



Sydney Metro City & Southwest: Waterloo Over Station Development

Geotechnical and Contamination Report

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Table of Contents

1.0	Introduction.....	4
1.1	Purpose of this report.....	4
1.2	Overview of the Sydney Metro in its context.....	6
1.3	Nominated State Significant Precinct - Waterloo	9
1.4	Planning relationship between Waterloo Station and the OSD	9
1.5	The site	11
1.5.1	Location	11
1.5.2	Site context	12
1.6	Overview of the proposed development	15
1.7	Staging and framework for managing environmental impacts.....	18
2.0	Scope of assessment	20
3.0	Geotechnical Baseline Investigation	23
3.1	Introduction	23
3.2	Data Sources	25
3.3	Metro Quarter Description	25
3.4	Ground Conditions	25
3.4.1	Regional Geology.....	25
3.4.2	Acid Sulfate Soils	25
3.4.3	Preliminary Geotechnical Model.....	26
3.4.4	Material Properties	32
3.4.5	Groundwater	32
3.5	Discussion and Recommendations	34
3.5.1	Geotechnical Risks.....	34
3.5.2	Groundwater and Excavation Retention Systems.....	34
3.5.3	Temporary Ground Anchors	35
3.5.4	Foundations	35
3.5.5	Further Geotechnical Investigations	37
4.0	Contamination Baseline Investigation – Stage 1 PSI	38
4.1	Introduction	38
4.1.1	Objectives	38
4.1.2	Scope of Work.....	38
4.2	Metro Quarter Identification	40
4.3	Site Condition and Surrounding Environment.....	41
4.3.1	Metro Quarter Land Use and Zoning	41
4.3.2	Surrounding Land Use	41
4.3.3	Topography and Drainage.....	41
4.3.4	Surface Water and Flood Potential	42

4.3.5	Regional Meteorology	42
4.3.6	Geology and Acid Sulfate Soils	42
4.3.7	Hydrogeology	42
4.4	Metro Quarter Background	45
4.4.1	Council Records	45
4.4.2	Aerial Photographs	45
4.4.3	NSW EPA Records	47
4.4.4	Business Directory Records	49
4.4.5	Unexploded Ordnance	52
4.5	Previous Environmental Investigations	52
4.6	Site Walkover	52
4.7	Conceptual Site Model	53
4.7.1	Sources	53
4.7.2	Receptors	55
4.7.3	Tabulated SSM and Risk Planning	56
4.8	Conclusion and Recommendations	58
5.0	SEARs Response	61
6.0	Conclusion	62
7.0	Important information about this Geotechnical and Contamination Report	65
Appendices		

1.0 Introduction

1.1 Purpose of this report

This report accompanies a concept State Significant Development Application (concept SSD Application) submitted to the Department of Planning and Environment (DPE) pursuant to Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act). The concept SSD Application is made under Section 4.22 of the EP&A Act.

This report should be read in conjunction with the Nominated State Significant Precinct (SSP) Study – Waterloo, submitted to the Minister for Planning (The Minister) in July 2018. That study proposes new planning controls to facilitate the development proposed.

Sydney Metro is seeking to secure concept approval for over station development (OSD) above and adjacent to Waterloo Station comprising a podium and three taller buildings which include commercial, residential, and community land uses. The concept SSD Application seeks consent for a building envelope and use for residential, retail, commercial, entertainment, community and recreational purposes, maximum building height, maximum gross floor area (GFA), pedestrian and vehicular access, circulation arrangements and associated car parking and the strategies and design parameters for the future detailed design of development.

Sydney Metro proposes to procure the construction of the OSD as part of an integrated station development package, which would result in the combined delivery of the station, OSD and public domain improvements. The station and its public domain elements form part of a separate planning approval for Critical State Significant Infrastructure (CSSI) approved by DPE on 9 January 2017.

As the development is within a rail corridor, is associated with railway infrastructure and is for “commercial premises or residential accommodation” with a Capital Investment Value of more than \$30 million, the project is identified as State Significant Development (SSD) pursuant to Schedule 1, 19(2)(a) of the *State Environmental Planning Policy (State and Regional Development) 2011* (SRD SEPP).

This report has been prepared to outline the Geotechnical and Contamination impacts and specifically respond to the Secretary's Environmental Assessment Requirements (SEARs) issued for the concept SSD Application on 29th June 2018 which states that the Environmental Impact Statement (EIS) is to address the following requirements:

Reference	SEARs Requirement	Where Addressed in Report
15. Geotechnical and Contamination		
SEAR 15.1	<i>Provide an assessment of the site's conditions, outlining the site's suitability for the proposed uses with respect to soil erosion, salinity and acid sulphate soil.</i>	Assessment of soil condition involving erosion, salinity and acid sulphate soils is outlined in Section 3.0 and Section 4.0.
SEAR 15.2	<i>Provide an assessment of the proposed in accordance with State Environmental Planning Policy No 55 - Remediation of Land and relevant guidelines.</i>	Assessment of proposed land use in accordance with SEEP 55 addressed in Section 3.5 and Section 4.8.

NOTE: In cases where land is potentially contaminated, the investigation and any remediation and validation work is to be carried out in accordance with guidelines made or approved by the EPA under Section 105 of the Contaminated Land Management Act 1997 and be in accordance with the requirements and procedures in the Contaminated Land Management Act 1997, Contaminated Land Management Regulation 2013 and State Environmental Planning Policy No 55 – Remediation of Land.

1.2 Overview of the Sydney Metro in its context

Sydney Metro is Australia's biggest public transport project. A new standalone metro railway system, this 21st century network will deliver 31 metro stations and 66km of new metro rail for Australia's biggest city — revolutionising the way Sydney travels. Services start in the first half of 2019 on Australia's first fully-automated railway.

Sydney Metro was identified in *Sydney's Rail Future*, as an integral component of the *NSW Long Term Transport Master Plan*, a plan to transform and modernise Sydney's rail network so it can grow with the city's population and meet the future needs of customers. In early 2018, the *Future Transport Strategy 2056* was released as an update to the *NSW Long Term Transport Master Plan* and *Sydney's Rail Future*. Sydney Metro City & Southwest is identified as a committed initiative in the *Future Transport Strategy 2056*.

Sydney Metro is comprised of three projects (refer to [Figure 1](#)):

Sydney Metro Northwest — formerly the 36km North West Rail Link. This \$8.3 billion project is now under construction and will open in the first half of 2019 with a metro train every four minutes in the peak.

Sydney Metro City & Southwest — a new 30km metro line extending the new metro network from the end of Sydney Metro Northwest at Chatswood, under Sydney Harbour, through the CBD and south west to Bankstown. It is due to open in 2024 with an ultimate capacity to run a metro train every two minutes each way through the centre of Sydney.

Sydney Metro West — a new underground railway connecting the Parramatta and Sydney central business districts. This once-in-a-century infrastructure investment will double the rail capacity of the Parramatta to Sydney CBD corridor and will establish future capacity for Sydney's fast growing west. Sydney Metro West will serve five key precincts at Westmead, Parramatta, Sydney Olympic Park, The Bays and the Sydney CBD. The project will also provide an interchange with the T1 Northern Line to allow faster connections for customers from the Central Coast and Sydney's north to Parramatta and the Sydney CBD.

Sydney's new metro, together with signalling and infrastructure upgrades across the existing Sydney suburban rail network, will increase the capacity of train services entering the Sydney CBD — from about 120 an hour currently to up to 200 services beyond 2024. That's an increase of up to 60 per cent capacity across the network to meet demand.



Figure 1: Sydney Metro alignment map

Sydney Metro City & Southwest includes the construction and operation of a new metro rail line from Chatswood, under Sydney Harbour through Sydney's CBD to Sydenham and on to Bankstown through the conversion of the existing line to metro standards.

The project also involves the delivery of six (6) new metro stations, including at Waterloo, together with new underground platforms at Central. Once completed, Sydney Metro will have the ultimate capacity for a train every two minutes through the CBD in each direction - a level of service never seen before in Sydney.

On 9 January 2017, the Minister approved the Sydney Metro City & Southwest - Chatswood to Sydenham application lodged by TfNSW as a CSSI project (reference SSI 15_7400).

The CSSI Approval includes all physical work required to construct the CSSI, including the demolition of existing buildings and structures on each site. Importantly, the CSSI Approval also includes provision for the construction of below and above ground structures and other components of future OSD (including building infrastructure and space for future lift cores, plant rooms, access, parking and building services, as relevant to each site). The rationale for this delivery approach, as identified within the CSSI application is to enable the OSDs to be more efficiently built and appropriately integrated into the metro station structures.

The EIS for the Chatswood to Sydenham alignment of the City & Southwest project identified that the OSD would be subject to a separate assessment process.

Since the CSSI Approval was issued, Sydney Metro has lodged four modification applications to amend the CSSI Approval as outlined below:

- Modification 1 - Victoria Cross and Artarmon Substation which involves relocation of the Victoria Cross northern services building from 194-196A Miller Street to 50 McLaren Street together with inclusion of a new station entrance at this location referred to as Victoria Cross North. The modification also involves the relocation of the substation at Artarmon from Butchers Lane to 98 – 104 Reserve Road. This modification application was approved on 18 October 2017.
- Modification 2 - Central Walk which involves additional works at Central Railway Station including construction of a new eastern concourse, a new eastern entry, and upgrades to suburban platforms. This modification application was approved on 21 December 2017.
- Modification 3 - Martin Place Station which involves changes to the Sydney Metro Martin Place Station to align with the Unsolicited Proposal by Macquarie Group Limited (Macquarie) for the development of the station precinct. The proposed modification involves a larger reconfigured station layout, provision of a new unpaid concourse link and retention of the existing MLC pedestrian link and works to connect into the Sydney Metro Martin Place Station. It is noted that if the Macquarie proposal does not proceed, the original station design remains approved. This modification application was approved on 22 March 2018.
- Modification 4 - Sydenham Station and Sydney Metro Trains Facility South which incorporated Sydenham Station and precinct works, the Sydney Metro Trains Facility South, works to Sydney Water's Sydenham Pit and Drainage Pumping Station and ancillary infrastructure and track and signalling works into the approved project. This modification application was approved on 13 December 2017.

The CSSI Approval as modified allows for all works to deliver Sydney Metro between Chatswood and Sydenham Stations and also includes upgrade of Sydenham Station.

The remainder of the City & Southwest alignment (Sydenham to Bankstown) proposes the conversion of the existing heavy rail line from west of Sydenham Station to Bankstown to metro standards. This part of the project, referred to as the Sydenham to Bankstown upgrade, is the subject of a separate CSSI Application (Application No. SSI 17_8256) for which an EIS was exhibited between September and November 2017. A Response to Submissions and Preferred Infrastructure Report was submitted to DPE in June 2018 for further exhibition and assessment. This application is subject to assessment and determination by DPE, taking into consideration a further Response to Submissions Report which was submitted to DPE in September 2018.

1.3 Nominated State Significant Precinct - Waterloo

Following the decision to locate a metro station in Waterloo, the Minister determined that parts of Waterloo are of State planning significance which should be investigated for urban renewal through the SSP process. Study requirements for such investigations were issued by the Minister on 19 May 2017.

Investigation of the Precinct is being undertaken by UrbanGrowth NSW Development Corporation (UrbanGrowth NSW), in partnership with Sydney Metro and the Land and Housing Corporation (LAHC). The outcome of the SSP process will be new planning controls that will enable future development applications for renewal of the Precinct.

The Precinct includes two separate but contiguous and inter-related parts:

- The Waterloo Metro Quarter (the Metro Quarter)
- The Waterloo Estate (the Estate)

A separate SSP Study for the Metro Quarter was lodged in July 2018 in advance of the SSP Study for the Estate to provide a planning framework for the construction of OSD within the Metro Quarter. The staged submission of the Metro Quarter SSP Study also facilitates the proposed development to be delivered concurrently with the metro station, as an integrated station development.

As this concept SSD Application relies upon the planning framework proposed in the Metro Quarter SSP Study, it is anticipated that the SSP Study and EIS for the SSD Application will be exhibited concurrently.

1.4 Planning relationship between Waterloo Station and the OSD

While Waterloo Station and the OSD will form an integrated station development, the planning pathways defined under the EP&A Act require separate approval for each component of the development. In this regard, the approved station works (CSSI Approval) are subject to the provisions of Part 5.1 of the EP&A Act (now referred to as Division 5.2) and the OSD component is subject to the provisions of Part 4 of the EP&A Act.

For clarity, the approved station works under the CSSI Approval included the construction of below and above ground structures necessary for delivering the station and also enabling construction of the integrated OSD. This includes but is not limited to:

- demolition of existing development
- excavation
- integrated station and OSD structure (including concourse and platforms)
- lobbies

- retail spaces within the station building
- public domain improvements associated with the station
- access arrangements including vertical transport such as escalators and lifts
- space provisioning and service elements necessary to enable the future development of the OSD, such as lift cores, plant rooms, access, parking, retail, utilities connections and building services.

The vertical extent of the approved station works above ground level is defined by the 'transfer level' level (which for Waterloo is defined by approximately RL 33.1 over the northern station box and RL 35.1 over the southern station box), above which would sit the OSD. An example of this delineation is illustrated in [Figure 2](#).

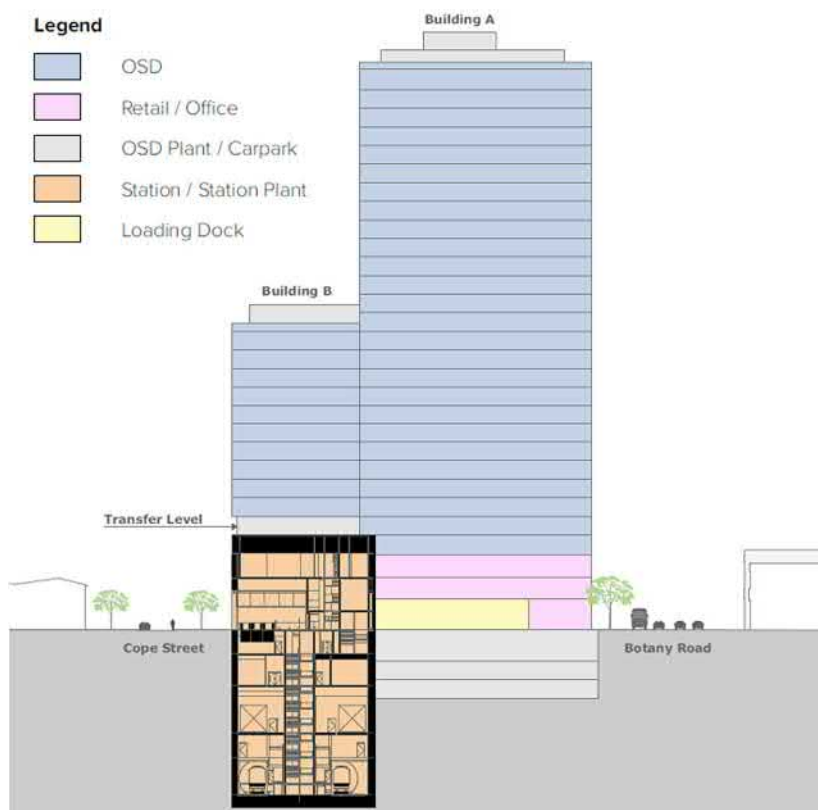


Figure 2: Delineation between the Metro station and OSD

It is noted that the structural and service requirements and space provisioning to support OSD vary from station to station. For example, based on the current level of design, Waterloo Station is not expected to provide for OSD lobbies, end of trip facilities and plant rooms. However, the detailed design may be amended to incorporate these elements as part of the integrated station development.

The CSSI Approval also establishes the general concept for the ground plane of Waterloo Station including access strategies for commuters, pedestrians and workers. In this regard, the main pedestrian access to the station would be via an entry located at the corner of Raglan and Cope Streets. The station design has continued to be developed having regard to its integration with the Metro Quarter OSD, and as a result, a second entrance to the station is to be provided from a proposed public plaza adjacent to Cope Street. Retail uses (approved under the CSSI Approval) would be located on the ground floor of the station development along the Cope Street frontage of the site.

Since the issue of the CSSI Approval, Sydney Metro has design work to determine the technical requirements for the structural integration of the OSD with the station. This level of design work, together with the planning and design undertaken for the remainder of the Metro Quarter has informed the concept proposal for the OSD. It is noted that ongoing design development of the works to be delivered under the CSSI Approval would continue with a view to developing an Interchange Access Plan (IAP) and Station Design Precinct Plan (SDPP) for Waterloo Station to satisfy Conditions E92 and E101 of the CSSI Approval. The detailed design for the Metro Quarter would continue to evolve having regard to the IAP and SDPP.

Public domain improvement works immediately adjacent to Waterloo Station would be delivered as part of the CSSI Approval to support pedestrian movements between transport modes (including to new and relocated bus stops, bike parking on Cope Street, and taxi and kiss-and-ride bays on Cope Street), while other public domain works within the Metro Quarter are proposed as part of the OSD. Final details of public domain works for the OSD will be provided with the detailed SSD Application(s) following finalisation of the SDPP and IAP for the CSSI Approval.

1.5 The site

1.5.1 Location

The site is located within the City of Sydney Local Government Area (LGA).

The Metro Quarter comprises land to the west of Cope Street, east of Botany Road, south of Raglan Street and north of Wellington Street. The heritage listed Waterloo Congregational Church located at 103–105 Botany Road is within this block but is not part of the site.

The site has an approximate area of 1.287 hectares (refer to [Figure 3](#)).



Figure 3: Waterloo Station location plan

1.5.2 Site context

The Metro Quarter is located in Redfern Street Village (see Figure 4) in the City of Sydney LGA approximately 3.3 kilometres south of Sydney CBD, 1 kilometre north of Green Square and less than 1 kilometre south of Redfern Station.

Directly east is the Waterloo Estate (see Figure 5), which is owned by the NSW Government and is under the management of NSW LAHC. The Waterloo Estate comprises 2,012 social housing dwellings and a small number of private dwellings in medium and high density forms, ranging from single storey attached dwellings to apartment buildings of up to thirty storeys.

The Metro Quarter is less than 1 kilometre south-east of the Australian Technology Park (ATP), a technology micro-cluster that currently contains around 3,000 – 3,500 workers with a range of businesses in technology and creative industries; and a start-up/business incubator hub. It is set to grow into a business park that will soon accommodate new

premises currently under construction (i.e. Commonwealth Bank Australia (CBA) has committed to two major office towers).

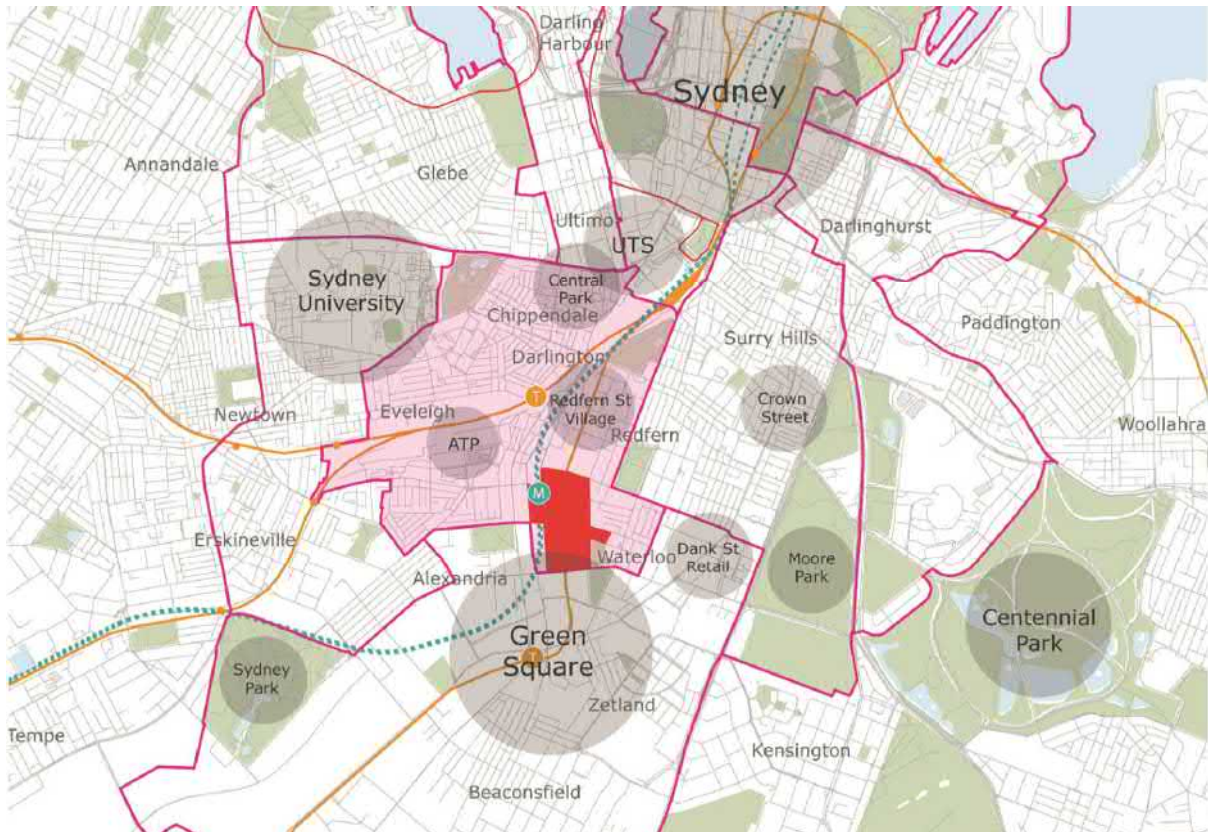


Figure 4 Location and site plan of the Waterloo State Significant Precinct (in red) and Redfern street village (in pink)



Figure 5 Nominated State Significant Precinct – Waterloo

The site comprises the following properties:

- 136B Raglan Street Lot 4 DP 215751
- 59 Botany Road Lot 5 DP 215751
- 65 Botany Road Lot 1 DP814205
- 67 Botany Road Lot 1 DP228641
- 124-128 Cope Street Lot 2 DP228641
- 69-83 Botany Road SP75492
- 130-134 Cope Street Lot 12 DP399757
- 136-144 Cope Street Lots A-E DP108312
- 85 Botany Road Lot 1 DP27454
- 87 Botany Road Lot 2 DP27454
- 89-91 Botany Road Lot 1 DP996765
- 93-101 Botany Road Lot 1 DP433969 & Lot 1 DP738891
- 156-160 Cope Street Lot 31 DP805384
- 107-117A Botany Road Lot 32 DP805384 & Lot A DP408116
- 119-121 Botany Road Lot 1 DP205942 & Lot 1 DP436831
- 170-174 Cope Street Lot 2 DP205942

The buildings and structures on the site are now demolished in accordance with the CSSI Approval with the exception of one building which is being used to support construction.

1.6 Overview of the proposed development

This concept SSD Application follows the submission of a SSP Study which supports a proposal to amend existing controls to facilitate the proposed development. The concept SSD Application will in turn comprises the first stage of seeking SSD development consent for the Waterloo OSD project. It will be followed by a future detailed SSD Application(s) for the design and construction of the OSD built form.

This concept SSD Application seeks approval for the planning and development framework and strategies to inform the future detailed design of the OSD. It specifically seeks approval for:

- maximum building envelopes, including maximum building heights, street-wall heights and ground and upper level setbacks
- a maximum gross floor area (GFA) of 68,750 square metres, comprising:

- approximately 56,200 square metres GFA of residential accommodation, providing for approximately 700 dwellings, including 5 to 10 percent affordable housing and 70 social housing dwellings
- approximately 3,905 square metres GFA of retail premises and entertainment facilities
- approximately 8,645 square metres GFA for business and commercial premises and community, health service and recreational facilities (indoor), including at least 2,000 square metres of floor space for community uses
- a three storey podium and a free standing building located within a public plaza, accommodating non-residential land uses.
- residential uses above podium level in various building forms including three taller buildings of 23, 25 and 29 storeys (Reduced Level (RL) 96.9, 104.2 and 116.9 metres AHD respectively).
- use of OSD space provisioning within the footprint of the CSSI Approval
- public domain works, including open spaces, through-site links, footpaths, provision for cycle facilities and enhanced pedestrian crossings and roads.
- car parking for up to 427 vehicles
- cycle parking to support residential and non-residential land uses and visitors to the Metro Quarter. Approval is also being sought for space within the future basement for a bike hub which would also support future bike parking for Waterloo Station
- loading, vehicular and pedestrian access arrangements
- strategies for utilities and services provision
- strategies for managing stormwater and drainage
- a strategy for the achievement of ecologically sustainable development
- a public art strategy
- provision for future signage zones
- a design excellence framework
- the future subdivision of parts of the OSD footprint (if required).

It is noted that the Sydney Metro comprises GFA of approximately 8,415 square metres on the site, approved under CSSI Approval. The total GFA for the integrated station development, including the station GFA is approximately 77,165 square metres, which is equivalent to an FSR of approximately 6:1.

Key parameters of the concept proposal based on the current level of design development are indicated at Figure 6 and Figure 7.

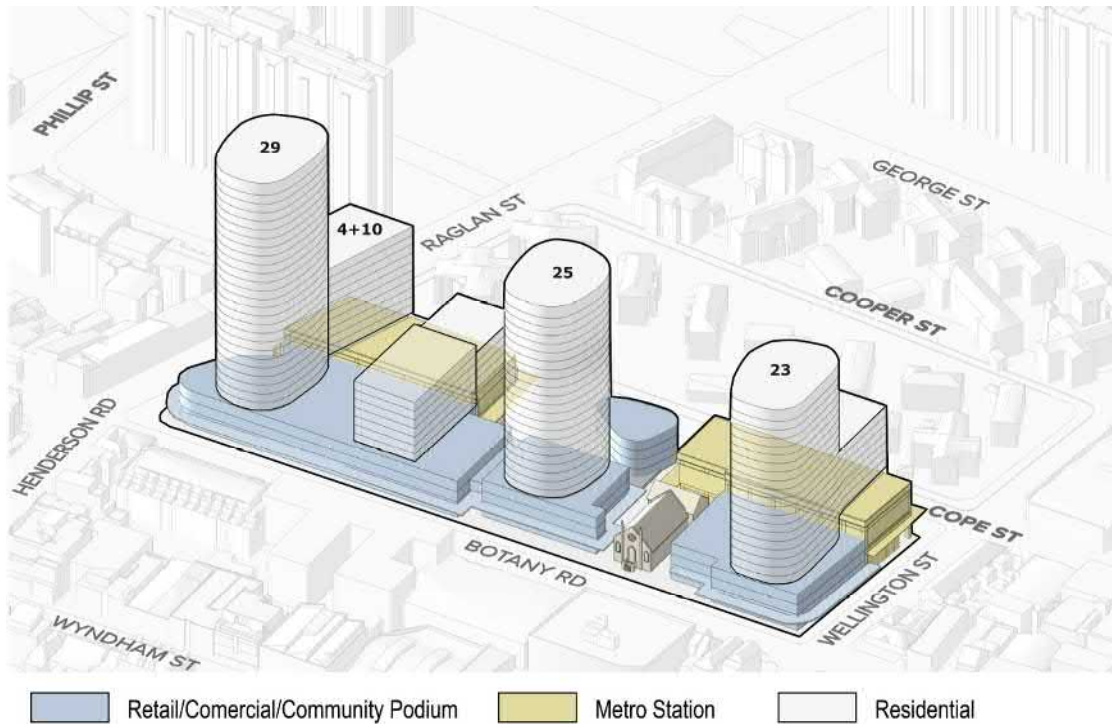


Figure 6 Proposed massing, viewed from the west

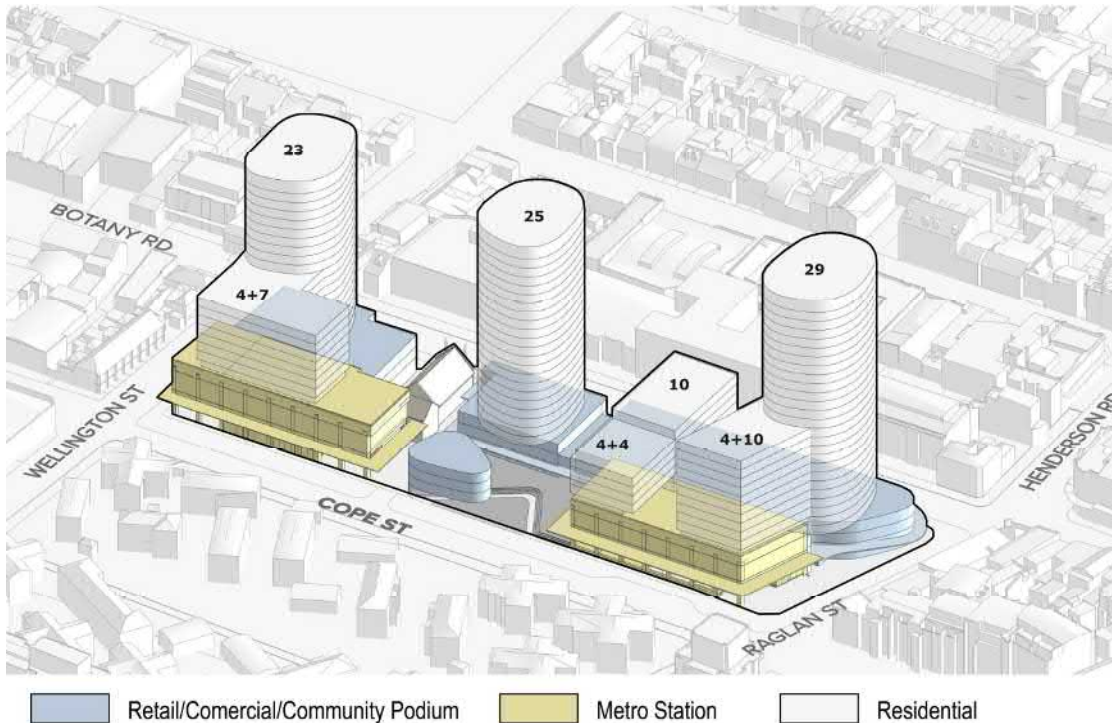


Figure 7 Proposed massing, viewed from the east

The proposal is a significant opportunity to contribute to the urban renewal process for the Waterloo SSP. The objective to deliver the Metro Quarter project as soon as reasonably possible after completion of the Sydney Metro works (earmarked to open 2024) would ensure buildings within the Metro Quarter are occupied to support maximum patronage of the proposed metro station.

The Metro Quarter would contain a mix of uses including residential, commercial, retail, community facilities and services and cultural opportunities sufficient for daily life to be provided for within the wider neighbourhood and to support the activation of the precinct. This would help make Waterloo one of the most connected and attractive inner-city places to live, work and visit.

1.7 Staging and framework for managing environmental impacts

Sydney Metro proposes to procure the delivery of the Waterloo integrated station development in one single package, which would entail the following works:

- station structure fit-out, including mechanical and electrical
- OSD structure fit-out, including mechanical and electrical.

Separate delivery packages are also proposed by Sydney Metro to deliver the excavation of the station boxes/shafts ahead of the integrated station development delivery package, and linewise systems (e.g. track, power, ventilation) and operational readiness works prior to the Sydney Metro City & Southwest metro system being able to operate.

For the purposes of considering construction related impacts, three possible staging scenarios have been identified for delivery of the integrated station development:

1. Scenario 1 – the station and OSD are constructed concurrently by constructing the transfer slab first and then building in both directions. Both the station and OSD would be completed in 2024.
2. Scenario 2 – the station is constructed first and ready for operation in 2024. OSD construction may still be incomplete or soon ready to commence after station construction is completed. This means that some or all OSD construction is likely to still be underway upon opening of the station in 2024.
3. Scenario 3 – the station is constructed first and ready for operation in 2024. The OSD is built at a later stage, with timing yet to be determined. This creates two distinct construction periods for the station and OSD.

The final staging for the delivery of the OSD would be resolved as part of the detailed SSD Application(s).

For the purposes of providing a high level assessment of the potential environmental impacts associated with construction, the following have been considered:

- Impacts directly associated with the OSD, the subject of this SSD Application
- Cumulative impacts of the construction of the OSD at the same time as the station works (subject of the CSSI Approval).

Given the integration of the delivery of the Sydney Metro City & Southwest metro station with an OSD development, Sydney Metro proposes the framework detailed in Figure 8 to manage the design and environmental impacts, in relation to Geotechnical and Contamination, consistent with the framework adopted for the CSSI Approval.

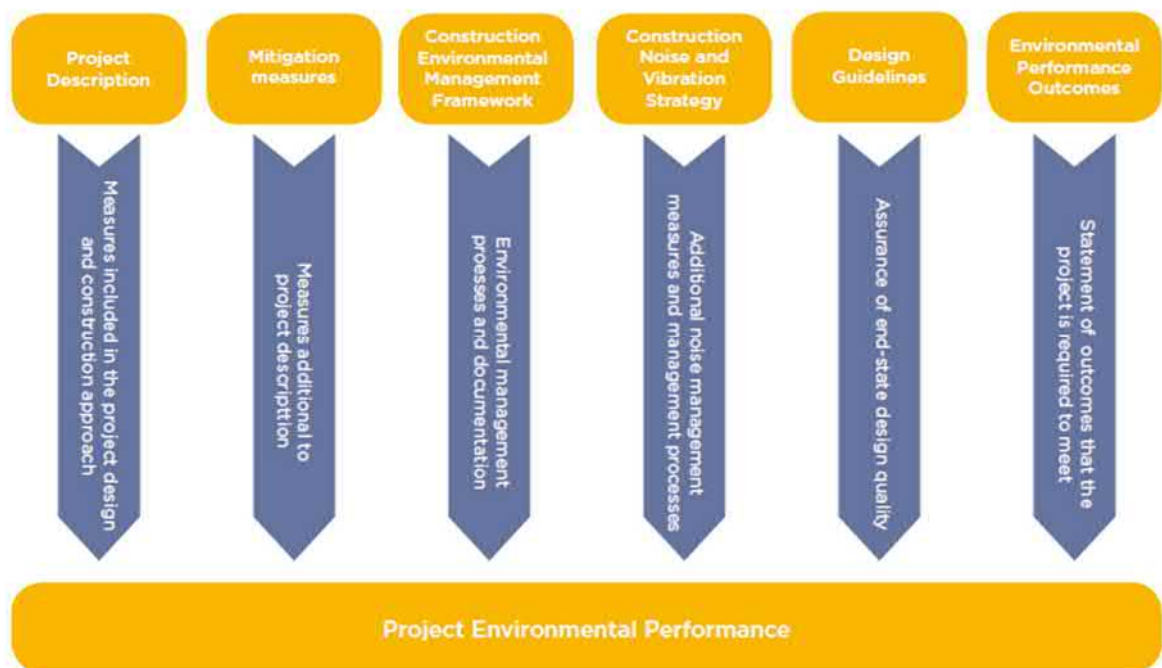


Figure 8 Project approach to environmental mitigation and management

This approach would be implemented until such time as completion of the station works (i.e. works under the CSSI Approval) is achieved. Beyond that point, standard construction environmental management practices would be implemented by the OSD developer in accordance with relevant guidelines and any conditions of approval.

2.0 Scope of assessment

The overarching objective of the report is to address the requirements outlined in Section 15 (Geotechnical and Contamination) of the Secretary's Environmental Assessment Requirements (SEARs) to evaluate the suitability of the concept Metro Quarter over station development. To achieve this overarching objective, the following specific objectives were undertaken:

- Review of existing geotechnical and contamination data points and results;
- Analysis of geotechnical risks;
- Identify whether potential contamination issues may be associated with the Metro Quarter;
- Evaluate whether potential contamination issues are likely to preclude the Metro Quarter from being suitable for the proposed residential and train station redevelopment; and
- Make recommendations to assist in making the Metro Quarter suitable for the proposed land use, which will inform the proposed redevelopment of the Metro Quarter.

To achieve the objectives, the following works were undertaken:

- Analysis of surrounding borehole information;
- Study of desktop geotechnical information (including geological sheets);
- Review of NSW Environment Protection Authority (EPA) records, historical aerial photographs, land ownership details, published maps and other records;
- Development of a conceptual site model (CSM) to identify potential sources of contamination, human health and environmental receptors and pathways in which these receptors may be exposed to the identified contamination;
- Metro Quarter inspection observations; and
- Risk ranking of the potential pollutant linkages to illustrate the relative risk of each pathway to current and future human health and environmental receptors.

Key findings of this report include:

- This desktop geotechnical study has been based on limited data. However, there is sufficient information to assess (from a geotechnical perspective) that the proposed development is suitable for the Metro Quarter.
- The study area is underlain by Quaternary Sediments, (Qhd), described as medium to fine grained "marine" sand with podsols;
- The underlying bedrock is Ashfield Shale underlain by Mittagong Formation and/or Hawkesbury Sandstone;
- The top of bedrock within the Metro Quarter ranges from about RL+9.5 m AHD in the north to about RL +6.5 m AHD in the south;

Potential sources of contamination identified during the Stage 1 PSI which may impact the condition of soil and groundwater within the Metro Quarter and its surrounds include the following:

- Commercial and light industrial properties including car repair centres (J&S Smash Repairs), car servicing and mechanical repairs (All Mechanic Repairs and Waterloo Automotive), panel beaters and/or spray painters, cleaning product manufacturers, printer machinery and supplies, sheet metal workers, woodworking machinery and battery manufacturers;
- Dry cleaning facilities including Waterloo Laundry;
- Service station including former Total Service Station;
- Use of fill material of unknown origin that could potentially contain or be impacted with contaminants;
- Historical use of asbestos containing materials (ACM) within buildings and structures erected since the 1920s; and
- Historical use of lead based paints on the interior and exterior of historical and current buildings.

Of the potential pollutant linkages identified in the CSM, three linkages were considered to present a high risk to human health and/or the environment that are expected to have implications for remediation/management costs:

- The historical and current commercial/light industrial activities undertaken within the Metro Quarter have likely resulted in contaminants of potential concern (CoPC) being released into the environment. Although it is understood that the redeveloped Metro Quarter is likely to be capped with limited access to soil, future sub-slab intrusive works may be required for service maintenance purposes. As such, there is a potential for workers to come into direct contact (i.e. incidental ingestion and/or dermal contact) with and/or inhale CoPC in soil/dust. Additionally, a number of CoPC are considered to be volatile e.g. light-end total recoverable hydrocarbons (TRH) fractions, benzene, toluene, ethylbenzene and xylenes (BTEX) and volatile organic compounds (VOCs). Therefore, future residents, commercial workers or construction/intrusive maintenance workers may be exposed to volatile CoPC via inhalation;
- Since 1930, a number of buildings within the Metro Quarter have been demolished and erected potentially depositing CoPC such as asbestos containing materials (ACM) and lead onto the soil.
- Although specific areas could not be identified where fill material may have been used it is likely to be present across given the level nature of the Metro Quarter. Imported fill material of unknown origin can contain a range of CoPC. Therefore, there is a potential for intrusive maintenance workers to come into direct contact (i.e. incidental ingestion and/or dermal contact) with and/or inhale CoPC in soil/dust. Based on the findings of this geotechnical assessment, AECOM presents the following recommendations. It is noted that the additional work scope would be undertaken during the detailed development application stage:

- An allowance for up to 15 cored boreholes to 20 m depth and five standpipe piezometers in five of these boreholes to allow for groundwater monitoring. If site-specific information such as from the metro rail investigations can be relied upon and is of a suitable scale and distribution then geotechnical investigations may not need to be as extensive;
- Development of geotechnical models for design and to assess interactions between the Metro Precinct development and the metro station box and running tunnels;

Based on the findings of this Stage 1 PSI and CSM developed for the Metro Quarter, AECOM recommends undertaking the following additional stages of work to ensure the SEARs are being fulfilled. It is noted that the additional work scope would be undertaken during the detailed development application stage:

- A Stage 2 contamination assessment to characterise the nature and extent of potential soil and groundwater contamination identified within the Metro Quarter to confirm that the Metro Quarter is either suitable in its current condition or can be made suitable following remediation for the proposed land use and zoning in accordance with clause 6(1)(b) of SEPP 55;
- In accordance with clause 6(1)(c) of SEPP 55, remediation and/or management of impacted areas may be required to mitigate risks associated with the identified impacts during the proposed construction works;
- Development of a Construction and Environment Management Plan (CEMP) to manage risks to construction and maintenance workers from erosion, impacted soils and groundwater during the redevelopment of the Metro Quarter; and
- Development of a Materials Management Plan (MMP) to include a strategy for the management of materials so that impacted material can be reused in less sensitive areas or managed within the Metro Quarter to manage erosion, salinity (if encountered) and mitigate off-site disposal of excavated material.
- In the event that potential or actual acid sulfate soil is identified, preparation of an acid sulfate soils management plan (ASSMP) to manage material that may require disturbance and/or movement.

Based on the investigations undertaken, the SEARs outlined in Section 15 have been wholly satisfied, with appropriate future investigations recommended for further development applications relating to detailed design.

3.0 Geotechnical Baseline Investigation

3.1 Introduction

This section presents our desktop review of available geotechnical information around the Metro Quarter project. Parts of the Metro Quarter are to be underlain by a metro station and tunnels. The proposal is to redevelop the Metro Quarter with commercial and residential buildings. The metro line is proposed to run beneath the eastern half of the Metro Quarter. Commercial and residential buildings are being considered for the Metro Quarter, to be located considering the station box and tunnels.

The purpose of the desktop geotechnical study is to provide an assessment of ground conditions and groundwater to inform design development in accordance to Section 15 of the SEARs as outlined in Section 1.1.

Figure 9 overleaf shows the topography of the proposed site.

3.2 Data Sources

AECOM has looked at the following sourced of information:

- Sydney 1:100,000 Geological Series Sheet 9130;
- NSW Office of Environment and Heritage Acid Sulphate Soil Map;
- Sydney Local Environmental Plan (LEP) 2010, the ASS map Sheet 010; and
- Borehole information from the AECOM database.

3.3 Metro Quarter Description

The ground surface in the locality of the Metro Quarter is relatively flat, with the ground elevation falling about 3 metres from north to south, i.e. a grade of about 1 percent.

Currently, the site has been levelled with the exception of the heritage-listed Congregational Church located at 103 Botany Rd, Waterloo, which has been retained. Early works undertaken by Sydney Metro under the CSSI approval have also commenced.

3.4 Ground Conditions

3.4.1 Regional Geology

Based on the Sydney 1:100,000 Geological Series Sheet 9130, the study area is underlain by Quaternary Sediments, (Qhd), described as medium to fine grained “marine” sand with podsols, which have a low potential for salinity, erosion and acid sulfate soils.

The underlying bedrock is Ashfield Shale underlain by Mittagong Formation and/or Hawkesbury Sandstone. The geology sheet describes the Ashfield Shale as black to dark grey shale and laminite. The Mittagong formation is an intermediate unit sometimes present between the Ashfield Shale and Hawkesbury Sandstone. It is sometimes referred to as transition beds between the fine grained Ashfield Shale and relatively coarse grained Hawkesbury Sandstone and is described as shale, laminite, and medium grained quartz sandstone. The Hawkesbury Sandstone is described as medium to coarse grained quartz sandstone, very minor shale and laminite lenses.

3.4.2 Acid Sulfate Soils

The Acid Sulfate Soils (ASS) Map provided by the NSW Office of Environment and Heritage (OEH) shows no potential ASS occurrence in the Metro Quarter and that the site is within Class 5 land according to Sheet 010.

The *Sydney Local Environment Plan 2012* (LEP), requires development consent for works on Class 5 land within 500 metres of Class 1, 2, 3 and 4 land that is below 5 metres Australian Height Datum (AHD), and where the groundwater is likely to be lowered below 1 metre AHD on the adjacent Class 1, 2, 3 and 4.

With a tanked basement, long-term groundwater impact beyond the Metro Quarter boundary is not an issue.

3.4.3 Preliminary Geotechnical Model

We have used borehole data within the vicinity of the Metro Quarter from our database to develop the preliminary geotechnical model in Table 1.

Of the natural soils, the Alluvium/Marine Sediments are underlain by Residual Soil formed by weathering of the underlying Shale bedrock that is in turn underlain by Sandstone bedrock. The top of bedrock at the Metro Quarter ranges from about RL+9.5m AHD in the north to about RL +6.5 m AHD in the south.

Table 1 | Indicative Ground Profile

Geotechnical Unit	Description	Depth to Top of Unit (m)	Unit thickness (m)
1. Fill	Likely to be variable Sands or Clays containing Silt, Gravel, possibly waste materials	Ground surface	Less than 1
2. Alluvium/Marine Sediments	Sand: mainly fine to medium grained, loose and medium dense SPT 'N' values ranging from 15 to 30	Less than 1	3.0 to 5.0
3. Residual Soil	Silty Clay: medium plasticity, very stiff and hard. SPT 'N' values ranging from 26 to refusal	3.5 to 5.0	2.7 to 4.6
4. Ashfield Shale			
4a. Shale Class V and IV ^(Note 1)	Shale: extremely weathered to highly weathered, very low to medium strength	7.5 to 9.0	1.8 to 3.8
4b. Shale Class II or better ^(Note 1)	Shale: slightly weathered and fresh, medium and high strength	9.0 to 13.0	5.0 to 8.0
5. Mittagong Formation and/or Hawkesbury Sandstone	Sandstone: mainly fresh rock with medium to high strength	16 to 18	Not proven

Note 1: Rock classifications based on Pells et al 1998.

The unit depths, thicknesses and material properties presented in Table 1 should not be assumed to represent the maximum or minimum values within the Metro Quarter. Actual unit boundaries and material properties can be highly variable, particularly for fill. Figure 10 to Figure 14 present inferred surfaces of the tops of Units 2, 3, 4a, 4b and 5. The surfaces representing the unit boundaries are based on interpolation, often between widely and variably spaced boreholes. Actual unit boundaries within the Metro Quarter may vary significantly from those shown. Features such as erosion channels, faults and igneous intrusions into the sedimentary bedrock sequences can affect bedrock surfaces within the Sydney region.

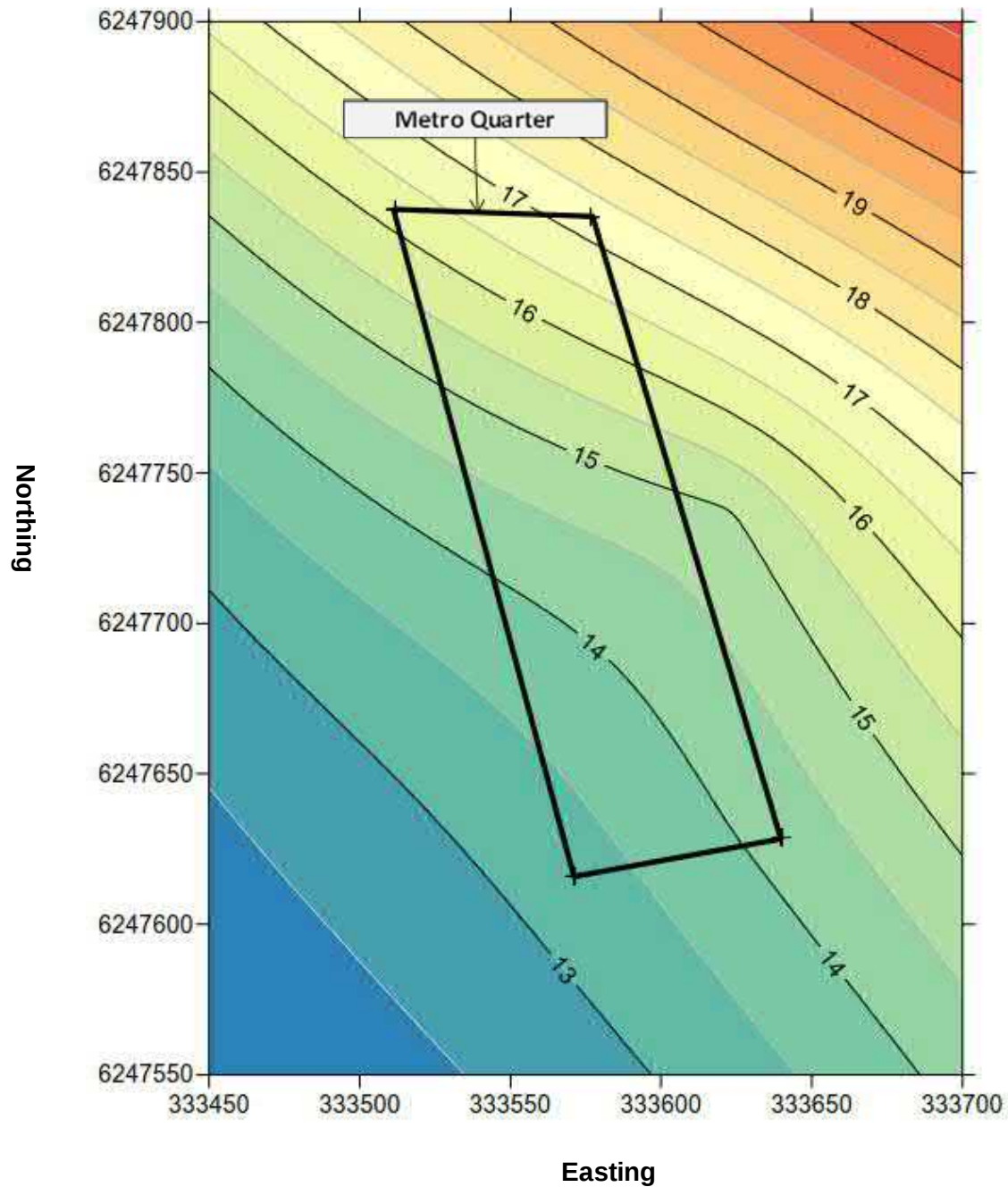


Figure 10 | Inferred Contours of Elevation of Top of Unit 2 – Alluvium/Marine Sediments

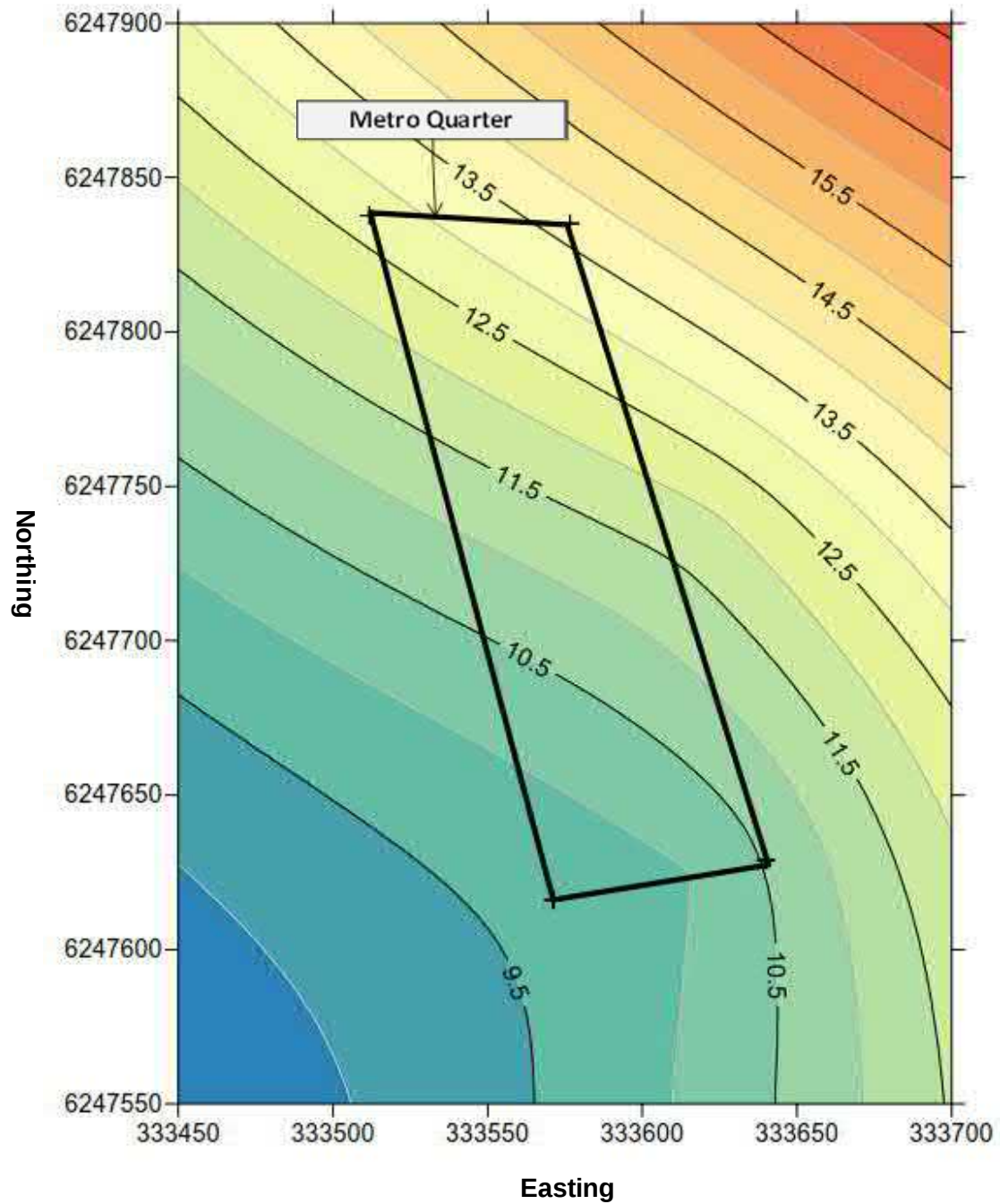


Figure 11 | Inferred Contours of Elevation of Top of Unit 3 - Residual Soil

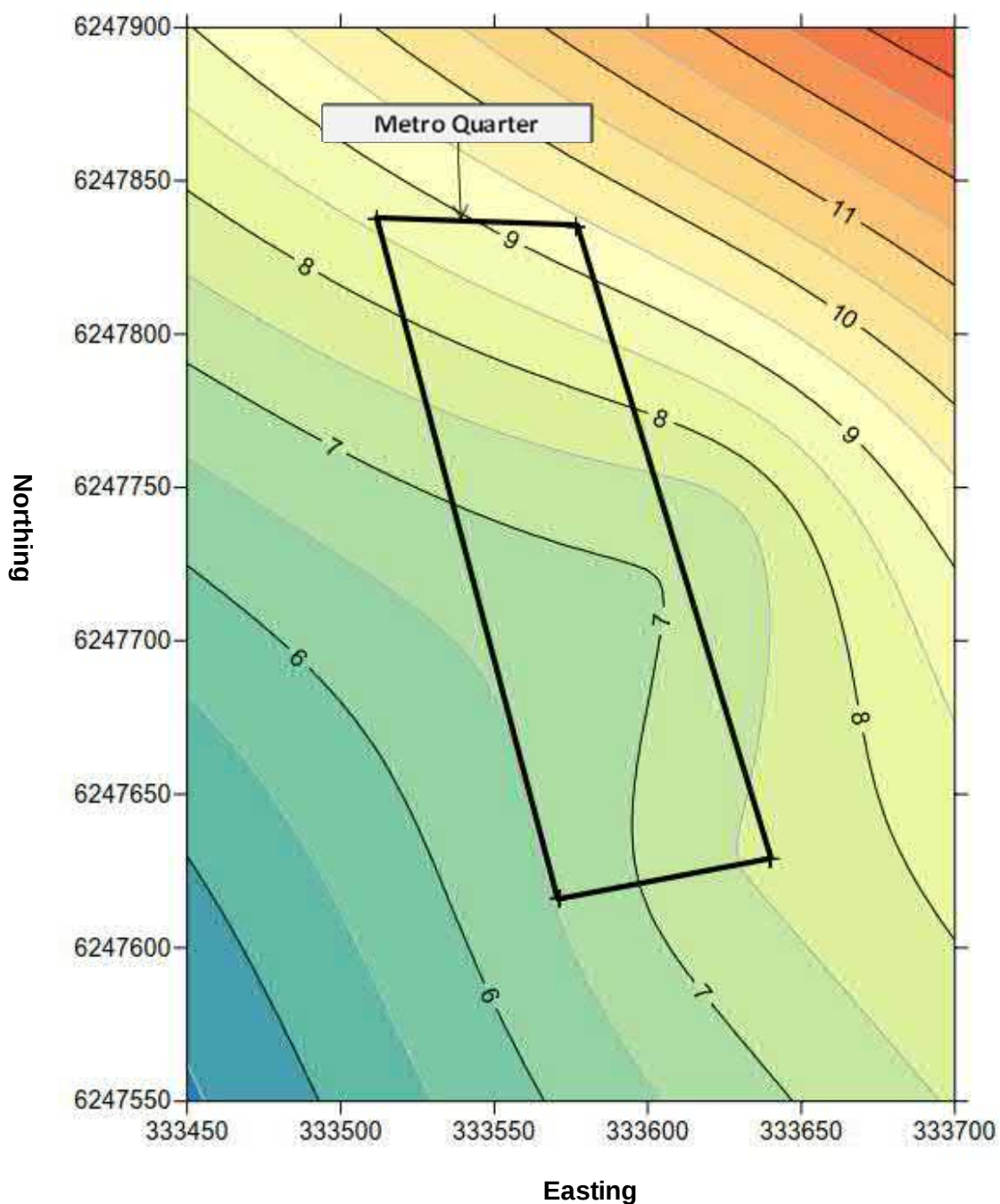


Figure 12 | Inferred Contour of Elevation of Top of Unit 4a – Class V and IV Shale

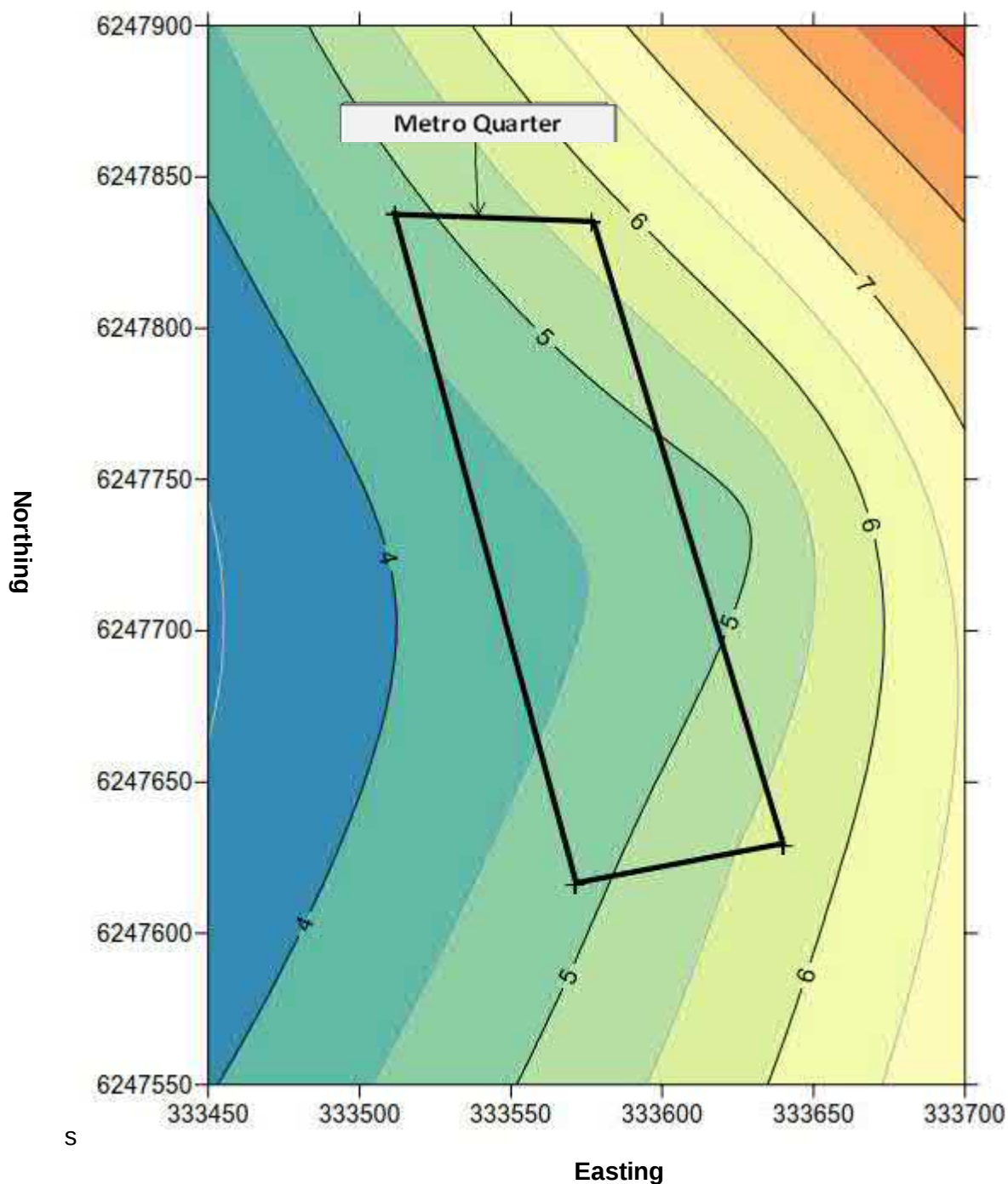


Figure 13 | Inferred Contours of Elevation of Top of Unit 4b – Class II Shale or better

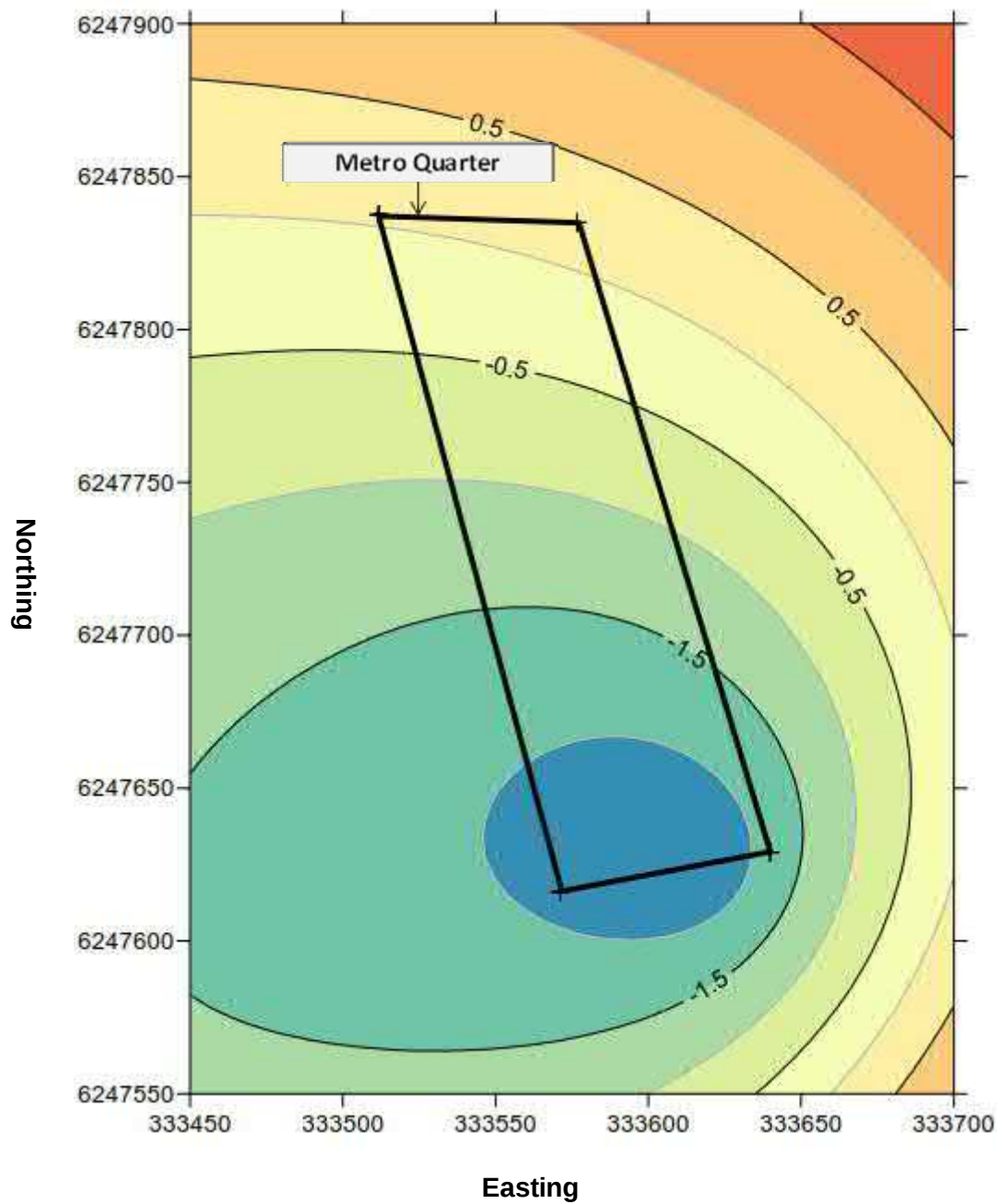


Figure 14 | Inferred Contours of Elevation of Top of Unit 5 – Class II Sandstone or better

3.4.4 Material Properties

Based on the results of in-situ testing from our database we infer the soil and rock properties summarised in Table 2 and Table 3.

