBD Business Directory Dry Cleaners & Motor Garages/Service Stations (Road & Area Matches)	Hardie Grant			Not required	250m	-	4	13
Points of Interest	NSW Department of Customer Service - Spatial Services	13/11/2023	13/11/2023	Quarterly	1000m	0	3	39
Tanks (Areas)	NSW Department of Customer Service - Spatial Services	13/11/2023	13/11/2023	Quarterly	1000m	0	0	0
Tanks (Points)	NSW Department of Customer Service - Spatial Services	13/11/2023	13/11/2023	Quarterly	1000m	0	0	0
Major Easements	NSW Department of Customer Service - Spatial Services	19/10/2023	19/10/2023	Quarterly	1000m	0	1	8
State Forest	Forestry Corporation of NSW	12/12/2023			1000m	0	0	0
NSW National Parks and Wildlife	NSW Office of Environment &	16/02/2023			1000m	0	0	0

Dataset Name	Custodian	Supply Date	Currency Date	Update Frequency	Dataset Buffer (m)	No. Features On-site	No. Features within 100m	No. Features within Buffer
Temporary Water Restriction (Botany Sands Groundwater Source) Order 2018	NSW Department of Planning, Industry and Environment	09/05/2023	23/02/2018	Annually	1000m	1	1	1
National Groundwater Information System (NGIS) Boreholes	Bureau of Meteorology; Water NSW	18/04/2023	13/07/2022	Annually	2000m	0	0	88
NSW Seamless Geology Single Layer: Rock Units	Department of Regional NSW	06/12/2023	31/05/2023	Annually	1000m	1	3	7
NSW Seamless Geology – Single Layer: Trendlines	Department of Regional NSW	06/12/2023	31/05/2023	Annually	1000m	0	0	1
NSW Seamless Geology – Single Layer: Geological Boundaries and Faults	Department of Regional NSW	06/12/2023	31/05/2023	Annually	1000m	0	0	0
Naturally Occurring Asbestos Potential	NSW Dept. of Industry, Resources & Energy	04/12/2015	24/09/2015	Annually	1000m	0	0	0
Atlas of Australian Soils	Australian Bureau of Agriculture and Resource Economics and Sciences (ABARES)	19/05/2017	17/02/2011	Annually	1000m	1	1	2
Soil Landscapes of Central and Eastern NSW	NSW Department of Planning, Industry and Environment	12/12/2023	27/07/2020	Annually	1000m	2	2	5
Environmental Planning Instrument Acid Sulfate Soils	NSW Department of Planning, Industry and Environment	02/11/2023	01/09/2023	Monthly	500m	2	-	-
Atlas of Australian Acid Sulfate Soils	CSIRO	19/01/2017	21/02/2013	Annually	1000m	2	2	2
Dryland Salinity - National Assessment	National Land and Water Resources Audit	18/07/2014	12/05/2013	Annually	1000m	0	0	0
Mining Subsidence Districts	NSW Department of Customer Service - Subsidence Advisory NSW	16/10/2023	16/10/2023	Quarterly	1000m	0	0	0
Current Mining Titles	NSW Department of Industry	29/11/2023	29/11/2023	Monthly	1000m	0	0	0
Mining Title Applications	NSW Department of Industry	29/11/2023	29/11/2023	Monthly	1000m	0	0	0
Historic Mining Titles	NSW Department of Industry	29/11/2023	29/11/2023	Monthly	1000m	10	10	10
Environmental Planning Instrument SEPP State Significant Precincts	NSW Department of Planning, Industry and Environment	02/11/2023		Monthly	1000m	0	0	0
Environmental Planning Instrument Land Zoning	NSW Department of Planning, Industry and Environment	02/11/2023	20/10/2023	Monthly	1000m	3	12	108
Commonwealth Heritage List	Australian Government Department of the Agriculture, Water and the Environment	20/10/2023	13/04/2022	Annually	1000m	0	0	1
National Heritage List	Australian Government Department of the Agriculture, Water and the Environment	20/10/2023	13/04/2022	Annually	1000m	0	0	0
State Heritage Register - Curtilages	NSW Department of Planning, Industry and Environment	06/09/2023	03/03/2023	Quarterly	1000m	0	1	7
Environmental Planning Instrument Local Heritage	NSW Department of Planning, Industry and Environment	10/10/2023	22/09/2023	Monthly	1000m	0	5	93
Bush Fire Prone Land	NSW Rural Fire Service	27/11/2023	20/11/2023	Monthly	1000m	0	0	0
NSW Native Vegetation Type Map	NSW Department of Planning and Environment	26/05/2023	12/12/2022	Quarterly	1000m	1	1	2
Ramsar Wetlands of Australia	Australian Government Department of Agriculture, Water and the Environment	09/05/2023	01/11/2022	Annually	1000m	0	0	0
Groundwater Dependent Ecosystems	Bureau of Meteorology	28/10/2022	26/10/2022	Annually	1000m	0	0	0
Inflow Dependent Ecosystems Likelihood	Bureau of Meteorology	28/10/2022	26/10/2022	Annually	1000m	0	0	0
NSW BioNet Species Sightings	NSW Office of Environment & Heritage	29/11/2023	29/11/2023	Weekly	10000m	-	-	-

Site Diagram

Burrows Ave and Railway Road, Sydenham, NSW 2044

Legend

- Site Boundary
- Internal Parcel Boundaries

Total Area: 3511m²

Total Perimeter: 357m

Scale: 0 15 30 Meters

Data Source Aerial Imagery:
© Aerometrex Pty Ltd

Disclaimers:

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

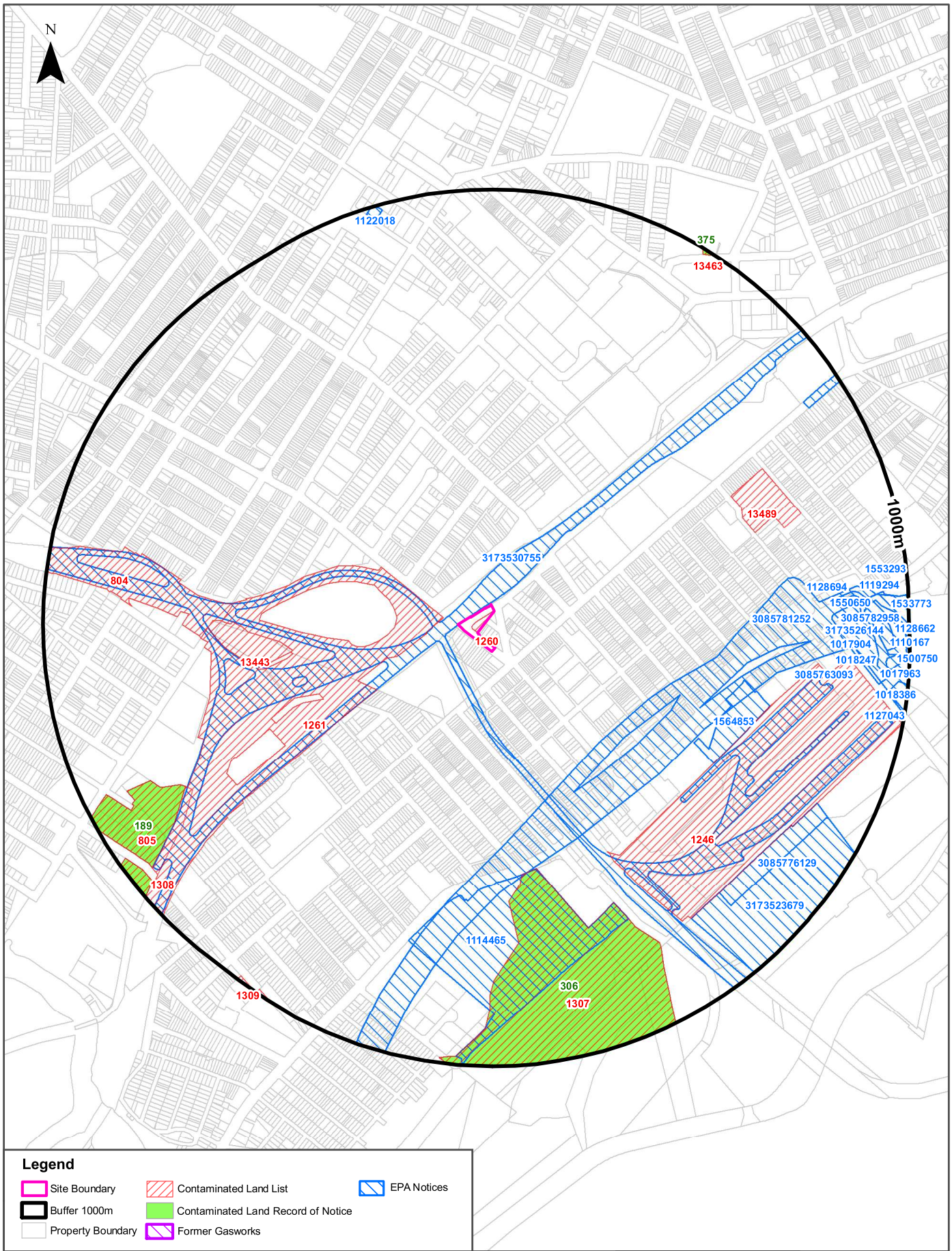
Parcels that make up a small percentage of the total site area have not been labelled for increased legibility.

Coordinate System:

Date: 19 December 2023

Contaminated Land

Burrows Ave and Railway Road, Sydenham, NSW 2044



Scale:	Data Sources: Property Boundaries & Topographic Data:	Coordinate System:	Date: 19 December 2023

Contaminated Land

Burrows Ave and Railway Road, Sydenham, NSW 2044

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
1260	SRA Land	117 Railway Parade	Sydenham	Other Industry	Regulation under CLM Act not required	Current EPA List	Premise Match	0m	On-site
1261	Sydenham XPT Maintenance Facility	Way Street	Sydenham	Other Industry	Regulation under CLM Act not required	Current EPA List	Premise Match	39m	West
13443	2 Carrington Road	2 Carrington ROAD	Marrickville	Unclassified	Regulation under CLM Act not required	Current EPA List	Premise Match	403m	West
1307	Former Tempe Tip	South Street	Tempe	Landfill	Contamination currently regulated under CLM Act	Current EPA List	Premise Match	533m	South
804	RailCorp	361 Victoria Road	Marrickville	Other Industry	Regulation under CLM Act not required	Current EPA List	Premise Match	543m	West
1246	Cooks River Rail Terminal	20 Canal Road	St Peters	Unclassified	Regulation under CLM Act not required	Current EPA List	Premise Match	555m	South East
13489	Former Industrial Manufacturing Facility (Taubman's Paints)	75 Mary STREET	St Peters	Other Industry	Regulation under CLM Act not required	Current EPA List	Premise Match	634m	North East
1308	Railcorp Site Renwick Street	Renwick Street	Tempe	Other Industry	Regulation under CLM Act not required	Current EPA List	Premise Match	754m	South West
805	TRW Steering and Suspension	22-28 Carrington Road	Marrickville	Other Industry	Ongoing maintenance required to manage residual contamination (CLM Act)	Current EPA List	Premise Match	764m	South West
1309	Tempe Depot	1a Gannon Street	Tempe	Other Petroleum	Regulation under CLM Act not required	Current EPA List	Premise Match	987m	South West
13463	Former Dry Cleaners and Loading Dock	Smidmore Street	Marrickville	Other Industry	Contamination currently regulated under CLM Act	Current EPA List	Premise Match	987m	North 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.

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

NSW EPA Contaminated Land List Data Source: Environment Protection Authority

Contaminated Land

Burrows Ave and Railway Road, Sydenham, NSW 2044

Contaminated Land: Records of Notice

Record of Notices within the dataset buffer:

Map Id	Name	Address	Suburb	Notices	Area No	Location Confidence	Distance	Direction
306	Former Tempe Tip	South Street	Tempe	2 current and 6 former	3157	Premise Match	533m	South
189	TRW Steering and Suspension	22-28 Carrington Road	Marrickville	1 current and 1 former	3167	Premise Match	764m	South West
375	Former Dry Cleaners and Loading Dock	Smidmore Street	Marrickville	2 current	3408	Premise Match	987m	North East

Former Gasworks

Former Gasworks within the dataset buffer:

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

Contaminated Land

Burrows Ave and Railway Road, Sydenham, NSW 2044

EPA Notices

Penalty Notices, s.91 & s.92 Clean up Notices and s.96 Prevention Notices within the dataset buffer:

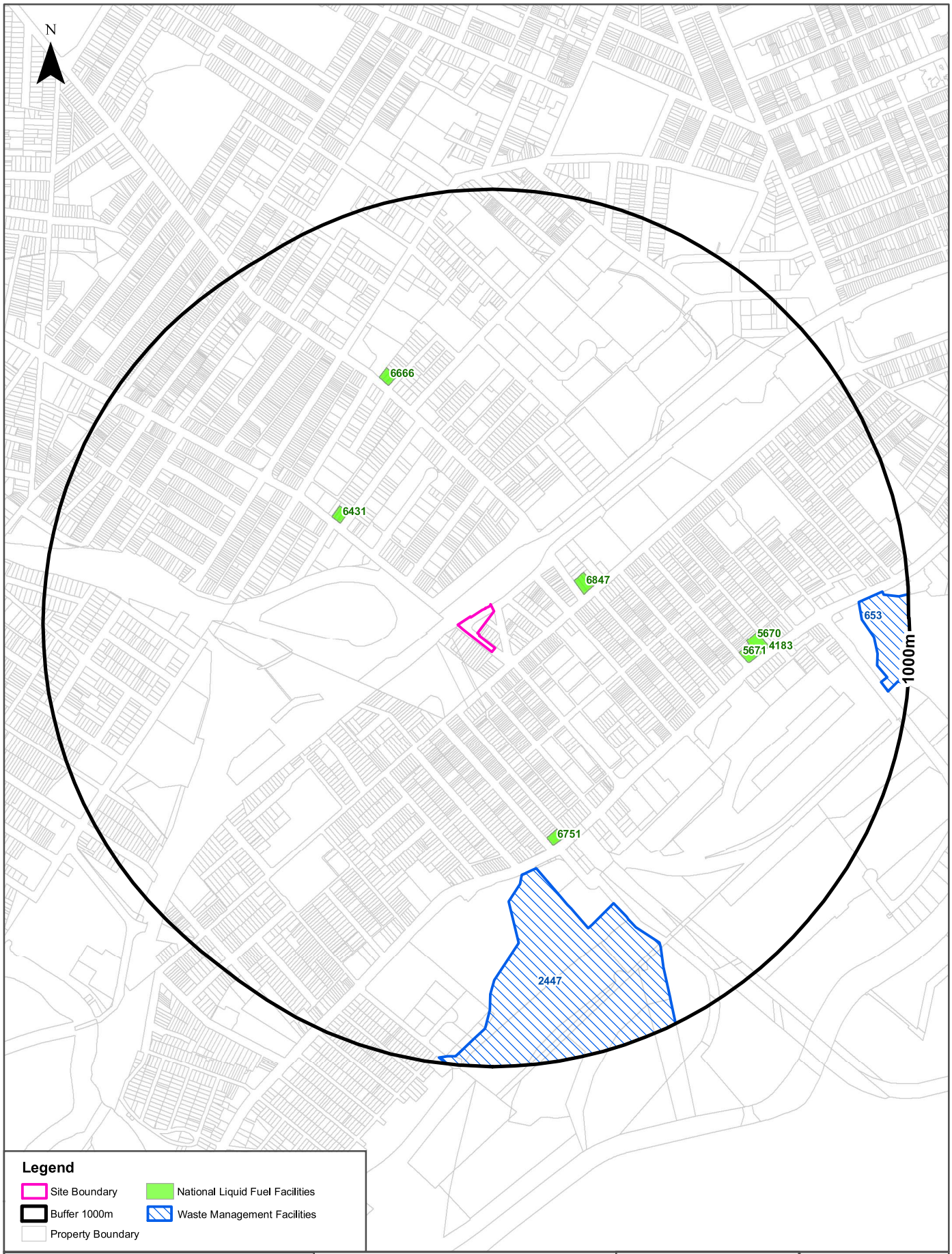
Number	Type	Name	Address	Status	Issued Date	Act	Offence	Offence Date	Loc Conf	Dist	Dir
3173530755	Penalty Notice	SYDNEY TRAINS	SYDNEY TRAINS, HAYMARKET, NSW 1238	Issued	10/11/2021	Protection of the Environment Operations Act 1997 - 64(1)	Contravene condition of licence - Corporation	31/05/2021	Network of Features	0m	On-site
3085781252	Penalty Notice	CPB CONTRACTORS PTY LIMITED	Between Beverly Hills and St Peters, BEVERLY HILLS, NSW 2209	Issued	20/06/2017	Protection of the Environment Operations Act 1997 - 64(1)	Contravene condition of licence - Corporation	02/11/2016	Road Match	337m	South East
1564853	s.91 Clean Up Notice	METROPOLITAN DEMOLITIONS AND RECYCLING PTY LIMITED	396 PRINCES HIGHWAY, ST PETERS, NSW 2044	Issued	25/05/2018				Premise Match	530m	East
1114465	s.96 Prevention Notice	IKEA PTY LTD		Issued	24/06/2010				Premise Match	533m	South
3085776129	Penalty Notice	SPRC PTY LTD	6-10 Burrows Road South, ST PETERS, NSW 2044	Issued	02/04/2015	Protection of the Environment Operations Act 1997 - 64(1)	Contravene condition of licence - Corporation	17/02/2015	Premise Match	798m	South East
3173523679	Penalty Notice	VISY PAPER PTY. LTD.	6-10 Burrows Road South , ST PETERS, NSW 2044	Issued	07/12/2017	Protection of the Environment Operations (Waste) Regulation 2014 - 22 (2)	Fail to provide waste contribution reports within 26 days after the end of each month - Corporation	29/08/2017	Premise Match	798m	South East
3085782958	Penalty Notice	CPB CONTRACTORS PTY LIMITED	10-16 ALBERT STREET, ST PETERS, NSW 2044	Issued	27/07/2017	Protection of the Environment Operations Act 1997 - 129(3)	Contravene section by emission of odours - Corporation	28/03/2017	Premise Match	814m	East
3173526144	Penalty Notice	CPB CONTRACTORS PTY LIMITED	10-16 ALBERT STREET, ST PETERS, NSW 2044	Issued	10/08/2018	Protection of the Environment Operations Act 1997 - 64(1)	Contravene condition of licence - Corporation	21/06/2018	Premise Match	814m	East
1017904	s.91 Clean Up Notice	ALEXANDRIA LANDFILL PTY LTD	10-16 ALBERT STREET, ST PETERS, NSW 2044	Issued	31/05/2002				Premise Match	814m	East
1017963	s.91 Clean Up Notice	ALEXANDRIA LANDFILL PTY LTD	10-16 ALBERT STREET, ST PETERS, NSW 2044	Issued	06/06/2002				Premise Match	814m	East
1018247	s.91 Clean Up Notice	IA LANDFILL	10-16 ALBERT STREET, ST PETERS, NSW	Issued	18/06/2002				Premise Match	814m	East

Number	Type	Name	Address	Status	Issued Date	Act	Offence	Offence Date	Loc Conf	Dist	Dir
1018386	s.91 Clean Up Notice	ALEXANDRIA LANDFILL PTY LTD	10-16 ALBERT STREET, ST PETERS, NSW 2044	Issued	21/06/2002				Premise Match	814m	East
1127043	s.91 Clean Up Notice	ALEXANDRIA LANDFILL PTY LTD	10-16 ALBERT STREET, ST PETERS, NSW 2044	Issued	15/04/2011				Premise Match	814m	East
1128694	s.91 Clean Up Notice	ALEXANDRIA LANDFILL PTY LTD	10-16 ALBERT STREET, ST PETERS, NSW 2044	Issued	21/06/2011				Premise Match	814m	East
1553293	s.91 Clean Up Notice	CPB CONTRACTORS PTY LIMITED	10-16 ALBERT STREET, ST PETERS, NSW 2044	Issued	19/06/2017				Premise Match	814m	East
1550650	s.96 Prevention Notice	CPB CONTRACTORS PTY LIMITED	10-16 ALBERT STREET, ST PETERS, NSW 2044	Issued	28/03/2017				Premise Match	814m	East
3085763093	Penalty Notice	BOILING PTY LTD	10 ALBERT STREET, ST PETERS, NSW 2044	Issued	05/04/2012	Protection of the Environment Operations Act 1997 - 64(1)	Contravene any condition of licence - not noise - corporation	13/12/2011	Premise Match	879m	East
1533773	s.92 Clean Up Notice	ROADS AND MARITIME SERVICES	10 ALBERT STREET, ST PETERS, NSW 2044	Issued	06/11/2015				Premise Match	879m	East
1110167	s.91 Clean Up Notice	EARTH CIVIL (NSW) PTY LTD		Issued	13/08/2010				Premise Match	879m	East
1119294	s.91 Clean Up Notice	ROADS & TRAFFIC AUTHORITY OF NEW SOUTH WALES		Issued	20/12/2010				Premise Match	879m	East
1500750	s.91 Clean Up Notice	BOILING PTY LTD	10 ALBERT STREET, ST PETERS, NSW 2044	Issued	02/09/2011				Premise Match	892m	East
1128662	s.91 Clean Up Notice	BOILING PTY LTD	10 ALBERT STREET, ST PETERS, NSW 2044	Issued	08/06/2011				Premise Match	906m	East
1122018	s.91 Clean Up Notice	CLEANA SERVICE PTY LTD		Issued	30/11/2010				Premise Match	966m	North

NSW EPA Notice Data Source: Environment Protection Authority

Waste Management & Liquid Fuel Facilities

Burrows Ave and Railway Road, Sydenham, NSW 2044



Scale:	Data Sources: Property Boundaries & Topographic Data:	Coordinate System:	Date: 19 December 2023

Waste Management & Liquid Fuel Facilities

Burrows Ave and Railway Road, Sydenham, NSW 2044

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
2447	Marrickville Council	Tempy Landfill	South Street	Tempe	Landfill	Operational				Premise Match	533 m	South
653	Alexandria Landfill Pty Ltd	Alexandria Landfill	Albert Street	St Peters	Multi-Purpose	Operational	Operational			Premise Match	879 m	East

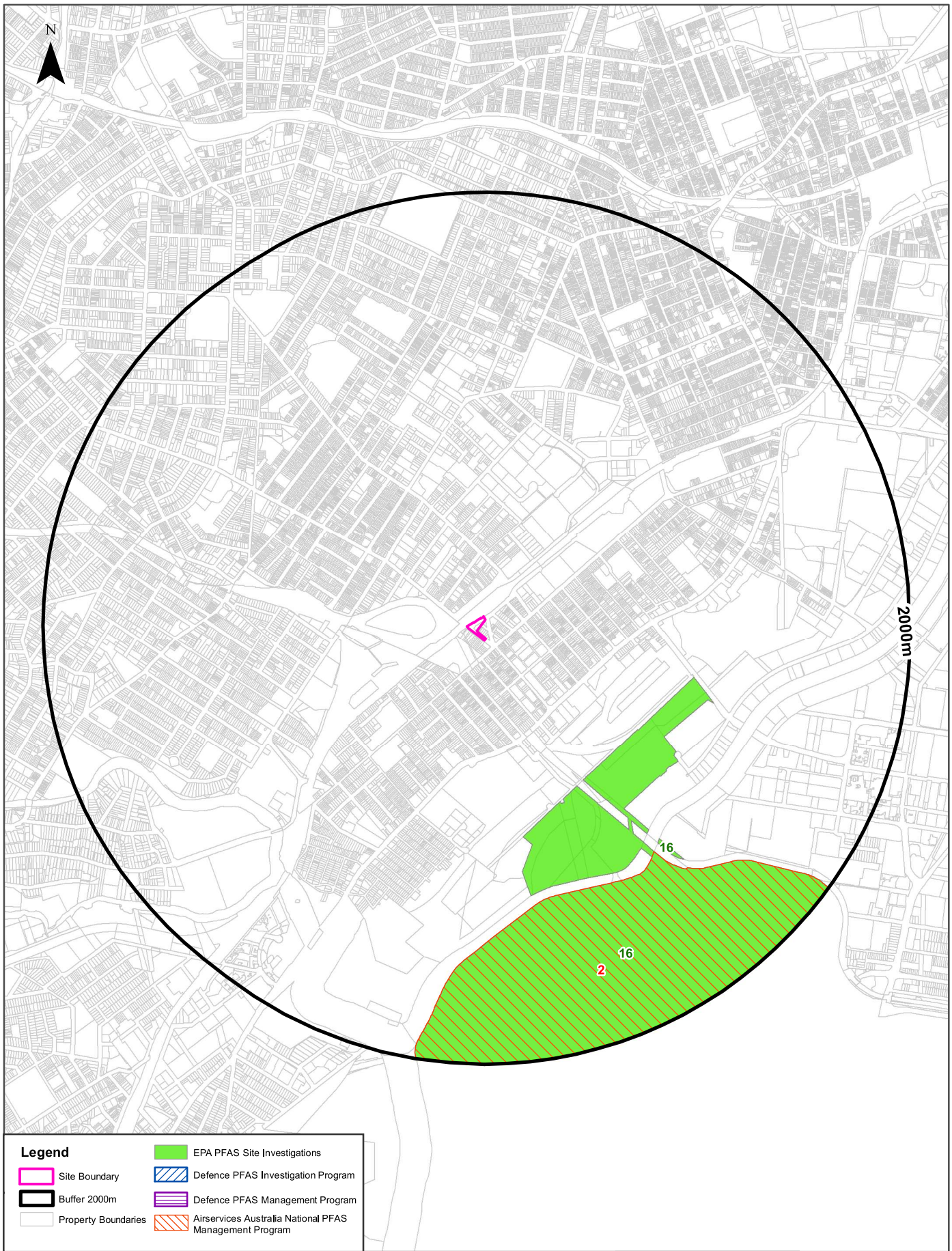
National Liquid Fuel Facilities

National Liquid Fuel Facilties within the dataset buffer:

Map Id	Owner	Name	Address	Suburb	Class	Operational Status	Operator	Revision Date	Loc Conf	Dist	Direction
6847	INDEPENDENT	PAYLESS FUEL SYDENHAM	31-35 UNWINS BRIDGE	SYDENHAM	PETROL STATION	OPERATIONAL			Premise Match	206m	East
6431	INDEPENDENT	INDEPENDENT MARRICKVILLE	73-81 MARRICKVILLE ROAD	MARRICKVILLE	PETROL STATION	OPERATIONAL			Premise Match	375m	North West
6751	METRO FUEL	METRO TEMPE	531 PRINCES HIGHWAY	TEMPE	PETROL STATION	OPERATIONAL			Premise Match	454m	South
6666	METRO FUEL	METRO MARRICKVILLE	103 SYDENHAM ROAD	MARRICKVILLE	PETROL STATION	OPERATIONAL			Premise Match	582m	North
4183	BP	BP Connect Sydenham	14 Grove Street	St Peters	Petrol Station	Operational		25/07/2011	Premise Match	587m	East
5670	BP	BP SYDENHAM	339 PRINCES HIGHWAY	SYDENHAM	PETROL STATION	OPERATIONAL			Premise Match	587m	East
5671	BP	BP SYDENHAM	339 PRINCES HIGHWAY	SYDENHAM	PETROL STATION	OPERATIONAL			Premise Match	587m	East

PFAS Investigation & Management Programs

Burrows Ave and Railway Road, Sydenham, NSW 2044



Scale:	Data Sources: Property Boundaries & Topographic Data:	Coordinate System:	Date: 19 December 2023

PFAS Investigation & Management Programs

Burrows Ave and Railway Road, Sydenham, NSW 2044

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
16	Botany Bay area	Botany Bay area & Georges River	Area Match	798m	South East

EPA PFAS Investigation Program: 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
2	Sydney Airport (NSW)	Confirmed at fire station and fire training ground.	Premise Match	1250m	South

Airservices Australia National PFAS Management Program Data Custodian: Airservices Australia

Defence Sites and Unexploded Ordnance

Burrows Ave and Railway Road, Sydenham, NSW 2044

Defence Controlled Areas (DCA)

Defence Controlled Areas provided by the Department of Defence within the dataset buffer:

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

Defence Controlled Areas, Data Custodian: Department of Defence, Australian Government

Defence 3 Year Regional Contamination Investigation Program (RCIP)

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

National Unexploded Ordnance (UXO)

Sites which have been assessed by the Department of Defence for the potential presence of unexploded ordnance within the dataset buffer:

Site ID	Location Name	Category	Area Description	Additional Information	Commonwealth	Loc Conf	Dist	Dir
N/A	No records in buffer							

National Unexploded Ordnance (UXO), Data Custodian: Department of Defence, Australian Government

EPA Other Sites with Contamination Issues

Burrows Ave and Railway Road, Sydenham, NSW 2044

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						

Current EPA Licensed Activities

Burrows Ave and Railway Road, Sydenham, NSW 2044

Scale:	Data Sources: Property Boundaries & Topographic Data:	Coordinate System:	Date: 19 December 2023

EPA Activities

Burrows Ave and Railway Road, Sydenham, NSW 2044

Licensed Activities under the POEO Act 1997

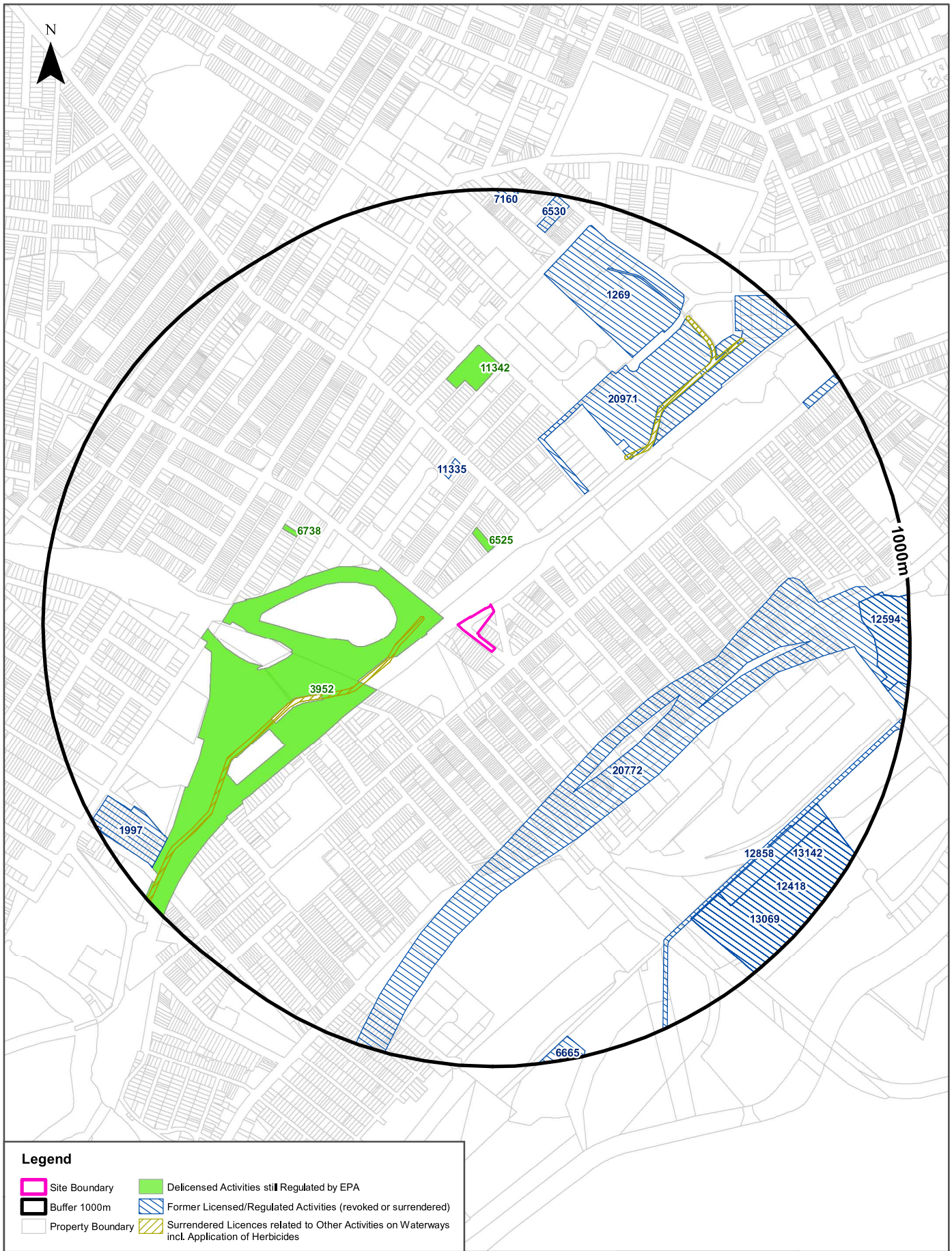
Licensed activities under the Protection of the Environment Operations Act 1997, within the dataset buffer:

EPL	Organisation	Name	Address	Suburb	Activity	Loc Conf	Distance	Direction
21147	Laing O'Rourke Australia Construction Pty Ltd		Sydenham Station Junction Works Project Site at Sydenham Station, SYDENHAM, NSW 2044		Railway systems activities	Premise Match	0m	On-site
3142	AUSTRALIAN RAIL TRACK CORPORATION LIMITED		AUSTRALIAN RAIL TRACK CORPORATION (ARTC) NETWORK, SYDNEY, NSW 2001		Railway systems activities	Network of Features	0m	On-site
12208	SYDNEY TRAINS		SYDNEY TRAINS, HAYMARKET, NSW 1238		Railway systems activities	Network of Features	0m	On-site
21247	Metro Trains Sydney Pty Ltd		SYDNEY METRO, ROUSE HILL, NSW 2155		Railway systems activities	Network of Features	16m	North
21524	JOHN HOLLAND PTY LTD		BETWEEN ST PETERS INTERCHANGE AND SYDNEY AIRPORT WITHIN THE SUBURBS OF TEMPE, ST PETERS AND MASCOT, TEMPE, NSW 2044		Road construction (>=50,000T & road to be constructed <10km)	Premise Match	500m	South
11483	METROPOLITAN DEMOLITIONS AND RECYCLING PTY LIMITED	METROPOLITAN DEMOLITIONS AND RECYCLING	396 Princes Highway	ST PETERS	Non-thermal treatment of general waste	Premise Match	530m	East
11483	METROPOLITAN DEMOLITIONS AND RECYCLING PTY LIMITED	METROPOLITAN DEMOLITIONS AND RECYCLING	396 Princes Highway	ST PETERS	Recovery of general waste	Premise Match	530m	East
11483	METROPOLITAN DEMOLITIONS AND RECYCLING PTY LIMITED	METROPOLITAN DEMOLITIONS AND RECYCLING	396 Princes Highway	ST PETERS	Waste storage - other types of waste	Premise Match	530m	East
21149	ACCIONA INFRASTRUCTURE PROJECTS AUSTRALIA PTY LTD		WestConnex between M4 East at Haberfield and the New M5 at St. Peters, MARRICKVILLE, NSW 2204		Road Construction	Premise Match	709m	East
4627	TRANSPORT FOR NSW	ALEXANDRIA LANDFILL	10-16 ALBERT STREET	ST PETERS	Waste disposal by application to land	Premise Match	814m	East
21372	WCX PT PTY LTD		33 BURROWS ROAD, ST PETERS,		Road tunnel emissions	Premise Match	832m	East

EPL	Organisation	Name	Address	Suburb	Activity	Loc Conf	Distance	Direction
21423	CPB CONTRACTORS PTY LIMITED		BETWEEN CHATSWOOD DIVE SITE AND SYDENHAM DIVE SITE, SYDNEY, NSW 2000		Railway infrastructure construction (<50,000T)	Network of Features	930m	North East

Delicensed & Former Licensed EPA Activities

Burrows Ave and Railway Road, Sydenham, NSW 2044



Scale:	Property Boundary Data Source:	Coordinate System:	Date: 19 December 2023

EPA Activities

Burrows Ave and Railway Road, Sydenham, NSW 2044

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
3952	RAIL CORPORATION NEW SOUTH WALES	XPT MAINTENANCE CENTRE	WAY STREET	SYDENHAM	Hazardous, Industrial or Group A Waste Generation or Storage	Premise Match	39m	West
6525	BIOCLONE AUSTRALIA PTY LTD	BIOCLONE	71-73 RAILWAY PARADE	MARRICKVILLE	Hazardous, Industrial or Group A Waste Generation or Storage	Premise Match	127m	North
6738	VEMADELL PTY. LIMITED	HALLMARK PLATERS	58 MEEKS ROAD	MARRICKVILLE	Hazardous, Industrial or Group A Waste Generation or Storage	Premise Match	442m	North West
11342	ALFRED JOHNS PTY LTD	ALFRED JOHNS PTY LTD	25 FITZROY STREET	MARRICKVILLE	Hazardous, Industrial or Group A Waste Generation or Storage	Premise Match	515m	North

Delicensed Activities Data Source: Environment Protection Authority

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

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

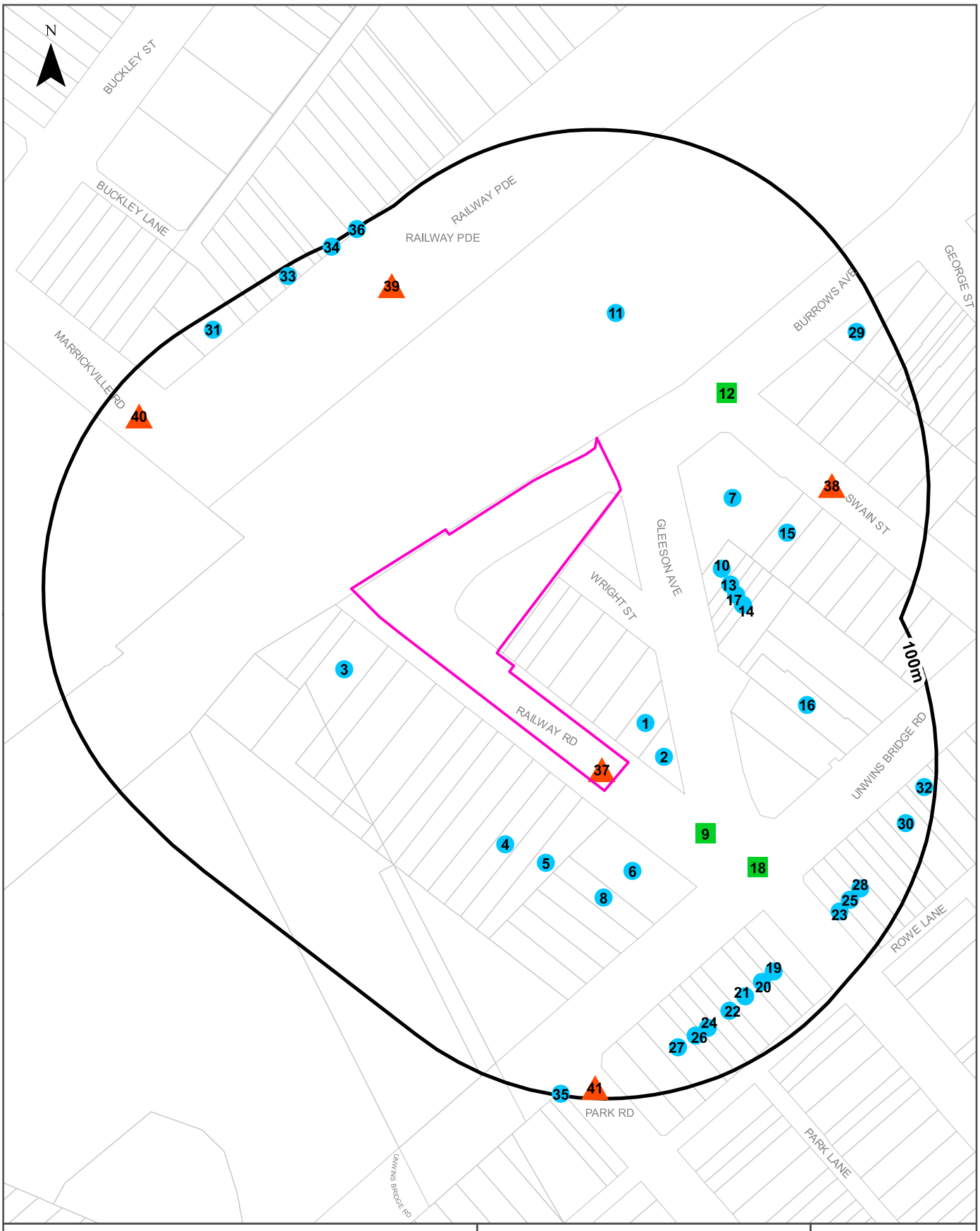
Licence No	Organisation	Location	Status	Issued Date	Activity	Loc Conf	Distance	Direction
4653	LUHRMANN ENVIRONMENT MANAGEMENT PTY LTD	WATERWAYS THROUGHOUT NSW	Surrendered	06/09/2000	Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	83m	West
4838	Robert Orchard	Various Waterways throughout New South Wales - SYDNEY NSW 2000	Surrendered	07/09/2000	Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	83m	West
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	83m	West
11335	NETWORK GRAPHICS PTY. LTD.	42 Sydneham Road, MARRICKVILLE, NSW 2204	Surrendered	31/01/2001	Hazardous, Industrial or Group A Waste Generation or Storage	Premise Match	320m	North
20772	CPB CONTRACTORS PTY LIMITED	WESTCONNEX NEW M5, Between Beverly Hills and St Peters, BEVERLY HILLS, NSW 2209,	Surrendered	17/05/2016	Road construction	Premise Match	337m	South East
20971	JOHN HOLLAND PTY LTD	Sydney Metro City & Southwest Tunnels and Excavation Works, locations between Chatswood railway station and Sydenham railway station, SYDNEY, NSW	Surrendered	28/09/2017	Concrete works, Railway systems activities	Network of Features	349m	North East

Licence No	Organisation	Location	Status	Issued Date	Activity	Loc Conf	Distance	Direction
1269	PEERLESS HOLDINGS PTY. LIMITED	74 EDINBURGH ROAD, MARRICKVILLE, NSW 2204	Surrendered	15/05/2000	Hazardous, Industrial or Group A Waste Generation or Storage	Premise Match	686m	North
12858	MCCONNELL DOWELL CONSTRUCTORS (AUST) PTY LTD	Various streets from Kurnell to Erskineville, including the pipeline route across Botany Bay, KURNELL, NSW 2231	Surrendered	01/05/2008	Water-based extractive activity, Miscellaneous licensed discharge to waters (at any time)	Network of Features	791m	South East
12418	BORAL RECYCLING PTY LIMITED	Boral Recycling Pty Ltd, 25 Burrows Road South, ST PETERS	Surrendered	21/12/2005	Recovery of general waste	Premise Match	798m	South East
12418	BORAL RECYCLING PTY LIMITED	Boral Recycling Pty Ltd, 25 Burrows Road South, ST PETERS	Surrendered	21/12/2005	Waste storage - other types of waste	Premise Match	798m	South East
13069	VISY PAPER PTY. LTD.	Visy Paper Pty Ltd, 6-10 Burrows Road South, ST PETERS	Surrendered	02/09/2009	Recovery of general waste	Premise Match	798m	South East
13069	VISY PAPER PTY. LTD.	Visy Paper Pty Ltd, 6-10 Burrows Road South, ST PETERS	Surrendered	02/09/2009	Waste storage - other types of waste	Premise Match	798m	South East
13142	SPRC PTY LTD	SPRC Pty Ltd, 6-10 Burrows Road South, ST PETERS	Surrendered	23/04/2010	Non-thermal treatment of general waste	Premise Match	798m	South East
13142	SPRC PTY LTD	SPRC Pty Ltd, 6-10 Burrows Road South, ST PETERS	Surrendered	23/04/2010	Waste storage - other types of waste	Premise Match	798m	South East
1997	TRISTAR STEERING AND SUSPENSION AUSTRALIA LIMITED	20-28 CARRINGTON ROAD, MARRICKVILLE, NSW 2204	Surrendered	07/08/2000	Hazardous, Industrial or Group A Waste Generation or Storage	Premise Match	869m	South West
12594	ROADS AND MARITIME SERVICES	ALEXANDRIA RECYCLING CENTRE, 10-16 Albert Street, ST PETERS	Surrendered	21/06/2007	Recovery of general waste	Premise Match	879m	East
12594	ROADS AND MARITIME SERVICES	ALEXANDRIA RECYCLING CENTRE, 10-16 Albert Street, ST PETERS	Surrendered	21/06/2007	Waste storage - other types of waste	Premise Match	879m	East
6530	GLOBUS GROUP PTY LTD	122 EDINBURGH ROAD, MARRICKVILLE, NSW 2204	Surrendered	28/04/2000	Hazardous, Industrial or Group A Waste Generation or Storage	Premise Match	906m	North
6665	MARRICKVILLE COUNCIL	BELLEVUE STREET, TEMPE, NSW 2044	Surrendered	15/11/2000	Waste disposal by application to land	Premise Match	944m	South
7160	CHAMPION FORMS AUSTRALIA MARRICKVILLE PTY. LTD.	1-21 SMITH STREET, MARRICKVILLE, NSW 2204	Revoked	11/07/2000	Hazardous, Industrial or Group A Waste Generation or Storage	Premise Match	970m	North

Former Licensed Activities Data Source: Environment Protection Authority

Historical Business Directories

Burrows Ave and Railway Road, Sydenham, NSW 2044



Legend

- Site Boundary
- Buffer 100m
- 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

Scale: 0 20 40 60 80 Meters

Coordinate System: GDA 1994 MGA Zone 56

Date: 19 December 2023

Historical Business Directories

Burrows Ave and Railway Road, Sydenham, NSW 2044

Business Directory Records 1950-1991
Premise or Road Intersection Matches

Universal Business Directory records from years 1991, 1986, 1982, 1978, 1975, 1970, 1965, 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	Motor Garages & Service Stations	Sydenham Mechanical Repairs, 103 Railway Rd., Sydenham 2044	53937	1991	Premise Match	3m	South East
	MOTOR GARAGES & SERVICE STATIONS.	M T. Service Station, 103 Railway Rd., Sydenham. 2044	65007	1986	Premise Match	3m	South East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	M.T. Service Station, 103 Railway Rd., Sydenham. 2044.	57110	1982	Premise Match	3m	South East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	M.T, Service Station, 103 Railway Rd., Sydenham. 2044	50405	1978	Premise Match	3m	South East
	MOTOR GARAGES &/OR ENGINEERS.	M.T. Service Station., 103 Railway Rd., Sydenham. 2044	59176	1975	Premise Match	3m	South East
	MOTOR GARAGES & ENGINEERS(M6S6)	MT Service Station., 103 Railway Rd., SYDENHAM	338302	1970	Premise Match	3m	South East
	Motor Service Stations - Petrol, Oil, Etc.	Wheeler's Service Station, 103 Railway Rd. Sydenham	126195	1965	Premise Match	3m	South East
2	MOTOR SERVICE STATIONS—PETROL, OIL, Etc.	Wheeler's Service Station, 103 Railway Rd., SYDENHAM	351282	1961	Premise Match	3m	South East
3	PHOTOGRAPHERS-PORTRAIT	French, Miss N., 106 Railway Rd., St. Peters	91841	1950	Premise Match	5m	South West
4	HARDWARE MERCHANTS RETAIL.	Rhodos Hardware, 86 Railway Rd., Sydenham. 2044	44738	1986	Premise Match	6m	South
5	CHEMISTS-PHARMACEUTICAL.	Sydenham Pharmacy, 82 Railway Rd., Sydenham. 2044	14943	1986	Premise Match	6m	South
	CHEMISTS - PHARMACEUTICAL.(C4110)	Sydenham Pharmacy, 82 Railway Rd., Sydenham. 2044.	15740	1982	Premise Match	6m	South
	CHEMISTS-PHARMACEUTICAL	Culhane, J., 82 Railway Rd., Sydenham. 2044	15154	1975	Premise Match	6m	South
6	CONFECTIONERY MFRS.' SUPPLIES	Confectionery Distributors Co-op. Ltd., 51 Unwins Bridge Rd., Sydenham	285489	1970	Premise Match	9m	South East
	Amusements	Rollerdrome., 51 Unwins Bridge Rd., Sydenham	46154	1965	Premise Match	9m	South East
	PICTURE THEATRES	Sydenham Rex Picture Theatre, 51 Unwins Bridge Rd., Sydenham	358556	1961	Premise Match	9m	South East
	BUTCHERS-RETAIL	Brian, E., 47 Unwin's Bridge Rd., Sydenham	13185	1950	Premise Match	9m	South East
	PICTURE THEATRES-SUBURBAN	Sydenham Theatre, 51 Unwins Bridge Rd., Sydenham	92905	1950	Premise Match	9m	South East
7	HOTELS-LICENSED (H690)	General Gordon Hotel., Gleeson Ave., Sydenham	317265	1970	Premise Match	20m	North East
	Hotels - Licensed	General Gordon Hotel, Gleeson Ave., Sydenham	101581	1965	Premise Match	20m	North East
	HOTELS—LICENSED	General Gordon Hotel, Gleeson Ave., Sydenham	325339	1961	Premise Match	20m	North East
	HOTELS-LICENSED	General Gordon Hotel, Gleeson Ave., Sydenham	63080	1950	Premise Match	20m	North East
	BOOT & SHOE REPAIRERS	Townsend, H. C., 20 Swain St., St.		1950	Premise Match	20m	North East
8	CAFES, MILK BARS &/OR SNACK BARS.	Sydenham Chinese Cafe, 53 Unwins Bridge Rd., Sydenham. 2044		1986	Premise Match	24m	South