Table 2 | Inferred Unit 1, 2 and 3 Soil and Unit 4a Rock Properties

Geotechnical Unit	Bulk Density, γ_b , kN/m ³	Undrained Cohesion, c_u , kPa	Drained Cohesion, c' , kPa	Drained Friction Angle, Φ' , degrees	Drained Young's Modulus, E' , MPa
1. Fill (Note 1) variable Sands or Clays	20	-	0	25	5 to 10
2. Alluvium/Marine Sediments Sand	20	0	0	33	25 to 50
3. Residual Soil Silty Clay	20	100	10	25	20 to 30
4a. Shale Class V and IV	22	500	10	28	50 to 300
Note	1. Existing fill should be treated as uncontrolled fill and should not be relied upon to support structures. The parameters for fill are for estimating retaining wall earth pressures and displacements and should not be used to assess existing fill as a bearing stratum.				

Table 3 | Preliminary Rock Strength Estimates and Rock Mass Classifications

Geotechnical Unit	Point Load Strength, I_{s50} , MPa	Uniaxial Compressive Strength, UCS, MPa ^{Note 1}	Rock Mass Classification based on Pells et al 1998
4a. Shale	<0.1	<2	Class V and IV
4b. Shale	1.0 to 1.1	20 to 22	Class II or better
5. Sandstone	1.0 to 1.5	20 to 30	Class II or better
Note	1. UCS has been estimated based on I_{s50} values, assuming a multiplier of 20 to convert point load strength to UCS.		

3.4.5 Groundwater

Groundwater is likely to be relatively shallow in this locality. Standing groundwater levels have been monitored in the Unit 2 – Alluvium/Marine Sediments, at a depth of 1.9 m in proximity to the Metro Quarter. Figure 15 shows inferred contours of groundwater elevation based on this borehole and a limited number of additional boreholes more remote from the Metro Quarter.

Groundwater levels could rise to the ground surface, depending on infiltration rates, flood levels and drainage paths.

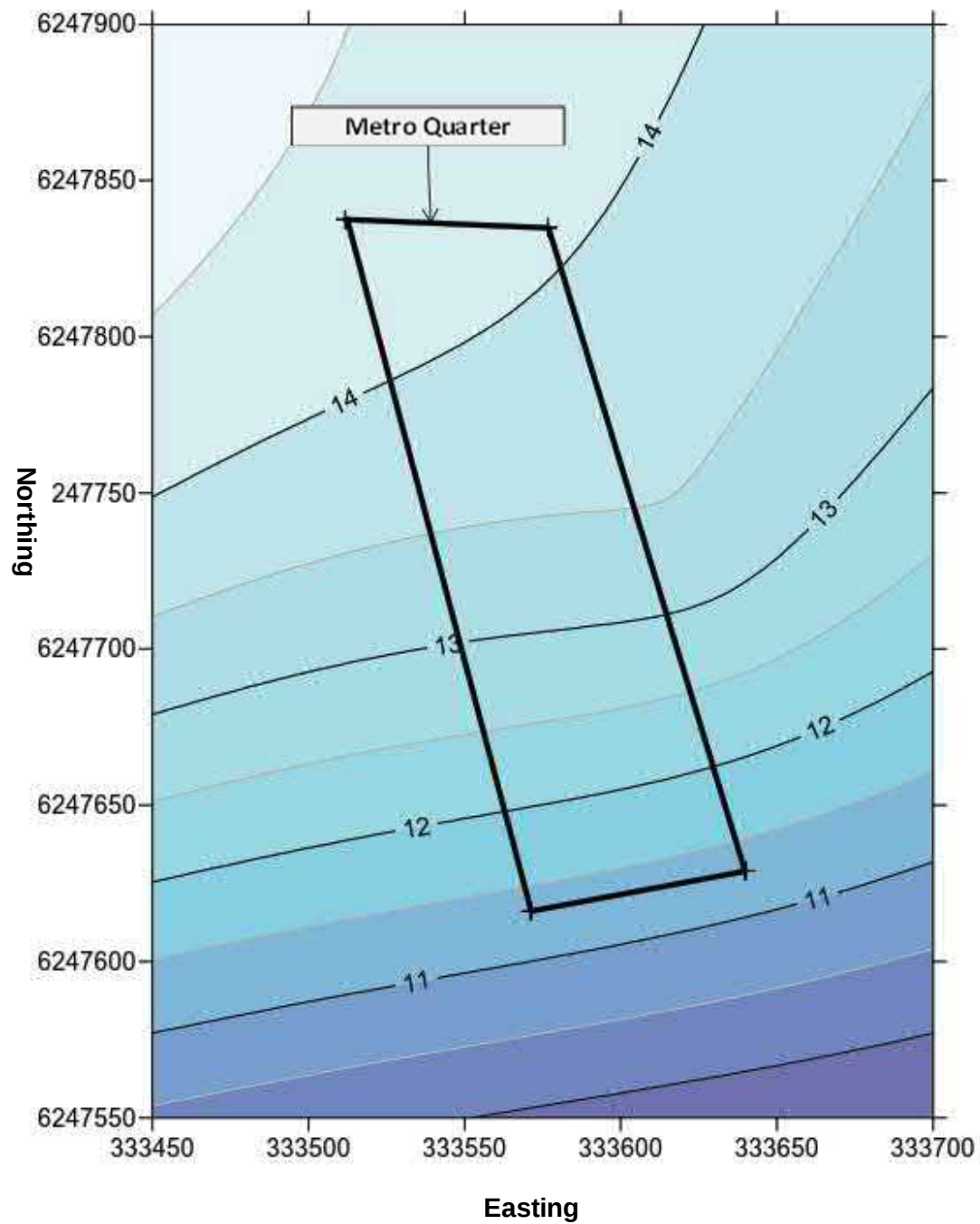


Figure 15 | Inferred Contours of Groundwater Elevation

3.5 Discussion and Recommendations

3.5.1 Geotechnical Risks

Commercial and residential development with basements should be practicable for the Metro Quarter with conventional structural elements and normal construction techniques. However, some geotechnical challenges exist that include:

- High groundwater table and the potential for rapid increase in groundwater levels to the ground surface during heavy/intense rain events or flooding;
- Potentially saturated cohesionless soils (Unit 2 – Botany Sands);
- Interaction with existing structures such as the metro station box, running tunnels and the heritage-listed Waterloo Congregational Church if it is retained as part of the redeveloped Metro Quarter. Restrictions associated with existing structures may result in increased site retention and foundation costs and impact on construction programs; and
- The risk associated with underground services along the site boundaries. Retention system design will have to consider the risk of excavation induced ground movements on existing services. Relatively stiff retention systems may be required to limit ground displacements beyond the site boundaries.

The predominantly sandy soils at the site are unlikely to be highly erodible. However, sediment or dust could still be an issue during construction under adverse conditions such as during very wet or dry weather. Erosion and sediment control would be managed using standard construction methods managed in accordance with a construction environmental management plan (CEMP) and material management plan (MMP).

In the following sections, preliminary comments and recommendations are provided on geotechnical issues associated with basement excavation and structural design and building foundations. Preliminary parameters are provided for concept design, but are based on very limited data from boreholes that were not drilled for this project and should not be relied upon.

3.5.2 Groundwater and Excavation Retention Systems

A tanked retention system will be required for the development of basements through the Botany Sands (Unit 2) that are laterally continuous and of relatively high permeability. Dewatering using spear points may be possible within an excavation enclosed by a groundwater cut-off such a sheet pile wall. If excavations extend into the Residual Soil (Unit 3) they should be able to be maintained dry by pumping from sumps, provided lateral inflows from the overlying sands are cut off.

Given the presence of a relatively low permeability clay layer (Unit 3 – Residual Soil) a cut-off for within the Unit 2 Alluvium/Marine Sediments should be able to be formed by driven steel sheet piles or a secant pile wall. A hydrostatic slab will be required to tank the base of the excavation. If it could be demonstrated that basements penetrate into a very low permeability strata then it may be possible to adopt a semi-tanked basement. The retaining

walls would be tanked and the basement slab designed with a drainage layer to relieve any hydrostatic pressures from groundwater inflows through the foundations. Such a semi-drained basement would be subject to regulatory approvals.

Driven steel sheet piles could be considered to form a temporary retention system to allow dewatering and excavation prior to constructing a permanent cast in place retaining wall. The sheet piles may be sacrificial where used as formwork for the permanent retaining wall.

Secant pile walls need to be constructed carefully to maintain pile verticality and avoid gaps between piles through which groundwater and soil could flow. Soldier pile walls with shotcrete infill panels or contiguous bored piles are unlikely to be practicable through the Botany Sands. These wall types are not suitable for cohesionless and/or saturated soils.

The parameters in Table 2 can be used for preliminary design of retention systems. If temporary ground anchors are required, provision should be made for effectively sealing up the anchor heads to prevent groundwater ingress should the groundwater level rise to above the anchor head.

Depending on factors such as construction sequence and structural stiffness, even well-constructed anchored retaining walls can deflect laterally in the order of 0.1 % to 0.3% of the wall height. Detailed soil-structure interaction analysis should be carried out to assess the lateral and vertical ground movements that could result from basement excavation.

3.5.3 Temporary Ground Anchors

Typically, exclusion zones are declared around buried structures associated with infrastructure such as shafts, station boxes and running tunnels associated with metro lines. Such exclusion zones restrict the imposition of additional stresses on the ground that may affect the buried infrastructure. The feasibility of installing temporary ground anchors should consider such exclusion zones as they may prevent anchors being adopted or require them to be inclined more steeply, which reduces their efficiency.

Table 4 provides recommendations for preliminary design of ground anchors. The parameters are valid for anchors with bond lengths between 3 m and 7 m. In addition to bond and structural capacity, anchors should be checked for a cone pullout failure mechanism.

Table 4 | Preliminary anchor design parameters

Geotechnical Unit	Ultimate Bond Stress kPa
4b. Shale – Class II or better	600
5. Sandstone Class II or better	1,000

3.5.4 Foundations

Piled foundations taken into bedrock are likely to be adopted to support structures within the Metro Quarter. Given the nature of the proposed development, building loads are likely to be relatively high. There may also be a requirement for deep piles to take loads to levels below which they may affect metro rail infrastructure.

If piles are allowed to be located close to metro rail infrastructure there also may be a need to isolate pile shafts from the rock so that loads are not transferred to rail structures. This could be achieved by sacrificial steel sleeves. Open bored piles are unlikely to be practicable unless temporary liners are installed through the Unit 2 Botany Sands and a seal can be achieved in the residual soils or bedrock.

Continuous flight auger (CFA) piles should be practicable. Care will be required if CFA piles are required to have long sockets into relatively high strength rock, resulting in slow auger penetration rates. If there are loose sands within the Unit 2 Botany Sands they could be drawn into the auger while the rock socket is being drilled. This can result in loosening of the sands and potentially unexpected ground movements near the piles. This aspect should be further assessed with additional investigation of the sand density, as the risk is lower in more dense sands.

Table 5 presents preliminary pile design parameters.

Table 5 | Preliminary Pile Design Parameters

Geotechnical Unit	Ultimate End Bearing Capacity, Mpa ^{Note 1}	Serviceability Bearing Pressure, Mpa ^{Note 2}	Ultimate Shaft Adhesion, kPa ^{Note 3}	Elastic Modulus, E, Mpa ^{Note 4}
4a. Shale Class V and IV	3	0.7	100	100
4b. Shale Class II or better	60	6	800	1,000
5. Sandstone Class II or better	100	10	1,400	1,600
Note	1. End bearing pressures assume a minimum embedment of 0.3 m into the relevant bearing stratum. 2. End bearing pressures should be checked under Serviceability Limit State (SLS) loads against the Serviceability Bearing Pressure value to confirm that the base of piles remain within the elastic range. 3. Ignore shaft adhesion where the embedment total embedment into rock is less than 1 pile diameter 1 pile diameter. 4. Pile settlement should be calculated using SLS loads and the elastic modulus values in the table.			

To design piles in accordance with AS 2159-2009 a geotechnical strength reduction factor, Φ_g , should be applied to check pile capacity under Ultimate Limit State (ULS) loads. The value will depend on a calculated Average Risk Rating (ARR) that considers various factors such as the level of investigation, level of redundancy in capacity, pile load testing, and level of construction review. Typically for single (low redundancy) piles that develop most of their capacity in Sydney sedimentary rock strata the ARR is less than or equal to 2.5.

We estimate an ARR of about 2 should be able to be assessed for this Metro Quarter, from which a Φ_g value of 0.61 can be assessed without considering a testing benefit factor. Minimum pile testing requirements still apply as per AS 2159-2009 Clause 8.2.4.

3.5.5 Further Geotechnical Investigations

This desktop study has been based on a limited number of boreholes, some of which are remote from the Metro Quarter. However, there is sufficient information to assess that proposed land uses are suitable for the Metro Quarter.

Further investigations should form part of detailed development applications. Comprehensive geotechnical models will be required for design and assessing interactions between the Metro Quarter development and the metro station box and running tunnels.

In the absence of borehole information that can be relied upon for the Metro Quarter development, we recommend an allowance for up to 15 cored boreholes to 20 metre depth and five standpipe piezometers in five of these boreholes to allow for groundwater monitoring. If Metro Quarter-specific information such as from the metro rail investigations can be relied upon and is of a suitable scale and distribution then geotechnical investigations may not need to be as extensive. A further desktop study should be carried out to make use of additional information that becomes available and to scope investigations.

4.0 Contamination Baseline Investigation – Stage 1 PSI

4.1 Introduction

AECOM was engaged by UrbanGrowth NSW to undertake a Stage 1 Preliminary Site Investigation (Stage 1 PSI) of the Metro Quarter. The location of the Metro Quarter is shown on **Figure F1, Appendix A** and the properties included within the Metro Quarter are shown on **Figure F2, Appendix A**. The purpose of this Stage 1 PSI is to evaluate the potential for contamination to be present within the Metro Quarter in accordance with the SEARs and assess the requirement for further intrusive investigation.

4.1.1 Objectives

The objectives of the Stage 1 PSI are to:

- To satisfy the requirements of Section 15 of the SEARs summarised in Section 1.1;
- Identify whether potential contamination issues may be associated with the Metro Quarter;
- Identify whether potential contamination at the Metro Quarter is likely to preclude it from being suitable for the proposed residential and train station redevelopment; and
- Make recommendations to assist in making the Metro Quarter suitable for the proposed development of the Metro Quarter and inform future detailed development applications.

4.1.2 Scope of Work

To achieve the objectives, the following scope of work was undertaken:

- Review of available drawings / plans / reports relating to the Site and assessment of data gaps (if any);
- Identification of known contaminated sites as detailed on the NSW Environment Protection Authority (EPA) list of NSW contaminated sites notified to the EPA;
- Identification of properties which are listed on the NSW EPA Contaminated Land record of Notices;
- Source and review current and historical ownership details and aerial photographs for the Metro Quarter;
- Identification of current or historical land uses at the Metro Quarter that are likely to have caused contamination;
- Review published maps of the area to gain an understanding of surface and subsurface conditions (e.g. geology, hydrogeology, soil, topography etc.) including erosion, salinity and acid sulphate soil potential;

- Search/review information readily available through the internet (e.g. historical parish maps, council records, registered groundwater bore database within identified areas of concern etc.);
- Development of a conceptual site model (CSM) to identify potential sources of contamination, human health and environmental receptors and pathways in which these receptors may be exposed to the identified contamination;
- Risk ranking of the potential pollutant linkages to illustrate the relative risk of each pathway to receptors; and
- Site inspection observations.

Investigative work was conducted with reference to relevant parts of the following guidelines:

- NSW DECC, 2009. *Guidelines on the Duty to Report Contamination under the Contaminated Land Management Act 1997* – used to determine potential significant risk of harm issues associated with the Metro Quarter, where required;
- NSW DEC, 2006. *Guidelines for the Site Auditor Scheme (2nd Edition)* – used to apply the NSW EPA decision processes for assessing and redevelopment of urban sites;
- NEPC, 2013. *National Environment Protection (Assessment of Site Contamination) Measure 1999, 2013 Amendment (herein referred to as the ASC NEPM [2013])* – considered throughout the investigation; and
- NSW EPA, 1997. *Guidelines for Consultants Reporting on Contaminated Sites* – considered during the preparation of this report.

4.2 Metro Quarter Identification

An overview of the Metro Quarter identification details are provided in **Table 6** below. Further details on the location and zoning of the Metro Quarter are provided in **Section 4.3**.

Table 6 | Metro Quarter Identification

Item	Description
Local Government Authority (LGA)	City of Sydney
County	Cumberland
Parish	Waterloo
Area	Approximately 1 hectare (Ha)
Elevation	Ranges from 16 – 18 m AHD (refer to Appendix B)
Distance from Sydney CBD ¹	3.3km
Current Land Zoning	Sydney Local Environmental Plan (LEP) 2012: Zone B4 Mixed Use.
Current Land Use	Residential and Commercial
Proposed Land Use	Residential and commercial (mixed use)
Metro Quarter Location	Refer to Figure F1, Appendix A .
Metro Quarter Layout	Refer to Figure F2, Appendix A .

Notes: AHD: Australian Height Datum

CBD: Central business district

1. Distance: Google maps (<http://maps.google.com.au>)

4.3 Site Condition and Surrounding Environment

4.3.1 Metro Quarter Land Use and Zoning

The zoning of the Metro Quarter is Zone B4 Mixed Use under the Sydney LEP2012. The site zoning map is provided in the Lotsearch Report in **Appendix B**.

The Metro Quarter, as inspected on 10 April 2017, currently consists of commercial and light industrial properties including car repair centres (J&S Smash Repairs), car servicing and mechanical repairs (All Mechanic Repairs and Waterloo Automotive), dry cleaning facilities (Waterloo Laundry) and various commercial facilities (such as printers/graphic services, factory outlets, retail stores, marine supplies [i.e. inflatable boats], convenience store, pharmacy and a medical centre). However, all structures within the site have since been demolished as approved under the CSSI Approval for the metro station.

4.3.2 Surrounding Land Use

Land uses surrounding the Metro Quarter identified during the site visit on 10 April 2017 are described below:

- North: Raglan Street and commercial properties including a hotel (Abbotts Hotel), restaurants, a convenience store and pharmacy beyond. A former service station was previously located approximately 150 metres north of the Metro Quarter;
- East: Cope Street and low to medium density residential housing beyond;
- South: Wellington Street, medium density housing and commercial properties including a hotel (Cauliflower Hotel) and office supply store and a recruitment agency beyond; and
- West: Botany Road, medium density housing and commercial properties including restaurants, furniture store (Wild Reeds), a fitness centre, factory outlets and bike store beyond.

4.3.3 Topography and Drainage

The Metro Quarter is relatively flat and elevated at approximately 16 – 18 metres AHD. The Metro Quarter generally slopes to the south with the northern portion at 18 metres AHD and the southern portion at 16 metres AHD. Given the generally flat nature of the Metro Quarter, erosion is unlikely to be a significant issue assuming excavated material is appropriately managed during construction.

The surrounding landscape is also relatively flat, although some mounding is noted approximately 350 metres east of the Metro Quarter. No major easements were identified by Property Boundary & Topographic Data (as presented in the Lotsearch Report) or during the site inspection on 10 April 2017 within the Metro Quarter. However, three undefined easements were identified within 1 kilometre of the Metro Quarter i.e. northeast (627 metres), southeast (755 metres) and east (799 metres).

4.3.4 Surface Water and Flood Potential

No obvious surface water bodies were observed within or surrounding the Metro Quarter during the site inspection on 10 April 2017. Alexandria Canal is noted to be located approximately 150 metres southwest of the Metro Quarter.

It is noted that development within the Metro Quarter or land surrounding may be subject to flood related development controls i.e. 110 Wellington Street, Waterloo (AECOM, 2014).

4.3.5 Regional Meteorology

According to the Bureau of Meteorology Station (www.bom.gov.au) at the Sydney Airport monitoring station (066037) (data from 1929 to 2017), which is located approximately 5.3 kilometres from the Metro Quarter, the Metro Quarter could expect to experience:

- Moderate to warm summers, with a mean maximum temperature of 26.6°C in January;
- Mild to cool winters, with a mean minimum temperature of 7.2°C in July; and
- Average annual rainfall of approximately 1,085.8 millimetres, which is generally highest from February through to June.

4.3.6 Geology and Acid Sulfate Soils

The Metro Quarter is located within the Sydney Basin, which in turn forms part of the Cumberland Plain.

According to the 1:100,000 Sydney Region Geological Map from NSW Department of Industry, Resources & Energy (see Lotsearch Report, **Appendix B**), the Metro Quarter is underlain by Quaternary age medium to fine-grained marine sand with podzols. To the northwest of the Metro Quarter (about 400 metres) is Triassic Ashfield Shale of the Wianamatta Group. The Ashfield Shale is described as black to dark grey shale and laminate.

Further north of the Metro Quarter (about 800 metres) is an unknown land filling area containing dredged estuarine sand and mud, demolition rubble, industrial and household waste) which overlays silty to peaty quartz sand, silt and clay with ferruginous and humic cementation in placed and common shell layers. Due to the previous and current land uses at the Metro Quarter, fill material is generally expected to be present on-site overlying the natural soils.

Soils within the Metro Quarter are classified as Acid Sulfate Soil (ASS) – Soil Class 5 (indicating no known risk of acid sulfate soils), see Lotsearch Report, **Appendix B**.

4.3.7 Hydrogeology

The Metro Quarter is situated on the Botany Sands, an unconfined aquifer, which has large groundwater capacity. The Hydrogeology Map of Australia (see Lotsearch Report, **Appendix**

B) described the local aquifers underlying the Metro Quarter as porous, extensive highly productive aquifers.

The Botany Sands aquifer recharges from the following sources:

- Infiltration of rainfall into the unconsolidated sediments;
- Open space areas including five local golf courses, Randwick Racecourse and Centennial Park;
- Direct run-off from the Hawkesbury Sandstone rim; and
- Discharge of water from springs rising through cracks and bedding planes in the Hawkesbury Sandstone.

The groundwater levels in the Botany Basin are highly variable depending on topographic relief, ranging between 0.0 metres and 23 metres below ground surface. For the identification of hydrogeological position relative to the Metro Quarter, it has been assumed that groundwater flow direction is to the southwest towards the Alexandria Canal.

The NSW Office Water website (www.water.nsw.gov.au) and Lotsearch Report indicate that there are eight registered groundwater bores within 500 m of the Metro Quarter, as summarised in **Table 7**. An annotated map of these groundwater bores is provided in the Lotsearch Report (**Appendix B**).

Table 7 | Registered Groundwater Bore Summary

Bore ID	Depth of Bore (m bgs)	SWL (m bgs)	Approximate distance and direction from Metro Quarter	Purpose	Construction Details	Comments
GW106192	6	4	152m southwest	Domestic	0.0 – 5.4 m bgs Casing 5.4 – 6.0 m bgs Screen	Water bearing zone: 4.00 to 6.00 m bgs
GW111958	6	3.49	282m south	Monitoring	0.0 – 2.5 m bgs Casing 2.5 – 4.5 m bgs Screen	Water bearing zone: 3.49 to 4.50 m bgs.
GW113037	5		375m south	Monitoring	-	-
GW113039	5		376m south	Monitoring	-	-
GW113038	5		381m south	Monitoring	-	-
GW113036	4		400m south	Monitoring	-	-
GW113035	5		415m south	Monitoring	-	-
GW071907	180	11.6	486m northeast	Recreation	0.0 – 17.5 m bgs Casing 17.5 – 17.7 m bgs Screen 17.7 – 57.5 m bgs Casing 57.5 – 57.7 m bgs Screen 57.7 – 180 m bgs Casing	Water bearing zone: 24.5 to 24.7 m bgs, 55.0 to 55.5 m bgs 82.0 to 85.0 m bgs 138.0 to 154 m bgs

Notes:

m bgs – metres below ground surface

- denotes no information available

It is noted that the groundwater bore GW106192 registered for domestic use is located approximately 150 metres hydraulically downgradient of the Metro Quarter. Domestic water use is water used for indoor and outdoor household purposes including drinking water. However, given the metropolitan setting of the Metro Quarter and the availability of potable mains water supply, groundwater in the Waterloo area is unlikely to be used for consumption purposes. Additionally, the yield from this domestic bore is considered to be low (i.e. 0.5 L/s) and therefore would not be suitable for ongoing use.

4.4 Metro Quarter Background

The background to the Metro Quarter, including history, council records and EPA records are summarised in the following sections. AECOM engaged Lotsearch to provide an Environmental Risk and Planning Report for the Metro Quarter and surrounds (hereafter referred to as the Lotsearch Report). The Lotsearch Report, dated 5 April 2017, was reviewed by AECOM for relevant background to the Metro Quarter, and is presented in **Appendix B**.

4.4.1 Council Records

A review of the Development Application (DA) Records database on the City of Sydney's website (<https://online.cityofsydney.nsw.gov.au/DA/>) was undertaken on 6 April 2017 to determine whether any contamination issues had been identified during the DA process within the vicinity of the Metro Quarter.

The City of Sydney Records DA Application database records applications processed in the last 28 days. All relevant DAs (five in total) processed in the Waterloo area did not contain any comment on potential contamination issues, excluding D/2017/407 (change of land use from a commercial clothing retailer to an art gallery) where a Statement of Environmental Effects (SEE) stated that "there would be no negative environment impacts resulting from the proposed development in regards to noise, air quality and impacts to soil and water. No hazardous chemicals will be used or stored on site and all fire safety equipment necessary for the type of development are present on site".

4.4.2 Aerial Photographs

Historical aerial photographs for the Metro Quarter and surrounds were reviewed to identify former land uses that may have the potential to be sources of contamination. The photographs were obtained from the NSW Department of Land and Property Management Authority (DLPMA) and are presented in the Lotsearch Report provided in **Appendix B**, except the 2016 aerial photograph, which was obtained from Google Earth. Details of the aerial photographs are detailed below.

Table 8 | Historical Aerial Photograph Review

Photograph Details	Description of Metro Quarter	Description of Surrounds
1930 (black and white)	The Metro Quarter appears to comprise small-scale and larger commercial/industrial properties. The Waterloo Congregation Church appears to be present near the southwest corner of the Metro Quarter while a garage/service station appears to be located in the northwest corner. At least three lots along Cope Street appear to be vacant.	The Metro Quarter is bound by Raglan Street, Cope Street, Wellington Street and Botany Road. The surrounding blocks appear to comprise residential properties and small-scale and larger commercial/industrial properties. Open space/parkland (i.e. Alexandria Park) was located southwest of the Metro Quarter.
1943 (black and white)	As per 1930 photograph. Additionally, a commercial/industrial property was constructed on the vacant lot in the northeast corner of the Metro Quarter and an L shape building replaced some smaller buildings in the northwest corner of the Metro Quarter (understood to be the J. Skinner metal merchant).	Additional commercial/industrial buildings have been constructed, including a large warehouse to the southwest of the Metro Quarter. A number of smaller buildings to the west of the Metro Quarter along Botany Road had been demolished.
1955 (black and white)	As per the 1943 photograph. A building had been extended on the northern portion of the Metro Quarter (understood to be the F.P. Wadds woodworkers and turners property).	As per the 1943 photograph.

Photograph Details	Description of Metro Quarter	Description of Surrounds
1961 (black and white)	Some redevelopment works were being undertaken across Metro Quarter. Two long buildings extending from Botany Road to Cope Street are observed on the northern portion of the Metro Quarter and three large warehouses had been constructed near the centre of the Metro Quarter following demolition of some existing smaller buildings.	A number of large warehouses had been constructed to the west of the Metro Quarter along Botany Road.
1965 (black and white)	Another large warehouse had been constructed on the northern portion of the Metro Quarter following demolition of some existing smaller buildings e.g. J. Skinner metal merchant building.	Significant redevelopment works had occurred on the two blocks east of the Metro Quarter with the demolition of most buildings and the construction of the Social Housing Estate. Additionally, at least three large warehouses were constructed to the west of the Metro Quarter replacing what appeared to be residential properties.
1970 (black and white)	All buildings along Raglan Street, including the garage/service station, had been demolished and replaced by one large building. Two car parking areas were observed in the southeast corner of the Metro Quarter.	Significant redevelopment works had occurred on the two blocks northeast of the Metro Quarter with the demolition of most buildings. Additionally, a large warehouse (or warehouses) had been constructed on the block north of the Metro Quarter replacing what appeared to be commercial/industrial properties.
1982 (colour)	The Metro Quarter appears to be similar to the 1970 photograph.	High-rise residential apartments and associated open space had been constructed on the two blocks northeast of the Metro Quarter. A number of larger commercial/industrial buildings had been constructed on the southern portion of the block located to the west of the Metro Quarter replacing what appeared to be smaller commercial/industrial properties.
1991 (colour)	The Metro Quarter appears to be similar to the 1982 photograph, although commercial/industrial buildings were constructed approximately halfway along Botany Road and in the southeast corner of the Metro Quarter.	A number of larger commercial/industrial buildings had been constructed on the southern portion of blocks located to the north and northwest of the Metro Quarter replacing what appeared to be smaller commercial/industrial properties.
2005 (colour)	One of the long buildings extending from Botany Road to Cope Street on the northern portion of the Metro Quarter had been demolished and a new elongated commercial/industrial warehouse was constructed in a slightly extended footprint.	A large commercial/industrial building had been constructed on the northern portion of the block located to the west of the Metro Quarter. A swimming pool appears to be located to the west of this building.

Photograph Details	Description of Metro Quarter	Description of Surrounds
	Additionally, a large commercial building was constructed approximately halfway along Botany Road.	Vegetation (i.e. trees) had matured to the northeast and east of the Metro Quarter.
2007 (colour)	The Metro Quarter appears to be similar to the 1982 photograph; however a commercial/industrial building had been constructed in one of the car parking areas located in the southeast corner of the Metro Quarter.	As per the 2005 photograph.
2014 (colour)	The Metro Quarter appears to be similar to the 2007 photograph.	A large warehouse on the block northwest of the Metro Quarter has been demolished and replaced with another commercial/industrial building. This is similar to the block located north of the Metro Quarter whereby a large building was demolished and replaced with smaller buildings.
2017 (colour)	The Metro Quarter appears to be similar to the 2014 photograph.	As per the 2014 photograph.

4.4.3 NSW EPA Records

4.4.3.1 Contaminated Land Records of Notices

A review of the NSW EPA website (www.epa.nsw.gov.au) and the Lotsearch Report was undertaken on 6 April 2017 to evaluate if the EPA has issued a regulatory notice in relation to the Project Area under Section 60 of the *Contaminated Land Management Act 1997 (CLM Act 1997)*.

No listed properties were identified within the Metro Quarter; however the following current notices were listed within 1 kilometre of the Metro Quarter:

- Formerly Gas N Go, Alexandria (located 141 metres northwest of the Metro Quarter). A Preliminary Investigation Order was issued on 30 May 2016 and an Amendment or Repeal of Order was issued on 30 November 2016; and
- Lawrence Dry Cleaners, Waterloo (located 784 metres east of the Metro Quarter). The seven current notices are detailed below:
 - Declaration of Investigation Area issued 31 October 2003
 - Agreed Voluntary Investigation Proposal issued 4 May 2004
 - Declaration of a Remediation Site issued on 2 November 2005.
 - Management Order issued 26 May 2011 and amended on 28 August 2014.
 - Amendment of Repeal of Order issued on 27 February 2015.
 - Amendment of Repeal of Order issued on 9 February 2016.

A copy of the search is provided in the Lotsearch Report in **Appendix B**. The former Gas N Go was located hydraulically upgradient of the Metro Quarter and impacted groundwater may have migrated toward the Metro Quarter. However, given the Gas N Go site was redeveloped into residential apartments in September 2016 and there is no ongoing source

of contamination, any legacy groundwater contamination is not likely to be significant at the Metro Quarter. Due to the distance of Lawrence Dry Cleaners and its cross hydraulic gradient location from the Metro Quarter, the contamination associated with this site is not considered relevant to this investigation.

4.4.3.2 NSW Contaminated Sites Notified to the EPA

A review of the NSW EPA website (www.epa.nsw.gov.au) and the Lotsearch Report was undertaken on 6 April 2017 to evaluate if, under Section 60 of the *CLM Act 1997*, any properties within the boundaries of Metro Quarter or the surrounding areas had been reported to the EPA.

No listed properties were identified within the Metro Quarter; however the following notices were listed within 1 km of the Metro Quarter:

- Alexandria Gardens, 146-156 Wyndham Street and 146-156 Botany Road, Alexandria (65 m south of the Metro Quarter). Currently under assessment;
- Proposed Construction Site, 2 John Street, Waterloo (137 m south of the Metro Quarter). Regulation under the *CLM Act 1997* not required;
- Formerly Gas N Go (fully redeveloped into residential apartment as of September 2016), 10-20 Botany Road, Alexandria (141 m northwest of the Metro Quarter). Contamination currently regulated under the *CLM Act 1997*;
- Australian Technology Park, Henderson Road, Eveleigh (208 m northwest of the Metro Quarter). Regulation under the *CLM Act 1997* not required;
- BP Service Station, 116 Regent Street, Redfern (315 m north of the Metro Quarter). Currently under assessment;
- Caltex Service Station, 133 Wyndham Street cnr McEvoy Street, Alexandria (365 m south of the Metro Quarter). Regulation under the *CLM Act 1997* not required;
- Lawrence Dry Cleaners, 887-893 Bourke Street, Waterloo (784 m east of the Metro Quarter). Contamination currently regulated under the *CLM Act 1997*;
- Diversity Waterloo, 1-13 Archibald Avenue, Waterloo (818 m southeast of the Metro Quarter). Currently under assessment;
- Waverley Woollahra Process Plant, 355 Botany Road, Waterloo (861 m southeast of the Metro Quarter). Regulation under the *CLM Act 1997* not required;
- Former Industrial Site, 16 O'Riordan Street, Alexandria (923 m south of the Metro Quarter). Currently under assessment;
- Former Mobil Service Station, 20 O'Riordan Street, Alexandria (960 m south of the Metro Quarter). Regulation under the *CLM Act 1997* not required; and
- Perry Park, 1B Maddox Street, Alexandria (995 m south of the Metro Quarter). Site no longer on EPA Contaminated Land List.

A copy of the Contaminated Land Search is provided in the Lotsearch Report, **Appendix B**.

Of the abovementioned sites notified to the EPA, two are considered to be located hydraulically upgradient of the Metro Quarter i.e. former Gas N Go and BP Service Station.

As discussed in **Section 4.4.3.1**, the legacy groundwater contamination associated with the former Gas N Go is unlikely to significantly impact the Metro Quarter. Given the distance of the BP service station from the Metro Quarter (i.e. greater than 300 m), any contamination associated with this site is not considered relevant to this investigation.

Due to the distance and/or location (i.e. hydraulically cross gradient or upgradient) of the remaining notified sites from the Metro Quarter the contamination of these sites is not considered relevant to this investigation.

4.4.3.3 Licensed Activities under the POEO Act 1997

The Lotsearch Report listed one business with licenced activities under the *Protection of the Environment Operations Act 1997 (POEO Act 1997)* within 1 km of the Metro Quarter:

- Sydney Trains: railway (131 m south of [and surrounding] the Metro Quarter)

A full list of formerly licenced activities under the *POEO Act 1997* is provided in the Lotsearch Report, attached as **Appendix B**.

The Sydney Trains licence (No. 12208) was issued to allow for railway system activities. Based on information contained within the Sydney Trains licence, these activities are unlikely to result in significant contamination (if any) being released to the environment. Therefore, the Metro Quarter is unlikely to be impacted by activities undertaken at the Sydney Trains site.

4.4.4 Business Directory Records

The Lotsearch Report lists businesses in the 1950, 1970 and 1991 Universal Business Directories within 150 m of the Metro Quarter and dry cleaners, garages and service stations within 1km of the Metro Quarter. Those businesses within the Metro Quarter or located 500 m hydraulically up gradient of the Metro Quarter with potentially contaminating activities that may impact the Metro Quarter are summarised in

Table 9. The full list of Business Directory Records and their locations are provided in the Lotsearch Report, attached as **Appendix B**.

Table 9 | Historical Business Directory Records

Potentially Contaminating Businesses	Approximate distance and direction from closest Metro Quarter boundary
1991	
Motor repairs, 85 Botany Road Waterloo 2017	Within Metro Quarter
Motor panel beaters and/or spray painters, 65 Botany Road Waterloo 2017	Within Metro Quarter
Various manufacturers, importers and/or distributors (e.g. toilet paper, adhesives, packaging), 128 Cope Street Waterloo 2017	Within Metro Quarter
Abrasive merchants, 128 Cope Street Waterloo 2017	Within Metro Quarter
Motor brake/clutch specialists and engine reconditioners, 129 Wellington Street Waterloo 2017	Within Metro Quarter

Potentially Contaminating Businesses	Approximate distance and direction from closest Metro Quarter boundary
Cleanser and/or cleaning preparation manufacturers and/or distributors, 23 Botany Road Alexandria 2015	102 m north
Regent auto repairs, 156 Regent Street Redfern 2016	219 m north
Redfern service station, 131 Regent Street Redfern 2016	389 m north
1970	
Cleaners (general, industrial, window), 87 Botany Road Waterloo 2017	Within Metro Quarter
Forgings manufacturers, 146 Botany Street Waterloo 2017	Within Metro Quarter
Printers machinery and furnishers, 128 Botany Road Waterloo 2017	Within Metro Quarter
Metal extrusion tooling and steel merchant, 146 Botany Street Waterloo 2017	Within Metro Quarter
Motor painters and panel beaters, 65 Botany Road Waterloo 2017	Within Metro Quarter
Printers machinery and supplies, 128 Botany Road Waterloo 2017	Within Metro Quarter
Chemist manufacturing and/or wholesale, 89 Botany Road Waterloo 2017	Within Metro Quarter
Sheet metal workers machinery, 59-63 Botany Road Waterloo 2017	Within Metro Quarter
Woodworking machinery, 59-63 Botany Road Waterloo 2017	Within Metro Quarter
Electronic motor dealers and/or wholesalers, 59-63 Botany Road Waterloo 2017	Within Metro Quarter
Motor garages and engineers, 69-83 Botany Road Waterloo 2017	Within Metro Quarter
Total service station, 69-83 Botany Road Waterloo 2017	Within Metro Quarter
Town auto repairs, 60 Botany Road Redfern 2016	221 m north
Palm dry cleaners, 130 Regent Street Redfern 2016	274 m north
Renault, 153 George Street, Redfern 2016	328 m northeast
BP service station, 118 Regent Street Redfern 2016	336 m north
McDermotts dry cleaners, 134 Pitt Street Redfern 2016	360 m northeast
Redfern Service Station, 133 Regent Street Redfern 2016	367 m north
Johnson's dry cleaning, 144 Renwick Street Redfern 2016	375 m north
Personality dry cleaning, 74 Regent Street Redfern 2016	447 m north
1950	
Dowel manufacturers, 87 Botany Road Waterloo 2017	Within Metro Quarter
Timber merchants, 87 Botany Road Waterloo 2017	Within Metro Quarter
Moulding manufacturers, 87 Botany Road Waterloo 2017	Within Metro Quarter
Sheet metal workers, 67 Botany Road Waterloo 2017	Within Metro Quarter
Motor electricians, 51 Botany Road Waterloo 2017	Within Metro Quarter
Battery manufacturers and service stations, 51 Botany Road Waterloo 2017	Within Metro Quarter

Potentially Contaminating Businesses	Approximate distance and direction from closest Metro Quarter boundary
Motor garages, painter, panel beaters, welders, 101 Botany Road Waterloo 2017	Within Metro Quarter
Coppersmiths, welders and sheet metal workers, 79 Botany Road Waterloo 2017	Within Metro Quarter
Motor carburettor and tuning specialists, 117 Botany Road Waterloo 2017	Within Metro Quarter
Statuette and model manufacturers, 77 Botany Road Waterloo 2017	Within Metro Quarter
Woodwork and turners, 63 Botany Road Waterloo 2017	Within Metro Quarter
Motor engineer, 101 Botany Road Waterloo 2017	Within Metro Quarter
Cabinet manufacturers, 15-19 Botany Road Waterloo 2017	124 m north
Furniture manufacturers, 11 Botany Road Waterloo 2017	150 m north
Dry cleaners, 199 Regent Street Redfern 2016	177 m north
Tasman dry cleaners, 195 Regent Street Redfern 2016	213 m north
Dalton motor garage, 150 Regent Street Redfern 2016	232 m north
Jones dry cleaners, 147 Regent Street Redfern 2016	324 m north
Redfern service station, 131 Regent Street Redfern 2016	388 m north
Redfern dry cleaners, 74 Regent Street Redfern 2016	447 m north
Anderson Bros dry cleaners, 46 Regent Street Redfern 2016	491 m north

Given the presence of light industrial and commercial businesses within or hydraulically upgradient of the Metro Quarter in 1991, there is a potential for petroleum hydrocarbons, polycyclic aromatic hydrocarbons (PAHs), heavy metals, asbestos and volatile organic compounds (VOCs) to have impacted the Metro Quarter.

It is noted that petroleum and chlorinated hydrocarbon impacts biodegrade over time, and therefore service station and dry cleaner records from 1950 and 1970 are not considered further.

4.4.5 Unexploded Ordnance

A search of the Australian Department of Defence Unexploded Ordnance (UXO) Contamination database was conducted on 7 April 2017 to evaluate whether the Metro Quarter or surrounding areas were listed. There were no records of UXO contamination in the City of Sydney Local Government Area.

4.5 Previous Environmental Investigations

AECOM is unaware of and has not been provided with any previous environmental investigation reports relevant to the condition of soil and groundwater which have been completed within the Metro Quarter.

However, AECOM has previously undertaken a Stage 1 Contamination Assessment dated 15 January 2014 on the Social Housing Estate located east of the Metro Quarter (AECOM, 2014). The information collated during this Stage 1 Contamination Assessment has been included in this Stage 1 PSI with regard to discussions on off-site land uses.

4.6 Site Walkover

AECOM conducted a walkover of the Metro Quarter and adjacent areas on 10 April 2017. A photographic log has been provided in **Appendix C**.

The Metro Quarter is located in a metropolitan setting which is generally highly developed with areas of green space. The Metro Quarter was identified to comprise commercial buildings (**Photograph 1**), some with residential dwellings above, and light industrial warehouses (**Photograph 2**). The buildings were typically of brick construction and ranged from one to three stories in height (**Photograph 3**). A number of commercial buildings along Raglan Street had awnings over the fronting footpath which may have been constructed with asbestos containing materials (ACM) (**Photograph 4**). However, it is noted that a hazardous building materials survey was not undertaken and therefore the presence of asbestos and other hazardous building materials on the interior or exterior of buildings could not be confirmed. Two unsealed or poorly sealed car parking areas were located within the Metro Quarter and hydrocarbon staining was observed on the car park surface (**Photograph 5**). The buildings within the Metro Quarter were surrounded by a concrete footpath, asphalt driveways, mature trees (particularly along Botany Road, **Photograph 6**) and grassy nature strips (along Wellington Street, **Photograph 7**).

The footpath and driveways within the Metro Quarter were observed to be typically cracked and uneven, particularly along Cope Street (**Photograph 8**). It should be noted that there were sections where the footpath had been replaced e.g. southern end of Cope Street and mid to southern end of Botany Road (adjacent to Two Lights Waterloo and former Wittner factory outlet). Therefore, the poor condition concrete/asphalt appears to be attributable to a

poor state of repair and not due to the subsidence of the underlying soils. There was also evidence of trench reinstatement within the concrete footpath (**Photograph 9**).

The vegetation that was observed within the Metro Quarter appeared to be healthy although patches of grass had eroded exposing the soil beneath (**Photograph 7**).

There was evidence of cut and fill across the Metro Quarter to level the land for building and road construction. Additionally, raised garden beds were observed outside the Waterloo Congregational Church (**Photograph 10**). Whilst rubbish was noted on the surface of the garden beds (and nature strips), no buried anthropogenic material was observed to be exposed at the surface.

During the walkover, no significant staining indicative of surface spills or contamination was observed and no unusual odours were noted.

The following land uses were observed adjacent to the Metro Quarter (i.e. off-site) (also depicted on **Figure F2**):

- Medium density residential houses (i.e. Waterloo Social Housing Estate) were observed to the east of the Metro Quarter (**Photograph 11**);
- Commercial and light industrial properties were typically observed to the north, south and west of the Metro Quarter (**Photograph 12**); and
- A number of terrace houses were located south and southwest of the Metro Quarter (**Photograph 13**).

4.7 Conceptual Site Model

A conceptual site model (CSM) presents information about potential contamination sources, receptors and potential exposure pathways between the identified sources and receptors. As detailed in the ASC NEPM 2013, the development of a CSM is a key component of contaminated site assessments and provides the framework for identifying how potential receptors may be exposed to contamination from historical and/or current site sources. The sources, pathways and receptors identified for the Metro Quarter are discussed and tabulated below.

4.7.1 Sources

4.7.1.1 Potential Areas of Concern

Based on the review of available historical information and available imagery, the following potential sources of contamination were identified, which may impact the condition of soil and groundwater within the Metro Quarter:

- Commercial and light industrial properties including car repair centres (J&S Smash Repairs), car servicing and mechanical repairs (All Mechanic Repairs and Waterloo Automotive), panel beaters and/or spray painters, cleaning product manufacturers, printer machinery and supplies, sheet metal workers, woodworking machinery and battery manufacturers;
- Dry cleaning facilities including Waterloo Laundry;
- Service station including former Total Service Station.

- Use of fill material of unknown origin that could potentially contain or be impacted with contaminants;
- Historical use of asbestos containing material (ACM) within buildings and structures erected since the 1920s; and
- Historical use of lead based paints on the interior and exterior of historical and current buildings.

The following potentially contaminated areas were identified on surrounding land located in proximity to or hydraulically upgradient of the Metro Quarter:

- Surrounding areas of former and current buildings erected since the 1920s which are likely to have been constructed using potentially contaminating or hazardous materials including asbestos and lead based paints (primarily located to the northeast and east of the Metro Quarter);
- Light industrial and commercial properties surrounding the Metro Quarter including dry cleaning facilities, service stations, car repair centres, furniture manufacturers and cleaning product manufacturers; and
- Groundwater in the vicinity of the Metro Quarter that may be contaminated from the surrounding historical commercial and industrial land uses. It is noted that the Metro Quarter footprint is located within the Botany Sands Beds aquifer which has been contaminated as a result of historical industrial land use activities.

4.7.1.2 Contaminants of Potential Concern

Based on the review of available information and observations made during the site inspection, the contaminants of potential concern (CoPC) relating to current and historical activities in and surrounding the Metro Quarter include, but may not be limited to, the following:

- Asbestos – there is potential for historical and current building materials to be constructed using ACM. ACM has historically been used since the 1920s, and then more widely in the post war years from 1945 to the end of the 1960s, and is reported to be present in almost 20 percent of all housing stock (The Asbestos Network, 2008). As buildings existed within the Metro Quarter in the 1930s aerial photographs, it is possible that the buildings and associated infrastructure were constructed using ACM. With the demolition of these buildings overtime, it is possible that residual ACM may be present in soils within the Metro Quarter. Asbestos can also potentially be present in fill (dependent on the origin of the fill material);
- Heavy metals including lead – which may occur in fill originating from industrial sites. Common metals include arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc. Also, selected metals (lead, cadmium, chromium and zinc) may be sourced from the metal-based paints and lithium from battery manufacturing waste. There is also potential for buildings to have been treated with lead paint. In Australia, paints containing at much as 50 percent lead were used on the inside and outside of houses built before 1950, and paint containing more than 1 percent lead was still being used

until the late 1960s. Lead paint may have been applied to and still exist on the interior and exterior walls of the current buildings, or may be present within the soil since re-development;

- Petroleum Hydrocarbons – can be found in emulsions, fuels, solvents and oils etc. and are commonly encountered in service stations, car maintenance and smash repair facilities. Petroleum hydrocarbons are generally quantified by analytical laboratories as total recoverable hydrocarbons (TRH) as four fractions of hydrocarbons grouped into ranges of volatility;
- Polycyclic Aromatic Hydrocarbons (PAHs) – related to some petroleum hydrocarbon use, bitumen emulsion, lubricating oils and waste oils. PAHs can also potentially be present in fill (dependent on the origin of the fill material);
- Volatile Organic Compounds (VOCs) including chlorinated hydrocarbons – related to various industrial processes, particularly where solvents are used and are associated with contamination from dry cleaning facilities and maintenance facilities. VOCs can also potentially be present in fill (dependent on the origin of the fill material); and
- Organochlorine pesticides (OCP), organophosphorous pesticides (OPP) and polychlorinated biphenyls (PCBs) can also potentially be present in fill (dependent on the origin of the fill material) which was placed across the Metro Quarter during its development.

4.7.2 Receptors

Based on the review of available information and observations made during the site inspection, the following potential human health and ecological receptors have been identified:

- Current and future on-site and off-site residents;
- Current and future on-site and off-site commercial workers;
- Current and future on-site and off-site construction/intrusive maintenance workers;
- Current and future off-site recreational users of Alexandria Park located south west of the Metro Quarter; and
- Alexandra Canal.

4.7.3 Tabulated SSM and Risk Planning

Based on the review of the Metro Quarter and sources and receptors discussed in **Section 4.7.1** and **Section 4.7.2**, a tabulated CSM has been prepared to illustrate the relative risk of each source-pathway-receptor linkage identified for the Metro Quarter. The qualitative risk ranking has been completed using a colour coding system, with green representing low risk, orange medium risk and red representing a high risk, as follows:

- Low risk – based on the available information, a complete pollutant linkage is considered to be unlikely.
- Medium risk – based on the available information, a complete pollutant linkage may potentially be present, however the likelihood and consequence is considered to be medium.
- High risk – based on the available information, a complete pollutant linkage is considered to be likely.

A discussion on the likelihood for potential pollutant linkages is provided for each source above, in **Section 4.7.1**.

Table 10 | CSM and Qualitative Risk Ranking of Potential Source-Pathway-Receptor Linkages

Source	CoPC	Pathway	Receptor	Qualitative Risk Ranking
Light industrial and commercial properties (within Metro Quarter)	- Asbestos - Heavy metals - TRH, BTEX, PAH, VOCs	- Direct contact during soil disturbance activities. - Inhalation of wind-blown dust (in unsealed areas). - Inhalation of volatiles that migrate through the vadose zone	- Current and future on-site commercial workers - Current and future on-site residents - Current and future on-site construction/ intrusive maintenance workers	High
		- Leaching from soil and migration through groundwater - Inhalation of volatiles that migrate through the vadose zone	- Current and future off-site commercial workers - Current and future off-site residents - Current and future off-site construction/ intrusive maintenance workers - Alexandria Canal	Medium
Imported fill	- Asbestos - Heavy metals - TRH, BTEX, PAH, VOCs, OCP, OPP, PCBs	- Direct contact during soil disturbance activities. - Inhalation of wind-blown dust (in unsealed areas) - Inhalation of volatiles that migrate through the vadose zone	- Current and future on-site commercial workers - Current and future on-site residents - Current and future on-site construction/ intrusive maintenance workers	High
		Leaching from soil and migration through groundwater	Alexandria Canal	Low

Source	CoPC	Pathway	Receptor	Qualitative Risk Ranking
Hazardous building materials	• Asbestos	• Disturbance of soils and inhalation of fibres released	• Current and future on-site commercial workers • Current and future on-site residents • Current and future on-site construction/ intrusive maintenance workers	High
	• Lead	• Direct contact during soil disturbance activities. • Inhalation of wind-blown dust (in unsealed areas)	• Current and future on-site commercial workers • Current and future on-site residents • Current and future on-site construction/ intrusive maintenance workers	Medium
		• Leaching from soil and migration through groundwater	• Alexandria Canal	Low
Light industrial and commercial properties (outside Metro Quarter)	• Heavy metals • TRH, BTEX, PAH, VOCs	• Leaching from off-site soil and migration through groundwater • Inhalation of volatiles that migrate through the vadose zone	• Current and future on-site commercial workers • Current and future on-site residents • Current and future on-site construction/ intrusive maintenance workers	Low

4.8 Conclusion and Recommendations

AECOM has reviewed historical and current records pertaining to the Metro Quarter and its surrounds and characterised the contamination status of the Metro Quarter. The Metro Quarter has primarily been used for commercial/light industrial purposes, while the surrounding area has been used for commercial/light industrial (typically north, south and west of the Metro Quarter), residential (east of the Metro Quarter) and recreational (southwest of Metro Quarter) purposes.

The CSM (presented in **Section 4.7**) identifies potential sources of contamination, receptors and exposure pathways, and risk ranked these potential pollutant linkages to illustrate the relative risk of each pathway. Potential sources of contamination identified during the Stage 1 PSI which may impact the condition of soil and groundwater within the Metro Quarter and its surrounds include the following:

Within the Metro Quarter

- Commercial and light industrial properties including car repair centres (J&S Smash Repairs), car servicing and mechanical repairs (All Mechanic Repairs and Waterloo Automotive), panel beaters and/or spray painters, cleaning product manufacturers, printer machinery and supplies, sheet metal workers, woodworking machinery and battery manufacturers;
- Dry cleaning facilities including Waterloo Laundry;
- Service station including former Total Service Station;
- Use of fill material of unknown origin that could potentially contain or be impacted with contaminants;
- Historical use of asbestos containing materials (ACM) within buildings and structures erected since the 1920s; and
- Historical use of lead based paints on the interior and exterior of historical and current buildings.

Outside the Metro Quarter

- Surrounding areas of former and current buildings erected since the 1920s which are likely have been constructed using potentially contaminating or hazardous materials including asbestos and lead based paints (primarily located to the northeast and east of the Metro Quarter);
- Light industrial and commercial properties surrounding the Metro Quarter including dry cleaning facilities, service stations, car repair centres, furniture manufacturers and cleaning product manufacturers; and
- Groundwater in the vicinity of the Metro Quarter that may be contaminated from the historical surrounding commercial and industrial land uses in surrounding areas. It is noted that the Metro Quarter footprint is located within the Botany Sands Beds aquifer, which has been contaminated as a result of historical industrial land use activities.

Of the potential pollutant linkages identified in the CSM, three linkages were considered to present a high risk to human health and/or the environment that are expected to have implications for remediation/management costs.