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
8	CAFES, TEA ROOMS &/OR COFFEELOUNGES. (C0345)	Sydenham Chinese Cafe, 53 Unwins Bridge Rd., Sydenham. 2044.	12397	1982	Premise Match	24m	South
	CAFES, TEA ROOMS &/OR COFFEE LOUNGES.	Sydenham Chinese Cafe, 53 Unwins Bridge Rd., Sydenham. 2044	10639	1978	Premise Match	24m	South
	CAFES, TEA ROOMS &/OR COFFEE LOUNGES.	Sydenham Chinese Cafe, 53 Unwins Bridge Rd., Sydenham. 2044	12303	1975	Premise Match	24m	South
	CAFES, COFFEE LOUNGES, Etc. (C030)	Sydenham Chinese Cafe., 53 Unwins Bridge Rd., Sydenham	276139	1970	Premise Match	24m	South
	Cafes, Tea Rooms, Coffee Lounges, Etc.	Sydenham Chinese Cafe, 53 Unwins Bridge Rd., Sydenham	60858	1965	Premise Match	24m	South
	CAFES, TEA ROOMS, COFFEE LOUNGES, Etc.	Windsor Cafe (The), 53 Unwins Bridge Rd., Sydenham	282641	1961	Premise Match	24m	South
	CAFES, TEA ROOMS, COFFEE LOUNGES, Etc.	Small, B., 53 Unwins Bridge Rd., St. Peters	16062	1950	Premise Match	24m	South
	CAFES, TEA ROOMS, COFFEE LOUNGES, Etc.	Windsor Cafe (The), 53 Unwins Bridge Rd., Sydenham	16191	1950	Premise Match	24m	South
	MILK BARS & CONFECTIONERS	Windsor Cafe (The)., 53 Unwins Bridge Rd., Sydenham	77560	1950	Premise Match	24m	South
9	MOTOR SERVICE STATIONS-PETROL, Etc.	Sydenham Auto Repair, Cnr. Gleeson Ave. and Railway Rd., St. Peters	86450	1950	Road Intersection	34m	South East
	MOTOR ACCESSORIES-DEALER	Sydenham Auto Repairs, Cnr. Gleeson Ave. and Railway Rd., St. Peters	81808	1950	Road Intersection	34m	South East
	MOTOR ELECTRICIANS	Sydenham Auto Repairs, Cnr. Gleeson Ave. and Railway Rd., St. Peters	83219	1950	Road Intersection	34m	South East
	MOTOR GARAGES &/OR ENGINEERS	Sydenham Auto Repairs, Cnr. Gleeson Ave. and Railway Rd., St. Peters	84452	1950	Road Intersection	34m	South East
	MOTOR TOWING SERVICES	Sydenham Auto Repairs, Cnr. Gleeson Ave. and Railway Rd., St. Peters	86968	1950	Road Intersection	34m	South East
10	HERBALISTS (H410)	Petridis, M., 11 Gleeson Ave., Sydenham	316203	1970	Premise Match	38m	East
	BOOT & SHOE REPAIRERS	Stefanic, A., 11 Gleeson Ave., Sydenham	269225	1970	Premise Match	38m	East
	DENTAL LABS.& TECHNICIANS (D120)	Sydenham Dental Tech., 13 Gleeson Ave., Sydenham	288268	1970	Premise Match	38m	East
	Herbalists	Petridis, M., 11 Gleeson Ave., Sydenham	100259	1965	Premise Match	38m	East
	ENGINEERS-ELECTRICAL	Buckley Bros. Pty. Ltd., 11 Gleeson Ave., Sydenham	305397	1961	Premise Match	38m	East
	ARMATURE WINDERS	Buckley Bros. Pty. Ltd., 11-13 Gleeson Ave., Sydenham	268653	1961	Premise Match	38m	East
	ELECTRIC ELEMENT MFRS. &/OR DISTRIBUTORS	Buckley Bros. Pty. Ltd., 11-13 Gleeson Ave., Sydenham	300320	1961	Premise Match	38m	East
	ELECTRIC MOTOR INSTALLATION/MAINTENANCE SPECIALISTS	Buckley Bros. Pty. Ltd., 11-13 Gleeson Ave., Sydenham	300890	1961	Premise Match	38m	East
	ELECTRIC MOTORS-REPAIRERS/HIRERS	Buckley Bros. Pty. Ltd., 11-13 Gleeson Ave., Sydenham	301145	1961	Premise Match	38m	East
	ELECTRICAL SUPPLIES/APPLIANCES-WHOLESALE	Buckley Bros. Pty. Ltd., 11-13 Gleeson Ave., Sydenham	303515	1961	Premise Match	38m	East
	VACUUM CLEANER SALES/SERVICE	Buckley Bros. Pty. Ltd., 11-13 Gleeson Ave., Sydenham	260668	1961	Premise Match	38m	East
	ARMATURE WINDERS	Buckley Bros., 11 Gleeson Ave., Sydenham	2567	1950	Premise Match	38m	East
	ELECTRIC ELEMENT MFRS. &/OR DISTRIBUTORS	Buckley Bros., 11 Gleeson Ave., Sydenham	36425	1950	Premise Match	38m	East
	ELECTRIC MOTOR INSTALLATION & MAINTENANCE SPECIALISTS	Buckley Bros., 11 Gleeson Ave., Sydenham	36883	1950	Premise Match	38m	East
	ELECTRIC RANGE & STOVE MANUFACTURERS	Buckley Bros., 11 Gleeson Ave., Sydenham	37132	1950	Premise Match	38m	East
	ELECTRICAL ENGINEERS	Buckley Bros., 11 Gleeson Ave., Sydenham	38037	1950	Premise Match	38m	East
	ELECTRICAL SUPPLIES &	Buckley Bros., 11 Gleeson Ave., Sydenham	38757	1950	Premise Match	38m	East
		Buckley Bros., 11 Gleeson Ave.,		1950	Premise Match	38m	East

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
10	ELECTRICAL SUPPLIES &. APPLIANCES RETAILERS	Sydenham Hardware and Electrical Store, 13 Gleeson Ave., Sydenham	38895	1950	Premise Match	38m	East
	HARDWARE DEALERS &/OR IRONMONGERS	Sydenham Hardware and Electrical Store, 13 Gleeson Ave., Sydenham	61422	1950	Premise Match	38m	East
	RADIO SALES &/OR SERVICEMEN	Sydenham Radio and Electrical Service, 11 Gleeson Ave., Sydenham	97672	1950	Premise Match	38m	East
	ELECTRIC IRON MANUFACTURERS	Sydenham Radio and Plating Works, 11 Gleeson Ave., Sydenham	36699	1950	Premise Match	38m	East
	ELECTROPLATERS	Sydenham Radio and Plating Works, 11 Gleeson Ave., Sydenham	39285	1950	Premise Match	38m	East
11	TAXIS	Hilleard, E. M., Railway Stn., Sydenham	107378	1950	Premise Match	41m	North
12	HAIRDRESSERS-LADIES &/OR BEAUTY SALONS.	Oliver, A., 13 Swain St., Sydenham. 2044	42875	1986	Road Intersection	45m	North East
	HAIRDRESSERS-MENS.	Oliver, A., 13 Swain St., Sydenham. 2044	43969	1986	Road Intersection	45m	North East
	BEAUTY SALONS &/OR LADIES HAIRDRESSERS. (B2000)	Oliver, A, 13 Swain St., Sydenham. 2044.	6289	1982	Road Intersection	45m	North East
	HAIRDRESSERS - GENTS. (H0550)	Oliver, A., 13 Swain St., Sydenham. 2044.	38676	1982	Road Intersection	45m	North East
	BEAUTY SALONS &/OR LADIES HAIRDRESSERS.	Oliver, A., 13 Swain St., Sydenham. 2044	5416	1978	Road Intersection	45m	North East
	HAIRDRESSERS-GENTS.	Oliver, A., 13 Swain St., Sydenham. 2044	34658	1978	Road Intersection	45m	North East
	BEAUTY SALONS &/OR LADIES HAIRDRESSERS.	Oliver, A., 13 Swain St., Sydenham. 2044	5742	1975	Road Intersection	45m	North East
	HAIRDRESSERS-GENTS.	Oliver, A., 13 Swain St., Sydenham. 2044	40786	1975	Road Intersection	45m	North East
	BEAUTY SALONS &/OR LADIES' HAIRDRESSERS (B260)	Oliver, A., 13 Swain St., Sydenham	266427	1970	Road Intersection	45m	North East
	HAIRDRESSERS (GENT.'S) (H070)	Oliver, Alb., 13 Swain St., Sydenham	314265	1970	Road Intersection	45m	North East
	Beauty Salons &/or Ladies Hairdressers	Oliver, A., 13 Swain St., Sydenham	51047	1965	Road Intersection	45m	North East
	Hairdressers (Gent.'s)/Tobacconists	Oliver, Alb., 13 Swain St., Sydenham	98378	1965	Road Intersection	45m	North East
	HAIRDRESSERS (GENT.'S) &/OR TOBACCONISTS	Grieves, L., 13 Swain St., Sydenham	59507	1950	Road Intersection	45m	North East
13	CAKE SHOPS &/OR PASTRYCOOKS.	Sydenham Cakes & Pies, 9 Gleeson Ave., Sydenham. 2044	12802	1975	Premise Match	45m	East
	CAKE SHOPS & PASTRYCOOKS (C045)	Sydenham Cakes & Pies., 9 Gleeson Ave., Sydenham	276922	1970	Premise Match	45m	East
	Cake Shops & Pastrycooks	Sydenham Cakes & Pies., 9 Gleeson Ave., Sydenham	61621	1965	Premise Match	45m	East
	DELICATESSENS	Classic (The), 9 Gleeson Ave., Sydenham	294678	1961	Premise Match	45m	East
	DELICATESSENS & SMALLGOODS DEALERS	Classic (The), 9 Gleeson Ave., Sydenham	30337	1950	Premise Match	45m	East
	GROCERS-RETAIL	Classic (The), 9 Gleeson Ave., Sydenham	56869	1950	Premise Match	45m	East
	MILK BARS & CONFECTIONERS	Classic (The), 9 Gleeson Ave., Sydenham	76508	1950	Premise Match	45m	East
14	MEDICAL PRACTITIONERS.	Da'Costa, L., 5 Gleeson Ave., Sydenham. 2044.	54427	1986	Premise Match	47m	East
	MEDICAL PRACTITIONERS.	Vago, Leslie, 5 Gleeson Ave., Sydenham. 2044	58065	1986	Premise Match	47m	East
	BABY & CHILDREN'S WEAR-RETAIL	Wee Guy's, 5 Gleeson Ave., Sydenham	270691	1961	Premise Match	47m	East
	CLOTHING MFRS. &/OR W'SALERS-BABY &/OR CHILDREN'S WEAR	Sydenham	289145	1961	Premise Match	47m	East
	BABY & CHILDREN'S WEAR-RETAIL	Wee Guy's, 5 Gleeson Ave., Sydenham	4880	1950	Premise Match	47m	East

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
14	CLOTHING MFRS. &/OR WHOLESALERS-BABIES & CHILDREN'S	Wee Guy's, 5 Gleeson Ave., Sydenham	24621	1950	Premise Match	47m	East
	BOOT & SHOE REPAIRERS	Winkworth, A. N., 5 Gleeson Ave., St. Peters	10797	1950	Premise Match	47m	East
15	BOOT & SHOE REPAIRERS	Brown, A. P, 18 Swain St., Sydenham	53147	1965	Premise Match	48m	East
	BOOT & SHOE REPAIRERS	Brown, A. P., 18 Swain St., Sydenham	274653	1961	Premise Match	48m	East
16	BEAUTY SALONS & LADIES' HAIRDRESSERS	Flamingo (The), 45 Unwins Bridge Rd., Sydenham	272410	1961	Premise Match	48m	East
	BEAUTY SALONS &/OR LADIES' HAIRDRESSERS	Flamingo (The), 45 Unwins Bridge Rd., Sydenham	7150	1950	Premise Match	48m	East
17	ELECTRICAL CONTRACTORS-LICENSED (E300)	Green, R., 7 Gleeson Ave., SYDENHAM	295258	1970	Premise Match	49m	East
	ELECTRICAL CONTRACTORS-LICENSED (E300)	Green, R., 7 Gleeson Ave., SYDENHAM	294755	1970	Premise Match	49m	East
	LIBRARIES-LENDING	Gartrell, Miss M., 7 Gleeson Ave., Sydenham	68659	1950	Premise Match	49m	East
	TOY DEALERS-RETAIL	Gartrell, Miss M., 7 Gleeson Ave., Sydenham	109425	1950	Premise Match	49m	East
18	GROCERS-RETAIL	G. and G. Stores Pty. Ltd., Cnr. Unwins Bridge Rd. and Railway Rd., Sydenham	57430	1950	Road Intersection	54m	South East
19	FRUITERERS &/OR GREENGROCERS.	Giunti, S., 264 Unwins Bridge Rd., Sydenham. 2044	36011	1986	Premise Match	63m	South East
	FRUITERERS &/OR GREENGROCERS. (F6775)	Giunti, S., 264 Unwins Bridge Rd., Sydenham. 2044.	33590	1982	Premise Match	63m	South East
	FRUITERERS &/OR GREENGROCERS.	Giunti. S., 264 Unwins Bridge Rd., Sydenham. 2044	30487	1978	Premise Match	63m	South East
	FRUITERERS &/OR GREENGROCERS.	Giunti, S., 264 Unwins Bridge Rd., Sydenham. 2044	35308	1975	Premise Match	63m	South East
	FRUITERERS/GREENGROCERS (F640)	Giunta, S., 264 Unwins Bridge Rd., Sydenham	307177	1970	Premise Match	63m	South East
	TOY DEALERS-RETAIL	Sydenham Sports Store (The), 264 Unwins Bridge Rd., Sydenham	370263	1970	Premise Match	63m	South East
	HARDWARE DEALERS/IRONMONGERS (H230)	Sydenham Sports Store., 264 Unwins Bridge Rd., SYDENHAM	315329	1970	Premise Match	63m	South East
	Hardware Dealers &/or Iron Mongers	Sydenham Sports Store, 264 Unwins Bridge Rd. Sydenham	99490	1965	Premise Match	63m	South East
	TOY DEALERS-RETAIL	Sydenham Sports Store (The), 264 Unwins Bridge Rd., Sydenham	258635	1961	Premise Match	63m	South East
	HARDWARE DEALERS/IRONMONGERS	Sydenham Sports Store, 264 Unwins Bridge Rd. SYDENHAM	323543	1961	Premise Match	63m	South East
	HAIRDRESSERS (GENT.'S) &/OR TOBACCONISTS	Creevey, C. (The Sydenham Sports Store), 264 Unwins Bridge Rd., Sydenham	59340	1950	Premise Match	63m	South East
	TOY DEALERS-RETAIL	Sydenham Sports Store (The), 264 Unwins Bridge Rd., Sydenham	109618	1950	Premise Match	63m	South East
	HAIRDRESSERS (GENT.'S) &/OR TOBACCONISTS	Sydenham Sports Store, 264 Unwins Bridge Rd., St. Peters	60069	1950	Premise Match	63m	South East
	SPORTS GOODS RETAILERS	Sydenham Sports Store, 264 Unwins Bridge Rd., Sydenham	104569	1950	Premise Match	63m	South East
20	WINE &/OR SPIRIT MERCHANTS RETAIL.	Sydenham Cellars, 266 Unwins Bridge Rd., Sydenham. 2044	99561	1986	Premise Match	63m	South East
	MILK, FRUIT JUICE BARS &/OR CONFECTIONERS.	Sydenham Milk Bar., 266 Unwins Bridge Rd., Sydenham. 2044	53886	1975	Premise Match	63m	South East
	MILK, FRUIT JUICE BARS/CONFECTIONERS	Sydenham Milk Bar., 266 Unwins Bridge Rd., Sydenham	331272	1970	Premise Match	63m	South East
	Milk, Fruit Juice Bars/Confectioners	Sydenham Milk Bar, 266 Unwins Bridge Rd., Sydenham	115653	1965	Premise Match	63m	South East
	MILK, FRUIT JUICE BARS/CONFECTIONERS	Johnson, John, 266 Unwins Bridge Rd., Sydenham	339197	1961	Premise Match	63m	South East
	MILK BARS & CONFECTIONERS	Bridge Rd., Sydenham	76266	1950	Premise Match	63m	South East

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
20	MIXED BUSINESSES & GENERAL STORES	Anderson, J. and C., 266 Unwins Bridge Rd., Sydenham	79255	1950	Premise Match	63m	South East
	MILK BARS & CONFECTIONERS	Black, T. A., 266 Unwins Bridge Rd., St. Peters	76305	1950	Premise Match	63m	South East
21	DENTISTS.	Gates, J. T. D., 270 Unwins Bridge Rd., Sydenham. 2044	18072	1978	Premise Match	64m	South East
	DENTISTS.	Gates, J. T. D., 270 Unwins Bridge Rd., Sydenham. 2044	20954	1975	Premise Match	64m	South East
	BOOT &/OR SHOE REPAIRERS.	Pizzolo, D. & A., 268 Unwins Bridge Rd., Sydenham. 2044	7804	1975	Premise Match	64m	South East
	DENTISTS (D140)	Chow, R. H. S., 270 Unwins Bridge Rd., Sydenham	288453	1970	Premise Match	64m	South East
	Dentists	Jankovich, M. D., 270 Unwins Bridge Rd., Sydenham	73459	1965	Premise Match	64m	South East
	Haberdashery - Retail	Jones, Enid M. (& Dry Cleaning Agency), 268 Unwins Bridge Rd., Sydenham	97566	1965	Premise Match	64m	South East
	BABY & CHILDREN'S WEAR-RETAIL	Bushell, Miss Greta, 268 Unwins Bridge Rd., Sydenham	270402	1961	Premise Match	64m	South East
	DENTISTS	Dickinson, A., 270 Unwins Bridge Rd., Sydenham	295851	1961	Premise Match	64m	South East
	LAUNDRIES	Carr, A. E., 268 Unwins Bridge Rd., St. Peters	67585	1950	Premise Match	64m	South East
	DRY CLEANERS, PRESSERS & DYERS	Carr, A. E.,.268 Unwins Bridge Rd., St. Peters	35149	1950	Premise Match	64m	South East
	DRY CLEANERS, PRESSERS & DYERS	Jones, Dry Cleaners Pty. Ltd. 268 Unwin's Bridge Rd., St. Peters	35358	1950	Premise Match	64m	South East
	BABY & CHILDREN'S WEAR-RETAIL	Ryan, Miss V., 268 Unwin's Bridge Rd., Sydenham	4794	1950	Premise Match	64m	South East
	FANCY GOODS RETAILERS	Ryan, v., 268 Unwins Bridge Rd., St. Peters	43415	1950	Premise Match	64m	South East
	LAUNDRIES	Sunshine Hand laundry, 268 Unwins Bridge Rd., Sydenham	67718	1950	Premise Match	64m	South East
22	FRUITERERS & GREENGROCERS	Psiletas, A., 272 Unwins Bridge Rd., St. Peters	50991	1950	Premise Match	65m	South East
23	BUTCHERS-RETAIL.	Lundberg, G., 260 Unwins Bridge Rd., Sydenham. 2044	10213	1986	Premise Match	68m	South East
	BUTCHERS - RETAIL. (B8040)	Lundberg, G., 260 Unwins Bridge Rd., Sydenham. 2044.	11151	1982	Premise Match	68m	South East
	BUTCHERS-RETAIL.	Lundberg. G., 260 Unwins Bridge Rd., Sydenham. 2044	9488	1978	Premise Match	68m	South East
	BUTCHERS-RETAIL	Lundberg, G., 260 Unwins Bridge Rd., Sydenham. 2044	10730	1975	Premise Match	68m	South East
	BUTCHERS-RETAIL (B860)	Lundberg, Geo., 260 Unwins Bridge Rd., Sydenham	273974	1970	Premise Match	68m	South East
	Butchers - Retail	Lundberg, Geo., 260 Unwins Bridge Rd., Sydenham	58739	1965	Premise Match	68m	South East
	BUTCHERS-RETAIL	Tillman's Butchery., 260 Unwins Bridge Rd., Sydenham	281279	1961	Premise Match	68m	South East
24	MILK, FRUIT JUICE BARS &/OR CONFECTIONERS.	Blue Moon Milk Bar., 276 Unwins Bridge Rd., Sydenham. 2044	53247	1975	Premise Match	68m	South East
	MILK, FRUIT JUICE BARS/CONFECTIONERS	Blue Moon Milk Bar (The)., 276 Unwins Bridge Rd., Sydenham	330391	1970	Premise Match	68m	South East
	Milk, Fruit Juice Bars/Confectioners	Blue Moan Milk Bar (The)., 276 Unwins Bridge Rd., Sydenham	114842	1965	Premise Match	68m	South East
	MILK, FRUIT JUICE BARS/CONFECTIONERS	Blue Moon Milk Bar (The), 276 Unwins Bridge Rd., Sydenham	338884	1961	Premise Match	68m	South East
	CAFES, TEA ROOMS, COFFEE LOUNGES, Etc.	Ritz, 276 Unwins Bridge Rd., Sydenham	15953	1950	Premise Match	68m	South East
25	FISH MERCHANTS-RETAIL.	Pitpazaris. K., 258 Unwins Bridge Rd.,	28095	1978	Premise Match	69m	South East
	FISH MERCHANTS-RETAIL	Two Fifty Eight Shop, 258 Unwins Bridge Rd., Sydenham. 2044	32653	1975	Premise Match	69m	South East
	FISH MERCHANTS-RETAIL	Two-Fifty-Eight Shop., 258 Unwins	303812	1970	Premise Match	69m	South East

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
25	Fish Merchants - Retail	Two-Fifty-Eight Shop, 258 Unwins Bridge Rd., Sydenham	87142	1965	Premise Match	69m	South East
	FISH MERCHANTS-RETAIL	Pitpazaris, K., 258 Unwins Bridge Rd., Sydenham	311175	1961	Premise Match	69m	South East
	FISH MERCHANTS-RETAIL	Gigo, K. P., 258 Unwins Bridge Rd., Sydenham	44350	1950	Premise Match	69m	South East
	FISH MERCHANTS-RETAIL	Sydenham Fish Supply, 258 Unwins Bridge Rd., St. Peters	44604	1950	Premise Match	69m	South East
26	FRUITERERS &/OR GREENGROCERS.	Sydenham Fruit Palace., 278 Unwins Bridge Rd., Sydenham. 2044.	35880	1975	Premise Match	69m	South East
	FRUITERERS/GREENGROCERS (F640)	Sydenham Fruit Palace., 278 Unwins Bridge Rd., Sydenham	308011	1970	Premise Match	69m	South East
	Fruiterers & Greengrocers	Sydenham Fruit Palace., 278 Urgwins Bridge Rd., Sydenham	92190	1965	Premise Match	69m	South East
	FRUITERERS/GREENGROCERS	Sydenham Fruit Palace, 278 Unwins Bridge Rd., Sydenham	316260	1961	Premise Match	69m	South East
	FRUITERERS & GREENGROCERS	Sydenham Fruit Palace, 278 Unwins Bridge Rd., Sydenham	51324	1950	Premise Match	69m	South East
27	DRAPERS - RETAIL. (D6600)	Hopkins, S. W., 282 Unwins Bridge Rd., Sydenham. 2044.	22105	1982	Premise Match	71m	South
	DRAPER-RETAIL	Hopkins, S. W. & A. J., 280 Unwins Bridge Rd., St. Peters. 2044	22525	1975	Premise Match	71m	South
	DRAPERS-RETAIL (D540)	McManus. R & E., 280-282 Unwins Bridge Rd., Sydenham	290523	1970	Premise Match	71m	South
	Drapers - Retail	McManus, R. & E., 280-282 Unwins Bridge Rd., Sydenham	75180	1965	Premise Match	71m	South
	DRAPERS-RETAIL	McManus, R. & E., 280-282 Unwins Bridge Rd., Sydenham	298026	1961	Premise Match	71m	South
	BABY & CHILDREN'S WEAR-RETAIL	Buckman's, 280 Unwin's Bridge Rd., Sydenham	4450	1950	Premise Match	71m	South
	DRAPERS-RETAIL	Buckman's, 280 Unwins Bridge Rd., St. Peters	33543	1950	Premise Match	71m	South
	HABERDASHERY-RETAIL	Buckman's, 280 Unwins Bridge Rd., St. Peters	58967	1950	Premise Match	71m	South
	MERCERS & GENT'S OUTFITTERS	Buckman's., 280 Unwins Bridge Rd., Sydenham	74280	1950	Premise Match	71m	South
	PRODUCE MERCHANTS-GRAIN & SEED-RETAIL	Kerslake, A. G., 282 Unwins Bridge Rd., St. Peters	95554	1950	Premise Match	71m	South
	CARRIERS & CARTAGE CONTRACTORS	Sydenham Produce Store, 282 Unwins Bridge Rd., Sydenham	19894	1950	Premise Match	71m	South
	PRODUCE MERCHANTS-GRAIN & SEED-RETAIL	Sydenham Produce Store, 282 Unwins Bridge Rd., Sydenham	95721	1950	Premise Match	71m	South
	BUTCHERS-RETAIL	Tillman Butchery, 280 Unwin's Bridge Rd., Sydenham	14424	1950	Premise Match	71m	South
28	FRUITERERS &/OR GREENGROCERS.	Fruit At 256, 256 Unwins Bridge Rd., Sydenham. 2044	35242	1975	Premise Match	71m	South East
	BABY & CHILDREN'S WEAR-RETAIL(B005)	Cathy's., 256 Unwins Bridge Rd., Sydenham	264054	1970	Premise Match	71m	South East
	Baby & Children's Wear - Retail	Cathy's., 256 Unwins Bridge Rd., Sydenham	48760	1965	Premise Match	71m	South East
	BABY & CHILDREN'S WEAR-RETAIL	Sydenham Baby Shop, 256 Unwin's Bridge Rd., Sydenham	270667	1961	Premise Match	71m	South East
	BABY & CHILDREN'S WEAR-RETAIL	Sydenham Baby Shop, 256 Unwin's Bridge Rd., Sydenham	4834	1950	Premise Match	71m	South East
	DRY CLEANERS, PRESSERS & DYERS	Sydney Valet Service, 256 Unwin's Bridge Rd., Sydenham	35735	1950	Premise Match	71m	South East
29	MARINE EQUIPMENT MFRS. &/OR DISTS.	Aquadist Pty. Ltd., 136 George St., Sydenham. 2044	52835	1986	Premise Match	80m	North East
	PLUMBERS, GASFITTERS &/OR DRAINLAYERS.	Enmore Plumbing Works Pty. Ltd., 2 Burrows Ave., Sydenham. 2044	74934	1986	Premise Match	80m	North East
	MARINE EQUIPMENT MFRS. &/OR DISTS. (M1120)	Sydenham. 2044.	46499	1982	Premise Match	80m	North East
	PLUMBERS, GASFITTERS &/OR DRAINLAYERS. (P6680)	Enmore Plumbing Works Pty. Ltd., 2 Burrows Ave., Sydenham. 2204.	65143	1982	Premise Match	80m	North East
	PLUMBERS, GASFITTERS &/OR DRAINLAYERS.	Enmore Plumbing Works Pty. Ltd., 2 Burrows Ave., Sydenham. 2204	58135	1978	Premise Match	80m	North East

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
29	CARPET &/OR FLOOR COVERING IMPS &/OR W/SALERS.	Wittey. & Wilson Pty. Ltd., 4 Burrows Ave., Sydenham. 2204	11433	1978	Premise Match	80m	North East
	PLUMBERS,GASFITTERS/DRAINLAYERS(P608)	Enmore Plumbing Works., 2 Burrows Ave., St. PETERS	350514	1970	Premise Match	80m	North East
	IMPORTERS (I200)	Wittey & Co. Pty. Ltd., 2 Burrows Av., Sydenham	318878	1970	Premise Match	80m	North East
	UMBRELLA DEALERS/REPAIR.	Dainty Wares, 2 Burrows St., Sydenham.	260359	1961	Premise Match	80m	North East
	DRESSMAKERS/COSTUMIERS	Sples, M., 4 Burrows Rd., Sydenham	298784	1961	Premise Match	80m	North East
30	MEDICAL PRACTITIONERS.	Davidson, R. M., 246 Unwins Bridge Rd., Sydenham. 2044.	50080	1975	Premise Match	82m	South East
	MEDICAL PRACTITIONERS.	Denesi, D., 246 Unwins Bridge Rd., Sydenham. 2044.	50120	1975	Premise Match	82m	South East
	MEDICAL PRACTITIONERS.	Doutney, C. P., 246 Unwins Bridge Rd., Sydenham. 2044.	50155	1975	Premise Match	82m	South East
	MEDICAL PRACTITIONERS.	Stockler. G., 246 Unwins Bridge Rd., Sydenham. 2044	51645	1975	Premise Match	82m	South East
	MEDICAL PRACTITIONERS (M216)	Davidson, R. M., 246 Unwins Rd., Sydenham	326610	1970	Premise Match	82m	South East
	MEDICAL PRACTITIONERS (M216)	Denesi, D., 246 Unwins Bridge Rd., Sydenham	326654	1970	Premise Match	82m	South East
	MEDICAL PRACTITIONERS (M216)	Stockier, G., 246 Unwins Bridge Rd., Sydenham	328331	1970	Premise Match	82m	South East
	MEDICAL PRACTITIONERS	Scott, R. S., 246 Unwins Bridge Rd., Sydenham	336274	1961	Premise Match	82m	South East
	MEDICAL PRACTITIONERS	Scott, R. S., 246 Unwins Bridge Rd., Sydenham	73763	1950	Premise Match	82m	South East
31	Footwear Boot & Shoe Mfrs & Dists	Riviera Shoes Pty. Ltd., 101 Railway Pde., Marrickville 2204	46261	1991	Premise Match	89m	North West
	FOOTWEAR-BOOT & SHOE-MFRS.	Riviera Shoes Pty. Ltd., 101 Railway Pde., Marrickville. 2204	34528	1986	Premise Match	89m	North West
	FOOTWEAR MFRS. - BOOTS &/OR SHOES. (F5350)	Riviera Shoes Pty. Ltd., 101 Railway Pde., Sydenham. 2204.	32186	1982	Premise Match	89m	North West
	FOOTWEAR MFRS. -BOOTS &/OR SHOES.	Riviera Shoes Pty. Ltd., 101 Railway Pde., Sydenham. 2204	29171	1978	Premise Match	89m	North West
	FOOTWEAR MFRS.-BOOTS &/OR SHOES.	Riviera Shoe Pty. Ltd., 101 Railway Pde., Sydenham. 2204	33775	1975	Premise Match	89m	North West
32	MEDICAL PRACTITIONERS.	Borton, S., 244 Unwins Bridge Rd., Sydenham. 2044	53793	1986	Premise Match	90m	South East
	MEDICAL PRACTITIONERS. (M2020)	Borton, S., 244 Unwins Bridge Rd., Sydenham. 2044.	47279	1982	Premise Match	90m	South East
	TOY DEALERS--- RETAIL	Sydenham Sports Store (The), 244 Unwins Bridge Rd., Sydenham	153105	1965	Premise Match	90m	South East
33	FOOTWEAR-SLIPPERS-MFRS.	Vogue Shoes Co Pty, Ltd., 95 Railway Pde., Marrickville. 2204	34578	1986	Premise Match	94m	North West
	FOOTWEAR-BOOT & SHOE-MFRS.	Vogue Shoes Co Pty. Ltd., 95 Railway Pde., Marrickville. 2204	34537	1986	Premise Match	94m	North West
	FOOTWEAR MFRS. - BOOTS &/OR SHOES. (F5350)	Vogue Shoes Co. Pty. Ltd., 95 Railway Pde., Marrickville. 2204.	32194	1982	Premise Match	94m	North West
	FOOTWEAR MFRS. -BOOTS &/OR SHOES.	Vogue Shoes Co. Pty. Ltd., 95 Railway Pde., Marrickville. 2204	29180	1978	Premise Match	94m	North West
	FOOTWEAR MFRS.-BOOTS &/OR SHOES.	Vogue Shoe Mfr. Co. Pty. Ltd., 95 Railway Pde., Marrickville. 2204	33788	1975	Premise Match	94m	North West
	FOOTWEAR MFRS.-BOOTS/SHOES (F460)	Vogue Shoe Manufacturing Co. Pty. Ltd., 95-99 Railway Pde., Marrickville	305365	1970	Premise Match	94m	North West
	Footwear Mfrs. - Boots/Shoes	Vogue Shoe Manufacturing Co. Pty. Ltd., 95-99 Railway Pde., Marrickville	88677	1965	Premise Match	94m	North West
34	Footwear Importers	Mainline Footwear Agencies, 93 Railway Pde., Marrickville 2204	46282	1991	Premise Match	97m	North West
	Importers	Mainline Footwear Agencies, 93	48996	1991	Premise Match	97m	North West
	FOOTWEAR IMPORTERS.	Mainline Footwear Agencies, 93 Railway Pde., Marrickville. 2204	34485	1986	Premise Match	97m	North West
	IMPORTERS.	Mainline Footwear Agencies, 93	47768	1986	Premise Match	97m	North West

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
34	MANUFACTURERS AGENTS.	Mainline Footwear Agencies, 93 Railway Pde., Marrickville. 2204	52612	1986	Premise Match	97m	North West
	FOOTWEAR-BOOT & SHOE-MFRS.	Marjoe Shoe Co., 93 Railway Pde., Marrickville. 2204	34522	1986	Premise Match	97m	North West
	IMPORTERS. (I0750)	Mainline Footwear Agencies, 93 Railway Pde., Marrickville. 2204.	41674	1982	Premise Match	97m	North West
	MANUFACTURERS AGENTS, (M0800)	Mainline Footwear Agencies, 93 Railway Pde., Marrickville. 2204.	46280	1982	Premise Match	97m	North West
	FOOTWEAR IMPORTERS. (F5300)	Makifine Footwear Agencies, 93 Railway Pde., Marrickville. 2204.	32139	1982	Premise Match	97m	North West
	IMPORTERS.	Mainline Footwear Agencies, 93 Railway Pde. Marrickville. 2204	37007	1978	Premise Match	97m	North West
	MANUFACTURERS AGENTS.	Mainline Footwear Agencies, 93 Railway Pde., Marrickville. 2204	41358	1978	Premise Match	97m	North West
	FOOTWEAR IMPORTERS.	Mainline Footwear Agencies. 93 Railway Pde., Marrickville. 2204	29122	1978	Premise Match	97m	North West
	FOOTWEAR IMPORTERS.	Mainline Footwear Agencies, 93 Railway Pde., Marrickville. 2204.	33714	1975	Premise Match	97m	North West
	IMPORTERS.	Mainline Footwear Agencies., 93 Railway Pde., Marrickville. 2204	43806	1975	Premise Match	97m	North West
	MANUFACTURERS AGENTS.	Mainline Footwear Agencies., 93 Railway Pde., Marrickville. 2204.	48863	1975	Premise Match	97m	North West
	IMPORTERS (I200)	Mainline Footwear Aegncies., 93 Railway Pde., Marrickville, 2204	318525	1970	Premise Match	97m	North West
	FOOTWEAR IMPORTERS (F450)	Mainline Footwear Agencies., 93 Railway Pde., Marrickville, 2204	305198	1970	Premise Match	97m	North West
	MANUFACTURERS' AGENTS (M112)	Mainline Footwear Agencies., 93 Railway Pde., Marrickville, 2204	325099	1970	Premise Match	97m	North West
	Plastic Laminated Products Manufacturers	Davies, J. J. & Sons, 93 Railway Pde., Marrickville	133995	1965	Premise Match	97m	North West
	Plastic Manufacturers Materials Suppliers	Storey Davies & Co. Pty. Ltd., 93 Railway Pde., Marrickville	134271	1965	Premise Match	97m	North West
	Plastic Extruders	Storey Davies (Sales) Pty. Ltd., 93 Railway Pde., Marrickville	133763	1965	Premise Match	97m	North West
	Plasticisers' Manufacturers	Storey Davies (Sales) Pty. Ltd., 93 Railway Pde., Marrickville	134305	1965	Premise Match	97m	North West
	Plastic Goods Manufacturers	Storey Davies (Sales) Pty. Ltd., 93 Railway Pde., Marrickville.	133967	1965	Premise Match	97m	North West
	Plastic Coating Specialists Material, Etc.	Storey, Davies (Sales) Pty. Ltd., 93 Railway Pde., Marrickville	133635	1965	Premise Match	97m	North West
	Plastic Manufacturers - Sheeting	Storey, Davies (Sales) Pty. Ltd., 93 Railway Pde., Marrickville	134186	1965	Premise Match	97m	North West
	Upholsterers' Supplies	Storey, Davies (Sales) Pty. Ltd., 93 Railway Pde., Marrickville	155067	1965	Premise Match	97m	North West
35	FISH MERCHANTS-RETAIL.	Carmeci. F., 288 Unwins Bridge Rd., Sydenham. 2044	27980	1978	Premise Match	98m	South
	FISH MERCHANTS-RETAIL	Sydenham Fish Mart, 288 Unwins Bridge Rd., Sydenham. 2044	32633	1975	Premise Match	98m	South
	FISH MERCHANTS-RETAIL (F245)	Sydenham Fish Mart., 288 Unwins Bridge Rd., Sydenham	303789	1970	Premise Match	98m	South
	Fish Merchants - Retail	Sydenham Fish Mart, 288 Unwins Bridge Rd., Sydenham	87119	1965	Premise Match	98m	South
	FISH MERCHANTS-RETAIL	Sydenham Fish Mart, 288 Unwins Bridge Rd., Sydenham	311247	1961	Premise Match	98m	South
	FISH MERCHANTS-RETAIL	Tony's Fish and Chips, 288 Unwins Bridge Rd., Sydenham	44617	1950	Premise Match	98m	South
36	Lithographic Plate Makers	Rosegraphics Pty. Ltd., 1st Fl., 91 Railway Pde., Marrickville.2204	96336	1991	Premise Match	99m	North
	Typesetters	Scanagraphics Pty Ltd, 91 Railway Pde Marrickville 2204	65141	1991	Premise Match	99m	North
	Lithographic Plate Makers	Scanagraphics Pty. Ltd., 91 Railway Pde., Marrickville. 2204	50891	1991	Premise Match	99m	North
	PRINTERS - LITHOGRAPHIC.	Rosegraphics Pty. Ltd., Rear 91 Railway Pde., Marrickville. 2204	76870	1986	Premise Match	99m	North
	TYPESETTERS - TRADE.	Scanagraphics Pty. Ltd., 91 Railway Pde., Marrickville. 2204	96075	1986	Premise Match	99m	North

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
36	TYPESETTING SPECIALISTS.	Scanagraphics Pty. Ltd., 91 Railway Pde., Marrickville. 2204	96116	1986	Premise Match	99m	North

Business Directory Records 1950-1991
Road or Area Matches

Universal Business Directory records from years 1991, 1986, 1982, 1978, 1975, 1970, 1965, 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
37	NEWSAGENTS.	Francis, P. & Y. G., 78 Railway Rd., Sydenham. 2044	69332	1986	Road Match	0m
	MEDICAL PRACTITIONERS.	Lee-Shoy, D. J., 76 Railway Rd., Sydenham. 2044	56015	1986	Road Match	0m
	MOTOR SHOCK ABSORBER SPECIALISTS.	Polyair Springs Pty. Ltd., (Inc. in N.S.W.), Railway Rd., Sydenham. 2044	67159	1986	Road Match	0m
	MOTOR SPRING MFRS. &/OR FITTERS.	Polyair Springs Pty. Ltd., (Inc. in N.S.W.), Railway Rd., Sydenham. 2044	67718	1986	Road Match	0m
	NEWSAGENTS. (N0800)	Cahill, T. D. & M. L., 78 Railway Rd., Sydenham. 2044.	60411	1982	Road Match	0m
	MEDICAL PRACTITIONERS. (M2020)	Shoy, L., 76 Railway Rd., Sydenham. 2044.	50284	1982	Road Match	0m
	BEAUTY SALONS &/OR LADIES HAIRDRESSERS.	Grainger, L., 76 Railway Rd., Sydenham. 2044	5047	1978	Road Match	0m
	BEAUTY SALONS &/OR LADIES HAIRDRESSERS.	Grainger, L., 76 Railway Rd., Sydenham. 2044	5319	1975	Road Match	0m
	DELICATESSENS	Tucker's Delicatessen, 78 Railway Rd., Sydenham. 2044	20563	1975	Road Match	0m
	CHEMISTS-PHARMACEUTICAL	Culhane, John, 80 Railway Rd., Sydenham	280245	1970	Road Match	0m
	BEAUTY SALONS &/OR LADIES' HAIRDRESSERS (B260)	Grainger, Lee., 76 Railway Rd., Sydenham	265956	1970	Road Match	0m
	FOOTWEAR MFRS.-BOOTS/SHOES (F460)	Riviera Shoe Pty. Ltd., 101 Railway Pde., Sydenham	305347	1970	Road Match	0m
	DELICATESSENS (D080)	Tuckers Delicatessen., 78 Railway Rd., Sydenham	288046	1970	Road Match	0m
	Chemists - Pharmaceutical	Culhane, John, 80 Railway Rd., Sydenham	64893	1965	Road Match	0m
	Beauty Salons &/or Ladies Hairdressers	Grainger, Lee., 76 Railway Rd., Sydenham	50677	1965	Road Match	0m
	DELICATESSENS	Sydenham Delicatessen, 78 Railway Rd., Sydenham	72783	1965	Road Match	0m
	DRESSMAKERS/COSTUMIERS	Ford, Iris, 80a Railway Rd., Sydenham	298601	1961	Road Match	0m
	DELICATESSENS	Tucker, T. H., 80 Railway Rd., Sydenham	295356	1961	Road Match	0m
	BEAUTY SALONS & LADIES' HAIRDRESSERS	Veronica, 76 Railway Rd., Sydenham	272842	1961	Road Match	0m
	BEAUTY SALONS &/OR LADIES' HAIRDRESSERS	Doze, G., 76 Railway Rd., Sydenham	7075	1950	Road Match	0m
	HAIRDRESSERS (GENT.'S) &/OR TOBACCONISTS	Doze, G., 76 Railway Rd., Sydenham	59392	1950	Road Match	0m
	DRESSMAKERS & COSTUMIERS	Ford, Iris, 80a Railway Rd., Sydenham	34480	1950	Road Match	0m
	DRESSMAKERS & COSTUMIERS	Johnston, J. M., 80a Railway Pde., St. Peters	34560	1950	Road Match	0m
	LIBRARIES-LENDING	Sydenham Book Library, Railway St., St. Peters	68959	1950	Road Match	0m
	HARDWARE DEALERS &/OR	Sydenham Hardware Shop, Railway Rd., St.	61423	1950	Road Match	0m
	DELICATESSENS &	Tucker's, 78 Railway Rd., Sydenham	31321	1950	Road Match	0m
	MILK BARS &	Tucker's., 78 Railway Rd., Sydenham	77476	1950	Road Match	0m
	LADIES' HAIRDRESSERS					

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
38	HOTELS-LICENSED.	General Gordon Hotel, Swain St., Sydenham. 2044	46709	1986	Road Match	40m
	HOTELS - LICENSED. (H7150)	General Gordon Hotel, Swain St., Sydenham. 2044.	40753	1982	Road Match	40m
	HOTELS-LICENSED.	General Gordon Hotel. Swain St., Sydenham. 2044	36130	1978	Road Match	40m
	HOTELS-LICENCED	General Gordon Hotel., Swain St., Sydenham. 2044	42863	1975	Road Match	40m
	HAIRDRESSERS (GENT.'S) &/OR TOBACCONISTS	Bonner, A. H., Swain St., St. Peters	59210	1950	Road Match	40m
39	GREETING CARD MANUFACTURERS &/OR DISTRIBUTORS (G615)	Murfett Publishers Pty. Ltd., 64 Railway Pde., Marrickville. 2204	312024	1970	Road Match	50m
	CAFES, TEA ROOMS, COFFEE LOUNGES, Etc.	Classic Smallgoods, 9 Railway Pde., St. Peters	15365	1950	Road Match	50m
	RIVET MANUFACTURERS	Commonwealth Bolt and Rivet Co., Railway Pde., Marrickville	99553	1950	Road Match	50m
	DROP FORGERS	Commonwealth Bolt and Rivet Pty. Ltd., Railway Pde., Marrickville	35000	1950	Road Match	50m
	BOOT & SHOE REPAIRERS	Day, C., 64 Railway Pde., St. Peters	10117	1950	Road Match	50m
	FRUITERERS & GREENGROCERS	James, E., 72 Railway Pde., St. Peters	50383	1950	Road Match	50m
	LIBRARIES-LENDING	Mayfair Library, 7 Railway Pde., St. Peters	68805	1950	Road Match	50m
	FRUITERERS & GREENGROCERS	Osborne, E. S., 72 Railway Pde., Sydenham	50867	1950	Road Match	50m
	ELECTRICAL CONTRACTORS &/OR ELECTRICIANS	Sydenham Radio Service, 11 Railway Pde., St. Peters	37906	1950	Road Match	50m
	BEAUTY SALONS &/OR LADIES' HAIRDRESSERS	Veronica, 8 Railway Pde., St. Peters	7907	1950	Road Match	50m
40	BUTCHERS-RETAIL.	Lardis Bros., 256 Marrickville Rd., Marrickville. 2204	10177	1986	Road Match	71m
	BUTCHERS - RETAIL. (B8040)	Lardis Bros., 256 Marrickville Rd., Marrickville. 2204.	11119	1982	Road Match	71m
	MOTOR TRANSMISSIONS. (M8240)	Rally Automatic Transmission, Marrickville Rd., Marrickville. 2204.	59751	1982	Road Match	71m
	MOTOR TRANSMISSIONS.	Rally Automatic Transmission, Marrickville Rd, Marrickville 2204	53244	1978	Road Match	71m
	DRAPERS-RETAIL.	Waste Textiles, Marrickville Rd., Marrickville. 2204	19677	1978	Road Match	71m
	BUTCHERS-RETAIL	Budget Meats, 256 Marrickville Rd., Marrickville. 2204.	10104	1975	Road Match	71m
	BOOT &/OR SHOE REPAIRERS.	Tzouvelekas, J., 271a Marrickville Rd., Marrickville. 2204.	7875	1975	Road Match	71m
	INSTRUMENTS - INDUSTRIAL - MFRS. &/OR DISTRIBUTORS	Goold & Clyde Wilson Reid Pty. Ltd., Marrickville Rd., Sydenham	319571	1970	Road Match	71m
	CLUBS & SPORTING BODIES (C487)	Marrickville B. C. U., 183a Marrickville Rd., Marrickville	284422	1970	Road Match	71m
	CLUBS & SPORTING BODIES (C487)	Railway Institute Bowling Club, Fraser Park., Marrickville Rd., Marrickville	284582	1970	Road Match	71m
	Butchers - Retail	Central Quality Meats., 256 Marrickville Rd. Marrickville	58040	1965	Road Match	71m
	Clubs & Sporting Bodies	Marrickville B.C.U., 183a Marrickville Rd., Marrickville	69092	1965	Road Match	71m
	BOOT & SHOE REPAIRERS	Marrickville Shoe Repairs, 183 Marrickville Rd., Marrickville	53501	1965	Road Match	71m
	GROCERS-RETAIL	Evans, P. G., 197 Marrickville Rd., Marrickville	320431	1961	Road Match	71m
	SPINNERS	Globe Worsted Mills Pty. Ltd., Marrickville Rd., Sydenham	251951	1961	Road Match	71m
	PIANO IMPORTERS/DIST.	Milledge, J. Pianos Pty. Ltd., 30 Marrickville Rd.,	358204	1961	Road Match	71m
	HARDWARE MERCHANTS-WHOLESALE	Seymour, H. T. Pty. Ltd., Marrickville Rd., Marrickville	323769	1961	Road Match	71m

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
40	PAINT, VARNISH, OILS/COLOUR MERCHANTS	Seymour, H. T. Pty. Ltd., Marrickville Rd., Marrickville	355746	1961	Road Match	71m
	LIBRARIES—LENDING	Victory Library, 183 Marrickville Rd., Marrickville	331610	1961	Road Match	71m
	TOY DEALERS-RETAIL	Victory Library, 183 Marrickville Rd., Marrickville	258647	1961	Road Match	71m
	BANKS	Bank of Australasia, Marrickville Rd, Marrickville	5624	1950	Road Match	71m
	BUTCHERS-RETAIL	Central Butchery, Marrickville Rd., Marrickville	13272	1950	Road Match	71m
	FUNERAL DIRECTORS	Hartley, F. W. Ltd., Marrickville Rd., Marrickville	51997	1950	Road Match	71m
	CATERERS	Keir, J. D., 30 Marrickville Rd., Marrickville	20633	1950	Road Match	71m
	POTTERY MANUFACTURERS & DISTRIBUTORS	Lowe, Eric C. Pty. Ltd., Marrickville Rd., Marrickville	93654	1950	Road Match	71m
	PICTURE THEATRES-SUBURBAN	Marrickville Kings, Marrickville Rd., Marrickville	92840	1950	Road Match	71m
	HALLS	Marrickville Masonic Hall, Marrickville Rd., Marrickville	60379	1950	Road Match	71m
	MILLINERY-RETAIL	Mary Lorraine, 256 Marrickville Rd., Marrickville	78852	1950	Road Match	71m
	MERCERS & GENT'S OUTFITTERS	Mortenson, S. R., 256 Marrickville Rd., Marrickville	74538	1950	Road Match	71m
	MERCHANTS & IMPORTERS	Seymour, H. T. Pty. Ltd., Marrickville Rd., Marrickville	75576	1950	Road Match	71m
	CYCLE DEALERS & ACCESSORIES	Small, Bruce Pty. Ltd., 22½ Marrickville Rd., Marrickville	29985	1950	Road Match	71m
	FLORISTS-RETAIL	Smith, Mrs. F., Marrickville Rd., Marrickville	46186	1950	Road Match	71m
41	CLUBS & SPORTS BODIES	St. Peter's Ex-Servicemen's Memorial Hall & Club, Park Rd., St. Peters	291801	1961	Road Match	90m

Dry Cleaners, Motor Garages & Service Stations

Burrows Ave and Railway Road, Sydenham, NSW 2044

Legend

- Site Boundary
- Buffer 250m
- 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

Scale: 0 40 80 120 160 Meters

Coordinate System: GDA 1994 MGA Zone 56

Date: 19 December 2023

Historical Business Directories

Burrows Ave and Railway Road, Sydenham, NSW 2044

Dry Cleaners, Motor Garages & Service Stations 1948-1993 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.

Note: The Universal Business Directories were published between 1948 and 1993. Dry Cleaners, Motor Garages & Service Stations have been extracted from all of these directories except the following years 1951, 1955, 1957, 1960, 1963, 1973, 1974, 1977, 1987.

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
1	Motor Garages & Service Stations	Sydenham Mechanical Repairs, 103 Railway Rd., Sydenham 2044	53937	1991	Premise Match	3m	South East
	MOTOR GARAGES & SERVICE STATIONS.	M.T. Service Station, 103 Railway Rd, Sydenham. 2044	11791	1990	Premise Match	3m	South East
	MOTOR GARAGE & SERVICE STATIONS.	M.T. Service Station, 103 Railway Rd., Sydenham. 2044	5195	1989	Premise Match	3m	South East
	MOTOR GARAGES & SERVICE STATIONS.	M T. Service Station, 103 Railway Rd., Sydenham. 2044	59549	1988	Premise Match	3m	South East
	MOTOR GARAGES & SERVICE STATIONS.	M T. Service Station, 103 Railway Rd., Sydenham. 2044	65007	1986	Premise Match	3m	South East
	MOTOR GARAGES & SERVICE STATIONS.	M T Service Station, 103 Railway Rd., Sydenham. 2044	45110	1985	Premise Match	3m	South East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	M.T. Service Station, 103 Railway Rd., Sydenham. 2044	33689	1984	Premise Match	3m	South East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	M T. Service Station., 103 Railway Rd., Sydenham 2044	15037	1983	Premise Match	3m	South East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	M.T. Service Station, 103 Railway Rd., Sydenham. 2044.	57110	1982	Premise Match	3m	South East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	M T Service Station., 103 Railway Rd., Sydenham 2044	3673	1981	Premise Match	3m	South East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	M.T. Service Station., 103 Railway Rd., Sydenham. 2044	58408	1980	Premise Match	3m	South East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	M.T Service Station., 103 Railway Rd., Sydenham. 2044	45895	1979	Premise Match	3m	South East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	M.T, Service Station, 103 Railway Rd., Sydenham. 2044	50405	1978	Premise Match	3m	South East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	M.T. Service Station., 103 Railway Rd., Sydenham 2044	30399	1976	Premise Match	3m	South East
	MOTOR GARAGES &/OR ENGINEERS.	M.T. Service Station., 103 Railway Rd., Sydenham. 2044	59176	1975	Premise Match	3m	South East
	MOTOR GARAGES &/OR ENGINEERS.	Mt Service Station., 103 Railway Rd Sydenham		1972	Premise Match	3m	South East
	MOTOR GARAGES	Mt Service Station., 103 Railway Rd Sydenham	62775	1971	Premise Match	3m	South East
	MOTOR GARAGES & ENGINEERS(M6S6)	MT Service Station., 103 Railway Rd., SYDENHAM	338302	1970	Premise Match	3m	South East

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
1	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Thompsons Corner Service Station., 103 Railway Rd Sydenham	50803	1969	Premise Match	3m	South East
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Thompsons Corner Service Station., 103 Railway Rd Sydenham	36888	1968	Premise Match	3m	South East
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Wheeler's Service Station., 103 Railway Rd Sydenham	20354	1967	Premise Match	3m	South East
	Motor Service Stations - Petrol, Oil, Etc.	Wheeler's Service Station, 103 Railway Rd. Sydenham	126195	1965	Premise Match	3m	South East
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Wheeler's Service Station., 103 Railway Rd., Sydenham	38755	1962	Premise Match	3m	South East
	MOTOR SERVICE STATIONS-PETROL,. OIL, ETC.	Wheeler's Service Station., 103 Railway Rd Sydenham	24604	1959	Premise Match	3m	South East
	MOTOR SERVICE STATIONS-PETROL, ETC.	Sydenham Auto Repairs., 103 Railway Rd., Sydenham	9864	1958	Premise Match	3m	South East
2	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Wheeler's Service Station., 103 Railway Rd., Sydenham	1857	1966	Premise Match	3m	South East
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Wheeler's Service Station., 103 Railway Rd., Sydenham	52447	1964	Premise Match	3m	South East
	MOTOR SERVICE STATIONS—PETROL, OIL, Etc.	Wheeler's Service Station, 103 Railway Rd., SYDENHAM	351282	1961	Premise Match	3m	South East
3	MOTOR GARAGE/ENGINEERS.	Sydenham Auto Repairs., Cnr Gleeson Ave & Railway Rd St Peters	5062	1958	Road Intersection	34m	South East
	MOTOR GARAGES &/OR ENGINEERS.	Sydenham Auto Repairs., Cnr. Gleeson Ave & Railway Rd., St Peters	61554	1956	Road Intersection	34m	South East
	MOTOR GARAGES &/OR ENGINEERS.	Sydenham Auto Repairs., Cnr Gleeson Ave & Railway Rd St Peters	54191	1954	Road Intersection	34m	South East
	MOTOR GARAGES &/OR ENGINEERS.	Sydenham Auto Repairs., Cnr Gleeson Ave & Railway Rd St Peters	40761	1953	Road Intersection	34m	South East
	MOTOR GARAGES &/OR ENGINEERS.	Sydenham Auto Repairs., Cnr Gleeson Ave & Railway Rd., St Peters	32315	1952	Road Intersection	34m	South East
	MOTOR SERVICE STATIONS-PETROL, Etc.	Sydenham Auto Repair, Cnr. Gleeson Ave. and Railway Rd., St. Peters	86450	1950	Road Intersection	34m	South East
	MOTOR GARAGES &/OR ENGINEERS	Sydenham Auto Repairs, Cnr. Gleeson Ave. and Railway Rd., St. Peters	84452	1950	Road Intersection	34m	South East
4	DRY CLEANERS, PRESSERS & DYERS.	Carr A. E., 268 Unwins Bridge Rd., St Peters	26997	1952	Premise Match	64m	South East
	DRY CLEANERS, PRESSERS & DYERS	Carr, A. E.,.268 Unwins Bridge Rd., St. Peters	35149	1950	Premise Match	64m	South East
	DRY CLEANERS, PRESSERS & DYERS	Jones, Dry Cleaners Pty. Ltd. 268 Unwin's Bridge Rd., St. Peters	35358	1950	Premise Match	64m	South East
	DRY CLEANERS, PRESSERS & DYERS.	Jones Dry Cleaners Pty. Ltd., 268 Unwin's Bridge Rd., st. Peters	17216	1948-49	Premise Match	64m	South East
5	DRY CLEANERS, PRESSERS & DYERS	Sydney Valet Service, 256 Unwin's Bridge Rd., Sydenham	35735	1950	Premise Match	71m	South East
	DRY CLEANERS, PRESSERS & DYERS.	Sydney Valet Service., 256 Unwin's Bridge Rd Sydenham	17503	1948-49	Premise Match	71m	South East
6	DRY CLEANERS, PRESSERS/ DYERS.	Orbit Dry Cleaners., 33 Marrickville Rd., Marrickville	43110	1964	Premise Match	171m	North West
7	Motor Garages & Service Stations	Olympic Motor Centre, 31 Unwins Bridge Rd., Sydenham 2044	97812	1991	Premise Match	216m	East
	MOTOR GARAGES & SERVICE STATIONS.	Olympic Motor Centre, 31 Unwins Bridge Rd., Sydenham. 2044	11944	1990	Premise Match	216m	East
	MOTOR GARAGE &	Olypic Motor Centre, 31 Unwins Bridge Rd.,	5356	1989	Premise Match	216m	East
	MOTOR GARAGES & SERVICE STATIONS.	Olympic Motor Centre, 31 Unwins Bridge Rd., Sydenham. 2044	59728	1988	Premise Match	216m	East

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
7	MOTOR GARAGES & SERVICE STATIONS.	Olympic Motor Centre, 31 Unwins Bridge Rd., Sydenham. 2044	45309	1985	Premise Match	216m	East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Esso Sydenham Service Station, 31 Unwins Bridge Rd., Sydenham. 2044	28249	1984	Premise Match	216m	East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Esso Sydenham Service Station., 31 Unwins Bridge Rd., Sydenham 2044	14672	1983	Premise Match	216m	East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	Esso Sydenham Service Station, 31 Unwins Bridge Rd., Sydenham. 2204.	56736	1982	Premise Match	216m	East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Esso Sydenham Service Station., 31 Unwins Bridge Rd., Sydenham. 2204	3285	1981	Premise Match	216m	East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Esso Sydenham Service Station., 31 Unwins Bridge Rd., Sydenham. 2204	52937	1980	Premise Match	216m	East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Esso Service Station., 31 Unwins Bridge Rd., Sydenham. 2204.	41438	1979	Premise Match	216m	East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Esso Service Station, 31 Unwins Bridge Rd., Sydenham. 2204	49977	1978	Premise Match	216m	East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Esso Service Station., 31 Unwins Bridge Rd., Sydenham 2204	29927	1976	Premise Match	216m	East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Esso Servicenter., 31 Unwins Bridge Rd., Sydenham 2044	29974	1976	Premise Match	216m	East
	MOTOR GARAGES &/OR ENGINEERS.	Esso Service Station., 31 Unwins Bridge Rd., St. Peters. 2044	58817	1975	Premise Match	216m	East
	MOTOR GARAGES &/OR ENGINEERS.	Esso Servicenter., 31 Unwins Bridge Rd., Sydenham. 2044	58844	1975	Premise Match	216m	East
	MOTOR SERVICE STATIONS - PETROL, OIL	Esso Servicenter., 31 Unwins Bridge Rd., Sydenham. 2044	61723	1975	Premise Match	216m	East
	MOTOR GARAGES &/OR ENGINEERS.	Esso Service Center., 31 Unwins Bridge Rd., Sydenham	13118	1972	Premise Match	216m	East
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Esso Servicenter., 31 Unwins Bridge Rd Sydenham	18217	1972	Premise Match	216m	East
	MOTOR GARAGES &/OR ENGINEERS.	Esso Service Center., 31 Unwins Bridge Rd., Sydenham	62774	1971	Premise Match	216m	East
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Esso Servicenter., 31 Unwins Bridge Rd., Sydenham	2631	1971	Premise Match	216m	East
	MOTOR GARAGES & ENGINEERS(M6S6)	Esso Service Center., 31 Unwins Bridge Rd., Sydenham	337741	1970	Premise Match	216m	East
	MOTOR SERVICE STATIONS-PETROL,OIL,Etc.	Esso Servicenter., 31 Unwins Bridge Rd., SYDENHAM	341069	1970	Premise Match	216m	East
	MOTOR GARAGES & ENGINEERS.	Esso Service Center., 31 Unwins Bridge Rd., Sydenham	47227	1969	Premise Match	216m	East
	MOTOR SERVICE STATIONS-PETROL, OIL ETC	Esso Servicenter., 31 Unwins Bridge Rd Sydenham	50802	1969	Premise Match	216m	East
	MOTOR GARAGES & ENGINEERS	Esso Service Center., 31 Unwins Bridge Rd., Sydenham	30661	1968	Premise Match	216m	East
	MOTOR GARAGES & ENGINEERS	Esso Service Station., 31 Unwin's Bridge Rd St Peters	26522	1968	Premise Match	216m	East

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
7	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Esso Servicenter., 31 Unwins Bridge Rd Sydenham	36887	1968	Premise Match	216m	East
	MOTOR GARAGES & ENGINEERS.	Esso Service Center., 31 Unwins Bridge Rd., Sydenham	11082	1967	Premise Match	216m	East
	MOTOR GARAGES & ENGINEERS.	Esso Service Station., 31 Unwin's Bridge Rd St Peters	11011	1967	Premise Match	216m	East
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Esso Servicenter., 31 Unwins Bridge Rd Sydenham	20353	1967	Premise Match	216m	East
	MOTOR GARAGES & ENGINEERS.	Esso Service Center., 31 Unwins Bridge Rd., Sydenham	60806	1966	Premise Match	216m	East
	MOTOR GARAGES & ENGINEERS.	Esso Service Station., 31 Unwin's Bridge Rd St Peters	60741	1966	Premise Match	216m	East
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Esso Servicenter., 31 Unwins Bridge Rd Sydenham	1856	1966	Premise Match	216m	East
	Motor Garages & Engineers	Esso Service Center., 31 Unwins Bridge Rd., Sydenham	123442	1965	Premise Match	216m	East
	Motor Garages & Engineers	Esso Service Station., 31 Unwin's Bridge Rd., St. Peters	123378	1965	Premise Match	216m	East
	MOTOR GARAGES & ENGINEERS	Esso Service Center., 31 Unwins Bridge Rd., Sydenham	48718	1964	Premise Match	216m	East
8	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Sydneham Station Auto Port (Shell)., 90 Marrickville Rd., Marrickville 2204	8254	1981	Premise Match	231m	North West
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Sydneham Station Auto Port., 90 Marrickville Rd., Marrickville. 2204	58935	1980	Premise Match	231m	North West
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Sydneham Station Auto Port (Shell)., 90 Marrickville Rd., Marrickville. 2204.	46437	1979	Premise Match	231m	North West
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Sydenham Station Auto Port (Shell), 90 Marrickville Rd., Marrickville. 2204	50917	1978	Premise Match	231m	North West
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Sydenham Station Auto Port, Marrickville Rd., Marrickville. 2204	50916	1978	Premise Match	231m	North West
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Sydenham Station Auto Port., Marrickville Rd., Marrickville 2204	34986	1976	Premise Match	231m	North West
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Sydneham Station Auto Port (Shell)., 90 Marrickville Rd., Marrickville 2204	34987	1976	Premise Match	231m	North West
	MOTOR GARAGES &/OR ENGINEERS.	Sydenham Station Auto Port., Marrickville Rd., Marrickville. 2204	59609	1975	Premise Match	231m	North West
	MOTOR SERVICE STATIONS - PETROL, OIL	Sydneham Station Auto Port (Shell)., 90 Marrickville Rd., Marrickville. 2204	61975	1975	Premise Match	231m	North West
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Sydenham Station Auto Port (Shell)., 90-102 Marrickville Rd Marrickville	16901	1972	Premise Match	231m	North West
	MOTOR GARAGES &/OR ENGINEERS.	Sydenham Station Auto Port., Marrickville Rd Marrickville	12592	1972	Premise Match	231m	North West
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Sydenham Station Auto Port (Shell)., 90-102 Marrickville Rd Marrickville	2362	1971	Premise Match	231m	North West
	MOTOR GARAGES &/OR ENGINEERS.	Sydenham Station Auto Port., Marrickville Rd Marrickville	62278	1971	Premise Match	231m	North West
	MOTOR SERVICE STATIONS-PETROL,OIL,Etc.	Sydenham Station Auto Port (Shell)., 90-102 Marrickville Rd., Marrickville	341524	1970	Premise Match	231m	North West

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
8	MOTOR GARAGES & ENGINEERS(M6S6)	Sydenham Station Auto Port., Marrickville Rd., MARRICKVILLE	338705	1970	Premise Match	231m	North West
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Sydenham Station Auto Port (Shell)., 90-102 Marrickville Rd Marrickville	50463	1969	Premise Match	231m	North West
	MOTOR GARAGES & ENGINEERS.	Sydenham Station Auto Port., Marrickville Rd Marrickville	42631	1969	Premise Match	231m	North West
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Sydenham Station Auto Port (Shell)., 90-102 Marrickville Rd Marrickville	32494	1968	Premise Match	231m	North West
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Sydenham Station Auto Port (Shell)., 90-102 Marrickville Rd Marrickville	15953	1967	Premise Match	231m	North West
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Sydenham Station Auto Port (Shell)., 90-102 Marrickville Rd Marrickville	1525	1966	Premise Match	231m	North West
	Motor Service Stations - Petrol, Oil, Etc.	Sydenham Station Auto Port (Shell), 90-102 Marrickville Rd. Marrickville	125899	1965	Premise Match	231m	North West
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Sydenham Station Auto Port (Shell)., 90-102 Marrickville Rd Marrickville	52168	1964	Premise Match	231m	North West
9	MOTOR GARAGES & ENGINEERS	Rofo Electrical Products Pty. Ltd., 20-22 Sydenham Rd. MARRICKVILLE	348049	1961	Premise Match	244m	North

Dry Cleaners, Motor Garages & Service Stations 1948-1993 Road or Area Matches

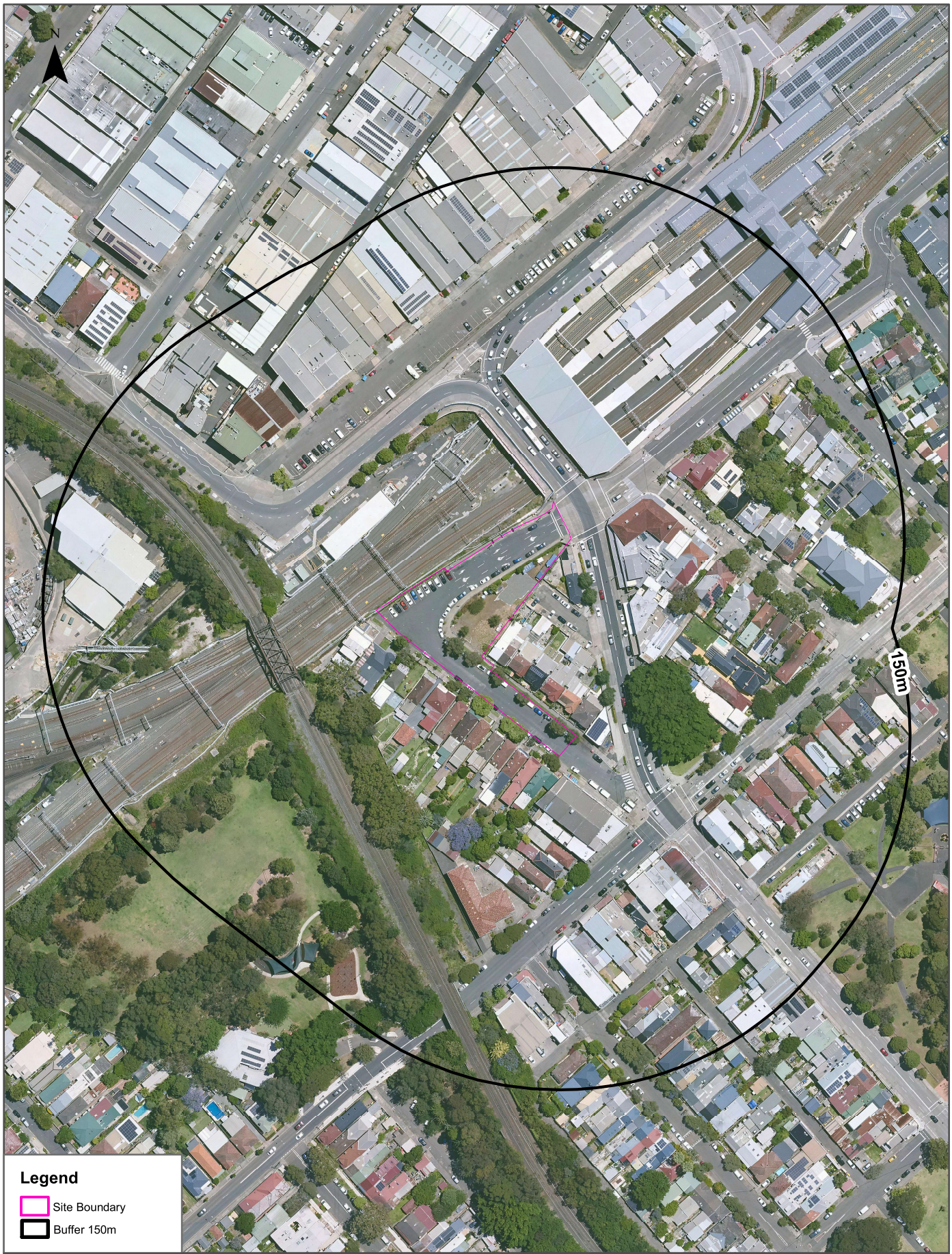
Dry Cleaners, Motor Garages & Service Stations from UBD Business Directories, mapped to a road or an area, within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found, or the road has been renumbered since the directory was published.

Note: The Universal Business Directories were published between 1948 and 1993. Dry Cleaners, Motor Garages & Service Stations have been extracted from all of these directories except the following years 1951, 1955, 1957, 1960, 1963, 1973, 1974, 1977, 1987.

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
10	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Caltex Service Station., 56 Marrickville Rd Marrickville	16883	1972	Road Match	71m
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Greens (Ampol) Garage., Marrickville Rd Marrickville	16891	1972	Road Match	71m
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Caltex Service Station., 56 Marrickville Rd Marrickville	2345	1971	Road Match	71m
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Greens (Ampol) Garage., Marrickville Rd Marrickville	2352	1971	Road Match	71m
11	MOTOR GARAGE & SERVICE STATIONS.	Mobil Marrickville Service Station, Sydenham Rd., Marrickville. 2204	5279	1989	Road Match	217m
	MOTOR GARAGES & SERVICE STATIONS.	Mobil Marrickville Service Station, Sydenham Rd., Marrickville. 2204	59642	1988	Road Match	217m
	MOTOR GARAGES & SERVICE STATIONS.	Mobil Marrickville Service Station, Sydenham Rd., Marrickville. 2204	65109	1986	Road Match	217m
	MOTOR GARAGES & SERVICE STATIONS.	Mobil Marrickville Service Station, Sydenham Rd., Marrickville.2204	65819	1985	Road Match	217m
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Mobil Marrickville Service Station, Sydenham Rd., Marrickville. 2204	33794	1984	Road Match	217m
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Mobil Marrickville Service Station., Sydenham Rd., Marrickville 2204	15145	1983	Road Match	217m
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	Mobil Marrickville Service Station, Sydenham Rd., Marrickville. 2204.	57224	1982	Road Match	217m
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Mobil Marrickville Service Station, Sydenham Rd., Marrickville. 2204.	65714	1981	Road Match	217m
	MOTOR GARAGES & ENGINEERS.	B.P. Park Service Station., Sydenham Rd Marrickville	10591	1967	Road Match	217m

Aerial Imagery 2023

Burrows Ave and Railway Road, Sydenham, NSW 2044



Scale:	Data Source Aerial Imagery:	Coordinate System:	Date: 19 December 2023

Aerial Imagery 2020

Burrows Ave and Railway Road, Sydenham, NSW 2044

Scale:	Data Source Aerial Imagery:	Coordinate System:	Date: 19 December 2023

Aerial Imagery 2016

Burrows Ave and Railway Road, Sydenham, NSW 2044

Scale:	Data Source Aerial Imagery:	Coordinate System:	Date: 19 December 2023

Aerial Imagery 2011

Burrows Ave and Railway Road, Sydenham, NSW 2044

Scale:	Data Source Aerial Imagery:	Coordinate System:	Date: 19 December 2023

Aerial Imagery 2007

Burrows Ave and Railway Road, Sydenham, NSW 2044

Scale:	Data Source Aerial Imagery:	Coordinate System:	Date: 19 December 2023

Aerial Imagery 2000

Burrows Ave and Railway Road, Sydenham, NSW 2044

Scale:	Data Source Aerial Imagery:	Coordinate System:	Date: 19 December 2023

Aerial Imagery 1994

Burrows Ave and Railway Road, Sydenham, NSW 2044

Scale:	Data Sources: Aerial Imagery:	Coordinate System:	Date: 19 December 2023

Aerial Imagery 1991

Burrows Ave and Railway Road, Sydenham, NSW 2044

Scale:	Data Sources: Aerial Imagery:	Coordinate System:	Date: 19 December 2023

Aerial Imagery 1986

Burrows Ave and Railway Road, Sydenham, NSW 2044

Scale:	Data Sources: Aerial Imagery:	Coordinate System:	Date: 19 December 2023

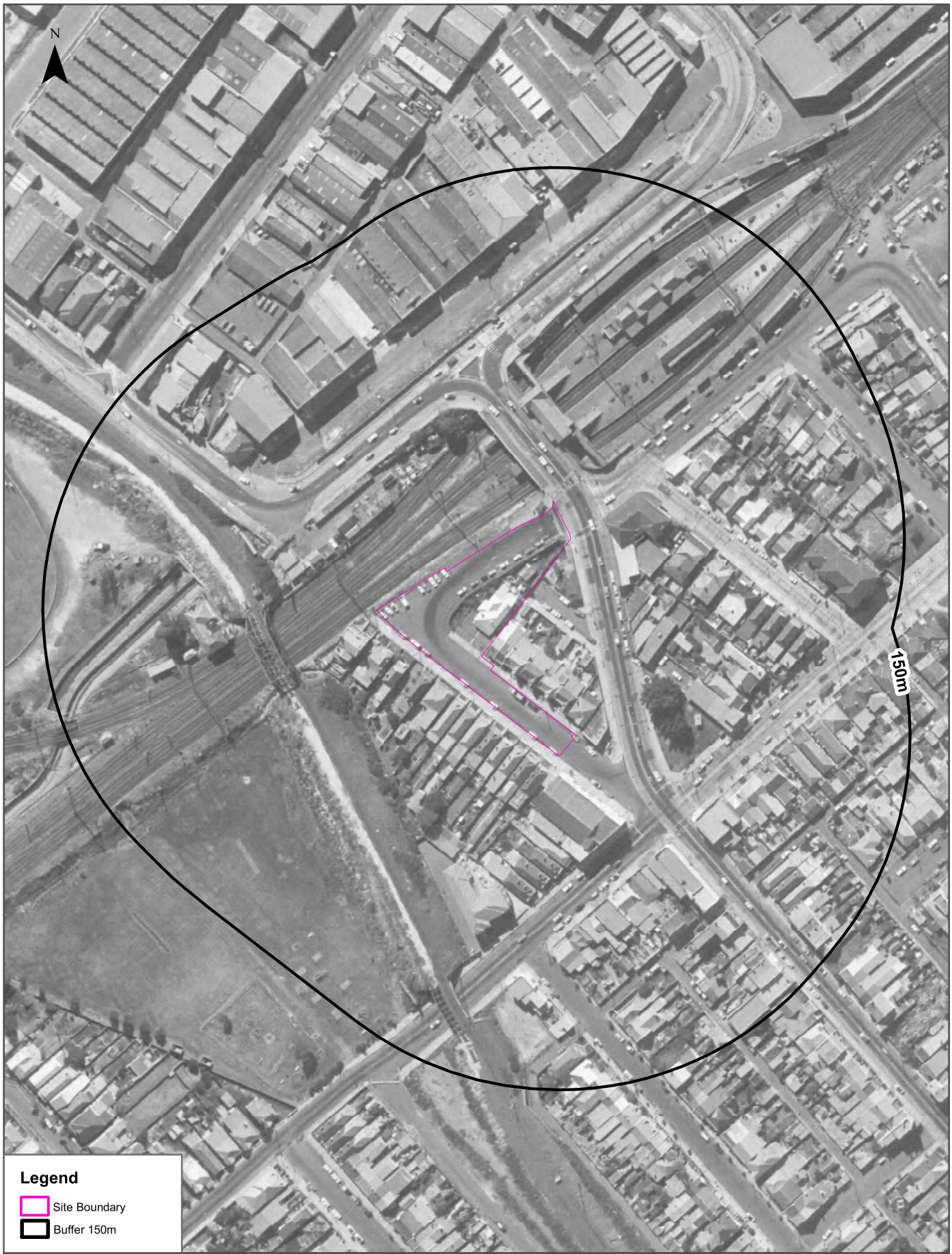
Aerial Imagery 1982

Burrows Ave and Railway Road, Sydenham, NSW 2044

Scale:	Data Sources: Aerial Imagery:	Coordinate System:	Date: 19 December 2023

Aerial Imagery 1978

Burrows Ave and Railway Road, Sydenham, NSW 2044



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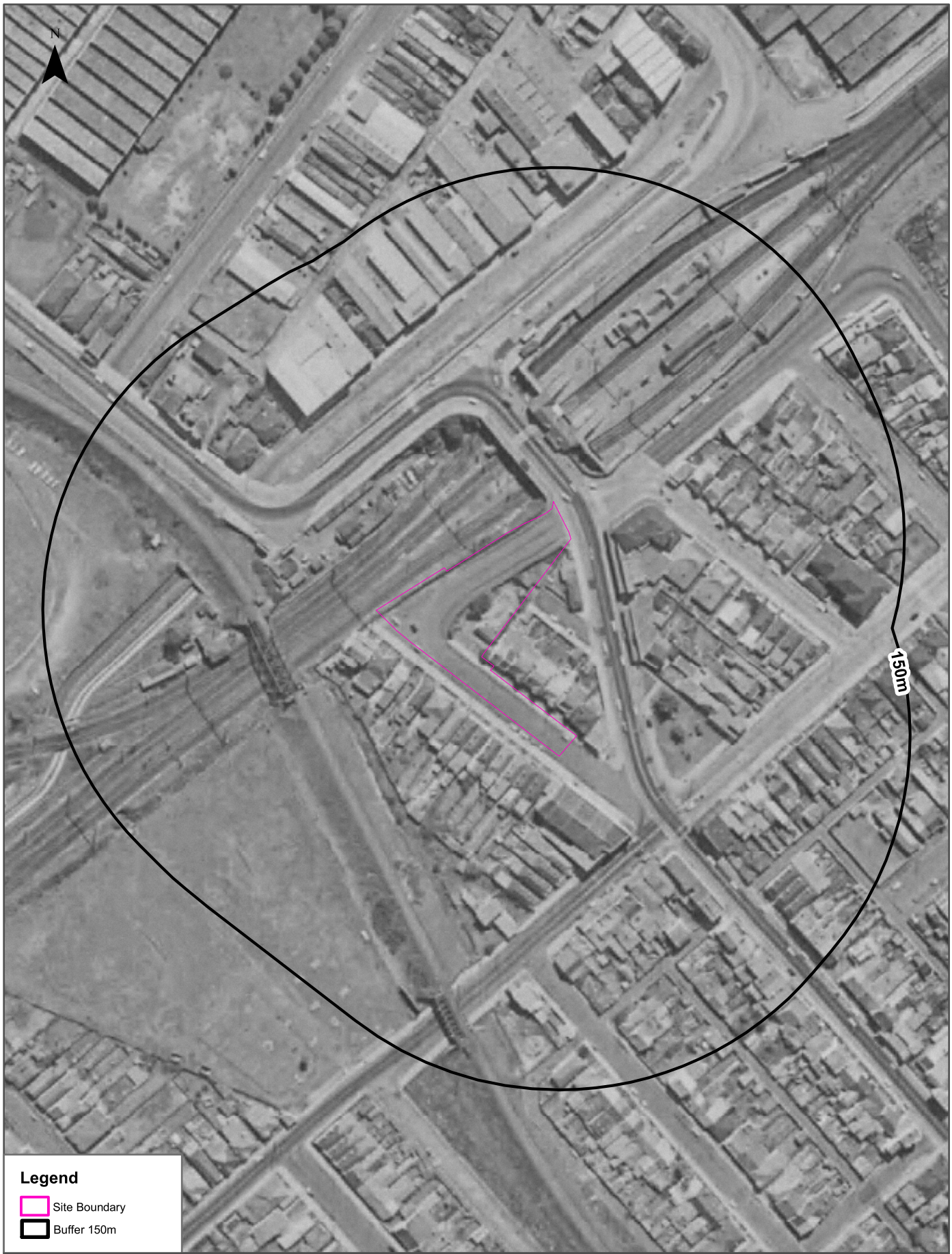
Aerial Imagery 1970

Burrows Ave and Railway Road, Sydenham, NSW 2044

Scale:	Data Sources: Aerial Imagery:	Coordinate System:	Date: 19 December 2023

Aerial Imagery 1965

Burrows Ave and Railway Road, Sydenham, NSW 2044



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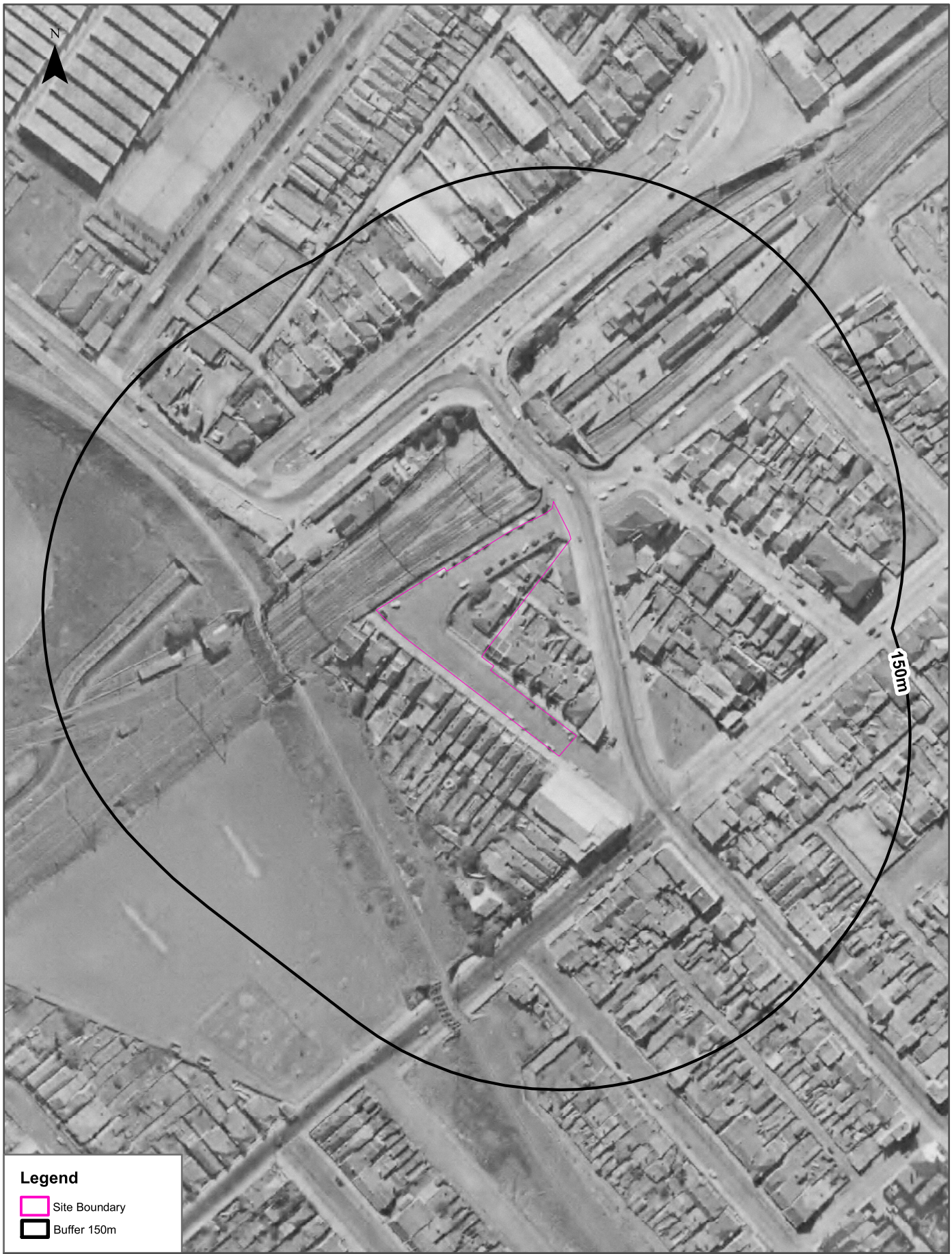
Aerial Imagery 1961

Burrows Ave and Railway Road, Sydenham, NSW 2044

Scale:	Data Sources: Aerial Imagery:	Coordinate System:	Date: 19 December 2023

Aerial Imagery 1955, 1956

Burrows Ave and Railway Road, Sydenham, NSW 2044



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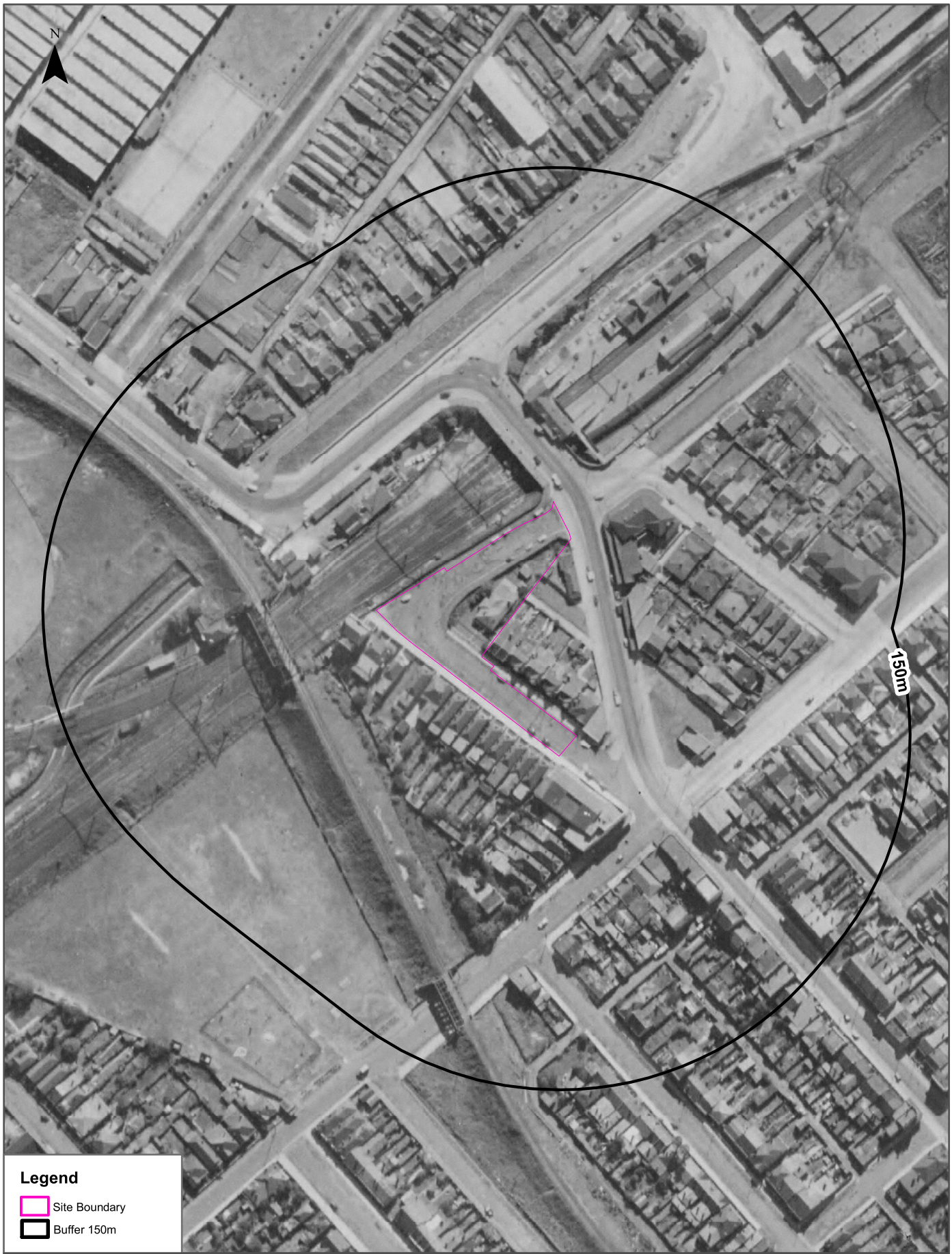
Aerial Imagery 1951

Burrows Ave and Railway Road, Sydenham, NSW 2044



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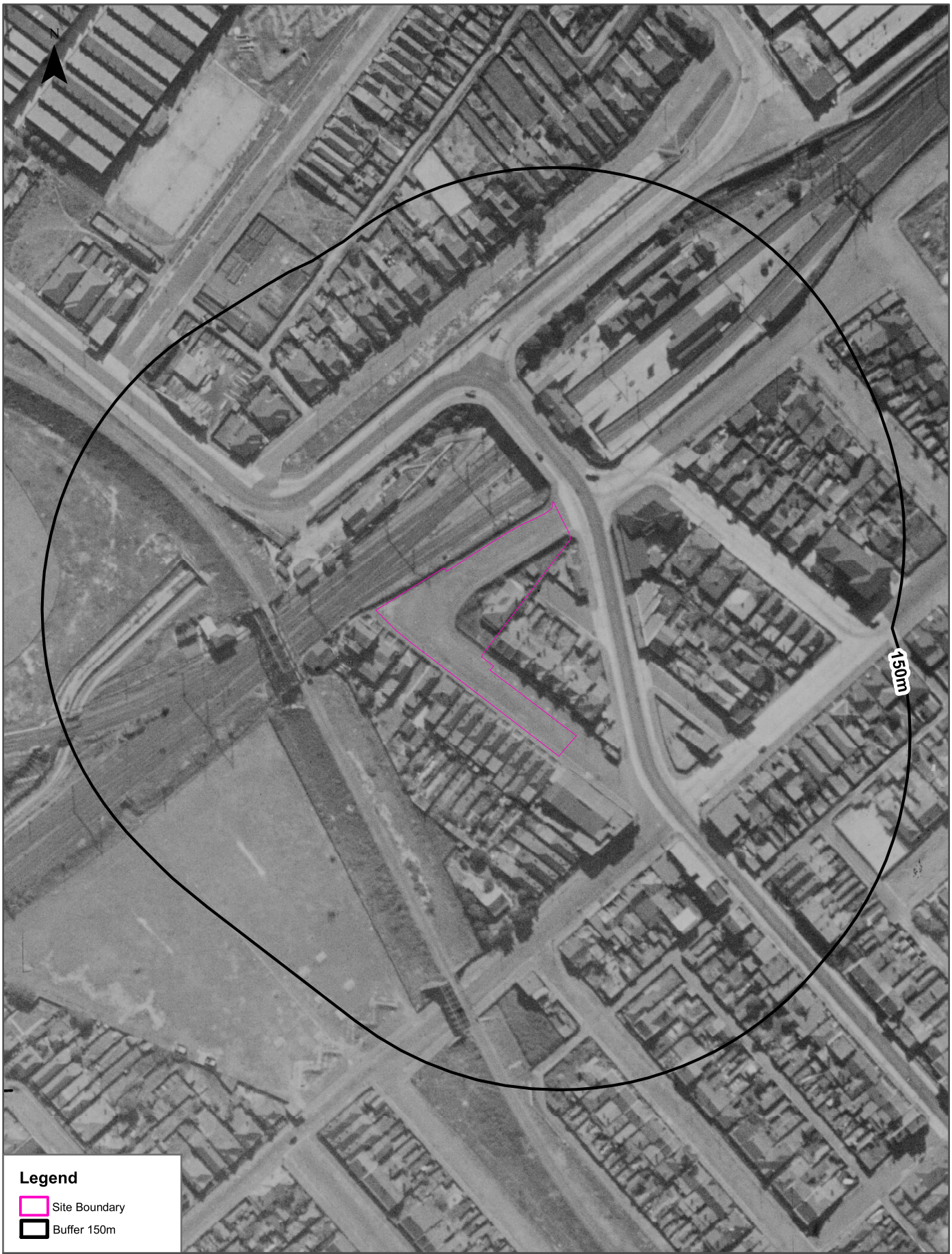
Aerial Imagery 1943

Burrows Ave and Railway Road, Sydenham, NSW 2044



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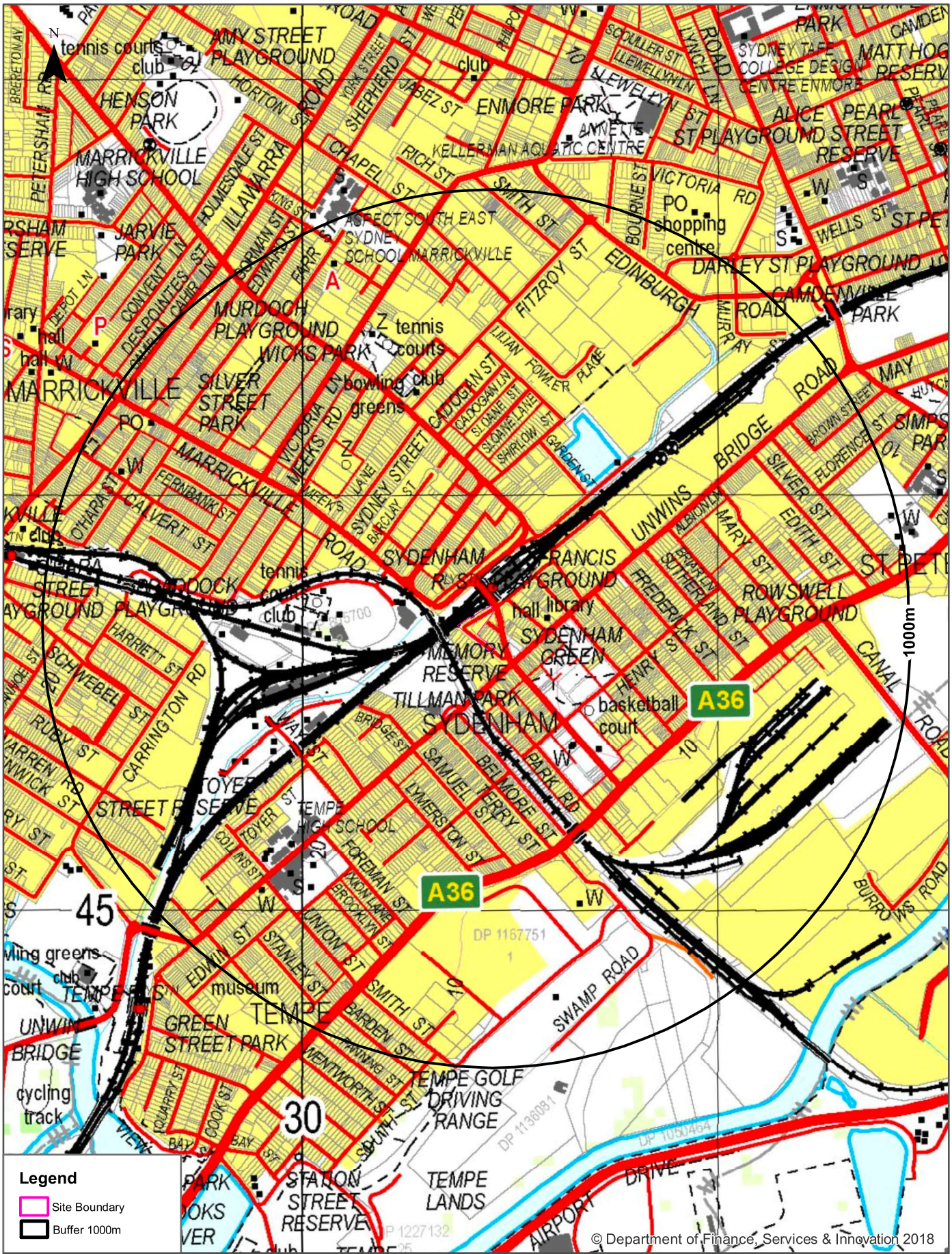
Aerial Imagery 1930

Burrows Ave and Railway Road, Sydenham, NSW 2044

Scale:	Data Sources: Aerial Imagery:	Coordinate System:	Date: 19 December 2023

Topographic Map 2015

Burrows Ave and Railway Road, Sydenham, NSW 2044



Scale:	Data Sources: Topographic Map Data	Coordinate System:	Date: 19 December 2023

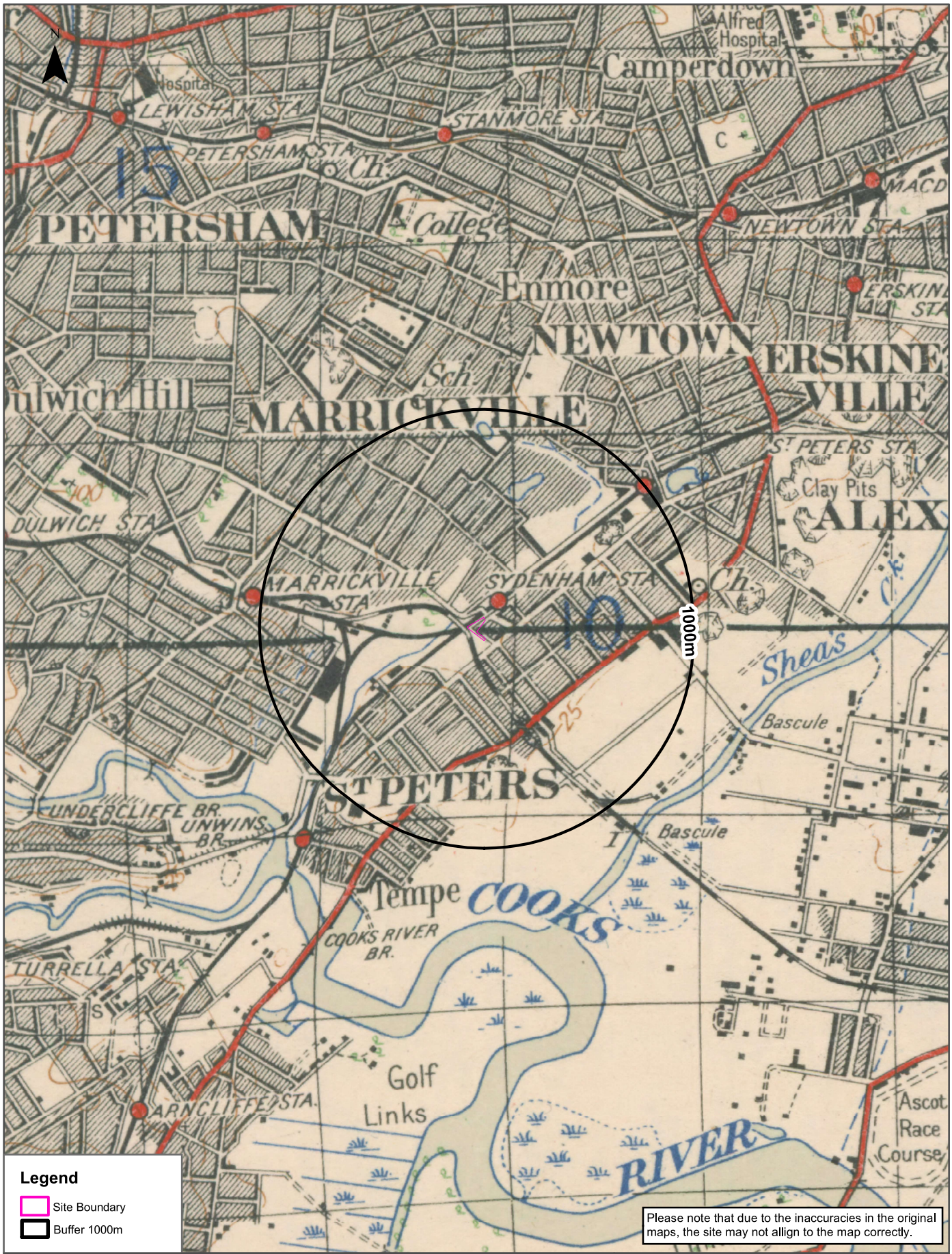
Historical Map 1975

Burrows Ave and Railway Road, Sydenham, NSW 2044

Scale:	Data Sources: NATMAP 1:100,000	Coordinate System:	Date: 19 December 2023

Historical Map c.1936

Burrows Ave and Railway Road, Sydenham, NSW 2044



Legend

- Site Boundary
- Buffer 1000m

Please note that due to the inaccuracies in the original maps, the site may not allign to the map correctly.