1. The historical and current commercial/light industrial activities undertaken within the Metro Quarter have likely resulted in contaminants of potential concern (CoPC) being released into the environment. Although it is understood that the redeveloped Metro Quarter is likely to be capped with limited access to soil, future sub-slab intrusive works may be required for service maintenance purposes. As such, there is a

potential for workers to come into direct contact (i.e. incidental ingestion and/or dermal contact) with and/or inhale CoPC in soil/dust. Additionally, a number of CoPC are considered to be volatile e.g. light-end total recoverable hydrocarbons (TRH) fractions, benzene, toluene, ethylbenzene and xylenes (BTEX) and volatile organic compounds (VOCs). Therefore, future residents, commercial workers or construction/intrusive maintenance workers may be exposed to volatile CoPC via inhalation.

2. Since 1930, a number of buildings within the Metro Quarter have been demolished and erected potentially depositing CoPC such as asbestos containing materials (ACM) and lead onto the soil. Therefore, there is a potential for intrusive maintenance workers to come into direct contact (i.e. incidental ingestion and/or dermal contact) with and/or inhale asbestos and lead in soil/dust.
3. Although specific areas could not be identified where fill material may have been used it is likely to be present across given the level nature the Metro Quarter. Imported fill material of unknown origin can contain a range of CoPC. Therefore, there is a potential for intrusive maintenance workers to come into direct contact (i.e. incidental ingestion and/or dermal contact) with and/or inhale CoPC in soil/dust. Additionally, future residents, commercial workers or construction/intrusive maintenance workers may be exposed to volatile CoPC via inhalation if not managed or remediated appropriately.

With consideration to Clause 7 of SEPP 55, this Stage 1 PSI has evaluated the contamination status of the Metro Quarter and identified the potential for contamination to be present. Notwithstanding, AECOM considers that the Metro Quarter can be made suitable for the proposed development following the completion of further investigation and remediation works (if required). Based on the findings of this Stage 1 PSI and CSM developed for the Metro Quarter, AECOM recommends undertaking the following additional stages of work to ensure the SEARs are being fulfilled. It is noted that the additional work scope would be undertaken during the detailed development application stage:

- Completion of a stage 2 contamination assessment to characterise the nature and extent of potential soil and groundwater contamination targeting the potential areas of concern identified within the Metro Quarter. Findings of available contamination and remediation reports for the metro station should be considered in the preparation of the assessment for the OSD. Soil and groundwater samples should be analysed for the identified CoPCs listed in **Section 4.7.1.2** and assessed in accordance with the National Environment Protection (Assessment of Site Contamination) Measure 1999 (ASC NEPM, 2013).
- The stage 2 contamination assessment would likely incorporate the following elements:
 - Preparation of a Sampling, Analysis & Quality Plan (SAQP), which will include an assessment of:
 - Data quality objective (DQO) development;
 - Refinement of the Conceptual Site Model (CSM) for the Site;
 - Confirmation of proposed sampling and analysis program, incorporating the findings of this Stage 1 PSI. The sampling program would likely comprise a combination of targeted and grid based sampling focusing on identified areas of concern; and

- Consideration would also be given to the requirement for waste classification sampling and analysis in the event that offsite disposal of material will be required.
- Preparation of a site specific Health and Safety Plan (HASP) including consideration of environmental management; and
- Project Management including subcontractor management, access approvals, stakeholder liaison, etc.
- Field Investigation comprising:
 - Service location in all areas that will be subject to intrusive investigations;
 - Drilling work and monitoring well installation;
 - Groundwater and soil sampling;
 - Survey of newly installed monitoring wells to a site specific datum to facilitate understanding of inferred groundwater flow direction; and
 - Laboratory analysis of soil and groundwater samples.
- Based on the results of the stage 2 contamination assessment, remediation cost estimates can be developed.
- Remediation and/or management of impacted areas may be required to mitigate risks during the construction works program and for the future proposed development. Any remediation works which may be required as an outcome of the stage 2 contamination assessment would be informed by the preparation of a remediation action plan (RAP).

It is noted that the information detailed within the RAP may also be used to inform the following UrbanGrowth requirements:

- Provision of tender documentation for intrusive ground works;
- Validation sampling based on the scope outlined in the RAP following completion of remediation works. It is noted that the validation sampling scope would likely incorporate the following requirements:
 - Groundwater and soil validation sampling;
 - Laboratory analysis of soil and groundwater samples; and
 - Preparation of a validation report
- Development of a CEMP to manage risks to construction and maintenance workers from impacted soils and groundwater during the redevelopment of the Metro Quarter.
- Develop a Materials Management Plan to include a strategy for the management of materials so that impacted material can be potentially reused in less sensitive areas or managed within the Metro Quarter to minimise off-site disposal of excavated material to a licensed landfill.

5.0 SEARs Response

This geotechnical and Contamination report presents a response to the SEARs outlined in Table 11:

Table 11 | SEARs Responses

Metro Quarter Requirements	Geotechnical and Contamination Responses
15. Geotechnical and Contamination	
15.1. Provide an assessment of the site's conditions, outlining the site's suitability for the proposed uses with respect to soil erosion, salinity and acid sulphate soil.	An assessment of the local soil conditions specifically addressing erosion, salinity and acid sulfate issues has been included in this report. Erosion, salinity and acid sulfate soil, if encountered, would be managed in accordance with Site specific management plans developed for Metro Quarter
15.2. Provide an assessment of the proposal in accordance with State Environmental Planning Policy No 55 - Remediation of Land and relevant guidelines.	An assessment of the proposed land uses satisfying the State Environmental Planning Policy No. 55 – Remediation of Land (SEPP 55) has been provided in this report, specifically addressing Clause 6(1)(b),(c). It is noted that: - A Stage 2 contamination assessment is required to characterise the nature and extent of potential soil and groundwater contamination identified within the Metro Quarter to confirm that the Metro Quarter is either suitable in its current condition or can be made suitable following remediation for the proposed land use and zoning in accordance with clause 6(1)(b) of SEPP 55 - In accordance with clause 6(1)(c) of SEPP 55, remediation and/or management of impacted areas may be required to mitigate risks associated with the identified impacts during the proposed construction works

6.0 Conclusion

This study has addressed the geotechnical and contamination requirements outlined Section 5.0 of this report. Key geotechnical and contamination findings of this report include:

- The study area is underlain by Quaternary Sediments, (Qhd), described as medium to fine grained “marine” sand with podsols;
- The underlying bedrock is Ashfield Shale underlain by Mittagong Formation and/or Hawkesbury Sandstone;
- The top of bedrock within the Metro Quarter ranges from about RL+9.5 metres AHD in the north to about RL +6.5 metres AHD in the south;

Potential sources of contamination identified during the Stage 1 PSI which may impact the condition of soil and groundwater within the Metro Quarter and its surrounds include the following:

- Commercial and light industrial properties including car repair centres (J&S Smash Repairs), car servicing and mechanical repairs (All Mechanic Repairs and Waterloo Automotive), panel beaters and/or spray painters, cleaning product manufacturers, printer machinery and supplies, sheet metal workers, woodworking machinery and battery manufacturers;
- Dry cleaning facilities including Waterloo Laundry;
- Service station including former Total Service Station;
- Use of fill material of unknown origin that could potentially contain or be impacted with contaminants;
- Historical use of asbestos containing materials (ACM) within buildings and structures erected since the 1920s; and
- Historical use of lead based paints on the interior and exterior of historical and current buildings.

Of the potential pollutant linkages identified in the CSM, three linkages were considered to present a high risk to human health and/or the environment that are expected to have implications for remediation/management costs:

- The historical and current commercial/light industrial activities undertaken within the Metro Quarter have likely resulted in contaminants of potential concern (CoPC) being released into the environment. Although it is understood that the redeveloped Metro Quarter is likely to be capped with limited access to soil, future sub-slab intrusive works may be required for service maintenance purposes. As such, there is a potential for workers to come into direct contact (i.e. incidental ingestion and/or dermal contact) with and/or inhale CoPC in soil/dust. Additionally, a number of CoPC are considered to be volatile e.g. light-end total recoverable hydrocarbons (TRH) fractions, benzene, toluene, ethylbenzene and xylenes (BTEX) and volatile organic compounds (VOCs). Therefore, future residents, commercial workers or construction/intrusive maintenance workers may be exposed to volatile CoPC via inhalation;
- Since 1930, a number of buildings within the Metro Quarter have been demolished and erected potentially depositing CoPC such as asbestos containing materials

(ACM) and lead onto the soil. Therefore, there is a potential for intrusive maintenance workers to come into direct contact (i.e. incidental ingestion and/or dermal contact) with and/or inhale asbestos and lead in soil/dust; and

- Although specific areas could not be identified where fill material may have been used it is likely to be present across given the level nature of the Metro Quarter. Imported fill material of unknown origin can contain a range of CoPC. Therefore, there is a potential for intrusive maintenance workers to come into direct contact (i.e. incidental ingestion and/or dermal contact) with and/or inhale CoPC in soil/dust. Additionally, future residents, commercial workers or construction/intrusive maintenance workers may be exposed to volatile CoPC via inhalation if not managed or remediated appropriately.

Based on the findings of this geotechnical assessment, AECOM presents the following recommendations. It is noted that the additional work scope would be undertaken during the detailed development application stage:

- We recommend an allowance for up to 15 cored boreholes to 20 m depth and five standpipe piezometers in five of these boreholes to allow for groundwater monitoring. If site-specific information such as from the metro rail investigations can be relied upon and is of a suitable scale and distribution then geotechnical investigations may not need to be as extensive; and
- Development of geotechnical models for design and to assess interactions between the Metro Precinct development and the metro station box and running tunnels.
- If Metro Quarter-specific information, such as from the metro rail investigations, can be relied upon and is of a suitable scale and distribution, then geotechnical investigations may not need to be as extensive.

Based on the findings of this Stage 1 PSI, AECOM presents the following contamination recommendations:

- A Stage 2 contamination assessment to characterise the nature and extent of potential soil and groundwater contamination identified within the Metro Quarter to confirm that the Metro Quarter is either suitable in its current condition or can be made suitable following remediation for the proposed land use and zoning in accordance with clause 6(1)(b) of SEPP 55. Findings of any available contamination assessments and/or remediation action plans for the metro station should be considered in the preparation of the assessment for the OSD;
- In accordance with clause 6(1)(c) of SEPP 55, remediation and/or management of impacted areas may be required to mitigate risks associated with the identified impacts during the proposed construction works;
- Development of a Construction and Environment Management Plan (CEMP) to manage risks to construction and maintenance workers from impacted soils and groundwater during the redevelopment of the Metro Quarter; and
- Development of a Materials Management Plan (MMP) to include a strategy for the management of materials so that impacted material can be reused in less sensitive areas or managed within the Metro Quarter to manage erosion, salinity (if encountered) and mitigate off-site disposal of excavated material.

- In the event that potential or actual acid sulfate soil is identified, preparation of an acid sulfate soils management plan (ASSMP) to manage material that may require disturbance and/or movement.

Based on the investigations undertaken, the SEARs outlined in Section 15 have been wholly satisfied, with appropriate future investigations recommended for further development applications relating to detailed design.

7.0 Important information about this Geotechnical and Contamination Report

Client details, scope and reliance

AECOM has prepared this report for the sole use of the Client and for a specific purpose, each as expressly stated in the report. No other party should rely on this report without the prior written consent of AECOM. AECOM undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this report. This report has been prepared based on the Client's description of its requirements and AECOM's experience, having regard to assumptions that AECOM can reasonably be expected to make in accordance with sound professional principles. AECOM's findings represent its reasonable judgment within the time and budget context of its commission and utilising the information available to it at the time.

No section or element of this report may be removed, reproduced, electronically stored or transmitted in any form by parties other than those for whom the report has been prepared without the written permission of AECOM. All sections in this report must be viewed in the context of the entire report/document including, without limitation, any assumptions made and disclaimers provided. No section in this report may be excised from the body of the report without AECOM's prior written consent.

Standard of care

AECOM has prepared this report using the standard of reasonable skill, care and diligence required of a consultant performing the same or similar Services. The report should be read in full. No warranty, expressed or implied, is made as to the professional advice included in this report.

Data sources

AECOM may have relied on information provided by the Client and third parties (Information Providers) to produce this report and arrive at its conclusions. AECOM has not verified information provided by the Information Providers (unless specifically agreed as part of AECOM's scope of work) and we assume no responsibility and make no representations with respect to the adequacy, accuracy or completeness of such information. AECOM assumes no responsibility for inaccuracies in reporting by the Information Providers including, without limitation, by the Client's employees or representatives or for inaccuracies in any other data source whether provided in writing or orally used in preparing or presenting the report.

Variability in conditions and limitations of data

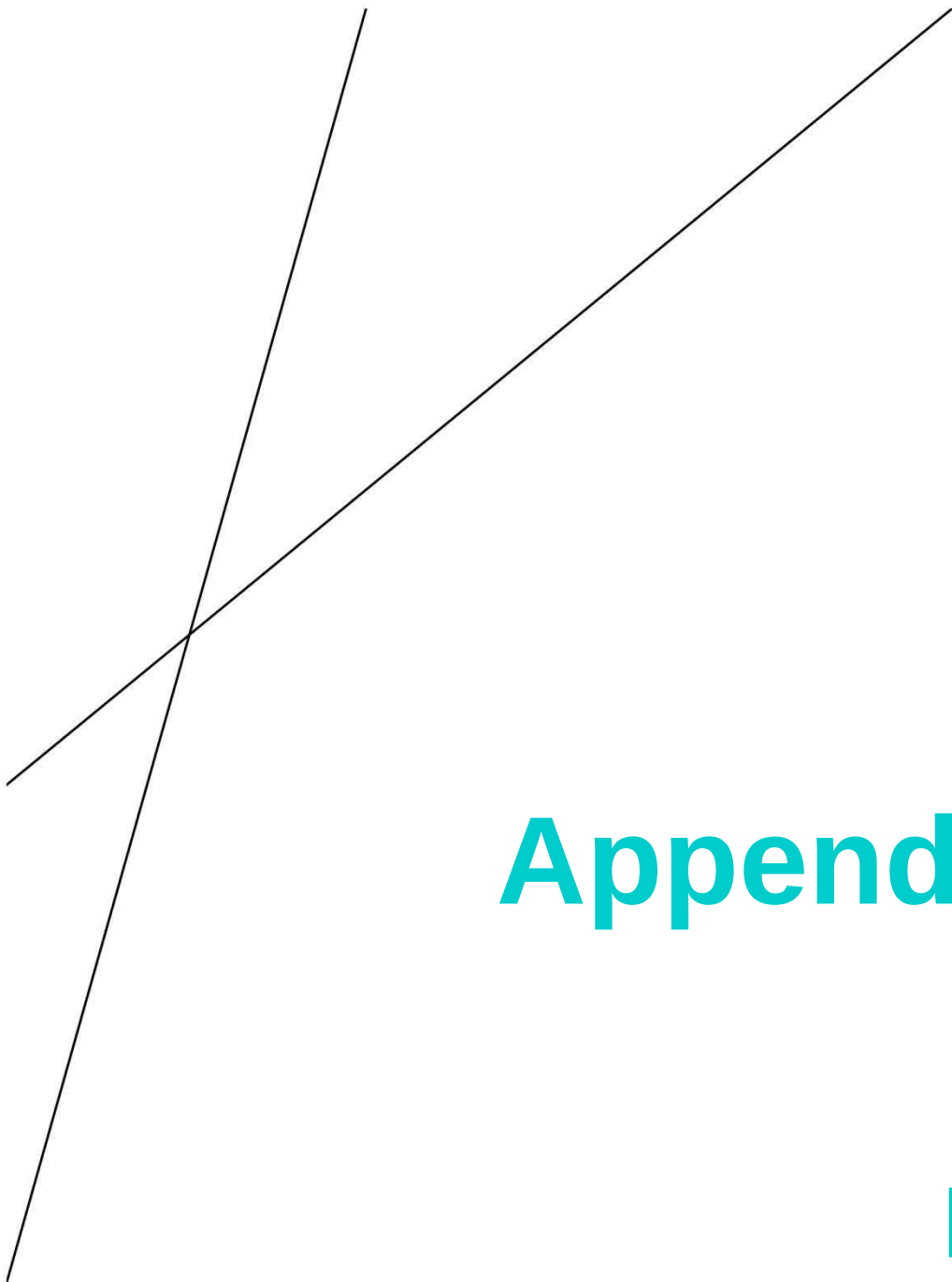
Subsurface conditions are formed through a variety of natural processes and can be altered by human activities. The behaviour of the ground, groundwater and contaminants are complex and conditions can vary across a particular Metro Quarter. As a result, subsurface conditions cannot be exhaustively defined by investigations at discrete locations. Therefore, it is unlikely that the results and assessments expressed in this report will represent conditions at any location removed from the specific points of sampling. The precision with which conditions can be inferred depends largely on the uniformity of subsurface conditions and on the frequency and method of sampling as constrained by factors such as project budget and time limitations and physical constraints.

Furthermore, subsurface conditions can change over time, which should be considered when interpreting or using the data within this report.

Verification of opinions and recommendations

The opinions and recommendations in this report apply to the proposed development and the Metro Quarter existing at the time of our investigation and cannot necessarily apply to changes in the proposed development or Metro Quarter changes of which AECOM is not aware and has not had the opportunity to evaluate. Our recommendations should be considered to be preliminary and subject to verification during project implementation. If conditions encountered within the Metro Quarter are subsequently found to differ significantly from those anticipated, AECOM must be notified and be provided with an opportunity to review the recommendations.

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Appendix A

Figures

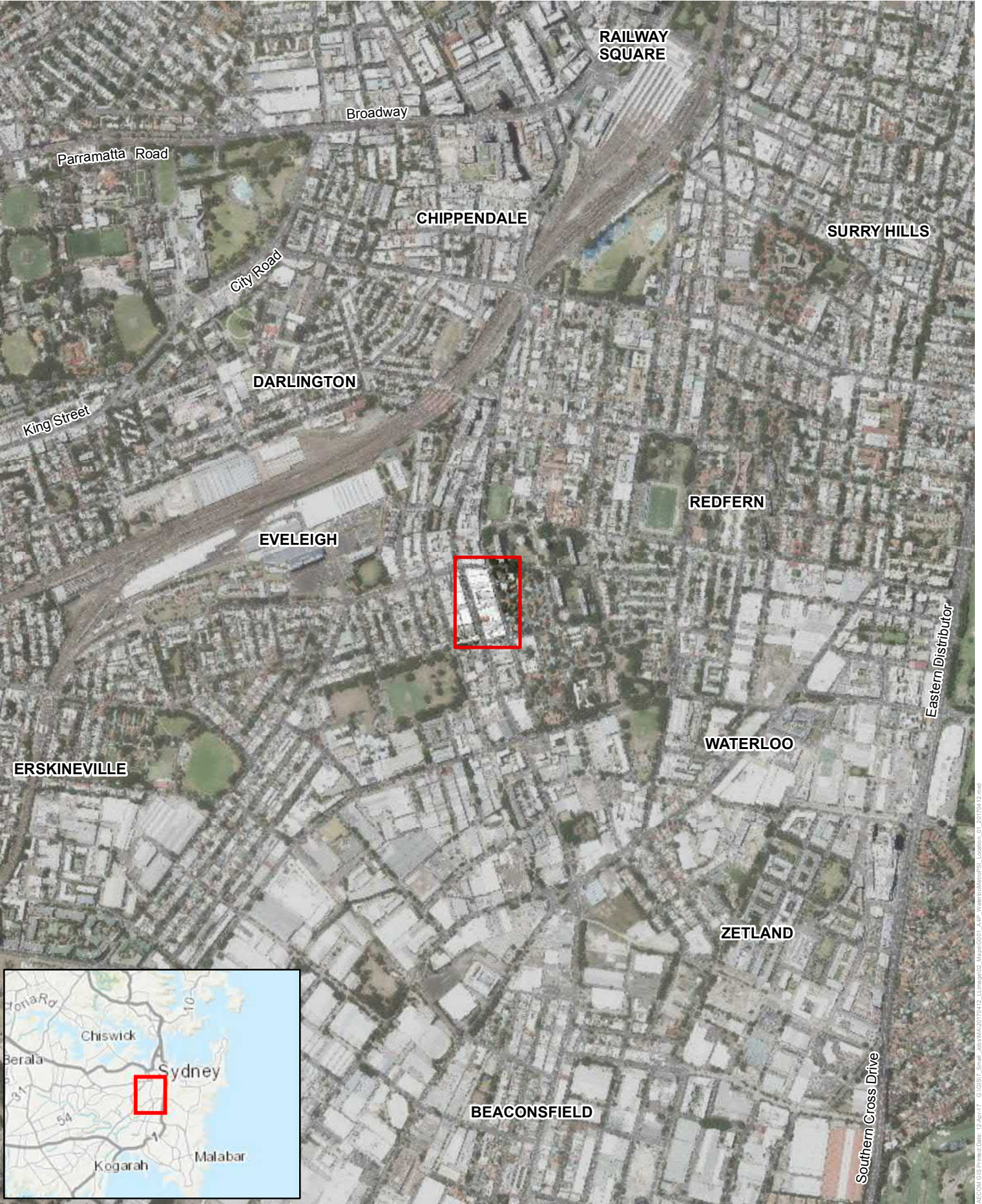
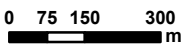


FIGURE F1 - STUDY AREA LOCATION

KEY
 Area of interest



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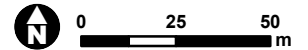


FIGURE F2 - STUDY AREA LAYOUT

KEY

- Area of interest
- Lot boundary
- Primary road
- Local road

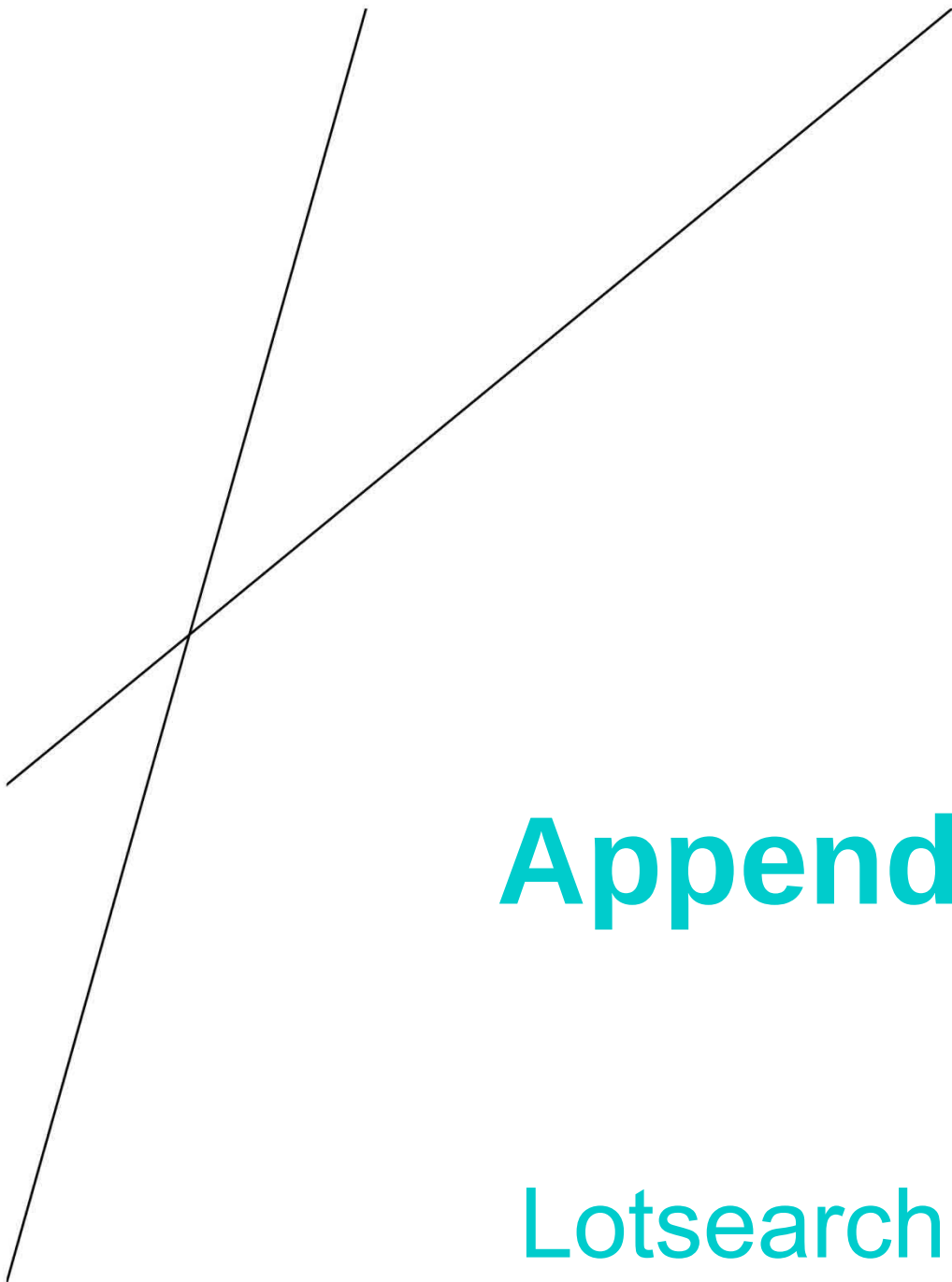
AECOM



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Appendix B

Lotsearch Report

Lotsearch



Environmental Risk and Planning Report

Waterloo Precinct, Waterloo, NSW 2017

Report Buffer: 1000m

Report Date: 05 Apr 2017 16:32:33

Disclaimer:

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

Table of Contents

Location Confidences.....	2
Dataset Listings	3
Site Location Aerial	5
Contaminated Land & Waste Management Facilities.....	6
EPA Current Licensed Activities.....	10
EPA Delicensed & Former Licensed Activities.....	12
UPSS Sensitive Zones.....	15
Historical Business Activities.....	16
Historical Aerial Imagery & Maps	40
Topographic Features	53
Elevation Contours.....	59
Hydrogeology & Groundwater	60
Geology.....	82
Naturally Occurring Asbestos Potential.....	84
Soil Landscapes.....	85
Acid Sulfate Soils	87
Dryland Salinity	89
Mining Subsidence Districts	90
State Environmental Planning.....	91
Local Environmental Planning.....	93
Heritage	99
Natural Hazards	108
Ecological Constraints.....	109
Terms & Conditions.....	115

Location Confidences

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

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

Dataset Listing

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

Dataset Name	Custodian	Supply Date	Currency Date	Update Frequency	No. Features Onsite	No. Features within 100m	No. Features within Buffer
List of NSW contaminated sites notified to EPA	Environment Protection Authority	23/03/2017	06/03/2017	Monthly	0	1	12
Contaminated Land: Records of Notice	Environment Protection Authority	08/03/2017	08/03/2017	Monthly	0	0	2
Former Gasworks	Environment Protection Authority	08/03/2017	16/01/2017	Monthly	0	0	0
National Waste Management Site Database	Geoscience Australia	07/03/2017	15/11/2012	Quarterly	0	0	1
Licensed Activities under the POEO Act 1997	Environment Protection Authority	08/03/2017	06/03/2017	Monthly	0	0	1
Delicensed POEO Activities still Regulated by the EPA	Environment Protection Authority	08/03/2017	06/03/2017	Monthly	0	0	7
Former POEO Licensed Activities now revoked or surrendered	Environment Protection Authority	08/03/2017	06/03/2017	Monthly	0	0	11
UPSS Environmentally Sensitive Zones	Department of Environment, Climate Change and Water (NSW)	14/04/2015	12/01/2010	As required	1	1	1
UBD Business to Business Directory 1991	Hardie Grant			Not required	20	55	65
UBD Business Directory 1991 Motor Garages/Service Stations	Hardie Grant			Not required	0	2	9
UBD Business Directory 1970	Hardie Grant			Not required	45	215	277
UBD Business Directory 1970 Drycleaners & Motor Garages/Service Stations	Hardie Grant			Not required	1	8	68
UBD Business Directory 1950	Hardie Grant			Not required	44	160	206
UBD Business Directory 1950 Drycleaners & Motor Garages/Service Stations	Hardie Grant			Not required	1	5	58
Points of Interest	Land and Property Information	01/02/2017	01/02/2017	Annually	1	1	94
Tanks (Areas)	Land and Property Information	01/02/2017	01/02/2017	Annually	0	0	0
Tanks (Points)	Land and Property Information	01/02/2017	01/02/2017	Annually	0	0	0
Major Easements	Land and Property Information	01/02/2017	01/02/2017	As required	0	0	3
State Forest	Land and Property Information	01/02/2017	29/06/2016	As required	0	0	0
NSW National Parks and Wildlife Service Reserves	NSW Office of Environment and Heritage	01/02/2017	31/12/2016	Annually	0	0	0
Hydrogeology Map of Australia	Commonwealth of Australia (Geoscience Australia)	08/10/2014	17/03/2000	As required	1	1	1
Groundwater Boreholes	NSW Department of Primary Industries - Office of Water / Water Administration Ministerial Corporation; Commonwealth of Australia (Bureau of Meteorology) 2015	21/03/2016	01/12/2015	Annually	0	0	363
Geological Units 1:100,000	NSW Department of Industry, Resources & Energy	20/08/2014		None planned	1	-	3
Geological Structures 1:100,000	NSW Department of Industry, Resources & Energy	20/08/2014		None planned	0	-	1
Naturally Occurring Asbestos Potential	NSW Department of Industry, Resources & Energy	04/12/2015	24/09/2015	Unknown	0	0	0
Soil Landscapes	NSW Office of Environment and Heritage	12/08/2014		None planned	1	-	3
Standard Local Environmental Plan Acid Sulfate Soils	NSW Planning and Environment	07/10/2016	07/10/2016	As required	1	-	-
Dryland Salinity Assessment	National Land and Water Resources Audit	18/07/2014	12/05/2013	None planned	0	0	0
Mining Subsidence Districts	Land and Property Information	31/08/2016	31/08/2016	As required	0	0	0
SEPP 14 - Coastal Wetlands	NSW Planning and Environment	17/12/2015	24/10/2008	Annually	0	0	0
SEPP 26 - Littoral Rainforest	NSW Planning and Environment	17/12/2015	05/02/1988	Annually	0	0	0
SEPP 71 - Coastal Protection	NSW Planning and Environment	17/12/2015	01/08/2003	Annually	0	0	0

Dataset Name	Custodian	Supply Date	Currency Date	Update Frequency	No. Features Onsite	No. Features within 100m	No. Features within Buffer
SEPP Major Developments 2005	NSW Planning and Environment	09/03/2013	25/05/2005	Under Review	0	1	1
SEPP Strategic Land Use Areas	NSW Planning and Environment	06/07/2016	28/01/2014	Annually	0	0	0
Local Environmental Plan - Land Zoning	NSW Planning and Environment	14/03/2017	20/01/2017	Quarterly	1	10	118
Local Environmental Plan - Minimum Subdivision Lot Size	NSW Planning and Environment	03/01/2017	04/09/2016	Quarterly	0	-	-
Local Environmental Plan - Height of Building	NSW Planning and Environment	14/03/2017	03/03/2017	Quarterly	2	-	-
Local Environmental Plan - Floor Space Ratio	NSW Planning and Environment	14/03/2017	24/02/2017	Quarterly	1	-	-
Local Environmental Plan - Land Application	NSW Planning and Environment	14/03/2017	09/12/2016	Quarterly	1	-	-
Local Environmental Plan - Land Reservation Acquisition	NSW Planning and Environment	14/03/2017	25/11/2016	Quarterly	0	-	-
State Heritage Items	NSW Office of Environment and Heritage	01/03/2017	30/09/2016	Quarterly	0	1	11
Local Heritage Items	NSW Planning and Environment	14/03/2017	20/01/2017	Quarterly	1	8	170
Bush Fire Prone Land	NSW Rural Fire Service	28/03/2017	17/02/2017	Quarterly	0	0	0
Native Vegetation of the Sydney Metropolitan Area	NSW Office of Environment and Heritage	01/03/2017	16/12/2016	As required	0	1	1
RAMSAR Wetlands	Commonwealth of Australia Department of the Environment	08/10/2014	24/06/2011	As required	0	0	0
ATLAS of NSW Wildlife	NSW Office of Environment and Heritage	05/04/2017	05/04/2017	Daily	-	-	-

Aerial Imagery 2015

Waterloo Precinct, Waterloo, NSW 2017



Legend

- Site Boundary
- Buffer 150m

Scale:
0 25 50 100
Meters

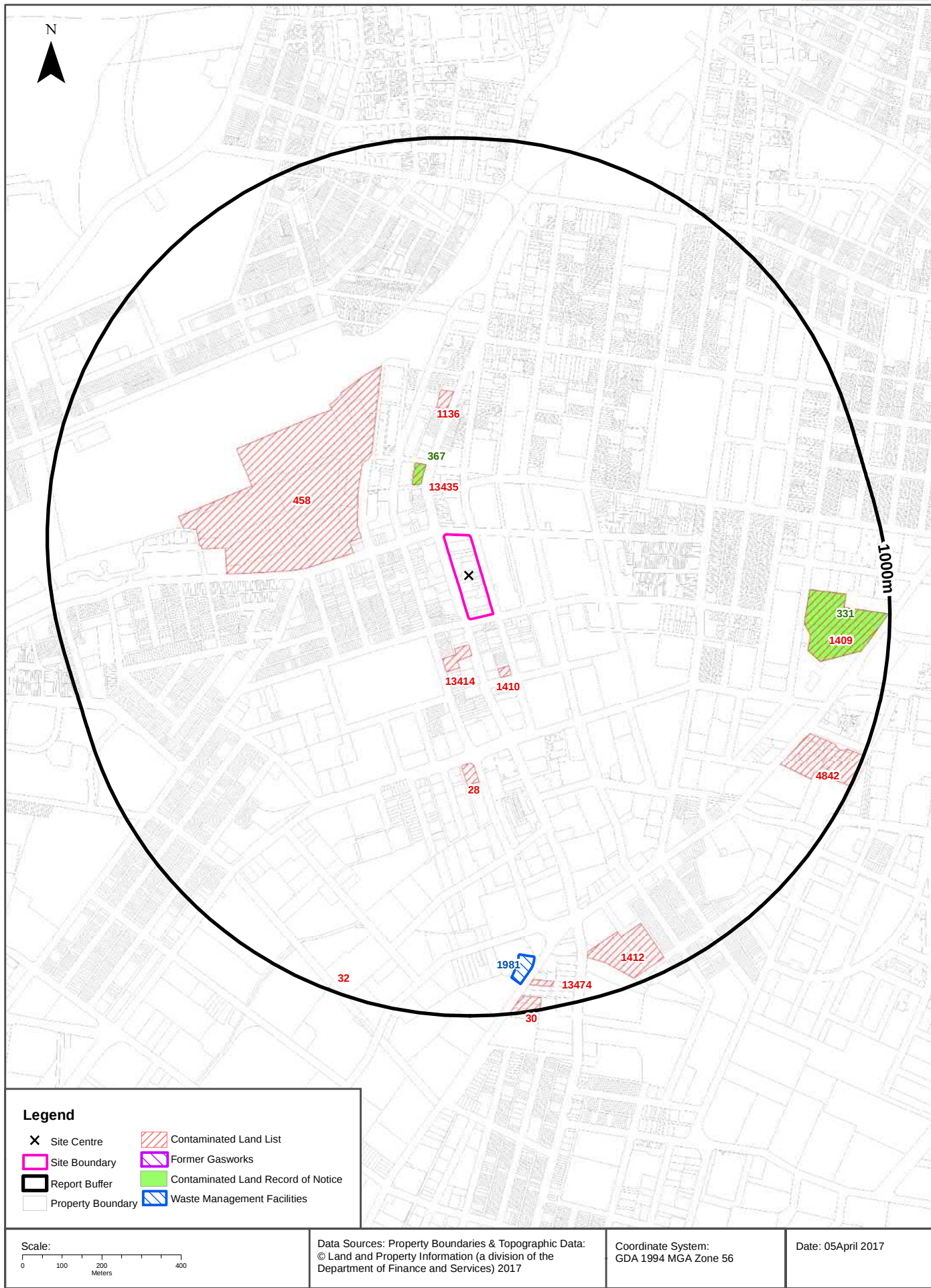
Data Sources: Aerial Imagery © 2017 Google Inc, used with permission. Google and the Google logo are registered trademarks of Google Inc.

Coordinate System:
GDA 1994 MGA Zone 56

Date: 05 April, 2017

Contaminated Land & Waste Management Facilities

Waterloo Precinct, Waterloo, NSW 2017



Contaminated Land & Waste Management Facilities

Waterloo Precinct, Waterloo, NSW 2017

List of NSW contaminated sites notified to EPA

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

Map Id	Site	Address	Suburb	Activity	EPA site management class	Status	Dist	Direction	LC
13414	Alexandria Gardens	146-156 Wyndham St & 146-156 Botany Rd	ALEXANDRIA	Unclassified	Under assessment	Current EPA List	65m	South	1
1410	Proposed Construction Site	2 John Street	Waterloo	Other Industry	Regulation under CLM Act not required	Current EPA List	137m	South	1
13435	Formerly Gas N Go Alexandria (fully redeveloped into residential apartment as of September 2016)	10-20 Botany ROAD	ALEXANDRIA	Service Station	Contamination currently regulated under CLM Act	Current EPA List	141m	North West	1
458	Australian Technology Park	Henderson Road	Eveleigh	Other Industry	Regulation under CLM Act not required	Current EPA List	208m	North West	1
1136	BP Service Station	116 Regent Street	Redfern	Service Station	Under assessment	Current EPA List	315m	North	1
28	Caltex Alexandria Service Station	133 Wyndham St, cnr McEvoy Street	Alexandria	Service Station	Regulation under CLM Act not required	Current EPA List	365m	South	1
1409	Lawrence Dry Cleaners	887-893 Bourke Street	Waterloo	Unclassified	Contamination currently regulated under CLM Act	Current EPA List	784m	East	1
4842	Diversity Waterloo	1-13 Archibald Avenue	Waterloo	Other Industry	Under assessment	Current EPA List	818m	South East	1
1412	Waverley Woollahra Process Plant	355 Botany Road	Waterloo	Other Industry	Regulation under CLM Act not required	Current EPA List	861m	South East	1
13474	Former Industrial Site	16 O'Riordan STREET	ALEXANDRIA	Other Industry	Under assessment	Current EPA List	923m	South	1
30	Former Mobil Service Station	20 O'Riordan Street	Alexandria	Service Station	Regulation under CLM Act not required	Current EPA List	960m	South	1
32	Perry Park	1B Maddox Street	Alexandria	Landfill	N/A - Site no longer on EPA Contaminated Land List	Previous EPA List	995m	South	1

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

EPA site management class	Explanation
Contamination being managed via the planning process (EP&A Act)	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation. The contamination of this site is managed by the consent authority under the Environmental Planning and Assessment Act 1979 (EP&A Act) planning approval process, with EPA involvement as necessary to ensure significant contamination is adequately addressed. The consent authority is typically a local council or the Department of Planning and Environment.
Contamination currently regulated under CLM Act	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation under the Contaminated Land Management Act 1997 (CLM Act). Management of the contamination is regulated by the EPA under the CLM Act. Regulatory notices are available on the EPA's Contaminated Land Public Record of Notices.
Contamination currently regulated under POEO Act	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation. Management of the contamination is regulated under the Protection of the Environment Operations Act 1997 (POEO Act). The EPA's regulatory actions under the POEO Act are available on the POEO public register.

EPA site management class	Explanation
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
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Contaminated Land & Waste Management Facilities

Waterloo Precinct, Waterloo, NSW 2017

Contaminated Land: Records of Notice

Record of Notices within the report buffer:

Map Id	Area No	Name	Address	Suburb	Notices	Distance	Direction	LC
367	3401	Formerly Gas N Go Alexandria (fully redeveloped into residential apartments)	10-20 Botany Road	Alexandria	2 current	141m	North West	1
331	3377	Lawrence Dry Cleaners	887-893 Bourke Street	Waterloo	7 current and 2 former	784m	East	1

Contaminated Land Records of Notice Data Source: Environment Protection Authority

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<http://www.epa.nsw.gov.au/clm/clmdisclaimer.htm>

Former Gasworks

Former Gasworks within the report buffer:

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

Former Gasworks Data Source: Environment Protection Authority

© State of New South Wales through the Environment Protection Authority

National Waste Management Site Database

Sites on the National Waste Management Site Database within the report buffer:

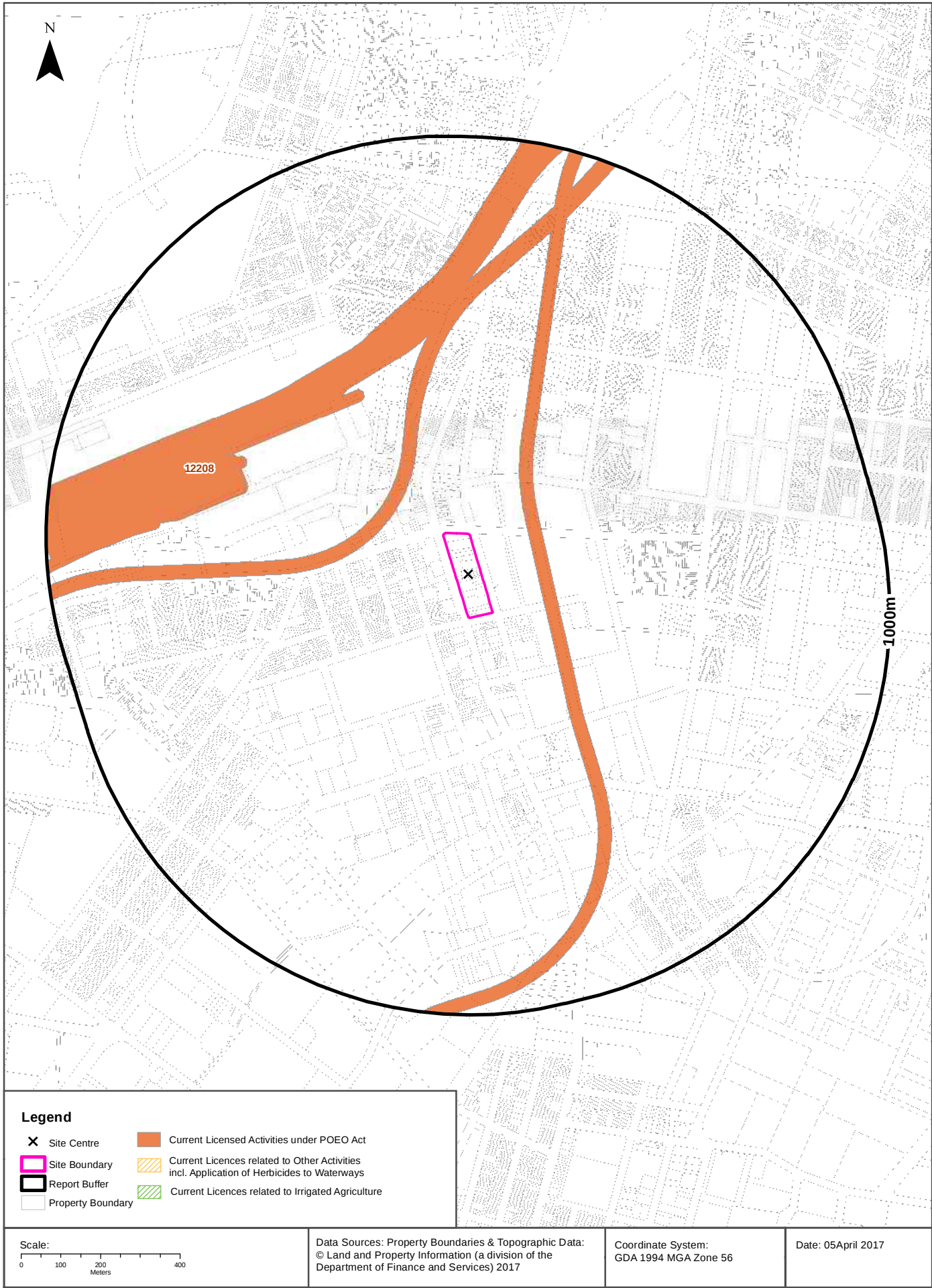
Site Id	Owner	Name	Address	Suburb	Postcode	Landfill	Reprocess	Transfer	Distance	Direction	LC
1981	Cardinal Group Pty Ltd	Reefway Waste	3-7 O'Riordan Street	Alexandria	2015	Not Applicable	Operating	Operating	854m	South	1

Waste Management Facilities Data Source: Australian Government Geoscience Australia

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Current EPA Licensed Activities

Waterloo Precinct, Waterloo, NSW 2017



EPA Activities

Waterloo Precinct, Waterloo, NSW 2017

Licensed Activities under the POEO Act 1997

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

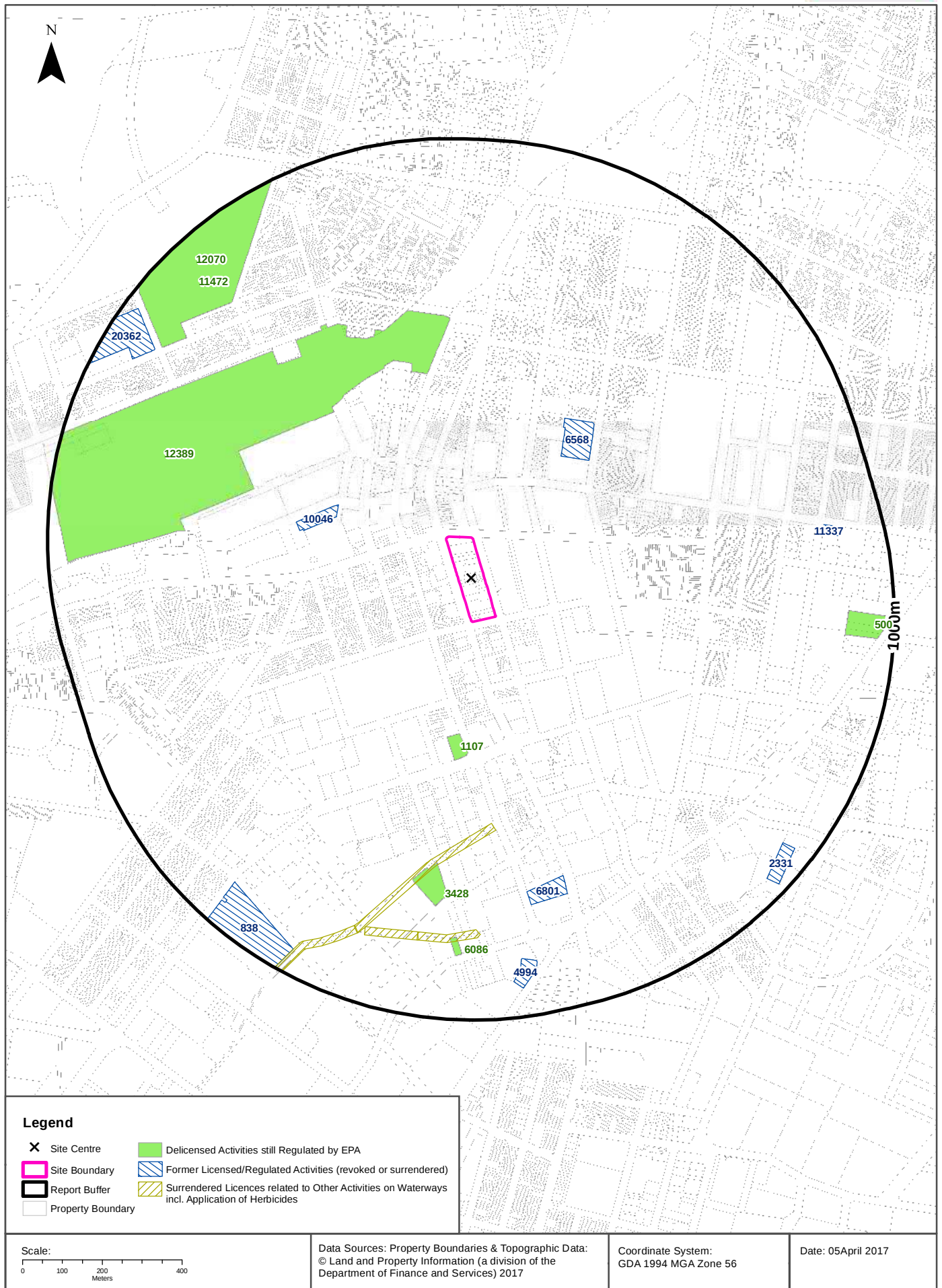
EPL	Organisation	Name	Address	Suburb	Activity	Loc Conf	Distance	Direction
12208	SYDNEY TRAINS		PO BOX K349, HAYMARKET, NSW 1238		Railway systems activities	3	131m	West

POEO Licence Data Source: Environment Protection Authority

© State of New South Wales through the Environment Protection Authority

Delicensed & Former Licensed EPA Activities

Waterloo Precinct, Waterloo, NSW 2017



EPA Activities

Waterloo Precinct, Waterloo, NSW 2017

Delicensed Activities still regulated by the EPA

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

Licence No	Organisation	Name	Address	Suburb	Activity	Loc Conf	Distance	Direction
1107	METROMIX PTY. LIMITED	ABLE ALEXANDRIA	131 WYNDHAM STREET	ALEXANDRIA	Concrete works	1	282m	South
12389	RAIL CORPORATION NEW SOUTH WALES	Xplorer Service Centre	Henderson Road (off)	EVELEIGH	Hazardous, Industrial or Group A Waste Generation or Storage	1	414m	North West
3428	CONCRITE PTY LTD	CONCRITE PTY LIMITED	25 MANDIBLE STREET	ALEXANDRIA	Concrete works	1	611m	South
6086	AUSTRALIAN METAL CO PTY LTD	AUSTRALIAN METAL CO PTY LTD	15 BOURKE ROAD	ALEXANDRIA	Hazardous, Industrial or Group A Waste Generation or Storage	1	791m	South
12070	THE UNIVERSITY OF SYDNEY	The University of Sydney	Camperdown & Darlington Campuses	SYDNEY UNIVERSITY	Hazardous, Industrial or Group A Waste Generation or Storage	1	801m	North West
500	LAWRENCE DRY CLEANERS PTY LTD	LAWRENCE DRY CLEANERS	887 BOURKE STREET	WATERLOO	Hazardous, Industrial or Group A Waste Generation or Storage	1	876m	East
11472	INTEC LTD	INTEC LTD	Room 427, Building J01, Maze Crescent, the University of Sydney	DARLINGTON	Hazardous, Industrial or Group A Waste Generation or Storage	1	878m	North West

Delicensed Activities Data Source: Environment Protection Authority
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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 report buffer:

Licence No	Organisation	Location	Status	Issued Date	Activity	Loc Conf	Distance	Direction
10046	JOHNSON & JOHNSON RESEARCH PTY LTD	1 CENTRAL AVENUE, EVELEIGH, NSW 1430	Surrendered	25/11/1999	Hazardous, Industrial or Group A Waste Generation or Storage	1	281m	West
6568	SYDNEY SOUTH WEST AREA HEALTH SERVICE	150 PITT ST, REDFERN, NSW 2016	Surrendered	04/08/2000	Hazardous, Industrial or Group A Waste Generation or Storage	1	303m	North East
6630	SYDNEY WEED & PEST MANAGEMENT PTY LTD	WATERWAYS THROUGHOUT NSW - PROSPECT, NSW, 2148	Surrendered		Other Activities / Non Scheduled Activity - Application of Herbicides	7	508m	-
4653	LUHRMANN ENVIRONMENT MANAGEMENT PTY LTD	WATERWAYS THROUGHOUT NSW	Surrendered		Other Activities / Non Scheduled Activity - Application of Herbicides	7	508m	-
4838	Robert Orchard	Various Waterways throughout New South Wales - SYDNEY NSW 2000	Surrendered		Other Activities / Non Scheduled Activity - Application of Herbicides	7	508m	-
6801	LEGRAND AUSTRALIA PTY LTD	298 BOTANY ROAD, ALEXANDRIA, NSW 2015	Surrendered	23/03/2000	Hazardous, Industrial or Group A Waste Generation or Storage	1	671m	South
11337	DAVID GRAPHICS PTY LIMITED	165 Phillip Street, WATERLOO, NSW 2017	Surrendered	31/01/2001	Hazardous, Industrial or Group A Waste Generation or Storage	1	846m	East

Licence No	Organisation	Location	Status	Issued Date	Activity	Loc Conf	Distance	Direction
4994	CARDINAL GROUP PTY LTD	3-7 O'RIORDAN ST, ALEXANDRIA, NSW 2015	Revoked	02/05/2000	Waste storage - other types of waste; Non-thermal treatment of general waste	1	854m	South
20362	JOHN HOLLAND PTY LTD	University of Sydney Darlington Campus, Corner Codrington and Abercrombie Streets, DARLINGTON	Surrendered	20/01/2014	Land-based extractive activity	1	872m	North West
838	CSR VIRIDIAN LIMITED	8-40 EUSTON ROAD, ALEXANDRIA, NSW 2015	Surrendered	20/06/2001	Glass production (float), Ceramic waste generation	1	884m	South West
2331	EMWEST PRODUCTS PTY LIMITED	JOYNTON AVE, WATERLOO, NSW 2017	Surrendered	24/03/2000	Hazardous, Industrial or Group A Waste Generation or Storage	1	917m	South East

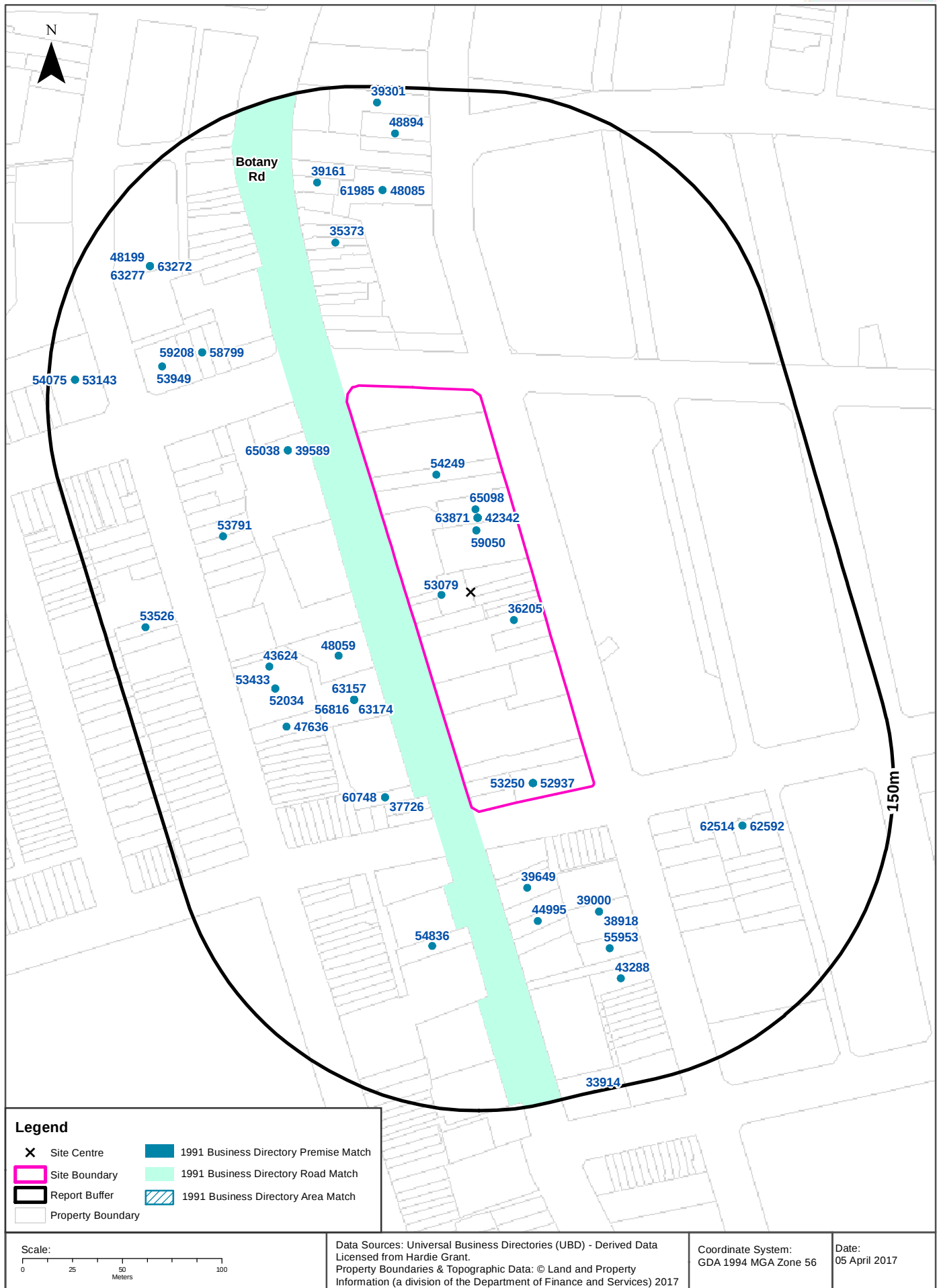
Former Licensed Activities Data Source: Environment Protection Authority
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Scale: 0 100 200 400 Meters	UPSS Data Source: Environment Protection Authority © Dept of Environment, Climate Change & Water (NSW)	Coordinate System: GDA 1994 MGA Zone 56	Date: 05April 2017
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1991 Historical Business Directory Records

Waterloo Precinct, Waterloo, NSW 2017



Historical Business Directories

Waterloo Precinct, Waterloo, NSW 2017

1991 Business to Business Directory Records

Records from the 1991 UBD Business to Business Directory within 150m of the site:

Business Activity	Organisation	Address	Ref No.	Location Confidence	Distance	Direction
Printers Lithographic (Offset)	Bragg Edgar & Sons Pty. Ltd	130 Cope St Waterloo 2017	59050	Premise Match	0m	Onsite
Bookbinders &/or Paper Rulers	Bragg, Edgar & Sons Ply. Liii.,	130 Cope St. Waterloo. 2017.	36411	Premise Match	0m	Onsite
Motor Engineers	Chris & Con Motor Repairs	85 Botany Rd Waterloo 2017	53079	Premise Match	0m	Onsite
Typesetters	Adcraft Graphic Design Pty Ltd	126 Cope St Waterloo 2017	65098	Premise Match	0m	Onsite
Boat, Launch &/or Yacht Equipment	Basham, R. W. Pty. Ltd.	146 Cope St., Waterloo. 2017	36205	Premise Match	0m	Onsite
Motor Panel Beaters &/or Spray Painters	Car Builders Pty Ltd	65 Botany Rd Waterloo 2017	54249	Premise Match	0m	Onsite
Toilet Paper Mfrs &/or Dists	Daines Harry Pty Ltd	128 Cope St Walarloo 2017	64450	Premise Match	0m	Onsite
Store &/or Packing Room Equipment Mfrs &/or Dists	Daines Harry Pty Ltd	128 Cope St Walarloo 2017	63620	Premise Match	0m	Onsite
Packaging Materials Mfrs &/or Dists	Daines Harry Pty. Ltd	128 Cope St Waterloo 2017	56359	Premise Match	0m	Onsite
Tape Adhesive Mfrs &/or Imps &/or Dists	Daines, Harry Pty Ltd	128 Cope St Walarloo 2017	63871	Premise Match	0m	Onsite
Electric Tools Mfrs &/or Dists	Daines, Harry Pty. Ltd.	128 Copa St., Waterloo. 2017	42342	Premise Match	0m	Onsite
Paper Products Disposable Mfrs &/or Dists	Daines, Harry Pty. Ltd.	128 Cope St Waterloo 2017	56788	Premise Match	0m	Onsite
Abrasive Merchants	Dalnes, harry Pty. Ltd.	128 Cope St., Waterloo 2017	33306	Premise Match	0m	Onsite
Packaging Services	Harry Daines Pty Ltd	128 Cope St Waterloo 2017	56468	Premise Match	0m	Onsite
Motor Brake Specialists	Joseph Bros Pty Ltd	129 Wellington St Waterloo 2017	52279	Premise Match	0m	Onsite
Motor Clutch Specialists	Joseph Bros Pty Ltd	129 Wellington St Waterloo 2017	52870	Premise Match	0m	Onsite
Motor Engine Reconditioners	Joseph Bros Pty Ltd	129 Wellington St Waterloo 2017	52937	Premise Match	0m	Onsite
Motor Brake &/or Spare Parts Mfrs &/or Imps &/or W/salers	Joseph Bros Pty Ltd	129 Wellington St Waterloo 2017	52173	Premise Match	0m	Onsite
Motor Brake Lining Mfrs &/or Dists	Joseph Bros Pty Ltd	129 Wellington St., Waterloo 2017	52195	Premise Match	0m	Onsite
Motor Engineers	Joseph Bros. Pty Ltd	129 Wellington St, Waterloo 2017	53250	Premise Match	0m	Onsite
Guillotine Blade &/or Shear Mfrs &/or Dists	Stationery Wholesalers (Trading Stationery Wholesalers)	Botany Rd Alexandria 2015	48062	Road Match	0m	South
Screen Printers	Mambo Graphics Pty Ltd	62 Botany Rd Alexandria 2015	61726	Premise Match	33m	North West
TShirt Printers &/or Suppliers	Mambo Graphics Pty Ltd	62 Botany Rd Alexandria 2015	65038	Premise Match	33m	North West
Clothing Mfrs &/or W/salers Sportswear	Mambo Graphics Pty Ltd	62 Botany Rd, Alexandria 2015	39589	Premise Match	33m	North West
Business Agents &/or Brokers	Silver & Co	128 Botany Rd, Alexandria 2015	37726	Premise Match	38m	South West
Real Estate Agents	Silver & Co	128 Botany Rd., Alexandria. 2015	60748	Premise Match	38m	South West
Stapling Tacking &/or Wire Stitching Machine Mfrs &/or Dists	Stationery Wholesalers	108 Botany Rd Alexandria 2015	63157	Premise Match	38m	South West
Stationers Commercial	Stationery Wholesalers	108 Botany Rd Alexandria 2015	63174	Premise Match	38m	South West
Stationers Manufacturing	Stationery Wholesalers	108 Botany Rd Alexandria 2015	63217	Premise Match	38m	South West

Business Activity	Organisation	Address	Ref No.	Location Confidence	Distance	Direction
Paper Shredders & Guillotines Mfrs &/or Imps &/or Dists	Stationery Wholesalers	108 Botany Rd Alexandria 2015	56816	Premise Match	38m	South West
StationersWholesale	Stationery Wholesalers	108 Botany Rd Alexandria 2015	63284	Premise Match	38m	South West
Furniture Mfrs &/or W/salers Office	Stationery Wholesalers	108 Botany Rd Alexandria 2015	47256	Premise Match	38m	South West
Shop &/or Office Fittings Mfrs &/or Dists	Stationery Wholesalers	108 Botany Rs Alexandria 2015	62424	Premise Match	38m	South West
Office Equipment &/or Supplies Mfrs &/or Imps &/or W/salers	Stationery Wholesalers	108Botany Rd Alexandria 2015	56014	Premise Match	38m	South West
Guillotine Blade &/or Shear Mfrs &/or Dists	Dudley Trading Company	102 Botany Rd Alexandria 2015	48059	Premise Match	39m	South West
Clothing Presser For Trade	Danny Pressing Service	125 Botany Rd, Waterloo. 2017	39649	Premise Match	41m	South
Engineers Supplies	Winnick Machines Pty Ltd	133 Botany Rd Waterloo 2017	44995	Premise Match	58m	South
Chemists Industrial	McLean, A. R. & Co Pty. Ltd.	180 Cope St. Waterloo 2017	39000	Premise Match	60m	South
Chemical Mfrs &/or Imps &/or Dists	McLean, A. R. & Co. Pty. Ltd	180 Cope St., Waterloo. 2017.	38918	Premise Match	60m	South
Motor Panel Beaters &/or Spray Painters	Summer Motors	144 Botany Rd Alexandria 2015	54836	Premise Match	69m	South
Bakers	Vicki's Hot Bread	33 Botany Rd, Alexandria 2015	35373	Premise Match	71m	North
Printers General	Lindwall & Ward Pty. Ltd.	5 Henderson Rd Alexandria 2015	58799	Premise Match	74m	North West
Printers Lithographic (Offset)	Lindwall & Ward Pty. Ltd.,	5 Henderson Rd., Alexandria. 2015.	59208	Premise Match	74m	North West
Engineers Electrical	Hodgson L Lee	84 Wyndham St Alexandria 2015	43624	Premise Match	74m	West
Signs General	Han Ho Signs & Interiors	116 Wellington St Waterloo 2017	62514	Premise Match	75m	South East
Signs Neon &/or Illuminated	Health Signs	116 Wellington St Waterloo 2017	62592	Premise Match	75m	South East
Gift Shop Supplies Mfrs &/or W/salers	Martinvale Pty Ltd	98 Wyndham St Alexandria 2015	47636	Premise Match	75m	South West
Motor Accessories Mfrs &/or Imps &/or W/salers	Mercury Mufflers (NSW) Pty Ltd	86 Wyndham St., Alexandria 2015	52034	Premise Match	75m	South West
Motor Exhaust Systems &/or Mufflers Mfrs &/or Dists &/or Fitters	Mercury Mufflers Pty Ltd	86 Wyndham St Alexandria 2015	53433	Premise Match	75m	South West
Motor Garages & Service Stations	Quel-A-Drive Pty. Ltd.	68 Wyndham St. Alexandria	53791	Premise Match	77m	West
Office Equipment &/or Supplies Mfrs &/or Imps &/or W/salers	Aztec Office Systems Pty Ltd	184 Cope St Waterloo 2017	55953	Premise Match	79m	South
Motor Garages & Service Stations	Tony's Service Station	11 Henderson Rd., Alexandria	53949	Premise Match	92m	North West
Engine Reconditioners	New Process Engine Reconditioning	186 Cope St Waterloo 2017	43288	Premise Match	95m	South
Haberdashery Wholesale	Bowner Robert C. Pty. Ltd.	86 Cope St Redfern 2016	48085	Premise Match	96m	North
Sewing Cotton, Silk &/or Thread Mfrs &/or Dists	Sewing Thread Specialist Pty Ltd	86 Cope St redfern 2016	61985	Premise Match	96m	North
Cleanser &/or Cleaning Preparations Mfrs &/or Dists	Soap Collection, The,	23 Botany Rd., Alexandria. 2015	39161	Premise Match	102m	North
StationersWholesale	Letts of London Pty Ltd	NBL Distribution Centre 34 Wyndham St Alexandria 2015	63272	Premise Match	116m	North West
StationersWholesale	Norman Baker & Longhurst Pty Ltd	34 Wyndham St Alexandria 2015	63277	Premise Match	116m	North West
Hardware Mfrs &/or Dists &/or W/salers	Norman Baker & Longhurst Pty. Ltd.	34 Wyndham St Alexandria 2015	48199	Premise Match	116m	North West
Importers	Academy Import Export	82 Cope St Redfern 2016	48894	Premise Match	125m	North
Motor Garages & Service Stations	Autohaus Strecker	75 Wyndham St, Alexandria 2015	53526	Premise Match	128m	West
Motor Engineers	East Star Motors Pty Ltd	43 Wyndham St Alexandria 2015	53143	Premise Match	135m	North West
Motor Panel Beaters &/or Painters Supplies	East Star Motors Pty Ltd	43 Wyndham St., Alexandria	54075	Premise Match	135m	North West
Clothing Mfrs &/or W/salers General	Vinh Hung Clothing Manufacturer	80A Cope St., Redfern. 2016.	39301	Premise Match	140m	North

Business Activity	Organisation	Address	Ref No.	Location Confidence	Distance	Direction
Air Conditioning Industrial, Commercial &/or Domestic Specialists	Carrera Refrigeration & Air Conditioning Pty. Ltd.	161 Botany Rd., Waterloo 2017	33914	Premise Match	149m	South

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

1991 Business Directory Motor Garages & Service Stations

Motor Garages & Service Stations from the 1991 UBD Business Directory within 1km of the site:

Business Activity	Organisation	Address	Ref No.	Location Confidence	Distance	Direction
Motor Garages & Service Stations	Quel-A-Drive Pty. Ltd.	68 Wyndham St. Alexandria	53791	Premise Match	77m	West
Motor Garages & Service Stations	Tony's Service Station	11 Henderson Rd., Alexandria	53949	Premise Match	92m	North West
Motor Garages & Service Stations	Autohaus Strecker	75 Wyndham St, Alexandria 2015	53526	Premise Match	128m	West
Motor Garages & Service Stations	Regent Auto Repairs	156 Regent St., Redfern	53808	Premise Match	219m	North
Motor Garages & Service Stations	Redfern Service Station	131 Regent St., Redfern	53803	Premise Match	389m	North
Motor Garages & Service Stations	J.S.H. Motors	82 Henderson Rd., Alexandria. 2015	53751	Premise Match	423m	West
Motor Garages & Service Stations	Waterloo Service Station	McEvoy St., Waterloo	53985	Road Match	479m	South East
Motor Garages & Service Stations	Automotive Quick Service	230 Young St, Waterloo 2017	53527	Premise Match	747m	East
Motor Garages & Service Stations	RL Cabs Service Centre	20 O'Riordan St., Alexandria	53814	Premise Match	987m	South

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

1970 Historical Business Directory Records

Waterloo Precinct, Waterloo, NSW 2017



Historical Business Directories

Waterloo Precinct, Waterloo, NSW 2017

1970 Business Directory Records

Records from the 1970 UBD Business Directory within 150m of the site:

Business Activity	Organisation & Premise	Ref No.	Location Confidence	Distance	Direction
CLEANERS-GENERAL (C380)	Austral Window & General Cleaning Co., 87 Botany Rd.,Waterloo, 2017	281816	Premise Match	0m	Onsite
CLEANERS-INDUSTRIAL (C383)	Austral Window & General Cleaning Co., 87 Botany Rd.,Waterloo, 2017	281848	Premise Match	0m	Onsite
WINDOW CLEANERS (W230)	Austral Window & General Cleaning Co.,87 Botany Rd.,Waterloo,2017	374298	Premise Match	0m	Onsite
FORGINGS MANUFACTURERS (F507)	Bohler Steels Pty.Ltd.,146 Botany St.,Waterloo	305861	Premise Match	0m	Onsite
FOOTWEAR MFRS.-SANDALS (F480)	Verka Shot Co,87 Botany Rd,Waterloo	305417	Premise Match	0m	Onsite
FOOTWEAR MFRS.-SANDALS (F480)	Verka Shot Co,87 Botany Rd,Waterloo	305416	Premise Match	0m	Onsite
CONFECTIONERS-RETAIL (C620)	Abood, J., 81 Botany Rd., Waterloo	285350	Premise Match	0m	Onsite
PRINTERS' MACHINERY MFRS./DISTRIBUTORS (P814)	ALEX COWAN MACHINERY 128 BOTANY ST.,WATERLOO,2017	351733	Premise Match	0m	Onsite
PRINTERS' FURNISHERS (P790)	ALEX COWAN MACHINERY,128 BOTANY ST.,WATERLOO,2017	351653	Premise Match	0m	Onsite
CLOTHING MFRS. &/OR W'SALERS-SPORTSWEAR (C473)	Arkabe Pty. Ltd., 168-170 Botany St, Waterloo	283562	Premise Match	0m	Onsite
CLOTHING MFRS. &/OR W'SALERS-LADIES' SKIRTS (C453)	Arkabe Pty. Ltd., 168-170 Botany St., Waterloo	283186	Premise Match	0m	Onsite
UPHOLSTERERS-MFRG.(U060)	Artwood Furniture Pty.Ltd.,107 Botany Rd.,Waterloo	372204	Premise Match	0m	Onsite
UPHOLSTERERS (U050)	Artwood Furniture Pty.Ltd.,107 Botany Rd.,Waterloo	371997	Premise Match	0m	Onsite
FURNITURE-HOUSEHOLD-RETAILERS RETAILERS (F740)	Artwood Furniture Pty.Ltd.,107 Botany Rd.,Waterloo	309357	Premise Match	0m	Onsite
FURNITURE-LOUNGE SUITES-MFRS.&/OR W'SALERS (F755)	Artwood Furniture Pty.Ltd.,107 Botany Rd.,Waterloo	309713	Premise Match	0m	Onsite
METAL EXTRUSION TOOLING	BOHLER STEELS PTY LTD,146 BOTANY ST.,WATERLOO,2017,P.O. BOX 57,WATERLOO	329737	Premise Match	0m	Onsite
MACHINE KNIFE MFRS. (M010)	Bohler Steels Pty. Ltd.,146 Botany St.,Waterloo	323937	Premise Match	0m	Onsite
STEEL MERCHANTS-GENERAL (S694)	Bohler Steels Pty.Ltd.,146 Botany St.,Waterloo,2017.	365558	Premise Match	0m	Onsite
BOOKBINDERS (B527)	Bragg, E& Sons Pty. Ltd., 130-134 Botany St., Waterloo	268165	Premise Match	0m	Onsite
PAPER RULERS/BINDERS (P147)	Bragg,E. & Sons Pty. Ltd.,130-134 Botany St.,Waterloo	347159	Premise Match	0m	Onsite
PRINTERS-LETTERPRESS (P806)	Bragg,Edgar & Sons Pty. Ltd.,130-134 Botany St.,Waterloo	351944	Premise Match	0m	Onsite
MOTOR PAINTERS (M672)	Continental Body Repairs Pty. Ltd.,65 Botany Rd.,Waterloo	339214	Premise Match	0m	Onsite
MOTOR PANEL BEATERS (M680)	Continental Body Repairs Pty. Ltd.,65 Botany Rd.,Waterloo	339950	Premise Match	0m	Onsite
PRINTERS' FURNISHERS (P790)	Cowan Alex Machinery,128 Botany St.	351658	Premise Match	0m	Onsite
PRINTERS' MACHINERY MFRS./DISTRIBUTORS (P814)	Cowan Alex Machinery,128 Botany St.	351749	Premise Match	0m	Onsite
PRINTERS' INK MFRS./IMPORT. (P802)	Cowan Alex Machinery,128 Botany St.,Waterloo,2017.	351680	Premise Match	0m	Onsite
PRINTERS' SUPPLIES (P836)	Cowan,Aiex Machinery,128 Botany St.,Waterloo,2017.	351802	Premise Match	0m	Onsite
BOOKBINDERS (B527)	Hayles Bookbinding Service, 130-134 Botany St., Waterloo	268190	Premise Match	0m	Onsite
MILK,FRUIT JUICE BARS/CONFECTIONERS (M336)	Lang,K. & P.,101 Botany Rd.,Waterloo	330806	Premise Match	0m	Onsite
STORE & PACKING ROOM EQUIPMENT MANUFACTURERS&/OR DISTRIBUTORS (S778)	Marfleet & Weight (Sales) Pty.Ltd,55B Botany Rd,Alexandria,2015	366222	Premise Match	0m	Onsite

Business Activity	Organisation & Premise	Ref No.	Location Confidence	Distance	Direction
CHEMISTS-MANUFACTURING &/OR WHOLESALE (C284)	Sigma Pharmaceuticals Pty. Ltd., 89 Botany Rd., Waterloo	279947	Premise Match	0m	Onsite
SHEET METAL WORKERS MACHINERY-MFRS. &/OR MERCHANTS (S234)	Skinner,J. Pty. Ltd.,59-63 Botany Rd.,Waterloo	360825	Premise Match	0m	Onsite
MACHINERY DEALERS-SECOND-HAND (M030)	Skinner,J. Pty. Ltd.,59-63 Botany Rd.,Waterloo	324099	Premise Match	0m	Onsite
WOODWORKING MACHINERY DEALERS-SECOND-HAND (W440)	Skinner,J.Pty.Ltd.,59-63 Botany Rd.,Waterloo	375090	Premise Match	0m	Onsite
ELECTRIC MOTORS-DEALERS &/OR WHOLESALE (E210)	Skinner,J.Pty.Ltd.,59-63 Botany Rd.,Waterloo	294248	Premise Match	0m	Onsite
BISCUIT MFRS. &/OR DIST. (B355)	Solomon, R& Co. Pty. Ltd., 136 Botany St., Waterloo	267019	Premise Match	0m	Onsite
CONDIMENT MFRS. &/OR DIST.(C611)	Solomon, R& Co. Pty. Ltd., 136-144 Botany St., Waterloo	285347	Premise Match	0m	Onsite
GROCERS-WHOLESALE (G660)	Solomon,R. & Co. Pty. Ltd.,136-144 Botany St.,Waterloo	313232	Premise Match	0m	Onsite
MACARONI MANUFACTURERS (M005)	Solomon,R. & Co. Pty. Ltd.,136-144 Botany St.,Waterloo	323934	Premise Match	0m	Onsite
FOOD PROCESSORS/PACKERS (F430)	Solomon,R.& Co.Pty.Ltd.,136-144 Botany St.,Waterloo	305003	Premise Match	0m	Onsite
FOOD PRODUCTS MFRS. &/OR DIST. (F432)	Solomon,R.& Co.Pty.Ltd.,136-144 Botany St.,Waterloo	305089	Premise Match	0m	Onsite
ADDRESSING MACHINE IMPS &/OR DEALERS (A110)	Spicers Business Machines, Office Equipment Division, 128 BotanySt., Waterloo, 2017	259678	Premise Match	0m	Onsite
DATA PROCESSING EQUIPMENT MFRS.	Spicers Business Machines,Office Equipment Division,128 Botany St.,Waterloo,2017	287039	Premise Match	0m	Onsite
OFFICE EQUIPMENT MFRS./ DISTRIBUTORS (O 030)	Spicers Business Machines,Office Equipment Division,128 Botany St.,Waterloo,2017	344740	Premise Match	0m	Onsite
MOTOR GARAGES & ENGINEERS (M6S6)	Total Service Station,69-83 Botany Rd.WATERLOO	338763	Premise Match	0m	Onsite
IMPORTERS (I200)	British Automatic Teleric Pty. Ltd.,BotanySt.,Redfent	318123	Road Match	0m	North East
CARDBOARD BOX & CARTON MANUFACTURERS (C111)	Curtis Packaging Pty. Ltd., Botany Rd., Alexandria	277461	Road Match	0m	South
PACKAGING/PACKING SPEC. (P 004)	Curtis Packaging Pty. Ltd.,Botany Rd.,Alexandria	345728	Road Match	0m	South
TYRE DEALERS,RETREADERS & VULCANIZERS (T773)	Uniroyal Tyre Service,Botany Rd.,Alexandria	371770	Road Match	0m	South
CLUBS & SPORTING BODIES (C487)	Waterloo-Alexandria Businessmen's Club Ltd(The), Cnr 217 Botany & Wellington Sts., Waterloo	284734	Road Intersection	15m	South East
WELDING EQUIPMENT & SUPPLIES MFRS.&/OR DIST (W155)	Abel Arc Holdings Pty.Ltd.,Buckland St,Alexandria.	374084	Road Match	20m	South West
WELDING MACHINE MFRS.(W160)	Abel Arc Holdings Pty.Ltd.,Buckland St,Alexandria.	374179	Road Match	20m	South West
SPRAYING EQUIPMENT MFRS. &/OR DISTRIBUTORS (S464)	Abel Arc Industries Pty. Limited,Buckland St,Alexandria	363817	Road Match	20m	South West
ENGINEERS-ELECTRICAL (E570)	Abel Arc Industries Pty.Ltd.,Buckland St.,Alexandria	298083	Road Match	20m	South West
MIXED BUSINESSES (M408)	Raglan-Botany Street Store,125 Raglan St.,Waterloo	333657	Premise Match	21m	North
MIXED BUSINESSES (M408)	Ryan,E. C.,112 Botany St.,Waterloo	333746	Premise Match	21m	North
HOTELS-LICENSED (H690)	Abbott Hotel,47 Botany Rd.,Waterloo	317063	Premise Match	21m	North West
HOTELS-LICENSED (H690)	Cauliflower Hotel,123 Botany Rd.,Waterloo	317152	Premise Match	25m	South
BUTCHERS-RETAIL (B860)	Greenfield, Jand Son, 45 Botany Rd., Waterloo	273705	Premise Match	29m	North West
BUTCHERS-RETAIL (B860)	Mickey's Butchery, 45 Botany Rd., Waterloo	274096	Premise Match	29m	North West
BUSINESS AGENTS &/OR BROKERS (B852)	Silver & Co., 130 Botany Rd., Alexandria	272912	Premise Match	29m	South
REAL ESTATE AGENTS/VALUERS(R205)	Sliver & Co,130 Botany Rd.ALEXANDRIA	356023	Premise Match	29m	South
MIXED BUSINESSES (M408)	Dermir,H.,123 Raglan St.,Waterloo	332476	Premise Match	31m	North
CHEMISTS-PHARMACEUTICAL (C286)	Kirby, MC., 43 Botany Rd., Waterloo	280653	Premise Match	36m	North
CHEMISTS-MANUFACTURING &/OR WHOLESALE (C284)	Ethnor Pty. Ltd., 108 Botany Rd., Alexandria	279840	Premise Match	38m	South West
MERCHANTS-GENERAL (M240)	Hong Kong Mercantile Pty. Ltd.,82 Botany Rd.,Redfern	329455	Premise Match	38m	West
MOTOR SERVICE STATIONS-PETROL,OIL,Etc. (M716)	Waterloo Auto Port (Neptune),74-82 Botany Rd.ALEXANDRIA	341607	Premise Match	38m	West

Business Activity	Organisation & Premise	Ref No.	Location Confidence	Distance	Direction
PRINTERS-LETTERPRESS (P806)	Berk Printing (Sales) Pty. Ltd.,94 Botany Rd.,Alexandria.	351926	Premise Match	39m	South West
PRICE TICKETING SYSTEM MFRS. (P778)	Berk Printing Co. Pty. Ltd.,94 Botany Rd. Alexandria	351597	Premise Match	39m	South West
LABELS-GENERAL (L020)	Berk Printing Co. Pty. Ltd.,94 Botany Rd.,Alexandria	322287	Premise Match	39m	South West
BOOKBINDERS (B527)	Berk Printing Co., 94 Botany Rd., Alexandria	268160	Premise Match	39m	South West
TICKET/TAG MFRS.(T330)	Berk Printing Co.Pty.Ltd.,94 Botany Rd.,Alexandria	368572	Premise Match	39m	South West
BUILDERS' SUPPLIERS (B814)	Brentware (N.S.W.) Pty. Ltd., 86-92 Botany Rd., Waterloo	271250	Premise Match	39m	West
MOTOR PANEL BEATERS (M680)	Chapman Walter Pty. Ltd.,86-88 Botany Rd.,Alexandria	339925	Premise Match	39m	West
MOTOR RADIATOR MFRS. (M696)	Chapman,Walter Pty. Ltd.,86 Botany Rd.,Alexandria	340654	Premise Match	39m	West
MOTOR RADIATOR SPECIALISTS &/OR REPAIRERS (M700)	Chapman,Walter Pty. Ltd.,86 Botany Rd.,Alexandria	340675	Premise Match	39m	West
MOTOR BODY REPAIRS/CONVERTERS (M496)	Chapman,Walter Pty. Ltd.,86-88 Botany Rd.,Alexandria	335298	Premise Match	39m	West
MOTOR CAR RADIO SPECS. (M544)	Chapman,Walter Pty. Ltd.,86-88 Botany Rd.,Alexandria	335696	Premise Match	39m	West
MOTOR PAINTERS (M672)	Chapman. Walter Pty. Ltd.,86-88 Botany Rd.,Alexandria	339191	Premise Match	39m	West
CASTOR & WHEEL MFRS. &/OR DIST. (C180)	Ford, CAPty. Ltd., 86 Botany Rd., Waterloo	278677	Premise Match	39m	West
LEAD MERCHANTS/SUPPLIER5 (L340)	Landow Bros.,6 Henderson Rd.,Alexandria	322877	Premise Match	43m	North West
METAL MERCHANTS (M260)	Landow Bros.,6 Henderson Rd.,Alexandria	329791	Premise Match	43m	North West
SCRAP METAL MERCHANTS (S161)	Undow Bros.,6 Henderson Rd.,Alexandria	359909	Premise Match	43m	North West
BUILDERS' SUPPLIERS (B814)	Vetro Glass Co. Pty. Ltd., 62-74 Botany Rd., Alexandria	271616	Premise Match	43m	North West
SHOP/OFFICE FITTERS (S276)	Vetro Glass Co. Pty. Ltd.,62-72 Botany Rd.,Alexandria	361415	Premise Match	43m	North West
MIRROR MANUFACTURERS (M400)	Vetro Glass Co. Pty. Ltd.,627-74 Botany Rd.,Alexandria	331853	Premise Match	43m	North West
GLASS BEVELLERS/CUTTERS (G210)	Vetro Glass Co.Pty.Ltd.,62-72 Botany Rd.,Alexandria	311097	Premise Match	43m	North West
GLASS MERCHANTS (G260)	Vetro Glass Co.Pty.Ltd.,62-72 Botany Rd.,Alexandria	311244	Premise Match	43m	North West
GLAZIERS (G320)	Vetro Glass Co.Pty.Ltd.,62-72 Botany Rd.,Alexandria	311392	Premise Match	43m	North West
GLASSWARE & CRYSTALWARE IMPORTS.&/OR W'SALERS (G300)	Vetro Glass Co.Pty.Ltd.,62-74 Botany Rd.,Alexandria	311309	Premise Match	43m	North West
GLASSWARE/CRYSTALWARE MFRS. (G310)	Vetro Glass Co.Pty.Ltd.,62-74 Botany Rd.,Alexandria	311316	Premise Match	43m	North West
GLASS BRICK MFRS. &/OR DIST. (G220)	Vetro Glass'Co.Pty.Ltd.,62-72 Botany Rd.,Alexandria	311102	Premise Match	43m	North West
UPHOLSTERERS (U050)	Lock Lee & Co.,134-136 Botany Rd.,Alexandria	372074	Premise Match	44m	South
FURNITURE/CABINET MAKERS'HARDWARE MFRS.(F693)	Lock Lee & Co.,136 Botany Rd.,Alexandria	308929	Premise Match	44m	South
FURNITURE-BEDROOM-MFRS.&/OR WHOLESALERS (F700)	Lock,Lee & Co.,136 Botany Rd.,Alexandria	309001	Premise Match	44m	South
FURNITURE-OCCASIONAL-MFRS.&/OR WHOLESALERS (F765)	Lock,Lee & Co.,136 Botany Rd.,Alexandria	309830	Premise Match	44m	South
FURNITURE-OFFICE-MFRS. &/OR WHOLESALERS (F770)	Lock,Lee & Co.,136 Botany Rd.,Alexandria	309911	Premise Match	44m	South
EASTERN GOODS MERCHANTS (E035)	Lock,Lee & Co.,136 Botany Rd.,Alexandria	293321	Premise Match	44m	South
FURNITURE-GENERAL-MFRS. &/OR WHOLESALERS (F730)	Lock,Lee St Co.,136 Botany Rd.,Alexandria	309258	Premise Match	44m	South
PLAN PRINTERS (P528)	S.D.S. PRINTING PTY. LTD,176 BOTANY ST.,WATERLOO,2017	349221	Premise Match	46m	South
PLAN PRINTERS (P528)	S.D.S. Printing Pty. Ltd.,176 Botany St.,Waterloo.	349222	Premise Match	46m	South
DRAWING OFFICE SUPPLIES (D543)	S.D.S.Printing Pty.Ltd.,176 Botany St.,Waterloo	290750	Premise Match	46m	South
ENGINEERS-CONSULTING (E550)	S.D.S.Printing Pty.Ltd.,176 Botany St.,Waterloo	297851	Premise Match	46m	South
DRAUGHTSMEN (D541)	S.D.S.Printing Pty.Ltd.,176 Botany St.,Waterloo	290717	Premise Match	46m	South

Business Activity	Organisation & Premise	Ref No.	Location Confidence	Distance	Direction
BLUE PRINTERS (B442)	S.D.SPrinting Pty. Ltd., 176 Botany St., Waterloo	267384	Premise Match	46m	South
DRAUGHTSMEN (D541)	Sydney Drafting & Service Pty.Ltd.,176 Botany St.,Waterloo	290719	Premise Match	46m	South
ENGINEERS-CONSULTING (E550)	Sydney Drafting Service Pty.Ltd.,176 Botany St.,Waterloo	297864	Premise Match	46m	South
FISH MERCHANTS-RETAIL (F245)	Stans Fish Shop,39 Botany Rd.,Waterloo	303772	Premise Match	47m	North
HOTELS-LICENSED (H690)	Cricketers' Arms Hotel,56-58 Botany Rd.,Alexandria	317191	Premise Match	51m	North West
CHINA, CROCKERY, CRYSTAL,CUTLERY, EARTHENWARE, GLASSWARE & SILVERWARE DEALERS (C307)	McDonald Montgomery & Co., 120 Wellington St., Waterloo,2017	281493	Premise Match	51m	South East
CAFE EQUIPMENT & SUPPLIES (C027)	McDonald Montgomery & Co., 120 Wellington St., Waterloo,2017	275264	Premise Match	51m	South East
CHINA, & CROCKERY MFRS., IMPS.&/OR WHOLESALERS (C304)	McDonald Montgomery & Co., 120 Wellington.St., Waterloo,2017	281364	Premise Match	51m	South East
CUTLERY IMPS.&/OR W'SALERS (C789)	McDonald Montgomery & Co.,120 Wellington St.,Waterloo,2017	286715	Premise Match	51m	South East
HOSPITAL EQUIPMENT IMPORTS.&/OR DISTRIBUTORS (H590)	McDonald Montgomery & Co.,120 Wellington St.,Waterloo,2017	316751	Premise Match	51m	South East
HOSPITAL EQUIPMENT MFRS. &/OR SUPPLIERS (H600)	McDonald Montgomery & Co.,120 Wellington St.,Waterloo,2017	316810	Premise Match	51m	South East
MANCHESTER MANUFACTURERS/WHOLESALERS (M080)	McDonald Montgomery & Co.,120 Wellington St.,Waterloo,2017	324524	Premise Match	51m	South East
HOTEL/MOTEL EQUIPMENT/SUPPLIES (H680)	McDonald, Montgomery & Co.,120 Wellington St.,Waterloo,2017	317023	Premise Match	51m	South East
LINEN MFRS.,IMPORTERS &/OR WHOLESALERS (L520)	McDonald, Montgomery & Co.,120 Wellington St.,Waterloo,2017	323438	Premise Match	51m	South East
MOTEL EQUIPMENT &/OR SUPPLIES (M441)	United Linen & Crocery Pty. Ltd.,120 Wellington St.,Waterloo.	334376	Premise Match	51m	South East
FRUITERERS/GREENGROCERS (F640)	Khoury,N.M.,37 Botany Rd.,Waterloo	307325	Premise Match	53m	North
BUTCHERS-RETAIL (B860)	Phillips, AF., 54 Botany Rd., Alexandria	274330	Premise Match	56m	North West
BUTCHERS-RETAIL (B860)	Phillis, AF., 54 Botany Rd., Alexandria	274332	Premise Match	56m	North West
BUILDING ALTERATIONS & REPAIRS (B816)	Veney, GC & Sons, 138-142 Botany Rd., Alexandria	271703	Premise Match	57m	South
HOUSE MAINTENANCE SPECS. (H720)	Veney,G. C. & Sons,138-142 Botany Rd.,Alexandria	317905	Premise Match	57m	South
PLUMBERS,GASFITTERS/DRAINLAYER S(P608)	Veney,G. C. & Sons,138-142 Botany Rd.ALEXANDRIA	350823	Premise Match	57m	South
ELECTRIC TOOLS (PORTABLE) MFRS.&/OR DIST.(E275)	Black & Decker (A/asia) Pty.Ltd.,133 Botany Rd.,Waterloo.	294558	Premise Match	58m	South
CRANES.-MOBILE-PROPRIETORS &/OR HIRERS (C737)	Richards, R Pty. Ltd., 100 Botany St., Alexandria	286342	Premise Match	59m	North
CARRIERS & CARTAGE CONTRACTORS (C150)	Richards, R Pty. Ltd., 100 Botany St., Waterloo	278296	Premise Match	59m	North
EARTH-MOVING CONTRACTORS (E010)	Richards,R.Pty.Ltd.,100 Botany St.,Waterloo	293188	Premise Match	59m	North
CHEMISTS-PHARMACEUTICAL (C286)	Karrs' Pharmacy, 52 Botany Rd., Alexandria	280613	Premise Match	59m	North West
CAFES, COFFEE LOUNGES, Etc. (C030)	Canton Cafe, 35 Botany Rd., Waterloo	275425	Premise Match	60m	North
MOTOR TOWING SERVICES (M744)	A. & A. Towing Services Pty. Ltd.,142 Botany Rd.,Alex.	342378	Premise Match	63m	South
BUILDERS & CONTRACTORS (B800)	Gabney Constructions Pty. Ltd., 142 Botany Rd., Alexandria	270120	Premise Match	63m	South
MOTOR PANEL BEATERS (M680)	Alexandria Car Replacement Parts,50 Botany Rd.,Redfern	339788	Premise Match	64m	North West
PAINTERS-SPRAY (P096)	Dana Pty. Ltd.,50 Botany Rd.,Alexandria	346778	Premise Match	64m	North West
SECOND-HAND DEALERS (S179)	Parsieglo,K. H.,50 Botany Rd.,Alexandria	360224	Premise Match	64m	North West
GROCERS-RETAIL (G655)	Hudson M.,117 Wellington St.,Waterloo	312581	Premise Match	66m	South East
SANDWICH/LUNCHEON SHOPS (S065)	Hamburger Lunch,3a Henderson Rd.,Alexandria	358718	Premise Match	68m	North West
MOTOR GARAGES & ENGINEERS (M6S6)	Precision Motor Engineering Co.,144 Botany Rd.ALEXANDRIA	338444	Premise Match	70m	South
MOTOR BODY REPAIRS/CONVERTERS (M496)	Summer Motors,144 Botany Rd., Alexandria	335411	Premise Match	70m	South

Business Activity	Organisation & Premise	Ref No.	Location Confidence	Distance	Direction
MOTOR PANEL BEATERS (M680)	Summer Motors,144 Botany Rd.,Alexandria	340452	Premise Match	70m	South
MOTOR TRIMMERS (M748)	Summer Motors,144 Botany Rd.,Alexandria	342696	Premise Match	70m	South
ADVERTISING DISPLAY SPEC. (A160)	Murphy William & Son Pty. Ltd., 60 Wyndham St.,Alexandria, 2015	260179	Premise Match	75m	North West
PLASTIC FABRICATORS Cr VACUUM FORMERS (P556)	Murphy,William & Son Pty. Lid.,60 Wyndham St.,Alexandria,2015	349551	Premise Match	75m	North West
PLASTIC MFRS. &/OR MOULDERS (P580)	Murphy,William & Son Pty. Ltd.,60 Wyndham St.,Alexandria,2015	349898	Premise Match	75m	North West
PACKAGING/PACKING SPEC. (P 004)	Murphy,William & Son Pty. Ltd.,60 Wyndham St.,Alexandria,2015	345786	Premise Match	75m	North West
PLASTIC CONTAINER MFRS. &/OR DISTRIBUTORS (P549)	Murphy,William & Son Pty. Ltd.,60 Wyndham St.,Alexandria,2015	349380	Premise Match	75m	North West
PLASTIC DISPLAY UNITS (P553)	Murphy,William & Son Pty. Ltd.,60 Wyndham St.,Alexandria,2015	349473	Premise Match	75m	North West
EMBOSSSED SEALS & LABELS	ARGENT MANUFACTURING CO PTY LTD,116 Wellington ST.,WATERLOO-P.O.BOX 10-WATERLOO,2017	296764	Premise Match	75m	South East
PRINTERS-LETTERPRESS (P806)	Argent Manufacturing Co. Pty. Ltd.,116 Wellington St.,Waterloo	351894	Premise Match	75m	South East
EMBOSSING SPECIALISTS (E412)	Argent Manufacturing Co.Pty.Ltd.,116 Wellington St.,Waterloo.	296767	Premise Match	75m	South East
CARDBOARD BOX & CARTON MANUFACTURERS (C111)	Argent Manufacturing CoPty.Ltd., 116 Wellington St.,Waterloo	277445	Premise Match	75m	South East
LABELS-ADHESIVE (L015)	Stickfast Labels Pty. Ltd.,116 Wellington St.,Waterloo,2017. 8	322281	Premise Match	75m	South East
IMPORTERS (I200)	Sasot Manufacturing Co. Pty. Ltd,86 Wyndham St,Alexandria	318703	Premise Match	75m	South West
KNITTING MILLS (K095)	Scotchcraft Knitting Mills Pty. Ltd,86 Wyndham St.,AJex	322215	Premise Match	75m	South West
CLOTHING MFRS. &/OR W'SALERS-KNITTED GOODS (C443)	Scotchcraft Pty. Ltd., 86 Wyndham St., Alexandria	282689	Premise Match	75m	South West
CLOTHING MFRS. &/OR W'SALERS-LADIES' FROCKS & SUITS (C449)	Sontag, G Pty. Ltd., 86 Wyndham St., Alexandria	283121	Premise Match	75m	South West
CLOTHING MFRS. &/OR W'SALERS-KNITTED GOODS (C443)	Sontag, GPty. Ltd., 86 Wyndham St., Alexandria	282698	Premise Match	75m	South West
STEEL IMPORTERS (S679)	Bohler Steels Pty. Ltd.,146 Botany Rd.,Waterloo.	365434	Premise Match	76m	South
STEEL MERCHANTS-ALLOY/TOOLSTEEL (S685)	Bohler Steels Pty. Ltd.,146 Botany Rd.,Waterloo.	365494	Premise Match	76m	South
SANDWICH/LUNCHEON SHOPS (S065)	Freshly-Cut Sandwiches,146 Botany Rd.,Alexandria	358702	Premise Match	76m	South
SANDWICH/LUNCHEON SHOPS (S065)	Freshly-Cut Sandwiches,146 Botany Rd.,Alexandria	358703	Premise Match	76m	South
MOTOR GARAGES & ENGINEERS (M6S6)	Quiet-A-Drive Pty. Ltd.,68 Wyndham St.ALEXANDRIA	338463	Premise Match	76m	West
MOTOR GEAR SPECIALISTS (M640)	Quiet-a-Drive Pty. Ltd.,68 Wyndham St.,Alexanrdia.	338952	Premise Match	76m	West
FOOTWEAR WHOLESALEERS &/OR DISTRIBUTORS (F505)	Wieder,S.M.Pty.Ltd.,66 Wyndham St.,Alexandria	305848	Premise Match	76m	West
RADIO &/OR TELEVISION SALES & SERVICEMEN (R090)	Commodore T.V. Service Pty. Ltd.,31 Botany Rd.WATERLOO	354231	Premise Match	77m	North
MACHINERY VALUATORS (M055)	Blnskin,A. W. & Co.,5-7 Henderson Rd.,Alexandria	324375	Premise Match	77m	North West
UPHOLSTERERS (U050)	Harcraft Products,64 Wyndham St.,Alexandria	372058	Premise Match	77m	West
FURNITURE-OCCASIONAL-MFRS.&/OR WHOLESALEERS (F765)	Le-Grest & Co.,64 Wyndham St.,Alexandria	309829	Premise Match	77m	West
FURNITURE-HOUSEHOLD-RETAILERS (F740)	Le-Grest St Co.,64 Wyndham St.,Aleandria	309499	Premise Match	77m	West
LEATHER GOODS MFRS. &/OR WHOLESALEERS (L400)	Lizard & Co.,72 Wyndham St.,Alexandria	322983	Premise Match	77m	West
TRAVEL GOODS MFRS.(T650)	Lizard & Co.,72 Wyndham St.,Alexandria	371213	Premise Match	77m	West
SAMPLE CASE MANUFACTURERS/DISTRIBUTORS (S053)	Lizard & Co.,72 Wyndham St.,Alexandria	358525	Premise Match	77m	West
UPHOLSTERERS-MFRG.(U060)	Marcraft Products,64 Wyndham St.,Alexandria	372214	Premise Match	77m	West
FURNITURE-GENERAL-MFRS. &/OR WHOLESALEERS (F730)	Marcraft Products,64 Wyndham St.,Alexandria	309264	Premise Match	77m	West
FURNITURE-OCCASIONAL-MFRS.&/OR WHOLESALEERS (F765)	Marcraft Products,64 Wyndham St.,Alexandria	309833	Premise Match	77m	West

Business Activity	Organisation & Premise	Ref No.	Location Confidence	Distance	Direction
HOTELS-LICENSED (H690)	Lord Raglan Hotel,12 Henderson Rd.,Alexandria	317411	Premise Match	79m	North West
OPTICAL SUPPLIES-MFRG. &/OR WHOLESALE (O 260)	Sun-Art Pty. Ltd.,184 Botany St.,Waterloo.	345257	Premise Match	80m	South
STEEL SECTION ROLLING	STEEL & PIPE BENDERS PTY LTD,78-82 WYNDHAM ST.,ALEXANDRIA	365680	Premise Match	80m	West
PIPE BENDERS &/OR FABRICATORS (P396)	Steel & Pipe Benders Pty. Ltd.,78-82 Wyndham St.,Alex.	348970	Premise Match	80m	West
ENGINEERS-FABRICATING (E580)	Steel & Pipe Benders Pty.Ltd.,78 Wyndham St.,Alexandria.	298616	Premise Match	80m	West
TUBE BENDERS (T695)	Steel & Pipe Benders Pty.Ltd.,78-82 Windham St.,Alexandria	371422	Premise Match	80m	West
WELDERS-ELECTRIC &/OR OXY(W145)	Steel & Pipe Benders Pty.Ltd.,78-82 Wyndham St.,Alexandria	373981	Premise Match	80m	West
TAILORS-LADIES'/GENT'S (T015)	Pavlou,G.,29 Botany Rd.,Waterloo	366846	Premise Match	82m	North
BUTCHERS-RETAIL (B860)	Barrett Bros., 29a Botany Rd., Waterloo	273163	Premise Match	83m	North
BUTCHERS-RETAIL (B860)	Olympia Meat Butchery, 29a Botany Rd., Waterloo	274241	Premise Match	83m	North
BEAUTY SALONS &/OR LADIES' HAIRDRESSERS (B260)	Norlee Salon, 42 Botany Rd., Redfern	266420	Premise Match	83m	North West
PRINTERS-LETTERPRESS (P806)	Ray Printing Co.,150 Botany Rd.,Alexandria	352302	Premise Match	83m	South
PRINTERS-LITHOGRAPHIC (OFFSET) (P810)	Ray Printing Co.,150 Botany Rd.,Alexandria	352697	Premise Match	83m	South
GROCERS-RETAIL (G655)	Prince's Grocery,27 Botany Rd.,Waterloo	312909	Premise Match	89m	North
FRUITERERS/GREENGROCERS (F640)	Choy,J.,40 Botany Rd.,Alexandria	306839	Premise Match	90m	North West
FRUITERERS/GREENGROCERS (F640)	Sue Sun,40 Botany Rd.,Alexandria	307996	Premise Match	90m	North West
MOTOR ENGINEERS (M626)	Nicolosi,W.,154 Botany Rd.,Alexandria	337097	Premise Match	90m	South
MIXED BUSINESSES (M408)	Buckland-Wyndham Corner,23 Buckland St.,Alexandria	332194	Premise Match	90m	South West
MOTOR SPARE PARTS DEALERS-RETAIL (M728)	Central Service Station,11 Henderson Rd.,Alexandria	341771	Premise Match	92m	North West
MOTOR SERVICE STATIONS-PETROL,OIL,Etc. (M716)	Central Service Station,11 Henderson Rd.ALEXANDRIA	340958	Premise Match	92m	North West
MOTOR GEAR SPECIALISTS (M640)	McGuckin & Smith Pty. Ltd.,11 Henderson Rd.,Alexandria	338946	Premise Match	92m	North West
MOTOR STEERING SPECIALISTS (M736)	McGuckin & Smith Pty. Ltd.,11 Henderson Rd.,Alexandria	342332	Premise Match	92m	North West
MOTOR STEERING SPECIALISTS (M736)	Smith,Leslie J. Pty. Ltd.,11 Henderson Rd.,Alexandria	342350	Premise Match	92m	North West
MOTOR GEAR SPECIALISTS (M640)	Smith,Leslie J. Pty. Ltd.,11 Henderson Rd.,Alexandria	338953	Premise Match	92m	North West
MOTOR CARBURETTOR/TUNING SPECIALISTS (M564)	Smith,Leslie J. Pty. Ltd.,11 Henderson Rd.,Alexandria	336461	Premise Match	92m	North West
MOTOR ENGINE RECONDITIONERS (M624)	Smith,Leslie J. Pty. Ltd.,11 Henderson Rd.,Alexandria	337070	Premise Match	92m	North West
MOTOR BRAKE SERVICES (M512)	Smith,Leslie J. Pty. Ltd.,11 Henderson Rd.,Alexandria	335558	Premise Match	92m	North West
MOTOR GARAGES & ENGINEERS (M6S6)	Smith,Leslie J. Pty. Ltd.,11 Henderson Rd.ALEXANDRIA	338612	Premise Match	92m	North West
FOOTWEAR RETAILERS (F495)	Ida Shoe Store,38 Botany Rd.,Alexandria	305599	Premise Match	94m	North West
FOOTWEAR RETAILERS (F495)	Ida Shoe Store,38 Botany Rd.,Alexandria	305600	Premise Match	94m	North West
MOTOR GARAGES & ENGINEERS (M6S6)	Wyndham Service Centre,Wyndham St.ALEXANDRIA	338920	Road Match	94m	South
MOTOR SERVICE STATIONS-PETROL,OIL,Etc. (M716)	Wyndham Service Centre,Wyndham St.ALEXANDRIA	341647	Road Match	94m	South
FINANCIERS/FINANCE AGENTS (F180)	Russell Plan Pty.Ltd.(The),186 Botany St.,Waterloo	303040	Premise Match	95m	South
CASTOR DISTRIBUTORS	BRENTWARE PTY LTD,86 BOTANY ST., WATERLOO, 2017	278683	Premise Match	96m	North
FURNITURE-OFFICE-MFRS. &/OR WHOLESALE (F770)	Lee,A.P. & Sons,156 Botany Rd.,Alexandria	309909	Premise Match	96m	South
UPHOLSTERERS (U050)	Lee,A.P. & Sons,156 Botany Rd.,Alexandria	372073	Premise Match	96m	South
FURNITURE REPAIRERS/REMODELLERS (F790)	Lee,A.P.A Sons,156 Botany Rd.,Alexandria	308904	Premise Match	96m	South

Business Activity	Organisation & Premise	Ref No.	Location Confidence	Distance	Direction
FOOTWEAR RETAILERS (F495)	Ada Shoe Store,36 Botany Rd.,Alexandria	305437	Premise Match	99m	North West
MERCERS-MEN'S & BOYS' OUTFITTERS(M232)	Lang's Mercery,36 Botany Rd.,Alexandria	328990	Premise Match	99m	North West
SMALLGOODS MANUFACTURERS &/OR WHOLESALERS (S371)	Dandy Bacon & Smallgoods,Phillip St.,Redfern.	361955	Road Match	112m	East
SMALLGOODS MANUFACTURERS &/OR WHOLESALERS (S371)	Dandy Bacon & Smallgoods,Phillip St.,Redfern.	361956	Road Match	112m	East
SMALLGOODS MANUFACTURERS &/OR WHOLESALERS (S371)	N.S.W. Bacon Products Pty. Ltd.,Phillip St.,Redfern,2016.	361974	Road Match	112m	East
HAIRDRESSERS (GENT.'S) (H070)	Dean,Wal & Sons Pty. Ltd.,30 Botany Rd.,Alexandria	313813	Premise Match	113m	North West
HAIRDRESSERS' SUPPLIES (H090)	Dean,Wal & Sons Pty. Ltd.,30 Botany Rd.,Alexandria	314601	Premise Match	113m	North West
CARPET & FLOOR COVERING PLANNERS & LAYERS (C132)	Project Floor Coverings Pty. Ltd., 158 Botany Rd., Alexandria	277684	Premise Match	114m	South
CARPET & FLOOR COVERING RETAILERS &/OR SPECIALISTS(C135)	Project Floor Coverings Pty. Ltd., 158 Botany Rd.,Alexandria	277804	Premise Match	114m	South
LINOLEUMS-MANUFACTURERS &/OR WHOLESALERS (L550)	Project Floor Coverings Pty. Ltd.,158 Botany Rd,Alexandria	323716	Premise Match	114m	South
FLOOR LAYERS (F310)	Project Floor Coverings Pty.Ltd.,158 Botany Rd.,Alexandria	304082	Premise Match	114m	South
TILE MFRS.&/OR DIST.S.-FLOOR &WALL (T355)	Project Floor Coverings Pty.Ltd.,158 Botany Rd.,Alexandria	368717	Premise Match	114m	South
FLOOR COVERING-INDUSTRIAL SPECIALISTS (F307)	Project Floor Coverings Pty.Ltd.,158 Botany Rd.,Alexandria.,	304054	Premise Match	114m	South
MOTOR GARAGES & ENGINEERS (M6S6)	Alexandria Auto Port,143-159 Botany Rd.WATERLOO	337172	Premise Match	115m	South
RADIO &/OR TELEVISION SALES & SERVICEMEN (R090)	Baker,Davies & Co.,13 Botany Rd.WATERLOO	354176	Premise Match	122m	North
INTER-COMMUNICATING SYSTEMS MFRS./INSTALLERS (I610)	British Automatic Teleric Pty. Ltd.,13 BotanyRd.,Redfern	320505	Premise Match	122m	North
SANITARYWARE MANUFACTURERS &/OR DISTRIBUTORS (S080)	Graham Tiles Pty,Ltd.,150 Wyndham St.,Alexandria	359078	Premise Match	123m	South
HARDWARE DEALERS/IRONMONGERS (H230)	Graham Tiles Pty. Ltd,150 Wyndham St,Alexandria	315072	Premise Match	123m	South
BUILDERS' HARDWARE-MFRS.&/OR DISTRIBUTORS (B804)	Graham Tiles Pty. Ltd., 150 Wyndham St., Alexandria	271059	Premise Match	123m	South
BUILDERS' SUPPLIERS (B814)	Graham Tiles Pty. Ltd., 150 Wyndham St., Alexandria	271367	Premise Match	123m	South
HARDWARE MERCHANTS-WHOLESALE (H260)	Graham Tiles Pty. Ltd.,150 Wyndham St.,Alexandria	315486	Premise Match	123m	South
HOT WATER SYSTEMS-ELECTRIC MFRS.&/OR DIST.S. (H640)	Graham Tiles Pty. Ltd.,150 Wyndham St.,Alexandria	316873	Premise Match	123m	South
HOT WATER SYSTEMS-GAS-MFRS.&/OR DISTRIBUTORS (H655)	Graham Tiles Pty. Ltd.,150 Wyndham St.,Alexandria	316909	Premise Match	123m	South
HOT WATER SYSTEMS-Industrial(H660)	Graham Tiles Pty. Ltd.,150 Wyndham St.,Alexandria	316926	Premise Match	123m	South
IMPORTERS (I200)	Graham Tiles Pty. Ltd.,150 Wyndham St.,Alexandria	318339	Premise Match	123m	South
SANITARY FITTINGS & HARDWARE MFRS. &/OR DIST.S. (S068)	Graham Tiles Pty. Ltd.,150 Wyndham St.,Alexandria	359034	Premise Match	123m	South
MERCHANTS-GENERAL (M240)	Graham Tiles Pty. Ltd.,150 Wyndham St.,Alexandria	329413	Premise Match	123m	South
TILE MFRS.&/OR DIST.S.-FLOOR &WALL (T355)	Graham Tiles Pty.Ltd.,150 Wyndham St.,Alexandria	368680	Premise Match	123m	South
TILE MFRS.&/OR DIST.S.-FLOOR &WALL (T355)	Linoleum Tiles Pty.Ltd.,150 Wyndham St.,Alexandria	368697	Premise Match	123m	South
SANITARY FITTINGS & HARDWARE MFRS. &/OR DIST.S. (S068)	Zieman Parker & Graham Pty. Ltd.,150 Wyndham St.Alexandria.,	359053	Premise Match	123m	South
MANCHESTER MANUFACTURERS/WHOLESALERS (M080)	Ling,William Sydney Pty. Ltd.,82 Botany St.,Waterloo	324522	Premise Match	124m	North
IMPORTERS (I200)	Ling,William Sydney Pty. Ltd.,82 Botany St.,Waterloo	318503	Premise Match	124m	North
SANDWICH/LUNCHEON SHOPS (S065)	Pie & Sandwich Bar (The),18 Henderson Rd.,Alexandria	358864	Premise Match	124m	West
FOOTWEAR RETAILERS (F495)	Glass' Personality Shoes,22-26 Botany Rd.,Alexandria	305559	Premise Match	128m	North West
BOILER PLANT IMPS. &/OR DIST.S. (B495)	Carmichael, C& Son Pty. Ltd., 79 Wyndham St., Alexandria	267836	Premise Match	128m	West
BOILER REPAIRERS/SERVICEMEN (B505)	Carmichael, C& Son Pty. Ltd., 79 Wyndham St., Alexandria	267854	Premise Match	128m	West

Business Activity	Organisation & Premise	Ref No.	Location Confidence	Distance	Direction
BOILERMAKERS (B510)	Carmichael, C& Son Pty. Ltd., 79 Wyndham St., Alexandria	267896	Premise Match	128m	West
STEAM PLANT EQUIPMENT MFRS. &/OR DIST. (S542)	Carmichael,C. & Son Pty. Ltd.,79 Wyndham St.,Alexandria	365028	Premise Match	128m	West
STEAM PLANT INSTALLATION SPECIALISTS (S545)	Carmichael,C. & Son Pty. Ltd.,79 Wyndham St.,Alexandria	365046	Premise Match	128m	West
WELDERS-ELECTRIC &/OR OXY(W145)	Carmichael,C.& Son Pty.Ltd.,79 Wyndham St.,Alexandria	373529	Premise Match	128m	West
ENGINEERS-LAUNDRY & DRY CLEANING (E660)	Carmichael,C.& Son Pty.Ltd.,79 Wyndham St.,Alex.	300084	Premise Match	128m	West
ENGINEERS-ELECTRICAL (E570)	Carmichael,C.& Son Pty.Ltd.,79 Wyndham St.,Alexandria	298112	Premise Match	128m	West
ENGINEERS-STEAM (E760)	Carmichael,C.& Son Pty.Ltd.,79 Wyndham St.,Alexandria	300975	Premise Match	128m	West
ENGINEERS-GENERAL &/OR MFRG.&/OR MECHANICAL (E615)	Carmichael,C.A Son Pty.Ltd.,79 Wyndham St.,Alexandria	298947	Premise Match	128m	West
ELECTRICAL CONTRACTORS-LICENSED FIRMS (E305)	Carmichael,C.A Son Pty.Ltd.,79 Wyndham St.,Alexandria	294983	Premise Match	128m	West
ENGINEERS-REPETITION (E735)	slmont Metal Stamping Co.Pty.Ltd.,77 Wyndham St.,Alexandria	300890	Premise Match	128m	West
BOOT & SHOE REPAIRERS (B580)	Arlstotals, PAntoniois, 212 George St., Waterloo	268698	Premise Match	131m	North East
WINE/SPIRIT MERCHANTS-WHOLESALE (W265)	Paris & Co.Pty.Ltd.,125 Botany St.,Redfern	374709	Premise Match	132m	North
PUMP MANUFACTURERS &/OR DISTRIBUTORS (P906)	Vibroflex Pty. Ltd.,125 Botany St.,Redfern	353844	Premise Match	132m	North
BUTCHERS-RETAIL (B860)	Caldwell, L.J., 7 Botany Rd., Waterloo	273308	Premise Match	138m	North
MERCHANTS-GENERAL (M240)	Falk Stadelmann & Co. Ltd.,160-168 Botany Rd. Alexandria	329391	Premise Match	139m	South
ELECTRICAL SUPPLIES/ APPLIANCES-WHOLESALE (E330)	Falks Australia Pty.Ltd.,160 Botany Rd.,Alexandria	296009	Premise Match	139m	South
ELECTRIC SWITCH & CONTROL GEAR MFRS.&/OR DIST. (E260)	Falks Australia Pty.Ltd.,160 Botany Rd.,Alexandria	294402	Premise Match	139m	South
ELECTRIC CABLE,FLEX & WIRE MFRS.&/OR DIST.(E055)	Falks Australia Pty.Ltd.,160 Botany Rd.,Alexandria	293375	Premise Match	139m	South
ELECTRIC LIGHT FITTINGS (SHADES,STANDARD BRACKETS,ETC)MFRS.&/OR DIST. (E165)	Falks Australia Pty.Ltd.,160 Botany Rd.,Alexandria	293831	Premise Match	139m	South
ELECTRIC LIGHT GLOBE & ELEMENT MFRS.&/OR DIST.(E170)	Falks Australia Pty.Ltd.,160 Botany Rd.,Alexandria	293902	Premise Match	139m	South
ELECTRIC LIGHTING SPECIALISTS-INSTALLERS &/OR DESIGNERS(E180)	Falks Australia Pty.Ltd.,160 Botany Rd.,Alexandria	293958	Premise Match	139m	South
FLUORESCENT LIGHTING SPEC. (F370)	Falks Australia Pty.Ltd.,160 Botany Rd.,Alexandria	304626	Premise Match	139m	South
FURNITURE-OCCASIONAL-MFRS.&/OR WHOLESALE (F765)	Seymour,F.& Sons Pty.Ltd.,80 Botany St.,Waterloo	309846	Premise Match	141m	North
FURNITURE-GENERAL-MFRS. &/OR WHOLESALE (F730)	Kafka,Paul Exclusive Furniture Pty.Ltd.,161 Botany Rd.,Waterloo	309248	Premise Match	144m	South
MEAT CANNERS (M180)	Barnes,J. Pty. Ltd.,117-123 Botany St.,Waterloo	325906	Premise Match	148m	North
MEAT EXTRACT MFRS. (M192)	Barnes,J. Pty. Ltd.,117-123 Botany St.,Waterloo	325969	Premise Match	148m	North
OILS-LINSEED-MFRS. (O 190)	Barnes,J. Pty. Ltd.,117-123 Botany St.,Waterloo	345146	Premise Match	148m	North
STOCK FOODS MANUFACTURERS&/OR DISTRIBUTORS (S757)	Barnes,James Pty.Ltd.,117-123 Botany St.,Waterloo	365861	Premise Match	148m	North

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

1970 Business Directory Drycleaners & Service Stations

Drycleaners, Motor Garages & Service Stations from the 1970 UBD Business Directory within 1km of the site:

Business Activity	Organisation & Premise	Ref No.	Location Confidence	Distance	Direction
MOTOR GARAGES & ENGINEERS (M6S6)	Total Service Station,69-83 Botany Rd.WATERLOO	338763	Building Match	0m	Onsite