Scale:	Data Sources: Australia 1:63360	Coordinate System:	Date: 19 December 2023

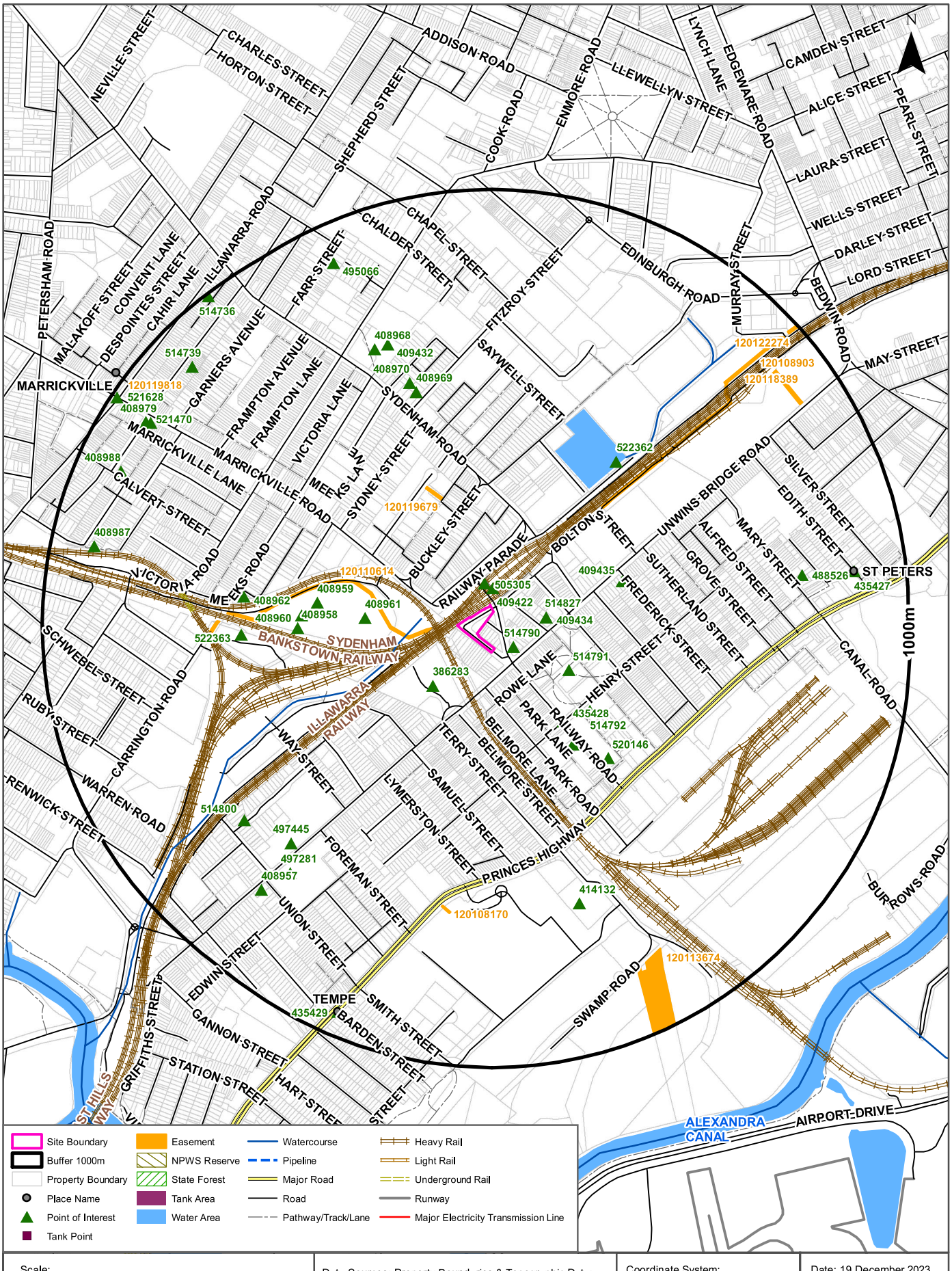
Historical Map c.1917

Burrows Ave and Railway Road, Sydenham, NSW 2044

Scale:	Data Sources: Australia 1:63360	Coordinate System:	Date: 19 December 2023

Topographic Features

Burrows Ave and Railway Road, Sydenham, NSW 2044



Scale:	Data Sources: Property Boundaries & Topographic Data:	Coordinate System:	Date: 19 December 2023

Topographic Features

Burrows Ave and Railway Road, Sydenham, NSW 2044

Points of Interest

What Points of Interest exist within the dataset buffer?

Map Id	Feature Type	Label	Distance	Direction
409422	Railway Station	SYDENHAM RAILWAY STATION	41m	North
514790	Park	MEMORY RESERVE	45m	South East
505305	Transport Interchange	SYDENHAM BUS INTERCHANGE	54m	North
409434	Library	ST PETERS SYDENHAM LIBRARY	128m	East
514827	Community Facility	ST PETERS TOWN HALL	128m	East
386283	Park	TILLMAN PARK	149m	South West
514791	Park	SYDENHAM GREEN	186m	South East
408961	Park	FRASER PARK	223m	West
435428	Suburb	SYDENHAM	240m	South East
514792	Sports Court	BASKETBALL COURT	273m	South East
409433	Place Of Worship	COPTIC CHURCH	296m	South East
409435	Park	FRANCIS PLAYGROUND	318m	East
408959	Sports Court	TENNIS COURTS	341m	West
408960	Sports Field	BOWLING GREENS	376m	West
520146	SES Facility	MARRICKVILLE SES	379m	South East
408958	Club	SYDNEY PORTUGAL COMMUNITY CLUB	385m	West
522362	Pumping Station	SYDNEY WATER STORMWATER PUMPING STATION	460m	North East
408962	Park	BRADDOCK PLAYGROUND	519m	West
522363	Pumping Station	SYDNEY WATER STORMWATER PUMPING STATION	522m	West
408969	Club	MARRICKVILLE BOWLING AND RECREATION CLUB	543m	North
408970	Sports Field	BOWLING GREENS	569m	North
414132	Place Of Worship	SALVATION ARMY CHURCH	640m	South
497445	High School	TEMPE HIGH SCHOOL	659m	South West
409432	Sports Court	TENNIS COURTS	674m	North
408968	Park	WICKS PARK	676m	North
514800	Park	TOYER STREET RESERVE	696m	South West
497281	Primary School	TEMPE PUBLIC SCHOOL	717m	South West
488526	Park	ROWSWELL PLAYGROUND	748m	East
408957	Place Of Worship	SIAOLA CONGREGATION	791m	South West
435427	Suburb	ST PETERS	874m	East
408979	Post Office	MARRICKVILLE POST OFFICE	885m	North West

Map Id	Feature Type	Label	Distance	Direction
408988	Place Of Worship	SILVER STREET BAPTIST MISSION	891m	North West
514739	Park	SILVER STREET PARK	892m	North West
408987	Park	O'HARA STREET PLAYGROUND	895m	West
521470	Park	O'HARA STREET PLAYGROUND	896m	North West
495066	Ambulance Station	MARRICKVILLE AMBULANCE STATION	906m	North
435429	Suburb	TEMPE	941m	South
521628	Locality	LITTLE GREECE	986m	North West
514736	Park	MURDOCH PLAYGROUND	994m	North West

Topographic Features

Burrows Ave and Railway Road, Sydenham, NSW 2044

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
N/A	No records in buffer					

Major Easements

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

Map Id	Easement Class	Easement Type	Easement Width	Distance	Direction
120110614	Primary	Undefined		63m	West
120119679	Primary	Undefined		280m	North
120118389	Primary	Undefined		358m	North East
120108170	Primary	Undefined		620m	South
120113674	Primary	Undefined		821m	South East
120108903	Primary	Undefined		878m	North East
120119818	Primary	Undefined		913m	North West
120122274	Primary	Undefined		971m	North East

Topographic Features

Burrows Ave and Railway Road, Sydenham, NSW 2044

State Forest

What State Forest exist within the dataset buffer?

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

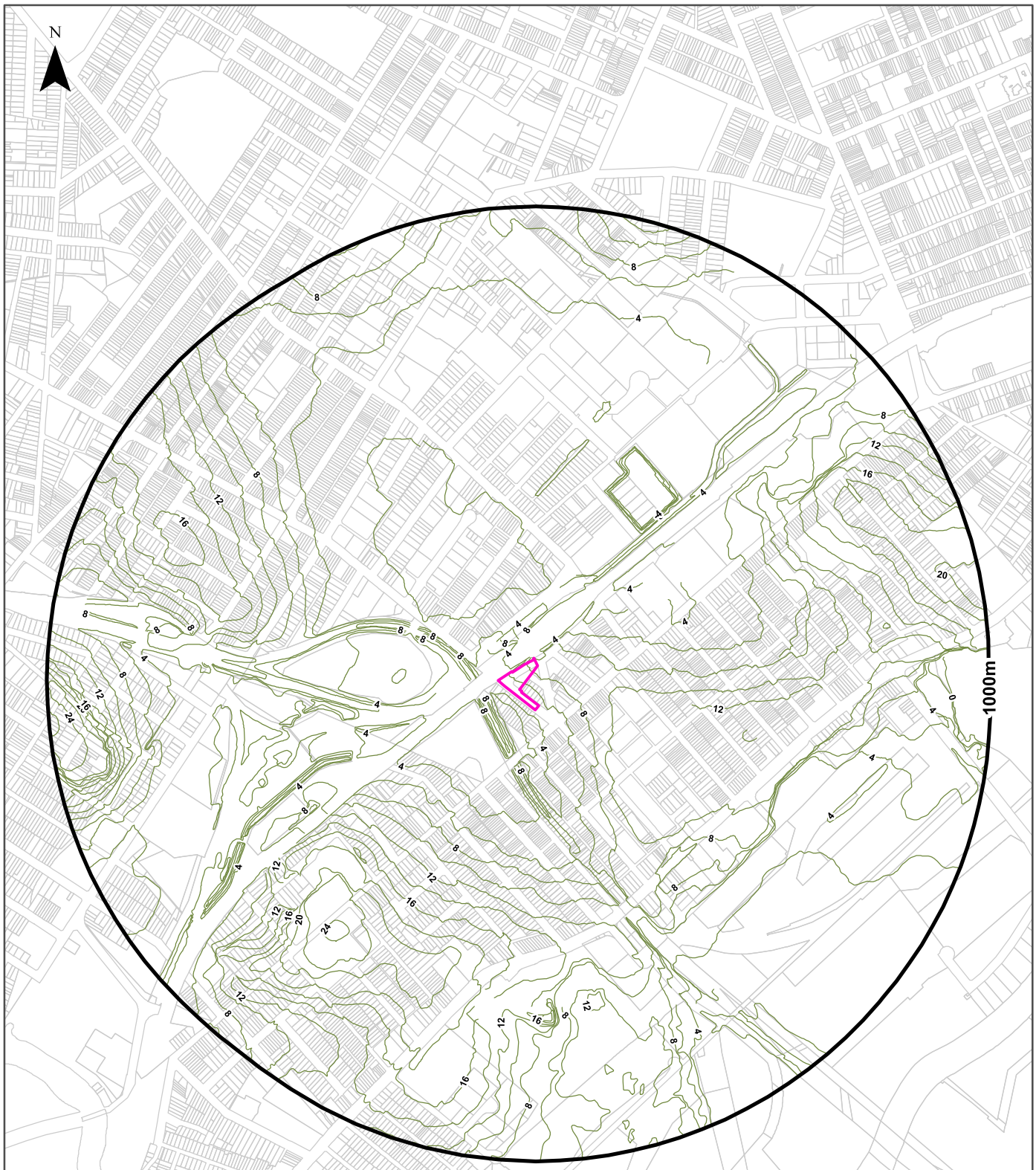
National Parks and Wildlife Service Reserves

What NPWS Reserves exist within the dataset buffer?

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

Elevation Contours (m AHD)

Burrows Ave and Railway Road, Sydenham, NSW 2044



Legend

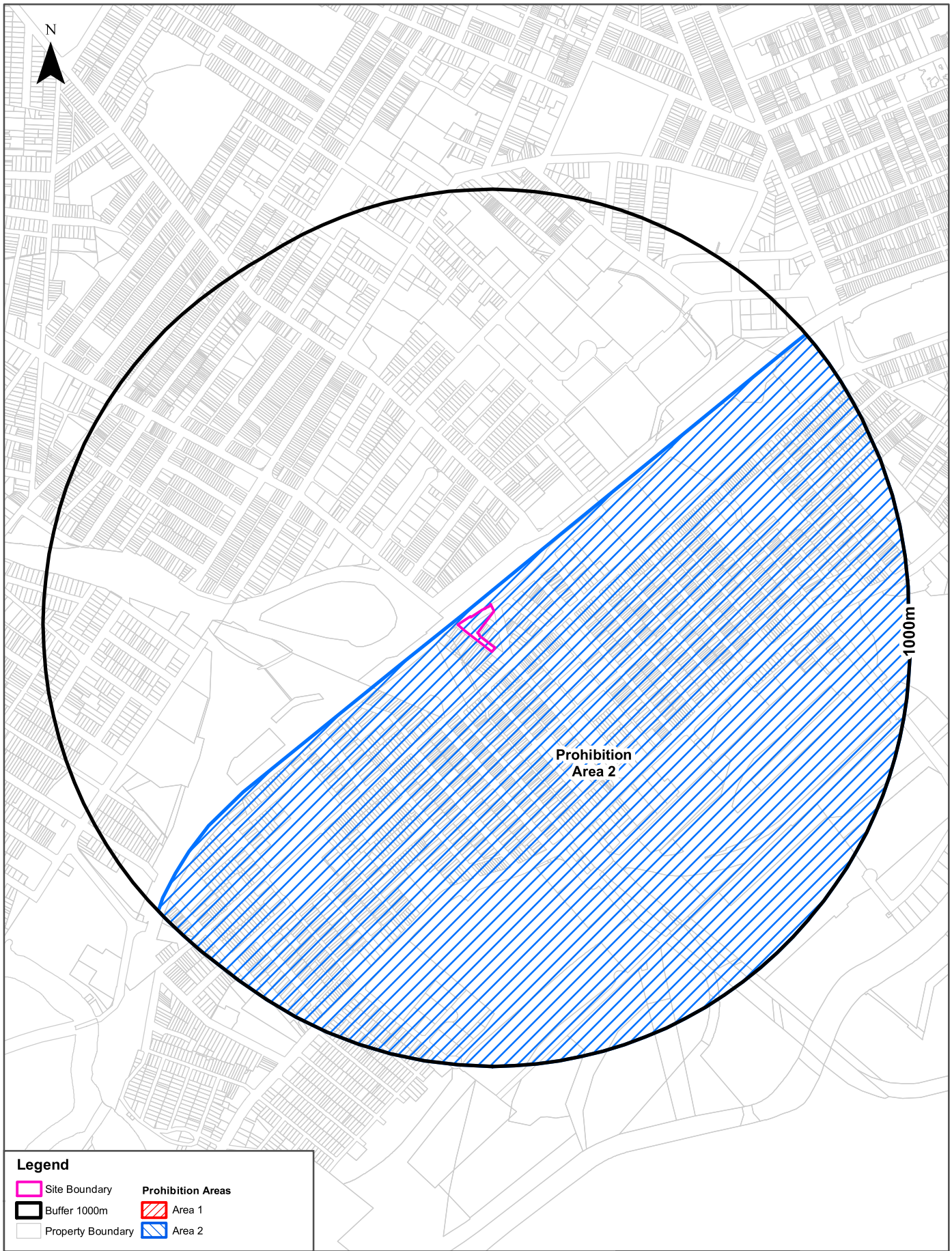
- Elevation Contour (m AHD)
- Site Boundary
- Buffer 1000m
- Property Boundary

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

Scale:	Data Sources: Property Boundaries & Topographic Data:	Coordinate System:	Date: 19 December 2023

Temporary Water Restriction (Botany Sands Groundwater Source) Order 2018

Burrows Ave and Railway Road, Sydenham, NSW 2044



Scale:	Data Sources: Property Boundaries & Topographic Data:	Coordinate System:	Date: 19 December 2023

Hydrogeology & Groundwater

Burrows Ave and Railway Road, Sydenham, NSW 2044

Hydrogeology

Description of aquifers within the dataset buffer:

Description	Distance	Direction
Porous, extensive highly productive aquifers	0m	On-site

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

Temporary Water Restriction (Botany Sands Groundwater Source) Order 2018

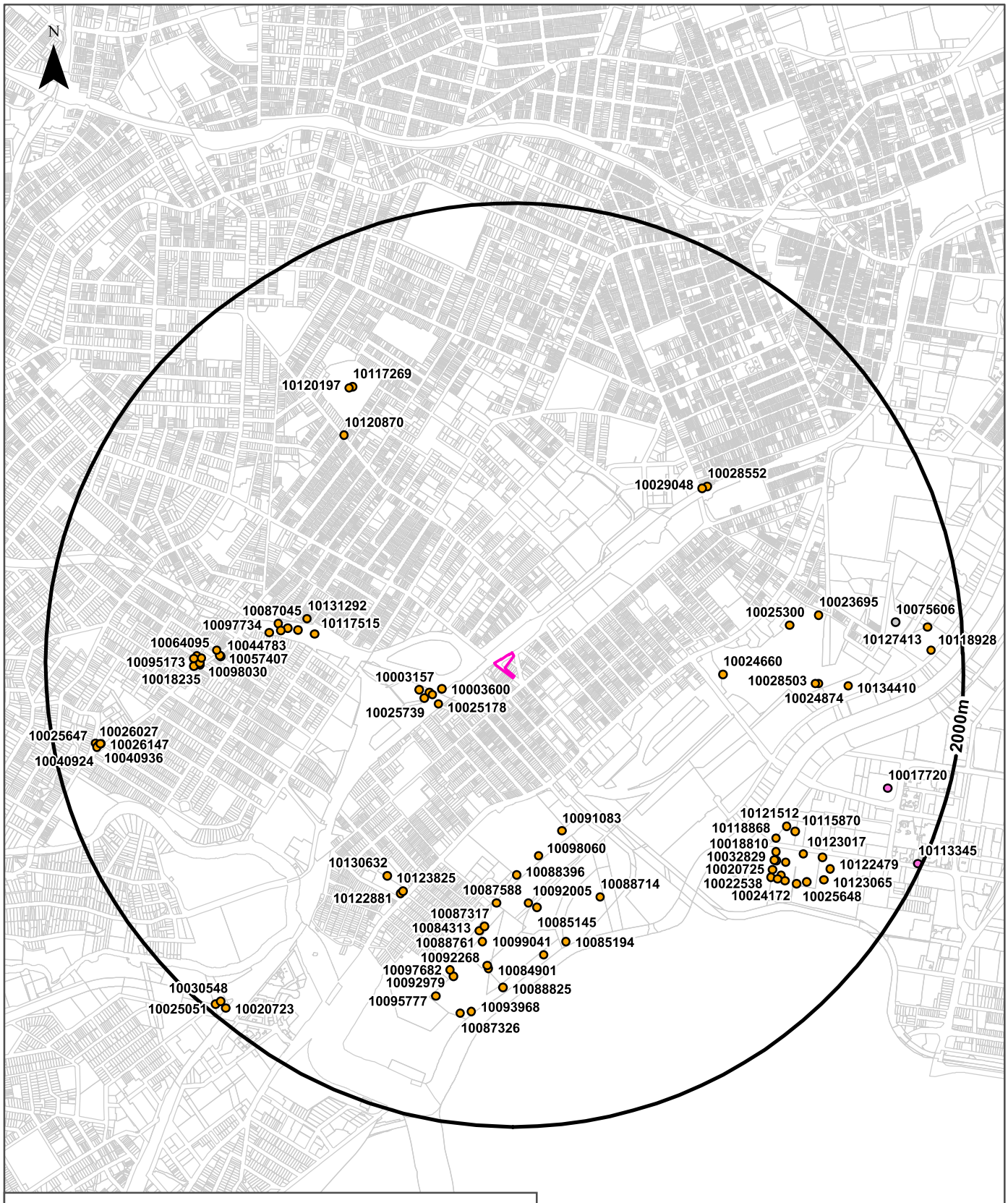
Temporary water restrictions relating to the Botany Sands aquifer within the dataset buffer:

Prohibition Area No.	Prohibition	Distance	Direction
2	Groundwater cannot be used for: a. human consumption; b. consumption by animals; c. domestic purposes; d. any other purpose, except if the water is fit for purpose, or it is for remediation, temporary construction dewatering, testing or monitoring purposes.	0m	On-site

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

Groundwater Boreholes

Burrows Ave and Railway Road, Sydenham, NSW 2044



Legend

- Site Boundary
- Buffer 2000m
- Property Boundary

Borehole

- Commercial and Industrial
- Dewatering
- Exploration
- Irrigation
- Monitoring
- Other; Unknown
- Stock and Domestic
- Water Supply

Scale:	Data Sources: Property Boundaries & Topographic Data:	Coordinate System:	Date: 19 December 2023

Hydrogeology & Groundwater

Burrows Ave and Railway Road, Sydenham, NSW 2044

Groundwater Boreholes

Boreholes within the dataset buffer:

NGIS Bore ID	NSW Bore ID	Bore Type	Status	Drill Date	Bore Depth (m)	Reference Elevation	Height Datum	Salinity (mg/L)	Yield (L/s)	SWL (mbgl)	Distance	Direction
10003600	GW115005	Monitoring	Functional	20/12/2011	6.00		AHD			4.00	258m	West
10033845	GW115001	Monitoring	Functional	20/12/2011	6.00		AHD			4.00	307m	South West
10025178	GW115000	Monitoring	Functional	20/12/2011	6.00		AHD				308m	South West
10026448	GW115002	Monitoring	Functional	20/12/2011	5.50		AHD			4.00	317m	West
10025739	GW115003	Monitoring	Functional	19/12/2011	5.50		AHD			4.00	348m	South West
10003157	GW115004	Monitoring	Functional	19/12/2011	6.00		AHD			4.00	355m	West
10091083	GW112275	Monitoring	Functional	27/02/2003	16.50		AHD				718m	South
10098060	GW112274	Monitoring	Functional	26/02/2003	13.70		AHD				802m	South
10117515	GW114824	Monitoring	Functional	16/12/2014	4.59		AHD	226.4		2.57	811m	West
10131292	GW114825	Monitoring	Functional	16/12/2014	4.99		AHD	379.4		2.71	855m	West
10088396	GW112280	Monitoring	Functional	18/04/2003	16.50		AHD				878m	South
10098292	GW110122	Monitoring	Unknown	16/01/2006	3.50		AHD			2.50	886m	West
10024660	GW109824	Monitoring	Unknown	05/04/2005	20.70		AHD			4.51	930m	East
10088328	GW110121	Monitoring	Unknown	16/01/2006	3.50		AHD			3.00	932m	West
10092543	GW110118	Monitoring	Unknown	16/01/2006	6.00		AHD			2.00	962m	West
10087045	GW110120	Monitoring	Unknown	16/01/2006	6.00		AHD			3.00	976m	West
10087588	GW112273	Monitoring	Functional	17/03/2003	11.50		AHD				1006m	South
10092005	GW112272	Monitoring	Functional	03/03/2003	14.84		AHD				1008m	South
10097734	GW110119	Monitoring	Unknown	16/01/2006	3.50		AHD			1.50	1010m	West
10085145	GW112271	Monitoring	Functional	07/03/2003	19.51		AHD				1030m	South
10130632	GW112336	Monitoring	Functional	01/01/2009	10.40		AHD				1045m	South West
10088714	GW112268	Monitoring	Functional	21/03/2003	12.35		AHD				1053m	South
10123825	GW112337	Monitoring	Functional	01/01/2009	9.00		AHD				1069m	South West
10122881	GW112338	Monitoring	Functional	01/01/2009	10.00		AHD				1083m	South West
10087317	GW112282	Monitoring	Functional	06/06/2003	18.50		AHD				1115m	South
10029048	GW114924	Monitoring	Functional	24/03/2012	9.00		AHD			7.60	1118m	North East
10084313	GW112281	Monitoring	Functional	29/05/2003	9.70		AHD				1137m	South
10028552	GW114925		Functional	24/03/2012	6.10					2.80	1141m	North
10088761	GW112270		Functional	05/03/2003	19.67						1184m	South
10085194	GW112267		Functional	20/03/2003	12.12						1199m	South

NGIS Bore ID	NSW Bore ID	Bore Type	Status	Drill Date	Bore Depth (m)	Reference Elevation	Height Datum	Salinity (mg/L)	Yield (L/s)	SWL (mbgl)	Distance	Direction
10120870	GW111692	Monitoring	Functional	12/01/2012	1.30		AHD			0.50	1216m	North West
10044783	GW112122	Monitoring	Functional	18/09/2003	8.70		AHD				1220m	West
10057407	GW112121	Monitoring	Functional	18/09/2003	8.00		AHD				1223m	West
10025300	GW109825	Monitoring	Unknown	10/02/2005	22.00		AHD			14.90	1236m	East
10064095	GW112123	Monitoring	Functional	18/09/2003	8.50		AHD				1236m	West
10099041	GW112266	Monitoring	Functional	19/03/2003	10.37		AHD				1243m	South
10092268	GW112277	Monitoring	Functional	04/03/2003	19.70		AHD				1287m	South
10084901	GW112278	Monitoring	Functional	10/03/2003	17.10		AHD				1300m	South
10118844	GW110014	Monitoring	Unknown	15/07/2005	7.00		AHD				1304m	West
10018235	GW107407	Monitoring	Unknown	15/07/2005	7.00		AHD			6.00	1310m	West
10098030	GW110011	Monitoring	Unknown	18/09/2003	8.70		AHD				1312m	West
10018402	GW107406	Monitoring	Unknown	15/07/2005	5.00		AHD				1325m	West
10084851	GW110013	Monitoring	Unknown	15/07/2005	5.00		AHD				1325m	West
10097682	GW112276	Monitoring	Functional	27/02/2013	26.65		AHD				1331m	South
10095173	GW110010	Monitoring	Unknown	18/09/2003	8.50		AHD				1338m	West
10098521	GW110012	Monitoring	Unknown	18/09/2003	8.00		AHD				1338m	West
10028503	GW109822	Monitoring	Unknown	04/04/1997	10.45		AHD	958		3.00	1343m	East
10024874	GW109823	Monitoring	Unknown	23/10/2000	29.00		AHD	10.6	0.100	12.50	1356m	East
10092979	GW112269	Monitoring	Functional	11/03/2003	17.60		AHD				1357m	South
10023695	GW109821	Monitoring	Unknown	03/04/1997	35.00		AHD	4400		14.50	1371m	East
10118868	GW104450	Monitoring	Functioning	01/01/2002	3.50		AHD		0.500		1374m	South East
10117269	GW111687	Monitoring	Functional	12/01/2012	4.25		AHD			2.50	1379m	North West
10088825	GW112279	Monitoring	Functional	18/04/2003	6.42		AHD				1380m	South
10120197	GW111686	Monitoring	Functional	12/01/2012	3.50		AHD			1.55	1380m	North West
10121512	GW104449	Monitoring	Functioning	01/01/2002	3.50		AHD		1.000		1387m	South East
10018810	GW112221	Monitoring	Functional	03/12/2002	4.20		AHD				1406m	South East
10032829	GW112222	Monitoring	Functional	03/12/2002	4.20		AHD				1420m	South East
10022629	GW112230	Unknown	Functional	03/12/2002	4.00		AHD				1430m	South East
10115870	GW104448	Monitoring	Functioning	25/11/2002	3.50		AHD		1.000		1431m	South East
10020725	GW112223	Monitoring	Functional	31/12/2002	4.20		AHD				1440m	South East
10022538	GW112224	Monitoring	Functional	03/12/2002	4.10		AHD				1455m	South East
10095777	GW112263	Monitoring	Functional	17/03/2003	3.12		AHD				1461m	South
10042844	GW112231	Monitoring	Functional	03/12/2002	4.00		AHD				1470m	South East
10043491	GW112228		Functional	03/12/2002	4.00						1482m	South East
10022628	GW112229		Functional	03/12/2002	4.00						1486m	South
10134410	GW072643			25/09/1996	12.00						1489m	East

NGIS Bore ID	NSW Bore ID	Bore Type	Status	Drill Date	Bore Depth (m)	Reference Elevation	Height Datum	Salinity (mg/L)	Yield (L/s)	SWL (mbgl)	Distance	Direction
10093968	GW112265	Monitoring	Functional	18/03/2003	8.00		AHD				1498m	South
10123017	GW112220	Monitoring	Functional	03/12/2002	4.00		AHD				1513m	South East
10024172	GW112225	Monitoring	Functional	03/12/2002	4.10		AHD				1514m	South East
10087326	GW112264	Monitoring	Functional	17/03/2003	15.45		AHD				1514m	South
10043407	GW112226	Monitoring	Functional	03/12/2002	4.40		AHD				1562m	South East
10025648	GW112227	Monitoring	Functional	03/12/2002	3.50		AHD				1594m	South East
10124425	GW112219	Monitoring	Functional	03/12/2002	4.00		AHD				1594m	South East
10122479	GW112218	Monitoring	Functional	03/12/2002	4.00		AHD				1650m	South East
10123065	GW112217	Monitoring	Functional	03/12/2002	4.10		AHD				1652m	South East
10075606	GW100053	Other	Functioning	20/04/1994	7.00		AHD		1.800	1.00	1709m	East
10017720	GW040219	Commercial and Industrial	Functioning		6.30	3.89	AHD				1739m	East
10026147	GW111972	Monitoring	Functional	31/05/2012	4.00		AHD				1789m	West
10040936	GW111971	Monitoring	Functional	31/05/2012	4.00		AHD				1792m	West
10026027	GW111973	Monitoring	Functional	11/02/2013	4.50		AHD				1798m	West
10040924	GW111969	Monitoring	Functional	30/05/2012	4.50		AHD				1809m	West
10025647	GW111970	Monitoring	Functional	30/05/2012	4.00		AHD				1812m	West
10127413	GW111320	Monitoring	Functional	09/01/2007	5.20		AHD			2.52	1849m	East
10118928	GW111321	Monitoring	Functional	09/01/2007	5.00		AHD			2.63	1862m	East
10030548	GW111345	Monitoring	Functional	29/09/2010	4.00		AHD			1.24	1937m	South West
10020723	GW111346	Monitoring	Functional	29/09/2010	4.00		AHD			1.25	1947m	South West
10025051	GW111344	Monitoring	Functional	29/09/2010	4.00		AHD			1.55	1961m	South West
10113345	GW027248	Commercial and Industrial	Unknown	01/11/1965	4.80		AHD				1983m	South East

Hydrogeology & Groundwater

Burrows Ave and Railway Road, Sydenham, NSW 2044

Driller's Logs

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

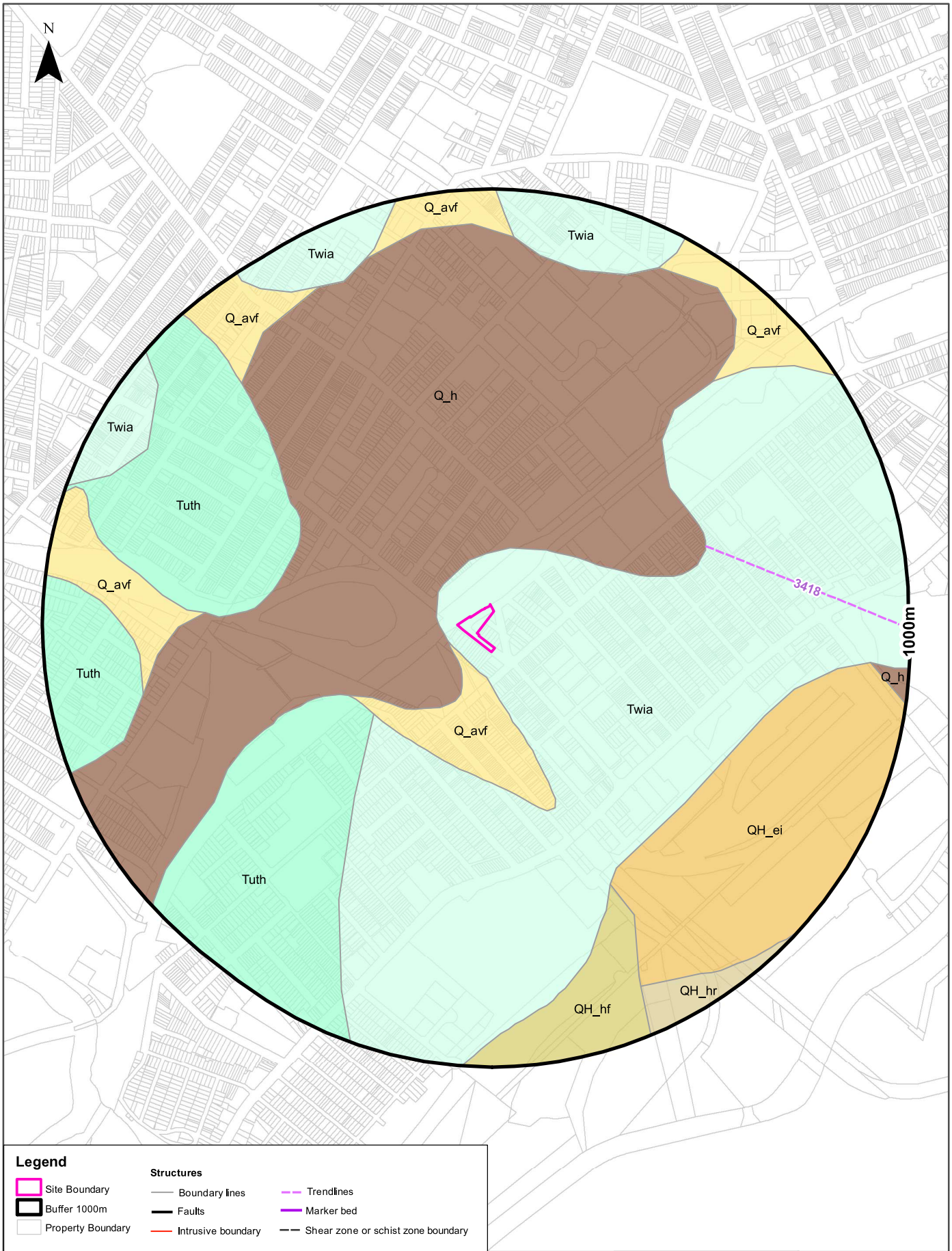
NGIS Bore ID	Drillers Log	Distance	Direction
10003600	0.00m-1.00m CLAY SAND FILL,MIXED GRAVEL INCLUSIONS. 1.00m-2.20m SANDY CLAY,SANDSTONE 2.20m-4.20m CLAYEY SAND DARK BROWN 4.20m-6.00m CLAY,GREY AND DARK BROWN	258m	West
10033845	0.00m-0.70m FILL, SAND FILL,BROWN,GRAVELS,SANDSTONE 0.70m-3.00m FILL, SANDY CLAY,MIXED GRAVEL 3.00m-4.20m SANDY CLAY 4.20m-6.00m SANDY CLAY GREY SOFT,LOW PLASTICITY	307m	South West
10025178	0.00m-0.30m FILL, GRAVELLY SAND DARK BROWN 0.30m-1.50m SANDY FILL. DARL GREY AND BLACK 1.50m-2.30m SANDY FILL, MOIST, GRAVELS 2.30m-2.60m CLAY ORANGE, TRACE RED FIRM 2.60m-6.00m SANDY CLAY GREY FIRM TO SOFT,MOIST	308m	South West
10026448	0.00m-1.00m FILL, SANDY CLAY,GREY,MAJOR GRAVELS 1.00m-2.80m CLAYEY SANDY FILL,BROWN AND GREY 2.80m-4.20m SANDY CLAY ,GREY,MOIST TO WET 4.20m-5.50m CLAY GREY,WET,SOFT	317m	West
10025739	0.00m-1.00m CLAYEY SAND FILL,GREY AND ORANGE 1.00m-3.00m SANDY FILL BROWN,MED TO COARSE GRAINED 3.00m-4.20m SANDY CLAY GREY MOIST TO WET 4.20m-5.50m CLAY GREY WET	348m	South West
10003157	0.00m-1.50m SANDY FILL COARSE GRAINED,MAJOR GRAVELS,CONCRETE 1.50m-2.00m SANDY FILL BROWN, GRAVELS AND SANDSTONE 2.00m-4.20m CLAY WITH ROCK,GREY BLACK,SAND 4.20m-5.20m SAND WITH ROCK DARK BROWN,CLAY 5.20m-6.00m CLAY GREY SOFT,WET	355m	West
10117515	0.00m-0.30m FILL SANDY SILT 0.30m-0.50m FILL SANDY CLAY 0.50m-0.70m NATURAL SILTY CLAY 0.70m-1.40m CLAY BROWN ORANGE 1.40m-2.70m CLAY GREY MOIST 2.70m-3.90m SAND GREY SATURATED MEDIUM GRAIN 3.90m-4.99m REFUSAL WITH PUSHTUBE AT3.9	811m	West
10131292	0.00m-0.25m FILL SANDY SILT 0.25m-0.60m FILL,SAND BROWN MOIST 0.60m-1.00m FILL CLAY DARK BROWN 1.00m-2.00m CLAY BROWN MOIST MED.STIFF 2.00m-2.40m WATER STRIKE AT2.0 m 2.40m-3.60m SAND LIGHT BROWN 3.60m-4.59m CLAY GREY BROWN,WET	855m	West
10098292	0.00m-3.50m CLAY	886m	West
10024660	0.00m-4.50m FILL 4.50m-9.00m LAMINITE 9.00m-17.00m SHALE 17.00m-20.70m SANDSTONE	930m	East
10088328	0.00m-3.50m CLAY	932m	West
10092543	0.00m-6.00m CLAY	962m	West
10087045	0.00m-6.00m CLAY	976m	West
10097734	0.00m-3.50m CLAY	1010m	West
10130632	0.00m-0.20m CONCRETE 0.20m-0.70m FILL 0.70m-10.40m SANDSTONE	1045m	South West
10123825	0.00m-0.10m CONCRETE 0.10m-0.40m FILL 0.40m-1.40m SILTY CLAY	1069m	

NGIS Bore ID	Drillers Log	Distance	Direction
10122881	0.00m-0.10m CONCRETE 0.10m-0.40m FILL 0.40m-2.00m SILTY CLAY 2.00m-10.00m SANDSTONE	1083m	South West
10120870	0.00m-0.20m TOPSOIL BROWN SOFT 0.20m-0.60m CLAY BTOWN LOOSE WET 0.60m-1.30m CLAY SOFT VERY WET	1216m	North West
10025300	0.00m-4.50m FILL 4.50m-22.00m SHALE	1236m	East
10118844	0.00m-1.50m BITUMEN,CONCRETE,FILL,CLAY,GRAVEL 1.50m-3.00m WEATHERED SANDSTONE,SOME SILT 3.00m-4.00m IRONSTONE BANDS 4.00m-6.00m WEATHERED SANDSTONE.GRAVEL AND SILT 6.00m-7.00m AS ABOVE,WET	1304m	West
10018235	0.00m-1.50m CLAY,ORANGE,L/BROWN 1.50m-7.00m WEATHERED SANDSTONE,SOME SILT	1310m	West
10098030	0.00m-1.00m ASPHALT,GRAVEL,SAND, 1.00m-8.70m SANDSTONE,MAROON TO LIGHT BROWN,SANDY CLAY	1312m	West
10018402	0.00m-1.50m CLAY,ORANGE BROWN 1.50m-4.00m WEATHERED SANDSTONE 4.00m-5.00m WEATHERED SANDSTONE,MOIST	1325m	West
10084851	0.00m-0.50m BITUMEN,CONCRETE,FILL,CLAY BROWN 0.50m-1.50m CLAY ORANGE BROWN,STIFF,FIRM,DAMP.LOW PLASTICITY,GRAVEL 1.50m-4.00m AS ABOVE,BROWN,SOME SILT,CLAY 4.00m-5.00m AS ABOVE,MOIST	1325m	West
10095173	0.00m-0.10m ASPHALT,ROAD SURFACE 0.10m-0.20m GRAVEL 0.20m-0.30m CLAY BROWN 0.30m-1.00m CLAY BROWN ORANGE 1.00m-7.50m SANDSTONE BROWN ORANGE 7.50m-7.60m CLAY SANDY BROWN ORANGE 7.60m-8.50m SANDSTONE LIGHT BROWN	1338m	West
10098521	0.00m-1.50m ASPHALT,GRAVELSAND L/BROWN, SANDY CLAY 1.50m-8.00m SANDSTONE,BROWN ORANGE TO LIGHT GREY	1338m	West
10028503	0.00m-2.60m FILL 2.60m-3.80m CLAYEY SAND 3.80m-8.20m SAND 8.20m-10.45m CLAY	1343m	East
10024874	0.00m-3.00m FILL 3.00m-6.00m CLAYEY SAND 6.00m-8.11m SAND 8.11m-11.50m SANDY CLAY 11.50m-29.00m SHALE	1356m	East
10023695	0.00m-2.20m FILL 2.20m-35.00m ASHFIELD SHALE	1371m	East
10117269	0.00m-1.90m FILL, SANDY GRAVEL DARK,SOFT 1.90m-2.70m SILTY CLAY,RED/ORANGE,STIFF 2.70m-3.00m SILTY CLAY,RED,ORANGE,SOFT 3.00m-4.25m SILTY CLAY BEIGE,VERY MOIST,SOFT	1379m	North West
10120197	0.00m-0.40m FILL,CLAY BANDS,BROWN 0.40m-1.20m SILTY CLAY,BEIGE,HIGH PLASTICITY,FIRM 1.20m-2.50m SILTY CLAY,BEIGE,SOFT,H/PLASTICITY 2.50m-3.50m CLAY GREY,FIRM,DRY	1380m	North West
10134410	0.00m-2.00m FILL 2.00m-6.50m MEDIUM SANDY GRAVEL 6.50m-7.20m GREY SILTY CLAY WB 7.20m-8.50m MEDIUM SAND WB 8.50m-10.00m BROWN SILTY SAND WB 10.00m-12.00m GREY SHALE CLAY	1489m	East
10075606	0.00m-0.95m FILL 0.95m-2.12m BROWN PEAT & SAND 2.12m-6.00m WHITESAND (WB) 6.00m-7.00m DARK GREY CLAY	1709m	East
10026147	0.00m-0.10m FILL,BRICK 0.10m-0.15m FILL,ROADBASE 0.15m-0.30m FILL,SANDY CLAY 0.30m-0.40m CONCRETE 0.40m-0.50m CLAYEY SAND,FINE GRAINED 0.50m-1.00m CLAYEY SAND,SOME PLASTICITY CLAY 1.00m-4.00m SANDY CLAY,M/PASTICITY,BLACK	1789m	West
10040936	0.00m-0.10m FILL,BRICK 0.10m-0.15m FILL,SAND,LIGHT BROWN 0.15m-0.50m SANDY CLAY 0.50m-1.00m SANDY CLAY,HIGH PLASTICITY,BLACK	1792m	

NGIS Bore ID	Drillers Log	Distance	Direction
10026027	0.00m-0.10m FILL,BRICK 0.10m-0.15m FILL,ROADBASE 0.15m-0.50m FILL,CLAYEY SAND 0.50m-1.00m FILL, SANDY CLAY 1.00m-1.30m FILL CLAYEY SAND 1.30m-1.40m FILL,CLAYEY SAND FINE TO COARSE GRAINED 1.40m-4.50m CLAYEY SAND,BROWN,SOME PLASTICITY	1798m	West
10040924	0.00m-0.50m SAND COARSE GRAINED 0.50m-1.00m SAND VERY COARSE,GRAINED 1.00m-1.50m CLAY M/PLASTICITY,BLACK 1.50m-4.50m CLAYEY SAND,COARSE GRAINED	1809m	West
10025647	0.00m-0.10m FILL,BRICK 0.10m-0.15m FILL,SAND 0.15m-0.50m SANDY CLAY 0.50m-1.00m SANDY CLAY BROWN WHITE 1.00m-1.50m SANDY CLAY DARK BROWN 1.50m-4.00m CLAYEY SAND,COARSE GRAINED	1812m	West
10127413	0.00m-0.18m CONCRETE 0.18m-0.33m SAND,GRAVELLY CLAYEY,M/DENSE 0.33m-0.70m SAND,VERY LOOSE,MOIST 0.70m-1.50m SAND,CLAYEY,MEDIUM DENSE,MOIST,DARK BROWN 1.50m-4.00m SAND,LOOSE, VERY MOIST,BROWN 4.00m-4.50m SAND CLAYEY,MEDIUM DENSE,GREY/BROWN 4.50m-5.20m CLAY SANDY,SOFT,SATURATED,L/PLASTICITY	1849m	East
10118928	0.00m-0.18m CONCRETE 0.18m-0.90m GRAVELLY CLAYEY SAND,DENSE,MOIST 0.90m-1.60m GRAVEL SILTY,DENSE,VERY MOIST 1.60m-2.00m SAND,CLAYEY SAND,GREY,FINE GRAINED 2.00m-5.00m CLAY,SANDY,SOFT,L/PLASTICITY,SAND FINE GRAINED	1862m	East
10030548	0.00m-0.10m ASOHAL:POOR CONDITION 0.10m-1.20m FILL,SANDY GRAVEL,GREY,CLAY,SANDY 1.20m-1.50m LOAM.SANDY,FINE GRAINED,BROWN,NO ODOUR 1.50m-4.00m SAND,FINE TO MEDIUM GRAINED,WET,LOOSE	1937m	South West
10020723	0.00m-0.10m ASPHALT:POOR CONDITION,CRACKS 0.10m-1.20m FILL,SANDY GRAVEL,DRY,LOOSE 1.20m-1.60m LOAM SANDY,FINE GRAINED,BROWN,MOIST 1.60m-4.50m SAND,WITH CLAY,FINE GRAINED,BROWN,WET	1947m	South West
10025051	0.00m-0.10m ASPHALT:POOR CONDITION,CRACKS 0.10m-1.00m FILL,ROAD BASE,SOME GRAVEL 1.00m-1.50m SAND,LOAMY,BROWN,FINE GRAINED 1.50m-3.50m SAND,FINE GRAINED,MOIST, VERY LOOSE 3.50m-4.00m CLAY,HIGH CAPACITY,GREY,MINOR SAND	1961m	South West
10113345	0.00m-1.21m Topsoil 0.00m-1.21m Loam Sandy 1.21m-3.04m Sand 3.04m-4.87m Sand Slightly Silty Water Supply	1983m	South East

Geology

Burrows Ave and Railway Road, Sydenham, NSW 2044



Scale:	Data Sources: Property Boundaries & Topographic Data:	Coordinate System:	Date: 19 December 2023

Geology

Burrows Ave and Railway Road, Sydenham, NSW 2044

Geological Units

What are the Geological Units within the dataset buffer?

Unit Code	Unit Name	Description	Unit Stratigraphy	Age	Dominant Lithology	Distance
Twia	Ashfield Shale	Black to light grey shale and laminite.	\Wianamatta Group\ \Ashfield Shale\\	Middle Triassic (base) to Middle Triassic (top)	Shale	0m
Q_h	Anthropogenic deposits	Anthropocene deposits varying from large man-made clasts (concrete blocks to building demolition rubble) to quarried natural boulders, with interstitial sand-sized to clay matrix.	\Anthropogenic deposits\ \\\	Quaternary (base) to Now (top)	Anthropogenic material	39m
Q_avf	Alluvial fan deposits	Fluvially-deposited quartz-lithic sand, silt, gravel, clay.	\Alluvium\\Alluvial valley deposits\Alluvial fan deposits\	Quaternary (base) to Now (top)	Clastic sediment	44m
Tuth	Hawkesbury Sandstone	Medium- to coarse-grained quartz sandstone with minor shale and laminite lenses.	\Ungrouped Triassic units\\Hawkesbury Sandstone\\	Anisian (base) to Anisian (top)	Sandstone	294m
QH_ei	Estuarine interbarrier creek deposits	Fine- to medium-grained lithic-carbonate-quartz sand (marine-deposited), silt, clay, organic mud, peat, gravel, shell material.	\Estuarine deposits\ \Estuarine interbarrier creek deposits\\	Holocene (base) to Now (top)	Clastic sediment	585m
QH_hf	Anthropogenic deposits - fill on Quaternary deposits	Land surface raised >1m above natural level by placement of fill on undifferentiated Quaternary deposits over an extensive area.	\Anthropogenic deposits\ \Anthropogenic deposits - fill on Quaternary deposits\\	Holocene (base) to Now (top)	Anthropogenic material	628m
QH_hr	Anthropogenic deposits - reclaimed estuarine areas	Natural surface elevation raised by placement of fill over former estuarine swamps and subaqueous estuarine margins (supratidal to subtidal zone); estuarine banks and islands formed from dredge spoil.	\Anthropogenic deposits\ \Anthropogenic deposits - reclaimed estuarine areas\\	Holocene (base) to Now (top)	Anthropogenic material	883m

Linear Geological Structures

What are the Dyke, Sill, Fracture, Lineament and Vein trendlines within the dataset buffer?

Map ID	Feature Description	Map Sheet Name	Distance
3418	Dyke or vein	Sydney 1:100,000 Geological Sheet	534m

What are the Faults, Shear zones or Schist zones, Intrusive boundaries & Marker beds within the dataset buffer?

Map ID	Boundary Type	Description	Map Sheet Name	Distance
No Features				

Naturally Occurring Asbestos Potential

Burrows Ave and Railway Road, Sydenham, NSW 2044

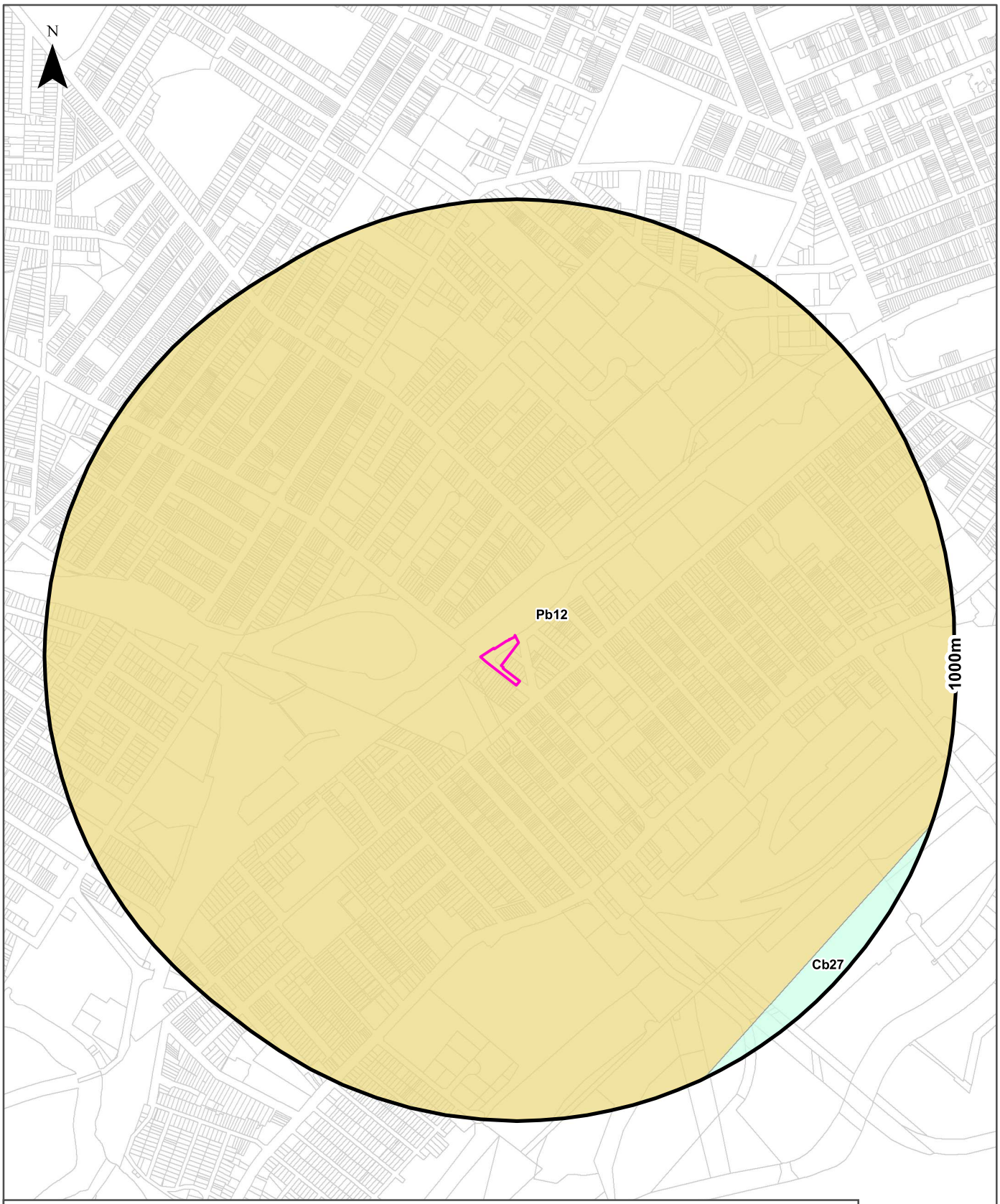
Naturally Occurring Asbestos Potential

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												

Atlas of Australian Soils

Burrows Ave and Railway Road, Sydenham, NSW 2044



Legend

- Site Boundary
- Buffer 1000m
- Property Boundary

Australian Soil Classification Orders

Anthroposol	Dermosol	Kandosol	Podosol	Tenosol	No Data
Calcarosol	Ferrosol	Kurosol	Rudosol	Vertosol	
Chromosol	Hydrosol	Organosol	Sodosol	Lake	

Scale:	Data Sources: Property Boundaries & Topographic Data:	Coordinate System:	Date: 19 December 2023

Soils

Burrows Ave and Railway Road, Sydenham, NSW 2044

Atlas of Australian Soils

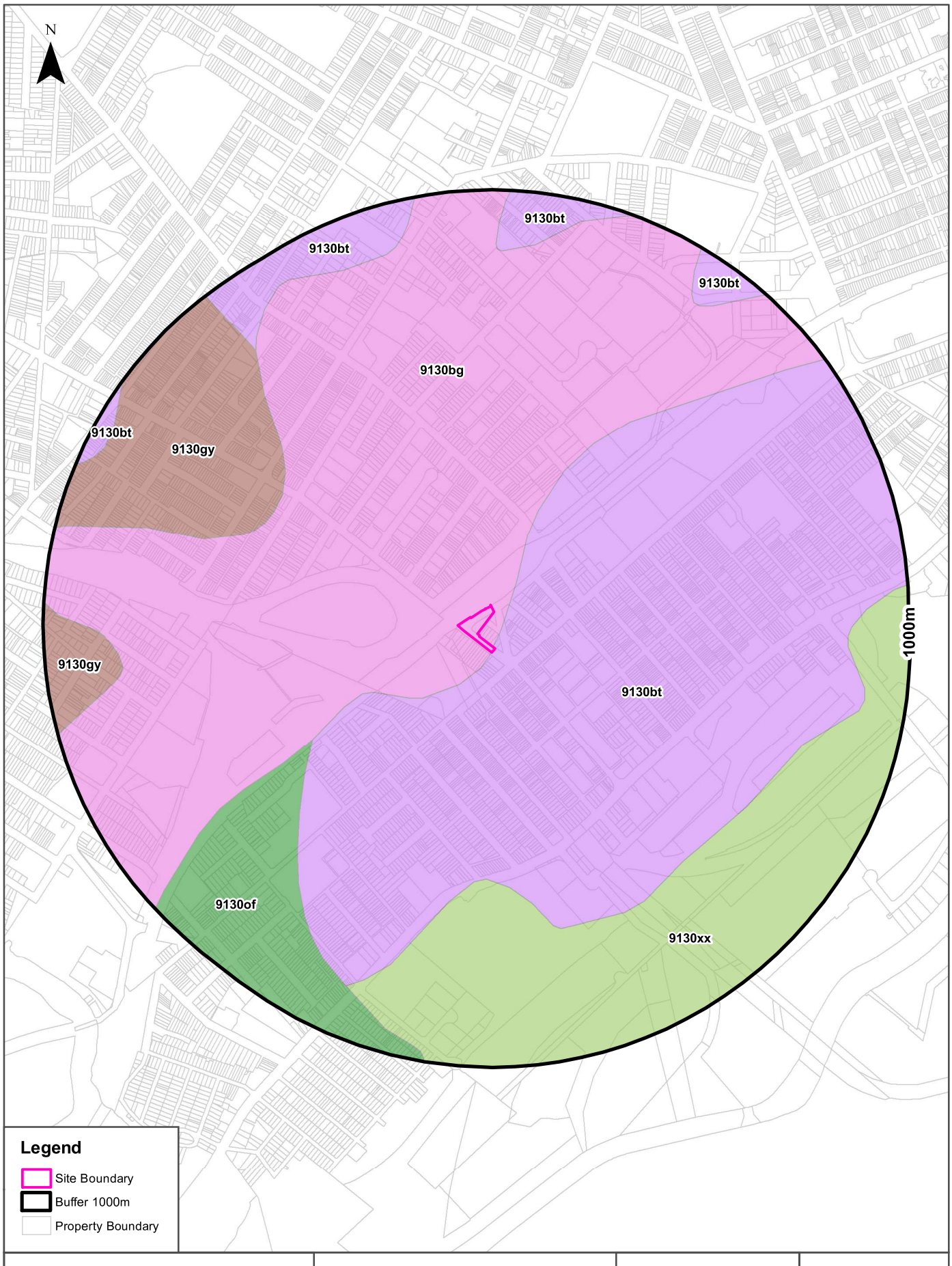
Soil mapping units and Australian Soil Classification orders within the dataset buffer:

Map Unit Code	Soil Order	Map Unit Description	Distance	Direction
Pb12	Kurosol	Gently rolling to rounded hilly country with some steep slopes and broad valleys: chief soils are hard acidic red soils (Dr2.21) with hard neutral and acidic yellow mottled soils (Dy3.42 and Dy3.41) on lower slopes and in valleys. Associated are small areas of various soils including (Gn3.54) on some ridges, (Dr3.31) on some slopes; (Dr2.23) in saddles and some mid-slope positions, and some low- lying swampy areas of (Uf6) soils and (Uc1.2) soils with peaty surfaces. Small areas of other soils such as (Db1.2) are likely throughout.	0m	On-site
Cb27	Podosol	Coastal sand plains and dunes, lagoons, and swampy areas: chief soils are leached sands (Uc2.3 and Uc2.2). Associated are dunes of siliceous sands (Uc1.2) and/or calcareous sands (Uc1.l) fringing the coastline; and swampy areas of (Uf6) soils and (Uc1.2) soils with peaty surfaces. Unit Cb27 has similarities with units Cb28 and Ca6.	921m	South East

Atlas of Australian Soils Data Source: CSIRO

Soil Landscapes of Central and Eastern NSW

Burrows Ave and Railway Road, Sydenham, NSW 2044



Scale:	Data Sources: Property Boundaries & Topographic Data:	Coordinate System:	Date: 19 December 2023

Soils

Burrows Ave and Railway Road, Sydenham, NSW 2044

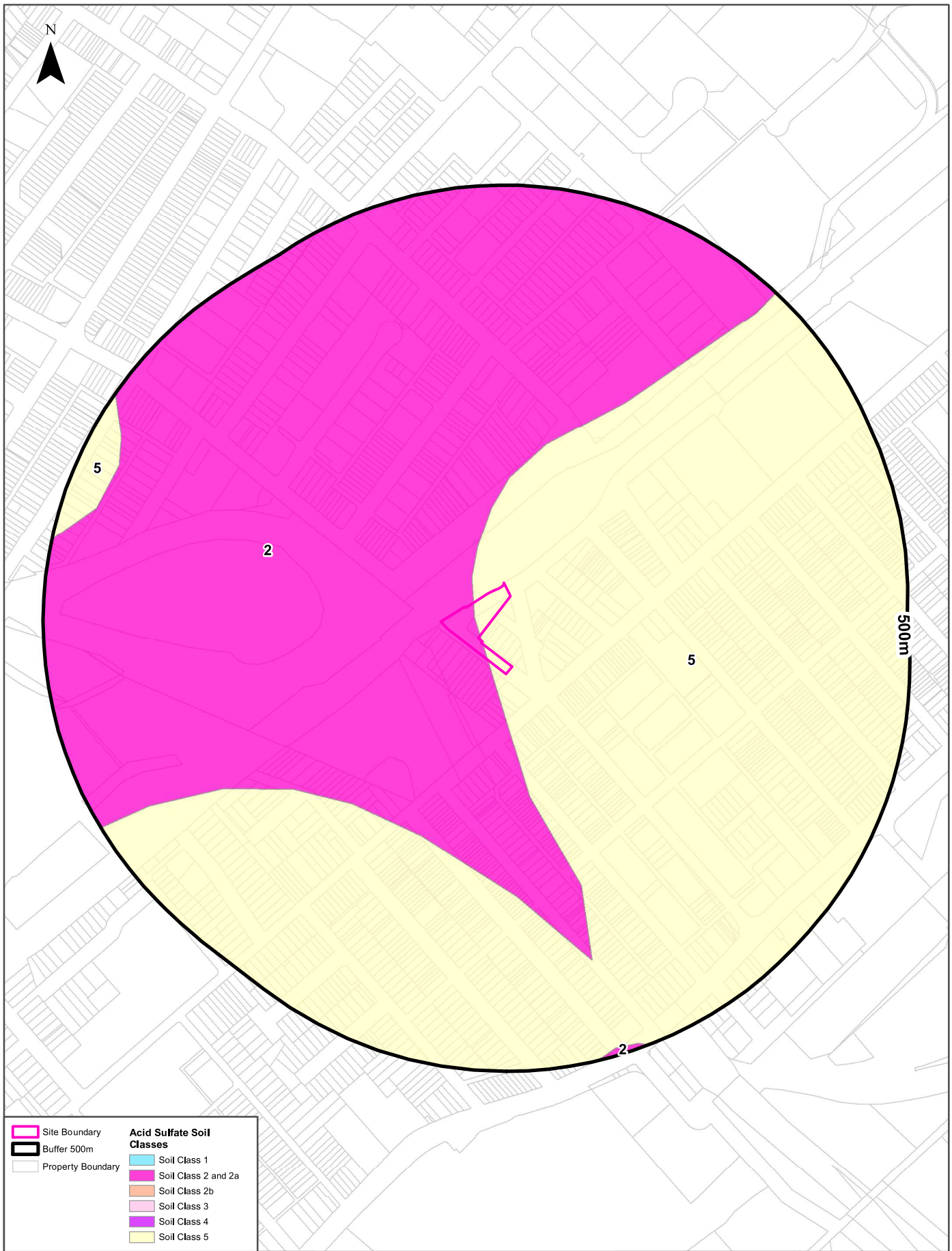
Soil Landscapes of Central and Eastern NSW

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

Soil Code	Name	Distance	Direction
9130bg	Birrong	0m	On-site
9130bt	Blacktown	0m	On-site
9130of	Oxford Falls	445m	South West
9130gy	Gymea	521m	North West
9130xx	Disturbed Terrain	546m	South East

Acid Sulfate Soils

Burrows Ave and Railway Road, Sydenham, NSW 2044



Scale:	Data Sources: Property Boundaries & Topographic Data:	Coordinate System:	Date: 19 December 2023

Acid Sulfate Soils

Burrows Ave and Railway Road, Sydenham, NSW 2044

Environmental Planning Instrument - Acid Sulfate Soils

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

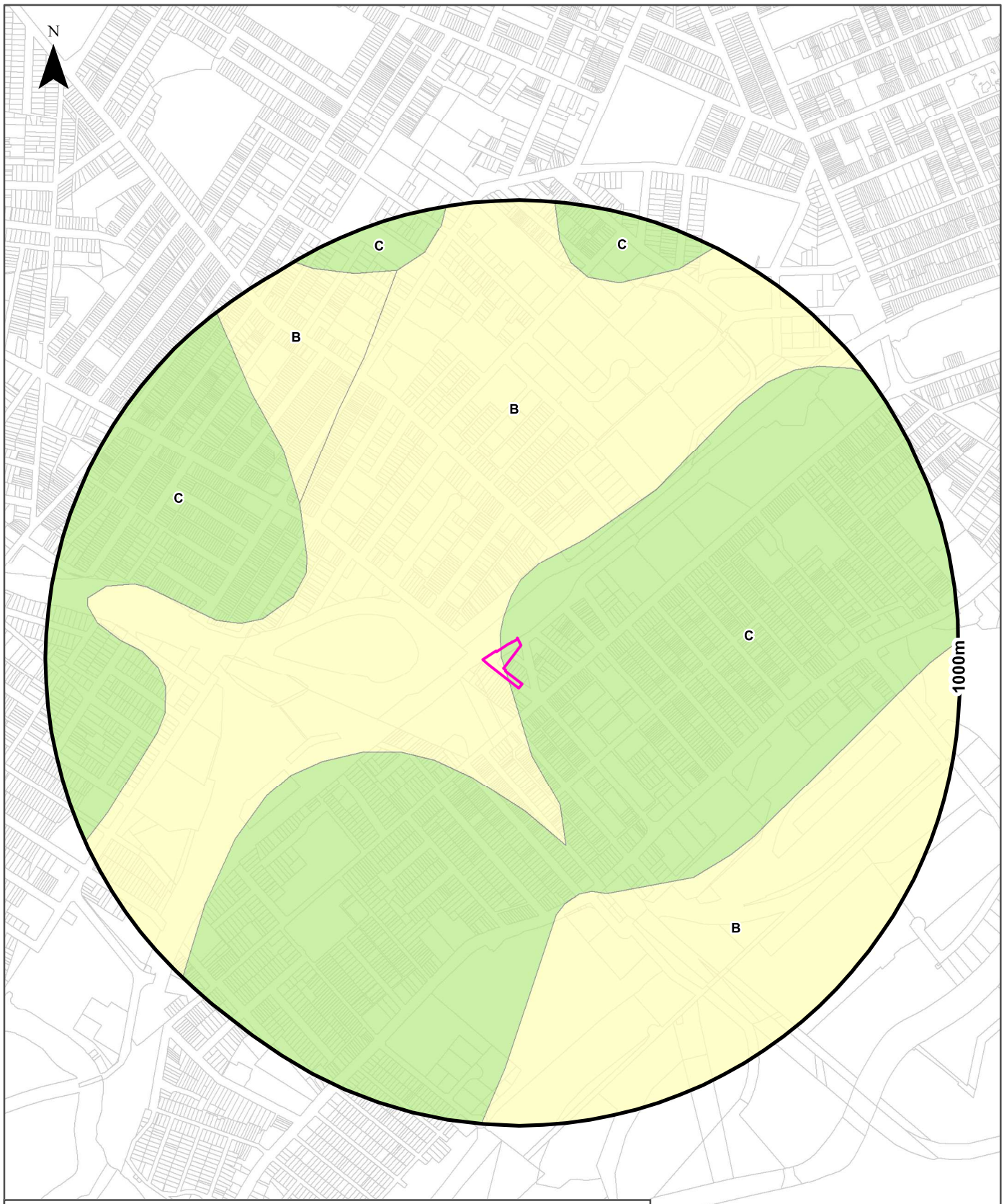
Soil Class	Description	EPI Name
2	Works below natural ground surface present an environmental risk; Works by which the watertable is likely to be lowered present an environmental risk	Inner West Local Environmental Plan 2022

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

Soil Class	Description	EPI Name	Distance	Direction
N/A				

Atlas of Australian Acid Sulfate Soils

Burrows Ave and Railway Road, Sydenham, NSW 2044



Legend

- Site Boundary
- Buffer 1000m
- Property Boundary

Probability of occurrence of Acid Sulfate Soils

- A. High (>70%)
- B. Low (6-70%)
- C. Extremely Low (1-5%)
- D. No Chance (0%)
- No Data

Scale:	Data Sources: Property Boundaries & Topographic Data:	Coordinate System:	Date: 19December 2023

Acid Sulfate Soils

Burrows Ave and Railway Road, Sydenham, NSW 2044

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.	0m	On-site

Dryland Salinity

Burrows Ave and Railway Road, Sydenham, NSW 2044

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		

Mining

Burrows Ave and Railway Road, Sydenham, NSW 2044

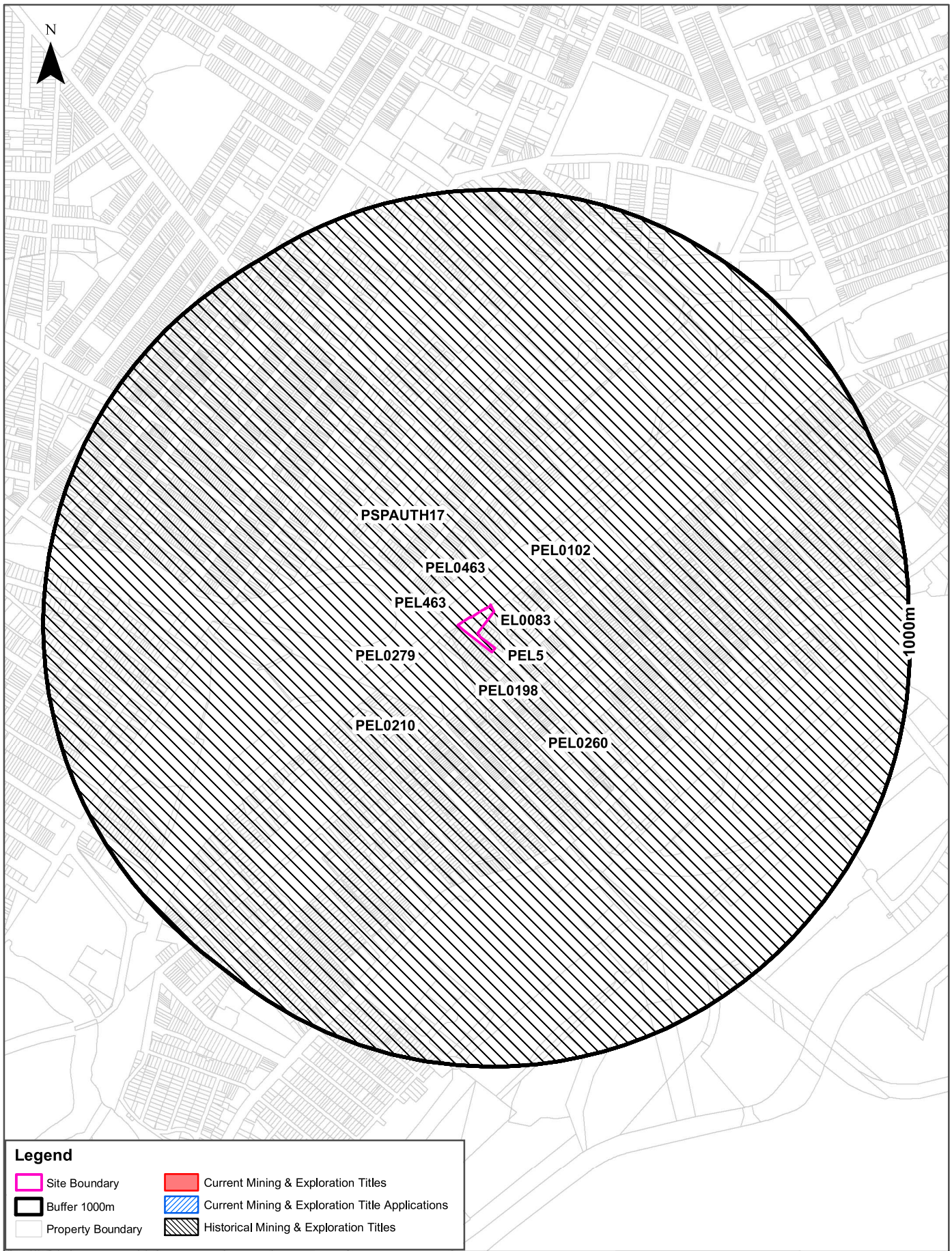
Mining Subsidence Districts

Mining Subsidence Districts within the dataset buffer:

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

Mining & Exploration Titles

Burrows Ave and Railway Road, Sydenham, NSW 2044



Scale:	Data Sources: Property Boundaries & Topographic Data:	Coordinate System:	Date: 19 December 2023

Mining

Burrows Ave and Railway Road, Sydenham, NSW 2044

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 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						

Mining

Burrows Ave and Railway Road, Sydenham, NSW 2044

Historical Mining & Exploration Titles

Historical Mining & Exploration Titles within the dataset buffer:

Title Ref	Holder	Start Date	End Date	Resource	Minerals	Dist	Dir
PEL0198	JOHN STREVENS (TERRIGAL) NL			PETROLEUM	Petroleum	0m	On-site
PEL0260	NORTH BULLI COLLIERIES PTY LTD, AGL PETROLEUM OPERATIONS PTY LTD, THE AUSTRALIAN GAS LIGHT CO.	19810909	19930803	PETROLEUM	Petroleum	0m	On-site
EL0083	CONTINENTAL OIL CO OF AUSTRALIA LIMITED	19670201	19680201	MINERALS		0m	On-site
PEL0279	THE ELECTRICITY COMMISSION OF NSW (TRADING AS PACIFIC POWER)	19910504	19931111	PETROLEUM	Petroleum	0m	On-site
PEL0463	DART ENERGY (APOLLO) PTY LTD	20091010	20150603	PETROLEUM	Petroleum	0m	On-site
PSPAUTH17	MACQUARIE ENERGY PTY LTD	20070803	20080703	PETROLEUM	Petroleum	0m	On-site
PEL0210	THE AUSTRALIAN GAS LIGHT COMPANY (AGL), NORTH BULLI COLLIERIES PTY LTD			PETROLEUM	Petroleum	0m	On-site
PEL0102	AUSTRALIAN OIL AND GAS CORPORATION LTD			PETROLEUM	Petroleum	0m	On-site
PEL463	DART ENERGY (APOLLO) PTY LTD	20081022	20130227	MINERALS		0m	On-site
PEL5	AGL UPSTREAM INVESTMENTS PTY LIMITED	19931111	20011210	MINERALS		0m	On-site

State Environmental Planning Policy

Burrows Ave and Railway Road, Sydenham, NSW 2044

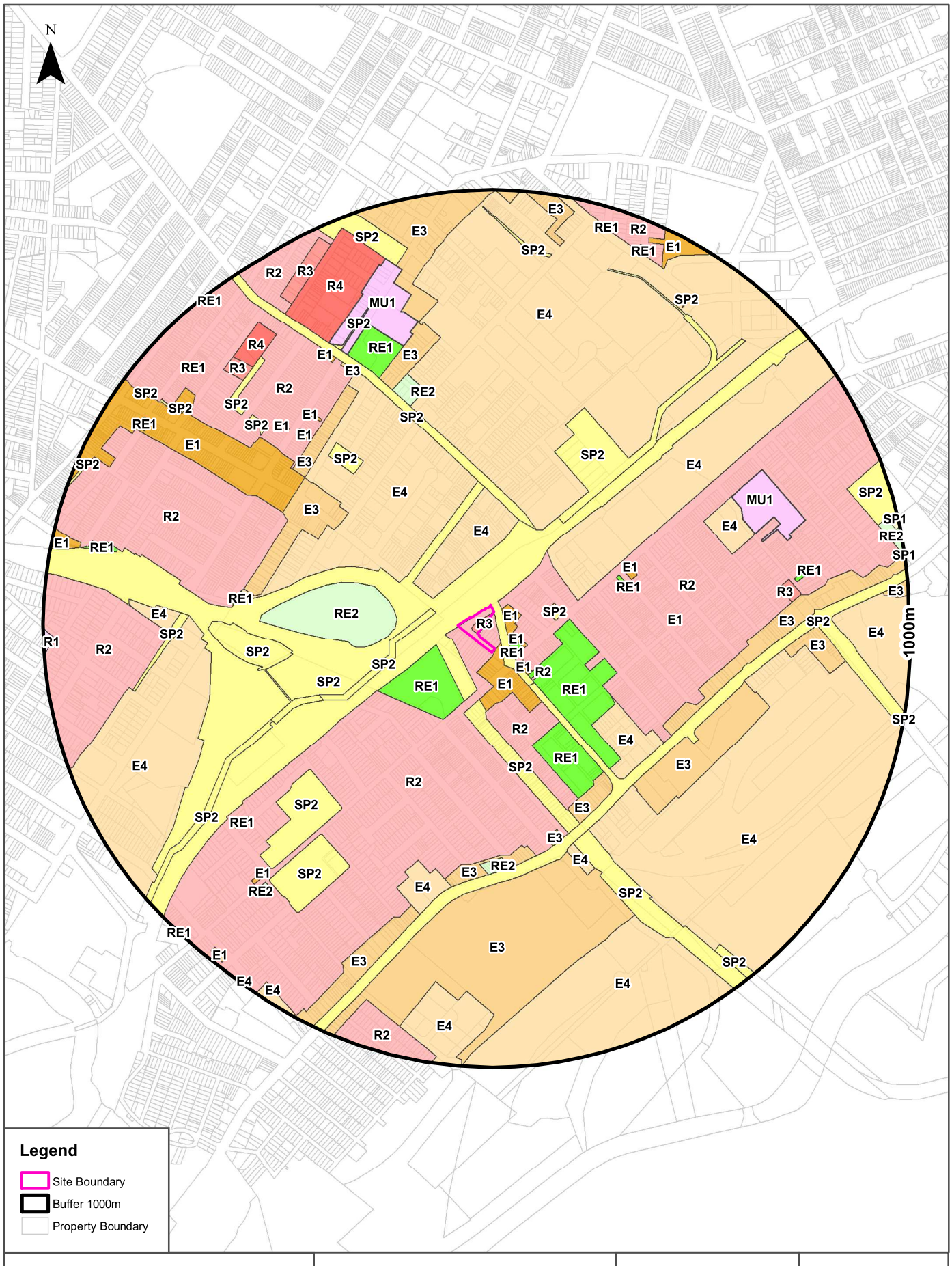
State Significant Precincts

What SEPP State Significant Precincts exist within the dataset buffer?

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

EPI Planning Zones

Burrows Ave and Railway Road, Sydenham, NSW 2044



Scale:	Data Sources: Property Boundaries & Topographic Data:	Coordinate System:	Date: 19 December 2023

Environmental Planning Instrument

Burrows Ave and Railway Road, Sydenham, NSW 2044

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		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	0m	On-site
SP2	Infrastructure	Rail Infrastructure Facilities	Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	0m	On-site
R3	Medium Density Residential		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	0m	On-site
E1	Local Centre		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	2m	South East
R2	Low Density Residential		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	19m	East
E1	Local Centre		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	20m	East
RE1	Public Recreation		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	36m	South East
E1	Local Centre		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	48m	East
SP2	Infrastructure	Drainage	Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	61m	West
E1	Local Centre		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	68m	South East
RE1	Public Recreation		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	70m	South West
E4	General Industrial		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	88m	North
RE1	Public Recreation		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	101m	South East
R2	Low Density Residential		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	107m	South East
R2	Low Density Residential		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	113m	South East
SP2	Infrastructure	Rail Infrastructure Facilities	Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	115m	South
SP2	Infrastructure	Classified Road	Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	118m	South East
SP2	Infrastructure	Air Transport Facilities	Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	123m	East
RE2	Private Recreation		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map	147m	West
E4	General Industrial		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map No 1	171m	North West

Zone	Description	Purpose	EPI Name	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
E4	General Industrial		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	176m	North East
E4	General Industrial		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	212m	North
RE1	Public Recreation		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	232m	South East
SP2	Infrastructure	Stormwater Management Systems	Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	263m	North East
E4	General Industrial		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	295m	South East
RE1	Public Recreation		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	306m	East
E1	Local Centre		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	328m	East
SP2	Infrastructure	Stormwater Management Systems	Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	371m	West
E3	Productivity Support		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	375m	North West
E3	Productivity Support		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	393m	South East
E1	Local Centre		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	422m	East
SP2	Infrastructure	Electricity Transmission and Distribution	Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	443m	North West
E3	Productivity Support		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	443m	East
E3	Productivity Support		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	454m	South
E4	General Industrial		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	465m	South East
E3	Productivity Support		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	465m	South East
E3	Productivity Support		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	469m	South
R2	Low Density Residential		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	482m	West
SP2	Infrastructure	Rail Infrastructure Facilities	Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	485m	South East
RE2	Private Recreation		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	495m	South
SP2	Infrastructure	Educational Establishments	Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	497m	South West
E4	General Industrial		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	499m	South East
RE1	Public Recreation		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map	499m	West
E1	Local Centre		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map No 1	502m	North West

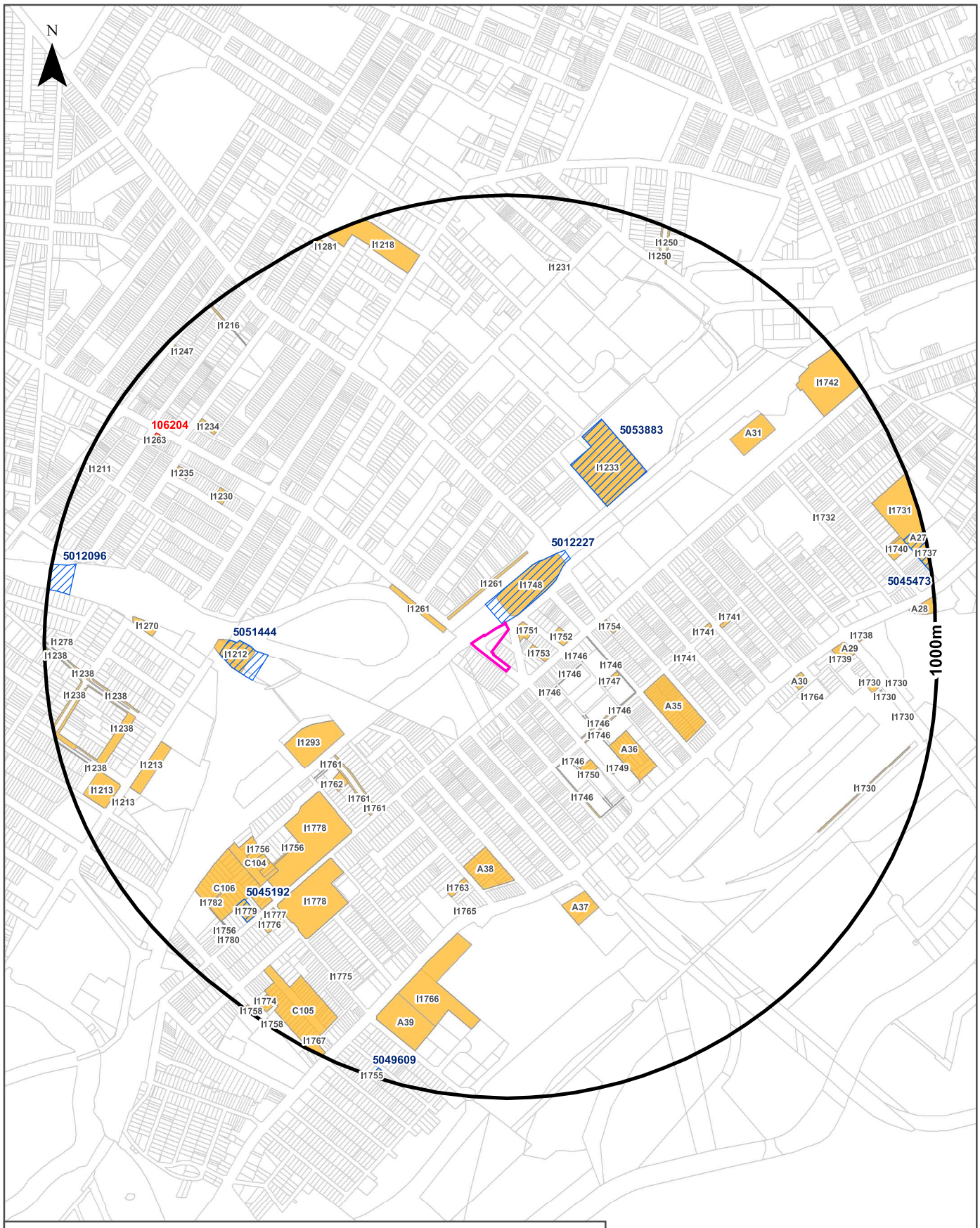
Zone	Description	Purpose	EPI Name	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
SP2	Infrastructure	Drainage	Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	502m	South West
E3	Productivity Support		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	512m	South
E3	Productivity Support		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	513m	North West
RE2	Private Recreation		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	518m	North
E4	General Industrial		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	531m	South
R2	Low Density Residential		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	548m	North West
E4	General Industrial		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	550m	East
E3	Productivity Support		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	571m	North
E1	Local Centre		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	573m	North West
E1	Local Centre		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	593m	North West
E4	General Industrial		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	597m	West
SP2	Infrastructure	Educational Establishments	Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	597m	South West
RE1	Public Recreation		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	610m	North
E1	Local Centre		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	621m	North West
MU1	Mixed Use		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	634m	North East
E3	Productivity Support		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	639m	South
SP2	Infrastructure	Stormwater Management Systems	Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	648m	West
E3	Productivity Support		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	653m	North West
MU1	Mixed Use		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	657m	North
SP2	Infrastructure	Stormwater Management Systems	Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	659m	North West
E4	General Industrial		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	668m	West
RE1	Public Recreation		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	685m	South West
R3	Medium Density Residential		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map No 1	689m	East
E3	Productivity Support		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map No 1	695m	East

Zone	Description	Purpose	EPI Name	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
E1	Local Centre		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	697m	North West
R2	Low Density Residential		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	698m	West
E3	Productivity Support		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	705m	North
SP2	Infrastructure	Emergency Services Facilities	Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	713m	North West
E4	General Industrial		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	719m	South
RE1	Public Recreation		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	727m	East
SP2	Infrastructure	Stormwater Management Systems	Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	728m	North West
R4	High Density Residential		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	743m	North West
E1	Local Centre		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	757m	South West
RE2	Private Recreation		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	772m	South West
R3	Medium Density Residential		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	785m	North West
R4	High Density Residential		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	795m	North West
E4	General Industrial		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	804m	South
E4	General Industrial		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	814m	East
SP2	Infrastructure	Local Road	Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	839m	North West
RE1	Public Recreation		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	839m	West
SP2	Infrastructure	Educational Establishments	Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	849m	North
SP2	Infrastructure	Stormwater Management Systems	Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	850m	North
SP2	Infrastructure	Local Road	Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	853m	North East
R2	Low Density Residential		Inner West Local Environmental Plan 2022	05/05/2023	05/05/2023	05/05/2023	Amendment No 2	858m	North
R3	Medium Density Residential		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	870m	North West
RE1	Public Recreation		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	876m	North West
RE1	Public Recreation		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map A d	887m	North West
R2	Low Density Residential		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map No 1	889m	South

Zone	Description	Purpose	EPI Name	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
SP2	Infrastructure	Air Transport Facilities	Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	891m	South East
SP2	Infrastructure	Educational Establishments	Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	899m	East
E1	Local Centre		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	911m	North East
SP2	Infrastructure	Local Road	Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	913m	North West
RE1	Public Recreation		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	919m	North East
E3	Productivity Support		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	937m	East
RE1	Public Recreation		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	945m	North
RE2	Private Recreation		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	948m	East
E4	General Industrial		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	961m	South West
E1	Local Centre		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	969m	South West
SP2	Infrastructure	Local Road	Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	970m	West
R1	General Residential		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	971m	West
SP1	Special Activities	Cemetery	Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	978m	East
RE1	Public Recreation		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	983m	North West
RE1	Public Recreation		Inner West Local Environmental Plan 2022	28/04/2023	28/04/2023	05/05/2023	Map Amendment No 1	998m	South West
SP2	Infrastructure	Classified Road	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	08/09/2023		999m	East

Heritage Items

Burrows Ave and Railway Road, Sydenham, NSW 2044



Legend

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

Scale:	Data Sources: Property Boundaries & Topographic Data:	Coordinate System:	Date: 19 December 2023

Heritage

Burrows Ave and Railway Road, Sydenham, NSW 2044

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
106204	Marrickville Post Office	274A Marrickville Rd, Marrickville NSW	1/12/025/0027	Historic	Listed place	22/08/2012	877m	North West

National Heritage List

What are the National Heritage List Items located within the dataset buffer?
Note. Please click on Place Id to activate a hyperlink to online website.

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

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
5012227	Sydenham Railway Station group	Illawarra railway, Sydenham	INNER WEST	02/04/1999	01254	2413	0m	North East
5053883	Sydenham Pit & Drainage Pumping Station 1	Garden Street, Marrickville	INNER WEST	15/11/2002	01644	2057	362m	North East
5051444	Sewage Pumping Station 271	Carrington Road, Marrickville	INNER WEST	18/11/1999	01342	2031	476m	West
5045192	Milford Haven	125 Unwins Bridge Road Tempe	INNER WEST	02/04/1999	00518	1349	800m	South West
5012096	Marrickville Railway Station group	Bankstown railway, Marrickville	INNER WEST	02/04/1999	01186	2389	944m	West
5045473	St Peter's Anglican Church	187-209 Princes Highway St Peters	INNER WEST	02/04/1999	00032	181	948m	East
5049609	Timber Slab Cottage	44 Barden Street Tempe	INNER WEST	29/09/2000	01412	3119	976m	South

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
I1751	General Gordon Hotel, including interiors	Item - General	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	20m	North East
I1748	Sydenham Railway Station group, including interiors	Item - General	State	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	20m	North East
I1753	Gothic and italianate houseCarthness, including interiors	Item - General	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	62m	East
I1261	Brick retaining walls	Item - General	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	67m	North West
I1261	Brick retaining walls	Item - General	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	77m	North
I1752	St Peters Town Hall, including interiors	Item - General	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	101m	East
I1746	Brick kerb and sandstone kerb guttering	Item - General	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	106m	South East
I1746	Brick kerb and sandstone kerb guttering	Item - General	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	120m	East
I1746	Brick kerb and sandstone kerb guttering	Item - General	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	150m	East
I1746	Brick kerb and sandstone kerb guttering	Item - General	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	182m	East
I1746	Brick kerb and sandstone kerb guttering	Item - General	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	204m	South East
I1747	Victorian filigree terrace and engineering workshop at rear, including interiors	Item - General	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	219m	East
I1754	Electricity substation No 43	Item - General	State	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	222m	East
I1746	Brick kerb and sandstone kerb guttering	Item - General	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	245m	South East
I1746	Brick kerb and sandstone kerb guttering	Item - General	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	246m	South East
I1746	Brick kerb and sandstone kerb guttering	Item - General	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	253m	South East
I1750	Former St Mary and St Mina Coptic Orthodox Church	Item - General	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	283m	South East
A36	Tivoli Archaeological site	Item - Archaeological	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	295m	South East
A35	The Grove Archaeological site	Item - Archaeological	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	318m	East
I1749	Victorian filigree style sandstone faced residence, including interiors	Item - General	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	338m	South East
I1233	Flood storage reserve and brick drain (Sydenham Pit and Drainage Pumping Station 1)	Item - General	State	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	361m	North East
I1293	Marrickville (Meeks Road) Railway substation	Item - General	State	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	364m	South West

Map Id	Name	Classification	Significance	EPI Name	Published Date	Commenced Date	Currency Date	Distance	Direction
I1741	Group of retail premises, including interiors	Item - General	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	396m	East
I1761	Brick paving	Item - General	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	411m	South West
A38	Marionette Archaeological site	Item - Archaeological	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	414m	South
I1761	Brick paving	Item - General	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	426m	South West
I1762	Victorian villaLymerston, including interiors	Item - General	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	432m	South West
I1741	Group of retail premises, including interiors	Item - General	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	446m	East
I1763	Victorian Italianate style villaGlenora	Item - General	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	494m	South
I1741	Group of retail premises, including interiors	Item - General	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	494m	East
I1778	Tempe Public and High Schools, including interiors	Item - General	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	497m	South West
I1212	Sewage pumping station 271, chimney stack and two storey residence, including interiors	Item - General	State	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	506m	West
A37	Bellevue Archaeological site	Item - Archaeological	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	546m	South
I1765	Electricity substation No 200	Item - General	State	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	564m	South
I1778	Tempe Public and High Schools, including interiors	Item - General	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	597m	South West
I1756	Group of stone houses and stone quarry, including interiors	Item - General	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	616m	South West
I1766	Westpac Stores Department and Penfold Wine Cellars (former) including interiors	Item - General	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	623m	South
A30	Nun-Cotnook Archaeological site	Item - Archaeological	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	658m	East
I1764	Potential archaeological site (including sandstone wall facing Berne Street)	Item - General	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	658m	East
I1230	Group of Federation Queen Anne style terrace houses, including interiors	Item - General	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	667m	North West
A31	Silverleigh Archaeological site	Item - Archaeological	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	678m	North East
C104	Collins Street Heritage	Conservation	Local	Inner West Local Environmental Plan	12/08/2022	12/08/2022	13/01/2023	681m	South West
I1756	Group of stone houses and stone quarry, including	Item - General	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	691m	South West

Map Id	Name	Classification	Significance	EPI Name	Published Date	Commenced Date	Currency Date	Distance	Direction
I1270	Stone house, including interiors	Item - General	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	731m	West
I1213	Carrington Road industrial precinctselect industrial facades	Item - General	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	743m	West
C106	Wells Avenue Heritage Conservation Area	Conservation Area - General	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	744m	South West
I1739	Southern Cross Hotel, including interiors	Item - General	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	754m	East
A29	Heathcote Archaeological site	Item - Archaeological	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	754m	East
I1235	Former Marrickville Police Station, including interiors	Item - General	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	770m	North West
I1777	Former Church of Christ, now Siaolo (Tongan) Congregation Uniting Church, including interiors	Item - General	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	772m	South West
I1732	Federation warehouse, including interiors	Item - General	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	775m	East
I1776	Victorian Villa - "Hurlingham", including interiors	Item - General	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	775m	South West
I1234	Victorian style residenceOurimba h, including interiors	Item - General	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	776m	North West
I1782	Quarry Cliff Face Wells Avenue and Edgar Street	Item - General	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	793m	South West
I1238	Stonewalling, terracing and street planting	Item - General	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	793m	West
A39	The Poffle Archaeological site	Item - Archaeological	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	795m	South
I1779	Milford Haven - Colonial bungalow, including interiors	Item - General	State	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	800m	South West
I1238	Stonewalling, terracing and street planting	Item - General	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	804m	West
I1775	Electricty substation No 36 (front portion of site only - excludes rear lot)	Item - General	State	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	807m	South West
I1238	Stonewalling, terracing and street planting	Item - General	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	814m	West
I1738	Service garage, including interiors	Item - General	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	814m	East
I1730	Cooks River container terminal	Item - General	State	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	816m	East
I1730	Cooks River container terminal	Item - General	State	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	833m	East
I1231	Electricty substation No 42	Item - General	State	Inner West Local Environmental Plan	12/08/2022	12/08/2022	13/01/2023	835m	North
	School, including interiors			Environmental Plan 2022					

Map Id	Name	Classification	Significance	EPI Name	Published Date	Commenced Date	Currency Date	Distance	Direction
C105	Stanley Street Heritage Conservation Area	Conservation Area - General	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	859m	South West
I1730	Cooks River container terminal	Item - General	State	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	867m	East
I1263	Former Marrickville Post Office, including interiors	Item - General	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	873m	North West
I1216	Brick drain	Item - General	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	873m	North West
I1742	Waugh & Josephson industrial buildings formerInter-war Functionalist Showroom and offices and workshop, including interiors	Item - General	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	878m	North East
I1730	Cooks River container terminal	Item - General	State	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	878m	East
I1756	Group of stone houses and stone quarry, including interiors	Item - General	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	882m	South West
I1213	Carrington Road industrial precinctselect industrial facades	Item - General	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	883m	South West
I1213	Carrington Road industrial precinctselect industrial facades	Item - General	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	886m	West
I1780	Quarry Masters residence, including interiors	Item - General	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	888m	South West
I1731	St Peters Public School, including interiors	Item - General	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	897m	East
I1740	Victorian filigree style mansionClaraville, including interiors	Item - General	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	900m	East
I1238	Stonewalling, terracing and street planting	Item - General	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	918m	West
I1250	Brick paving	Item - General	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	919m	North East
I1250	Brick paving	Item - General	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	922m	North East
I1730	Cooks River container terminal	Item - General	State	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	924m	East
A28	Petersleigh Archaeological site	Item - Archaeological	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	937m	East
I1774	Group of 3 War Widows HousesPozieres (No 4), Coramie (No 6) and Messines (No 8), including interiors	Item - General	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	940m	South West
I1737	S P ' Ch h of England, including interiors	I G I	S	I W L I Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	948	E
I1247	house, including interiors	Item - General	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	953m	North West

Map Id	Name	Classification	Significance	EPI Name	Published Date	Commenced Date	Currency Date	Distance	Direction
I1211	Electricity substation No 151 (whole site)	Item - General	State	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	957m	North West
I1238	Stonewalling, terracing and street planting	Item - General	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	969m	West
I1281	Victorian italianate style mansionLauraville, including interiors	Item - General	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	970m	North West
I1767	Tempe Hotel, including interiors	Item - General	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	971m	South West
I1755	Timber slab cottage, including interiors	Item - General	State	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	976m	South
A27	St Peters Church England and Cemetery	Item - Archaeological	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	978m	East
I1758	Tempe Bus Depot site, including interiors	Item - General	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	987m	South West
I1278	Sandstone stonemasons cottages, including interiors	Item - General	Local	Inner West Local Environmental Plan 2022	12/08/2022	12/08/2022	13/01/2023	991m	West

Natural Hazards

Burrows Ave and Railway Road, Sydenham, NSW 2044

Bush Fire Prone Land

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

Bush Fire Prone Land Category	Distance	Direction
No records in buffer		

Ecological Constraints - Vegetation & Ramsar Wetlands

Burrows Ave and Railway Road, Sydenham, NSW 2044

- Site Boundary
- ReportBuffer
- Property Boundary
- Ramsar Wetland

Native Vegetation

- Alpine Complex
- Arid Shrublands (Acacia sub-formation)
- Arid Shrublands (Chenopod sub-formation)
- Dry Sclerophyll Forests (Shrub/grass sub-formation)
- Dry Sclerophyll Forests (Shrubby sub-formation)
- Forested Wetlands
- Freshwater Wetlands
- Grasslands
- Grassy Woodlands
- Heathlands
- Rainforests
- Saline Wetlands
- Semi-arid Woodlands (Grassy sub-formation)
- Semi-arid Woodlands (Shrubby sub-formation)
- Wet Sclerophyll Forests (Grassy sub-formation)
- Wet Sclerophyll Forests (Shrubby sub-formation)
- Non vegetated
- Unattributed
- Not classified
- Other

Scale:	Data Sources: Property Boundaries & Topographic Data:	Coordinate System:	Date: 19 December 2023

Ecological Constraints

Burrows Ave and Railway Road, Sydenham, NSW 2044

Native Vegetation

What native vegetation exists within the dataset buffer?