Business Activity	Organisation & Premise	Ref No.	Location Confidence	Distance	Direction
MOTOR SERVICE STATIONS-PETROL,OIL,Etc. (M716)	Waterloo Auto Port (Neptune),74-82 Botany Rd.ALEXANDRIA	341607	Building Match	38m	West
MOTOR GARAGES & ENGINEERS (M6S6)	Precision Motor Engineering Co.,144 Botany Rd.ALEXANDRIA	338444	Building Match	70m	South
MOTOR GARAGES & ENGINEERS (M6S6)	Quiet-A-Drive Pty. Ltd.,68 Wyndham St.ALEXANDRIA	338463	Building Match	76m	West
MOTOR SERVICE STATIONS-PETROL,OIL,Etc. (M716)	Central Service Station,11 Henderson Rd.ALEXANDRIA	340958	Building Match	92m	North West
MOTOR GARAGES & ENGINEERS (M6S6)	Smith,Leslie J. Pty. Ltd.,11 Henderson Rd.ALEXANDRIA	338612	Building Match	92m	North West
MOTOR GARAGES & ENGINEERS (M6S6)	Wyndham Service Centre,Wyndham St.ALEXANDRIA	338920	Road Match	94m	South
MOTOR SERVICE STATIONS-PETROL,OIL,Etc. (M716)	Wyndham Service Centre,Wyndham St.ALEXANDRIA	341647	Road Match	94m	South
MOTOR GARAGES & ENGINEERS (M6S6)	Alexandria Auto Port,143-159 Botany Rd.WATERLOO	337172	Building Match	115m	South
MOTOR GARAGES & ENGINEERS (M6S6)	Hawxwell & Jones Pty. Ltd.,165 Botany Rd.WATERLOO	337997	Building Match	154m	South
MOTOR GARAGES & ENGINEERS (M6S6)	Esso Service Station,10 Botany Rd.ALEXANDRIA	337748	Building Match	158m	North West
MOTOR SERVICE STATIONS-PETROL,OIL,Etc. (M716)	Esso Servicenter,10 Botany Rd.REDFERN	341055	Building Match	158m	North West
MOTOR GARAGES & ENGINEERS (M6S6)	MacKenzie & Adams Pty. Ltd.,Cnr. Garden St. & Henderson Rd.ALEXANDRIA	338182	Road Intersection	187m	West
MOTOR GARAGES & ENGINEERS (M6S6)	Whittingham,Alex & Sons Pty. Ltd.,40 Henderson Rd.ALEXANDRIA	338884	Building Match	202m	West
MOTOR SERVICE STATIONS-PETROL,OIL,Etc. (M716)	Whittingham,Alex & Sons Pty. Ltd.,40 Henderson Rd.ALEXANDRIA	341629	Building Match	202m	West
MOTOR GARAGES & ENGINEERS (M6S6)	Town Auto Repairs,60 Botany St.REDFERN	338784	Building Match	221m	North
DRY CLEANERS,PRESSERS/DYERS (D710)	Palms Dry Cleaners (The,130 Regent St.,Redfern	292440	Building Match	274m	North
MOTOR GARAGES & ENGINEERS (M6S6)	McEvoy Street Auto Port,McEvoy St.WATERLOO	338231	Road Match	323m	South East
MOTOR GARAGES & ENGINEERS (M6S6)	Renault (Aust.) Pty. Ltd.,153 George St.REDFERN	338500	Building Match	328m	North East
MOTOR SERVICE STATIONS-PETROL,OIL,Etc. (M716)	BP Everleigh Service Station,118 Regent St.REDFERN	340874	Building Match	336m	North
MOTOR SERVICE STATIONS-PETROL,OIL,Etc. (M716)	McEvoy Street Auto Port,cnr. McEvoy & George Sts.	341321	Road Intersection	345m	South East
DRY CLEANING MACHINERY & SUPPLIES-MFRS.&/OR DIST.(D720)	Bryce,R.& Co.Ltd.,183 Botany Rd.,Waterloo	292586	Building Match	354m	South
DRY CLEANERS,PRESSERS/DYERS (D710)	McDermotts,134 Pitt St.,Redfern	292402	Building Match	360m	North East
MOTOR SERVICE STATIONS-PETROL,OIL,Etc. (M716)	Esso Servicenter,Mitchell Rd.ALEXANDRIA	341097	Road Match	365m	South West
MOTOR GARAGES & ENGINEERS (M6S6)	Redfern Service Station,133 Regent St.REDFERN	338488	Building Match	367m	North
DRY CLEANERS,PRESSERS/DYERS (D710)	Johnson's Dry Cleaning Service,144 Renwick St.,Redfern	292355	Building Match	375m	North
DRY CLEANERS,PRESSERS/DYERS (D710)	Personality Dry Cleaners,74 Regent St.,Redfern	292451	Building Match	447m	North
MOTOR SERVICE STATIONS-PETROL,OIL,Etc. (M716)	Regent Service Centre,Cnr. George A Redfem Sts.REDFERN	341418	Road Intersection	503m	North
MOTOR GARAGES & ENGINEERS (M6S6)	Harrison,Reg. Pty. Ltd.,44 Hlles St.ALEXANDRIA	337985	Road Match	529m	South
MOTOR SERVICE STATIONS-PETROL,OIL,Etc. (M716)	Smith,C. Service Station,George StREDFERN	341469	Road Match	539m	North
MOTOR GARAGES & ENGINEERS (M6S6)	H. & S. Auto Engineering,13 Dadley St.ALEXANDRIA	337965	Building Match	542m	West
MOTOR GARAGES & ENGINEERS (M6S6)	Waterloo Car Centre,762 Elizabeth St. & Wellington St.WATERLOO	338843	Building Match	545m	East
MOTOR GARAGES & ENGINEERS (M6S6)	Caltex Service Station,762 Elizabeth St.WATERLOO	337506	Building Match	548m	East
DRY CLEANERS,PRESSERS/DYERS (D710)	Anderson Bros.(Dry Cleaners) Pty.Ltd.,46 Regent St.(& Branch)	292178	Building Match	575m	North
DRY CLEANERS,PRESSERS/DYERS (D710)	Sunshine Home Laundry & Dry Cleaners,88 Pitt St.,Redfern	292533	Building Match	577m	North East
DRY CLEANERS,PRESSERS/DYERS (D710)	Sharp Bros.,286-288 Botany Rd.,Alexandria	292500	Building Match	621m	South
DRY CLEANERS,PRESSERS/DYERS (D710)	Dante's Dry Cleaning Service 94 Redfern St.,Redfern	292264	Building Match	633m	North East

Business Activity	Organisation & Premise	Ref No.	Location Confidence	Distance	Direction
MOTOR GARAGES & ENGINEERS (M6S6)	R.S.L. Service Station,70 George St.REDFERN	338467	Road Match	672m	North
DRY CLEANERS,PRESSERS/DYERS (D710)	Immaculate Dry Cleaning Pty.Ltd.,78 Mitchell Rd.,Alex.	292347	Building Match	677m	South West
MOTOR GARAGES & ENGINEERS (M6S6)	Waterloo Service Station,Cnr. McEvoy & Moorehead Sts.WATERLOO	338844	Road Intersection	686m	South East
MOTOR GARAGES & ENGINEERS (M6S6)	BP Waterloo Service Station,Moorehead Rd.WATERLOO	337416	Road Match	690m	East
MOTOR GARAGES & ENGINEERS (M6S6)	Smith,C. Motors,53 Pitt St.REDFERN	338611	Building Match	693m	North East
DRY CLEANING MACHINERY & SUPPLIES-MFRS.&/OR DIST.(D720)	Lilley,Robert Industries Pty.Ltd.,88 Mitchell Rd.,Alexandria	292599	Building Match	705m	South West
MOTOR GARAGES & ENGINEERS (M6S6)	Ampol Castlereagh Service Station,292 Chalmers St.REDFERN	337198	Building Match	714m	North East
MOTOR SERVICE STATIONS-PETROL,OIL,Etc. (M716)	Ampol Castlereagh Service Station,292 Chalmers St.REDFERN	340762	Building Match	714m	North East
MOTOR GARAGES & ENGINEERS (M6S6)	International Smash Repairs,2-4 Renwick St.REDFERN	338046	Building Match	717m	North
MOTOR SERVICE STATIONS-PETROL,OIL,Etc. (M716)	R.S.L. Esso Service Station,56 George St.REDFERN	341414	Road Match	730m	North
MOTOR SERVICE STATIONS-PETROL,OIL,Etc. (M716)	Golden Fleece Service Station,Bourke St.WATERLOO	341167	Road Match	737m	South East
DRY CLEANERS,PRESSERS/DYERS (D710)	Clean Overall Co.Pty.Ltd.(The),4-14 Vine St.,Redfern	292248	Building Match	787m	North
MOTOR GARAGES & ENGINEERS (M6S6)	Rizzo,A.,621 Elizabeth St.REDFERN	338517	Building Match	800m	North East
MOTOR SERVICE STATIONS-PETROL,OIL,Etc. (M716)	Evans Ampol Service Station,19 Regent St.REDFERN	341108	Building Match	801m	North
MOTOR SERVICE STATIONS-PETROL,OIL,Etc. (M716)	Erskineville Auto Port,Mitchell Rd.ERSKINEVILLE	341034	Road Match	807m	South West
MOTOR GARAGES & ENGINEERS (M6S6)	Field Mechanical Pty. Ltd.,21 Bourke Rd.,Alexandria,2015	337801	Building Match	846m	South
MOTOR SERVICE STATIONS-PETROL,OIL,Etc. (M716)	Federal Motor Service Station,1 Regent St.REDFERN	341113	Building Match	847m	North
DRY CLEANERS,PRESSERS/DYERS (D710)	Jones,David Ltd.,George St.	292356	Road Match	851m	North
MOTOR SERVICE STATIONS-PETROL,OIL,Etc. (M716)	Donikan,A. (Caltex),149 Abercrombie St.REDFERN	341011	Building Match	854m	North
MOTOR SERVICE STATIONS-PETROL,OIL,Etc. (M716)	Bosler A Sargent,Cnr. Cleveland A Regent Sts.REDFERN	340858	Road Intersection	860m	North
MOTOR SERVICE STATIONS-PETROL,OIL,Etc. (M716)	Caltex Service Station,145 Abercrombie St.CHIPPENDALE	340924	Building Match	862m	North
MOTOR GARAGES & ENGINEERS (M6S6)	Imperial Garage,153 Cleveland St.CHIPPENDALE	338042	Building Match	894m	North
MOTOR GARAGES & ENGINEERS (M6S6)	B.P. Kwinana Service Station,7-9 O'Riordan St.ALEXANDRIA	337242	Building Match	896m	South
MOTOR SERVICE STATIONS-PETROL,OIL,Etc. (M716)	Golden Grove Service Station (Shell),121-125 Cleveland St.REDFERN	341181	Building Match	929m	North
MOTOR GARAGES & ENGINEERS (M6S6)	Golden Grove Servlet Station,117 Cleveland St.CHIPPENDALE	337915	Building Match	933m	North
MOTOR GARAGES & ENGINEERS (M6S6)	Peter's Sales & Service,70 Darlington Rd.DARLINGTON	338416	Building Match	939m	North West
MOTOR SERVICE STATIONS-PETROL,OIL,Etc. (M716)	South Sydney Auto Port,589 Elizabeth St.REDFERN	341481	Building Match	942m	North East
MOTOR GARAGES & ENGINEERS (M6S6)	South Sydney Auto Port,589 Elizabeth St.REDFERN	338636	Building Match	942m	North East
MOTOR GARAGES & ENGINEERS (M6S6)	Broadway Motors (Service) Pty. Ltd.,20 O'Riordan St.ALEXANDRIA	337443	Building Match	987m	South
MOTOR GARAGES & ENGINEERS (M6S6)	Regent St. Service Station,70 Regent St.	338493	Building Match	988m	North
MOTOR SERVICE STATIONS-PETROL,OIL,Etc. (M716)	Regent Street Service Station,70 Regent St.	341419	Building Match	988m	North

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

1950 Historical Business Directory Records

Waterloo Precinct, Waterloo, NSW 2017



Historical Business Directories

Waterloo Precinct, Waterloo, NSW 2017

1950 Business Directory Records

Records from the 1950 UBD Business Directory within 150m of the site:

Business Activity	Organisation & Premise	Ref No.	Location Confidence	Distance	Direction
HAIRDRESSERS (GENT.'S) &/OR TOBACCONISTS	Antico, R., 93a Botany Rd., Mascot	59139	Premise Match	0m	Onsite
UPHOLSTERERS	Art Wood Furniture, 107-115 Botany Rd., Waterloo	111125	Premise Match	0m	Onsite
FURNISHINGS-SOFT-MANUFACTURERS &/OR WHOLESALERS	Hall Mark Manufacturing Co., 87 Botany Rd., Waterloo	52176	Premise Match	0m	Onsite
DOWEL MANUFACTURERS	Hallmark Manufacturing Co., 87 Botany Rd., Waterloo	33312	Premise Match	0m	Onsite
DOWEL MANUFACTURERS	Hallmark Mfg. Co., 87 Botany Rd., Waterloo	33313	Premise Match	0m	Onsite
TIMBER MERCHANTS	Hallmark Mfg. Co., 87 Botany Rd., Waterloo	78218	Premise Match	0m	Onsite
MOULDING MANUFACTURERS	Hallmark Mfg. Co., 87 Botany Rd., Waterloo	87359	Premise Match	0m	Onsite
SHEET METAL WORKERS	Hodge, Bass, 67 Botany Rd., Waterloo	101731	Premise Match	0m	Onsite
ARMATURE WINDERS	T.E.B. Auto Elect. Service, 51 Botany Rd., Waterloo	2591	Premise Match	0m	Onsite
MOTOR ELECTRICIANS	T.E.B. Auto Electrical Service, 51 Botany Rd., Waterloo	83221	Premise Match	0m	Onsite
BATTERY DISTRIBUTORS	T.E.B. Batteries, 51 Botany Rd., Waterloo	6506	Premise Match	0m	Onsite
BATTERY MANUFACTURERS	T.E.B. Batteries, 51 Botany Rd., Waterloo	6548	Premise Match	0m	Onsite
BATTERY SERVICE STATIONS	T.E.B. Batteries, 51 Botany Rd., Waterloo	6649	Premise Match	0m	Onsite
MOTOR ELECTRICIANS	Taylor, A. E., 51 Botany Rd., Waterloo	83222	Premise Match	0m	Onsite
BANKS	Union Bank of Australia Ltd, 107 Botany Rd., Waterloo (and Alexandria)	6023	Premise Match	0m	Onsite
HAIRDRESSERS (GENT.'S) &/OR TOBACCONISTS	Bryson, T. E., 101 Botany Rd., Waterloo	59252	Premise Match	0m	Onsite
BOX & CASE MERCHANTS & MANUFACTURERS	Clovely Box Factory, 69 Botany Rd., Waterloo	11032	Premise Match	0m	Onsite
MOTOR GARAGES &/OR ENGINEERS	Feneck, J., 101 Botany Rd., Waterloo	83739	Premise Match	0m	Onsite
MOTOR PAINTERS	Feneck, J., 101 Botany Rd., Waterloo	84804	Premise Match	0m	Onsite
MOTOR PANEL BEATERS	Feneck, J., 101 Botany Rd., Waterloo	85268	Premise Match	0m	Onsite
WELDERS-ELECTRIC &/OR OXY	Feneck, J., 101 Botany Rd., Waterloo	112782	Premise Match	0m	Onsite
FURNITURE MANUFACTURERS & WHOLESALERS-GENERAL	Hollitt, G. and Co., 55 Botany St., Waterloo	52759	Premise Match	0m	Onsite
PRODUCE MERCHANTS-GRAIN & SEED-RETAIL	Kennedy, T. and Son, 119 Botany Rd., Waterloo	95551	Premise Match	0m	Onsite
MODELLERS & SCULPTORS	Luchi, I., 77 Botany Rd., Waterloo	81367	Premise Match	0m	Onsite
CHURCH SUPPLIES-STATUE MANUFACTURERS	Luchi, I., 77 Botany Rd., Waterloo	22897	Premise Match	0m	Onsite
COPPERSMITHS	Martin, R. and Co., 79 Botany Rd., Waterloo	29000	Premise Match	0m	Onsite
WELDERS-ELECTRIC &/OR OXY	Martin, R. and Co., 79 Botany Rd., Waterloo	112928	Premise Match	0m	Onsite
COPPERSMITHS	Martin, Robert & Co., 79 Botany Rd., Waterloo	29001	Premise Match	0m	Onsite
SHEET METAL WORKERS	Martin, Robert and Co., 79 Botany Rd., Waterloo	101762	Premise Match	0m	Onsite
MOTOR CARBURETTOR & TUNING SPECIALISTS	McDonnell, D. Pty. Ltd., 117 Botany Rd., Waterloo	82795	Premise Match	0m	Onsite
POTATO CRISP MANUFACTURERS	Mulhall and Higgs, 87 Botany Rd., Waterloo	93612	Premise Match	0m	Onsite
FOOD PRODUCTS MANUFACTURERS	Mulhall and Higgs, 87 Botany Rd., Waterloo	46618	Premise Match	0m	Onsite

Business Activity	Organisation & Premise	Ref No.	Location Confidence	Distance	Direction
STATUETTE & MODEL MANUFACTURERS	Pizzol, V. and I., 77 Botany Rd., Waterloo	105128	Premise Match	0m	Onsite
CHURCH SUPPLIES-CATHOLIC	Pizzol, V. and I., 77, Botany Rd., Waterloo	22865	Premise Match	0m	Onsite
NEWSAGENTS	Ritchie, K., 75 Botany Rd., Waterloo	88307	Premise Match	0m	Onsite
MACHINERY DEALERS-SECONDHAND	Skinner, J., 59 Botany Rd., Waterloo	69948	Premise Match	0m	Onsite
MACHINERY MERCHANTS &/OR IMPORTERS	Skinner, J., 59-61 Botany Rd., Waterloo	70141	Premise Match	0m	Onsite
ASSOCIATIONS & SOCIETIES	South Sydney Homing Pigeon Soc, 117 Botany Rd., Waterloo	3880	Premise Match	0m	Onsite
FOOTWEAR MANUFACTURERS-BOOTS & SHOES	Taylor, C. S. (Sandals), 55 Botany Rd., Waterloo	46937	Premise Match	0m	Onsite
BOOT & SHOE REPAIRERS	Taylor, C. S., 55 Botany Rd., Waterloo	10695	Premise Match	0m	Onsite
NEWSAGENTS	Taylor, J. S., 75 Botany Rd., Waterloo	88384	Premise Match	0m	Onsite
WOODWORKERS & TURNERS	Wadds, F. P., 63 Botany Rd., Waterloo	114156	Premise Match	0m	Onsite
PICTURE THEATRES-SUBURBAN	Waterloo Plaza, 99 Botany Rd., Waterloo	92909	Premise Match	0m	Onsite
MILK BARS & CONFECTIONERS	Willcocks, E. A. and W, J., 121 Botany Rd, Waterloo	77551	Premise Match	0m	Onsite
GROCERS-RETAIL	Elliott, H., Wellington St., Waterloo	57216	Road Match	0m	East
MIXED BUSINESSES & GENERAL STORES	Glassby, E., Raglan St., Waterloo	80010	Road Match	0m	East
FOOTWEAR MANUFACTURERS-BOOTS & SHOES	Green Shoe Co (The), Wellington St., Waterloo	46787	Road Match	0m	East
GROCERS-RETAIL	Hall, E., Rag an St., Waterloo	57649	Road Match	0m	East
HOMES & INSTITUTIONS	Mt. Lachlan Aged Women's Home, Raglan St., Waterloo	62443	Road Match	0m	East
BUTCHERS-RETAIL	O'Sullivan Bros., Raglan St., Waterloo	14053	Road Match	0m	East
TAXIS	Waterloo Taxi Service, Wellington St., Waterloo	107528	Road Match	0m	East
MUSIC TEACHERS	Webber, W. H., Raglan St., Waterloo	87568	Road Match	0m	East
PRODUCE MERCHANTS-WHOLESALE	Beaconsfield Post Office, Botany Rd., Alexandria	95789	Road Match	0m	South
DRESSMAKERS & COSTUMIERS	Faunce, Mrs., Botany Rd., Alexandria	34466	Road Match	0m	South
ZINC MERCHANTS	Industrial Oxides Co., Botany Rd., Alexandria	114772	Road Match	0m	South
DELICATESSENS & SMALLGOODS DEALERS	Matha, N., Botany Rd., Alexandria	30841	Road Match	0m	South
BEAUTY SALONS &/OR LADIES' HAIRDRESSERS	Mays, Botany Rd., Alexandria	7527	Road Match	0m	South
ELECTRICAL SUPPLIES &. APPLIANCES RETAILERS	United Brass Founders, Botany Rd., Alexandria	38918	Road Match	0m	South
GASS APPLIANCES MFRS. &/OR DISTRIBUTORS	United Brass Founders, Botany Rd., Alexandria	54170	Road Match	0m	South
SAWMILLERS	Wallerawan Box Co. Pty. Ltd., 885 Botany Rd., Waterloo	100708	Road Match	0m	South
NEWSAGENTS	Welsh's, F. B., Botany Rd., Alexandria	88424	Road Match	0m	South
WOOL STORES	Wool and. General Storage, Botany Rd., Alexandria	114552	Road Match	0m	South
HOTELS-LICENSED	Cricketers Arms Hotel, Cnr. Henderson and Botany Rds., Alexandria	63007	Road Intersection	19m	North West
HOTELS-LICENSED	Abbotts Hotel, 47 Botany Rd., Waterloo	62866	Premise Match	21m	North West
HOTELS-LICENSED	Australia Hotel, 106 Botany St., Waterloo	62888	Premise Match	28m	South East
BUTCHERS-RETAIL	Greenfield, J. and Son, 45 Botany .Rd., Waterloo	13586	Premise Match	29m	North West
BUTCHERS-RETAIL	Shalvey, J. A., 45 Botany Rd., Waterloo	14296	Premise Match	29m	North West
BUTCHERS-RETAIL	Shalvey, P. L., 45 Botany Rd., Waterloo	14298	Premise Match	29m	North West
BANKS	Bank of Australasia, 132 Botany Rd, Waterloo	5602	Premise Match	29m	South
MILK BARS & CONFECTIONERS	Rankine, W., 123 Raglan St., Waterloo	77238	Premise Match	31m	North

Business Activity	Organisation & Premise	Ref No.	Location Confidence	Distance	Direction
CARRIERS & CARTAGE CONTRACTORS (MASTER)	Campbell, A. E., 66 Botany St., Waterloo	20126	Premise Match	32m	North East
DISPLAY FITTINGS MFRS. &/OR SUPPLIERS	Art Decor Studios Pty. Ltd., 62 Botany Rd., Alexandria	32996	Premise Match	35m	North West
INTERIOR DECORATORS	Art Decor Studios Pty. Ltd., 62 Botany Rd., Alexandria	65219	Premise Match	35m	North West
DISPLAY FITTINGS MFRS. &/OR SUPPLIERS	Ornament and Display Model Co., 62 Botany Rd., Alexandria	33052	Premise Match	35m	North West
CHEMISTS-PHARMACEUTICAL	Kirby, M. C., 43 Botany Rd., Waterloo	21720	Premise Match	36m	North
DRIED FRUITS MFRS. &/OR DISTRIBUTORS	Murrumbidgee Dried Fruit Sales Pty. Ltd., 66 Botany Rd., Alexandria	34903	Premise Match	36m	North West
FRUIT JUICE EXTRACT MFRS. & MERCHANTS	Healthblest Juices, 94 Botany Rd., Alexandria	49112	Premise Match	36m	South West
HANDLE MANUFACTURERS &/OR WHOLESALERS	Kay, Ray Handle Works, 96 Botany Rd., Alexandria	60794	Premise Match	36m	South West
DRY CLEANERS, PRESSERS & DYERS	Normays Dry Cleaners, 90 Botany Rd., Alexandria	35566	Premise Match	36m	West
BAKERS-BREAD	Original' Bread Roll Bakery, 68 Botany St., Waterloo	5408	Premise Match	37m	North East
FUR DRESSERS & DYERS	Australian Fur Works, 100 Botany. Rd., Waterloo	52097	Premise Match	38m	South West
CHEMISTS-PHARMACEUTICAL	Brown, H. G., 110 Botany Rd.	21353	Premise Match	38m	South West
MOTOR GARAGES &/OR ENGINEERS	Skinner, F. L. and Sons. 102 Botany Rd., Alexandria	84374	Premise Match	38m	South West
MACHINERY MERCHANTS &/OR IMPORTERS	Feneck, J., 80 Botany Rd., Alexandria	70053	Premise Match	38m	West
METAL MERCHANTS	Feneck, J., 80 Botany Rd., Alexandria	75816	Premise Match	38m	West
MACHINERY DEALERS-SECONDHAND	Feneck, J., 80 Botany Rd., Alexandria	69920	Premise Match	38m	West
SECONDHAND DEALERS	Feneck, J., 80 Botany Rd., Alexandria	101149	Premise Match	38m	West
FURNITURE MANUFACTURERS & WHOLESALERS-GENERAL	Darlington Cabinet Works, 129 Botany Rd., Waterloo	52673	Premise Match	41m	South
GROCERS-RETAIL	Shugg, F., 41 Botany Rd., Waterloo	55669	Premise Match	42m	North
FURNITURE MANUFACTURERS & WHOLESALERS-GENERAL	Lock Lee & Co., 136 Botany Rd., Alexandria	52809	Premise Match	44m	South
FURNITURE MANUFACTURERS & WHOLESALERS-GENERAL	Lock, Lee and Co., 136 Botany Rd., Alexandria	52810	Premise Match	44m	South
WOOD BOX CONTAINER MANUFACTURERS &/OR DISTRIBUTORS	Lock, Lee and Co., 136 Botany Rd., Alexandria	113982	Premise Match	44m	South
CAFES, TEA ROOMS, COFFEE LOUNGES, Etc.	Crete Seafoods, 39 Botany Rd., Waterloo	15392	Premise Match	47m	North
BOTTLE MERCHANTS & EXCHANGES	Furze E., 39 Botany Rd., Redfern	10923	Premise Match	47m	North
CAFES, TEA ROOMS, COFFEE LOUNGES, Etc.	Kanarls, G., 39 Botany Rd., Waterloo	15629	Premise Match	47m	North
MERCERS & GENT'S OUTFITTERS	Mallick, J., 37 Botany Rd., Waterloo	74507	Premise Match	53m	North
METAL MERCHANTS	Landow Bros., 6 Henderson Rd., Alexandria	75830	Premise Match	54m	North West
LEAD MERCHANTS & SUPPLIERS	Landow Bros., 6 Henderson Rd., Alexandria	67910	Premise Match	54m	North West
BUTCHERS-RETAIL	Rawling, C., 54 Botany Rd., Alexandria	14187	Premise Match	57m	North West
PIE MANUFACTURERS	"Cousin Jacks", 35 Botany Rd., Waterloo	92922	Premise Match	60m	North
LIBRARIES-LENDING	Franklin, M., 35b Botany Rd., Waterloo	68654	Premise Match	60m	North
LIBRARIES-LENDING	Lewco Library, 3S Botany Rd., Waterloo	68743	Premise Match	60m	North
SANDWICH & LUNCHEON SHOPS	Longhurst, F. J., 35a Botany Rd., Waterloo	100358	Premise Match	60m	North
LIBRARIES-LENDING	Magson, S., 35 Botany Rd., Waterloo	68791	Premise Match	60m	North
CHEMISTS-PHARMACEUTICAL	Korrs' Pharmacy, 52 Botany Rd., Alexandria	21727	Premise Match	63m	North West
PEANUT MERCHANTS & ROASTERS	Woo Ling, 142 Botany Rd., Alexandria	91453	Premise Match	63m	South
CAFES, TEA ROOMS, COFFEE LOUNGES, Etc.	Mills, L. M. and T. D., 33a Botany Rd., Waterloo	15769	Premise Match	65m	North
JUSTICES OF THE PEACE	Hayward, W., 32 Botany St., Waterloo	66693	Premise Match	66m	North

Business Activity	Organisation & Premise	Ref No.	Location Confidence	Distance	Direction
GROCERS-RETAIL	Heidtmann, G. S., 117 Wellington St., Waterloo	57722	Premise Match	66m	South East
CARAVAN BUILDERS	Murphy, J. G., 117 Wellington St., Waterloo	17662	Premise Match	66m	South East
MOTOR CYCLE SIDE CAR MANUFACTURERS	Murphy, J. G., 117 Wellington St., Waterloo	83010	Premise Match	66m	South East
MOTOR PAINTERS	Wiseman's, 117 Wellington St., Waterloo	85111	Premise Match	66m	South East
BOOT & SHOE REPAIRERS	Bussey, J. A., 3 Henderson Rd., Alexandria	10030	Premise Match	68m	North West
FOOTWEAR-RETAILERS	Bussey, J. A., 3 Henderson Rd., Alexandria	47169	Premise Match	68m	North West
CAFES, TEA ROOMS, COFFEE LOUNGES, Etc.	Mills Hamburger, 33 Botany Rd., Waterloo	15768	Premise Match	71m	North
FLORISTS-RETAIL	Munger, Miss D., 33 Botany Rd., Waterloo	46079	Premise Match	71m	North
MIXED BUSINESSES & GENERAL STORES	Meares, G., 146 Botany Rd., Alexandria	80566	Premise Match	74m	South
PRINTERS-GENERAL	Argent Manuf. Co. Pty., 116 Wellington St., Waterloo	94743	Premise Match	75m	South East
CARDBOARD BOX & CARTON MANUFACTURERS	Argent Manufacturing Co, Pty. Ltd., 116 Wellington St., Waterloo	17742	Premise Match	75m	South East
FRUITERERS & GREENGROCERS	Greek Fruit Shop, 31 Botany Rd., Waterloo	50219	Premise Match	76m	North
FURNITURE MANUFACTURERS & WHOLESALERS-GENERAL	Oxley Furniture Co., 60 Wyndham St., Alexandria	52866	Premise Match	76m	West
FURNITURE MANUFACTURERS & WHOLESALERS-GENERAL	Oxley Furniture Co., 60 Wyndham St., Alexandria	52867	Premise Match	76m	West
FURNITURE MANUFACTURERS-OCCASIONAL	Oxley Furniture Co., 60 Wyndham St., Alexandria	53056	Premise Match	76m	West
CABINETMAKERS	Oxley Furniture Co., 60 Wyndham St., Alexandria	14937	Premise Match	76m	West
OFFICE FURNITURE MANUFACTURERS	Oxley Furniture Co., 60 Wyndham St., Alexandria	89491	Premise Match	76m	West
OFFICE FURNITURE RETAILERS	Oxley Furniture Co., 60 Wyndham St., Alexandria	89521	Premise Match	76m	West
FURNITURE MANUFACTURERS & WHOLESALERS-GENERAL	Warr, P. W., 60 Wyndham St., Alexandria	52960	Premise Match	76m	West
FRUITERERS & GREENGROCERS	Markou, Conn, 5 and 31 Botany Rd., Waterloo	50649	Premise Match	77m	North
GLASS MERCHANTS	Dynon, B. Pty. Ltd., 66 Wyndham St., Alexandria	54619	Premise Match	77m	West
CAFE & HOTEL SUPPLIES & EQUIPMENT	Dynon, Basil Pty. Ltd., 66 Lyndham St., Alexandria	15055	Premise Match	77m	West
HAIRDRESSERS (GENT.'S) &/OR TOBACCONISTS	King, E. W., 148 Botany Rd., Alexandria	59660	Premise Match	78m	South
HOTELS-LICENSED	Lord Raglan Hotel, 12 Henderson Rd., Alexandria	63226	Premise Match	79m	North West
BUTCHERS-RETAIL	Barrett Bros., 29a Botany Rd., Waterloo	13126	Premise Match	83m	North
CAKE SHOPS & PASTRYCOOKS	Nicer Cakes Co., 29b Botany Rd., Waterloo	17045	Premise Match	83m	North
BEAUTY SALONS &/OR LADIES' HAIRDRESSERS	Lee, Miss Norma, 42 Botany Rd., Alexandria	7433	Premise Match	83m	North West
HAIRDRESSERS (GENT.'S) &/OR TOBACCONISTS	Lee, N., 42 Botany Rd., Alexandria	59690	Premise Match	83m	North West
MOTOR PANEL BEATERS	Holley, R., 7-9 Henderson Rd., Alexandria	85314	Premise Match	85m	North West
MOTOR PANEL BEATERS	Holley, R., 7-9 Henderson Rd., Alexandria	85315	Premise Match	85m	North West
MOTOR PAINTERS	Holley, R., 7-9 Henderson Rd., Alexandria	84855	Premise Match	85m	North West
GROCERS-RETAIL	Prince's Grocery, 27 Botany Rd, Waterloo	58778	Premise Match	90m	North
DELICATESSENS & SMALLGOODS DEALERS	Princes Store, 27 Botany Rd., Waterloo	31056	Premise Match	90m	North
OILS-LUBRICATING-MERCHANTS	Crown Lubricant and Mfg. Co., 154 Botany Rd., Alexandria	89764	Premise Match	90m	South
DISINFECTANT MANUFACTURERS & SUPPLIERS	Crown Lubricant and Mnfg. Co., 154 Botany Rd., Alexandria	32935	Premise Match	90m	South
FLY SPRAY MANUFACTURERS	Crown Lubricants Mfrg. Co., 154 Botany Rd., Alexandria	46422	Premise Match	90m	South
MOTOR OIL & GREASE MANUFACTURERS	Crown Lubricants Mnfg. Co., 154 Botany Rd., Alexandria	84631	Premise Match	90m	South

Business Activity	Organisation & Premise	Ref No.	Location Confidence	Distance	Direction
MIXED BUSINESSES & GENERAL STORES	Hirst, W., 23 Buckland St., Alexandria	80188	Premise Match	90m	South West
GROCERS-RETAIL	Hurst, W. H., 23 Buckland St., Alexandria	57841	Premise Match	90m	South West
MOTOR SERVICE STATIONS-PETROL, Etc.	Central Service Station, 11 Henderson Rd., Alexandria	85861	Premise Match	92m	North West
MOTOR GARAGES &/OR ENGINEERS	Central Service Station, 11 Henderson Rd., Alexandria	83569	Premise Match	92m	North West
CARRIERS 4 CARTAGE CONTRACTORS (MASTER)	Mayman, W. M. Transport Co., 11 Henderson Rd., Alexandria	20419	Premise Match	92m	North West
CARRIERS & CARTAGE CONTRACTORS	Mayman, W. M. Transport Co., 11 Henderson Rd., Alexandria	19326	Premise Match	92m	North West
FOOTWEAR-RETAILERS	Kacen, J. (Children's Shoes), 38 Botany Rd., Alexandria	47368	Premise Match	94m	North West
HOTELS-LICENSED	Boundary Hotel, Wyndham St., Alexandria	62926	Road Match	94m	South
CARRIERS & CARTAGE CONTRACTORS (MASTER)	Edwards, R. H., Wyndham St., Alexandria	20173	Road Match	94m	South
VALVES (STEAM, WATER, Etc.) MFRS. &/OR DISTRIBUTORS	Victor Motor Co. Ltd., Wyndham St., Alexandria	111810	Road Match	94m	South
HAIRDRESSERS (GENT'S) &/OR TOBACCONISTS	Strachan, H. Chas., 25 Botany Rd., Waterloo	60051	Premise Match	96m	North
FURNITURE MANUFACTURERS & WHOLESALE-GENERAL	Lee, A. P. and Son, 156 Botany Rd., Alexandria	52799	Premise Match	96m	South
CABINETMAKERS	Lee, A., 156 Botany Rd., Alexandria	14922	Premise Match	96m	South
PAWNBROKERS & MONEYLENDERS	Alexandria Monte de Piete, 36 Botany Rd., Alexandria	91376	Premise Match	99m	North West
PAWNBROKERS & MONEYLENDERS	Franklin, P., 36 Botany Rd., Alexandria	91395	Premise Match	99m	North West
CAKE & PASTRYCOOKS-WHOLESALE	Nash, A., 23 Botany Rd., Waterloo	16223	Premise Match	102m	North
CAKE SHOPS & PASTRYCOOKS	Nash, A., 23 Botany Rd., Waterloo	17030	Premise Match	102m	North
MOTOR ACCESSORIES-DEALER	Central Service Station (Alexandria) Pty. Ltd., Cnr. Wyndham St. and Henderson Rd., Alexandria	81533	Road Intersection	103m	North West
WINE SALOONS	Bennett, F. J., 34 Botany Rd., Alexandria	113716	Premise Match	105m	North West
WEAVERS	Rex Weaving Mill Pty. Ltd. (Rayons, Woollens, Cottons), Mill, 158 Botany Rd.,	112566	Premise Match	107m	South
CARRIERS & CARTAGE CONTRACTORS	Behn, L. M., 4 Wyndham St., Alexandria	18394	Premise Match	108m	North West
HARDWARE DEALERS &/OR IRONMONGERS	Carr, G. H., 32 Botany Rd., Alexandria	60919	Premise Match	110m	North West
DEPARTMENTAL STORES	Haslams Pty. Ltd., 13-21 Botany Rd., Waterloo	32487	Premise Match	112m	North
DRAPERS-RETAIL	Haslams Pty. Ltd., 13-21 Botany Rd., Waterloo	33711	Premise Match	112m	North
MIXED BUSINESSES & GENERAL STORES	Connors, H., Phillip St., Redfern	79651	Road Match	112m	East
CHEMICAL MANUFACTURERS	Corbett, W. H., Phillips St., Redfern	21022	Road Match	112m	East
FURNITURE MANUFACTURERS & WHOLESALE-GENERAL	Maguire, C. R. and Co., Phillip St., Waterloo	52816	Road Match	112m	East
SIGNWRITERS	Summers, E., 143-139 Botany Rd., Waterloo	102653	Premise Match	115m	South
WELDERS-ELECTRIC &/OR OXY	Summers, E., 143-159 Botany Rd., Waterloo	113100	Premise Match	115m	South
MOTOR PAINTERS	Summers, E., 143-159 Botany Rd., Waterloo	85051	Premise Match	115m	South
MOTOR PANEL BEATERS	Summers, E., 143-159 Botany Rd., Waterloo	85532	Premise Match	115m	South
MOTOR BODY BUILDERS	Summers, E., 143-159 Botany Rd., Waterloo	82197	Premise Match	115m	South
COACH & HORSE DRAWN VEHICLE BUILDERS	Summers, E., 143-159 Botany Rd., Waterloo	25499	Premise Match	115m	South
BLACKSMITHS	Summers, E., 143-159 Botany Rd., Waterloo	8371	Premise Match	115m	South
DELICATESSENS & SMALLGOODS DEALERS	Jenkins, W. M., 28 Botany Rd., Alexandria	30690	Premise Match	117m	North West
CABINETMAKERS	Hafoma Cabinet Co. Pty. Ltd., 15-19 Botany St., Waterloo	14908	Premise Match	124m	North
KITCHEN UNIT & CABINET MANUFACTURERS	Hafoma Cabinet Co., 15-19 Botany St., Waterloo	66899	Premise Match	124m	North

Business Activity	Organisation & Premise	Ref No.	Location Confidence	Distance	Direction
GROCERS-RETAIL	Tierney, P., 18 Henderson Rd., Alexandria	55924	Premise Match	124m	West
ENGINEERS-STEAM	Carmichael, C. and Son, 83 Wyndham St., Alexandria	42353	Premise Match	127m	West
BOILERMAKERS	Carmichael, L. C. and Son, 83 Wyndham St, Alexandria	9056	Premise Match	127m	West
FOOTWEAR-RETAILERS	Glass Shoes, 24 Botany Rd., Alexandria	47288	Premise Match	128m	North West
ENGINEERS-PRECISION	Jardyne, J. Pty. Ltd, 28 Wyndham St, Alexandria	41869	Premise Match	128m	North West
ENGINEERS-GENERAL &/OR MANUFACTURING &/OR MECHANICAL	Jardyne, J. Pty. Ltd., 28 Wyndham St, Alexandria	40877	Premise Match	128m	North West
DIE & PRESS TOOL MAKERS	Jardyne, J. Pty. Ltd., 28 Wyndham St., Alexandria	32710	Premise Match	128m	North West
CAN MAKING MACHINERY MANUFACTURERS	Jardyne, J. Pty. Ltd., 28 Wyndham St., Alexandria	17456	Premise Match	128m	North West
TOOL MAKERS	Jardyne, J. Pty. Ltd., 28 Wyndham St., Alexandria	109147	Premise Match	128m	North West
SHEET METAL WORKERS' MACHINERY MFRS. & MERCHANTS	Jardyne, J. Pty. Ltd., 28 Wyndham St., Alexandria	101869	Premise Match	128m	North West
HEALTH CENTRES & CLINICS	Baby Health Centre, 20 Henderson Rd., Alexandria	61923	Premise Match	130m	West
BUTCHERS-RETAIL	Caldwell, S. E., 9 Botany Rd., Waterloo	13231	Premise Match	132m	North
FURNISHINGS-SOFT-RETAILERS	Mason, H. L. and Son Pty. Ltd., 14-16 Botany St., Waterloo	52346	Premise Match	132m	North
PICTURE THEATRE EQUIPMENT & SUPPLIES	Mason, H. L. and Son Pty. Ltd., 14-16 Botany St., Waterloo	92645	Premise Match	132m	North
FURNITURE MANUFACTURERS & WHOLESALERS-GENERAL	Mason, H. L. and Son Pty. Ltd., 16 Botany St., Waterloo	52823	Premise Match	132m	North
FURNISHINGS-SOFT-MANUFACTURERS &/OR WHOLESALERS	Mason, H. L. and Sons Pty. Ltd., 14-16 Botany St., Waterloo	52192	Premise Match	132m	North
CARRIERS & CARTAGE CONTRACTORS	Burns, J., 22 Henderson Rd., Alexandria	18507	Premise Match	136m	West
FURNITURE MANUFACTURERS & WHOLESALERS-GENERAL	Kafka, P. E., 161 Botany Rd., Waterloo	52780	Premise Match	144m	South
FURNITURE MANUFACTURERS & WHOLESALERS-GENERAL	Kafka, P. E., 161 Botany Rd., Waterloo	52781	Premise Match	144m	South
STEEL TREATMENT SPECIALISTS	Barron, W. N., 22 Wyndham St., Alexandria	105308	Premise Match	145m	North West
HOTELS-LICENSED	Bow-Bells Hotel, 20 Botany Rd., Alexandria	62929	Premise Match	145m	North West
SCHOOLS & COLLEGES-GENERAL	Waterloo Tanning School, Botany St., Waterloo	100931	Premise Match	147m	South
FURNITURE MANUFACTURERS & WHOLESALERS-GENERAL	Seymour, F. B., 11 Botany St., Waterloo	52916	Premise Match	150m	North
FURNITURE MANUFACTURERS-OCCASIONAL	Seymour, F., 11 Botany St., Waterloo	53063	Premise Match	150m	North

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

1950 Business Directory Drycleaners & Service Stations

Drycleaners, Motor Garages & Service Stations from the 1950 UBD Business Directory within 1km of the site:

Activity	Organisation & Premise	Ref No.	Location Confidence	Distance	Direction
MOTOR GARAGES &/OR ENGINEERS	Feneck, J., 101 Botany Rd., Waterloo	83739	Premise Match	0m	Onsite
DRY CLEANERS, PRESSERS & DYERS	Normays Dry Cleaners, 90 Botany Rd., Alexandria	35566	Premise Match	36m	West
MOTOR GARAGES &/OR ENGINEERS	Skinner, F. L. and Sons. 102 Botany Rd., Alexandria	84374	Premise Match	38m	South West
MOTOR SERVICE STATIONS-PETROL, Etc.	Central Service Station, 11 Henderson Rd., Alexandria	85861	Premise Match	92m	North West
MOTOR GARAGES &/OR ENGINEERS	Central Service Station, 11 Henderson Rd., Alexandria	83569	Premise Match	92m	North West
MOTOR GARAGES &/OR ENGINEERS	Hawxwell and Jones Pty. Ltd., 163 Botany Rd., Waterloo	83855	Premise Match	154m	South
MOTOR SERVICE STATIONS-PETROL, Etc.	Hawxwell and Jones Pty. Ltd., 163 Botany Rd., Waterloo	86049	Premise Match	154m	South

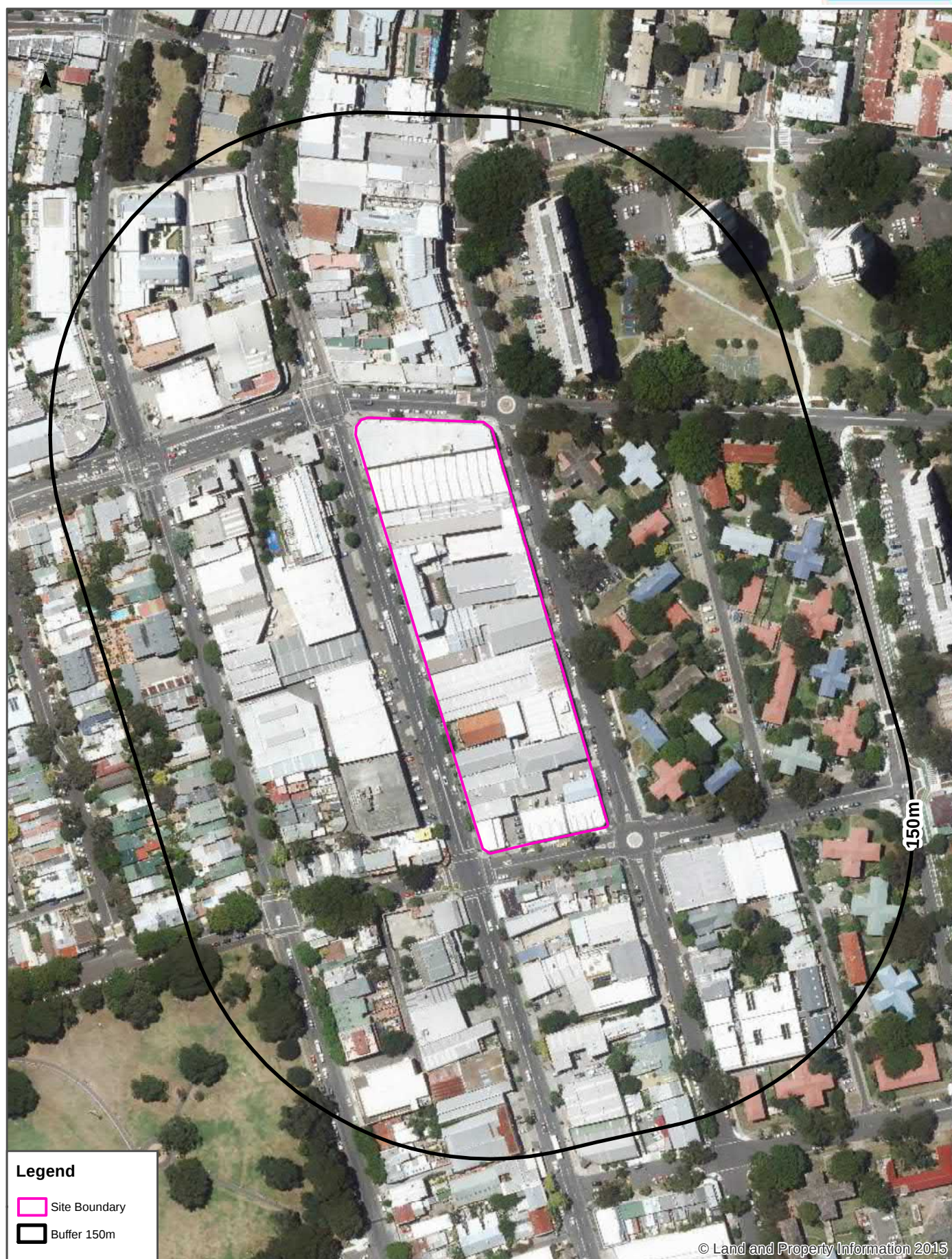
Activity	Organisation & Premise	Ref No.	Location Confidence	Distance	Direction
DRY CLEANERS, PRESSERS & DYERS	Anderson Bros. Pty. Ltd. 199 Regent St., Redfern	35078	Premise Match	177m	North
MOTOR GARAGES &/OR ENGINEERS	McKenzie and Adams, Garden St. and Henderson Rd., Alexandria	84066	Road Intersection	185m	West
MOTOR SERVICE STATIONS-PETROL, Etc.	Whittingham, A., 40 Henderson Rd., Alexandria	86526	Premise Match	202m	West
DRY CLEANERS, PRESSERS & DYERS	Tasman Dry Cleaners. 195 Regent St. Redfern	35772	Premise Match	213m	North
MOTOR GARAGES &/OR ENGINEERS	Dalton Motor Garage, 150 Regent St., Redfern	83657	Premise Match	232m	North
MOTOR GARAGES &/OR ENGINEERS	Dalton Motor Garage, 150 Regent St., Redfern	83658	Premise Match	232m	North
MOTOR SERVICE STATIONS-PETROL, Etc.	Super Service Station, 173 Botany Rd., Waterloo	86443	Road Match	264m	South
DRY CLEANERS, PRESSERS & DYERS	Jones, Dry Cleaners Pty. Ltd. 147 Regent St., Redfern	35346	Premise Match	324m	North
MOTOR GARAGES &/OR ENGINEERS	H. & S. Auto Engineers, Cnr. Botany Rd. & O'Riordan Sts., Alexandria	83832	Road Match	363m	South
MOTOR SERVICE STATIONS-PETROL, Etc.	Jones, E. H., 131 Regent St., Redfern	86093	Premise Match	388m	North
MOTOR GARAGES &/OR ENGINEERS	Redfern Service Station (Williams and Eysers), 131 Regent St., Redfern	84264	Premise Match	388m	North
MOTOR SERVICE STATIONS-PETROL, Etc.	Redfern Service Station, 131 Regent St., Redfern	86323	Premise Match	388m	North
MOTOR SERVICE STATIONS-PETROL, Etc.	Red-Fern Service Station, 131 Regent St., Redfern	86324	Premise Match	388m	North
DRY CLEANERS, PRESSERS & DYERS	Redfern Dry Cleaners, 74 Regent St., Redfern	35634	Premise Match	447m	North
DRY CLEANERS, PRESSERS & DYERS	Anderson Bros. Pty. Ltd. 46 Regent St., Redfern	35075	Premise Match	491m	North
DRY CLEANERS, PRESSERS & DYERS	Tasman Dry Cleaners. Renwick St., Redfern	35775	Road Match	491m	North
DRY CLEANERS, PRESSERS & DYERS	Tasman Dry Cleaners. 170 Redfern St., Redfern	35747	Premise Match	505m	North
DRY CLEANERS, PRESSERS & DYERS	Tasman Dry Cleaners. 38 Mitchell Rd., Alexandria	35754	Premise Match	514m	South West
MOTOR SERVICE STATIONS-PETROL, Etc.	Moir, J., 15 Dudley St., Alexandria	86216	Premise Match	547m	West
MOTOR SERVICE STATIONS-PETROL, Etc.	Redfern Motor Garage, 76 Lawson Sq., Redfern	86322	Road Match	554m	North
MOTOR GARAGES &/OR ENGINEERS	Redfern Motor Garage, 76 Lawson Sq., Redfern	84263	Road Match	554m	North
MOTOR SERVICE STATIONS-PETROL, Etc.	Adams, Williams and Co. Ltd., Fountain St., Alexandria	85737	Premise Match	561m	South West
DRY CLEANERS, PRESSERS & DYERS	Sunshine Hand Laundry and Dry Cleaner, 88 Pitt St., Redfern	35719	Premise Match	577m	North East
MOTOR GARAGES &/OR ENGINEERS	Scholtz, E. N., 231 Elizabeth St., Redfern	84347	Road Match	596m	North East
DRY CLEANERS, PRESSERS & DYERS	Sharpe Bros., 286-288 Botany Rd., Alexandria	35685	Premise Match	621m	South
DRY CLEANERS, PRESSERS & DYERS	Jones, Dry Cleaners Pty. Ltd. 90 Redfern St., Redfern	35343	Premise Match	638m	North East
MOTOR SERVICE STATIONS-PETROL, Etc.	Buckle Motors Trading Co. Pty. Ltd., 74-76 George St., Redfern	85831	Premise Match	642m	North
DRY CLEANERS, PRESSERS & DYERS	Immaculate Dry Cleaners, Redfern St. Redfern	35300	Road Match	671m	North East
DRY CLEANING MACHINERY & SUPPLIES MFRS. &/OR DISTRIBUTORS	Beaton M. G. and Co., 78 Mitchell Rd., Alexandria	35841	Premise Match	677m	South West
DRY CLEANING MACHINERY & SUPPLIES MFRS. &/OR DISTRIBUTORS	Abel Lemon and Co. Pty. Ltd., 193 Elizabeth St., Waterloo	35839	Premise Match	678m	South East
DRY CLEANERS, PRESSERS & DYERS	Ashton Dry Cleaners, 135 Abercrombie St., Redfern	35087	Premise Match	682m	North West
DRY CLEANERS, PRESSERS & DYERS	Burton, W., 88 Mitchell Rd., Alexandria	35146	Premise Match	705m	South West
MOTOR GARAGES &/OR ENGINEERS	Town Auto Repairs, 4 Renwick St., Redfern	84476	Premise Match	717m	North
DRY CLEANERS, PRESSERS & DYERS	Tasman Dry Cleaners. Castlereagh St., Redfern	35748	Road Match	774m	North East
MOTOR GARAGES &/OR ENGINEERS	Five Ways Service Station, Cnr. Botany Rd. and O'Riordan St., Alexandria	83747	Road Intersection	794m	South
MOTOR SERVICE STATIONS-PETROL, Etc.	Green Square Filling Station, Cnr. Bourke Rd. and O'Riordan St., Alexandria	86010	Road Intersection	794m	South
MOTOR GARAGES &/OR ENGINEERS	H. and S. Auto Engineering, Cnr. Botany Rd. and O'Riordan St., Alexandria	83833	Road Intersection	794m	South
MOTOR SERVICE STATIONS-PETROL, Etc.	H. and S. Auto Engineers, Cnr. Botany Rd. and O'Riordan St., Alexandria	86026	Road Intersection	794m	South

Activity	Organisation & Premise	Ref No.	Location Confidence	Distance	Direction
MOTOR SERVICE STATIONS-PETROL, Etc.	Evans, W. (B.A.P. Service Station), 19 Regent St., Redfern	85944	Premise Match	805m	North
MOTOR SERVICE STATIONS-PETROL, Etc.	Snelgrove, F. C., Green Sq., Alexandria	86402	Premise Match	809m	South
MOTOR GARAGES &/OR ENGINEERS	Truck Repairs, Lawrence St., Alexandria	84482	Road Match	822m	South West
MOTOR SERVICE STATIONS-PETROL, Etc.	Five Ways Service Station, 312 Botany Rd., Alexandria	85961	Premise Match	826m	South
MOTOR GARAGES &/OR ENGINEERS	Federal Motor Service Station, 1 Regent St., Redfern	83737	Premise Match	845m	North
MOTOR SERVICE STATIONS-PETROL, Etc.	Federal Motors Service Station, 1 Regent St., Redfern	85953	Premise Match	845m	North
MOTOR GARAGES &/OR ENGINEERS	Albania Motor Repair Coy., 17 Pitt St., Redfern	83362	Road Match	862m	North East
MOTOR GARAGES &/OR ENGINEERS	Cork, E. J., 3 O'Riordan St., Alexandria	83627	Premise Match	882m	South
MOTOR GARAGES &/OR ENGINEERS	Imperial Garage, 397 Cleveland St., Redfern	83906	Premise Match	891m	North
MOTOR GARAGES &/OR ENGINEERS	Fraser, B., 449 Cleveland St., Redfern	83769	Premise Match	935m	North
MOTOR SERVICE STATIONS-PETROL, Etc.	Golden Grove Service Station, 449 Cleveland St., Redfern	85999	Premise Match	935m	North
MOTOR GARAGES &/OR ENGINEERS	Golden Grove Station (W. G. Clarke), 449 Cleveland St., Redfern	83810	Premise Match	935m	North
MOTOR GARAGES &/OR ENGINEERS	Ferguson, W. A. and Co., 120 Abercrombie St., Chippendale	83742	Premise Match	949m	North

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

Aerial Imagery 2014

Waterloo Precinct, Waterloo, NSW 2017

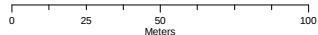


Legend

- Site Boundary
- Buffer 150m

© Land and Property Information 2015

Scale:



Data Sources: Historical Aerials: © Land and Property Information (a division of the Department of Finance and Services)

Coordinate System:
GDA 1994 MGA Zone 56

Date: 05 April, 2017

Aerial Imagery 2007

Waterloo Precinct, Waterloo, NSW 2017



150m

Legend

- Site Boundary
- Buffer 150m

Google earth
Layers > Satellite > Historical Imagery

Scale:
0 25 50 100
Meters

Data Sources: Aerial Imagery © 2017 Google Inc, used with permission. Google and the Google logo are registered trademarks of Google Inc.