Map ID	Vegetation Formation	Plant Community Type and Vegetation Formation	Vegetation Class	Dist	Dir
3396556	Not classified	(Not classified) Not classified	Not classified	0m	On-site
1923595	Freshwater Wetlands	(Freshwater Wetlands) Estuarine Reedland	Coastal Freshwater Lagoons	781m	South East

Ramsar Wetlands

What Ramsar Wetland areas exist within the dataset buffer?

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

Ecological Constraints

Burrows Ave and Railway Road, Sydenham, NSW 2044

Groundwater Dependent Ecosystems Atlas

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

Ecological Constraints

Burrows Ave and Railway Road, Sydenham, NSW 2044

Inflow Dependent Ecosystems Likelihood

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

Ecological Constraints

Burrows Ave and Railway Road, Sydenham, NSW 2044

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	Crinia tinnula	Wallum Froglet	Vulnerable	Not Sensitive	Not Listed	
Animalia	Amphibia	Litoria aurea	Green and Golden Bell Frog	Endangered	Not Sensitive	Vulnerable	
Animalia	Amphibia	Pseudophryne australis	Red-crowned Toadlet	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Actitis hypoleucos	Common Sandpiper	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Anseranas semipalmata	Magpie Goose	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Anthochaera phrygia	Regent Honeyeater	Critically Endangered	Category 2	Critically Endangered	
Animalia	Aves	Apus pacificus	Fork-tailed Swift	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Ardenna carneipes	Flesh-footed Shearwater	Vulnerable	Not Sensitive	Not Listed	ROKAMBA;JAMBA
Animalia	Aves	Ardenna grisea	Sooty Shearwater	Not Listed	Not Sensitive	Not Listed	JAMBA
Animalia	Aves	Ardenna pacifica	Wedge-tailed Shearwater	Not Listed	Not Sensitive	Not Listed	JAMBA
Animalia	Aves	Ardenna tenuirostris	Short-tailed Shearwater	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Arenaria interpres	Ruddy Turnstone	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Artamus cyanopterus cyanopterus	Dusky Woodswallow	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Botaurus poiciloptilus	Australasian Bittern	Endangered	Not Sensitive	Endangered	
Animalia	Aves	Burhinus grallarius	Bush Stone-curlew	Endangered	Not Sensitive	Not Listed	
Animalia	Aves	Calidris acuminata	Sharp-tailed Sandpiper	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Calidris alba	Sanderling	Vulnerable	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Calidris canutus	Red Knot	Not Listed	Not Sensitive	Endangered	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Calidris ferruginea	Curlew Sandpiper	Endangered	Not Sensitive	Critically Endangered	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Calidris melanotos	Pectoral Sandpiper	Not Listed	Not Sensitive	Not Listed	ROKAMBA;JAMBA
Animalia	Aves	Calidris ruficollis	Red-necked Stint	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Calidris tenuirostris	Great Knot	Vulnerable	Not Sensitive	Critically Endangered	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Callocephalon fimbriatum	Gang-gang Cockatoo	Vulnerable	Category 3	Endangered	
Animalia	Aves	Calonectris leucomelas	Streaked Shearwater	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Calyptorhynchus banksii banksii	Red-tailed Black- subspecies)	Critically Endangered	Category 2	Not Listed	
		Calyptorhynchus banksii samueli	Red-tailed Black-Cockatoo (inland subspecies)		Category 2	Not Listed	

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Animalia	Aves	Calyptorhynchus lathami lathami	South-eastern Glossy Black-Cockatoo	Vulnerable	Category 2	Vulnerable	
Animalia	Aves	Certhionyx variegatus	Pied Honeyeater	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Charadrius leschenaultii	Greater Sand-plover	Vulnerable	Not Sensitive	Vulnerable	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Charadrius mongolus	Lesser Sand-plover	Vulnerable	Not Sensitive	Endangered	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Charadrius veredus	Oriental Plover	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Chlidonias leucopterus	White-winged Black Tern	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
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	Cuculus optatus	Oriental Cuckoo	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Diomedea exulans	Wandering Albatross	Endangered	Not Sensitive	Endangered	
Animalia	Aves	Epthianura albifrons	White-fronted Chat	Endangered Population, Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Erythrotriorchis radiatus	Red Goshawk	Endangered	Category 2	Endangered	
Animalia	Aves	Esacus magnirostris	Beach Stone-curlew	Critically Endangered	Not Sensitive	Not Listed	
Animalia	Aves	Fregata ariel	Lesser Frigatebird	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Gallinago hardwickii	Latham's Snipe	Not Listed	Not Sensitive	Not Listed	ROKAMBA;JAMBA
Animalia	Aves	Glossopsitta pusilla	Little Lorikeet	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Grantiella picta	Painted Honeyeater	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Aves	Gygis alba	White Tern	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Haematopus fuliginosus	Sooty Oystercatcher	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Haematopus longirostris	Pied Oystercatcher	Endangered	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 Needletail	Not Listed	Not Sensitive	Vulnerable	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Hydroprogne caspia	Caspian Tern	Not Listed	Not Sensitive	Not Listed	JAMBA
Animalia	Aves	Ixobrychus flavicollis	Black Bittern	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Lathamus discolor	Swift Parrot	Endangered	Not Sensitive	Critically Endangered	
Animalia	Aves	Limicola falcinellus	Broad-billed Sandpiper	Vulnerable	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Limosa lapponica	Bar-tailed Godwit	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Limosa limosa	Black-tailed Godwit	Vulnerable	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Lophochroa leadbeateri	Major Mitchell's Cockatoo	Vulnerable	Category 2	Not Listed	
		Lophoictinia isura	Square-tailed Kite		Category 3	Not Listed	
		Macronectes	Southern Giant	Endangered	Not Sensitive	Endangered	
		Macronectes halli	Northern Giant-Petrel		Not Sensitive		

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Animalia	Aves	Manorina melanotis	Black-eared Miner	Critically Endangered	Not Sensitive	Endangered	
Animalia	Aves	Motacilla flava	Yellow Wagtail	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Neophema chrysogaster	Orange-bellied Parrot	Critically Endangered	Category 3	Critically Endangered	
Animalia	Aves	Neophema pulchella	Turquoise Parrot	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Ninox connivens	Barking Owl	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Ninox strenua	Powerful Owl	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Numenius madagascariensis	Eastern Curlew	Not Listed	Not Sensitive	Critically Endangered	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Numenius minutus	Little Curlew	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Numenius phaeopus	Whimbrel	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Oceanites oceanicus	Wilson's Storm-Petrel	Not Listed	Not Sensitive	Not Listed	JAMBA
Animalia	Aves	Onychoprion fuscata	Sooty Tern	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Pandion cristatus	Eastern Osprey	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Petroica boodang	Scarlet Robin	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Petroica phoenicea	Flame Robin	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Pezoporus wallicus wallicus	Eastern Ground Parrot	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Phaethon lepturus	White-tailed Tropicbird	Not Listed	Not Sensitive	Not Listed	CAMBA;JAMBA
Animalia	Aves	Phaethon rubricauda	Red-tailed Tropicbird	Vulnerable	Not Sensitive	Not Listed	CAMBA;JAMBA
Animalia	Aves	Pluvialis fulva	Pacific Golden Plover	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Pluvialis squatarola	Grey Plover	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Polytelis swainsonii	Superb Parrot	Vulnerable	Category 3	Vulnerable	
Animalia	Aves	Pterodroma leucoptera leucoptera	Gould's Petrel	Vulnerable	Not Sensitive	Endangered	
Animalia	Aves	Pterodroma nigripennis	Black-winged Petrel	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Pterodroma solandri	Providence Petrel	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Ptilinopus magnificus	Wompoo Fruit-Dove	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Ptilinopus regina	Rose-crowned Fruit-Dove	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Ptilinopus superbus	Superb Fruit-Dove	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Puffinus assimilis	Little Shearwater	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Rostratula australis	Australian Painted Snipe	Endangered	Not Sensitive	Endangered	
Animalia	Aves	Stagonopleura guttata	Diamond Firetail	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Stercorarius longicaudus	Long-tailed Jaeger	Not Listed	Not Sensitive	Not Listed	CAMBA;JAMBA
Animalia	Aves	Stercorarius parasiticus	Arctic Jaeger	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
		Stercorarius pomarinus	Pomarine Jaeger	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
		Sterna hirundo	Common Tern	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
		Sternula albifrons	Little Tern	Endangered	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Animalia	Aves	Stictonetta naevosa	Freckled Duck	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Sula dactylatra	Masked Booby	Vulnerable	Not Sensitive	Not Listed	ROKAMBA;JAMBA
Animalia	Aves	Thalassarche bulleri	Buller's Albatross	Not Listed	Not Sensitive	Vulnerable	
Animalia	Aves	Thalassarche cauta	Shy Albatross	Endangered	Not Sensitive	Endangered	
Animalia	Aves	Thalassarche melanophris	Black-browed Albatross	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Aves	Thalasseus bergii	Crested Tern	Not Listed	Not Sensitive	Not Listed	JAMBA
Animalia	Aves	Thinornis cucullatus cucullatus	Eastern Hooded Dotterel	Critically Endangered	Not Sensitive	Vulnerable	
Animalia	Aves	Tringa brevipes	Grey-tailed Tattler	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Tringa glareola	Wood Sandpiper	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Tringa incana	Wandering Tattler	Not Listed	Not Sensitive	Not Listed	JAMBA
Animalia	Aves	Tringa nebularia	Common Greenshank	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Tringa stagnatilis	Marsh Sandpiper	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Tyto novaehollandiae	Masked Owl	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Tyto tenebricosa	Sooty Owl	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Xenus cinereus	Terek Sandpiper	Vulnerable	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Gastropoda	Meridolum maryae	Maroubra Woodland Snail	Endangered	Not Sensitive	Not Listed	
Animalia	Insecta	Petalura gigantea	Giant Dragonfly	Endangered	Not Sensitive	Not Listed	
Animalia	Mammalia	Arctocephalus forsteri	New Zealand Fur-seal	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Arctocephalus pusillus doriferus	Australian Fur-seal	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Balaenoptera musculus	Blue Whale	Endangered	Not Sensitive	Endangered	
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	Dasyurus viverrinus	Eastern Quoll	Endangered	Not Sensitive	Endangered	
Animalia	Mammalia	Dugong dugon	Dugong	Endangered	Not Sensitive	Not Listed	
Animalia	Mammalia	Eubalaena australis	Southern Right Whale	Endangered	Not Sensitive	Endangered	
Animalia	Mammalia	Falsistrellus tasmaniensis	Eastern False Pipistrelle	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Macrotis lagotis	Bilby	Extinct	Not Sensitive	Vulnerable	
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	
	Mammalia	Myotis macropus	Southern Myotis		Not Sensitive	Not Listed	
	Mammalia	Notomys cervinus	Fawn Hopping-	Extinct	Not Sensitive	Not Listed	
		mitchellii	Hopping-mouse				

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Animalia	Mammalia	Perameles nasuta	Long-nosed Bandicoot	Endangered Population	Not Sensitive	Not Listed	
Animalia	Mammalia	Phascolarctos cinereus	Koala	Endangered	Not Sensitive	Endangered	
Animalia	Mammalia	Physeter macrocephalus	Sperm Whale	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Pseudomys gracilicaudatus	Eastern Chestnut Mouse	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Pteropus poliocephalus	Grey-headed Flying-fox	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Mammalia	Saccolaimus flaviventris	Yellow-bellied Sheathtail-bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Scoteanax rueppellii	Greater Broad-nosed Bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Reptilia	Aspidites ramsayi	Woma	Vulnerable	Not Sensitive	Not Listed	
Animalia	Reptilia	Caretta caretta	Loggerhead Turtle	Endangered	Not Sensitive	Endangered	
Animalia	Reptilia	Chelonia mydas	Green Turtle	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Reptilia	Dermochelys coriacea	Leatherback Turtle	Endangered	Not Sensitive	Endangered	
Animalia	Reptilia	Diplodactylus platyurus	Eastern Fat-tailed Gecko	Endangered	Not Sensitive	Not Listed	
Animalia	Reptilia	Eretmochelys imbricata	Hawksbill Turtle	Not Listed	Not Sensitive	Vulnerable	
Animalia	Reptilia	Eulamprus leuraensis	Blue Mountains Water Skink	Endangered	Not Sensitive	Endangered	
Animalia	Reptilia	Hoplocephalus bitorquatus	Pale-headed Snake	Vulnerable	Not Sensitive	Not Listed	
Animalia	Reptilia	Hoplocephalus stephensii	Stephens' Banded Snake	Vulnerable	Not Sensitive	Not Listed	
Animalia	Reptilia	Pseudonaja modesta	Ringed Brown Snake	Endangered	Not Sensitive	Not Listed	
Animalia	Reptilia	Tiliqua occipitalis	Western Blue-tongued Lizard	Vulnerable	Not Sensitive	Not Listed	
Animalia	Reptilia	Varanus rosenbergi	Rosenberg's Goanna	Vulnerable	Not Sensitive	Not Listed	
Fungi	Flora	Hygrocybe austropratensis		Endangered	Not Sensitive	Not Listed	
Plantae	Flora	Acacia bynoeana	Bynoe's Wattle	Endangered	Not Sensitive	Vulnerable	
Plantae	Flora	Acacia gordonii		Endangered	Not Sensitive	Endangered	
Plantae	Flora	Acacia prominens	Gosford Wattle	Endangered Population	Not Sensitive	Not Listed	
Plantae	Flora	Acacia pubescens	Downy Wattle	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Acacia terminalis subsp. Eastern Sydney	Sunshine wattle	Endangered	Not Sensitive	Endangered	
Plantae	Flora	Allocasuarina portuensis	Nielsen Park She-oak	Endangered	Category 3	Endangered	
Plantae	Flora	Amperea xiphoclada var. pedicellata		Extinct	Not Sensitive	Extinct	
Plantae	Flora	Caladenia tessellata	Thick Lip Spider Orchid	Endangered	Category 2	Vulnerable	
Plantae	Flora	Callistemon linearifolius	Netted Bottle Brush	Vulnerable	Category 3	Not Listed	
Plantae	Flora	Dichanthium setosum	Bluegrass	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Doryanthes palmeri	Giant Spear Lily	Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Epacris purpurascens			Not Sensitive	Not Listed	

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Plantae	Flora	Eucalyptus fracta	Broken Back Ironbark	Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Eucalyptus leucoxylon subsp. pruinosa	Yellow Gum	Vulnerable	Not Sensitive	Not Listed	
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	Eucalyptus scoparia	Wallangarra White Gum	Endangered	Not Sensitive	Vulnerable	
Plantae	Flora	Hibbertia puberula		Endangered	Not Sensitive	Not Listed	
Plantae	Flora	Macadamia integrifolia	Macadamia Nut	Not Listed	Not Sensitive	Vulnerable	
Plantae	Flora	Macadamia tetraphylla	Rough-shelled Bush Nut	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Maundia triglochinoides		Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Melaleuca deanei	Deane's Paperbark	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Persoonia hirsuta	Hairy Geebung	Endangered	Category 3	Endangered	
Plantae	Flora	Pimelea curviflora var. curviflora		Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Pomaderris prunifolia	Plum-leaf Pomaderris	Endangered Population	Not Sensitive	Not Listed	
Plantae	Flora	Prostanthera marifolia	Seaforth Mintbush	Critically Endangered	Category 3	Critically Endangered	
Plantae	Flora	Rhodamnia rubescens	Scrub Turpentine	Critically Endangered	Not Sensitive	Critically Endangered	
Plantae	Flora	Senecio spathulatus	Coast Groundsel	Endangered	Not Sensitive	Not Listed	
Plantae	Flora	Senna acclinis	Rainforest Cassia	Endangered	Not Sensitive	Not Listed	
Plantae	Flora	Syzygium paniculatum	Magenta Lilly Pilly	Endangered	Not Sensitive	Vulnerable	
Plantae	Flora	Tetratheca glandulosa		Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Tetratheca juncea	Black-eyed Susan	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Thesium australe	Austral Toadflax	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Tylophora woollsii	Cryptic Forest Twiner	Endangered	Not Sensitive	Endangered	
Plantae	Flora	Wahlenbergia multicaulis	Tadgell's Bluebell	Endangered Population	Not Sensitive	Not Listed	
Plantae	Flora	Wilsonia backhousei	Narrow-leafed Wilsonia	Vulnerable	Not Sensitive	Not Listed	

Data does not include NSW category 1 sensitive species.

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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Appendix B. Aurecon %80 Detailed Design

Sydenham Station Bus Layover Design

Design Report

Connect Sydney

Reference: 520212-038

Revision: 1

13-February-2024

aurecon

Bringing ideas to life

Document control record

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Approval			
Author signature		Approver signature	
Name	Paul McLean	Name	James Stewart
Title	Design Manager	Title	Project Manager

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1. Introduction

1.1. Acknowledgement of Country

Aurecon recognises, respects and values the traditional EORA custodians and the ongoing contributions of the First Nations residents of the Sydney region on the lands where we live and work, to build, maintain and service TfNSW infrastructure, with a vision of ensuring better futures for all Australians.

We acknowledge the wider Sydney region is the traditional country of around 29 clans of the EORA First Nations. Within the Sydney Roads Asset Performance Contract (SRAPC) Harbour Zone region this broadly includes the major EORA clans of inner-city Sydney; the Gadigal clan and Dharawal clan to the south around Kamay (Botany Bay); in the inner-west the Wangal clan and the Kuringgai clans to the north of Sydney Harbour which include the harbourside Cammeraygal clan.

These areas lie within the boundaries of the Metropolitan Local Aboriginal Land Council (MLALC) and the La Perouse Local Aboriginal Land Council (LPLALC). We recognise and respect the authority of both and commit to working with them should we be successful. The EORA clans of the Sydney region have been looking after these lands, the flora and fauna sustainably since time immemorial.

The EORA clans of Sydney, particularly the Gadigal and Dharawal, are widely acknowledged as being instrumental in forming the major Sydney roads of George and Oxford streets and Anzac Parade.

Roads and infrastructure can help us to unite our histories; with the people, places and activities that were conducted in the past, with what we do today, and with the legacy we leave for the future.

Aurecon are committed to improving the lives of, and relationships with, all First Nations of NSW, and will do this through inclusion in business and contractual partnerships; employment; training and development opportunities; and community capacity building.

We will also celebrate the heritage and culture of the traditional custodians and the First Nations peoples who exist in Sydney today.

Professor Jakelyn Troy, Director, Indigenous Research, University of Sydney says: “We are living a very Aboriginal existence in Sydney by walking in the tracks of the people who were here and living in the spaces of the people who lived here until 1788 and for a long time beyond and are indeed still here.”

1.2. Background and Purpose

Sydenham has experienced growth in population and foot traffic leading to an expansion of public transport use and facilities. With the new Metro Train Station being constructed, this will further increase public transport users utilising Sydenham as a transport interchange and has been identified as the terminus for future bus routes under the Greater Sydney Bus Network strategy.

The busy traffic environment surrounding Sydenham Station channels freight traffic east to the Airport and Port Botany creating difficulty for buses to safely find the space to terminate and layover in the area without interruption to other bus services and the public. To improve this and prepare for future growth, the Sydenham Bus Layover Project proposes to build a six-bay bus parking layover area with a Dedicated Drivers’ Facility in the existing vacant parcel of land on the corner of Railway Rd and Burrows Ave.

This report provides a detailed design of the Sydenham Station Bus Layover Design. The developed report addresses the solution related to providing a safer and equipped area for buses layover, supports the design findings, changes, and improvements across all the disciplines involved.

1.3. Project Objectives

The overarching project-specific objective is to design and construct a suitable bus layover area in Sydenham, which will provide a solution for buses having difficulty finding space, decrease the confusion and delays for customers, contribute to reliability improvement on public transport, increase road safety and offer a dedicated facility for bus operators while taking the expected increase in volume of the traffic through Sydenham into account follow specific active transport considerations.

1.4. Design Objectives

The Design for Bus Layover Project in Sydenham will offer high-performance and low-maintenance cost solution while allowing maximum number of bus spaces, minimising utility relocation impacts and the amount of cut required.

Moreover, our proposed design solution will have a low impact on current conditions for road user safety along Burrows Avenue and Railway Road for motorists and active transport. It will address the requirements of Safety-in-Design and use following guidelines, (in order of priority):

- The Authorised Scope of Works and Technical Criteria
- Published Roads and Maritime Services supplements to Austroads Guides
- Austroads Road Design Guides
- Australian Standards

2. Design scope status

2.1. Design items to be addressed in the following design phases

The following items are to be addressed in the following design submissions:

Table 1: Design items to be addressed in the following design phases

Design Item	Design Gate	Comment
Telstra Services Relocation	80% Detailed design	
Pavement Investigations	80% Detailed design	
Road Safety Audit	80% Detailed design	
Health and Safety in Design Register	80% Detailed design	
Noise wall Details and easement	80% Detailed design	
Details of Amenities Building	80% Detailed design	

The following items are not included in the scope of this project but can be performed as additional prior approval:

- Engagement of services providers
- Utilities relocation/protection designs

2.2. Design Specification

- Design software to be used: 12d Model.
- Kerb and gutter specifications per TfNSW standards. (R0300 Kerb drawings)
- Refer to Structural Design section for design assumptions used for noise wall and footing slab of amenities building.

3. Investigations completed for design development.

3.1. Topographical survey

Topographical survey was carried out in 2022 by TfNSW along Gleeson Avenue, Railway Road and Burrows Avenue, Sydenham. The survey was provided in pdf, dwg and 12da formats. The coordinates information is in Geocentric Datum of Australia 2020 (GDA2020), Map Grid of Australia (MGA56) and Australian Height Datum 1971 (AHD). Refer to **Appendix C** for details.

3.2. Service Detection Quality B

Underground utilities survey was carried out in 2022 by TfNSW along Gleeson Avenue, Railway Road and Burrows Avenue, Sydenham. The investigation methodology used Electromagnetic locating (EML) and Ground Penetrating Radar (GPR), to search for every possible asset within the area being investigated. The survey data was provided in pfd, dwg and 12da formats. Refer to **Appendix C** for details.

3.3. Service Detection Quality A

On 29/10/2023 Durkin survey team carried Quality Level B (QL-B) investigation in preparation for Quality Level A (QL-A) utilities survey. Aurecon provided survey investigation scope to capture Jemena gas LP pipe, Telstra conduits and pits, drainage pits and pipes as well as Sydney Water ventshaft pipe. Subsequently, Aurecon carried out a survey gap analysis to refine the scope of survey.

3.4. Geotechnical Investigations

On 13/12/2023 Durkin investigations team conducted site borehole collections for lab analysis aiming to classify the Sydenham Bus Layover site. This step was crucial for understanding geological and environmental conditions, providing database for soil requirements and decision-making during design and construction. Results outcomes are outlined within the appended final investigation report.

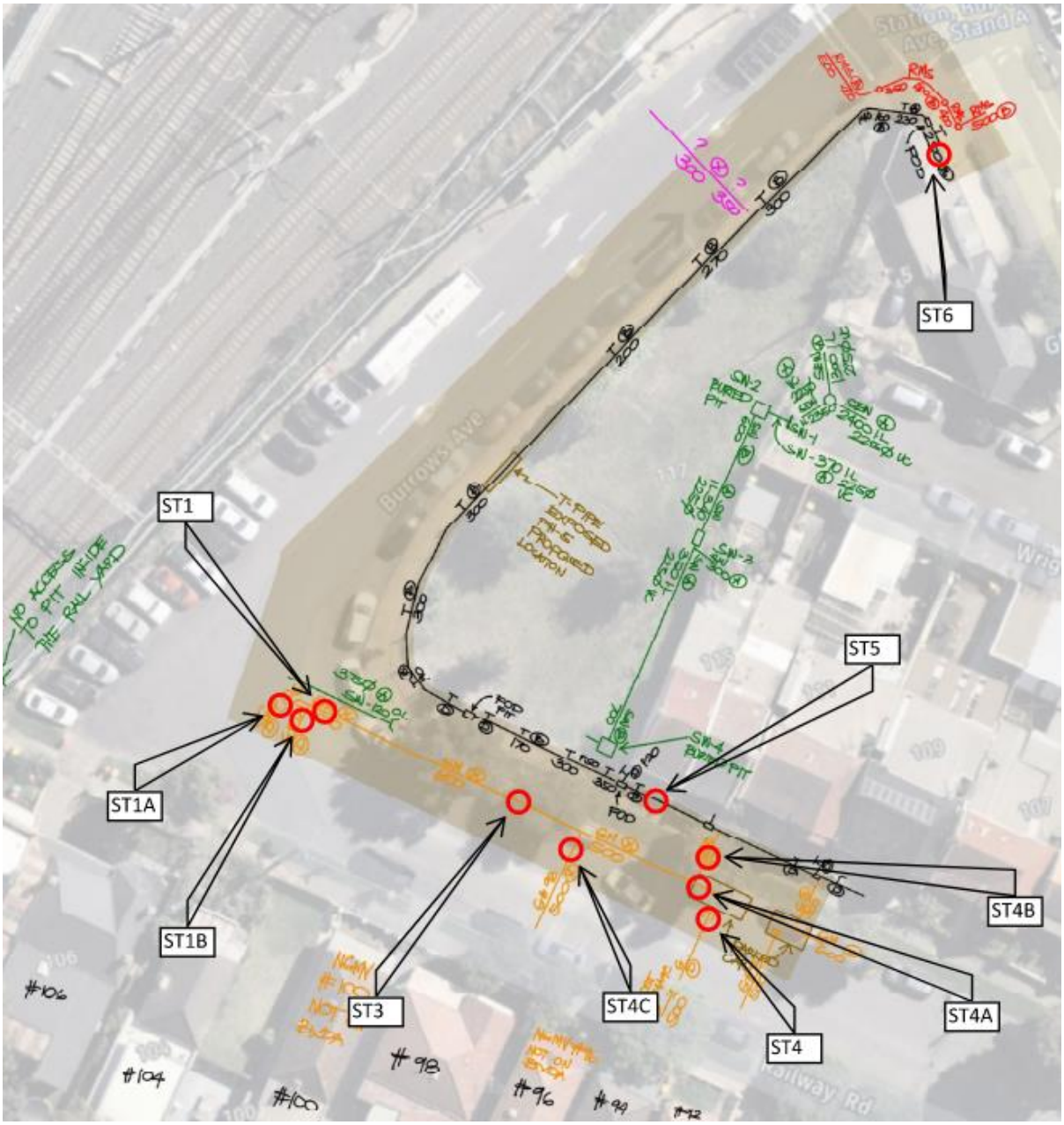


Figure 1: Durkin QL-A survey scope

On 08/12/2023 Durkin survey team carried out Quality Level A (QL-A) utilities survey investigation. The potholing revealed the position of Jemena LP gas and property connections along Railway Road and Telstra conduits along Railway Rd and Burrows Avenue. Refer to **Appendix D** for Durkin's utilities survey investigation.

Figure 2: Durkin QL-A survey investigation - Railway Road

The potholing provided positive identification of the location and attributes of the Jemena gas and Telstra network which were fundamental for the design development. It was possible to establish absolute spatial position of utilities in three dimensions which facilitated space proofing of proposed drainage.

4. Civil Design

4.1. Project Overview

Civil design for the Sydenham Bus Layover covers kerb updates, installation of bus and car parking bays, grading of bus layover area and a new footpath on the edge of the property. The current design features 6 bus bays and 6 and 13 car parking bays along Burrows Avenue and Railway Road. New alignments have been introduced for the grading of the bus layover area. Refer to the General Arrangement section for more information on the alignments used.

4.2. Design Inputs

- Austroads Guide to Road Design Part 3: Geometric Design
- TfNSW Specifications: R0300 Kerb and Channel Series
- Australian Standard AS 2890.1 Parking Facilities Part 1: Off-street Parking
- Australian Standard AS 2890.1 Parking Facilities Part 2: Off-street Commercial Vehicle Facilities
- Australian Standard AS 2890.5 Parking Facilities Part 5: On-street Parking

4.3. Design speed and design vehicle

The design and posted speeds are summarised in Table 2 and are in accordance with the brief. The design vehicles are shown in the table.

According to AGRD Part 3 Section 3.3, design speed should match posted speed for streets signposted at 50km/h below.

Table 2: Design Criteria – Design speed and Design vehicle

Location	Design Speed	Posted Speed	Design Vehicle	Checking Vehicle
Burrows Avenue and Railway Road	50kph	50kph	12.5m Single Unit Truck/Bus	-
Burrows Ave and Railway Road On-Street Parking	50kph	50kph	5.2m Passenger Vehicle	-

4.4. Sight Distance

Truck/Bus stopping sight distance is listed in the table below. Values according to AGRD Part 3 Section 5.3.2

Table 3: Design Criteria – Stopping Sight Distance

Location	Posted Speed	Design Value	Comments
Burrows Avenue	50kph	51m	Sight distance will be assessed in the next design phase

4.5. Road cross sections

The table below summarizes the road cross section requirements that were adopted in the detailed design.

Table 4: Design Criteria – Road Cross Sections

Design Element	Design Value	Comments
Burrows Avenue:		
Existing Left Turn Lane Width	4.86m	-
Existing Through Lane Width	2.55m	-
Existing Right Turn Lane Width	3.75m	Part of the right turn lane will be taken over by the proposed bus layover area.
Lane Crossfalls	Crossfall varies	-
Existing Footpath Width	2.30m	-
Existing Footpath Crossfalls	Crossfall varies	-
Car parking	5.4m long; 2.5m wide	6 spaces allotted for car parking along Burrows Ave. Parking bay specifications per AS 2890.1
Railway Road:		
Existing Left Lane Width	5.90m	-
Existing Right Lane Width	5.95m	Part of the right lane will be taken over by the proposed bus layover area.
Lane Crossfalls	Crossfall varies	-
Existing Footpath Width	1.80m	-
Existing Footpath Crossfalls	Crossfall varies	-
Angled Car Parking	4.8m long; 2.50m wide; 45 degree angle	13 angled parking spaces allotted for cars along Railway Road. Parking bay specifications per AS 2890.1
Bus Layover Area:		
Bus Parking	15.6m long; 3.2m wide	6 spaces allotted for bus parking on layover area
Proposed Footpath Width	1.7m min; 1.8m max	Width transitions due to drainage easement

Design Element	Design Value	Comments
Proposed Footpath Crossfalls	2.5%	Maximum 2.5% crossfall for DDA compliance
Dished Crossing	SB Type	See TfNSW R0300-1 Standard Drawing
Kerb and Gutter	SA Type	See TfNSW R0300-1 Standard Drawing

Typical and detailed cross sections are provided as part of the detailed design drawings.

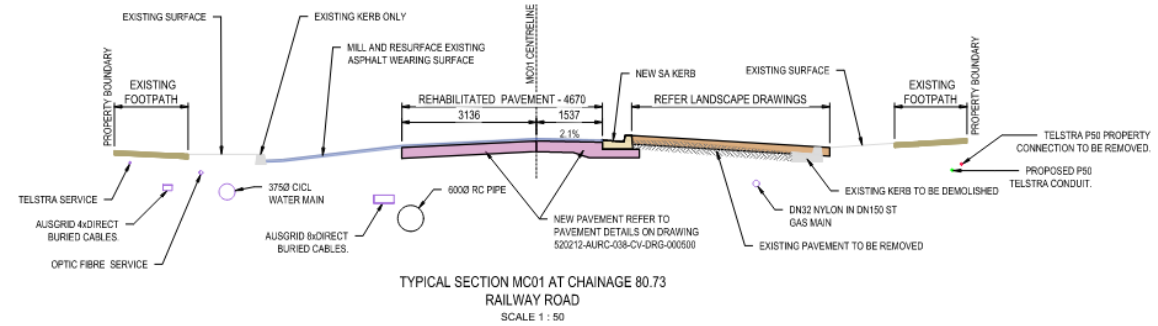


Figure 3: Typical Section along MC01 at Chainage 80.73

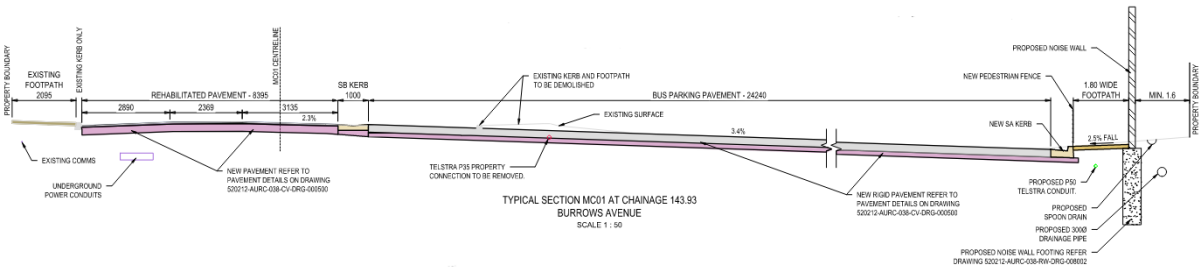


Figure 4: Typical Section along MC01 at Chainage 143.93

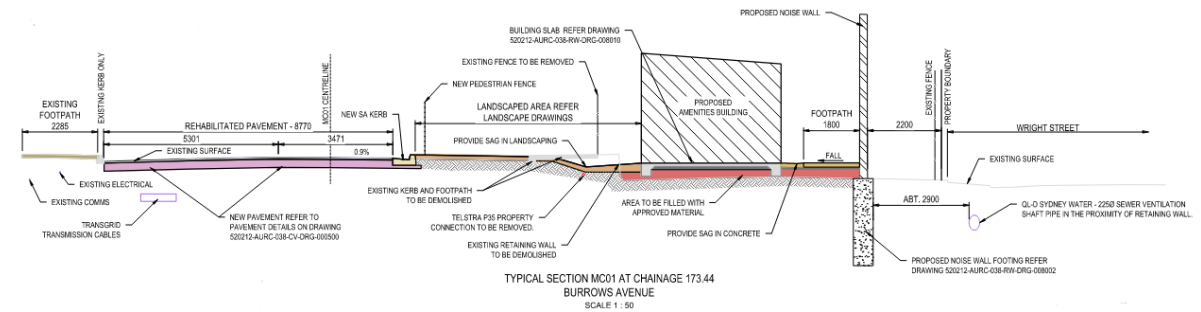


Figure 5: Typical Section along MC01 at Chainage 173.44

4.6. General Arrangement

Master control alignments that will be used in the detailed design includes:

- **MC01** – Alignment that runs along Burrows Avenue and Railway Road. It will follow the existing ground levels.
- **MK01** – Alignment along kerb lip located west of Burrows Avenue. It will follow existing ground levels.
- **MK02** – Alignment along kerb lip located east of Railway Road and Burrows Avenue. It will follow existing ground levels.
- **MK03** – Alignment along kerb lip running along eastern side of bus layover area. Start and end points tie into existing ground levels.
- **MK04** – Alignment along kerb lip that forms the island area on the bus layover entrance. Start and end points tie in to MK02 kerb lip strings.
- **MK05** – Alignment at the northern end of MK04 that forms the island area on the bus layover entrance. Start and end points tie in to MK02 kerb lip strings.
- **MK06** – Alignment at the southern end of MK04 that forms the island area on the bus layover entrance. Start and end points tie in to MK02 kerb lip strings.
- **MK07** – Alignment at the existing kerb entry to Railway Road from Gleeson Avenue on the southern side. Start and end points tie into the existing kerb and increase the road pavement.
- **EX01** – proposed alignment footpath adjacent to proposed noise wall on property edge. Start and end points tie into existing footpath levels.

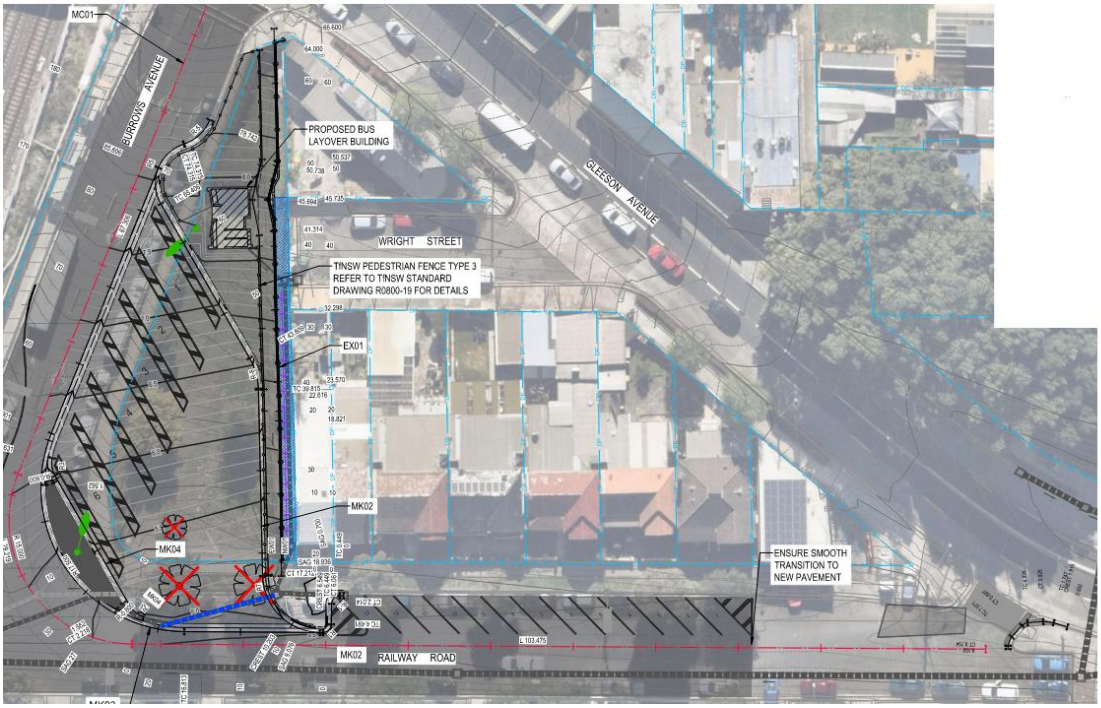


Figure 6: General alignment

4.7. Swept Path Analysis

A speed of 20 kph was used for the swept path analysis. Refer to Table 2 for the design vehicle specifications and below for the vehicle profile.

Swept paths of a 12.5m single unit truck/bus was run from Railway Road entering the layover area into the first and last parking bays and exiting onto Burrows Avenue.

Another swept path of the bus was tested going along Railway Road and turning onto Burrows Avenue with the extended kerb (MK03).

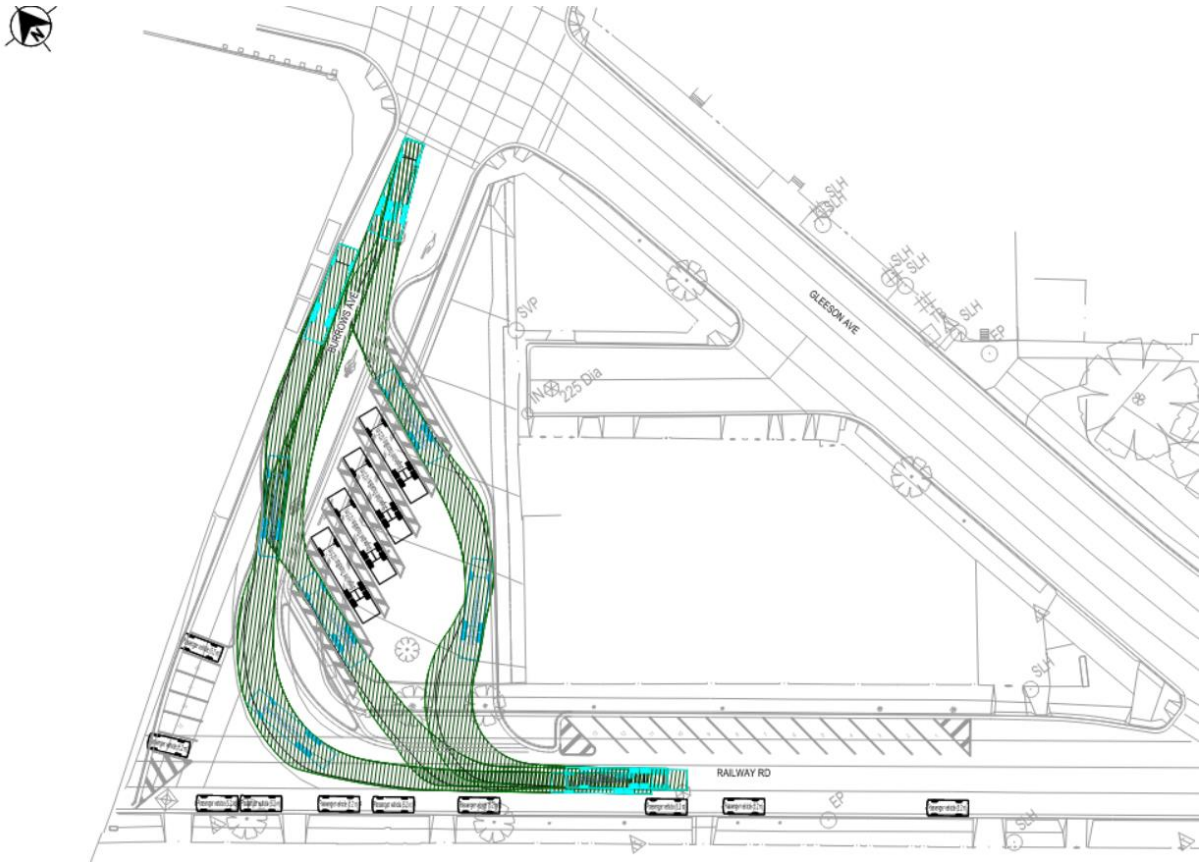


Figure 7: Swept Path of 12.5m Single Unit Truck/Bus turning and exiting bus layover area.

Multiple swept paths of a 5.2m single unit passenger vehicle was run from Railway Road going to private property entrances from the through lane.

A swept path going into the angled parking from Railway Road was also tested.

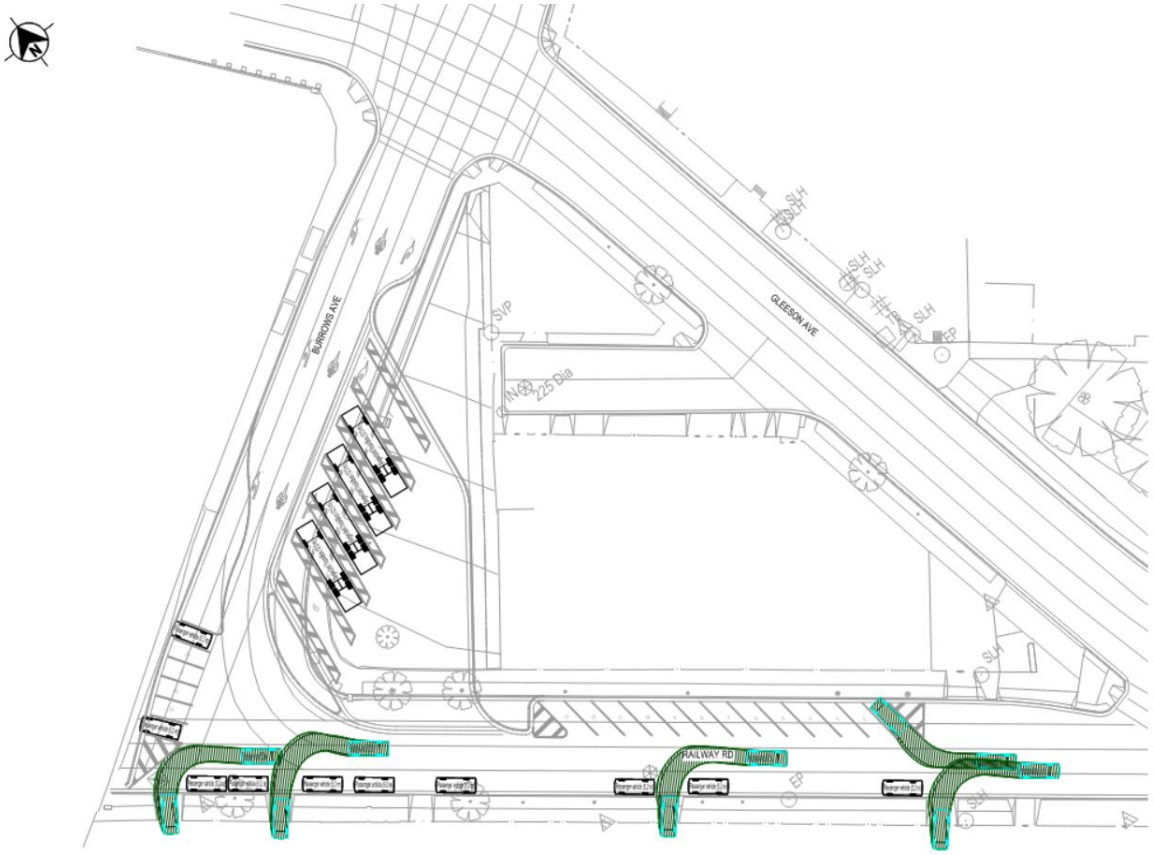
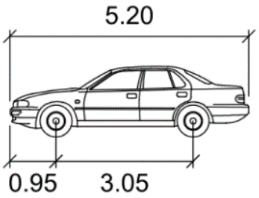


Figure 8: Swept Path of 5.2m Passenger Vehicle along Railway Road



CAR

	METERS
WIDTH	: 1.94
TRACK	: 1.84
LOCK TO LOCK TIME	: 6.0
STEERING ANGLE	: 33.5

Figure 9: Vehicle Profile – 5.2m Passenger Vehicle

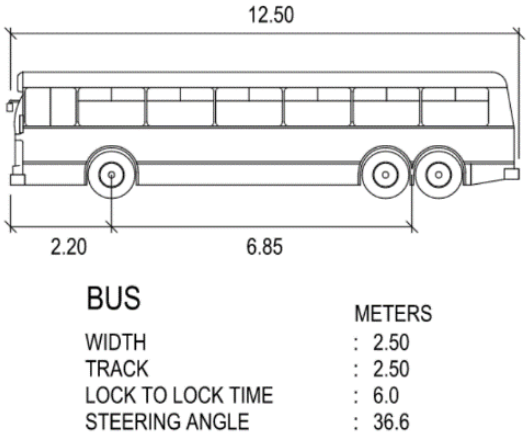


Figure 10: Vehicle Profile – 12.5m Single Unit Truck/Bus

4.8. Stopping Sight Distances

A stopping sight distance plan has been prepared to show the available sight distances to the buses parked at the bus parking layover.

A speed of 20 - 30 km/h was used to determine whether adequate stopping sight distance was achieved. The stopping distances were taken from the Austroads Guide to Road Design Part 3 Geometric Design for a truck. Refer Table 5.6 page 131. The table only provides operating speeds to a minimum of 40km/h. The stopping sight distances for 20 and 30 km/h speeds were based on proportional reductions in distance and a positive uphill grade of 4%.

The plan shows the sight distances available to the driver looking out the front and side of the bus and the location of vehicles seen in the rear vision mirrors along Railway Road. The driver when viewing his rear vision mirror can allow time for a vehicle to negotiate the bend and determine when it is safe to leave. This is only applicable to buses parked in the lower 3 bus parks. The upper 3 bus parks have sufficient stopping sight distance to at the side and front to determine when it is safe to leave.

5. Pavement Drainage

5.1. Scope of Works

The scope of works covering the detailed drainage design for this project includes:

- Undertake a review existing topographical and utility survey to gain an appreciation of the site drainage, catchments and overland flows.
- Assess the capacity of the existing drainage network within 12d. Note that this will be undertaken on the next design stage as part of the hydrology and hydraulics assessment.
- Model proposed drainage network within 12d & assess hydraulic performance of the drainage network in consideration of the existing drainage network.
- Identify drainage risks and potential mitigations for the identified risks.
- Provide drainage design in accordance with the SRAP contract, TfNSW standards and specifications, Australian and Inner West Council standards.