Coordinate System:
GDA 1994 MGA Zone 56

Date: 05 April, 2017



Google earth

Scale: 0 25 50 100 Meters	Data Sources: Aerial Imagery © 2017 Google Inc, used with permission. Google and the Google logo are registered trademarks of Google Inc.	Coordinate System: GDA 1994 MGA Zone 56	Date: 05 April, 2017
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Legend

 Site Boundary

 Buffer 150m

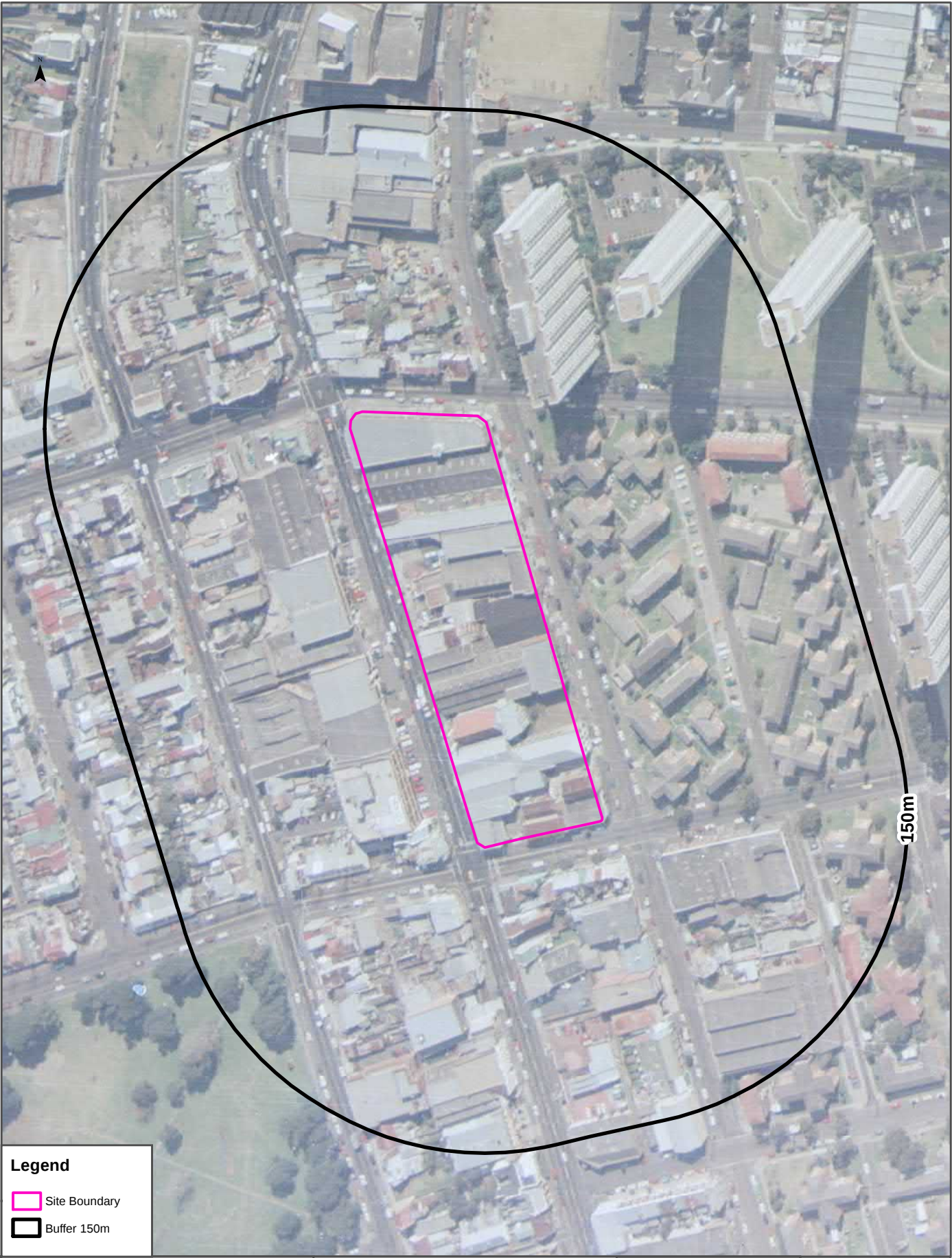


Legend

 Site Boundary

 Buffer 150m

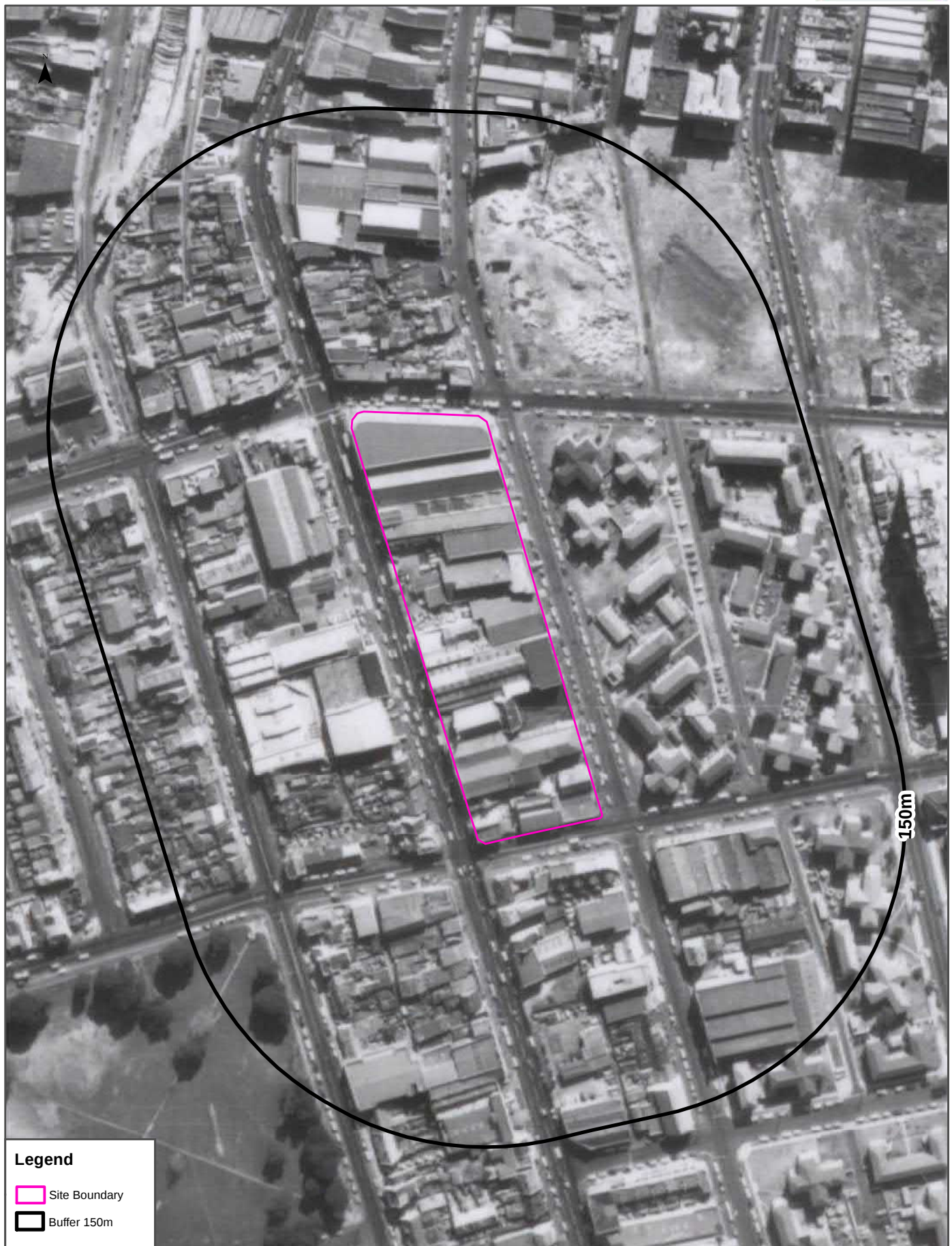
Scale: 0 25 50 100 Meters	Data Sources: Historical Aerials: © Land and Property Information (a division of the Department of Finance and Services)	Coordinate System: GDA 1994 MGA Zone 56	Date: 05 April, 2017
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Scale: 0 25 50 100 Meters	Data Sources: Historical Aerials: © Land and Property Information (a division of the Department of Finance and Services)	Coordinate System: GDA 1994 MGA Zone 56	Date: 05 April, 2017
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Aerial Imagery 1970

Waterloo Precinct, Waterloo, NSW 2017



Legend

- Site Boundary
- Buffer 150m

Scale:

0 25 50 100
Meters

Data Sources: Historical Aerials: © Land and Property Information (a division of the Department of Finance and Services)

Coordinate System:
GDA 1994 MGA Zone 56

Date: 05 April, 2017



Legend

Site Boundary

Buffer 150m

Scale: 0 25 50 100 Meters	Data Sources: Historical Aerials: © Land and Property Information (a division of the Department of Finance and Services)	Coordinate System: GDA 1994 MGA Zone 56	Date: 05 April, 2017
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Legend

- Site Boundary
- Buffer 150m

Scale:
0 25 50 100
Meters

Data Sources: Historical Aerials: © Land and Property Information (a division of the Department of Finance and Services)

Coordinate System:
GDA 1994 MGA Zone 56

Date: 05 April, 2017



Legend

 Site Boundary

 Buffer 150m

Scale:

0 25 50 100
Meters

Data Sources: Historical Aerials: © Land and Property Information (a division of the Department of Finance and Services)

Coordinate System:
GDA 1994 MGA Zone 56

Date: 05 April, 2017



Legend

 Site Boundary

 Buffer 150m

Scale:

0 25 50 100
Meters

Data Sources: Historical Aerials: © Land and Property Information (a division of the Department of Finance and Services)

Coordinate System:
GDA 1994 MGA Zone 56

Date: 05 April, 2017



Legend

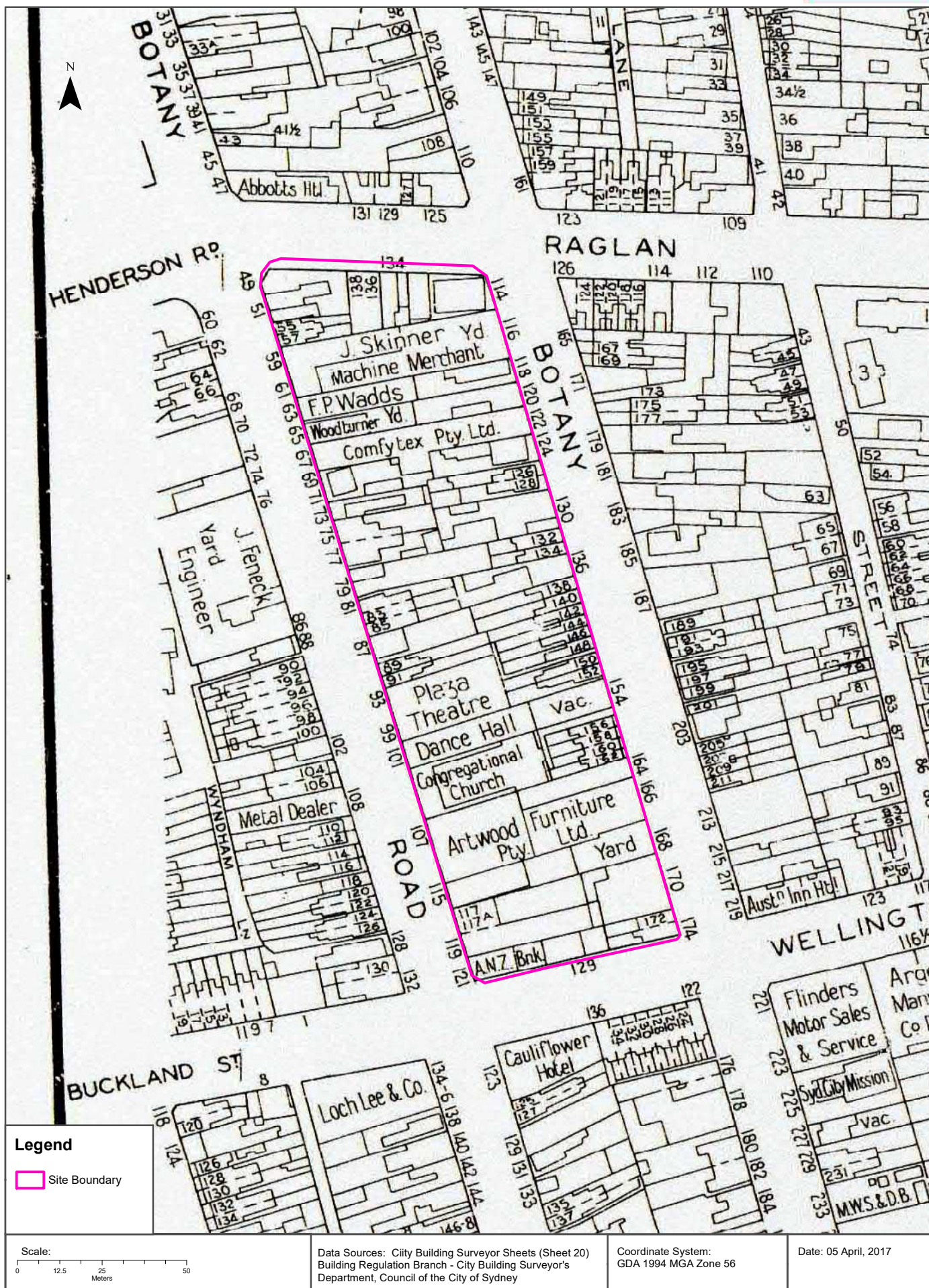
 Site Boundary

 Buffer 150m

Scale: 0 25 50 100 Meters	Data Sources: Historical Aerials: © Land and Property Information (a division of the Department of Finance and Services)	Coordinate System: GDA 1994 MGA Zone 56	Date: 05 April, 2017
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Historical Map 1956

Waterloo Precinct, Waterloo, NSW 2017



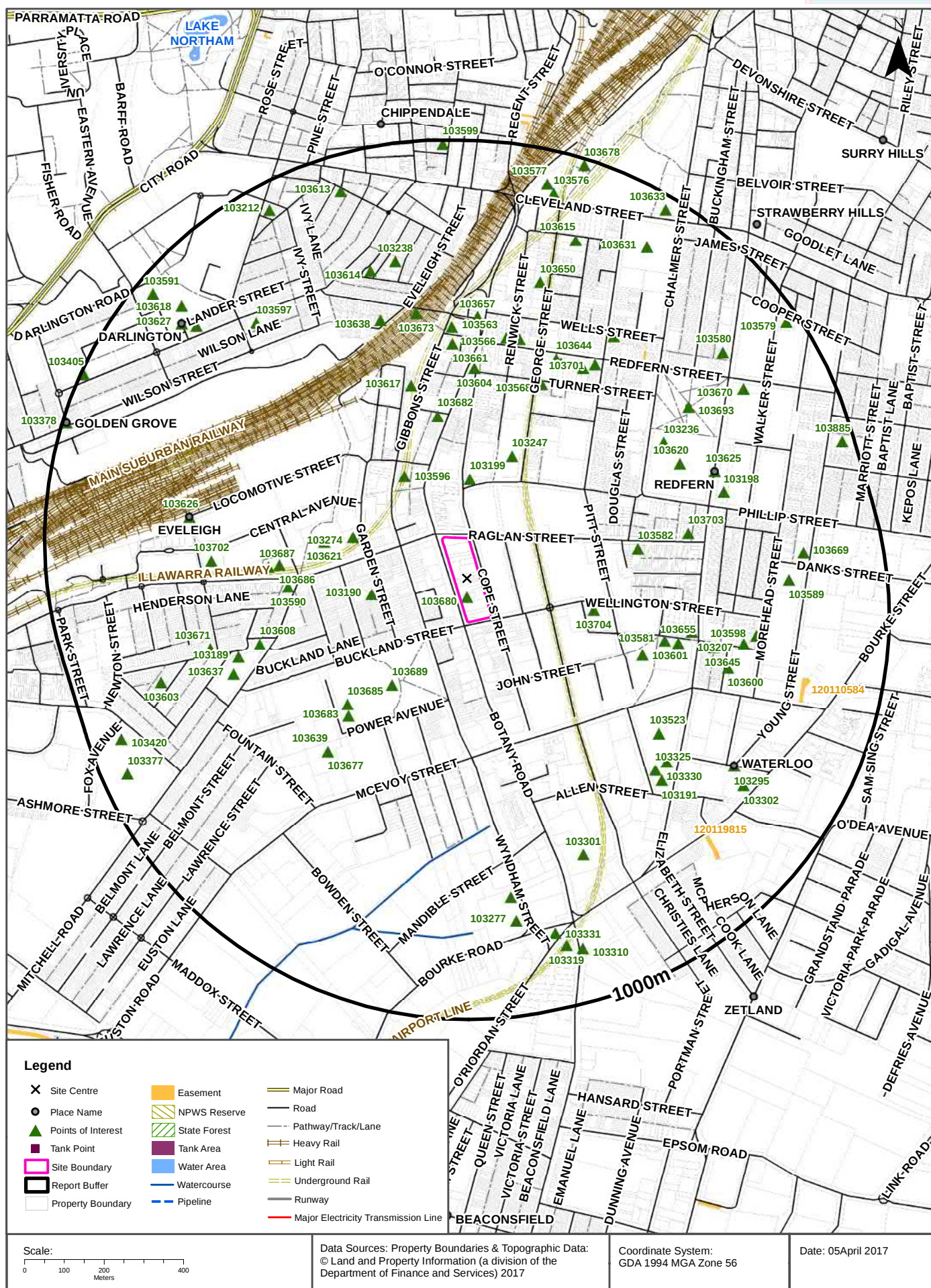
Historical Map 1951

Waterloo Precinct, Waterloo, NSW 2017



Topographic Features

Waterloo Precinct, Waterloo, NSW 2017



Topographic Features

Waterloo Precinct, Waterloo, NSW 2017

Points of Interest

What Points of Interest exist within the report buffer?

Map Id	Feature Type	Label	Distance	Direction
103680	Place Of Worship	CONGREGATIONAL CHURCH	0m	Onsite
103199	Community Facility	THE SALVATION ARMY COMMUNITY CENTRE	148m	North
103596	Park	DANIEL DAWSON RESERVE	183m	North West
103190	Community Facility	ALEXANDRIA TOWN HALL	210m	West
103274	Ambulance Station	SYDNEY AMBULANCE CONTROL CENTRE	224m	West
103247	Special School	SEDA COLLEGE	234m	North
103689	Park	ALEXANDRIA PARK	248m	South West
103704	Child Care Centre	LOIS BARKER LONG DAY CARE CENTRE	257m	East
103621	Sports Field	VICE CHANCELLORS OVAL	297m	West
103682	Place Of Worship	UNITING CHURCH	304m	North
103685	Sports Court	TENNIS COURTS	367m	South West
103683	Sports Court	BASKETBALL COURT	382m	South West
103617	Park	Park	390m	North
103601	Park	MOUNT CARMEL RESERVE	391m	South East
103582	Place Of Worship	UNITING CHURCH	401m	East
103590	Post Office	ALEXANDRIA POST OFFICE	405m	West
103686	Sports Court	TENNIS COURTS	414m	West
103604	Park	JACK FLOYD RESERVE	427m	North
103568	Fire Station	REDFERN FIRE STATION	429m	North
103581	Place Of Worship	CATHOLIC CHURCH	440m	East
103687	Sports Court	BASKETBALL COURT	442m	West
103655	Primary School	OUR LADY OF MOUNT CARMEL CATHOLIC PRIMARY SCHOOL	474m	East
103639	Primary School	ALEXANDRIA PARK COMMUNITY SCHOOL	480m	South West
103677	Medical Centre	ALEXANDRIA PARK COMMUNITY CENTRE	480m	South West
103661	Club	CLUB REDFERN	487m	North
103681	Place Of Worship	CATHOLIC CHURCH	498m	North East
103644	Primary School	REDFERN JARJUM COLLEGE	502m	North
103609	Park	TOBRUK RESERVE	505m	East
103566	Post Office	REDFERN POST OFFICE	512m	North
103523	Sports Field	WATERLOO OVAL	514m	South East
103608	Park	JACK SHUTTLEWORTHS RESERVE	515m	West
103658	Medical Centre	REDFERN COMMUNITY HEALTH CENTRE	516m	North East
103659	Court House	REDFERN COURT HOUSE	516m	North East

Map Id	Feature Type	Label	Distance	Direction
103235	Community Facility	REDFERN NEIGHBOURHOOD SERVICE CENTRE	517m	North
103563	Police Station	REDFERN POLICE STATION	529m	North
103703	Child Care Centre	WATERLOO KINDERGARTEN	533m	East
103701	Child Care Centre	REDFERN EARLY CHILDHOOD CENTRE	541m	North East
103236	Community Facility	REDFERN OVAL COMMUNITY ROOM	547m	North East
103657	Transport Interchange	REDFERN BUS INTERCHANGE	556m	North
103620	Sports Field	REDFERN OVAL	563m	North East
103645	Library	WATERLOO LIBRARY	564m	East
103325	Sports Court	BASKETBALL COURT	564m	South East
103673	Railway Station	REDFERN RAILWAY STATION	567m	North
103638	High School	KEY COLLEGE	568m	North
103330	Park	WATERLOO PARK	572m	South East
103189	Community Facility	ALEXANDRIA ACTIVITY CENTRE	575m	West
103702	Child Care Centre	ALEXANDRIA CHILD CARE CENTRE	583m	West
103191	Community Facility	SOUTH SYDNEY YOUTH SERVICES	594m	South East
103637	High School	ALEXANDRIA PARK COMMUNITY SCHOOL	600m	West
103600	Park	Park	608m	East
103202	Community Facility	REDFERN TOWN HALL	626m	North East
103207	Community Facility	GORDON IBBETT CENTRE	637m	East
103671	Retirement Village	THE ALEXANDER	637m	West
103626	Suburb	EVELEIGH	638m	West
103625	Suburb	REDFERN	641m	North East
103301	Special School	GREEN SQUARE SCHOOL	642m	South East
103693	Park	REDFERN PARK	644m	North East
103198	Community Facility	SOUTH SYDNEY PCYC	648m	East
103598	Park	JAMES HENRY DEACON	668m	East
103650	Embassy	CONSULATE OF THE PEOPLE'S REPUBLIC OF CHINA	669m	North
103614	Park	YELLOWMUNDI PARK	694m	North
103278	Fire Station	ALEXANDRIA FIRE STATION	701m	South
103238	Community Facility	REDFERN COMMUNITY CENTRE	704m	North
103597	Park	CHARLES KEENAN RESERVE	715m	North West
103295	Suburb	WATERLOO	716m	South East
103589	Place Of Worship	ASSEMBLIES OF GOD CHURCH	753m	East
103277	Academy	NSWFB STATE TRAINING COLLEGE	762m	South
103302	High School	TAYLORS COLLEGE	763m	South East
103603	Park	DIBBS STREET RESERVE	781m	West
103670	Community Home	ANNIE GREEN COURT	786m	North East
103580	Place Of Worship	CATHOLIC CHURCH	792m	North East
103615	Park	RECONCILIATION PARK	796m	North
103669	Community Home	FREDERIC HOUSE	800m	East

Map Id	Feature Type	Label	Distance	Direction
103331	Park	GREEN SQUARE	812m	South
103675	TAFE College	EORA TAFE COLLEGE	817m	North West
103319	Railway Station	GREEN SQUARE RAILWAY STATION	848m	South
103627	Suburb	DARLINGTON	849m	North West
103631	Post Office	STRAWBERRY HILLS POST BUSINESS CENTRE	859m	North East
103310	Transport Interchange	GREEN SQUARE BUS INTERCHANGE	866m	South
103618	Sports Court	TENNIS COURTS	878m	North West
103576	Education Facility	ST ANDREWS GREEK ORTHODOX THEOLOGICAL COLLEGE	893m	North
103613	Park	VINE STREET PLAYGROUND	908m	North
103577	Place Of Worship	ORTHODOX CHURCH	912m	North
103420	Park	ERSKINEVILLE PARK	919m	South West
103212	Community Facility	THE HARRY BURLAND ACTIVITY CLUB	932m	North West
103377	Sports Field	ERSKINEVILLE OVAL	936m	South West
103591	Sports Centre	UNIVERSITY OF SYDNEY SPORTS AQUATIC CENTRE	953m	North West
103633	High School	CLEVELAND STREET INTENSIVE ENGLISH HIGH SCHOOL	964m	North East
103579	Place Of Worship	ORTHODOX CHURCH	967m	North East
103885	Place Of Worship	ANGLICAN CHURCH	969m	East
103678	Club	JENSEN'S TENNIS CENTRE	983m	North
103378	Locality	GOLDEN GROVE	988m	West
103599	Park	Park	988m	North
103405	Preschool	DARLINGTON PUBLIC SCHOOL PRESCHOOL	990m	North West

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

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Topographic Features

Waterloo Precinct, Waterloo, NSW 2017

Tanks (Areas)

What are the Tank Areas located within the report buffer?

Note. The large majority of tank features provided by LPI are derived from aerial imagery & are therefore primarily above ground tanks.

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

Tanks (Points)

What are the Tank Points located within the report buffer?

Note. The large majority of tank features provided by LPI are derived from aerial imagery & are therefore primarily above ground tanks.

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

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

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Major Easements

What Major Easements exist within the report 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
120122137	Primary	Undefined		627m	North East
120119815	Primary	Undefined		775m	South East
120110584	Primary	Undefined		799m	East

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

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Topographic Features

Waterloo Precinct, Waterloo, NSW 2017

State Forest

What State Forest exist within the report buffer?

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

State Forest Data Source: © Land and Property Information (2015)

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National Parks and Wildlife Service Reserves

What NPWS Reserves exist within the report buffer?

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

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

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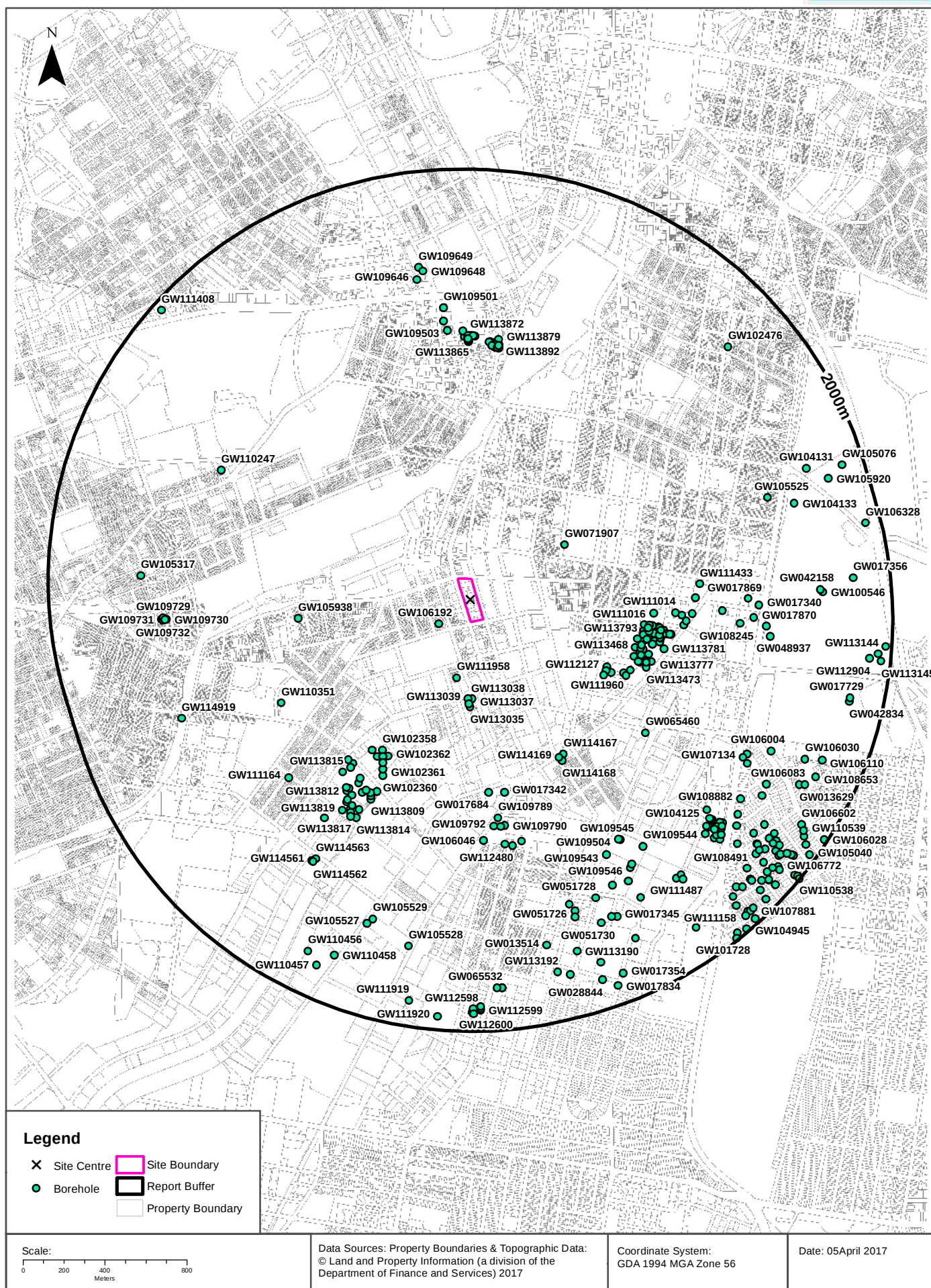
Elevation Contours (m AHD)

Waterloo Precinct, Waterloo, NSW 2017



Groundwater Boreholes

Waterloo Precinct, Waterloo, NSW 2017



Hydrogeology & Groundwater

Waterloo Precinct, Waterloo, NSW 2017

Hydrogeology

Description of aquifers on-site:

Description
Porous, extensive highly productive aquifers

Description of aquifers within the report buffer:

Description
Porous, extensive highly productive aquifers

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

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Groundwater Boreholes

Boreholes within 2km of the site:

GW No.	Licence No	Work Type	Owner Type	Purpose	Contractor	Complete Date	Final Depth	Drilled Depth	Salinity	SWL	Yield	Elev	Dist	Dir
GW106192	10BL164184, 10WA113750	Spear	Private	Domestic	B & B Drilling Inc	10/12/2004	6.00	6.00	Good	4.00	0.500		152m	South West
GW111958	10BL605133	Spear	Private	Monitoring		27/04/2012	6.00	6.00		3.49			282m	South
GW113037	10BL602801	Bore	Private	Monitoring		17/11/2008	5.00	5.00					375m	South
GW113039	10BL602801	Bore	Private	Monitoring		17/10/2013	5.00	5.00					376m	South
GW113038	10BL602801	Bore	Private	Monitoring		17/02/2009	5.00	5.00					381m	South
GW113036	10BL602801	Bore	Private	Monitoring		17/11/2008	4.00	4.00					400m	South
GW113035	10BL602801	Bore	Private	Monitoring		17/11/2008	5.00	5.00					415m	South
GW071907	10BL152224, 10BL602472, 10BL602711, 10WA114785	Bore	Local Govt	Recreation	Intertec Drilling Services	15/05/2008	180.00	180.00	345	11.60	0.100	30.00	486m	North East
GW112127	10BL160293	Bore	Private	Monitoring		03/10/2001	4.50	4.50					648m	South East
GW112128	10BL160293	Bore	Private	Monitoring		03/10/2001	5.50	5.50					651m	South East
GW112129	10BL160293	Bore	Private	Monitoring		03/10/2001	5.50	5.50					651m	South East
GW111959	10BL605226	Bore	Private	Monitoring		07/08/2012	6.00	6.00	1077	2.60			678m	South East
GW111960	10BL605226	Bore	Private	Monitoring		07/08/2012	6.00	6.60	1124	3.52			735m	South East
GW113475	10BL603970	Bore	Local Govt	Monitoring		07/07/2009	6.00	6.00					752m	South East
GW113468	10BL603970	Bore	Local Govt	Monitoring		18/01/2007	3.50	3.50					757m	East
GW113467	10BL603970	Bore	Local Govt	Monitoring		18/01/2007	3.40	3.40					759m	East
GW113469	10BL603970	Bore	Local Govt	Monitoring		19/01/2007	3.10	3.10					760m	East
GW102358	10BL158856	Bore		Monitoring	Engineering Explorations Pty Ltd	01/01/1998	6.00			1.63			761m	South West
GW113474	10BL603970	Bore	Local Govt	Monitoring		07/07/2009	6.00	6.00					763m	South East

GW No.	Licence No	Work Type	Owner Type	Purpose	Contractor	Complete Date	Final Depth	Drilled Depth	Salinity	SWL	Yield	Elev	Dist	Dir
GW114167	10BL604100	Bore	Private	Monitoring	TERRATEST	26/08/2010	5.50	5.50					768m	South East
GW114169	10BL604100	Bore	Private	Monitoring	TERRATEST	11/03/2014	9.80	9.80					771m	South East
GW102362	10BL158856	Bore		Monitoring	Engineering Explorations Pty Ltd	01/01/1998	3.00			1.75			772m	South West
GW113256	10BL604454	Bore	Other Govt	Monitoring		29/11/2010	4.05	4.05					783m	East
GW112713	10BL604402	Bore	Other Govt	Monitoring		29/11/2010	4.05	4.05					783m	East
GW112714	10BL604402	Bore	Other Govt	Monitoring		29/11/2010	4.10	4.10					784m	East
GW113254	10BL604454	Bore	Other Govt	Monitoring		29/11/2010	3.60	3.60					785m	East
GW113258	10BL604454	Bore	Other Govt	Monitoring		29/11/2010	4.10	4.10					785m	East
GW102364	10BL158856	Bore		Monitoring	Engineering Explorations Pty Ltd	01/01/1998	3.00			1.82			786m	South West
GW102363	10BL158856	Bore		Monitoring	Engineering Explorations Pty Ltd	01/01/1998	3.00			1.82			786m	South West
GW109744	10BL160787, 10BL605177	Well	Other Govt	Monitoring	HLA Enviroscienc es	02/08/2002	4.00	4.00					787m	East
GW113796	10BL603971	Bore	Other Govt	Monitoring		14/06/2006	11.05	11.05					787m	East
GW114399	10BL603579	Bore	Other Govt	Monitoring	Terratest	28/07/2009	4.20	4.20					787m	East
GW114398	10BL603579	Bore	Other Govt	Monitoring	Terratest	28/07/2009	4.20	4.20					788m	East
GW113795	10BL603971	Bore	Other Govt	Monitoring		04/05/2006	3.90	3.90					788m	East
GW112711	10BL604402	Bore	Other Govt	Monitoring		30/11/2010	3.60	3.60					789m	East
GW113255	10BL604454	Bore	Other Govt	Monitoring		29/11/2010	4.00	4.00					791m	East
GW114168	10BL604100	Bore	Private	Monitoring	TERRATEST	26/08/2010	8.70	8.70					792m	South East
GW112712	10BL604402	Bore	Other Govt	Monitoring		29/11/2010	4.00	4.00					792m	East
GW102357	10BL158856	Bore		Monitoring	Engineering Explorations Pty Ltd	01/01/1998	6.00			2.69			792m	South West
GW113793	10BL603971	Bore	Other Govt	Monitoring		04/05/2006	4.10	4.10					793m	East
GW112715	10BL604402	Bore	Other Govt	Monitoring		29/11/2010	4.10	4.10					795m	East
GW113257	10BL604454	Bore	Other Govt	Monitoring		29/11/2010	4.10	4.10					795m	East
GW113780	10BL603971	Bore	Other Govt	Monitoring		16/11/2000	8.00	8.00					795m	East
GW113797	10BL603971	Bore	Other Govt	Monitoring		05/05/2006	4.13	4.13					796m	East
GW114400	10BL603579	Bore	Other Govt	Monitoring	Terratest	27/07/2009	3.20	3.20					798m	East
GW113791	10BL603971	Bore	Other Govt	Monitoring		04/05/2006	4.00	4.00					799m	East
GW102356	10BL158856	Bore		Monitoring	Engineering Explorations Pty Ltd	01/01/1998	6.00			3.32			801m	South West
GW105938	10BL162977, 10WA108677	Bore				20/05/2005							801m	West
GW109751	10BL160787, 10BL605178	Well	Private	Monitoring	HLA Enviroscienc es	05/08/2002	3.50	3.50					804m	East
GW113794	10BL603971	Bore	Other Govt	Monitoring		08/06/2006	11.15	11.15					806m	East
GW114396	10BL603579	Bore	Other Govt	Monitoring	Terratest	28/07/2009	5.20	5.20					807m	East
GW109745	10BL160787, 10BL605177	Well	Other Govt	Monitoring	HLA Enviroscienc es	02/08/2002	3.50	3.50					809m	East

GW No.	Licence No	Work Type	Owner Type	Purpose	Contractor	Complete Date	Final Depth	Drilled Depth	Salinity	SWL	Yield	Elev	Dist	Dir
GW102365	10BL158856	Bore		Monitoring	Engineering Explorations Pty Ltd	01/01/1998	6.00			3.65			812m	South West
GW109746	10BL160787, 10BL605177	Well	Other Govt	Monitoring	HLA Envirosciences	02/08/2002	4.20	4.20					812m	East
GW114393	10BL603579	Bore	Other Govt	Monitoring	Terratest	28/07/2009	4.20	4.20					813m	East
GW114403	10BL603579	Bore	Other Govt	Monitoring	Terratest	05/08/2009	2.20	2.20					818m	East
GW113792	10BL603971	Bore	Other Govt	Monitoring		04/05/2006	3.70	3.70					821m	East
GW114397	10BL603579	Bore	Other Govt	Monitoring	Terratest	27/07/2009	3.20	3.20					823m	East
GW113779	10BL603971	Bore	Other Govt	Monitoring		13/11/2000	9.00	9.00					824m	East
GW113778	10BL603971	Bore	Other Govt	Monitoring		13/11/2000	5.00	5.00					825m	East
GW113784	10BL603971	Bore	Other Govt	Monitoring		22/11/2000	7.00	7.00					827m	East
GW114390	10BL603579	Bore	Other Govt	Monitoring	Terratest	28/07/2009	3.20	3.20					828m	East
GW109750	10BL160787, 10BL605177	Well	Other Govt	Monitoring	HLA Envirosciences	05/08/2002	3.50	3.50					831m	East
GW113473	10BL603970	Bore	Local Govt	Monitoring		07/07/2000	3.00	3.00					832m	East
GW111016	10BL603969	Bore	Private	Monitoring	HLA Envirosciences	30/01/2004	4.40	4.50					834m	East
GW109747	10BL160787, 10BL605178	Well	Other Govt	Monitoring	HLA Envirosciences	02/08/2002	3.80	3.80					836m	East
GW109749	10BL160787, 10BL605177	Well	Other Govt	Monitoring	HLA Envirosciences	05/08/2002	4.50	4.50					836m	East
GW113782	10BL603971	Bore	Other Govt	Monitoring		17/11/2000	8.00	8.00					837m	East
GW017684	10BL008347	Bore	Private	Industrial		01/09/1947	14.90	14.90					837m	South
GW114391	10BL603579	Bore	Private	Monitoring	Terratest	28/07/2009	4.20	4.20					837m	East
GW113785	10BL603971	Bore	Other Govt	Monitoring		22/11/2000	4.00	4.00					837m	East
GW113788	10BL603971	Bore	Other Govt	Monitoring		10/02/2014	11.00	11.00					837m	East
GW102359	10BL158856	Bore		Monitoring	Engineering Explorations Pty Ltd	01/01/1998	6.00			0.83			838m	South West
GW114394	10BL603579	Bore	Other Govt	Monitoring	Terratest	28/07/2009	4.20	4.20					838m	East
GW102361	10BL158856	Bore		Monitoring	Engineering Explorations Pty Ltd	01/01/1998	6.00			0.79			838m	South West
GW113790	10BL603971	Bore	Other Govt	Monitoring		03/05/2006	5.85	5.85					838m	East
GW114402	10BL603579	Bore	Other Govt	Monitoring	Terratest	05/08/2009	2.20	2.20					846m	East
GW017342	10BL008345	(Unknown)	Private	Industrial		01/12/1946	15.50	15.50					847m	South
GW114395	10BL603579	Bore	Other Govt	Monitoring	Terratest	27/07/2009	3.20	3.20					850m	East
GW113777	10BL603971	Bore	Other Govt	Monitoring		13/11/2000	6.00	6.00					850m	East
GW114388	10BL603579	Bore	Other Govt	Monitoring	Terratest	28/07/2009	5.20	5.20					856m	East
GW114386	10BL603579	Bore	Other Govt	Monitoring	Terratest	27/07/2009	5.20	5.20					858m	East
GW109748	10BL160787, 10BL605178	Well	Other Govt	Monitoring	HLA Envirosciences	02/08/2002	3.80	3.80					863m	East
GW102360	10BL158856	Bore		Monitoring	Engineering Explorations Pty Ltd	01/01/1998	6.00			1.17			864m	South West

GW No.	Licence No	Work Type	Owner Type	Purpose	Contractor	Complete Date	Final Depth	Drilled Depth	Salinity	SWL	Yield	Elev	Dist	Dir
GW114392	10BL603579	Bore	Other Govt	Monitoring	Terratest	27/07/2009	2.40	2.40					865m	East
GW109752	10BL160787, 10BL605177	Well	Other Govt	Monitoring	HLA Envirosciences	05/08/2002	3.40	3.40					866m	East
GW113786	10BL603971	Bore	Other Govt	Monitoring		02/05/2006	3.00	3.00					868m	East
GW114389	10BL603579	Bore	Other Govt	Monitoring	Terratest	27/07/2009	3.20	3.20					870m	East
GW114401	10BL603579	Bore	Other Govt	Monitoring	Terratest	05/08/2009	2.20	2.20					870m	East
GW113798	10BL603971	Bore	Other Govt	Monitoring		10/02/2014	4.80	4.80					871m	East
GW113787	10BL603971	Bore	Other Govt	Monitoring		02/05/2006	4.80	4.80					871m	East
GW114387	10BL603579	Bore	Other Govt	Monitoring	Terratest	27/07/2009	3.20	3.20					871m	East
GW113783	10BL603971	Bore	Other Govt	Monitoring		22/11/2000	4.60	4.60					872m	East
GW111407	10BL604132	Bore	Private	Monitoring		15/10/2010	4.80	4.80					875m	East
GW113789	10BL603971	Bore	Other Govt	Monitoring		03/05/2006	10.95	10.95					875m	East
GW111406	10BL604132	Bore	Private	Monitoring		16/07/2010	4.80	4.80					881m	East
GW111405	10BL603966	Bore	Private	Monitoring		16/07/2010	4.80	4.80					885m	East
GW113781	10BL603971	Bore	Other Govt	Monitoring		17/11/2000	4.50	4.50					895m	East
GW113803	10BL603258	Bore	Private	Monitoring		22/01/2010	5.80						899m	South West
GW111082	10BL603966	Bore	Private	Monitoring	HLA Envirosciences	02/09/2006	4.00	4.00					900m	East
GW113802	10BL603258	Bore	Private	Monitoring		22/01/2010	6.10	6.10					901m	South West
GW111081	10BL603966	Bore	Private	Monitoring	HLA Envirosciences	02/09/2006	4.00	4.00					913m	East
GW111080	10BL603966	Bore	Private	Monitoring	HLA Envirosciences	02/09/2006	5.00	5.00					923m	East
GW113804	10BL603258	Bore	Private	Monitoring		22/01/2010	6.00	6.00					923m	South West
GW113824	10BL603258	Bore	Private	Monitoring		22/01/2010	3.05	3.05					936m	South West
GW111014	10BL603968	Bore	Private	Monitoring	HLA Envirosciences	18/12/2003	6.50	6.50					942m	East
GW113807	10BL603258	Bore	Private	Monitoring		22/01/2010	4.20	4.20					948m	South West
GW113823	10BL603258	Bore	Private	Monitoring		22/01/2010	3.20	3.20					957m	South West
GW113815	10BL603258	Bore	Private	Monitoring		22/01/2010	6.10	6.10					964m	South West
GW109789	10BL163543	Well	Private	Monitoring	Macquarie Drilling	21/03/2004	5.00	5.00					967m	South
GW113800	10BL603258	Bore	Private	Monitoring		22/01/2010	4.60	4.60					969m	South West
GW065460		Bore	Private	Industrial		09/01/1992	12.00		Good				969m	South East
GW113799	10BL603258	Bore	Private	Monitoring		22/01/2010	4.10	4.10					969m	South West
GW111015	10BL603968	Bore	Private	Monitoring	HLA Envirosciences	18/02/2003	7.00	7.00					971m	East
GW113808	10BL603258	Bore	Private	Monitoring		22/01/2010	4.20	4.20					982m	South West
GW113472	10BL603970	Bore	Local Govt	Monitoring		11/02/2008	6.20	6.20					982m	East
GW113801	10BL603258	Bore	Private	Monitoring		22/01/2010	4.50	4.50					988m	South West
GW113809	10BL603258	Bore	Private	Monitoring		22/01/2010	4.50	4.50					994m	South West

GW No.	Licence No	Work Type	Owner Type	Purpose	Contractor	Complete Date	Final Depth	Drilled Depth	Salinity	SWL	Yield	Elev	Dist	Dir
GW113471	10BL603970	Bore	Local Govt	Monitoring		11/02/2008	4.50	4.50					994m	East
GW109792	10BL163543	Well	Private	Monitoring	Macquarie Drilling	17/04/2004	4.20	4.20					1004m	South
GW110351	10BL602742, 10WA114781	Bore	Local Govt	Recreation	Intertec Drilling Services	01/01/1975	60.00			25.00	1.000		1005m	South West
GW113813	10BL603258	Bore	Private	Monitoring		22/01/2010	6.10	6.10					1007m	South West
GW109790	10BL163543	Well	Private	Monitoring	Macquarie Drilling	27/03/2004	4.00	4.00					1008m	South
GW109791	10BL163543	Well	Private	Monitoring	Macquarie Drilling	17/04/2004	4.10	4.10					1011m	South
GW113811	10BL603258	Bore	Private	Monitoring		22/01/2010	5.40	5.40					1012m	South West
GW113470	10BL603970	Bore	Local Govt	Monitoring		11/02/2008	5.70	5.70					1022m	East
GW113812	10BL603258	Bore	Private	Monitoring		22/01/2010	6.10	6.10					1024m	South West
GW113822	10BL603258	Bore	Private	Monitoring		22/01/2010	1.86	1.86					1027m	South West
GW111434	10BL604568	Bore	Private	Monitoring	SOIL CHECK	24/01/2011	8.00	8.00					1043m	East
GW113818	10BL603258	Bore	Private	Monitoring		22/01/2010	4.40	4.40					1056m	South West
GW106046	10BL162628, 10WA113460	Bore				07/06/2005							1068m	South
GW113805	10BL603258	Bore	Private	Monitoring		22/01/2010	4.60	4.60					1068m	South West
GW113821	10BL603258	Bore	Private	Monitoring		22/01/2010	4.60	4.60					1068m	South West
GW113810	10BL603258	Bore	Private	Monitoring		22/01/2010	4.60	4.60					1070m	South West
GW111433	10BL604568	Bore	Private	Monitoring		24/01/2011	6.30	7.00					1073m	East
GW113806	10BL603258	Bore	Private	Monitoring		22/01/2010	4.10	4.10					1089m	South West
GW112479	10BL604489	Bore	Private	Monitoring	Terratest	15/02/2011	7.00	7.00	613	5.10			1099m	South
GW112478	10BL604489	Bore	Private	Monitoring	Terratest	15/02/2011	4.50	4.50	369	3.70			1099m	South
GW113820	10BL603258	Bore	Private	Monitoring		22/01/2010	5.00	5.00					1101m	South West
GW113814	10BL603258	Bore	Private	Monitoring		22/01/2010	3.80	3.80					1108m	South West
GW112480	10BL604489	Bore	Private	Monitoring	Terratest	15/02/2011	7.00	7.00	584	5.50			1111m	South
GW113819	10BL603258	Bore	Private	Monitoring		22/01/2010	3.25	3.25					1115m	South West
GW113817	10BL603258	Bore	Private	Monitoring		22/01/2010	3.70	3.70					1117m	South West
GW113885	10BL165951	Bore	Private	Monitoring	TERRATEST	20/08/2004	7.00	7.00					1132m	North
GW113883	10BL165951	Bore	Private	Monitoring	TERRATEST	20/08/2004	6.10	6.10					1135m	North
GW113882	10BL165951	Bore	Private	Monitoring	TERRATEST	20/08/2004	6.10	6.10					1136m	North
GW113892	10BL165951	Bore	Private	Monitoring	TERRATEST	09/10/2005	7.00	7.00					1136m	North
GW113890	10BL165951	Bore	Private	Monitoring	TERRATEST	09/10/2005	6.00	6.00					1136m	North
GW113893	10BL165951	Bore	Private	Monitoring	TERRATEST	11/10/2005	8.50	8.50					1136m	North
GW113891	10BL165951	Bore	Private	Monitoring	TERRATEST	09/10/2005	6.80	6.80					1136m	North
GW113881	10BL165951	Bore	Private	Monitoring	TERRATEST	20/08/2004	6.10	6.10					1137m	North
GW113886	10BL165951	Bore	Private	Monitoring	TERRATEST	01/10/2004	5.80	5.80					1143m	North
GW113855	10BL165951	Bore	Private	Monitoring	TERRATEST	22/07/2003	5.00	5.00					1146m	North
GW113859	10BL165951	Bore	Private	Monitoring	TERRATEST	15/09/2003	6.10	6.10					1146m	North
GW113856	10BL165951	Bore	Private	Monitoring	TERRATEST	23/07/2003	6.20	6.20					1146m	North

GW No.	Licence No	Work Type	Owner Type	Purpose	Contractor	Complete Date	Final Depth	Drilled Depth	Salinity	SWL	Yield	Elev	Dist	Dir
GW113884	10BL165951	Bore	Private	Monitoring	TERRATEST	20/08/2004	6.80	6.80					1149m	North
GW109500	10BL601554	Well	Private	Monitoring	Terratest Pty Ltd	01/03/2007	4.80			2.30			1149m	North
GW113875	10BL165951	Bore	Private	Monitoring	TERRATEST	30/07/2003	7.50	7.50					1149m	North
GW113860	10BL165951	Bore	Private	Monitoring	TERRATEST	16/09/2003	6.50	6.50					1152m	North
GW113889	10BL165951	Bore	Private	Monitoring	TERRATEST	05/10/2004	6.70	6.70					1152m	North
GW113874	10BL165951	Bore	Private	Monitoring	TERRATEST	19/09/2003	7.00	7.00					1152m	North
GW113873	10BL165951	Bore	Private	Monitoring	TERRATEST	26/07/2003	6.00	6.00					1154m	North
GW113862	10BL165951	Bore	Private	Monitoring	TERRATEST	28/07/2003	3.80	3.80					1154m	North
GW113857	10BL165951	Bore	Private	Monitoring	TERRATEST	23/07/2003	6.00	6.00					1156m	North
GW113858	10BL165951	Bore	Private	Monitoring	TERRATEST	19/09/2003	6.30	6.30					1158m	North
GW113863	10BL165951	Bore	Private	Monitoring	TERRATEST	16/09/2003	4.60	4.60					1158m	North
GW113887	10BL165951	Bore	Private	Monitoring	TERRATEST	05/10/2004	5.70	5.70					1159m	North
GW113864	10BL165951	Bore	Private	Monitoring	TERRATEST	22/07/2003	4.50	4.50					1162m	North
GW113888	10BL165951	Bore	Private	Monitoring	TERRATEST	05/10/2004	5.50	5.50					1162m	North
GW113865	10BL165951	Bore	Private	Monitoring	TERRATEST	21/07/2003	6.50	6.50					1165m	North
GW113866	10BL165951	Bore	Private	Monitoring	TERRATEST	18/02/2014	3.00	3.00					1168m	North
GW111164	10BL600213, 10WA114125	Spear	Private	Domestic		22/10/2010	8.00	8.00					1170m	South West
GW037956		Bore	Private	Industrial		01/04/1972	0.00	21.10					1170m	East
GW113867	10BL165951	Bore	Private	Monitoring	TERRATEST	22/07/2003	3.50	3.50					1171m	North
GW113868	10BL165951	Bore	Private	Monitoring	TERRATEST	18/02/2014	3.70	3.70					1175m	North
GW113879	10BL165951	Bore	Private	Monitoring	TERRATEST	25/07/2003	5.30	5.30					1176m	North
GW113869	10BL165951	Bore	Private	Monitoring	TERRATEST	29/07/2003	6.00	6.00					1178m	North
GW113880	10BL165951	Bore	Private	Monitoring	TERRATEST	20/08/2004	5.00	5.00					1180m	North
GW113870	10BL165951	Bore	Private	Monitoring	TERRATEST	07/11/2003	4.80	4.80					1183m	North
GW113878	10BL165951	Bore	Private	Monitoring	TERRATEST	07/11/2003	7.00	7.00					1185m	North
GW113871	10BL165951	Bore	Private	Monitoring	TERRATEST	08/11/2003	6.00	6.00					1186m	North
GW113877	10BL165951	Bore	Private	Monitoring	TERRATEST	28/07/2003	5.50	5.50					1187m	North
GW113876	10BL165951	Bore	Private	Monitoring	TERRATEST	25/07/2003	7.80	7.80					1187m	North
GW113872	10BL165951	Bore	Private	Monitoring	TERRATEST	16/09/2003	8.00	8.00					1187m	North
GW113816	10BL603258	Bore	Private	Monitoring		22/01/2010	5.75	5.75					1196m	South West
GW113861	10BL165951	Bore	Private	Monitoring	TERRATEST	30/07/2003	6.50	6.50					1209m	North
GW109503	10BL601554	Well	Private	Monitoring	Terratest Pty Ltd	01/03/2007	5.20			2.24			1212m	North
GW108245	10BL159905, 10BL165753, 10BL602271, 10WA114749	Bore		Recreation	Intertec Drilling Services	21/09/2006	20.80	20.80	198	5.80	1.500		1255m	East
GW109502	10BL601554	Well	Private	Monitoring	Terratest Pty Ltd	01/03/2007	6.40			2.18			1258m	North
GW109504	10BL601773	Bore	Local Govt	Monitoring	Nealings Drilling	05/06/2007	7.48			3.08			1261m	South East
GW109545	10BL601773	Bore	Local Govt	Monitoring	Nealings Drilling	06/11/2008	13.90			3.20			1269m	South East
GW110247	10BL603148, 10WA109284	Bore	Private	Domestic	Intertec Drilling Services	16/07/2009	210.00	210.00	4400	31.00	0.130		1272m	North West

GW No.	Licence No	Work Type	Owner Type	Purpose	Contractor	Complete Date	Final Depth	Drilled Depth	Salinity	SWL	Yield	Elev	Dist	Dir
GW109543	10BL601773	Bore	Local Govt	Monitoring	Nealings Drilling	04/06/2007	11.30			3.15			1298m	South East
GW017869	10BL008298	Bore	Private	Industrial		01/01/1955	17.90	18.00	Good				1299m	East
GW017870	10BL008297	Bore	Private	Industrial		01/03/1955	17.90	18.00					1323m	East
GW109501	10BL601554	Well	Private	Monitoring	Terratest Pty Ltd	01/03/2007	6.00			2.30			1324m	North
GW017340	10BL008296	Bore	Private	Industrial		01/06/1958	18.50	18.60	Good				1349m	East
GW109544	10BL601773	Bore	Local Govt	Monitoring	Nealings Drilling	04/06/2007	14.00			1.68			1357m	South East
GW104266	10BL160594	Bore	Private	Monitoring	Intertec Drilling Services	11/04/2002	22.80	35.60	134	5.85	9.000		1383m	East
GW114563	10BL605489	Bore	Other Govt	Monitoring bore	EPOCA ENVIRONMETAL	06/12/2013	4.00	3.90	591				1384m	South West
GW109547	10BL601773	Bore	Local Govt	Monitoring	Nealings Drilling	06/06/2007	13.60			2.43			1400m	South East
GW114561	10BL605489	Bore	Other Govt	Monitoring bore	EPOCA ENVIRONMETAL	06/12/2013	4.00	4.00	529	2.92			1401m	South West
GW114562	10BL605489	Bore	Other Govt	Monitoring bore	EPOCA ENVIRONMETAL	06/12/2013	4.00	2.70	448	2.51			1402m	South West
GW048937	10BL104270	Bore	Private	Recreation		01/06/1974	24.40	24.40					1404m	East
GW109546	10BL601773	Bore	Local Govt	Monitoring	Nealings Drilling	06/06/2007	8.14			2.32			1412m	South East
GW109730	10BL162346	Bore	Private	Monitoring	Terratest Pty Ltd	28/08/2003	6.50	6.50	1000	1.00			1435m	West
GW104125	10BL159848, 10BL159859, 10WA114703	Bore	Private	Recreation	Southern Tablelands Drilling	01/08/2000	15.70	22.00	Fresh	0.50	9.800		1438m	South East
GW107134	10BL164592, 10WA113817	Spear	Private	Domestic		14/04/2005	7.00	7.00					1439m	South East
GW109733	10BL162346	Bore	Private	Monitoring		05/09/2003	2.40	2.40	1000	1.40			1442m	West
GW203385		Bore	Private	Monitoring bore		23/04/2015	6.20	6.20		2.20			1445m	South East
GW109729	10BL162346	Bore	Private	Monitoring	Terratest Pty Ltd	02/09/2003	6.00	6.00	1000	1.40			1449m	West
GW107133	10BL164593, 10WA113818	Spear	Private	Domestic		14/04/2005	7.00	7.00					1449m	South East
GW109732	10BL162346	Bore	Private	Monitoring	Terratest Pty Ltd	02/09/2003	4.30	4.30	1000	1.50			1454m	West
GW051725		Bore	Private	Monitoring		01/02/1980	8.00	8.00	0-500 ppm				1456m	South
GW109731	10BL162346	Bore	Private	Monitoring	Terratest Pty Ltd	28/08/2003	6.00	6.00	1000	1.10			1458m	West
GW203387		Bore	Private	Monitoring bore	AD Envirotech	23/04/2015	7.00	7.00		2.50			1463m	South East
GW203386		Bore	Private	Monitoring bore		23/04/2015	2.80	2.80		2.30			1463m	South East
GW051728		Bore	Private	Monitoring		01/12/1980	8.30	8.30	0-500 ppm				1468m	South East
GW107135	10BL164591, 10WA113816	Spear	Private	Domestic		14/04/2005	7.00	7.00					1472m	South East
GW109646	10BL602486	Bore	Private	Monitoring	Environment Investigation Services	03/05/2008	8.20	8.20	1258	5.93	1.000		1473m	North
GW113757	10BL601746	Bore	Private	Monitoring		06/11/2006	5.00	5.00					1474m	South East
GW113758	10BL601746	Bore	Private	Monitoring		06/02/2014	4.50	4.50					1482m	South East
GW113775	10BL601746	Bore	Private	Monitoring		08/11/2006	5.00	5.00					1487m	South East
GW114919	10BL605064	Bore	Other Govt	Monitoring bore		06/07/2015	3.00	3.00					1488m	West
GW113759	10BL601746	Bore	Private	Monitoring		06/11/2006	4.30	4.30					1489m	South East
GW051726		Bore	Private	Monitoring		01/02/1980	8.00	8.00	0-500 ppm				1493m	South

GW No.	Licence No	Work Type	Owner Type	Purpose	Contractor	Complete Date	Final Depth	Drilled Depth	Salinity	SWL	Yield	Elev	Dist	Dir
GW105525	10BL159952, 10WA113298	Bore		Domestic		18/11/2003	5.49	5.49		2.75	1.000		1501m	East
GW113773	10BL601746	Bore	Private	Monitoring		07/11/2006	5.00	5.00					1503m	South East
GW109648	10BL602485	Bore	Private	Monitoring	Environment Investigation Services	03/05/2008	6.20	6.20	1302	5.23	0.500		1509m	North
GW113776	10BL601746	Bore	Private	Monitoring		08/11/2006	4.30	4.30					1510m	South East
GW113772	10BL601746	Bore	Private	Monitoring		08/11/2006	4.30	4.30					1521m	South East
GW113761	10BL601746	Bore	Private	Monitoring		06/11/2006	4.50	4.50					1523m	South East
GW051727		Bore	Private	Monitoring		01/12/1980	8.00	8.00	0-500 ppm				1523m	South
GW113760	10BL601746	Bore	Private	Monitoring		06/02/2014	5.00	5.00					1524m	South East
GW113774	10BL601746	Bore	Private	Monitoring		08/11/2006	5.50	5.50					1526m	South East
GW105529	10BL160254	Bore		Monitoring	Macquarie Drilling	07/02/2001	5.00	5.00					1529m	South
GW113765	10BL601746	Bore	Private	Monitoring		07/11/2006	5.00	5.00					1529m	South East
GW113767	10BL601746	Bore	Private	Monitoring		09/11/2006	5.50	5.50					1529m	South East
GW109649	10BL602485	Bore	Private	Monitoring	Environment Investigation Services	03/05/2008	7.20	7.20	869	2.95	1.000		1531m	North
GW113763	10BL601746	Bore	Private	Monitoring		08/11/2006	4.30	4.30					1533m	South East
GW108882	10BL163403, 10WA113575	Bore	Private	Domestic		30/05/2008	6.00						1533m	South East
GW113762	10BL601746	Bore	Private	Monitoring		08/11/2006	4.30	4.30					1537m	South East
GW113764	10BL601746	Bore	Private	Monitoring		07/11/2006	5.00	5.00					1545m	South East
GW105317	10BL161846	Bore		Monitoring		21/03/2003	6.50	6.50		1.70			1546m	West
GW106004	10BL162812, 10WA113489	Bore	Private	Domestic	Intertec Drilling Services	25/03/2004	19.50	23.20	305	4.10	2.000		1548m	South East
GW113766	10BL601746	Bore	Private	Monitoring		09/11/2006	5.50	5.50					1552m	South East
GW113769	10BL601746	Bore	Private	Monitoring		06/11/2006	5.50	5.50					1554m	South East
GW113771	10BL601746	Bore	Private	Monitoring		07/11/2006	5.00	5.00					1556m	South East
GW105527	10BL160254	Bore		Monitoring	Engineering Explorations Pty Ltd	15/12/2000	5.00	5.00					1558m	South
GW072622	10BL156770, 10WA114631	Bore	Local Govt	Industrial, Recreation	B & B Drilling Inc	28/11/1994	16.00	16.00	9000	2.95	1.600		1564m	South East
GW109066	10BL601956, 10WA114425	Spear	Private	Domestic		16/07/2008	7.50						1568m	South East
GW113768	10BL601746	Bore	Private	Monitoring		06/11/2006	5.00	5.00					1570m	South East
GW111487	10BL604480	Bore	Private	Monitoring		03/02/2011	2.40	2.40					1578m	South East
GW113770	10BL601746	Bore	Private	Monitoring		06/02/2014	5.00	5.00					1579m	South East
GW111486	10BL604480	Bore	Private	Monitoring		03/02/2011	2.00	2.00					1580m	South East
GW051729		Bore	Private	Monitoring		01/12/1980	8.50	8.50	0-500 ppm			20.82	1582m	South East
GW051730		Bore	Private	Monitoring		01/12/1980	0.00	8.30	0-500 ppm				1592m	South
GW017345		Bore	Private	Industrial		01/10/1954	13.70	13.70	Good	5.40	10.100		1592m	South East
GW024118	10BL018436, 10WA112948	Spear	Private	General Use		01/01/1966	3.00	3.00	Good				1598m	South East
GW105747	10BL162263, 10WA113382	Spear	Private	Domestic		15/12/2003	8.23	8.24		4.88	1.000		1601m	South East
GW111488	10BL604480	Bore	Private	Monitoring		03/02/2011	3.00	3.00	1817	2.10	0.100		1602m	South East