5.2. Engineering Standards

The following order of precedence for the design guidelines and standards has been adopted (in descending order) in the development of the drainage design for the project.

- Inner West Council Design Specifications
    - Marrickville Development Control Plan (DCP) 2011
    - Council Standard Drawings
- Transport for New South Wales (TfNSW) Design Specifications
    - QA Spec R11, R23, R44
    - TfNSW Standard Drawings
- Austroads Guide to Road Design Guidelines 2023 (AGRD), Part 5 and 5A

5.3. Reference Documents

The following documents have been used as reference for drainage design:

- GT0427 – Gleeson Ave & Railway Road, Sydenham Cadastral overlay DRG No. 3041-00766-01-001
- Transport for NSW LGA: Inner West Council, Utility investigation, Drawing Set Number:DS2022/000415
- Inner West Council information from Before You Dig Australia (BYDA), 21 August 2023.
- Elvis – Elevation and Depth - Elevation Foundation Spatial Data, Sydney202005-LID1-AHD_3306244_56_0002_0002_1m.tif
- Topographical survey provided by TfNSW

5.4. Design Criteria

The drainage design criteria outlined in this section is informed by relevant Engineering Standards and design guidelines as listed above.

Table 5: Drainage Design Criteria

Criteria	Value	Clause
Adverse Impact	Development shall not cause adverse impact on any other properties. This includes preserving surface flow paths & not increase water levels	Marrickville DCP 2011 Part 2.25 Clause 2.25.3.2
OSD	Site discharges restricted to pre-development discharges using On-site detention	Marrickville DCP 2011 Part 2.25 Clause 2.25.3.2
	Requirement for OSD for paving works shall be subjected to Council's assessment on the details of the development	Marrickville DCP 2011 Part 2.25 Clause 2.25.2
Runoff From Adjoining Properties	Surface runoff from adjoining properties onto development site shall be catered for within the development	Marrickville DCP 2011 Part 2.25 Clause 2.25.3.6
Pipe Design ARI	Residential High Density – 20 years Commercial/Industrial – 20 years	Marrickville DCP 2011 Part 2.25 Clause 2.25.3.9
Pipe Size	Under road or public land - min. 375mm	Marrickville Council Stormwater and OSD Code 1999, Clause 4.9
Pipe Grade	Min. 0.5%	Typical
Tailwater Level	100 year – Grate level 20 year – 150mm below grate	Typical
Pit Blockage	20% on-grade pits 50% sag pits	Typical
Flow Width	Residential Street: Min. one lane width should be trafficable during 5y ARI or to Local Council Standards On-street parking and car parks: Flow width should be restricted to 2.0 m for the two year ARI.	AGRD 5A Table 5.1
Kerb Discharge	Maximum Kerb Discharge – 25L/s	Marrickville Council Stormwater and OSD Code 1999, Clause 4.9

Criteria	Value	Clause
Water Quality	For development with construction of 10 or more additional uncovered car spaces: TSS – 85% TP – 60% TN – 45%	Marrickville DCP 2011 Part 2.17 Table 1

5.5. Existing drainage

The existing drainage system within the vicinity of the project consists of private property kerb outlets and road drainage pit and pipe network. The main existing drainage line consists of a Ø600 RC pipe running from southeast to northwest direction along Railway Road (see Figure 11). A 375mm drainage crossing (Burrows Avenue) exists at the western corner of the project which connects into the 600mm pipe as mentioned and discharges westerly towards the rail tracks. This pipe crosses the rail tracks and connects into the existing drainage network on the other side of Sydenham Station at the intersection of Marrickville Road and Railway Parade.

There is also an existing stormwater inlet and a 225mm pipe located at the southwest corner of Wright St (see Figure 13). The 225mm pipe runs through the project boundary via an easement before discharging into Railway Road via a kerb outlet, shown in Figure 14. It is presumed that the easement is a drainage easement which burdens the project lot to the beneficiary of Wright St which is Council owned and operated land. Further confirmation of the information of the easement is required. .The main drainage 600mm diameter pipe crosses the rail track and discharge to the canal and outflow towards Cooks River.

Figure 11: Existing drainage layout

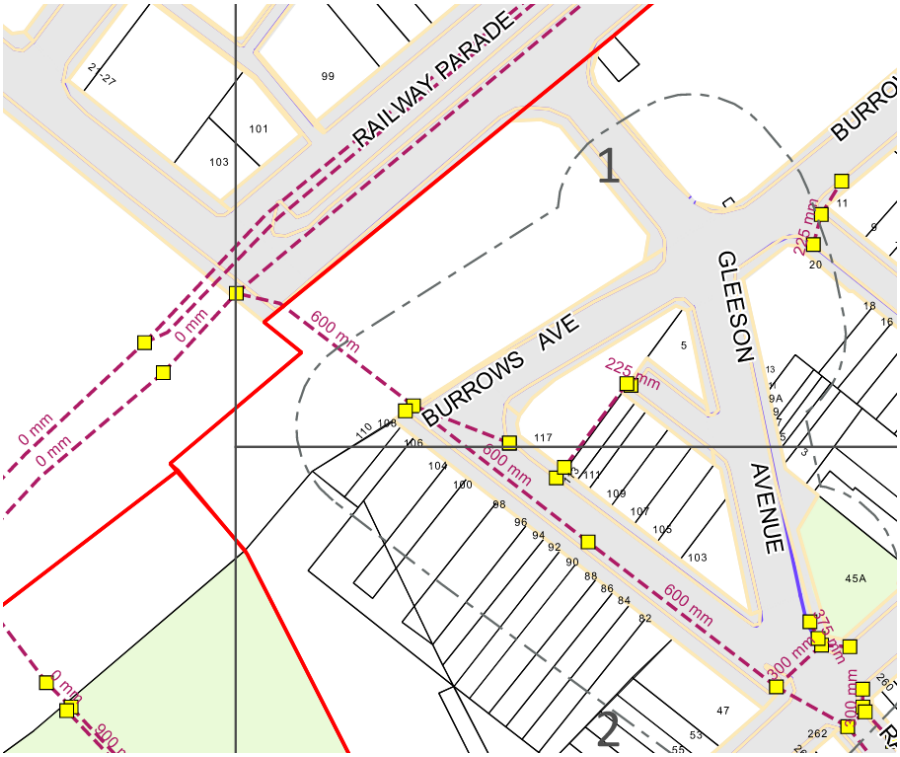


Figure 12: BYDA Inner West Council

Figure 13: Low point at Wright St.

Figure 14: Typical kerb outlet

5.6. Hydrology

Pavement hydrology has been analysed using 12d software. 12d's rational hydrological method has been used for initial pipe sizing. 12d's ILSAX hydrological method (i.e. dynamic analysis) will be used in future delivery milestones to confirm the pipe sizing and complete the hydraulic analysis of the whole drainage network including the incorporation of tailwater levels & HGL analysis. This approach of using separate hydrological methods provide a robust method of analysis of the drainage system.

Due to the relatively small catchment area to each drainage pit, a minimum of 5 min time of concentration (tc) for both pervious and impervious areas have been adopted.

For ILSAX hydrology, IFD & temporal patterns have been extracted from BOM DataHub. The Antecedent Moisture Content of 3 shall be adopted and a 1mm and 5mm depression storage shall be applied to impervious and pervious surfaces respectively. These values are in accordance with Inner West Council Specifications.

5.7. IFD

IFD data adopted for the project was obtained from the Bureau of Meteorology (BoM) and ARR 2019 Datahub. Data Acquired 13/11/2023.

Table 6: IFD Data

Duration (mins)	Stormwater events AEP						
	63.21	50	20	10	5	2	1
1	2.36	2.63	3.46	4.01	4.55	5.26	5.79
2	3.95	4.36	5.64	6.51	7.36	8.51	9.4
3	5.47	6.04	7.85	9.07	10.3	11.9	13.1
4	6.84	7.58	9.89	11.4	13	15	16.5
5	8.07	8.95	11.7	13.6	15.4	17.8	19.6

Duration (mins)	Stormwater events AEP						
10	12.7	14.2	18.7	21.7	24.6	28.4	31.3
15	15.8	17.7	23.3	27.1	30.7	35.5	39
20	18.2	20.3	26.8	31.1	35.2	40.7	44.8
25	20.1	22.4	29.5	34.2	38.8	44.8	49.3
30	21.7	24.1	31.7	36.8	41.8	48.2	53.1
45	25.4	28.2	36.9	42.8	48.6	56.2	62
60	28.2	31.2	40.9	47.4	53.8	62.3	68.8
90	32.5	36	47	54.6	62	72	79.8
120	36	39.8	52	60.5	68.9	80.2	89.1
180	41.6	46.1	60.5	70.5	80.6	94.3	105
270	48.5	53.8	71.1	83.3	95.6	112	126
360	54.3	60.4	80.3	94.4	109	128	144

5.8. Catchment

The western corner of the site (intersection of Railway Parade and Burrows Ave) is the lowest point of the site. To the north, the catchment extends from Gleeson Avenue bridge & drains into this corner. To the southwest, significant parts of Railway Parade also drains into this low point.

The proposed design converts approximately 550m^2 of existing vegetated area into paved bus parking as seen on Figure 15.

A new Catchment P05-1 with an area of approximately 500 m^2 along Burrow's Avenue is introduced for the proposed design. This catchment was assumed to be is a result of the addition of a kerb and gutter system.

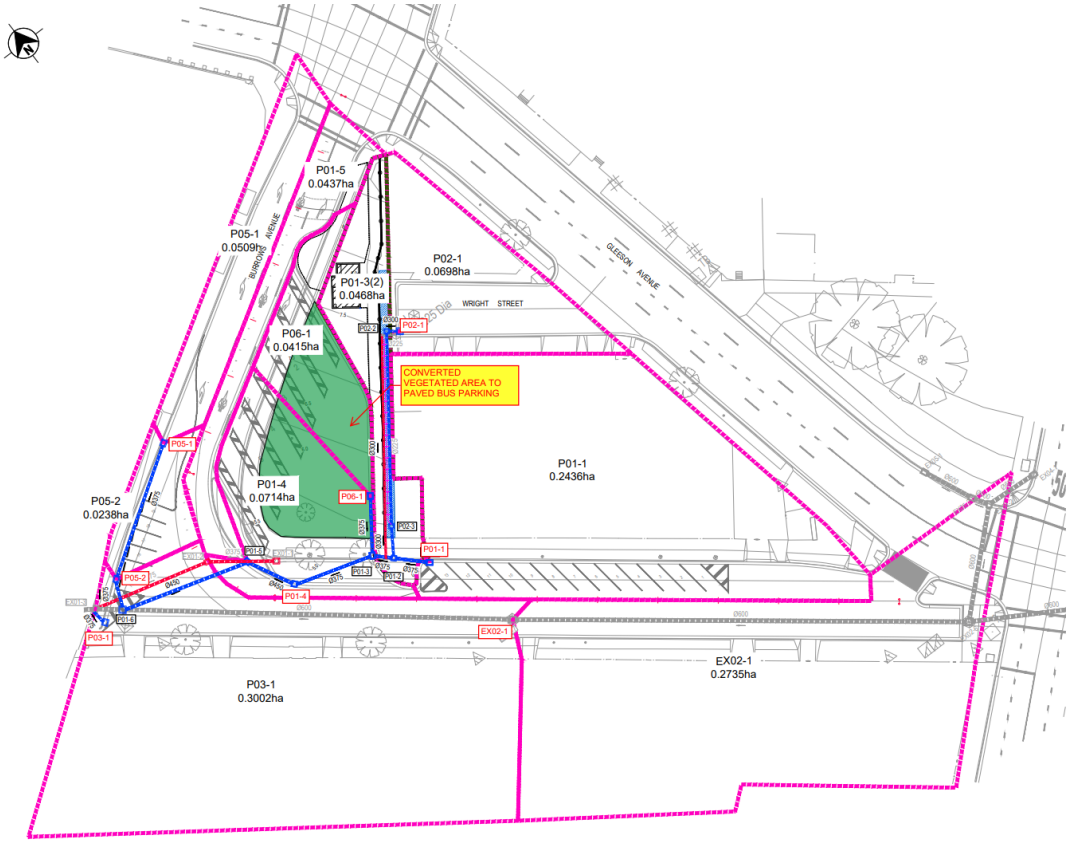


Figure 15: Proposed Catchment Plan

6. Drainage Design

6.1. Proposed Drainage

The proposed drainage is shown in Figure 16 which has been extracted from the design drawings. Refer to the design drawings for details.

The new noise wall is expected to impact the existing 225mm pipe within the drainage easement. Therefore, a new stormwater pit and 300mm pipe within the easement is proposed as a replacement. This area of work is however outside of the project boundary. Confirmation by TfNSW is required to confirm the ownership and beneficiary of the easement and that the construction of new drainage in the easement is feasible. Feasibility of this design & any opportunities will be further investigated in the next design stage.

The existing drainage network crossing Burrows Avenue corner Railway Rd is to be demolished and replaced with a new drainage pipe. New drainage pits are proposed on the new V-drains with a 375mm diameter pipe connecting to the existing pit across Burrows Avenue at the corner of Railway Road. The connection into the existing drainage pit is constrained by the presence of 2 x HV electrical. Feasibility of this design and any opportunities will be investigated in the next design stage.

A new amenities building is proposed north-east of the site. The downpipe from the building is proposed to discharge via 150mm pipe connection to the proposed drainage network.

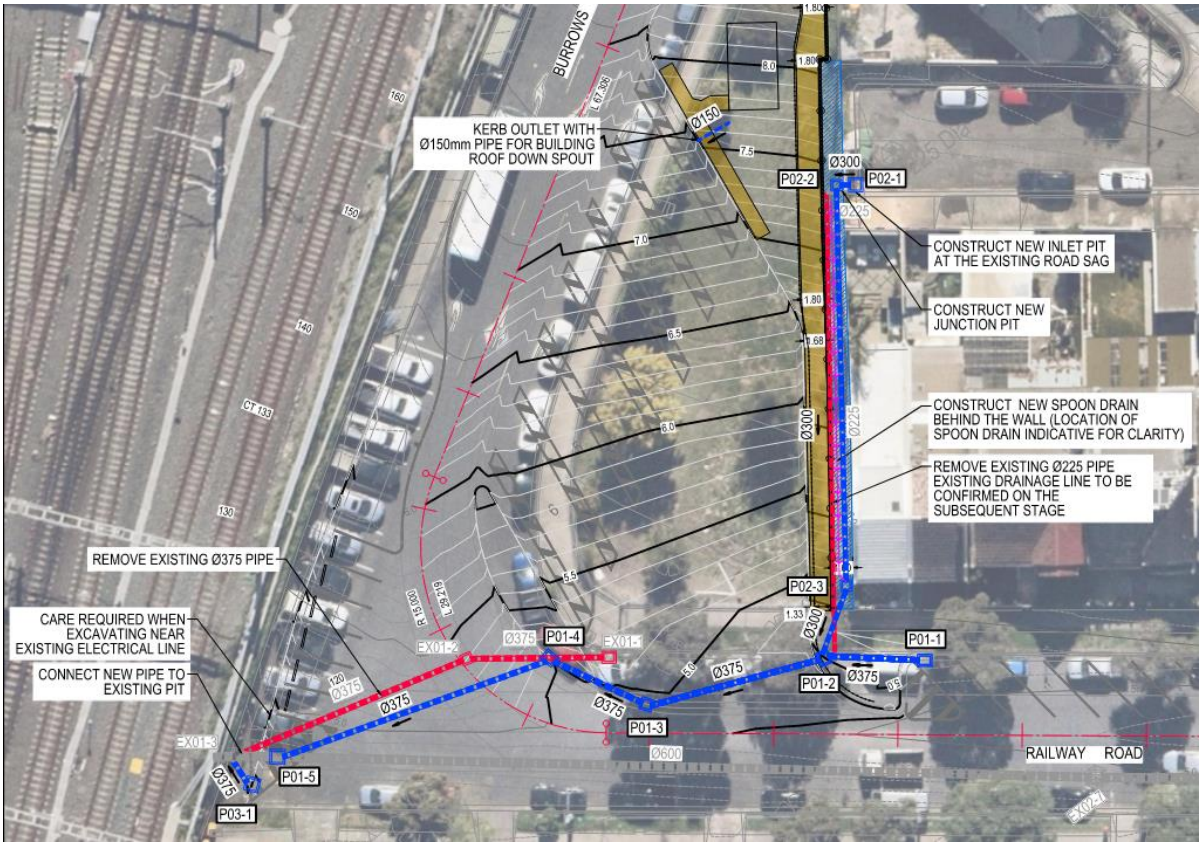


Figure 16: Proposed drainage network

6.2. Hydraulic Performance

For the 80% submission, the drainage pipes have been analysed and designed for the 20-year storm event in accordance with Inner West Council specifications. ILSAX method analysis has been used to conduct hydraulic assessment for pre and post conditions to ensure minimal hydraulic impact on the existing system. A tailwater level (TWL) of 150mm below grate level was used in the assessment as typical assumptions for the 20 year storm event. It is important to note that the consideration of the total capacity of the wider drainage network & regional catchment would be beyond the scope of a singular project to resolve. The in-depth effects of the analysis shall be considered in subsequent design milestones to assess the behaviour of the drainage network. Further hydraulic results shall be confirmed in subsequent submissions.

A 100 year storm event with a consideration of TWL set to the grate level was also explored to asses and demonstrate minimal impact between pre and post conditions. Refer to Table 4 for the Pre and Post Assessment Summary.

Rational method analysis with pipes running in full capacity has been used to analyse flood width compliance for residential street and on street parking areas. Refer to Figure 16.

The new amenities building (roof area approximately 28m^2) downpipes are proposed to be connecting to the proposed drainage network specifically at pit P02-2. The roof runoff from this small catchment generates about 2L/s in the 100 year which is within the maximum limit of 25L/s kerb outlet discharge as specified by Inner West Council.

6.2.1. Drainage network connection pre and post assessment

Downstream pipe of EX02-3: refer to the catchment plan in Figure 15.

Catchment change and flow assessment for weave ramp section from existing condition to proposed condition are as follow:

Table 7: Pre and Post Assessment Summary

	Existing Condition	Proposed Condition
Total catchment area (ha)	11.645	11.690
Impervious %	99.2	99.6
Peak flow rate 1% AEP (m3/s)	0.400	0.427
Peak flow rate 5% AEP (m3/s)	0.356	0.400

Based on the assessment, the change in peak flow rate and hydraulic grade line is minimal. The flow in the connection outlet is still contained within the pit and has no surcharge for both 1% and 5% AEP storm. Therefore connecting to the existing drainage system is acceptable.

6.2.2. Onsite Detention (OSD)

The proposed development converts approximately 525m2 of vegetated area into a fully impervious bus parking area. It is likely that this will result in an increase in stormwater runoff.

An assessment of the pre and post development flows is required to assess impacts to the downstream network. The assessment of flows will be completed in the next design stage.

Generally Inner West Council requires OSD to mitigate runoff to pre-development levels. However given that this project is predominately providing new pavement for bus parking, Inner West Council

Marrickville DCP 2011 part 2.25 Clause 2.25.2 stipulates that for “paving” landuse, the requirement for OSD shall be subjected to Council’s assessment on the details of the development.

An RFI has been raised to TfNSW to confirm the requirement of OSD.

6.3. Water Quality

Inner West Council requires water quality targets to be achieved for developments with designation of 10 or more additional uncovered car parking spaces. The presence of 2 x bank of high voltage electrical utilities at the low point of the site, provides significant constraint for any water quality treatment opportunities.

An RFI has been raised to TfNSW to confirm the requirement of water quality objectives.

6.4. Flooding

The site is not flood affected as indicated by Inner West Council Flood Liable Land Map MDCP 2011.

6.5. Utility impacts

The existing utilities were considered during the design of the kerb realignment, and proposed drainage pits and pipes. The proposed drainage and other civil elements were placed where possible to minimise impact to existing utilities. The services located in the entrance area along Railway Road has been verified on site to assess potential clashes with proposed drainage. Constructability and safety issues requirements during construction with existing HV power cables beside the existing and proposed drainage network have been considered. The drainage network had been designed to avoid impact to the Transgrid transmission cables by achieving standard clearances. However, non-standard clearance to the Ausgrid HV cables could not be avoided. Aurecon to seek Ausgrid’s dispensation for non-standard clearances. Correspondence of the consultation will be provided once available.

6.6. Key Risks

- Regarding the 1.6m easement which burdens the project, it is presumed that the easement is a drainage easement which benefits Wright Lane (presumed Council owned). Confirmation of the right to build in the easement is required.
- OSD may be required by Council which may be difficult to provide due to space constraints.
- Water quality targets may be required by Council and requires GPTs or other treatment devices.
- Structural piles for the noise wall are located immediately adjacent to an easement. Council requires sufficient clearances to prevent structural loads imparted on any drainage structures within the easement. The proposed noise wall location may require relocation.
- Condition of existing drainage pipe to be confirmed via CCTV.
- Survey of existing drainage is incomplete. i.e. Wright Street drainage is unknown.
- The presence of existing HV at the low point corner of the site is a construction and design risk.

6.7. Key Opportunities

- The drainage provided at Wright Lane is outside of project extents. Offsetting the noise wall with sufficient clearance away from the easement would limit any disruptions to the existing drainage system within the ease, mitigating the need to replace existing drainage and constructing within the easement.
- Opportunity exists in investigating whether drainage can connect into the existing 375mm pipe crossing Burrows Avenue mitigating the need to connect into the 600mm pipe at the low point corner and any risks associated with building near a HV electrical asset.

6.8. Design items to be addressed in the following design phases

The following items are noted to be addressed for the subsequent design phases as part of the scope of works:

- Undertake hydrology and hydraulics assessment to understand existing scenario and impact of the proposed development to the existing.
- Confirm additional inlet pit requirement following results of the flood width analysis and any changes on civil grading.
- Confirm existing pit and pipes to be removed and replaced following receipt of additional site survey information.
- Clash detection analysis with existing and proposed utilities
- Actual site verification of the condition of the 375mm diameter existing pipe crossing at the corner of Burrows Avenue and Railway Road. To further evaluate if we can use this existing pipe connection for our proposed drainage network to avoid underground HV cables constructability and safety risk issues.

Moreover, the following risks and opportunities have been identified and to be confirmed on the subsequent stage as these are not part of the current scope of works:

- Water quality as per Inner West Council, Marrickville DCP 2011, Table 1, states that “any development which involves the construction or designation of 10 or more additional uncovered car parking spaces” requires storm water quality pollution load reduction to be undertaken in the location of the noise wall and associated clearance with the easement. Raised as RFI No. 22 last 07/09/2023.
- On-site detention requirement as per Inner West Council, Marrickville DCP 2011, C5, states that “OSD will be required for all developments except for i. Extension (alterations and additions) where the proposed roof or paved area are less than 40m2, and ii. Sites that discharge directly to the Cooks River or into a major Sydney Water Corporation controlled trunk drainage system”. Raised as RFI No. 24 last 07/09/2023.

7. Structural Design

7.1. Noise wall at Eastern Boundary

7.1.1. Description of Structure

The design of the noise wall requires urban and acoustic assessment to determine the appropriate noise wall design complying with the standards and is suitable for the current condition considering the adjacent residential area.

The noise wall is proposed to be 4.5 m high (as per advice of ConnectSydney) from the design finish level and constructed with a traditional post and wall panel type construction. The alignment of the wall is proposed to be constructed 1.6m from the residential boundary line due to an existing easement.

The typical noise wall consists of a minimum 4m-high precast wall panels and 0.5m-high Perspex panels proprietarily fixed on top of the precast wall and steel posts. The height of the precast panels varies to retain a maximum height of 1m on the bus layover side while maintaining a height of 4.5m from the design surface level. The precast wall is proposed to be 150 mm thick reinforced with mesh designed for strength and crack control. Additional 20 mm thick of wall section was initially considered to incorporate a panel relief / finish which is to be completed in the precast factory. The overall thickness of the precast shall be confirmed once the panel relief / finish is determined by the acoustic and/or urban designer.

The precast walls are attached to steel section posts (310UB intermediate and 300PFC ends) spaced at a maximum spacing of 4m centre to centre along the 60m length of the wall. The steel posts are cast-into 600mm diameter reinforced concrete pile with a minimum embedment of 800 mm and a maximum of 1000 mm. The piles are founded into Class 5 Rock with a minimum socket length of 1.7 m. The final height, extent and panel finish surface of the noise wall shall be confirmed by urban and acoustic designers. Refer to Figure 17 for the elevation and to drawing 520212-AURC-0380-RW-DRG-008002 for further details.

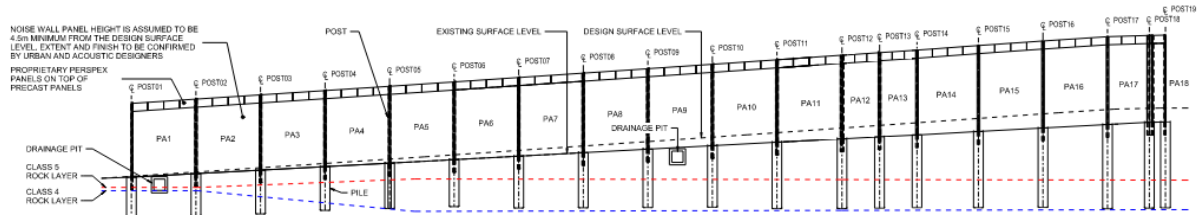


Figure 17: Noise Wall Elevation

7.2. Design Methodology

7.2.1. Design Interfaces

- Easement of the noise wall from the property boundary.
- Future drainage construction within the easement area.
- Possible existing services (to be confirmed).
- Architectural / Urban Design Requirements

7.2.2. Design References

Below are the reference documents used as a basis/guide for the detailed design:

- TfNSW – Noise Wall Design Guideline
- TfNSW Specification B349 – Precast Concrete Noise Wall Members (Not Pretensioned)
- TfNSW Specification B59 – Bored Cast in Place RC Piles
- AS 4678:2002 – Earth Retaining Structures
- AS 3600:2018 – Concrete Structures
- AS 4100:2020 – Steel Structures
- AS 5100.3:2017 – Foundation and Soil Supporting Structures
- AS 1170.2:2021 – Wind Actions
- AS 2159:2009 – Pile Footings and Design Installation

7.2.3. Design Inputs

The following sections summarised the design criteria that has been taken into consideration, in the design development of the noise wall and footing slab. Further details shall be confirmed on the next detailed design stage.

7.2.4. Design Criteria

The following design parameters/criteria were considered for developing of concept design options and progressing into detailed design:

- Structures Importance Level 2
- Design Working Life: 50 years.
- Regional Wind Speed (ULS): 500-year return period.
- Post Maximum displacement: Height/125
- Panel Maximum deflection: Panel Span/150
- Acoustic and Aesthetic Impact.
- Extent and height of the noise wall.
- Ground condition.
- Future excavation along the adjacent easement.
- Corrosion allowance

7.2.5. Design Assumptions

The following were assumed in the design and will be confirmed on the next design stage:

- The noise wall will have a 4.5m height protrusion from the design surface level.

- The noise wall will have 1.6m clearance from the property boundary and will have a total length of around 60m.
- Future excavation along the adjacent easement is limited to 1m deep from the design surface level.
- No vehicle impact was allowed in the design of the noise wall.

7.2.6. Design Considerations

The following were considered in the development of the detailed design:

- Provide a noise wall design that complies with urban/acoustic requirements and other related design standards.
- Design the noise wall as a retaining wall with the lower part retaining the soil and upper part being subjected to wind load.
- The noise wall to have 1.6 m clearance from the property line for the designated easement.
- Design consideration for future construction (drainage etc.) within the easement area.
- The pile shall have a minimum embedment of 1.7m into Class 5 Shale with a minimum 700 kPa allowable end bearing capacity.

7.2.7. Material Properties

The following sections summarises the material properties considered in design.

Concrete

The material property of the pile and precast panel shall have a minimum compressive strength of 32 MPa in 28 days.

Steelworks

Table 8: Steelworks Material Properties

Elements	Strength Grade
Hot rolled Sections	300
Rolled plates (plates)	250

7.2.8. Geotechnical Parameters

Refer to **Appendix J** for Foundation Design Parameters

Dead Load, G

The dead load considered comprises of the weight of the precast panel, Perspex panel, pile and steel UB and PFC section posts.

Wind Load, W

Wind load acting on the noise wall shall be calculated based on AS 1170.2 considering the assumed parameters below.

Table 9: Wind Parameters

Parameters	Values
Average Return Interval for Ultimate Limit State	500 yrs.
Average Return Interval for Serviceability Limit State	25 yrs.
Wind Region	A2
Terrain Category	2.5
ULS Wind Speed	45 m/s
SLS Wind Speed	37 m/s

Earth Pressure, EP

Earth pressure shall be considered acting on the bottom part of the wall which retains a maximum height of 1m of soil. The assumed soil properties below have been considered for initial design. Geotechnical parameters shall be confirmed on the next stage.

Table 10: Soil Parameters

Soil Properties	Values (TBC)
Saturated unit weight	20 kN/m^3
Dry unit weight	18 kN/m^3
Angle of internal friction	30
ka	0.33
ko	0.50

Compaction Pressure, Phm

The compaction pressure shall be determined using AS 4678. The considered pressure induced by compaction is 12 kPa for light compaction equipment on thin walls as per AS467 Section J9.

Ground water pressure, Wa

The height of the water acting on the wall is assumed to be 1/3 of retained height of soil.

Live load surcharge, Q

The surcharge is assumed to be 10 kPa considering both pedestrian and vehicular live load.

Load Factors

Table 11: Load Factors

Soil Properties	SLS Factor	ULS Factor
Dead Load, G (steel/concrete)	1 / 1	1.1 / 1.2

Soil Properties	SLS Factor	ULS Factor
Wind Load, Q	1	1
Earth Pressure, EP	1.2	1.5
Compaction Pressure, Phm	1.2	1.5
Live Load Surcharge, Q	1	1.5
Ground Water Pressure, Wa	1	1

Load Combinations

The noise wall shall be designed for the most critical combination shown below:

Ultimate Limit State

Table 12: ULS Load Combinations

Load Case	ULS Load Combination
ULS 1	1.1G + 1.2G + 1.5EP+1.0Wa +1.5Q
ULS 2	1.1G + 1.2G +1.5EP+1.0Wa +1.0W_{ULS}
ULS 3	1.1G + 1.2G + 1.5EP +1.0Wa + 1.5Phm

Serviceability Limit State

Table 13: SLS Load Combinations

Load Case	SLS Load Combination
SLS 1	1.0G + 1.2EP+1.0Wa +1.0Q
SLS 2	1.0G + 1.2EP+1.0Wa +1.0 W_{SLS}
SLS 3	1.0G + 1.2EP +1.0Wa + 1.2Phm

7.2.9. Method of Analysis

The noise wall was designed as a precast panel connected to steel section post (UB intermediate and PFC ends) embedded to the pile. The posts have a typical centre to centre spacing of 4m. The loads acting on the panel are self weight of structural components, wind load, earth pressure, compaction pressure, ground water pressure and live load surcharge which are transferred into the post and then to the pile.

The panel was modelled as plate elements in Space Gass with pin support on the side and was designed considering the maximum design actions.

For post and pile, the maximum design actions due to the loads transferred from the panel have been derived from the simple 2D Space Gass model with springs on the pile. The model also checks for the deflection of the structure under SLS loading.

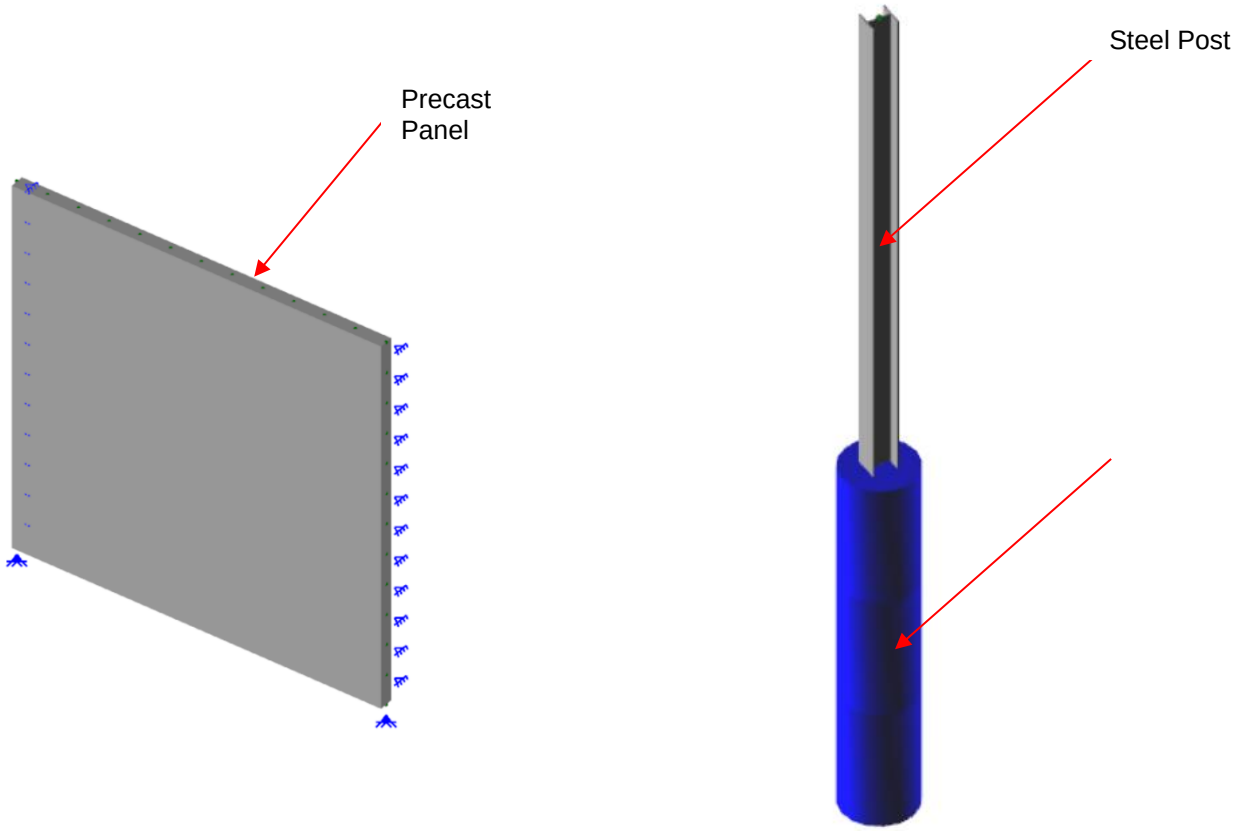


Figure 18: Space Gass Model

7.3. Amenities Building

7.3.1. Description of Structure

The amenities building is a single-storey structure with assumed nominal plan dimensions of 4m x 7m. It is assumed that the building is built with residential type construction.

The design of footing slab of amenities building is to be designed in accordance with AS 2870, the standard for this type of foundation.

The footing slab of the amenities building is proposed to be cast-in situ concrete slab with 100mm minimum thickness reinforced with mesh and footing beams spaced at maximum of 4m with a minimum depth of 400mm. The design complies with AS 2870 – Residential Slabs and Footings. Other details of the amenities' building are to be finalised on the next stage. Refer to Drawing 520212-AURC-0380-RW-DRG-008002 for further details.

7.3.2. Design Methodology

Design Interfaces

- Possible existing services (to be confirmed).
- Pavement around the amenities building.

Design References

Below are the reference documents used as a basis/guide for the detailed design:

- AS 2870 – Residential Slabs and Footings
- Current Version of Suite of AS 1170

Design Inputs

The following sections summarised the design criteria that has been taken into consideration, in the design development footing slab. Further details shall be confirmed on the next detailed design stage.

Design Criteria

The following design parameters/criteria were considered for the detailed design:

- Structures Importance Level 2
- Design Working Life: 50 years.
- Site classification (TBC).
- Type of construction (TBC).

Design Assumptions

The following were assumed in the design and will be confirmed on the next design stage:

- The type of construction is Class M (Clad Frame/Articulate Masonry Veneer) as per AS 2870.
- The soil reactivity is Class M as per AS 2870 Table 2.1.

Design Considerations

The following were considered in the development of the detailed design:

- Provide minimum dimensions and detailing requirements of the slab complying with the standard.
- Interface of the amenities building to the surrounding pavement

Material Properties

The following sections summarises the material properties considered in design of the footing slab.

Concrete

The material property of footing slab shall have a minimum compressive strength of 32 MPa in 28 days.

Loads

The loads acting on the footing slab are self-weight, live load of 3 kPa as per AS 1170.1 Table 3.1 Category B, and wind load (refer to Table 2) acting on the building.

Method of Analysis

The design of footing slab was primarily based on AS 2870 for the minimum dimensions and reinforcements based on specified site classification and type of construction. This will be further confirmed on the next detailed design stage.

7.4. Design Outputs

7.4.1. Drawings

At the current 80% Detailed Design, the following drawing documents have been allocated to this work:

Table 14: Drawing Deliverables

DRAWING NUMBER	DRAWING TITLE
520212-AURC-038-RW-DRG-008001	GENERAL ARRANGEMENT
520212-AURC-038-RW-DRG-008002	NOISE WALL POST AND PANEL DETAIL-SHEET 1
520212-AURC-038-RW-DRG-008003	NOISE WALL POST AND PANEL DETAIL-SHEET 2
520212-AURC-038-RW-DRG-008010	AMENITIES BUILDING DETAILS

7.4.2. Results of Structural Analysis

7.5. Noise Wall

7.5.1. Design of Post

Section capacities of the post have been determined using *Tekla Tedds* steel member design and compared them to governing design actions. Deflection based on AS 5100 was also considered in the design.

Table 15: Post Capacity Check - Bending

Post				
Maximum Height	**Section**	**M***	**Bending Capacity**	**Utilizations**
5.5m (intermediate)	310UB40	77.8	166.6	0.47
5.5m (end)	300PFC	77.8	132	0.59
5m	310UB32	58.9	100.2	0.59
4.5m	300PFC	47.6	132	0.36

Table 16: Post Capacity Check - Shear

Post				
Maximum Height	**Section**	**V***	**Bending Capacity**	**Utilizations**
5.5m (intermediate)	310UB40	41.3	320.4	0.13
5.5m (end)	300PFC	41.3	388.8	0.11
5m	310UB32	26	283.2	0.09
4.5m	300PFC	21.2	388.8	0.05

Table 17: Deflection Check

Post				
Maximum Height	**Section**	**Deflection**	**Deflection Limit (h/125)**	**Utilizations**
5.5m (intermediate)	310UB40	32.8	44	0.75
5.5m (end)	300PFC	36.8	44	0.84
5m	310UB32	26.5	40	0.66
4.5m	300PFC	16.9	36	0.47

Corrosion allowance for the buried posts for the noise wall is 1.0 mm. This is to be confirmed once the soil properties of the backfill has been confirmed.

7.5.2. Design of Pile

Section capacity and maximum steel stress of the pile has been determined using Autodesk Structural Bridge Design software compared them to governing design actions.

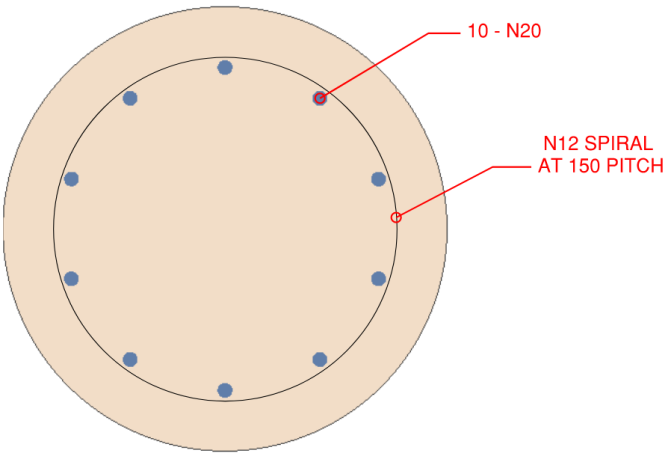


Figure 19: Pile Reinforcement Details

Table 18: Pile Capacity Check

Pile – 600mm Diameter			
	Compression (kN)	**Moment (kN-m)**	**Shear (kN)**
Design Action	103	111	31.2
Capacity	6646.3	274	245.8
Utilisation	0.02	0.40	0.13

Table 19: Steel Stress and Crack Width

Pile – 600mm Diameter		
	Steel Stress (MPa)	**Crack Width (mm)**
Design Action	121.7	0.194
Capacity/Allowable	240	0.2
Utilisation	0.51	0.97

7.5.3. Design of Precast Panel

Section capacity and maximum steel stress of the precast panel at the critical section has been determined using Autodesk Structural Bridge Design software and compared them to governing design actions.

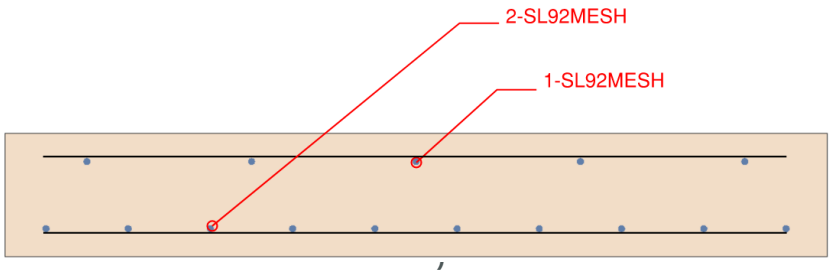


Figure 20: Precast Panel Reinforcement Details (Bottom Part – Critical)

Table 20: Precast Panel Capacity Check

Precast Panel – 150mm thick		
	Moment (kN-m)	**Shear (kN)**
Design Action	8.6	10.8
Capacity/Allowable	27.7	130.7
Utilization	0.31	0.08

Table 21: Steel Stress and Crack Width

Precast Panel – 150mm thick		
	Steel Stress (MPa)	**Crack Width (mm)**
Design Action	112.4	0.132
Capacity/Allowable	240	0.20
Utilization	0.47	0.66

Table 22: Deflection Check

Deflection (mm)	Deflection Limit (s/150) mm	**Utilization**
1.58	26.7	0.06

7.6. Amenities Building

The design of footing slab is deemed to comply with AS 2870 for the minimum dimensions and reinforcements based on specified site classification and type of construction. Based on the assumption of site classification as Class M and type of construction as articulated masonry/masonry veneer, the edge and internal beams shall have a minimum depth of 400mm as per AS2870 Figure 3.1.

7.6.1. Constructability

As part of the design development process, construction information and consideration have been gathered during 80% detailed design to confirm that the design solution is practical and has been optimised for construction. Key construction issues are highlighted in the following sections.

7.6.2. Construction Sequence and Staging

The anticipated construction sequence could follow the stages listed below:

For Noise Wall:

- Bore the piles to the required embedment.
- Once the depth of embedment is confirmed, install reinforcement to the piles and embed the steel posts then pour the concrete to required level.
- After 28 days, install the precast wall panels and ensure that the connection to the post will be tight using neoprene packer.
- Backfill behind the wall and build the pavement adjacent to the wall.

For Footing Slab:

- 100mm thick hardcore and 0.2mm high impact damp-proof membrane shall be laid on the desired level.
- Install reinforcement and pour the concrete slab above the membrane.

7.6.3. Associated Risks

Risks that can be associated during construction/installation of noise wall are as follows, and shall be considered by the contractors during construction:

- Working near residential area and roadways.
- Noise during construction that might cause disturbance on the nearby residential area.
- Vehicle impact.
- Lifting of precast panels during installation.
- Existing services.

7.6.4. Maintenance Considerations

Regular condition inspections need to be undertaken to ensure full functionality of the noise wall and footing slab and minimise repair or replacement at a later stage.

Apply anti-graffiti coating to all exposed concrete surfaces in accordance with manufacturer's requirements, system PSL1 of AS2312 table 6.3 using an epoxy primer conforming with AS3750.9 and recommended for application over concrete by the manufacturer. Colour and pattern of the coating will be confirmed by the Urban designer.

8. Pavement design

8.1. Design reference documents

The following reference documents were used to develop the pavement design:

- Austroads Guide to Pavement Technology Part 2: Pavement Structural Design Edition 4.2, 2019 (AGPT-02)
- TfNSW Supplement to Austroads Guide to Pavement Technology – Part 2: Pavement Structural Design, Version 3.0, August 2018
- Benefits Assessment – To acquire bus layover facility on Burrows Avenue at Sydenham Station Report, TK Business Group, Final Version, April 2023

8.2. Design software

The following software packages were used to assist in design computations:

- TfNSW AC Modulus, Version 6B (March 2018).
- TfNSW Pavement Traffic Loading 2 (PTL2), Version 1C (December 2021).
- Circly 7.0
- TfNSW Rigid Pavement Design (RPD) Version 1T

8.3. Design parameters

8.3.1. Design life

A design life of 40 years was adopted for the rigid pavement design and 20 years adopted for flexible pavements as per Table 7.2 of TfNSW Supplement to AGPT-02.

Table 23: Table 7.2 of TfNSW Supplement to AGPT02

Pavement Type	Design Life
Flexible Pavements	20 years
Rigid Pavements	40 years

8.3.2. Design traffic

With the absence of any suitable traffic counts, the 'Benefits Assessment – To acquire bus layover facility on Burrows Avenue at Sydenham Station' report by TK Business Group for TfNSW was utilised to determine the bus traffic data on the Burrows Avenue and Railway Road carriageway. Under Chapter 9, Proposed Bus Layover Benefits, it was stated that TfNSW is expecting 306 bus arrivals at Sydenham Station each week. In addition to this, Table 3.2, 2T3 Bus and Train Lines were also utilised for frequency of peak hour bus traffic via Sydenham Station. Two peak hours periods, four hours each morning and night, and one peak hour period of three hours during weekends were considered. The following parameters were adopted for the calculation of NDT:

- Growth rate of 1% - Minimum value prescribed by TfNSW Supplement to AGPT02
- Direction factor – 1.00
- Lane Distribution Factor – 1.00 (AGPT-02 Table 7.3)

See Table 24 for the summary of the adopted design traffic.

For the development of Traffic Load Distribution (TLD), an assumption was made that buses will be either lightly loaded or empty. This assumption is considered suitable as it is in line with the projected usage case of the Bus Layover facility, in that buses will be typically awaiting the start of a route near or at Sydenham station

Table 24: Summary of design traffic

Road	AADT (NB and SB)	Design Life (years)	HV%	Growth (%)	ESA/HVAG	NDT	DESA
Flexible Pavement	176	20	100	1.0	1.00	2.83E+06	2.83E+06
Rigid Pavement (Bus layover)	176	40	100	1.0	1.00	6.28E+06	6.28E+06

8.3.3. Pavement support and subgrade conditions

At 20% design, due to the absence of any geological information, a subgrade of CBR of 3% was chosen for the pavement design. This will be revised when the planned geotechnical investigation results are available.

Eight pavement cores and boreholes are performed as part of geotechnical investigation before the 80% design. Summary of these investigation is provided below and the plan is provided in Figure 21.

Table 25: Summary of Geotechnical and Laboratory Results

ID	Sample Depth (mm)	Material Description	Plasticity Index %	10 Day Soaked CBR %	CBR Swell %
PC-01	40 - 360	Silty Sandy GRAVEL with Cobbles	Non- Plastic	50	0.0
PC-02	50 - 300	GRAVEL with Sand trace Silt	Non- Plastic	20	0.0
PC-03	360 - 500	Sandy CLAY with Gravel	15	8.0	0.1
PC-04	160 - 260	Silty Sandy GRAVEL with Cobbles	Non- Plastic	40	0.0
BH-01	250 - 500	CLAY trace Sand and Gravel	26	2.0	3.2

ID	Sample Depth (mm)	Material Description	Plasticity Index %	10 Day Soaked CBR %	CBR Swell %
BH-02	250 - 450	Silty SAND trace Gravel	Non- Plastic	7.0	0.1
BH-02	450 - 500	CLAY trace Sand and Gravel	21	3.5	1.6
BH-03	250 - 500	Silty SAND trace Gravel	Non- Plastic	10	0.1

Figure 21: Geotechnical Investigation locations

At existing road corridor in-situ CBR was between 8% and 50%. Three out four samples were non-plastic however the plastic sample was obtained much deeper locations compared to other samples. Therefore, for pavement design at existing road corridor, a CBR of 5% seems suitable for the subgrade and existing materials will be designed with CBR of 8% to be conservative.

For the bus layover site, in-situ CBR was between 2% and 10% and the maximum swell recorded was 3.2%. Therefore, for the rigid pavement design, CBR of 2% will be adopted. Also, a capping layer of 300mm will be nominated to address the high swell (>2.5%) of the subgrade. This is compatible as per TfNSW supplement to AGPT-02.

8.3.4. Existing Pavement Composition

Four pavement cores have been completed as part of the geotechnical investigation to understand the pavement makeup and thickness of each layer. A summary of the results is provided below.

Table 26: Summary of Pavement Cores

Pavement Core ID	PC-01	PC-02	PC-03	PC-04
Road Section	**Railway Rd**	**Railway Rd**	**Burrows Ave**	**Burrows Ave**
Wearing Course	0 – 40mm Asphaltic Concrete (AC10)	0 – 50mm Asphaltic Concrete (AC10)	0 – 50mm Asphaltic Concrete (AC14)	0 – 50mm Asphaltic Concrete (AC14)
Base	40 – 360mm Silty Sandy GRAVEL trace Cobbles	50 – 300mm GRAVEL with Sand trace Silt	50 – 160mm GRAVEL (Macadam)	50 – 160mm Sandy GRAVEL (Macadam)
Subbase/Fill	-	-	160 – 360mm Rock (Sandstone)	160 – 260mm Silty Sandy GRAVEL with Cobbles
Subgrade	360 – 500mm CLAY	300 – 500mm Gravelly CLAY	360 – 500mm Sandy CLAY with Gravel	260 – 500mm Silty CLAY

The asphalt thickness was between 40-50mm while the granular base thickness was between 250-310mm at Railway Road while 110mm granular base with 100-200 granular subbase was encountered at Burrows Avenue. Clay was the predominant component of the subgrade.