GW No.	Licence No	Work Type	Owner Type	Purpose	Contractor	Complete Date	Final Depth	Drilled Depth	Salinity	SWL	Yield	Elev	Dist	Dir
GW105528	10BL160254	Bore		Monitoring		02/12/1993	5.00	5.00					1612m	South
GW111136	10BL600564, 10WA114167	Spear	Private	Domestic	Combined Drilling Services	17/12/2006	11.00	11.00		3.50			1613m	South East
GW104133	10BL159785, 10BL159928, 10WA114701	Bore		Recreation	Southern Tablelands Drilling	28/07/2000	20.50		Fresh				1618m	East
GW013514	10BL008711	Spear	Private	Industrial		01/03/1958	9.10	9.10	Good				1623m	South
GW042158		Bore	NSW Office of Water	Monitoring			21.15					43.71	1654m	East
GW106058	10BL162559, 10WA113447	Spear	Private	Domestic		06/02/2004	7.50	7.50					1658m	South East
GW100546	10BL157958	Bore	Private	Test Bore	B & B Drilling Inc	09/03/1997	14.50	14.50	Good	6.40	9.500		1664m	East
GW113190	10BL605409	Bore	Private	Monitoring	Rockwell Drilling	05/07/2013	9.00	9.00					1685m	South
GW111592	10BL165354, 10WA113966	Bore	Private	Domestic		01/01/2005	20.00	20.00					1686m	South East
GW102476	10BL157882	Bore		Monitoring		01/01/1999	4.00						1692m	North East
GW105940	10BL162321, 10WA113403	Bore				20/05/2005							1702m	South East
GW106030	10BL162823, 10WA113492	Bore	Private	Domestic	Intertec Drilling Services	17/03/2004	20.00	20.50	220	4.10	2.000		1715m	South East
GW104131	10BL159784, 10BL159927, 10WA114699	Bore		Recreation	Southern Tablelands Drilling	03/08/2000	20.00						1723m	East
GW026142	10BL019576, 10WA112987	Bore	Private	General Use		01/02/1967	12.40	12.50					1727m	South East
GW108846	10BL601652	Bore	Private	Domestic		20/04/2006	8.00	8.00					1729m	South East
GW023585	10BL017518, 10WA112912	Spear	Private	General Use		01/03/1966	4.50	4.60					1736m	South East
GW013629	10BL009006	Bore	Private	General Use		01/11/1955	21.90	21.90	0-500 ppm				1745m	South East
GW108491	10BL600658, 10WA114191	Spear	Private	Domestic	B & B Drilling Inc	08/01/2007	7.00	7.00	Good	5.00	0.500		1757m	South East
GW110458	10BL603007	Well	Private	Monitoring		01/05/2009	2.80	2.80		2.30			1760m	South
GW100939	10BL156892, 10WA113082	Bore	Private	Domestic		21/08/1995	5.50	5.50	Good	2.44	1.000		1761m	South East
GW108632	10BL165385, 10WA113969	Spear	Private	Domestic		15/08/2005	7.32	7.32	Good	3.96	1.000		1761m	South East
GW113192	10BL605409	Bore	Private	Monitoring	Rockwell Drilling	05/07/2013	5.30	5.30					1762m	South
GW106083	10BL162811, 10WA113488	Bore	Private	Domestic	Intertec Drilling Services	23/03/2004	18.90	20.10	295	1.70	3.500		1768m	South East
GW106856	10BL163087, 10WA113524	Spear	Private	Domestic		21/12/2004	7.93	7.93	Good	2.13	1.000		1768m	South East
GW051731		Bore	Private	Monitoring		01/12/1980	8.00	8.00	501-1000 ppm				1773m	South
GW114917	10WA119150	Spear	Private	Domestic		04/03/2015	9.15	9.15		5.49	1.000		1773m	South East
GW104834	10BL161173, 10WA113328	Bore	Private	Domestic	A Korkadis	07/12/2002	5.80	5.80		2.44	1.000		1776m	South East
GW113191	10BL605409	Bore	Private	Monitoring	Rockwell Drilling	05/07/2013	8.00	8.00					1787m	South
GW100359	10BL157618, 10WA113170	Spear	Private	Domestic		12/09/1995	5.50	5.50	Good	2.74	1.000		1791m	South East
GW017782	10BL009960	Bore	Private	Industrial		01/09/1959	15.50	15.50					1792m	South
GW106110	10BL162824, 10WA113493	Bore	Private	Domestic	Intertec Drilling Services	19/03/2004	20.50	23.20	239	4.40	2.000		1793m	South East
GW065532		Bore	Private	Industrial		01/11/1990	18.00						1794m	South
GW072328	10BL155241	Bore	Private	Industrial	B & B Drilling Inc	18/06/1994	13.00	14.00					1794m	South

GW No.	Licence No	Work Type	Owner Type	Purpose	Contractor	Complete Date	Final Depth	Drilled Depth	Salinity	SWL	Yield	Elev	Dist	Dir
GW023144	10BL016800, 10WA112845	Spear	Private	General Use		01/01/1942	4.80		Good				1795m	South East
GW110456	10BL603007	Well	Private	Monitoring		01/05/2009	3.20	3.60		2.30			1796m	South West
GW108653	10BL601557, 10WA114374	Spear	Private	Domestic		17/04/2007	12.00	12.00					1798m	South East
GW106182	10BL162821, 10WA113491	Spear	Private	Domestic	B & B Drilling Inc	14/07/2004	4.00	4.00	Good	2.00	0.500		1799m	South East
GW105920	10BL161710, 10BL600596, 10BL603529, 10WA114587	Bore		Domestic		13/05/2005				6.00			1812m	East
GW105736	10BL162854, 10WA113499	Bore				19/04/2005							1815m	South East
GW017356	10BL008397	Bore	Local Govt	Recreation		01/01/1942	30.40	30.50	Good				1819m	East
GW072787		Spear	Private	Domestic		14/01/1995	5.50	5.50	Good				1822m	South East
GW106364	10BL163835, 10WA113691	Bore				23/08/2005							1822m	South East
GW112385	10WA118623	Spear	Private	Domestic		17/03/2013	5.49	5.49		3.05	1.000		1822m	South East
GW025717	10BL016557, 10WA112825	Spear	Private	General Use		01/10/1965	3.60						1824m	South East
GW106093	10BL162896, 10WA113507	Spear	Private	Domestic		18/04/2004	5.18	5.19		2.13	1.000		1825m	South East
GW105134	10BL157056, 10WA113105	Bore	Private	Domestic		11/09/1995	5.00	5.00					1831m	South East
GW023275	10BL016918	Spear	Local Govt	General Use		01/09/1965	5.70	5.80					1831m	South East
GW017729	10BL008396	Bore	Local Govt	Recreation		01/01/1942	30.40	30.50	Good				1833m	East
GW042834	10BL105619, 10BL162081, 10CA114621	Bore	Local Govt	Irrigation, Recreation		01/11/1976	31.10	31.10					1834m	East
GW110457	10BL603007	Well	Private	Monitoring		01/05/2009	3.60	3.60		1.70			1838m	South West
GW025718	10BL016426, 10WA112816	Spear	Private	General Use		01/11/1965	3.60	3.70	Good				1849m	South East
GW106602	10BL163744, 10WA113670	Spear	Private	Domestic		28/08/2004	6.10	6.10		3.50	1.000		1852m	South East
GW110270	10BL165643, 10WA114008	Bore	Private	Domestic	B & B Drilling Inc	16/01/2006	6.00	6.00	Good	4.00	0.500		1852m	South East
GW028844	10BL023115	Bore open thru rock	Private	Industrial		01/11/1968	13.70	13.70					1855m	South
GW111621	10BL164152, 10WA113739	Spear	Private	Domestic		01/01/2004	6.00	6.00		4.00			1857m	South East
GW017354	10BL008562	Bore	Private	Industrial		01/01/1939	16.40						1859m	South
GW107603	10BL162349, 10WA113411	Spear	Private	Domestic		15/10/2004	7.00	7.00					1866m	South East
GW107551	10BL165618, 10WA114005	Spear	Private	Domestic		18/11/2005	6.71	6.71	Good	3.50	1.000		1866m	South East
GW111158	10BL600566, 10WA114169	Spear	Private	Domestic		01/01/2003	14.00	14.00					1869m	South East
GW111919	10BL602004	Spear	Private	Monitoring		01/01/2007	7.00	7.00		90.00	0.200		1875m	South
GW106772	10BL157060, 10WA113107	Spear	Private	Domestic		10/09/1995	5.00	5.00					1875m	South East
GW110539	10BL601395, 10WA114336	Spear	Private	Domestic		07/10/2009	10.00	10.00					1876m	South East
GW112597	10BL604110	Bore	Private	Monitoring	Macquarie Drilling	13/07/2010	5.00	5.00		3.90			1880m	South
GW105575	10BL162490, 10WA113436	Bore	Private	Domestic		04/01/2004	7.00	7.00					1882m	South East
GW105440	10BL162159, 10WA113357	Bore		Domestic		20/10/2003	5.19	5.19		2.75	1.000		1889m	South East
GW112602	10BL604110	Bore	Private	Monitoring	Macquarie Drilling	13/07/2010	5.00	5.00		3.80			1889m	South
GW107213	10BL164994, 10WA113901	Spear	Private	Domestic	B & B Drilling Inc	05/07/2005	6.00	6.00		2.00	0.500		1890m	South East

GW No.	Licence No	Work Type	Owner Type	Purpose	Contractor	Complete Date	Final Depth	Drilled Depth	Salinity	SWL	Yield	Elev	Dist	Dir
GW112601	10BL604110	Bore	Private	Monitoring	Macquarie Drilling	13/07/2010	5.00	5.00		4.20			1890m	South
GW112598	10BL604110	Bore	Private	Monitoring	Macquarie Drilling	13/07/2010	5.00	5.00					1892m	South
GW112397	10WA118646	Spear	Private	Domestic		16/04/2013	7.32	7.32	Good	3.05	1.000		1894m	South East
GW108440	10BL165741, 10WA114037	Spear	Private	Domestic	B & B Drilling Inc	03/11/2005	5.00	5.00	Good	3.00	0.500		1894m	South East
GW105076	10BL161711, 10BL162107, 10BL163813, 10BL603530, 10WA114588	Bore		Domestic		30/04/2003	10.00	10.00		6.00	1.000		1894m	East
GW101933	10BL156973, 10WA113092	Bore		Domestic		11/01/1996	2.20			2.10			1895m	South East
GW113310	10BL163382, 10WA113571	Spear	Private	Domestic		01/01/2004	9.00	9.00			4.000		1896m	South East
GW112904	10BL604599	Bore	Private	Monitoring	Total Drilling	12/05/2011	9.00	9.00		8.10			1897m	East
GW112599	10BL604110	Bore	Private	Monitoring	Macquarie Drilling	13/07/2010	4.50	4.50		3.50			1897m	South
GW112600	10BL604110	Bore	Private	Monitoring	Macquarie Drilling	13/07/2010	4.60	4.60		3.30			1907m	South
GW103774	10BL156600, 10WA113072	Bore		Domestic		12/03/1995	6.00			4.00			1907m	South East
GW017834	10BL008563	Bore	Private	Industrial		01/11/1955	14.90	15.00					1908m	South
GW112603	10BL604110	Bore	Private	Monitoring	Macquarie Drilling	13/07/2010	5.00	5.00		4.00			1915m	South
GW108400	10BL600676, 10WA114193	Spear	Private			15/10/2007	7.01		Good	3.96	1.000		1924m	South East
GW111557	10BL600797, 10WA114224	Spear	Private	Domestic		25/01/2007	8.00	8.00					1926m	South East
GW106328	10BL162970, 10BL162972, 10BL603528, 10WA114586	Bore		Domestic		12/06/2004	9.50	9.50					1927m	East
GW105508	10BL162631, 10WA113462	Bore		Domestic		01/01/2000	7.00				0.050		1930m	South East
GW107881	10BL600088, 10WA114098	Spear		Domestic		20/03/2006	7.00						1932m	South East
GW108403	10BL600688, 10WA114196	Spear	Private	Domestic		15/12/2006	5.00	5.00					1933m	South East
GW111920	10BL602005	Spear	Private	Monitoring		01/01/2007	6.00	6.00		9.00	0.200		1934m	South
GW108418	10BL600796, 10WA114223	Spear	Private	Domestic		30/01/2007	6.00	6.00					1935m	South East
GW113144	10BL604599	Bore	Private	Monitoring	Total Drilling	12/05/2011	9.75	9.75					1938m	East
GW108734	10BL601448, 10WA114352	Spear	Private	Domestic		19/03/2007	6.10	6.10	Good		1.000		1945m	South East
GW111408	10BL604530	Bore	Private	Monitoring	Terratest Pty Ltd	05/02/2011	4.40	4.40		2.07			1952m	North West
GW113145	10BL604599	Bore	Private	Monitoring	Total Drilling	13/05/2011	9.70	9.74					1954m	East
GW105040	10BL161099, 10WA113326	Bore		Domestic		20/03/2003	8.00	8.00		5.00	1.000		1968m	South East
GW109118	10BL602249, 10WA114472	Bore	Private	Domestic		25/07/2008	7.63		Good	3.05	1.000		1969m	South East
GW038046	10BL102456, 10CA114621	Bore	Local Govt	Recreation		01/11/1974	24.30	24.40	Good				1972m	East
GW109946	10BL602187, 10WA114462	Spear	Private	Domestic	B & B Drilling Inc	05/02/2009	5.00	5.00	Good	2.00	0.500		1973m	South East
GW104945	10BL160495, 10WA113317	Bore	Private	Domestic		08/02/2000	7.32	7.32		4.27	1.000		1975m	South East
GW108703	10BL601650, 10WA114398	Bore	Private	Domestic		01/01/1982	8.00				40.00 0		1983m	South East
GW106028	10BL162949, 10WA113511	Spear	Private	Domestic	B & B Drilling Inc	21/06/2004	5.00	5.00	Good	3.00	0.500		1985m	South East
GW104832	10BL161176, 10WA113329	Bore	Private	Domestic		07/12/2000	7.32	7.32		3.96	1.250		1988m	South East
GW101728	10BL157144, 10WA113118	Bore		Domestic		10/10/1995	4.58	4.58	Good	1.52	1.000		1991m	South East
GW110538	10BL603119, 10WA114570	Spear	Private	Domestic		08/09/2009	8.00	8.00					1998m	South East

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

Hydrogeology & Groundwater

Waterloo Precinct, Waterloo, NSW 2017

Driller's Logs

Drill log data relevant to the boreholes within 2km of the site:

Groundwater No	Drillers Log	Distance	Direction
GW106192	0.00m-0.30m topsoil 0.30m-2.20m sand, yellow 2.20m-2.30m rock, coffee 2.30m-4.50m sand, brown 4.50m-6.00m sand, grey	152m	South West
GW111958	0.00m-0.32m CONCRETE 0.32m-1.40m FILL, LOOSE, DARK GREY/BLACK CLAYEY SAND AND SANDSTONE 1.40m-6.00m SAND, LOOSE WHITE FINE GRAINED	282m	South
GW071907	0.00m-3.00m SANDY CLAY 3.00m-8.50m CLAY 8.50m-24.00m SHALE 24.00m-24.50m SANDSTONE GREY 24.50m-24.70m SANDSTONE GREY FRACTURED 24.70m-44.00m SANDSTONE GREY 44.00m-55.00m SANDSTONE QUARTZ 55.00m-55.50m SANDSTONE GREY FRACTURED 55.50m-82.00m SANDSTONE GREY 82.00m-85.00m SANDSTONE QUARTZ 85.00m-128.00m SANDSTONE GREY 128.00m-130.00m SANDSTONE QUARTZ 130.00m-138.00m SANDSTONE GREY 138.00m-154.00m SANDSTONE QUARTZ 154.00m-180.00m SANDSTONE GREY	486m	North East
GW111959	0.00m-1.20m FILL, DENSE FINE GRAINED/BROWN 1.20m-2.20m CLAY SILTY, DENSE, RED/BROWN 2.20m-3.00m CLAY SILTY SANDY, DENSE, DARK BROWN 3.00m-3.50m SAND SILTY, DENSE FINE GRAINED 3.50m-5.60m SAND, DENSE, FINE GRAINED L/BROWN 5.60m-6.00m CLAY, DENSE, FINE GRAINED RED/YELLOW	678m	South East
GW111960	0.00m-1.60m FILL, SILTY SAND, GREY/BROWN 1.60m-2.80m CLAY, DENSE FINE GRAIN, YELLOW BROWN 2.80m-6.60m SAND, SILTY, DENSE LIGHT BROWN	735m	South East
GW109744	0.00m-0.60m SANDY GRAVEL, FILL, BLACK, RED, BROWN, LOOSE, MOIST/BRICK/SANDSTONE 0.60m-0.80m SILTY SAND, BLACK, LOOSE, MOIST 0.80m-2.00m SAND, GREY/BROWN, LOOSE, MOIST TO SATURATED, WELL ROUNDED 2.00m-3.60m SILTY SAND, ORANGE, BROWN TO BLACK, SATURATED, WITH PEAT 3.60m-4.00m SANDY CLAY, LIGHT GREY, MOIST, HIGH PLASTICITY	787m	East
GW109751	0.00m-0.10m CONCRETE 120mm 0.10m-0.90m SANDY GRAVEL, FILL, BROWN, LOOSE, SLIGHTLY MOIST 0.90m-1.50m SAND, GREY TO BROWN, LOOSE TO DENSE, MOIST TO VERY MOIST 1.50m-1.90m HUMIC CEMENTED SAND (COFFEE ROCK) 1.90m-3.20m SAND, RED, BROWN TO BROWN, LOOSE TO DENSE, V/MOIST TO SATURATED 3.20m-3.50m CLAY, YELLOW BROWN, VERY STIFF, MOIST, M/TO HIGH PLASTICITY/SAND	804m	East
GW109745	0.00m-1.20m SANDY GRAVEL, BLACK, WHITE, ORANGE, LOOSE, MOIST WITH ASH, CONCRETE, BRICK AND SANDSTONE 1.20m-2.80m SAND, GREY TO ORANGE, BROWN, LOOSE TO DENSE, MOIST TO SATURATED, WELL GRADED 2.80m-3.00m CLAYEY SAND, ORANGE, BROWN, DENSE, SATURATED, WELL GRADED 3.00m-3.50m CLAY, GREY/RED, VERY STIFF, MOIST, LOW PLASTICITY.	809m	East
GW109746	0.00m-1.00m GRAVELY SAND, FILL, BROWN/RED, LOOSE, MOIST, CONCRETE, SANDSTONE 1.00m-2.40m SAND, GREY TO ORANGE, BROWN, LOOSE, MOIST TO SATURATED 2.40m-2.80m SILTY SAND, BLACK, LOOSE, SATURATED 2.80m-3.80m SAND, BROWN, LOOSE, SATURATED, WELL ROUNDED, WELL GRADED 3.80m-4.20m CLAY, GREY, VERY STIFF, SLIGHTLY MOIST TO MOIST, LOW PLASTICITY.	812m	East
GW109750	0.00m-0.10m CONCRETE 150mm 0.10m-0.30m SANDY GRAVEL, LOOSE, SLIGHTLY MOIST 0.30m-3.00m SAND, GREY, LOOSE, MOIST TO SATURATED, WELL, ROUNDED AND GRADED 3.00m-3.50m CLAY, LIGHT GREY, VERY STIFF, SLIGHTLY MOIST TO MOIST, M/H PLASTICITY	831m	East

Groundwater No	Drillers Log	Distance	Direction
GW111016	0.00m-0.20m CONCRETE 180 mm 0.20m-1.00m SAND, GRAVELLY CLAYEY, FILL, SANDSTONE 1.00m-3.40m SAND, SILTY, MEDIUM, DENSE, MOIST 3.40m-3.50m SAND, DENSE, SATURATED, YELLOW, MINOR CLAY 3.50m-4.40m SAND, CLAYEY, LOOSE TO MED. DENSE 4.40m-4.50m CLAY, GRAVELLY SILTY, FIRM, VERY MOIST	834m	East
GW109747	0.00m-0.10m CONCRETE 140mm 0.10m-0.30m SANDY CLAY WITH GRAVEL, FILL, LIGHT BROWN, SOFT, MOIST 0.30m-0.50m CONCRETE 130mm 0.50m-0.70m SANDY CLAY WITH GRAVEL, FILL, BROWN, ORANGE, RED, SOFT, MOIST 0.70m-3.20m SAND, GREY, LOOSE, MOIST TO SATURATED, WELL ROUNDED, WELL GRADED 3.20m-3.40m SANDY CLAY, YELLOW, BROWN, SOFT, SATURATED 3.40m-3.80m CLAY, GREY, RED, STIFF, SLIGHTLY MOIST, LOW PLATICITY, MINOR SAND	836m	East
GW109749	0.00m-1.00m SANDY GRAVEL (FILL), BLACK/BROWN, LOOSE, MOIST 1.00m-2.50m SAND, GREY, LOOSE, VERY MOIST TO SATURATED WELL ROUNDED & GRADED 2.50m-3.30m SILTY SAND, BROWN, TO GREY, VERY DENSE, SATURATED 3.30m-4.20m SAND, VERY DENSE, BROWN, SATURATED, COFFEE ROCK 4.20m-4.50m SILTY CLAY, DARK GREY, VERY STIFF, MOIST, LOW PLASTICITY	836m	East
GW017684	0.00m-2.43m Sand Peaty Fossils:peat 2.43m-6.40m Sand White Water Supply 6.40m-6.70m Sand Hard Cemented 6.70m-10.05m Sand Light Yellow Water Supply 10.05m-10.66m Clay White Grey 10.66m-11.58m Sand Grey Water Supply 11.58m-12.19m Clay Grey Some Peaty 12.19m-14.93m Sand Grey Water Supply	837m	South
GW017342	0.00m-0.30m Made Ground 0.30m-2.74m Sand Peaty 2.74m-2.89m Peat 2.89m-7.31m Sand Grey Oozy Wet 7.31m-10.05m Sand Water Supply 10.05m-13.25m Sand Grey Water Supply 13.25m-14.17m Peat 14.17m-14.32m Clay Grey 14.32m-15.54m Sand Grey Water Supply	847m	South
GW109748	0.00m-0.20m CONCRETE 160mm 0.20m-0.40m SANDY SILT WITH GRAVEL, FILL, BROWN, SOFT, SLIGHTLY MOIST TO MOIST 0.40m-3.20m SAND, YELLOW, BROWN, LOOSE, MOIST TO SATURATED, WELL ROUNDED 3.20m-3.80m CLAY, GREY, RED, SOFT TO STIFF, MOIST, LOW TO MEDIUM PLASTICITY, WITH MINOR SAND	863m	East
GW109752	0.00m-0.80m SANDY SILT WITH GRAVEL, BLACK, BROWN, RED, SOFT, SLIGHTLY MOIST 0.80m-1.00m BLACK STAINED FILL 1.00m-2.80m SAND, BROWN, LOOSE TO DENSE, VERY MOIST TO SATURATED, WELL ROUNDED AND GRADED 2.80m-3.40m CLAY, LIGHT GREY, VERY STIFF, MOIST, M/H PLASTICITY, MINOR SAND	866m	East
GW111406	0.00m-0.12m CONCRETE SLAB 0.12m-0.60m GRAVELLY SILT, DARK BROWN, DRY, LOOSE 0.60m-1.20m GRAVELLY CLAY, FILL, ORANGE BROWN 1.20m-2.30m SILTY SAND, LIGHT GREY/BROWN 2.30m-2.60m CLAY DARK GREY, VERY MOIST 2.60m-3.40m SANDY CLAY DARK GREY 3.40m-4.50m CLAY LIGHT BROWN, TO L/GREY 4.50m-4.80m CLAY RED BROWN, MOIST, L/PLASTICITY, HARD	881m	East
GW111405	0.00m-0.13m CONCRETE SLAB 0.13m-0.25m SAND FILL, LIGHT ORANGE BROWN 0.25m-0.85m GRAVELLY SAND, FILL, BLACK, MOIST, VERY DENSE 0.85m-1.10m GRAVELLY CLAY (FILL) 1.10m-1.20m SAND FILL RED BROWN 1.20m-2.30m SILTY SAND, FILL, MINOR CLAY 2.30m-3.30m SAND, DARK BROWN, SATURATED, M/GRAINED 3.30m-4.00m SILTY SAND LIGHT GREY 4.00m-4.80m CLAY LIGHT GREY, MOIST, MED. TO HIGH PLASTICITY	885m	East
GW111081	0.00m-0.25m CONCRETE SLAB 0.25m-0.90m SAND, FILL, DRY, GREY, NO ODOUR 0.90m-2.80m SILTY SAND, GRAVEL BITS, VERY MOIST, BROWN 2.80m-3.40m SANDY SILT, GRAVEL BITS 3.40m-4.00m SANDY SILT, MOIST, DARK BROWN	913m	East
GW111080	0.00m-0.20m CONCRETE SLAB 0.20m-0.60m SAND, FILL, MOIST, BROWN 0.60m-2.00m SILTY SAND, MOIST, BROWN, SLIGHT ODOUR 2.00m-4.00m SANDY SILT, SATURATED, L/PLASTICITY, GREY BLACK 4.00m-4.50m SANDY CLAY, MOIST, M/PLASTICITY 4.50m-5.00m CLAY, HIGH PLASTICITY, VERY MOIST, GREY	923m	East
GW111014	0.00m-0.20m CONCRETE 0.20m-3.70m SAND 3.70m-6.10m SILTY SAND 6.10m-6.50m CLAY, GRAVELLY, SANDY, MOIST, IRONSTONE, GRAVEL	942m	East

Groundwater No	Drillers Log	Distance	Direction
GW109789	0.00m-0.10m CONCRETE 0.10m-2.00m FILL,MAINLY GRAVEL,COARSE SAND AND SILTY CLAY 2.00m-3.00m CLAY,SILTY,GREY,GREEN, SOFT, DAMP, LOW PLASTICITY 3.00m-5.00m WEATHERED SHALE,GREY,DARK RED,FIRM, DAMP	967m	South
GW111015	0.00m-0.30m CONCRETE 0.30m-1.00m SAND,GRAVELLY,SILTY,SANDSTONE AND ASH 1.00m-3.50m SAND, SILTY,M/DENSE 3.50m-4.40m SAND,GRAVELLY,DENSE,SATURATED,YELLOW 4.40m-4.80m SILTY SAND 4.80m-5.40m SAND,GRAVELLY,DENSE,SATURATED,YELLOW 5.40m-6.60m SAND,CLAYEY, MEDIUM DENSE,PALE,GREY 6.60m-7.00m CLAY,SANDY,SILTY,STIFF,MOIST	971m	East
GW109792	0.00m-0.20m CONCRETE 0.20m-1.00m FILL,BRICKS,SAND,GRAVELS,DAMP-WET 1.00m-1.50m FILL,MAINLY SAND,BROWN,LOOSE,DAMP 1.50m-2.50m FILL,SAND,GRAVEL,BROWN, DAMP TO MOIS 2.50m-3.50m SILT,SANDY,GREY,DAMP,SOFT 3.50m-4.20m CLAY,REDDISH BROWN,DAMP,FIRM,MEDIUM PLASTICITY	1004m	South
GW109790	0.00m-0.10m CONCRETE ,TWO LAYERS 0.10m-1.00m FILL,VARIOUS COLOURS/MATERIALS,DAMP,GRAVELLY SAND 1.00m-2.00m FILL,VARIOUS MATERIALS,DARK GREY,DAMP TO MOIST 2.00m-3.00m CLAY,LIGHT BROWN,GREY,DAMP,FIRM TO SOFT 3.00m-4.00m WEATHERED SHALE.GREY/DARK RED,DAMP,FIRM	1008m	South
GW109791	0.00m-0.20m CONCRETE 0.20m-2.00m FILL,MAINLY SAND,SOME BRICK AND GRAVEL 2.00m-3.00m FILL,MAINLY SAND, SOME CLAY, BROWNISH YELLOW TO BLACK 3.00m-4.10m CLAY,YELLOWISH BROWN,DAMP,FIRM,MEDIUM PLATICITY	1011m	South
GW111434	0.00m-0.50m FILL, SILTY SAND,FINE TO MEDIUM GRAINED 0.50m-2.00m SAND,FINE TO MEDIUM GRAINED,BROWN,TACE OF SILT 2.00m-8.00m SAND FINE TO MEDIUM GRAINED,BROWN	1043m	East
GW111433	0.00m-2.00m FILL,SILTY,GRAVELLY SAND 2.00m-7.00m SAND, LIGHT BROWN,GREY,BROWN	1073m	East
GW112478	0.00m-1.80m Fil; grey-brown, fine-medium graied, gravelly Sand 1.80m-4.50m Clay; sandy, grey-brown, stiff, high plasticity	1099m	South
GW112479	0.00m-3.70m Fill; gravelly clayey Sand, grey-brown, fine-medium grained, poorly sorted 3.70m-5.50m Fill; Sand, dark grey, fine-medium grained, well sorted, homogenous 5.50m-7.00m Clay, Silty; mottled grey & brown, stiff, high plasticity, homogenous	1099m	South
GW112480	0.00m-3.20m Fill; gravelly clayey Sand, grey-brown, heterogeneous, damp, fine-medium grained, poorly sorted 3.20m-4.60m Fill; Sand, grey-rown, homogenous, damp, fine-medium grained, well sorted 4.60m-7.00m Clay, Silty; grey & brown, mottled, homogenous, stiff, high plasticity	1111m	South
GW037956	0.00m-2.59m Made Ground 2.59m-3.04m Sand Grey 3.04m-5.02m Sand Yellow Clean 5.02m-6.40m Sand Yellow Clean Wet 6.40m-7.84m Sand Hard Cemented Very Fine 7.84m-7.92m Sand Hard Cemented 7.92m-10.51m Sand Yellow Water Supply 10.51m-11.73m Sand Dirty Water Supply 11.73m-11.81m Sand Hard Cemented 11.81m-13.56m Sand Grey Dirty Water Supply 13.56m-15.24m Sand Yellow Clean 15.24m-15.84m Clay Organic 15.84m-18.13m Sand Grey Water Supply 18.13m-20.11m Sand White Clean Water Supply 20.11m-21.10m Clay Dark Grey Water Supply	1170m	East
GW111164	0.00m-8.00m SAND	1170m	South West
GW108245	0.00m-0.75m SANDSTONE ROCKS & FILL 0.75m-2.00m SAND AND RUBBISH 2.00m-5.00m SAND AND HEAVY PEAT 5.00m-13.00m SAND 13.00m-19.90m SAND WITH PEAT LAYERS 19.90m-20.80m SANDSTONE GREY	1255m	East

Groundwater No	Drillers Log	Distance	Direction
GW110247	0.00m-2.00m CLAY BROWN 2.00m-4.50m CLAY GREY 4.50m-22.00m SHALE GREY 22.00m-23.00m SHALE SOFT 23.00m-33.00m SHALE HARD 33.00m-74.00m SANDSTONE GREY 74.00m-76.00m SANDSTONE AND QUARTZ FINE 76.00m-134.00m SANDSTONE GREY 134.00m-135.50m SANDSTONE QUARTZ FINE 135.50m-153.50m SANDSTONE GREY 153.50m-154.00m SANDSTONE QUARTZ FINE 154.00m-168.00m SANDSTONE GREY 168.00m-170.00m SANDSTONE SHALE BEDDING 170.00m-188.00m SANDSTONE GREY 188.00m-188.50m SANDSTONE QUARTZ 188.50m-210.00m SANDSTONE GREY	1272m	North West
GW017869	0.00m-1.82m Made Ground 1.82m-3.65m Sand Dry Water Supply 3.65m-10.97m Sand Water Supply 10.97m-11.58m Clay Sandy Peat 11.58m-12.19m Sand Grey Water Supply 12.19m-12.80m Sand Grey Dirty Water Supply 12.80m-13.71m Sand Grey Peaty Water Supply 13.71m-14.93m Sand Dirty Water Supply 14.93m-16.15m Sand Water Supply Clay Peat 16.15m-16.45m Sand Water Supply 16.45m-16.76m Clay Water Supply 16.76m-17.37m Sand Grey Clean Water Supply 17.37m-17.98m Peat	1299m	East
GW017870	0.00m-5.18m Made Ground 5.18m-6.70m Sand Dry Packed 6.70m-8.83m Sand White Water Supply 8.83m-10.05m Sand 10.05m-10.97m Sand Hard Cemented 10.97m-13.10m Sand Dirty Water Supply 13.10m-14.63m Sand Grey Water Supply 14.63m-14.93m Sand Grey Peaty 14.93m-16.76m Sand Grey Water Supply 16.76m-17.98m Clay	1323m	East
GW017340	0.00m-15.24m Made Ground Sand 15.24m-18.59m Clay Water Supply Sand Peaty	1349m	East
GW104266	0.00m-2.60m BLACK SANDY CLAY/ROCK FILL 2.60m-4.60m DARK GREY SANDY CLAY/GRAVEL 4.60m-6.60m LT. BROWN FINE SAND 6.60m-8.60m LIGHT BROWN FINE SAND 8.60m-10.60m WHITE FINE SAND 10.60m-12.60m WHITE FINE SAND 12.60m-14.60m WHITE SANDY CLAY 14.60m-16.60m BROWN SANDY CLAY 20% 16.60m-18.60m BROWN SANDY CLAY 50% 18.60m-20.60m BROWN SANDY CLAY 70% 20.60m-22.60m PEAT 22.60m-24.60m DENSE PEAT 24.60m-26.60m DENSE PEAT 26.60m-28.60m LIGHT PEAT 28.60m-30.60m GREY CLAY 30.60m-32.60m GREY CLAY 32.60m-34.60m SANDY CLAY 34.60m-35.60m WEATHERED GREY TO HARD SANDSTONE	1383m	East
GW114563	0.00m-0.08m ASPHALT 0.08m-0.21m CONCRETE 0.21m-0.31m SAND LIGHT BROWN, SOFT 0.31m-0.99m SILTY SAND,DARK BROWN MG SOFT 0.99m-1.23m SANDY CLAY BROWN SOFT FG 1.23m-1.31m SANDY CLAY BROWN SOFT FG 1.31m-1.95m SAND LIGHT BROWN SOFT 1.95m-2.52m CLAYEY SAND,DARK BROWN SOFT 2.52m-2.80m CLAY DARK BROWN SOFT 2.80m-3.34m CLAYEY SAND, DADRK BROWN SOFT 3.34m-3.54m CLAY, DARK BROWN SOFT 3.54m-3.90m CLAY, DARK BROWN SOFT	1384m	South West
GW114561	0.00m-0.15m ASPHALT 0.15m-0.21m CONCRETE 0.22m-0.50m SILTY SAND BLACK ,CG,SOFT 0.50m-1.00m SAND GREY BROWN CG BROWN 1.00m-1.50m SAND WHITE CG SOFT 1.50m-1.60m SANDY CLAY BLACK SOFT 1.60m-2.15m SAND GREY CG SOFT 2.15m-2.70m SAND BROWN,CG,SOFT	1401m	South West

Groundwater No	Drillers Log	Distance	Direction
GW114562	0.00m-0.05m ASPHALT 0.05m-0.18m CONCRETE 0.18m-0.58m SILTY SAND DARK BROWN MG.SOFT 0.58m-0.75m SAND, LIGHT BROWN, soft 0.75m-0.95m SILTY SAND DARK BROWN MG.SOFT 0.95m-1.05m SAND,WHITE ORANGE MOTTLED,SOFT 1.05m-1.55m GRAVELLY SAND, LIGHT BROWN SOFT 1.55m-1.75m SAND ORANGE SOFT 1.75m-2.25m CLAY DARK BROWN FG, SOFT 2.25m-2.70m SILTY CLAY DARK BROWN FG SOFT	1402m	South West
GW048937	0.00m-2.74m Made Ground 2.74m-12.19m Sand Light Brown Water Supply 12.19m-13.72m Sand Dirty Water Supply 13.72m-16.76m Sand Dirty Clay Bands Interlayere Water Supply 16.76m-17.98m Sand Water Supply 17.98m-22.71m Sand White Water Supply 22.71m-24.38m Clay Grey	1404m	East
GW109730	0.00m-0.50m TOPSOIL 0.50m-1.00m CLAY ORANGE,MOIST,FIRM, MODERATE PLASTICITY 1.00m-1.50m CLAY,ORANGE/GREY,VERY STIFF,MODERATE PLASTICITY 1.50m-2.00m CLAY,ORANGE/GREY,VERY STIFF,MODERATE PLASTICITY3 2.00m-3.00m CLAY,GREY,RED,VRY STIFF,NON PLASTIC,DAMP 3.00m-4.00m CLAY,GREY,RED,VRY STIFF,NON PLASTIC 4.00m-4.50m CLAY,GREY/RED,SOME GRAVEL,NON PLASTIC,DAMP 4.50m-5.00m CLAY,WATER AT 4.5m 5.00m-5.50m CLAY,GRAVELLY,GREY/RED,WET,NON PLASTIC,HETEROGENOUS,STIFF 5.50m-6.50m CLAY,BROWN,GREY,WET,HOMOGENOUS	1435m	West
GW104125	0.00m-1.00m SAND,LT,BROWN,LOAMY 1.00m-5.30m SAND,LT,BROWN 5.30m-8.10m SAND,LT BROWN 8.10m-14.20m PEAT,BLACK 14.20m-15.20m SAND, WHITE 15.20m-18.00m PEAT,BLACK 18.00m-22.00m CLAY,GREY,SANDY	1438m	South East
GW107134	0.00m-7.00m sand	1439m	South East
GW109733	0.00m-0.80m FILL,CLAY,SILTY SOIL,CEMENT,GRAVELS,HARD IN GROUND,DRY,NO ODOUR 0.80m-1.50m CLAY,BLACK/GREY SMEARING AND STAINING IN SOIL,HIGH PLASTICITY 1.50m-2.00m CLAY,NATURAL RED COLOURING BECOMING APPARAENT IN SOIL,DRY 2.00m-2.40m CLAY,RED SOIL COLOURING,NO ODOUR	1442m	West
GW203385	0.00m-0.05m Fill; Asphalt 0.05m-1.10m Sand; Fill, brown sand with a trace of sandstone gravels, fine to medium grained, dry 1.10m-2.80m Sand; grey, fine, grained, moist from 2m, saturated @ 2.5m 2.80m-3.50m Peat; black peat, saturated 3.50m-6.20m Sand; dark brown, natural	1445m	South East
GW107133	0.00m-7.00m sand	1449m	South East
GW109729	0.00m-0.20m PAVERS,CONCRETE 0.20m-0.70m FILL,CLAY,SILTY SOIL, BROWN,BLACK,HARD IN GROUND,DRY,NO ODOUR 0.70m-1.80m CLAY,TIGHT,LIGHT BROWN,HIGH PLASTICITY,DRY,NO ODOUR 1.80m-3.00m CLAY,RED COLOUR,NO ODOUR,DRY 3.00m-4.00m CLAY,NO ODOUR,DRY 4.00m-6.00m CLAY,VERY HOMOGENEOUS	1449m	West
GW109732	0.00m-0.10m TOPSOIL,SILTY,BLACK,LOOSE,FINE GRAIN,DRY,NO ODOUR 0.10m-1.20m CLAY,LIGHT BROWN,STICKY,STIFF,HIGH PLASTICITY,NO ODOUR 1.20m-2.00m CLAY,RED,ORANGE,STIFF,MODERATE PLASTICITY,DRY,NO ODOUR 2.00m-3.30m CLAY BECOMING LESS PLASTIC,BRITTLE AND DRY WITH DEPTH 3.30m-4.30m CLAY,GREY,WITH IRONSTONE BANDS, SOFT, STIFF,HIGH PLASTICITY,GREY CLAY	1454m	West
GW051725	0.00m-0.70m Made Ground 0.70m-3.50m Sand Dark Brown Fine-medium 3.50m-8.00m Sand Greyish Light Brown Fine-medium	1456m	South
GW109731	0.00m-0.50m TOPSOIL,BROWN,DRY,HETEROGENOUS 0.50m-1.00m FILL.SLAG,BLACK,RESIDUAL WHITE CLAY. 1.00m-1.50m CLAY,BROWN,RED,STIFF,NON PLASTIC,DAMP 1.50m-2.00m CLAY, RED/BROWN,STIFF,;NON PLASTIC 2.00m-2.50m CLAY,RED/GREY,STIFF,PLASTIC, DAMP 2.50m-3.00m CLAY,RED/GREY,STIFF,NON PLASTIC 3.00m-4.00m CLAY,RED/GREY,STIFF,NON PLASTIC 4.00m-5.00m CLAY,RED/GREY,STIFF,ON PLASTIC 5.00m-5.50m CLAY,VERY STIFF,NON PLASTIC. 5.50m-6.00m CLAY,BROWN,LOOSE,SOFT,MOIST	1458m	West
GW203386	0.00m-0.05m Fill; Asphalt 0.05m-1.10m Sand; Fill, brown sand with a trace of sandstone pieces/gravel, fine to medium grained, dry 1.10m-2.80m Sand; grey, fine grained, moist from 2m, saturated @ 2.5m	1463m	South East
GW203387	0.00m-0.40m Sand; fill, red/brown with a trace of sandstone gravels, fine to medium grained 0.40m-1.00m Sand, Silty; fille, dark brown silty sand, fine grained with some bricks & pieces, dry 1.00m-3.00m Sand; natural light grey/white sand, fine grained, dry 3.00m-7.00m Sand; natural, light grey/white sand, fine grained, moist - saturated	1463m	South East

Groundwater No	Drillers Log	Distance	Direction
GW051728	0.00m-1.00m Made Ground 1.00m-3.80m Sand Fine-medium Some Fine 3.80m-8.30m Sand Greyish Grey Fine-medium	1468m	South East
GW107135	0.00m-7.00m Sand	1472m	South East
GW109646	0.00m-0.80m FILL,LT GREY,SAND,CONCRETE,BRICK,METAL FRAG. 0.80m-2.80m SILTY CLAY,BROWN,GREY,MED PLASTICITY 2.80m-5.00m CLAYEY SAND,GREY/DARK GREY 5.00m-8.00m SILTY SAND,LT GREY/RED 8.00m-8.20m SANDSTONE,RED,BROWN,WEATHERED,CLAY BANDS	1473m	North
GW051726	0.00m-0.80m Made Ground 0.80m-3.20m Sand Grey Yellow Yellowish Fine-medium Interlayere 3.20m-8.00m Sand Light Brown Grey Fine-medium	1493m	South
GW105525	0.00m-2.75m SANDY CLAY,SOIL LAND FILL 2.75m-5.49m UNCONSOLIDATED ALL SANDS	1501m	East
GW109648	0.00m-2.90m FILL,BROWN/GREY,LOOSE GRAVEL,CONCRETE,SAND 2.90m-4.90m SILTY CLAY,LT GREY,MOTT.BROWN HIGH PLASTICITY 4.90m-5.80m SILTY SAND,LT GREY,MED COURSE GRAINED 5.80m-6.20m SANDSTONE,RED,BROWN,WEATHERED,CLAY BANDS	1509m	North
GW051727	0.00m-0.60m Made Ground 0.60m-4.60m Sand Yellow Dark Brown Fine-medium 4.60m-8.00m Sand Light Brown Fine-medium	1523m	South
GW105529	0.00m-2.00m FILL,SILTY SAND/GRAVEL 2.00m-5.00m SAND,BEIGE/BROWN/YELLOW MOT.	1529m	South
GW109649	0.00m-4.80m FILL,GREY,BROWN,GRAVEL,CLAY,SILT 4.80m-5.90m SILTY SAND,LT GREY,RED,MED COARSE GRAINED 5.90m-7.20m SANDSTONE RED BROWN,WEATHERED WITH CLAY BANDS	1531m	North
GW105317	0.00m-1.10m FILL,SILTY, SANDY CLAY 1.10m-6.50m SILTY CLAY,HIGH PLASTICITY	1546m	West
GW106004	0.00m-0.30m fill 0.30m-10.80m sand 10.80m-11.50m sand, peat 11.50m-16.50m sand 16.50m-17.00m sand, peat 17.00m-19.00m sand 19.00m-21.00m peat 21.00m-23.20m peat, sand	1548m	South East
GW105527	0.00m-0.80m FILL,SANDY GRAVEL 0.80m-2.10m SAND,MEDIUM GRAINED,BROWN/YELLOW 2.10m-5.00m SAND,MEDIUM GRAINED,YELLOW/WHITE	1558m	South
GW072622	0.00m-1.00m FILL, ROCKS & SAND 1.00m-1.50m YELLOW SAND 1.50m-2.80m PEATY SAND 2.80m-8.30m YELLOW SAND 8.30m-11.00m DARK BROWN PEATY SAND 11.00m-11.50m BLACK PEATY SAND 11.50m-14.20m BROWN PEATY SAND 14.20m-15.30m PEAT 15.30m-16.00m STIFF GREY CLAY	1564m	South East
GW111487	0.00m-0.10m FILL CONCRETE CORE 0.10m-0.50m GRAVEL AND SAND 0.50m-2.40m SAND,NATURAL BROWN,M/GRAINED	1578m	South East
GW111486	0.00m-0.10m FILL CONCRETE CORE 0.10m-0.50m GRAVEL AND SAND ,MINOR CLAY 0.50m-2.00m SAND NATURAL BROWN M/GRAINED	1580m	South East
GW051729	0.00m-0.80m Made Ground 0.80m-1.80m Sand Light Brown Fine-medium Some Fine 1.80m-5.70m Sand Dark Brown Fine-medium 5.70m-8.50m Sand Light Brown Fine-medium	1582m	South East
GW017345	0.00m-0.60m Made Ground 0.60m-2.43m Sand Grey 2.43m-2.74m Wood 2.74m-4.26m Sand Wood 4.26m-6.70m Sand White Hard 6.70m-7.92m Sand White Hard Clay 7.92m-13.41m Sand Water Supply 13.41m-13.71m Clay	1592m	South East
GW051730	0.00m-3.30m Sand Reddish Fine-medium Some Fine 3.30m-8.30m Sand Greyish Light Brown Fine-medium	1592m	South
GW024118	0.00m-0.91m Sand Black 0.91m-3.04m Sand White Water Supply	1598m	South East

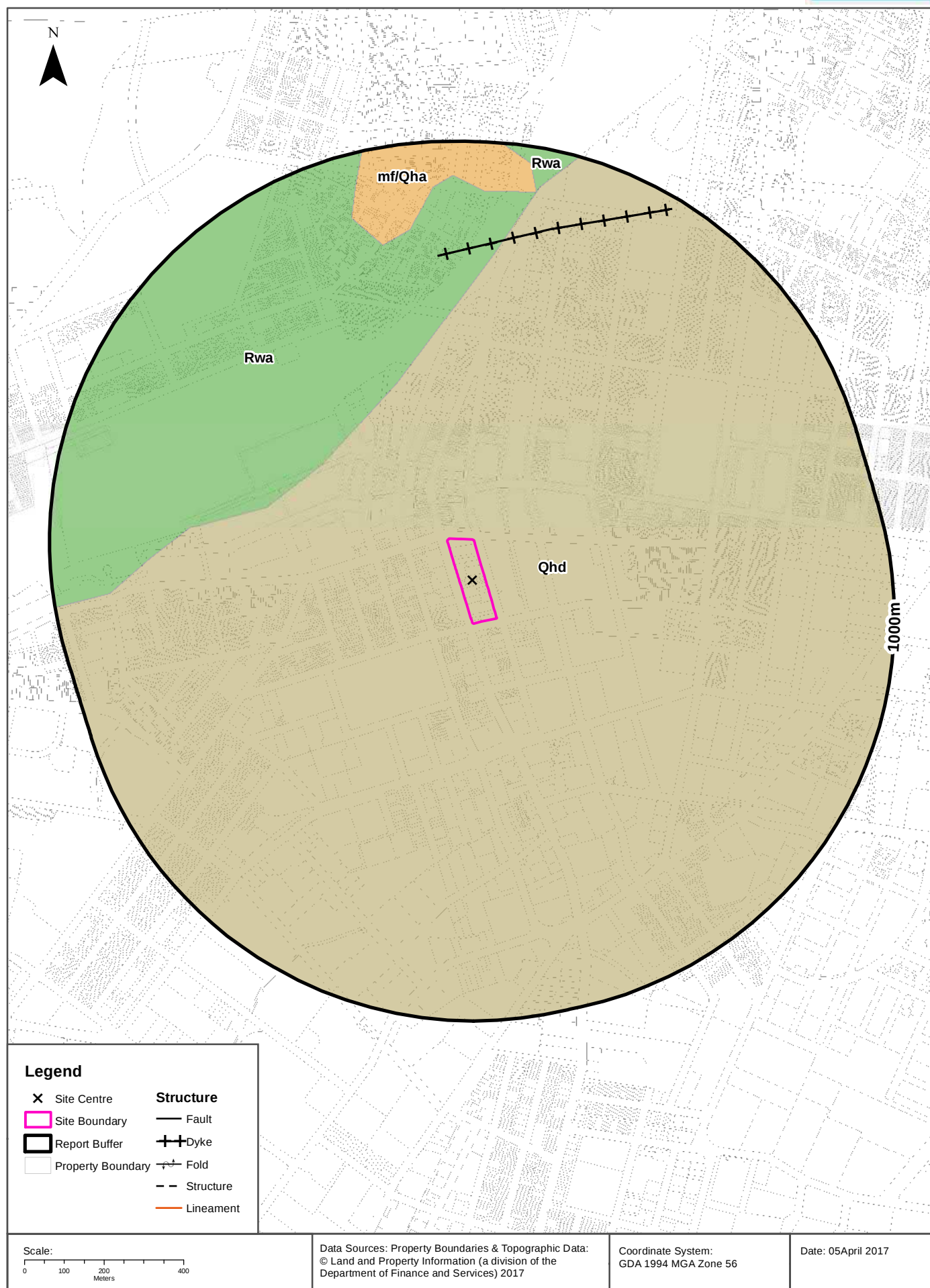
Groundwater No	Drillers Log	Distance	Direction
GW105747	0.00m-8.23m sand, unconsolidated	1601m	South East
GW111488	0.00m-0.10m FILL, CONCRETE CORE 0.10m-1.00m FILL, GRAVELLY ROAD BASE, GREY, SAND BROWN 1.00m-1.60m CLAY SANDY, GRAVELLY, BROWN, DRY, SAND M/GRAINED 1.60m-3.00m SAND NATURAL, YELLOW, FINE TO MED. GRAINED	1602m	South East
GW105528	0.00m-1.00m SAND, GREY, SOME GRAVEL, CLAY WET 1.00m-1.50m GRAVELLY CLAY, YELLOW BROWN 1.50m-2.50m SANDY SILT, BLACK 2.50m-4.00m SAND, L/BROWN, GREY 4.00m-5.00m SAND GREY, L/BROWN	1612m	South
GW013514	0.00m-9.14m Sand Water Supply	1623m	South
GW106058	0.00m-7.50m sand	1658m	South East
GW100546	0.00m-14.50m BOTANY BAY SANDS	1664m	East
GW106030	0.00m-1.00m fill 1.00m-4.00m sand, small rocks 4.00m-8.80m sand 8.80m-8.90m peat 8.90m-9.70m sand 9.70m-11.30m peat & sand 11.30m-13.10m sand 13.10m-13.20m peat 13.20m-14.70m sand 14.70m-14.80m peat 14.80m-19.90m sand 19.90m-20.40m clay 20.40m-20.50m sandstone	1715m	South East
GW026142	0.00m-5.18m Sand Rubble 5.18m-12.49m Sand White Wet Clean Water Supply 12.49m-12.51m Peat Sandy Clay	1727m	South East
GW108846	0.00m-8.00m sand	1729m	South East
GW023585	0.00m-4.57m Sand Water Supply	1736m	South East
GW013629	0.00m-0.60m Topsoil Sandy 0.60m-12.19m Sand White Some Hard Cemented 12.19m-16.76m Sand 16.76m-16.91m Clay Seams 16.91m-21.64m Sand Water Supply 21.64m-21.94m Peat	1745m	South East
GW108491	0.00m-0.30m Topsoil 0.30m-6.50m Sand, yellow 6.50m-7.00m Sand, dark grey	1757m	South East
GW110458	0.00m-0.70m FILL 0.70m-2.80m SANDS	1760m	South
GW100939	0.00m-5.50m UNCONSOLIDATED ALL SANDS	1761m	South East
GW108632	0.00m-7.32m sand	1761m	South East
GW106083	0.00m-0.50m fill 0.50m-11.20m sand 11.20m-11.30m peat 11.30m-19.20m sand 19.20m-20.00m peat siff 20.00m-20.10m sandstone,	1768m	South East
GW106856	0.00m-7.93m sand, unconsolidated	1768m	South East
GW051731	0.00m-0.25m Made Ground 0.25m-2.60m Sand Yellow Fine-medium Some Fine 2.60m-8.00m Sand Greyish Grey Fine-medium	1773m	South
GW114917	0.00m-9.15m UNCONSOLIDATED ALL SANDS	1773m	South East
GW104834	0.00m-5.79m UNCONSOLIDATED ALL SANDS	1776m	South East
GW100359	0.00m-5.50m ALL SAND UNCONSOLIDATED	1791m	South East

Groundwater No	Drillers Log	Distance	Direction
GW017782	0.00m-1.82m Made Ground 1.82m-4.26m Peat 4.26m-4.87m Sand Peaty 4.87m-9.44m Sand 9.44m-10.36m Clay Sandy 10.36m-11.88m Sand Clay 11.88m-14.63m Sand 14.63m-15.54m Sand Clay	1792m	South
GW106110	0.00m-1.80m fill 1.80m-9.00m sand 9.00m-10.50m sand, peat 10.50m-21.00m sand 21.00m-23.20m peat heavy	1793m	South East
GW072328	0.00m-1.00m FELT 1.00m-8.00m PEATY WHITE SAND 8.00m-9.50m BROWN PEATY SAND 9.50m-10.80m PEAT ON CLAY 10.80m-13.00m BROWN PEATY SAND 13.00m-14.00m SHALEY GREY CLAY	1794m	South
GW110456	0.00m-0.30m CONCRETE 0.30m-0.50m FILL 0.50m-0.60m CONCRETE 0.60m-1.80m SILTY SAND 1.80m-3.60m SAND	1796m	South West
GW108653	0.00m-12.00m sand	1798m	South East
GW106182	0.00m-0.30m topsoil 0.30m-3.00m sand, brown silty 3.00m-4.00m sand, light brown	1799m	South East
GW017356	0.00m-30.48m Sand Water Supply	1819m	East
GW072787	0.00m-5.50m Unconsolidated Sand	1822m	South East
GW112385	0.00m-5.49m UNCONSOLIDATE ALL SANDS	1822m	South East
GW106093	0.00m-5.18m sand, unconsolidated	1825m	South East
GW023275	0.00m-5.79m Sand Water Supply	1831m	South East
GW105134	0.00m-5.00m SAND	1831m	South East
GW017729	0.00m-30.48m Sand Water Supply	1833m	East
GW042834	0.00m-1.22m Made Ground 1.22m-10.36m Sand White 10.36m-21.95m Sand White Light Water Supply 21.95m-23.16m Peat Sand Water Supply 23.16m-29.87m Sand Grey Water Supply 29.87m-30.48m Sand Grey Clay Water Supply 30.48m-31.09m Clay Grey	1834m	East
GW110457	0.00m-0.25m CONCRETE 0.25m-0.90m FILL 0.90m-1.70m SANDY SILT, SILT 1.70m-3.60m SAND	1838m	South West
GW025718	0.00m-3.65m Sand Water Supply	1849m	South East
GW106602	0.00m-6.10m sand, unconsolidated	1852m	South East
GW110270	0.00m-0.30m TOPSOIL 0.30m-3.00m YELLOW SAND 3.00m-5.00m SAND, DARK BROWN 5.00m-6.00m SAND, LIGHT BROWN	1852m	South East
GW028844	0.00m-0.30m Topsoil 0.30m-4.57m Sand Yellow 4.57m-6.09m Sand Yellow 4.57m-6.09m Sandstone Decomposed Seams 6.09m-10.66m Sand White Water Supply 10.66m-13.71m Sand Clayey Water Supply 13.71m-13.73m Clay Reddish Stiff Water Supply	1855m	South
GW107551	0.00m-6.71m Sand, unconsolidated	1866m	South East
GW107603	0.00m-7.00m sand	1866m	South East
GW106772	0.00m-5.00m sand	1875m	South East

Groundwater No	Drillers Log	Distance	Direction
GW110539	0.00m-10.00m SAND	1876m	South East
GW112597	0.00m-0.80m FILL, CLAYEY, SANDY GRAVELLY,SANDSTONE 0.80m-1.10m SAND, LIGHT GREY,FINE GRAINED,MOIST 1.10m-3.00m SAND TO DARK BROWN 3.00m-3.90m SAND TO LIGHT BROWN 3.90m-5.00m SAND WET,STRONG HYDROCARBON ODOUR	1880m	South
GW105575	0.00m-7.00m sand	1882m	South East
GW105440	0.00m-5.18m UNCONSOLIDATED ALL SANDS	1889m	South East
GW112602	0.00m-1.50m FILL, CLAYEY,GRAVELLY,BROWN,DRY TO MOIST 1.50m-5.00m SILTY SAND,BROWN TO D/BROWN,WET	1889m	South
GW107213	0.00m-0.30m topsoil 0.30m-1.50m sand, grey 1.50m-3.40m sand, brown 3.40m-6.00m sand, yellow	1890m	South East
GW112601	0.00m-0.30m CONCRETE 0.30m-1.30m FILL SANDY BROWN,SOME SANDSTONE 1.30m-5.00m FILL,SANDY,BROWN COARSE,MOIST,WET	1890m	South
GW112598	0.00m-0.30m CONCRETE 0.30m-1.30m SANDSTONE CRUSHED 1.30m-3.50m SAND,DARK BROWN,FINE TO MEDIUM GRAINED 3.50m-4.50m SAND MOIST TO WET 4.50m-5.00m SAND BROWN TO LIGHT BROWN , WET	1892m	South
GW105076	0.00m-10.00m SAND	1894m	East
GW108440	0.00m-0.30m Topsoil 0.30m-3.50m Sand, yellow 3.50m-5.00m Sand, grey	1894m	South East
GW112397	0.00m-7.32m UNCONSOLIDATED ALL SAND	1894m	South East
GW112599	0.00m-0.30m CONCRETE 0.30m-0.80m GRAVELLY SAND,FILO,DARK BROWN 0.80m-1.60m SAND GREY FINE TO MED. GRAINED 1.60m-3.50m SAND TO DARK BROWN 3.50m-4.50m SAND WET	1897m	South
GW112600	0.00m-0.30m CONCRETE 0.30m-4.60m (Unknown)	1907m	South
GW017834	0.00m-1.22m Sand Dry 1.22m-1.68m Sand Hard Cemented 1.68m-2.44m Sand Some Hard Cemented 2.44m-6.10m Sand Dry Compacted 6.10m-14.17m Sand Grey Yellow Water Supply 14.17m-14.94m Rock Soft Sand Water Supply 14.94m-14.95m Clay	1908m	South
GW112603	0.00m-1.30m FILL, SANDY ,GRAVELLY,,GRAVEL 1.30m-4.00m SILTY SAND, BROWN,M/GRAINED,WELL GRADED 4.00m-5.00m SILTY SAND,DARK BROWN.FINE TO MED. GRAINED	1915m	South
GW111557	0.00m-8.00m ALL SAND	1926m	South East
GW106328	0.00m-9.50m SAND	1927m	East
GW108418	0.00m-6.00m sand	1935m	South East
GW108734	0.00m-6.10m sand	1945m	South East
GW111408	0.00m-0.22m CONCRETE SLAB 0.22m-0.50m GRAVEL ROADBASE 0.50m-1.10m FILLING,GREY BROWN AND GREY,SILTY CLAY 1.10m-4.40m CLAY,GREY,SILTY WITH TRACE OF IRONSTONE,GRAVEL,DAMP	1952m	North West
GW105040	0.00m-8.00m SAND	1968m	South East
GW038046	0.00m-0.30m Sand 0.30m-0.91m Rubble 0.91m-9.14m Sand 9.14m-12.19m Sand Water Supply 12.19m-13.71m Sand White Water Supply 13.71m-18.89m Sand Water Supply 18.89m-19.81m Sand Clay Bands 19.81m-24.38m Sand White Water Supply 24.38m-24.39m Clay Sandy	1972m	East

Groundwater No	Drillers Log	Distance	Direction
GW109946	0.00m-0.30m TOPSOIL 0.30m-3.00m SAND BROWN 3.00m-5.00m SAND YELLOW	1973m	South East
GW104945	0.00m-7.32m UNCONSOLIDATED ALL SANDS	1975m	South East
GW106028	0.00m-0.30m topsoil 0.30m-3.00m sand, yellow 3.00m-5.00m sand, brown	1985m	South East
GW104832	0.00m-7.32m UNCONSOLIDATED ALL SANDS	1988m	South East
GW101728	0.00m-4.58m SAND, UNCONSOLIDATED	1991m	South East
GW110538	0.00m-8.00m SAND	1998m	South East

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

Waterloo Precinct, Waterloo, NSW 2017

Geological Units

What are the Geological Units onsite?