8.3.5. Falling Weight Deflectometer (FWD) Analysis

Falling Weight Deflectometer (FWD) testing was undertaken on the 6th of Nov 2023. The target load for the testing was 50kN / 707kPa and the equipment used was HWD-175. Standard geophone spacings from the load as per TfNSW Test Method T177 were used (0, 200, 300, 450, 600. 750, 900, 1200 and 1500mm).

- Deflections results were measured in micrometres (µm), and they were normalised for the target load of 50kN / 707 kPa later.
- Both surface and air temperature were measured on the night for each test point.
- Curvature is calculated using following equation per AGPT05:

$$Curvature = D_0 - D_{200}$$

Where D_0 = maximum deflection, D_{200} = deflection measured at 200mm.

Normalised deflection values were then corrected using the following factors according to AGPT05:

- Seasonal correction factor – 1.0

  Based on Table 9.1 of AGPT05 - Winter and spring rain (temperate climates)

- Deflection standardisation factor – 1.0

Aurecon developed stripmaps to illustrate deflection results each road section. These stripmaps are presented in Table 27 below.

Each of the individual stripmap presents the maximum deflection (D0) and curvature along the outer wheel path and inner wheel path on all surveyed travel lanes.

Table 27: Benchmarking values used in Stripmaps

	Range 1			Range 2			Range 3		
	From	To	Colour	From	To	Colour	From	To	Colour
Deflection (µm)	0	500		500	1000		1000	2000	
Curvature (µm)	0	175		175	350		350	1000	

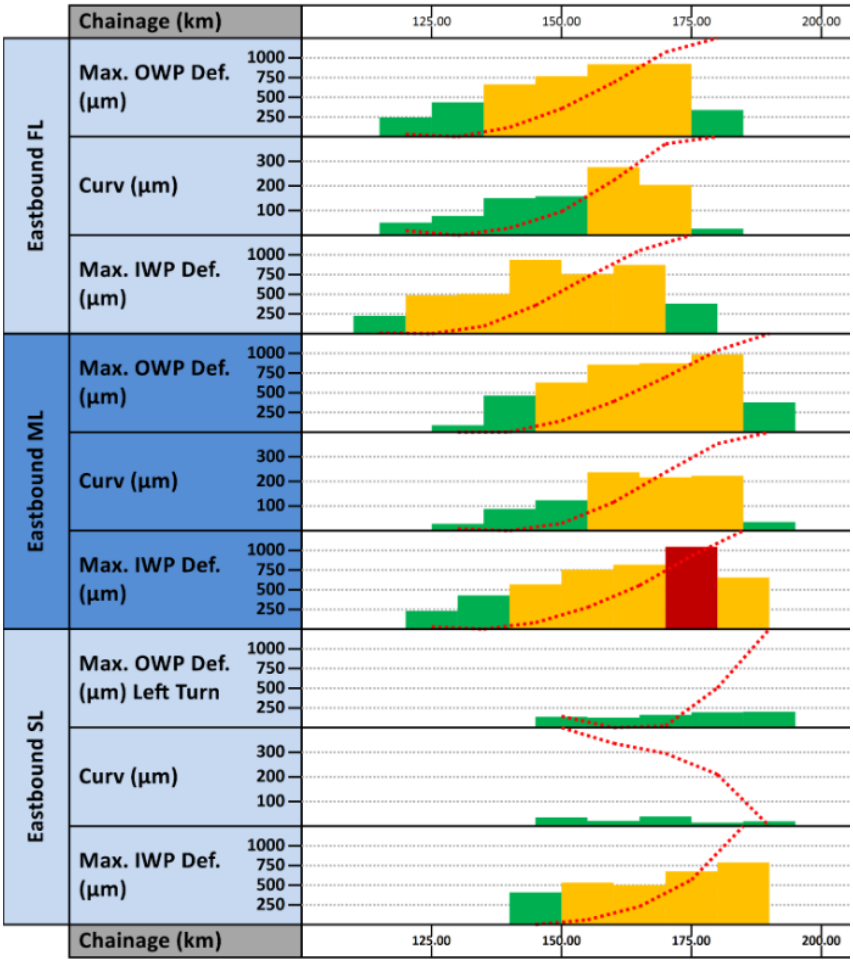


Figure 22: FWD results from Burrows Avenue

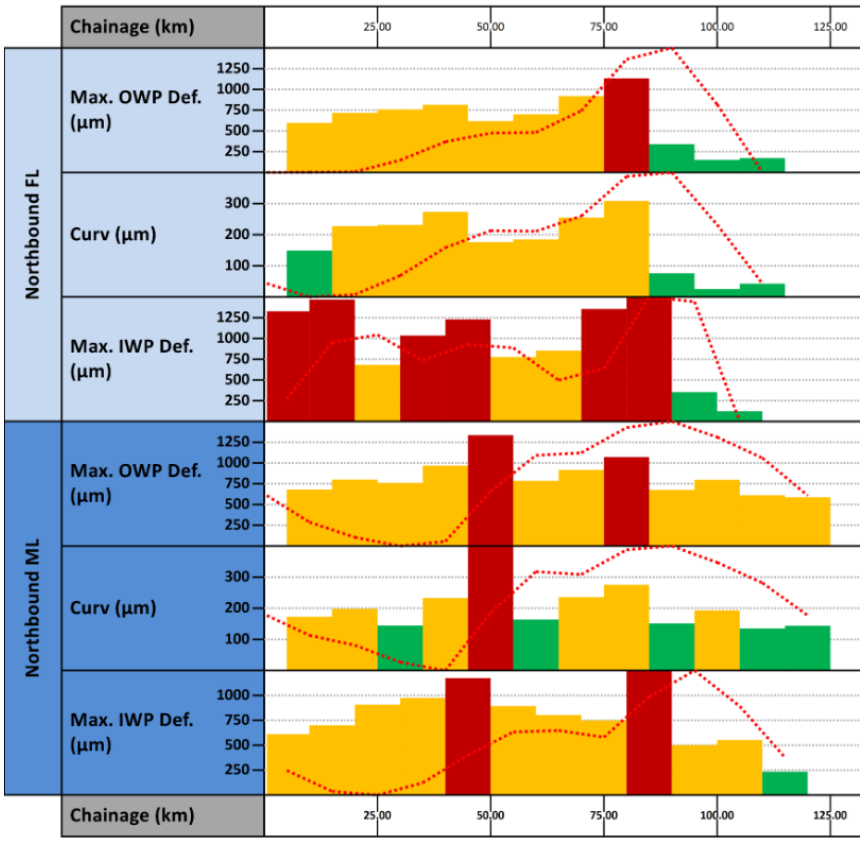


Figure 23: FWD results from Railway Road

Higher deflections were recorded in Railway Road compared to Burrows Avenue due to existing pavement conditions and structure noted in this section. To accommodate heavier traffic, this pavement needs to be overlaid however, the levels are remaining the same in this project. Therefore, an asphalt inlay is nominated where top granular material will be replaced by asphalt thus increasing the pavement structural capacity.
As per the AGPT-05 Equation 7, design deflection is calculated to be 1000µm. the deflections more than this shown in red in above figures.

Design traffic of 10^6 ESA or more:

$$D = 0.731 + 91.202N^{-0.3924}$$

where

D = design deflection (mm)

N = design traffic loading (ESA)

There are few deflections more than the design deflection is recorded in Railway Road while once such recording is found in Burrows Avenue. This can be interpreted as the lack of capacity of the existing pavement to accommodate the expected traffic therefore, the nominated treatment will be necessary to address this issue.

8.3.6. Pavement material parameters

The following properties have been assumed for subgrade and selected materials.

Table 28: Selected material and subgrade characteristics

Layer:	Thickness (mm)	Assumed Strength in Pavement Design
Selected material	300 mm	Min. CBR = 15%, E_v = 150 MPa
General Fill (Subgrade)	Assumed semi-infinite	Design subgrade CBR 3%

The following design inputs were used in preparing the pavement design elements containing asphalt:

- WMAPT quoted in the Austroads Guide of 28°C (Sydney).
- Binder contents 0.3% above minimum values for Heavy Duty Dense Graded Asphalt as per TfNSW R116
- Design air voids for dense graded asphalt of 6.0% per TfNSW Supplement to AGPT02.
- For EME2, utilising a WMAPT of 28°C, modulus was calculated in accordance with the TfNSW Supplement to AGPT02 with the below equation and verified with TfNSW asphalt modulus software version 6B

$$E_{WMAPT,V} = E_{28^\circ\ C,80km/h} \times e^{(-0.08(WMAPT-28))} \times \left(\frac{V}{80}\right)^{0.365}$$

- Class C450 bitumen properties based on Sydney refinery testing results and in accordance with the TfNSW Supplement to AGPT02:
    - Bitumen penetration at 25° C (0.1 mm): 31 (after RTFO).
    - Bitumen viscosity at 60° C: 970 Pa.s (after RTFO).

TfNSW asphalt modulus software (AC modulus version 6B) was used to determine the modulus for inclusion in the design. Detailed outputs are contained in **Appendix C** with a summary in Table below.

A speed of 20 km/h has been adopted to characterise asphalt mix designs. C450 binder has been nominated for AC20 intermediate courses and A15E binder has been nominated for AC14 wearing course to assist in resistance to rutting at the intersection.

Table 29: Asphalt Modulus

Nominal size of asphalt (Asphalt designation)	Binder Type	Loading Speed (km/h)	Adopted Modulus (MPa)	Total Binder (by mass)
14mm (AC14)	A15E	20	1500	5.2%
EME2	EME Binder	20	3600	N/A
14mm (AC14)	C450	20	2000	5.2%

Asphalt in the wearing course is to incorporate an HFA (PAFV>56), the extents of which will be defined at the following design submission.

8.4. Pavement profiles

A summary of the proposed pavement types for this project are shown in the table below with further information regarding pavement type R1 and F1 following. Refer to **Appendix B** for the calculations.

Table 30: Adopted pavement profiles

Pavement Type	Pavement Tag	Pavement Profile	Earthworks Support
Sydenham Bus Layover Project			
Mill and Resheet	MR1	50mm AC14 (A15E Binder) If on Asphalt: Tack Coat Only. If on Granular: Apply Polymer Emulsion Primerseal	Existing Pavement
Rigid	R1	180mm Steel Fibre Reinforced Concrete 7mm Low Cutter Seal 150mm Roller Compacted Concrete	300mm Selected Material Zone (CBR 15%) Subgrade (CBR 2%) with 300mm capping layer
Flexible	F1	50mm AC14 (A15E Binder) 50mm AC14 (C450 Binder) 75mm EME2 7mm Low Cutter Seal	Existing Pavement - Assume to be equivalent to 300mm Selected Material Zone (CBR 15%) Subgrade (CBR 3%)
Median	M1	100mm N32 Concrete with SL 62 Mesh 100mm Select Fill Type U	Compacted Subgrade
Shared Path	SP1	150mm N32 Concrete with SL 82 Mesh 150mm DGB Class 2	Compacted Subgrade

8.4.1. Pavement Type R1: Rigid Pavement

Pavement Type R1 is a rigid pavement with a steel fibre reinforced concrete base and roller compacted concrete subbase.

Rigid pavement has been adopted for the layover facility as it is resistant to rutting, highly durable, and low maintenance. Steel fibre reinforcement has been considered suitable as buss wheel paths are non-defined across the layover extents. As such, a similar approach of what is considered at TfNSW standard roundabouts has been adopted. Slow moving, turning traffic means that only fatigue is considered, and a load safety factor of 1.6 was applied.

The subbase that is proposed is roller compacted concrete (RCC). Recent experience with this at the Moorebank Multimodal as a rigid pavement subbase indicates that it is easy to construct and, when the appropriate strength mix is nominated, quickly trafficable. An RCC subbase is also non-erodible, provided beneficial support conditions for a rigid pavement.

8.4.2. Pavement Type F1: Flexible with EME2

Pavement Type F1 is a flexible pavement inlay for the area considered trafficable by buses on Burrows Avenue and Railway Road. EME2 has been adopted as the pavement critical base layer due to its high modulus and therefore can be relatively thin. This is likely to assist with utility clearances on Burrows Avenue and Railway Road.

Due to the high stiffness of EME2 mixes however, it is considered poor practice to allow construction vehicles to traffic the EME2 base layer prior to construction of the wearing course. As such, Pavement Type F1 has been designed to incorporate two AC14 layers, such that the AC14 C450 intermediate layer ‘caps’ the EME2 after construction of the EME2 layer, and prior to application of the wearing course. This prevents long term construction traffic loading directly onto the EME2 base layer and potentially inducing cracking in the highly stiff EME2 layer.

8.5. Outstanding Items and Opportunities

The following items are either outstanding or present opportunities, that will be investigated and incorporated at the following design stage:

- Subsurface drainage
- Construction loading consideration for rigid pavement subbase – high early strength or high strength roller compacted concrete mix may be required.

9. Utilities

9.1. Existing utilities

A BYDA investigation was undertaken on 12 February 2024 to identify the utility authorities within the project boundary. The following utility authorities were identified by the investigation:

- Ausgrid
- Australian Rail Track Corporation NSW
- FibreSense Pty Limited (NSW)
- Inner West Council
- Jemena Gas South
- NBN Co NswAct
- Sydney Trains Central
- Sydney Water
- Telstra NSW Central
- Transgrid
- Transport for NSW

The received plans from the BYDA investigation were compared to the QL-B survey and any strings not shown in survey were digitised and are shown as QL-D. The information has been presented on the utility plans. Refer to **Appendix H** for BYDA documentation.

9.2. Utility Impact assessment

Existing utility services have been investigated through collected Before You Dig Australia (BYDA) data.

The general methodology for the identification of existing utilities and relocation alignments in the project area is as follows:

- Order BYDA plans for the project site through Before You Dig Australis website;
- Incorporate Quality Level B (QL-B) utility survey data into the model and digitise QL-D data where there is no survey information available and drape the strings to below existing surface level;
- Incorporate Quality Level C (QL-C) utility survey data into the model and digitise QL-D data where there is no survey information available and drape the strings to below existing surface level;
- Assess the impact of the civil design on the QL-B, QL-C, and QL-D utility data by undertaking a clash check;
- Model proposed utilities relocations impacted by the civil design, and
- Annotate the drawings with the impact of the utilities in various locations.

The following utilities are affected by the civil works:

- Sydney Water ventshaft on Wright Street in the vicinity of the proposed noise wall
    - Noise wall alignment has been adjusted to satisfy Sydney Water BOA requirements.
- Sydney Water DN600 RC drainage pipe runs along Railway Road
    - Impacted by the proposed drainage. The drainage pit is proposed to intercept existing DN600 RC pipe at approx. MC01 CH.120. Aurecon is engaging WSC to manage detailed design application for approval by Sydney Water.
- Jemena DN32 NY 210kPa MP gas main runs along Railway Road
    - Not impacted. Cover of gas main is increasing by approximately 300mm as per QL-A survey provided at this location.
- Ausgrid HV conduits runs along Railway Road
    - Non-standard clearance to the drainage pit and pipe. Aurecon to seek dispensation from Ausgrid. Additional details will be provided when it is available.
- Transgrid transmission cables runs along Burrows Avenue
    - Not impacted. Proposed drainage network has been designed to minimise impact to the Transgrid asset.
- Telstra P35 and P50 property connection runs along Railway Rd and Burrows Avenue
    - Pit and conduit are impacted by the proposed kerb realignment and to be relocated.

9.3. Utility Authority Coordination

9.3.1. Telstra

Telstra has been consulted regarding the relocation of pits and conduits along Burrows Avenue impacted by the proposed kerb realignment and associated civil works. A site visit was conducted by Telstra on 07 September 2023 to assist in obtaining Telstra's Industry Specialist fee proposal to carry out non-contestable design and relocation. Subsequently, Telstra provided Aurecon a fee proposal to carry out civil design of the relocation works. Aurecon has provided relocation plan, chainages, long section, and typical cross sections to Telstra for review and comments. Telstra has provided in-principal agreement for the relocation works. Quality A survey investigations were carried out by Durkin to confirm tie in locations of Telstra's relocation to the existing network. An additional pit was proposed to facilitate connection to the amenities building. Aurecon to submit updated design to Telstra for approval. Telstra relocation and noise wall construction staging to be coordinated. It is recommended to install Telstra pits and conduits and remove existing Telstra network ahead of northern noise wall construction. Refer to **Appendix E** for correspondence with Telstra.

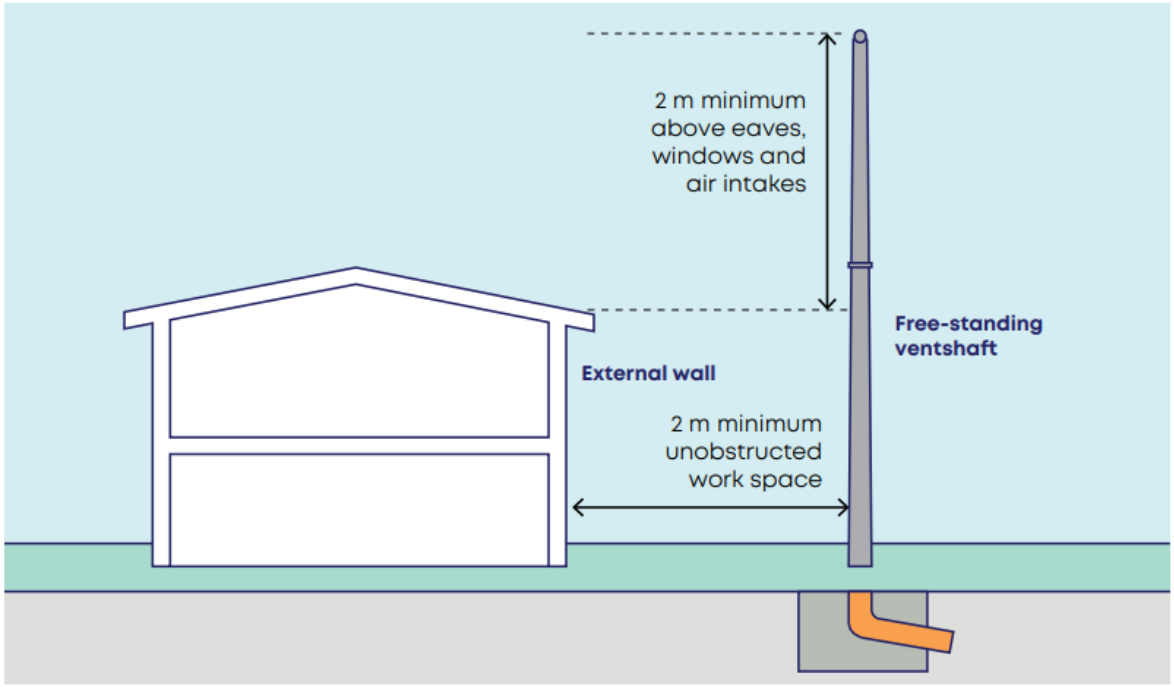
Telstra contact details:

Sam Angeloni
Network Integrity Field Operative
M: 0417290932
E: Sam.angeloni@team.telstra.com

9.3.2. Sydney Water

Aurecon requested Water Services Coordinator (WSC) services from ‘AT&L Pty Ltd’ to obtain the Building Over/Adjacent Asset (BOA) for the sewer ventshaft (VS) on Wright Street in the vicinity of the proposed noise wall. As Sydney Water assets are not designed to withstand external loads, imposed ground movement, the purpose of the BOA is to assess the potential impact of proposed noise wall construction adjacent to the existing Sydney Water VS. According to Sydney Water guidelines, a 2m minimum clearance is required from the face of the VS to the noise wall. Refer to Figure 24 taken from BOA technical guidelines. At 20% DD, the desired clearance to the noise wall was not achieved and therefore the BOA assessment was designed as Out of Scope (OOS) for Sydney Water approval. A Specialist Engineering Assessment (SEA) was required to be prepared by the project team with civil/structural and geotechnical engineers input as well as Pre-Construction and Post-Construction condition assessment of the asset in compliance with Sydney Water requirements. A design coordination meeting was held to explore adjustment of noise wall alignment to achieve minimum clearance to the VS and avoid SEA. Subsequently, the noise wall alignment has been updated to satisfy the BOA In - Scope requirements which does not require pre-condition assessment of the asset. Aurecon to engage WSC to submit BOA application to Sydney Water with expected approval for 100% DD submission.

Diagram 8 – Building near free-standing ventshafts



Note:

If you're building close to any ventshaft, you must consult us early.

BOA technical requirements:

1 For ventshafts over 300 mm diameter, other requirements may apply.
2 Obtain a service location diagram.
3 Submit a building plan application and obtain acceptance.
4 Locate the ventshaft, its footing and underground pipework on-site.
5 Maintain free and full access.
6 Don't alter the existing ground level without our acceptance.
7 Don't excavate near the ventshaft footing.
8 Erect a fence or barrier to protect the ventshaft from damage by construction plant.

Figure 24: Building Over Adjacent Pipe assets taken from Sydney Water Technical Guidelines

WSC has provided fee proposal for the potable water and sewer connections to the amenities building. The contractor could apply via the Sydney Water Tap-In website to obtain approval. However, WSC has advised that given the complexity of the connections and construction staging of the amenities building and the noise wall, the Tap-In application may get rejected. As such, the WSC has provided fee proposal to manage water and sewer connections as detailed design which requires case number. Aurecon to engage WSC to begin coordination with Sydney Water.

Furthermore, the DN600 RC drainage pipe along Railway Road is Sydney Water's asset. It is proposed to intercept the drainage pipe and construct new pit and pipe. As such, a case number is to be raised and major works design to be submitted to Sydney Water. Sydney Water protocols will need to be followed for construction quality control, connections inspection, and submission of Work As Executed (WAE) package for acceptance by Sydney Water. Desing coordination has been carried out to avoid impact to the DN600 RC drainage pipe. However, due to non-compliance of the existing drainage network, it is proposed to upgrade drainage pipes and establish connection to the DN600 RC drainage pipe. Currently WSC is developing a fee proposal to obtain Sydney Water's approval. Additional details will be provided when it is available.

Water Service Coordinator contact details:
Nick Watts
Associate – NSW Manager – Water Services
M: 0430 139 685
E: nick.w@atl.net.au

9.3.3. Ausgrid

Aurecon has engaged Accredited Service Provider Level 3 (ASP3) 'Power Solutions (NSW) Pty Ltd' to begin coordination with Ausgrid. ASP3 has developed the Concept Design which includes electrical supply to the amenities building and proposed street lighting. Also, the design is proposing Ausgrid spare conduits to be installed as enabling works to facilitate future EV bus charging electrical supply. Two options are proposed for the location of the timer pole for electricity point of supply. Refer to **Appendix A** for details.

Accredited Service Provider Level 3 contact details:
Scott Clothier
Director
M: 0407 002 647
E: scott@powersol.com.au

9.3.4. Transgrid

There is an existing Transgrid transmission cable along Burrows Avenue in the vicinity of the proposed drainage network. According to Transgrid guidelines, a minimum 1m horizontal and 600mm vertical clearance is required of the drainage pit and pipes. As such, proposed drainage network has been updated to achieve minimum clearances. QL-A survey investigation around the transmission asset is required to ensure adequate clearances are achieved. Aurecon to share the latest civil design documentations to seek Transgrid's no objection. Additional details will be provided when it is available. Furthermore, constructability and safety issues requirements during construction within existing transmission cables are to be considered. Trasgrid provides a site representative to advise non-Transgrid staff on the most appropriate work methods to employ when working in the vicinity of Transgrid power cables. No work will be permitted within the zone of influence of any Transgrid cables unless a Transgrid site representative is present. Zone of influence is at least 2 meters from the extremities of the cable trench and increases with depth. Refer to **Appendix I** for requirements of working in the vicinity of Transgrid underground cables.

9.4. Key Risks

Water and sewer connections to the amenities building might attract detailed design submission to Sydney Water via WSC. Aurecon to engage WSC and start the application process.

Durkin's QL-A survey investigation was limited and there are some utilities that were not exposed due to site constraints. Assumptions have been made on the cover of utilities.

Further QL-A survey investigation is required to verify the location of Transgrid transmission cable to ensure sufficient clearances are achieved to the drainage network.

9.5. Next steps to develop design

- Engage Water Services Coordinator (WSC) and Sydney Water to obtain approval for the BOA applications of water and sewer assets as well as amenities building connections.
- Liaise with Telstra to obtain approval for the proposed pits and conduit relocation.
- Continue coordination with ASP3 and Ausgrid to obtain approval.
- Liaise with Transgrid to obtain in principle agreement for the standard clearance of the transmission cable to the proposed drainage pipe.

10. Lighting

This section of the report discusses the lighting requirements for the Bus Layover and the modified pedestrian footpath.

10.1. Bus Layover

The Bus Layover area is proposed to be illuminated to a **PC3** category and is currently documented as such in the 80% drawing set.
As the new bus layover area is a non-commuter car park, T HR SS 80001 ST defers to AS/NZS 1158.3.1:2020 for the appropriate lighting design category.

Table 4 – Illumination levels for TNSW staff areas

Areas	Lighting requirements
Station circulation spaces	AS/NZS 1680.2.1 applies
Stations offices	AS/NZS 1680.2.2 applies
All other areas and building types	Relevant AS standards apply
Non-commuter car parks (for example, staff car parks)	Relevant AS standards apply

Figure 25: T-HR-SS-80001-ST-V3.0

In accordance with the determination for a lighting sub-category as outlined in Table 2.5, The highest criteria takes precedence.

TABLE 2.5

LIGHTING SUBCATEGORIES FOR OUTDOOR CAR PARKS (INCLUDING ROOF-TOP CAR PARKS)

1	2	3	4
Type of area	Selection criteria[a,c]		
	Night time vehicle and/or pedestrian movements	Fear of crime	Applicable lighting subcategory[b]
Parking spaces, aisles and circulation roadways	High	High	PC1
	Medium	Medium	PC2
	Low	Low	PC3
Designated parking spaces specifically intended for people with disabilities	N/A	N/A	PCD
For any designated areas for pedestrians to cross	N/A	N/A	PCX

Figure 26: AS/NZS 1158.3.1:2020 – Selection of PC category

Being immediately adjacent to a primary rail station, it is assumed that the volume of traffic in the vicinity would be Medium to High during the evening.

Based on the data available from the 'Red Suburbs' Australian Crime Data, Sydenham is listed as within the top 7% of Australian suburbs for violent crime as shown in Figure 27.

Crime rate in Sydenham (NSW), NSW, Australia, 2044

Suburb in Inner West

Crime Rank: 37/100
(higher number means more crime)

1,100 Population	0.27 km² Area size	558 All Crimes	507.27 Crimes per 1000 people	25 Violent Crimes
44 Property Crimes	22.73 Violent Crimes per 1000 people	40.00 Property Crimes per 1000 people	92.89% suburbs with less Violent Crimes	84.28% suburbs with less Property Crimes

Figure 27: Red Suburbs Crime Data

This would suggest a design category of PC1 for the Bus Layover area.

TABLE 3.7

VALUES OF LIGHT TECHNICAL PARAMETERS FOR OUTDOOR CAR PARKS (INCLUDING ROOF-TOP CAR PARKS)

1	2	3	4	5
Lighting subcategory	Light technical parameters (LTP)			
	Average horizontal illuminance[a,b] $(\bar{E}_h)$ lx	Point horizontal illuminance[a,b] (E_{Ph}) lx	Illuminance (horizontal) uniformity[c] Cat. P (U_{E2})	Point vertical illuminance[a,b] (E_{Pv}) lx
PC1	14	3	8	3
PC2	7	1.5	8	1
PC3	3.5	0.7	8	—
PCD[d]	—	≥14 and ≥$(\bar{E}_h)$ [d]	—	—
PCX[e]	21	5	8	—

Figure 28: AS/NZS 1158.3.1:2020 - Lighting Parameters

Given the limitations with mounting opportunities for new columns however, it is difficult to achieve the minimum vertical illumination across the entirety of the Bus Layover footprint.

For this reason it is proposed to allow for a PC3 category within the bus layover, however provide a higher illumination for the new pedestrian footpath.

The lighting design uses a BRP381 35W Philips Luminaire mounted on a 6m column. These assets are included within the Transport for NSW approved material list.

10.2. Existing Carriageway

While this design proposes some modification to the carparking bays on the existing Railway Road and Burrows Avenue, there are no modifications to the existing kerb alignment. Therefore, this design assumes that all existing dedicated streetlighting for these carriageways were designed for compliance and no changes are proposed as part of this design.

10.3. Pedestrian Footpath

As with the Bus Layover, this area has been determined to have a 'High' fear of crim designation and therefore the highest category of PP1 has been the basis for compliance in accordance with Table 3.4 in Figure 29 below.

TABLE 3.4

VALUES OF LIGHT TECHNICAL PARAMETERS FOR PATHWAYS AND CYCLIST PATHS

1	2	3	4	5
Lighting subcategory	Light technical parameters (LTP)			
	Average horizontal illuminance[a,b] $(\bar{E}_h)$ lx	Point horizontal illuminance[a,b,d] (E_{Ph}) lx	Illuminance (horizontal) uniformity[c] Cat. P (U_{E2})	Point vertical illuminance[a,b] (E_{Pv}) lx
PP1	10	2	5	1
PP2	7	1	5	0.3
PP3	3	0.5	5	0.1
PP4	1.5	0.25	5	0.05[e]
PP5	0.85	0.14	5	0.02[e]

Figure 29: AS/NZS 1158.3.1:2020 – Selection of PP category

The current design uses eight (8) wall-mounted luminaires, mounted to the Noise Wall main support I-Beams. The luminaires are mounted at approximate 7000mm spacings at an elevation of 2.4m to meet compliance with the PP1 category.

The proposed luminaire is a Ligman LEEDS Wedge luminaire with type T2 side-throw distribution.

10.4. Obtrusive Lighting

The new lighting systems have been assessed for obtrusive lighting against the recommended limitations outlined in AS/NZS 4282:2023 Control of the obtrusive effects of outdoor lighting.

The Bus Layover area has been determined to fall into an A4 Environmental Zone ‘High District Brightness’ as shown in Table 3.1 of that standard illustrated in Figure 30.

Table 3.1 — Environmental zones

Environmental zones	Ambient light conditions	Descriptions/ Examples
A0	Intrinsically dark	UNESCO Starlight Reserve. IDA: Dark Sky Parks, Reserves or Sanctuaries Major optical observatories Other accreditations for dark sky places for example astrotourism, heritage value, astronomical importance, wildlife/ecosystem protection Lighting for safe access may be required
A1	Dark	Relatively uninhabited rural areas (including terrestrial, marine, aquatic and coastal areas) Generally roadways without streetlighting through rural areas
A2	Low district brightness	Sparsely inhabited rural and semi-rural areas Generally roadways without streetlighting through suburban, rural or semi-rural areas other than intersections
A3	Medium district brightness	Suburban areas in towns and cities Generally roadways with streetlighting through suburban, rural or semi-rural areas
A4	High district brightness	Town and city centres and other commercial areas Residential areas abutting commercial areas Industrial and Port areas Transport Interchanges
TV	High district brightness	Vicinity of major sport and event stadiums during TV broadcasts
NOTE Zones A0 and A1 would normally have a minimum area of 50 ha.(0.5 km^2). There may be smaller environmentally sensitive areas.		

Figure 30: AS/NZS 4282:2023 - Obtrusive Lighting Environmental Zone Classification

The relevant metrics for the basis of Obtrusive Lighting compliance therefore are as listed in Table 3.2 in Figure 31 below.

Table 3.2 — Light technical parameter limits

Zones	Maximum vertical illuminance (E_v) lux		Threshold increment (TI)		Upward Light Ratio
	Non-curfew	Curfew	Maximum TI %	Default Adaptation level (L_{ad}) cd/m^2	Maximum ULR_S or ULR_L
A0	0[a]	0.0	N/A	N/A	0.00
A1	2	0.1	20	0.1	0.00
A2	5	1	20	0.2[b]	0.01
A3	10	2	20	1	0.02
A4	25	5	20	5	0.03
TV	N/A	N/A	20	10	0.08

[a] For A0, E_v shall be as close to zero as practicable without impacting safety considerations.

[b] For an internally illuminated sign in a A2 zone, $L_{ad} \leq 0.25$ cd/m^2

Figure 31: AS/NZS 4282:2023 - Obtrusive Lighting Limiting Parameters

11. Safety in Design

11.1. Health and safety

11.1.1. Safety in Design

Aurecon is committed to maximising the opportunity for safer delivery of this project. The key goal is to provide safer designs for construction, operation, maintenance, and demolition phases throughout the project's lifecycle.

The Safety in Design (safe design) process to be used on this project is based on a risk management approach that includes identification of control measures to be incorporated into the design, or if appropriate, incorporated during construction, operations, and maintenance and demolition phases. The safe design process is intended to maximise the likelihood of project safety objectives being achieved and to document the safe design work undertaken and record associated outcomes.

To ensure the process is incorporated into the design, a Safe Design register will be held following the 80% Concept Design submission. The emphasis of the register will be to identify the risk sources (i.e., hazards) and assess the associated risks during construction, operation, maintenance and/or demolition phases that could be addressed during the design phase. The register will also establish appropriate control measures for the identified risks. A Health Safety in Design Report will be provided, and the objectives are:

- Identify risk sources (i.e., hazards) and assess the associated risks.
- Identify control measures already in place (i.e., initial risk level).
- Establish future control measures and ownership of risks and actions (if newly identified risks cannot be eliminated).
- Assess risk levels; and
- Establish how safe design information is communicated to relevant parties (contractors, operators, maintainers etc).

Aurecon has a responsibility to:

- Advise TfNSW of identified risk sources (i.e., hazards), assessed risks and proposed control measures (through this report and the risk register); and
- Incorporate agreed control measures into the design.

As the Client, Connect Sydney has a responsibility to:

- Communicate this report including the Safe Design Rating Matrix and the Safe Design Risk Register(s) to key stakeholders, contractors, and owners of control measures.
- HSiD (Health and Safety in Design) issues raised as a part of the safe design process, will be incorporated into the design, and captured in the HSiD Register at 80% submission.

11.1.2. Statutory and regulatory obligations

Aurecon's safe design process is intended to comply with the 2011 Work Health and Safety Act in Australia.

11.2.Design issues Register.

Throughout the development of this 20% Detailed Design, design issues were identified and assessed for each specialty. A compilation of these items can be found out as **Appendix K** to this report.

12. Design review and verification

12.1. Aurecon review and verification

The 20% Detailed design documentation has been reviewed and verified by Aurecon accordance with the Project Quality Plan.

12.2. Independent Verification

Independent verification is excluded from scope.

12.3. Connect Sydney review comments.

Connect Sydney review comments at every stage of the detailed design will be documented in the Report Appendix and will include Aurecon responses to those comments.

Appendix A – ASP 3 Concept Design

Appendix B – Pavement Design Calculations

Appendix C – Topographical and underground utilities survey

Appendix D – Utilities QL-A survey

Appendix E – Utility Authority Correspondence

Appendix F – Telstra’s Scope of Work

Appendix G – Transgrid and drainage clearances

Appendix H – Before You Dig Australia

Appendix I – Working in the Vicinity of Transgrid Underground Cables

Appendix J – Final Investigations' Report

Appendix K – Issues log register

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Appendix C. Borehole Logs

BOREHOLE ID:_BH01_

RARE Environmental

Project Name:	Sydenham Bus Layover	**Surface condition:**		**Northings (GDA2020):**	6245708.259
Project Number:	RP24029	**Rig:**	Hand Auger	**Eastings (GDA2020):**	330449.394
Project Manager:	Christopher Redford	**Contractor:**	RARE	**Surface Elevation:**	
Location:	Sydenham	**Method:**	HA	**Well ID:**	
Client:	Hutchinson Weller	**Total Depth (m):**	1.5	**Logged by:**	CR
Date:	22/02/2024	**Diameter (mm):**	70	**Checked by:**	RD

FIELD DATA					MATERIAL DESCRIPTION					
DEPTH (m)	WATER	SAMPLE ID	SAMPLE TYPE	FIELD TEST PID	GRAPHIC LOG	LITHOLOGICAL CLASS	DESCRIPTION	MOISTURE	CONSISTENCY/ DENSITY	ADDITIONAL OBSERVATIONS
0		BH01_0.0-0.1	J	0.5		FILL	Silty SAND, brown, heterogeneous, fine. Trace rootlets and sedimentary gravel.	moist	loose	
0.2							Sandy CLAY, orange/yellow, high plasticity, trace fine sedimentary gravel	moist	loose	
0.4		BH01_0.4-0.5	J	0.3						
0.6							CLAY, orange/yellow, high plasticity. Trace rootlets fine sedimentary gravel	moist	medium	
0.8										
1	▼	BH01_0.9-1.0	J	0.1		CH	Orange mottled white	wet	medium	groundwater encountered
1.2										
1.4										
1.6		Target depth achieved								
1.8										
2										
2.2										
2.4										

Moisture
D: Dry, SM: Slightly Moist
M: Moist, W: Wet

Consistency Index
VS: Very Soft, S: Soft, St: Stiff, VSt: Very Stiff
F: Firm, H : Hard, Fb: Friable

Density Index
VL: Very Loose, D: Dense
L: Loose, VD: Very Dense, MD: Medium Dense

Groundwater Symbols
▼ Water level (static)
▽ Water strike

Survey
GDA2020
MGA56

Material (USC) and Field Data Abbreviations

GW:Well-graded gravel	SW:Well-graded sand	SC:Clayey sand	CI: Medium plasticity clay	OH: Organic clay	PID: Photo Ionisation Dectector
GP: Poorly-graded gravel	SP:Poorly-graded sand	ML: Low plasticity silt	CH: High plasticity Clay	Pt: Peat	ppm: Parts per million
GM: Silty Gravel	SM: Silty sand	MH: High plasticity silt	OL: Organic silt		

BOREHOLE ID:_BH02_

RARE Environmental

Project Name:	Sydenham Bus Layover	**Surface condition:**		**Northings (GDA2020):**	6245703.298
Project Number:	RP24029	**Rig:**	Hand Auger	**Eastings (GDA2020):**	330437.762
Project Manager:	Christopher Redford	**Contractor:**	RARE	**Surface Elevation:**	
Location:	Sydenham	**Method:**	HA	**Well ID:**	
Client:	Hutchinson Weller	**Total Depth (m):**	1.5	**Logged by:**	CR
Date:	22/02/2024	**Diameter (mm):**	70	**Checked by:**	RD

FIELD DATA					MATERIAL DESCRIPTION					
DEPTH (m)	WATER	SAMPLE ID	SAMPLE TYPE	FIELD TEST PID	GRAPHIC LOG	LITHOLOGICAL CLASS	DESCRIPTION	MOISTURE	CONSISTENCY/ DENSITY	ADDITIONAL OBSERVATIONS
0.2		BH02_0.0-0.1	J	0.6		FILL	Silty SAND, brown, heterogeneous, fine. Trace rootlets and sedimentary gravel. Anthopogenic material including long steel screws.	moist	loose	
0.4		BH02_0.4-0.5	J	0.2			Sandy CLAY, orange/yellow, homogenous, high plasticity, trace fine sedimentary gravel	moist	loose	
0.6							CLAY, orange mottled white, high plasticity. Trace rootlets fine sedimentary gravel			
0.8										
1		BH02_0.9-1.0	J	0.2		CH		moist	medium	
1.2										
1.4										
1.6		Target depth achieved								
1.8										
2										
2.2										
2.4										

Moisture
D: Dry, SM: Slightly Moist
M: Moist, W: Wet

Consistency Index
VS: Very Soft, S: Soft, St: Stiff, VSt: Very Stiff
F: Firm, H : Hard, Fb: Friable

Density Index
VL: Very Loose, D: Dense
L: Loose, VD: Very Dense, MD: Medium Dense

Groundwater Symbols
Water level (static)
Water strike

Survey
GDA2020
MGA56

Material (USC) and Field Data Abbreviations

GW:Well-graded gravel	SW:Well-graded sand	SC:Clayey sand	CI: Medium plasticity clay	OH: Organic clay	PID: Photo Ionisation Dectector
GP: Poorly-graded gravel	SP:Poorly-graded sand	ML: Low plasticity silt	CH: High plasticity Clay	Pt: Peat	ppm: Parts per million
GM: Silty Gravel	SM: Silty sand	MH: High plasticity silt	OL: Organic silt		

BOREHOLE ID:_BH03_

RARE Environmental

Project Name:	Sydenham Bus Layover	**Surface condition:**		**Northings (GDA2020):**	6245688.786
Project Number:	RP24029	**Rig:**	Hand Auger	**Eastings (GDA2020):**	330434.052
Project Manager:	Christopher Redford	**Contractor:**	RARE	**Surface Elevation:**	
Location:	Sydenham	**Method:**	HA	**Well ID:**	
Client:	Hutchinson Weller	**Total Depth (m):**	1.5	**Logged by:**	CR
Date:	22/02/2024	**Diameter (mm):**	70	**Checked by:**	RD

FIELD DATA					MATERIAL DESCRIPTION					
DEPTH (m)	WATER	SAMPLE ID	SAMPLE TYPE	FIELD TEST PID	GRAPHIC LOG	USC CLASS	DESCRIPTION	MOISTURE	CONSISTENCY/ DENSITY	ADDITIONAL OBSERVATIONS
0		BH03_0.0-0.1	J	0.6			Silty SAND, brown, heterogeneous, fine. Trace rootlets and sedimentary gravel. Anthopogenic material including iron nails.	moist	loose	
0.2										
0.4		BH03_0.4-0.5	J	0.1			Sandy CLAY, brown, homogenous, high plasticity, trace fine sedimentary gravel			
0.6						FILL		moist	medium	
0.8										
1		BH03_0.9-1.0	J	0.2						
1.2						CH	CLAY, orange mottled white, high plasticity. Trace rootlets fine sedimentary gravel	moist	stiff	
1.4										
1.6		Target depth achieved								
1.8										
2										
2.2										
2.4										

Moisture
D: Dry, SM: Slightly Moist
M: Moist, W: Wet

Consistency Index
VS: Very Soft, S: Soft, St: Stiff, VSt: Very Stiff
F: Firm, H : Hard, Fb: Friable

Density Index
VL: Very Loose, D: Dense
L: Loose, VD: Very Dense, MD: Medium Dense

Groundwater Symbols
Water level (static)
Water strike

Survey
GDA2020
MGA56

Material (USC) and Field Data Abbreviations

GW:Well-graded gravel	SW:Well-graded sand	SC:Clayey sand	CI: Medium plasticity clay	OH: Organic clay	PID: Photo Ionisation Dectector
GP: Poorly-graded gravel	SP:Poorly-graded sand	ML: Low plasticity silt	CH: High plasticity Clay	Pt: Peat	ppm: Parts per million
GM: Silty Gravel	SM: Silty sand	MH: High plasticity silt	OL: Organic silt		

BOREHOLE ID:_BH04_

Project Name:	Sydenham Bus Layover	**Surface condition:**		**Northings (GDA2020):**	6245675.147
Project Number:	RP24029	**Rig:**	Hand Auger	**Eastings (GDA2020):**	330423.877
Project Manager:	Christopher Redford	**Contractor:**	RARE	**Surface Elevation:**	
Location:	Sydenham	**Method:**	HA	**Well ID:**	
Client:	Hutchinson Weller	**Total Depth (m):**	1.5	**Logged by:**	CR
Date:	22/02/2024	**Diameter (mm):**	70	**Checked by:**	RD

FIELD DATA					MATERIAL DESCRIPTION					
DEPTH (m)	WATER	SAMPLE ID	SAMPLE TYPE	FIELD TEST PID	GRAPHIC LOG	USC CLASS	DESCRIPTION	MOISTURE	CONSISTENCY/ DENSITY	ADDITIONAL OBSERVATIONS
0		BH04_0.0-0.1	J	0.5		FILL	Silty SAND, brown, heterogeneous, fine. Trace rootlets and sedimentary gravel.	moist	loose	
						CH	CLAY, orange mottled white, high plasticity. Trace rootlets fine sedimentary gravel	moist	stiff	
0.4				0.1						
0.6		Target depth achieved								

0.8, 1, 1.2, 1.4, 1.6, 1.8, 2, 2.2, 2.4

Moisture	Consistency Index	Density Index	Groundwater Symbols		Survey
D: Dry, SM: Slightly Moist	VS: Very Soft, S: Soft, St: Stiff, VSt: Very Stiff	VL: Very Loose, D: Dense	▼	Water level (static)	GDA2020
M: Moist, W: Wet	F: Firm, H : Hard, Fb: Friable	L: Loose, VD: Very Dense, MD: Medium Dense	▽	Water strike	MGA56

Material (USC) and Field Data Abbreviations

GW:Well-graded gravel	SW:Well-graded sand	SC:Clayey sand	CI: Medium plasticity clay	OH: Organic clay	PID: Photo Ionisation Dectector
GP: Poorly-graded gravel	SP:Poorly-graded sand	ML: Low plasticity silt	CH: High plasticity Clay	Pt: Peat	ppm: Parts per million
GM: Silty Gravel	SM: Silty sand	MH: High plasticity silt	OL: Organic silt		

BOREHOLE ID:_BH05_

Project Name:	Sydenham Bus Layover	**Surface condition:**		**Northings (GDA2020):**	6245708.259
Project Number:	RP24029	**Rig:**	Hand Auger	**Eastings (GDA2020):**	330449.394
Project Manager:	Christopher Redford	**Contractor:**	RARE	**Surface Elevation:**	
Location:	Sydenham	**Method:**	HA	**Well ID:**	
Client:	Hutchinson Weller	**Total Depth (m):**	0.6	**Logged by:**	CR
Date:	22/02/2024	**Diameter (mm):**	70	**Checked by:**	RD

FIELD DATA					MATERIAL DESCRIPTION					
DEPTH (m)	WATER	SAMPLE ID	SAMPLE TYPE	FIELD TEST PID	GRAPHIC LOG	USC CLASS	DESCRIPTION	MOISTURE	CONSISTENCY/ DENSITY	ADDITIONAL OBSERVATIONS
		BH05_0.0-0.1	J	0.4		FILL	Silty SAND, brown, heterogeneous, fine. Trace rootlets and sedimentary gravel.	moist	loose	
0.2						CH	CLAY, orange mottled white, high plasticity. Trace rootlets fine sedimentary gravel	moist	stiff	
0.4		BH05_0.4-0.5	J	0.2						
0.6		Target depth achieved								
0.8										
1										
1.2										
1.4										
1.6										
1.8										
2										
2.2										
2.4										

Moisture
D: Dry, SM: Slightly Moist
M: Moist, W: Wet

Consistency Index
VS: Very Soft, S: Soft, St: Stiff, VSt: Very Stiff
F: Firm, H : Hard, Fb: Friable

Density Index
VL: Very Loose, D: Dense
L: Loose, VD: Very Dense, MD: Medium Dense

Groundwater Symbols
Water level (static)
Water strike

Survey
GDA2020
MGA56

Material (USC) and Field Data Abbreviations

GW:Well-graded gravel	SW:Well-graded sand	SC:Clayey sand	CI: Medium plasticity clay	OH: Organic clay	PID: Photo Ionisation Dectector
GP: Poorly-graded gravel	SP:Poorly-graded sand	ML: Low plasticity silt	CH: High plasticity Clay	Pt: Peat	ppm: Parts per million
GM: Silty Gravel	SM: Silty sand	MH: High plasticity silt	OL: Organic silt		

Appendix D. Photographic Log

Photolog

Report:	PSI Sydenham Bus layover
Site:	17 Railway Rd, Sydenham
Project Reference:	RP24029-PSI-RPT-01_Rev0

Photo 1: ACM material encountered at the southern boundary tip of the site

Photo 2: Footprint north of the site of what was assumed to be a storage container removed prior to site visit

Photo 3: Construction and demolition waste on the southeastern boundary of the site adjacent BH03

Photo 4: Stormwater pipe inlet along the southeastern boundary leading south

Photolog	
Report:	PSI Sydenham Bus layover
Site:	117 Railway Rd, Sydenham
Project Reference:	RP24029-PSI-RPT-01_Rev0

Photo 5: Shallow groundwater encountered at BH01 at around 1 mbg following some period of rainfall

Photo 6: Soil cuttings from hand auger at BH01 showing sandy silts at the surface and deeper clays

Photo 7: Hand auger, eskies, and rinsate cleaning bucket behind soil cuttings from BH01. Fill material behind rock embankment the right adjacent and below footpath.

Photo 8: Construction and demolition waste on the southern boundary tip adjacent BH04

End of Photolog

Appendix E. Nearmap Photograph Compilation


Sat Nov 14 2009
Imagery © 2024 Nearmap, HERE
5 m
nearmap


Sat Nov 29 2014
Imagery © 2024 Nearmap, HERE
5m
nearmap


Mon Dec 7 2020
Imagery © 2024 Nearmap, HERE
5 m
nearmap

Thu Mar 16 2023
Imagery © 2024 Nearmap, HERE
5 m
nearmap

Thu Mar 30 2023
Imagery © 2024 Nearmap, HERE
5 m
nearmap

Mon May 1 2023
Imagery © 2024 Nearmap, HERE
5 m
nearmap


Wed May 31 2023
Imagery © 2024 Nearmap, HERE
5 m
nearmap