Symbol	Description	Unit Name	Group	Sub Group	Age	Dom Lith	Map Sheet	Dataset
Qhd	Medium to fine-grained marine sand with podsols				Quaternary		Sydney	1:100,000

What are the Geological Units within the report buffer?

Symbol	Description	Unit Name	Group	Sub Group	Age	Dom Lith	Map Sheet	Dataset
mf/Qha	Man-made fill (dredged estuarine sand and mud, demolition rubble, industrial and household waste) overlying silty to peaty quartz sand, silt and clay with ferruginous & humic cementation in places and common shell layers				Quaternary		Sydney	1:100,000
Qhd	Medium to fine-grained marine sand with podsols				Quaternary		Sydney	1:100,000
Rwa	Black to dark grey shale and laminate	Ashfield Shale	Wianamatta Group		Triassic		Sydney	1:100,000

Geological Structures

What are the Geological Structures onsite?

Feature	Name	Description	Map Sheet	Dataset
No features				1:100,000

What are the Geological Structures within the report buffer?

Feature	Name	Description	Map Sheet	Dataset
Dyke			Sydney	1:100,000

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

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Naturally Occurring Asbestos Potential

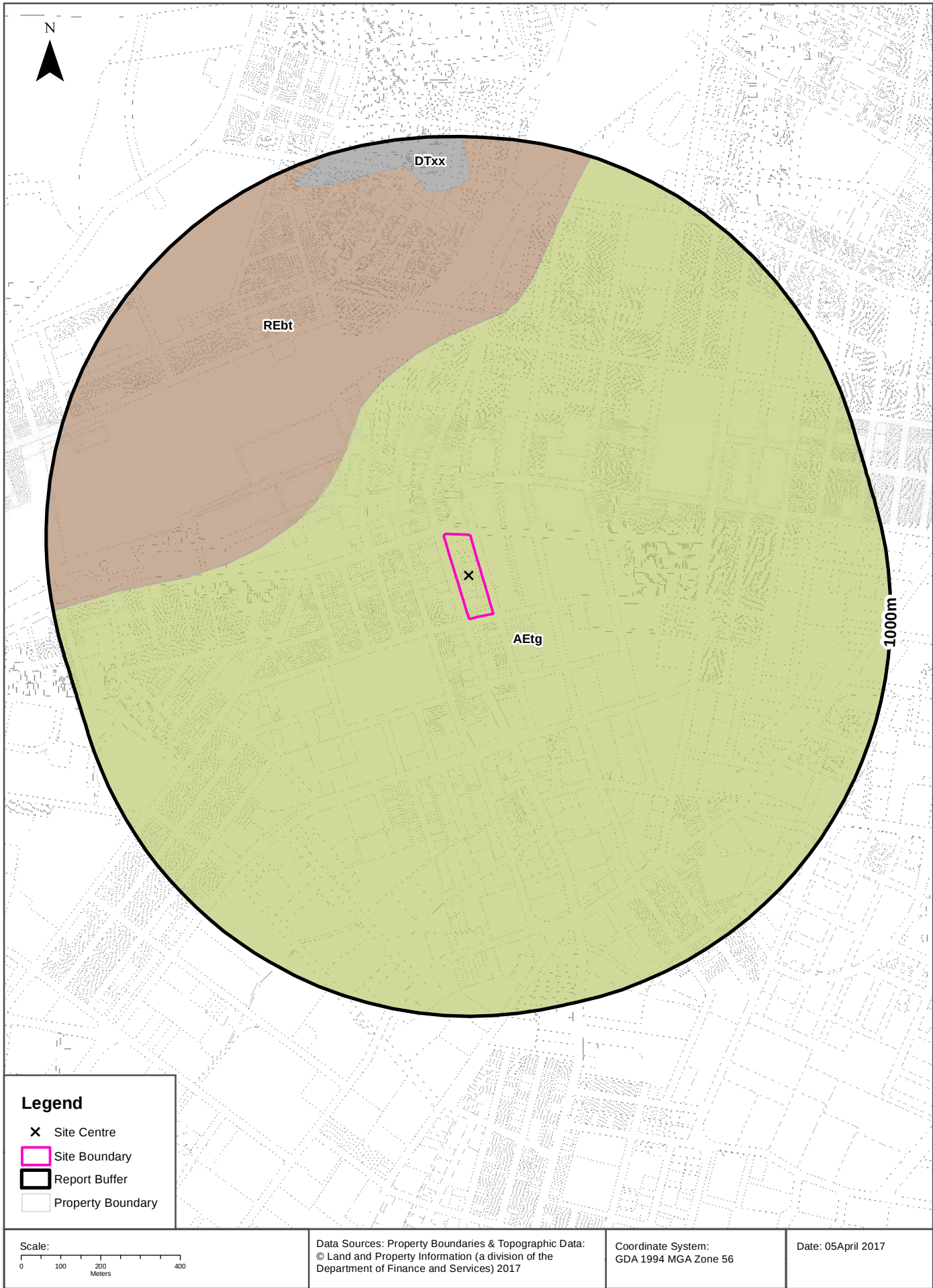
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Naturally Occurring Asbestos Potential

Naturally Occurring Asbestos Potential within the report buffer?

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

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



Soils

Waterloo Precinct, Waterloo, NSW 2017

Soil Landscapes

What are the onsite Soil Landscapes?

Soil Code	Name	Group	Process	Map Sheet	Scale
AEtg	TUGGERAH		AEOLIAN	Sydney	1:100,000

What are the Soil Landscapes within the report buffer?

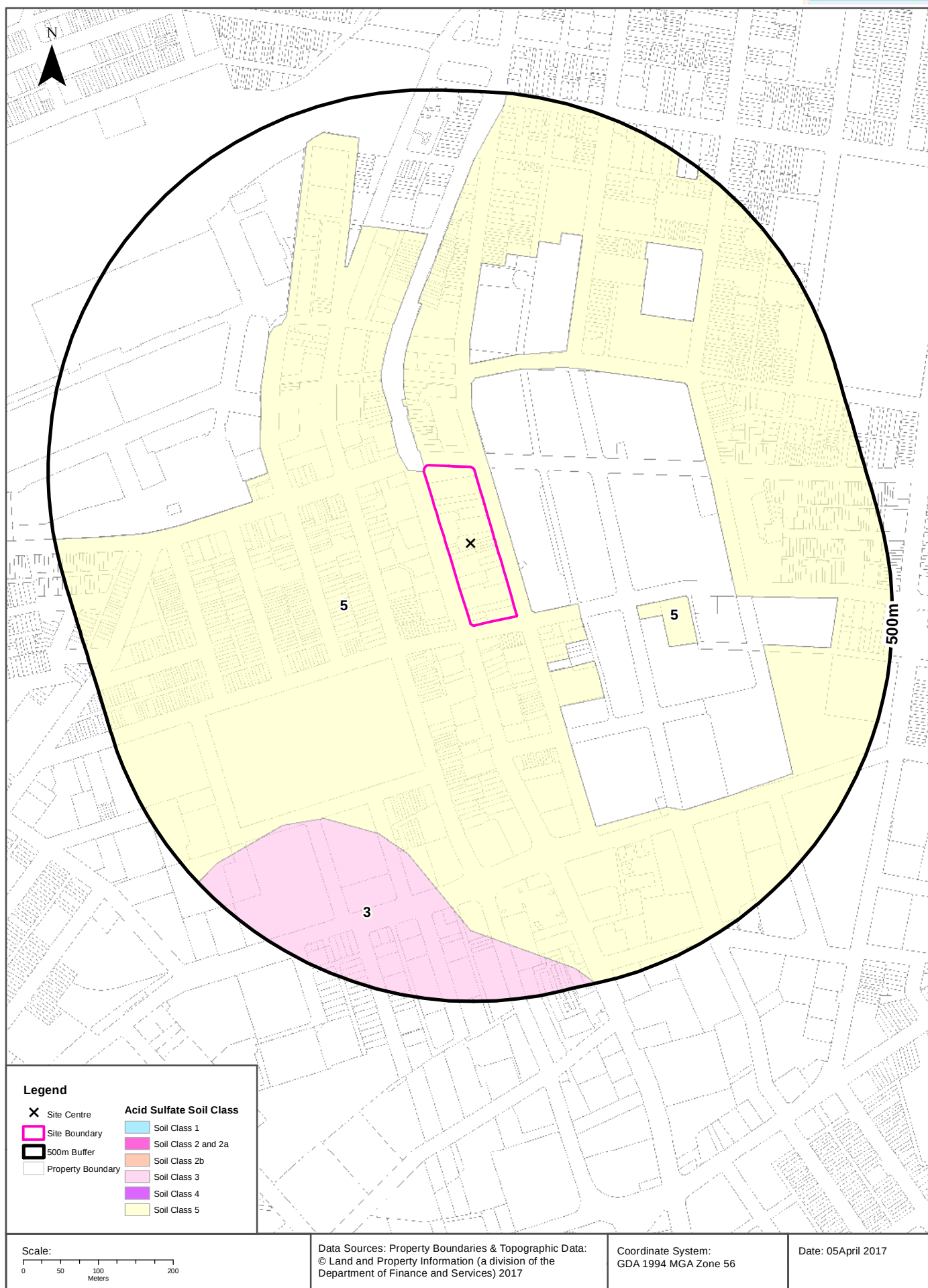
Soil Code	Name	Group	Process	Map Sheet	Scale
AEtg	TUGGERAH		AEOLIAN	Sydney	1:100,000
DTxx	DISTURBED TERRAIN		DISTURBED TERRAIN	Sydney	1:100,000
REbt	BLACKTOWN		RESIDUAL	Sydney	1:100,000

Soils Landscapes Data Source : NSW Office of Environment and Heritage

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Acid Sulfate Soils

Waterloo Precinct, Waterloo, NSW 2017



Standard Local Environmental Plan Acid Sulfate Soils

Waterloo Precinct, Waterloo, NSW 2017

Standard Local Environmental Plan Acid Sulfate Soils

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

Soil Class	Description	LEP
5	Works within 500 metres of adjacent Class 1, 2, 3, or 4 land that is below 5 metres AHD and by which the watertable is likely to be lowered below 1 metre AHD on adjacent Class 1, 2, 3 or 4 land, present an environmental risk	Sydney Local Environmental Plan 2012

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

Soil Class	Description	LEP	Distance	Direction
3	Works more than 1 metre below natural ground surface present an environmental risk; Works by which the watertable is likely to be lowered more than 1 metre below natural ground surface, present an environmental risk	Sydney Local Environmental Plan 2012	304m	South

Acid Sulfate Data Source Accessed 07/10/2016: NSW Crown Copyright - Planning and Environment
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Dryland Salinity

Waterloo Precinct, Waterloo, NSW 2017

Dryland Salinity

Is there Dryland Salinity data onsite?

No

Is there Dryland Salinity data within the report buffer?

No

What Dryland Salinity assessments are given?

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

Dryland Salinity Data Source : National Land and Water Resources Audit

The Commonwealth and all suppliers of source data used to derive the maps of "Australia, Forecast Areas Containing Land of High Hazard or Risk of Dryland Salinity from 2000 to 2050" do not warrant the accuracy or completeness of information in this product. Any person using or relying upon such information does so on the basis that the Commonwealth and data suppliers shall bear no responsibility or liability whatsoever for any errors, faults, defects or omissions in the information. Any persons using this information do so at their own risk.

In many cases where a high risk is indicated, less than 100% of the area will have a high hazard or risk.

Mining Subsidence Districts

Waterloo Precinct, Waterloo, NSW 2017

Mining Subsidence Districts

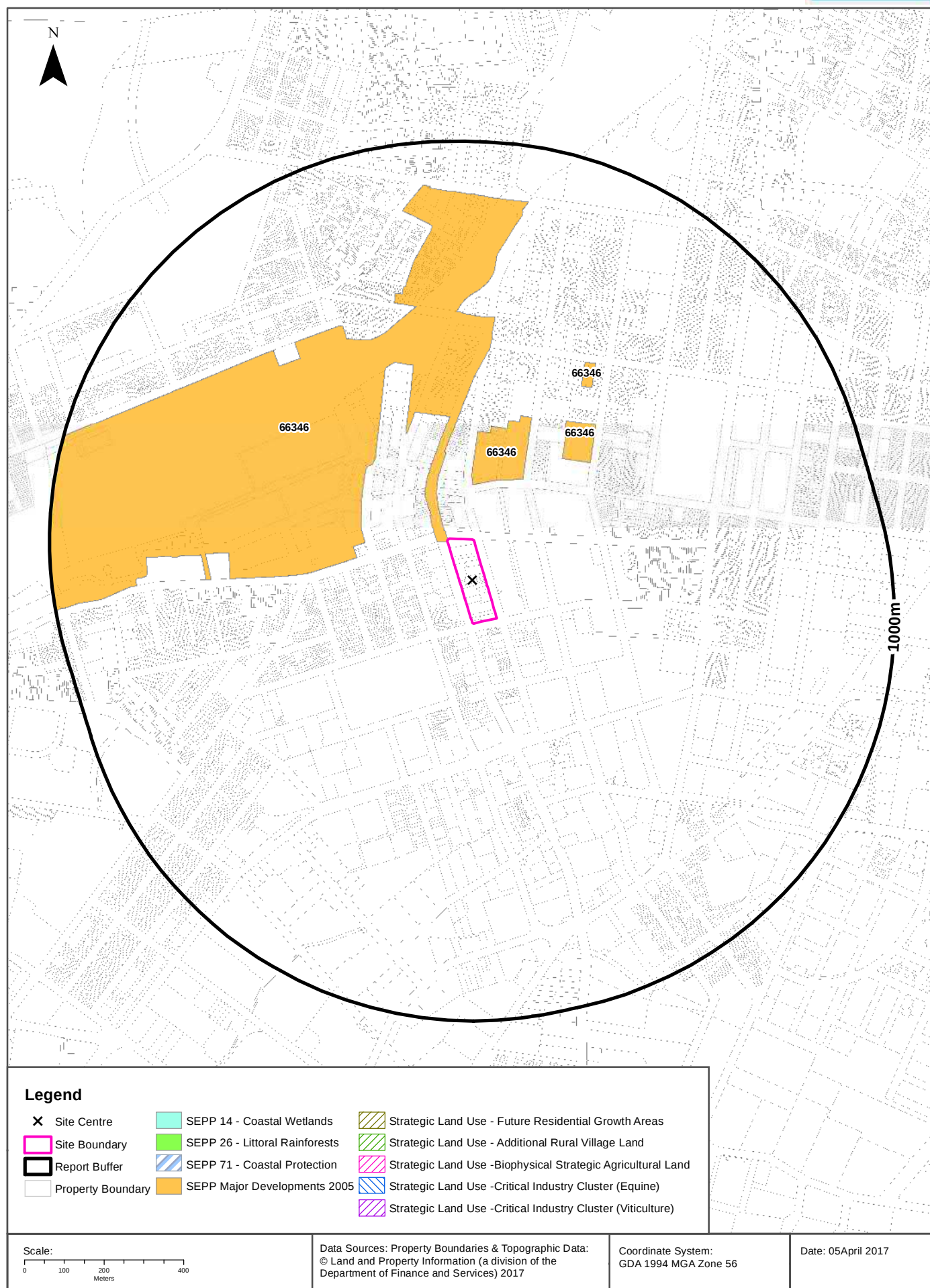
Mining Subsidence Districts within the report buffer?

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

Mining Subsidence District Data Source: © Land and Property Information (2016)
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State Environmental Planning Policy

Waterloo Precinct, Waterloo, NSW 2017



Environmental Zoning

Waterloo Precinct, Waterloo, NSW 2017

State Environmental Planning Policy Protected Areas

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

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

SEPP Protected Areas Data Source: NSW Department of Planning & Environment
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State Environmental Planning Policy Major Developments (2005)

State Environmental Planning Policy Major Developments within the report buffer?

Map Id	Feature	Effective Date	Distance	Direction
66346	Redfern-Waterloo Authority Sites	17/07/2009	0m	North West

SEPP Major Development Data Source: NSW Department of Planning & Environment
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State Environmental Planning Policy Strategic Land Use Areas

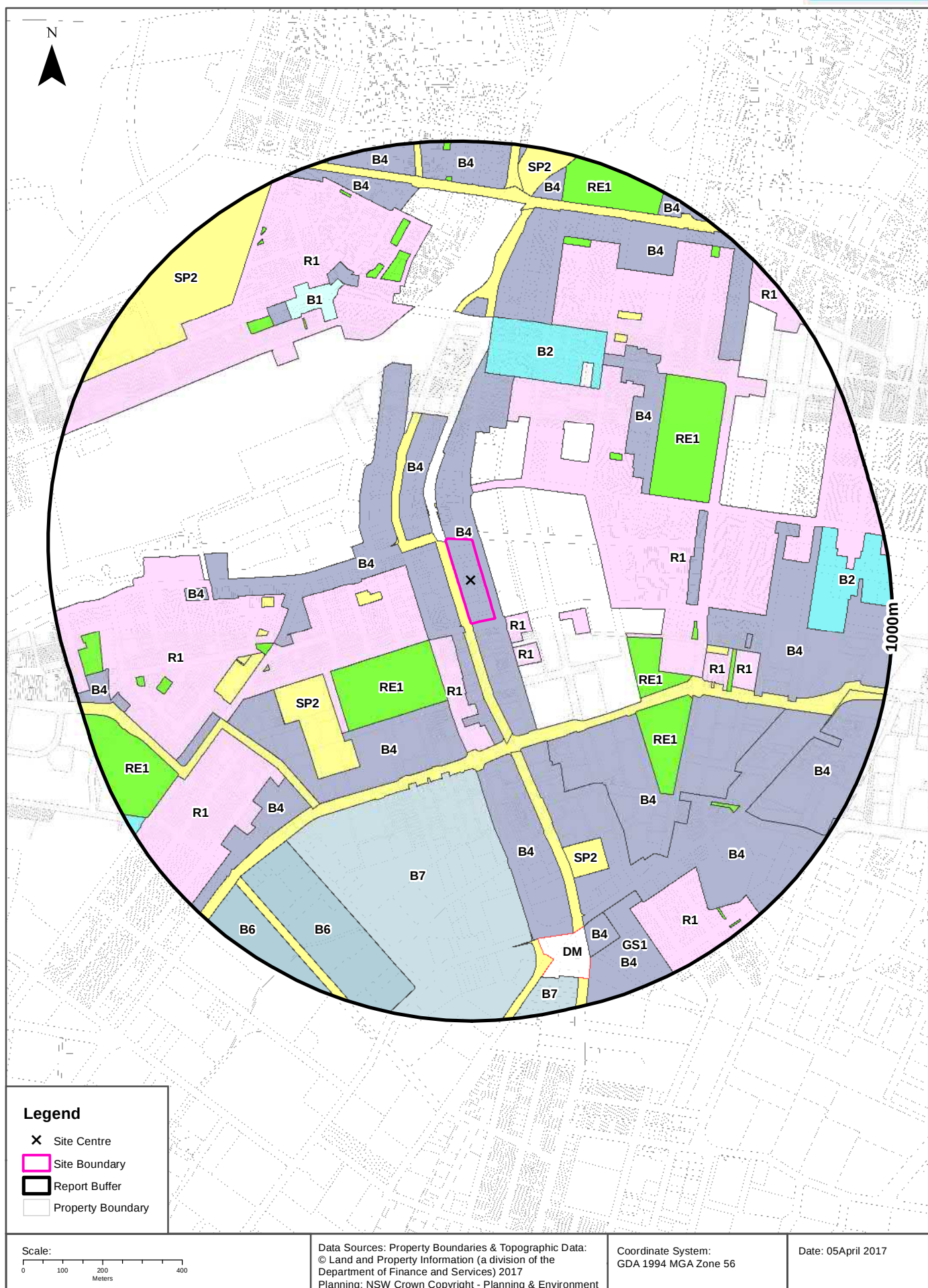
State Environmental Planning Policy Strategic Land Use Areas onsite or within the report buffer?

Strategic Land Use	SEPPNo	Effective Date	Amendment	Amendment Year	Distance	Direction
No records within buffer						

SEPP Strategic Land Use Data Source: NSW Department of Planning & Environment
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LEP Planning Zones

Waterloo Precinct, Waterloo, NSW 2017



Local Environmental Plan

Waterloo Precinct, Waterloo, NSW 2017

Land Zoning

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

Zone	Description	Purpose	LEP or SEPP	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
B4	Mixed Use		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		0m	Onsite
SP2	Infrastructure	Classified Road	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		0m	West
B4	Mixed Use		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		21m	West
R1	General Residential		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		24m	South East
B4	Mixed Use		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		42m	North West
SP2	Infrastructure	Classified Road	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		45m	North West
R1	General Residential		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		58m	South
SP2	Infrastructure	Classified Road	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		76m	North West
SP2	Infrastructure	Classified Road	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		85m	North West
R1	General Residential		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		86m	South East
R1	General Residential		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		114m	West
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		115m	South West
R1	General Residential		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		119m	North East
SP2	Infrastructure		Sydney Local Environmental Plan 2012	12/12/2014	12/12/2014	16/12/2016	Amendment No 9	119m	North West
R1	General Residential		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		159m	East
SP2	Infrastructure	Community Facility	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		194m	West
B4	Mixed Use		Sydney Local Environmental Plan 2012	11/04/2014	11/04/2014	16/12/2016	Amendment No 5	203m	South West
SP2	Infrastructure	Classified Road	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		290m	South
B4	Mixed Use		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		332m	South East
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		334m	South East
B4	Mixed Use		Sydney Local Environmental Plan 2012	21/11/2014	21/11/2014	16/12/2016	Amendment No 12	336m	South East
R1	General Residential		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		337m	South
SP2	Infrastructure	Classified Road	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		338m	South
B4	Mixed Use		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		340m	South
B7	Business Park		Sydney Local Environmental Plan 2012	12/06/2015	12/06/2015	16/12/2016	Amendment No 17	365m	South
R1	General Residential		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		376m	South
R1	General Residential		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		393m	South
SP2	Infrastructure	Educational Establishment	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		395m	South West
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		402m	North East
R1	General Residential		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		415m	South

Zone	Description	Purpose	LEP or SEPP	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
B2	Local Centre		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		421m	North
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		425m	South East
B4	Mixed Use		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		434m	North East
SP2	Infrastructure	Community Facility	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		455m	West
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		459m	North East
B4	Mixed Use		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		482m	East
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		489m	West
SP2	Infrastructure	Community Facility	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		493m	West
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		497m	East
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		518m	South West
SP2	Infrastructure	Educational Establishment	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		519m	South West
R1	General Residential		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		524m	South West
B4	Mixed Use		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		532m	East
R1	General Residential		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		536m	East
SP2	Infrastructure	Community Facility	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		536m	East
R1	General Residential		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		538m	North West
SP2	Infrastructure	Community Facility	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		551m	West
B4	Mixed Use		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		560m	North
SP2	Infrastructure	Classified Road	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		560m	North
B4	Mixed Use		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		564m	North East
SP2	Infrastructure	Classified Road	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		586m	West
SP2	Infrastructure	Educational Establishment	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		600m	South East
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		602m	East
B4	Mixed Use		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		607m	South West
R1	General Residential		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		608m	South West
R1	General Residential		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		612m	East
B4	Mixed Use		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		614m	West
SP2	Infrastructure	Community Facility	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		616m	North East
B1	Neighbourhood Centre		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		622m	North West
B4	Mixed Use		Sydney Local Environmental Plan 2012	19/12/2014	19/12/2014	16/12/2016	Amendment No 13	631m	East
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		636m	North West
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		658m	North
SP2	Infrastructure	Community Facility	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		669m	North East
B4	Mixed Use		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		674m	North West
B4	Mixed Use		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		675m	South West
B4	Mixed Use		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		676m	North West

Zone	Description	Purpose	LEP or SEPP	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		681m	North
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		690m	North West
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		714m	South East
B6	Enterprise Corridor		Sydney Local Environmental Plan 2012	12/06/2015	12/06/2015	16/12/2016	Amendment No 17	718m	South
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		747m	North
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		761m	West
B4	Mixed Use		Sydney Local Environmental Plan (Green Square Town Centre) 2013	13/09/2013	13/09/2013	13/09/2013		769m	South
GS1	Sydney LEP (Green Square Town Centre) 2013		Sydney Local Environmental Plan 2012	19/12/2014	19/12/2014	16/12/2016	Amendment No 13	769m	South
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		780m	North
B2	Local Centre		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		784m	East
B4	Mixed Use		Sydney Local Environmental Plan (Green Square Town Centre - Stage 2) 2013	10/07/2015	10/07/2015	10/07/2015	Amendment No 2	787m	South
DM	Deferred Matter		Sydney Local Environmental Plan (Green Square Town Centre - Stage 2) 2013	06/09/2013	06/09/2013	10/07/2015		787m	South
B4	Mixed Use		Sydney Local Environmental Plan 2012	10/04/2015	10/04/2015	16/12/2016	Amendment No 15	795m	South East
R1	General Residential		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		800m	South East
SP2	Infrastructure	Educational Establishment	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		802m	North West
GS2	Sydney LEP (Green Square Town Centre 2) 2013		Sydney Local Environmental Plan 2012	19/12/2014	19/12/2014	16/12/2016	Amendment No 13	805m	South
GS2	Sydney LEP (Green Square Town Centre 2) 2013		Sydney Local Environmental Plan 2012	19/12/2014	19/12/2014	16/12/2016	Amendment No 13	810m	South
GS21	Sydney LEP (GSTC 2) 2013 & SS LEP 114		Sydney Local Environmental Plan 2012	19/12/2014	19/12/2014	16/12/2016	Amendment No 13	810m	South
SP2	Infrastructure	Classified Road	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		810m	South
GS2P	Sydney LEP (GSTC 2) 2013 & CoS PSO		Sydney Local Environmental Plan 2012	19/12/2014	19/12/2014	16/12/2016	Amendment No 13	816m	South
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		827m	West
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		828m	South West
B4	Mixed Use		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		835m	North
SP2	Infrastructure	Classified Road	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		839m	North East
SP2	Infrastructure		Sydney Local Environmental Plan 2012	12/06/2015	12/06/2015	16/12/2016	Amendment No 17	863m	South West
SP2	Infrastructure	Classified Road	Sydney Local Environmental Plan 2012	10/04/2015	10/04/2015	16/12/2016	Amendment No 15	870m	East
B4	Mixed Use		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		877m	North
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		877m	North West
SP2	Infrastructure	Railways	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		877m	North
B4	Mixed Use		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		879m	West
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		882m	North
B6	Enterprise Corridor		Sydney Local Environmental Plan 2012	12/06/2015	12/06/2015	16/12/2016	Amendment No 17	883m	South

Zone	Description	Purpose	LEP or SEPP	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
B4	Mixed Use		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		885m	North
SP2	Infrastructure	Classified Road	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		885m	North
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		894m	North
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		897m	North West
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		899m	North
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		901m	West
B7	Business Park		Sydney Local Environmental Plan 2012	12/06/2015	12/06/2015	16/12/2016	Amendment No 17	905m	South
SP2	Infrastructure	Classified Road	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		912m	North
B4	Mixed Use		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		917m	North
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		917m	South East
SP2	Infrastructure	Classified Road	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		927m	South
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		933m	North East
B4	Mixed Use		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		942m	North East
B2	Local Centre		Sydney Local Environmental Plan 2012	25/07/2014	25/07/2014	16/12/2016	Amendment No 10	953m	South West
B4	Mixed Use		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		953m	North
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		973m	South East
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		977m	North
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		992m	North
RE1	Public Recreation		Sydney Local Environmental Plan 2012	12/06/2015	12/06/2015	16/12/2016	Amendment No 17	993m	South
R1	General Residential		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		995m	North

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Local Environmental Plan

Waterloo Precinct, Waterloo, NSW 2017

Minimum Subdivision Lot Size

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

Symbol	Minimum Lot Size	LEP or SEPP	Published Date	Commenced Date	Currency Date	Amendment	Percentage of Site Area
No Data							

Maximum Height of Building

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

Symbol	Maximum Height of Building	LEP or SEPP	Published Date	Commenced Date	Currency Date	Amendment	Percentage of Site Area
15	15.00 m	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	24/02/2017		92.7
13	12.00 m	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	24/02/2017		7

Floor Space Ratio

What are the onsite Local Environmental Plan Floor Space Ratios?

Symbol	Floor Space Ratio	LEP or SEPP	Published Date	Commenced Date	Currency Date	Amendment	Percentage of Site Area
68	1.75	LEP	14/12/2012	14/12/2012	24/02/2017		99.7

Land Application

What are the onsite Local Environmental Plan Land Applications?

Application Type	LEP or SEPP	Published Date	Commenced Date	Currency Date	Amendment	Percentage of Site Area
Included	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	12/06/2015		100

Land Reservation Acquisition

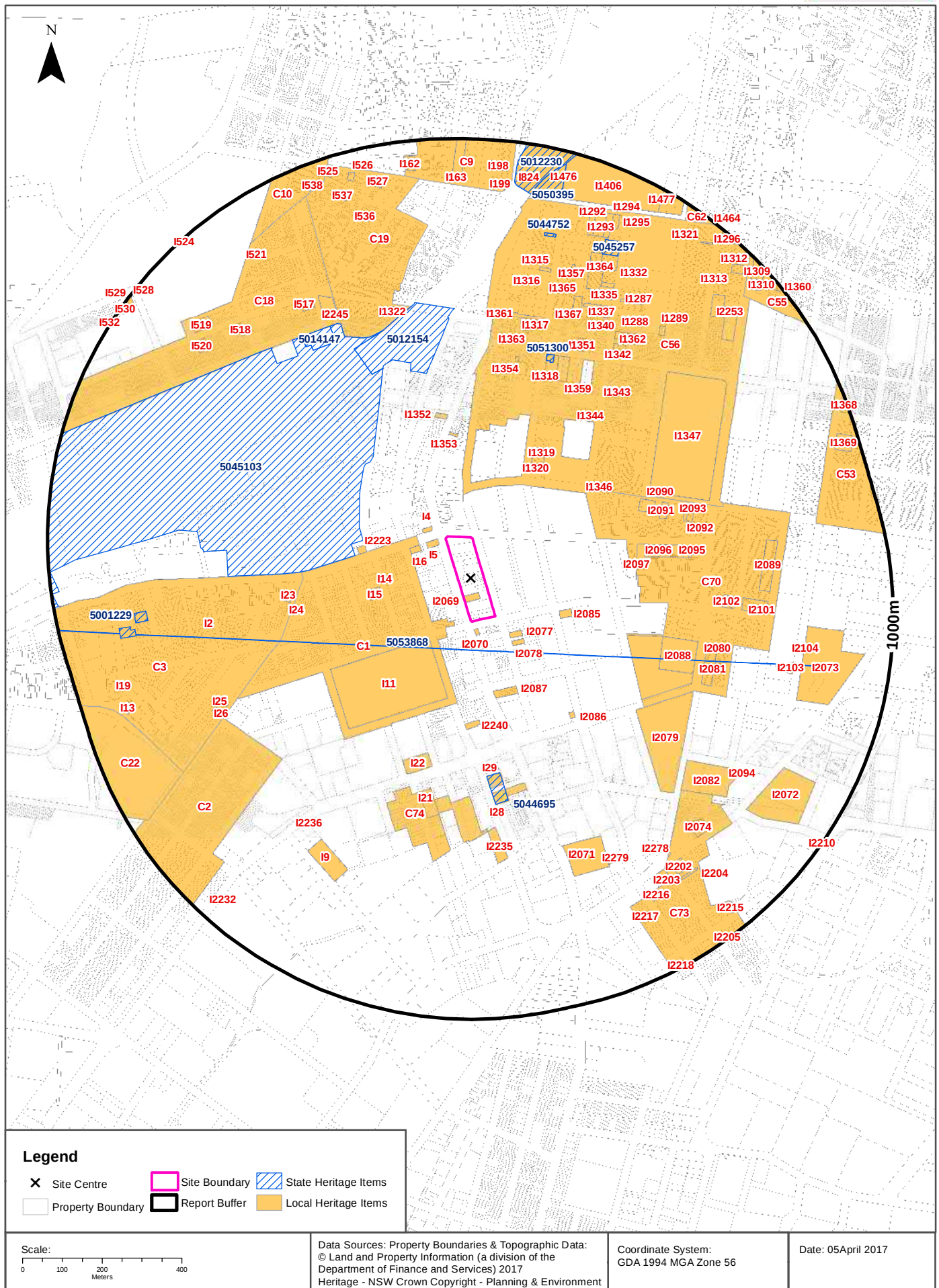
What are the onsite Local Environmental Plan Land Reservation Acquisitions?

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

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Heritage Items

Waterloo Precinct, Waterloo, NSW 2017



Heritage

Waterloo Precinct, Waterloo, NSW 2017

State Heritage Items

What are the State Heritage Items located within the report buffer?

Map Id	Name	Address	LGA	Listing Date	Listing No	Plan No	Distance	Direction
5053868	Pressure Tunnel and Shafts	Potts Hill	Bankstown	15/11/2002	1630	2046	71m	West
5045103	Eveleigh Railway Workshops	Great Southern and Western Railway, Redfern	Sydney	02/04/1999	1140	2347	208m	West
5044695	Yiu Ming Temple	16-22 Retreat Street Alexandria	Sydney	24/09/1999	1297	2239	386m	South
5012154	Redfern Railway Station group	Great Southern and Western Railway, Redfern	Sydney	02/04/1999	1234	2340	414m	North
5051300	Redfern Post Office	113 Redfern Street Redfern	Sydney	22/12/2000	1439	2140	483m	North
5014147	Eveleigh Chief Mechanical Engineers Office	Great Southern and Western Railway, Redfern	Sydney	02/04/1999	1139	2341	564m	North West
5001229	Enginemans Resthouse	39 Brandling Street Alexandria	Sydney	02/04/1999	723	1777	774m	West
5044752	Redfern Aboriginal Children's Services	18 George Street, Redfern	Sydney	13/07/2015	1951	2670	780m	North
5045257	Fitzroy Terrace	6-18 Pitt Street Redfern	Sydney	02/04/1999	83	277	785m	North East
5012230	Sydney Terminal and Central Railway Stations Group	Great Southern and Western Railway; Illawarra Rail, Sydney	Sydney	02/04/1999	1255	2247	875m	North
5050395	Cathedral of the Annunciation of Our Lady	242 Cleveland Street Redfern	Sydney	17/04/2012	1881	2523	876m	North

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Local Heritage Items

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

Map Id	Name	Classification	Significance	LEP or Act	Published Date	Commenced Date	Currency Date	Distance	Direction
I2069	Congregational Church	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	0m	Onsite
I2070	Cauliflower Hotel	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	19m	South
I5	Former CBC Bank	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	20m	North West
C1	Alexandria Park	Conservation Area - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	41m	South West
I4	Cricketers Arms Hotel	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	42m	North West
I2077	Former Waterloo Pre-school (225 Cope Street)	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	54m	South East

Map Id	Name	Classification	Significance	LEP or Act	Published Date	Commenced Date	Currency Date	Distance	Direction
I16	Lord Raglan Hotel	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	67m	North West
I2078	Terrace group	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	75m	South East
C56	Redfern Estate	Conservation Area - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	107m	North East
I11	Alexandria Park	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	115m	South West
I2085	Duke of Wellington Hotel	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	159m	East
I2087	Terrace group 'Gordon Terrace'	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	182m	South
I15	Alexandria Town Hall	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	194m	West
I14	Former Mayor's Residence	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	194m	West
I2223	Alexandria Hotel	Item - General	Local	Sydney Local Environmental Plan 2012	01/04/2016	01/04/2016	06/05/2016	202m	West
I1320	House 'Clyde House'	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	228m	North East
I1319	Terrace group	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	236m	North East
I2240	Former Electric Light Substation No. 89	Item - General	Local	Sydney Local Environmental Plan 2012	22/01/2016	22/01/2016	06/05/2016	247m	South
I1353	Terrace house	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	250m	North
I1352	St Luke's Presbyterian Church	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	296m	North
C70	Waterloo	Conservation Area - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	298m	East
I2086	Electrical substation	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	305m	South East
I1346	Somerset Hotel	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	328m	North East
I1345	Terrace house	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	332m	North East
I2079	Waterloo Park & Oval	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	334m	South East
I22	Industrial building	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	348m	South
C3	Kingsclear	Conservation Area - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	372m	West
I2097	Uniting Church	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	376m	East
I29	Terrace group (17A-29 Retreat Street)	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	386m	South
I2096	Terrace group	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	401m	East
I23	Former NSW Mission Church & Hall	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	406m	West
I1344	Former shop & residence	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	415m	North East

Map Id	Name	Classification	Significance	LEP or Act	Published Date	Commenced Date	Currency Date	Distance	Direction
I24	Terrace house	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	417m	West
I2090	Terrace group	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	419m	East
I1354	Former Redfern Municipal Electric Light Station	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	422m	North
I2088	Our Lady of Mt Carmel Church & School	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	423m	East
I6	Glenroy Hotel	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	423m	South
I2079	Waterloo Park & Oval	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	425m	South East
I28	Yiu Ming Temple (16-22 Retreat Street)	Item - General	State	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	429m	South
I21	Warehouse	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	432m	South
C74	North Alexandria Industrial	Conservation Area - General	Local	Sydney Local Environmental Plan 2012	22/01/2016	22/01/2016	06/05/2016	432m	South
I1318	Redfern Telephone Exchange	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	440m	North
I1359	Terrace group	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	443m	North East
I1348	Former St Vincent's Roman Catholic Church group	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	449m	North East
I2254	Electricity Substation No. 112	Item - General	Local	Sydney Local Environmental Plan 2012	22/01/2016	22/01/2016	06/05/2016	456m	North
I1347	Redfern Park	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	459m	North East
I2091	House	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	464m	East
I1349	Redfern Post Office	Item - General	State	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	483m	North
I1343	Cottage	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	496m	North East
I2095	Terrace group	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	506m	East
I2092	Terrace house	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	519m	East
I2235	Former Standard Telephones and Cables	Item - General	Local	Sydney Local Environmental Plan 2012	22/01/2016	22/01/2016	06/05/2016	519m	South
I2093	Terrace group	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	526m	East
I2080	Waterloo Town Hall	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	536m	East
I2081	Terrace group	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	536m	East
I1363	Terrace group	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	536m	North
C19	Darlington	Conservation Area - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	538m	North

Map Id	Name	Classification	Significance	LEP or Act	Published Date	Commenced Date	Currency Date	Distance	Direction
I1351	Terrace house	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	541m	North East
I1350	Shop & residence	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	544m	North East
I1317	Redfern Hotel	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	555m	North
I1361	Wood Block paving beneath bitumen surface	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	564m	North
I1322	Terrace house 'Waratah'	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	568m	North
I2102	Terrace group	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	568m	East
I1342	Terrace house	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	578m	North East
I1341	Terrace group	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	586m	North East
C2	Cooper Estate	Conservation Area - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	588m	South West
C18	Golden Grove	Conservation Area - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	597m	North West
I2071	Waterloo Public School group	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	600m	South East
I2082	Former commercial building group 'Chubb Pty Ltd'	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	601m	South East
I1367	Terrace group	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	609m	North
I1340	Former shop & residence 'Quirk's Store'	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	614m	North East
I1366	Terrace group	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	615m	North
I1339	Redfern Town Hall	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	616m	North East
I2101	Terrace group	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	618m	East
I2	Terrace house	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	619m	West
I2245	Former McMurtrie, Kellermann & Co Factory	Item - General	Local	Sydney Local Environmental Plan 2012	22/01/2016	22/01/2016	06/05/2016	622m	North West
I1362	Terrace group	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	624m	North East
I1365	Terrace group	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	629m	North
I1338	Terrace group	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	637m	North East
C73	Zetland Estate	Conservation Area - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	638m	South East
I25	Terrace group	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	644m	South West
I2236	Electricity Substation No. 152	Item - General	Local	Sydney Local Environmental Plan 2012	22/01/2016	22/01/2016	06/05/2016	645m	South West

Map Id	Name	Classification	Significance	LEP or Act	Published Date	Commenced Date	Currency Date	Distance	Direction
I1337	Terrace group	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	646m	North East
I1316	Fence posts on Renwick Street	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	659m	North
I26	Terrace group	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	664m	South West
I2089	Terrace group 'Grosvenor Terrace'	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	665m	East
I9	Industrial building 'Eclipse House'	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	665m	South West
I517	Terrace group	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	668m	North West
I1288	Cottage	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	668m	North East
I2279	Electricity Substation No.75	Item - General	Local	Sydney Local Environmental Plan 2012	22/01/2016	22/01/2016	06/05/2016	674m	South East
I1335	Terrace group	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	680m	North East
I1364	Terrace group 'Tamworth Terraces'	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	689m	North
I1289	Woolpack Hotel	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	691m	North East
I2278	Part former William Brooks factory including interiors	Item - General	Local	Sydney Local Environmental Plan 2012	22/01/2016	22/01/2016	06/05/2016	692m	South East
I1315	Commercial building 'Star House'	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	694m	North
I1334	Cottage	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	699m	North East
I1336	Terrace house	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	702m	North East
I2074	Terrace group 'Chase Terrace'	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	707m	South East
I1357	Cottage	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	710m	North
I1333	Cottage	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	711m	North East
I1287	Cottage 'Dascom E Cottage'	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	716m	North East
I518	Terrace house	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	718m	North West
I2094	Electrical substation	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	730m	South East
I2083	Former Zetland Tram Terminus (874 Elizabeth Street)	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	735m	South East
I2103	Commercial building part of 'Federation Business Centre' (222 Young Street)	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	744m	East
I1332	Terrace group	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	750m	North East
I520	Terrace group	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	761m	North West

Map Id	Name	Classification	Significance	LEP or Act	Published Date	Commenced Date	Currency Date	Distance	Direction
I2203	Green Square Hotel	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	763m	South East
I2202	Former fire station	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	764m	South East
I10	House 'Eveleigh House'	Item - General	State	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	774m	West
I2104	Electrical substation	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	779m	East
I2073	Former Sydney Water pumping station & valve house	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	779m	East
I1314	Terrace house	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	780m	North
I1331	Terrace group 'Fitzroy Terrace'	Item - General	State	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	785m	North East
I519	Commercial building	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	792m	North West
I2072	Federation Warehouse with Art Deco Additions	Item - General	Local	Sydney Local Environmental Plan 2012	10/04/2015	10/04/2015	06/05/2016	795m	South East
I2253	Former A. Hordern & Sons Factory Complex	Item - General	Local	Sydney Local Environmental Plan 2012	22/01/2016	22/01/2016	06/05/2016	799m	North East
I2216	Terrace group 'Elsie Terrace'	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	801m	South East
I2204	Terrace house 'Alencon'	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	805m	South East
I1292	House	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	814m	North
C22	Erskineville Estate	Conservation Area - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	816m	South West
I1293	Cottage group 'Tutulla' & 'Tivoli'	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	817m	North
I536	Terrace house 'The Settlement' (17 Edward Street)	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	817m	North
I1294	Park Hotel	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	824m	North
I2217	Terrace group 'Ada Terrace'	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	836m	South East
C53	Baptist Street	Conservation Area - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	837m	East
I521	Terrace group	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	849m	North West
I1295	Terrace group	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	852m	North
I13	Terrace group	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	872m	West
I19	Cottage	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	872m	West
C9	Chippendale	Conservation Area - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	873m	North
I824	Central Railway Station group	Item - General	State	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	876m	North

Map Id	Name	Classification	Significance	LEP or Act	Published Date	Commenced Date	Currency Date	Distance	Direction
I1476	Greek Orthodox Church group	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	877m	North
I537	Terrace group	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	881m	North
I1406	Prince Alfred Park	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	882m	North
I199	Former Mercantile Bank Chambers	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	885m	North
C10	Darling Nursery Estate	Conservation Area - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	887m	North West
I527	Terrace group	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	892m	North
I163	Flat building group 'Strickland Building'	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	896m	North
C55	Cooper Street	Conservation Area - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	914m	North East
I162	Terrace group 'Dangar Terrace'	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	922m	North
I2215	Semi-detached cottage group	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	925m	South East
I198	Cottage	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	926m	North
I526	Former service station 'Hahn Automotive Services'	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	926m	North
I2232	Electricity Substation No. 117	Item - General	Local	Sydney Local Environmental Plan 2012	22/01/2016	22/01/2016	06/05/2016	930m	South West
I1313	Church 'The Where Kakakel'	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	932m	North East
I1369	St Saviour's Anglican Church group	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	935m	East
I538	Industrial building	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	935m	North
I1310	Terrace group 'Pleasant Terrace' (552-564 Elizabeth Street)	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	936m	North East
I1321	Electrical substation	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	938m	North East
I1477	Former Cleveland Street Public School	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	942m	North East
I525	Britannia Hotel	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	949m	North
I1309	Terrace group	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	957m	North East
I1312	Commercial building 'Stanton Mellick'	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	959m	North East
C62	Cleveland Gardens	Conservation Area - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	960m	North East
I1296	Commercial building 'Demco Machinery Co'	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	972m	North East
I1360	Terrace group 'Zetland Terraces'	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	974m	North East

Map Id	Name	Classification	Significance	LEP or Act	Published Date	Commenced Date	Currency Date	Distance	Direction
I1368	Terrace group 'Teleopea Terraces'	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	976m	North East
I528	Terrace group 'Roma' & 'Frelin'	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	976m	North West
I529	Terrace house	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	979m	North West
I530	Terrace group	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	981m	North West
I524	Former Darlington Primary School	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	985m	North West
I2218	Terrace group	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	986m	South East
I531	Terrace house	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	991m	North West
I2205	Cottage	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	992m	South East
I1464	Terrace group 'Pembroke Terrace'	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	992m	North East
I532	Terrace house	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	995m	North West
I1311	Terrace group	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	996m	North East
I2210	Street trees	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	998m	South East
I533	Terrace group 'Golden Grove Terrace'	Item - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	998m	North West

Heritage Data Source: NSW Crown Copyright - Planning & Environment

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Natural Hazards

Waterloo Precinct, Waterloo, NSW 2017

Bush Fire Prone Land

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

Bush Fire Prone Land Category	Distance	Direction
No records within buffer		

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



Ecological Constraints

Waterloo Precinct, Waterloo, NSW 2017

Native Vegetation

What native vegetation exists within the report buffer?

Map ID	Map Unit Name	Threatened Ecological Community NSW	Threatened Ecological Community EPBC Act	Understorey	Disturbance	Disturbance Index	Dominant Species	Dist	Direction
Urban_E/N	Urban_E/N: Urban Exotic/Native			00: Not assessed	00: Not assessed	0: Not assessed	Urban Exotic/Native	5m	East

Native Vegetation of the Sydney Metropolitan Area : NSW Office of Environment and Heritage
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RAMSAR Wetlands

What RAMSAR Wetland areas exist within the report buffer?

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

RAMSAR Wetlands Data Source: © Commonwealth of Australia - Department of Environment

Ecological Constraints

Waterloo Precinct, Waterloo, NSW 2017

ATLAS of NSW Wildlife

Endangered & Vulnerable Species on the ATLAS of NSW Wildlife database, within 10km of the site?

Class	Family	Scientific	Common	Exotic	NSW Status	Commonwealth Status
Amphibia	Hylidae	<i>Litoria aurea</i>	Green and Golden Bell Frog	No	Endangered, Protected	Vulnerable
Amphibia	Myobatrachidae	<i>Crinia tinnula</i>	Wallum Froglet	No	Vulnerable, Protected	
Amphibia	Myobatrachidae	<i>Pseudophryne australis</i>	Red-crowned Toadlet	No	Vulnerable, Protected	
Aves	Accipitridae	<i>Haliaeetus leucogaster</i>	White-bellied Sea-Eagle	No	Vulnerable, Protected	CAMBA
Aves	Accipitridae	<i>Hieraaetus morphnoides</i>	Little Eagle	No	Vulnerable, Protected	
Aves	Accipitridae	<i>Pandion cristatus</i>	Eastern Osprey	No	Vulnerable, Protected, Category 3 Sensitive Species	
Aves	Anatidae	<i>Stictonetta naevosa</i>	Freckled Duck	No	Vulnerable, Protected	
Aves	Anseranatidae	<i>Anseranas semipalmata</i>	Magpie Goose	No	Vulnerable, Protected	
Aves	Ardeidae	<i>Botaurus poiciloptilus</i>	Australasian Bittern	No	Endangered, Protected	Endangered
Aves	Ardeidae	<i>Ixobrychus flavicollis</i>	Black Bittern	No	Vulnerable, Protected	
Aves	Artamidae	<i>Artamus cyanopterus cyanopterus</i>	Dusky Woodswallow	No	Vulnerable, Protected	
Aves	Burhinidae	<i>Burhinus grallarius</i>	Bush Stone-curlew	No	Endangered, Protected	
Aves	Cacatuidae	<i>Calyptorhynchus lathami</i>	Glossy Black-Cockatoo	No	Vulnerable, Protected, Category 2 Sensitive Species	
Aves	Charadriidae	<i>Charadrius leschenaultii</i>	Greater Sand-plover	No	Vulnerable, Protected	V,C,J,K
Aves	Charadriidae	<i>Charadrius mongolus</i>	Lesser Sand-plover	No	Vulnerable, Protected	E,C,J,K
Aves	Columbidae	<i>Ptilinopus superbus</i>	Superb Fruit-Dove	No	Vulnerable, Protected	
Aves	Diomedidae	<i>Diomedea exulans</i>	Wandering Albatross	No	Endangered, Protected	E,J
Aves	Diomedidae	<i>Diomedea gibsoni</i>	Gibson's Albatross	No	Vulnerable, Protected	Vulnerable
Aves	Diomedidae	<i>Thalassarche melanophris</i>	Black-browed Albatross	No	Vulnerable, Protected	Vulnerable
Aves	Estrildidae	<i>Stagonopleura guttata</i>	Diamond Firetail	No	Vulnerable, Protected	
Aves	Haematopodidae	<i>Haematopus fuliginosus</i>	Sooty Oystercatcher	No	Vulnerable, Protected	
Aves	Haematopodidae	<i>Haematopus longirostris</i>	Pied Oystercatcher	No	Endangered, Protected	
Aves	Laridae	<i>Onychoprion fuscata</i>	Sooty Tern	No	Vulnerable, Protected	
Aves	Laridae	<i>Sternula albifrons</i>	Little Tern	No	Endangered, Protected	CAMBA, JAMBA, ROKAMBA
Aves	Meliphagidae	<i>Anthochaera phrygia</i>	Regent Honeyeater	No	Critically Endangered Species, Protected	Critically Endangered
Aves	Meliphagidae	<i>Epthianura albifrons</i>	White-fronted Chat	No	Vulnerable, Protected	
Aves	Meliphagidae	<i>Epthianura albifrons</i>	White-fronted Chat population in the Sydney Metropolitan Catchment Management Area	No	Endangered Population, Vulnerable, Protected	
Aves	Neosittidae	<i>Daphoenositta chrysoptera</i>	Varied Sittella	No	Vulnerable, Protected	
Aves	Petroicidae	<i>Petroica boodang</i>	Scarlet Robin	No	Vulnerable, Protected	
Aves	Petroicidae	<i>Petroica phoenicea</i>	Flame Robin	No	Vulnerable, Protected	
Aves	Procellariidae	<i>Ardenna carneipes</i>	Flesh-footed Shearwater	No	Vulnerable, Protected	J,K

Class	Family	Scientific	Common	Exotic	NSW Status	Commonwealth Status
Aves	Procellariidae	Macronectes giganteus	Southern Giant Petrel	No	Endangered, Protected	Endangered
Aves	Procellariidae	Macronectes halli	Northern Giant-Petrel	No	Vulnerable, Protected	Vulnerable
Aves	Procellariidae	Pterodroma leucoptera leucoptera	Gould's Petrel	No	Vulnerable, Protected	Endangered
Aves	Psittacidae	Glossopsitta pusilla	Little Lorikeet	No	Vulnerable, Protected	
Aves	Psittacidae	Lathamus discolor	Swift Parrot	No	Endangered, Protected, Category 3 Sensitive Species	Critically Endangered
Aves	Psittacidae	Neophema pulchella	Turquoise Parrot	No	Vulnerable, Protected, Category 3 Sensitive Species	
Aves	Psittacidae	Pezoporus wallicus wallicus	Eastern Ground Parrot	No	Vulnerable, Protected, Category 3 Sensitive Species	
Aves	Scolopacidae	Calidris alba	Sanderling	No	Vulnerable, Protected	CAMBA, JAMBA, ROKAMBA
Aves	Scolopacidae	Calidris ferruginea	Curlew Sandpiper	No	Endangered, Protected	CE,C,J,K
Aves	Scolopacidae	Calidris tenuirostris	Great Knot	No	Vulnerable, Protected	CE,C,J,K
Aves	Scolopacidae	Limicola falcinellus	Broad-billed Sandpiper	No	Vulnerable, Protected	CAMBA, JAMBA, ROKAMBA
Aves	Scolopacidae	Limosa limosa	Black-tailed Godwit	No	Vulnerable, Protected	CAMBA, JAMBA, ROKAMBA
Aves	Scolopacidae	Xenus cinereus	Terek Sandpiper	No	Vulnerable, Protected	CAMBA, JAMBA, ROKAMBA
Aves	Strigidae	Ninox connivens	Barking Owl	No	Vulnerable, Protected, Category 3 Sensitive Species	
Aves	Strigidae	Ninox strenua	Powerful Owl	No	Vulnerable, Protected, Category 3 Sensitive Species	
Aves	Tytonidae	Tyto novaehollandiae	Masked Owl	No	Vulnerable, Protected, Category 3 Sensitive Species	
Aves	Tytonidae	Tyto tenebricosa	Sooty Owl	No	Vulnerable, Protected, Category 3 Sensitive Species	
Mammalia	Balaenidae	Eubalaena australis	Southern Right Whale	No	Endangered, Protected	Endangered
Mammalia	Balaenopteridae	Megaptera novaeangliae	Humpback Whale	No	Vulnerable, Protected	Vulnerable
Mammalia	Burramyidae	Cercartetus nanus	Eastern Pygmy-possum	No	Vulnerable, Protected	
Mammalia	Dasyuridae	Dasyurus maculatus	Spotted-tailed Quoll	No	Vulnerable, Protected	Endangered
Mammalia	Dasyuridae	Dasyurus viverrinus	Eastern Quoll	No	Endangered, Protected	Critically Endangered
Mammalia	Dugongidae	Dugong dugon	Dugong	No	Endangered, Protected	
Mammalia	Molossidae	Mormopterus norfolkensis	Eastern Freetail-bat	No	Vulnerable, Protected	
Mammalia	Otariidae	Arctocephalus forsteri	New Zealand Fur-seal	No	Vulnerable, Protected	
Mammalia	Otariidae	Arctocephalus pusillus doriferus	Australian Fur-seal	No	Vulnerable, Protected	
Mammalia	Peramelidae	Perameles nasuta	Long-nosed Bandicoot population in inner western Sydney	No	Endangered Population, Protected	
Mammalia	Potoroidae	Aepyprymnus rufescens	Rufous Bettong	No	Vulnerable, Protected	
Mammalia	Pteropodidae	Pteropus poliocephalus	Grey-headed Flying-fox	No	Vulnerable, Protected	Vulnerable
Mammalia	Vespertilionidae	Miniopterus australis	Little Bentwing-bat	No	Vulnerable, Protected	
Mammalia	Vespertilionidae	Miniopterus schreibersii oceanensis	Eastern Bentwing-bat	No	Vulnerable, Protected	
Mammalia	Vespertilionidae	Myotis macropus	Southern Myotis	No	Vulnerable, Protected	
Reptilia	Cheloniidae	Chelonia mydas	Green Turtle	No	Vulnerable, Protected	Vulnerable
Reptilia	Dermochelyidae	Dermochelys coriacea	Leatherback Turtle	No	Endangered, Protected	Endangered
Flora	Asteraceae	Senecio spathulatus	Coast Groundsel	No	Endangered, Protected	

Class	Family	Scientific	Common	Exotic	NSW Status	Commonwealth Status
Flora	Casuarinaceae	<i>Allocasuarina portuensis</i>	Nielsen Park She-oak	No	Endangered, Protected, Category 3 Sensitive Species	Endangered
Flora	Convolvulaceae	<i>Wilsonia backhousei</i>	Narrow-leafed <i>Wilsonia</i>	No	Vulnerable, Protected	
Flora	Dilleniaceae	<i>Hibbertia puberula</i>		No	Endangered, Protected	
Flora	Elaeocarpaceae	<i>Tetratheca glandulosa</i>		No	Vulnerable, Protected	
Flora	Elaeocarpaceae	<i>Tetratheca juncea</i>	Black-eyed Susan	No	Vulnerable, Protected	Vulnerable
Flora	Ericaceae	<i>Epacris purpurascens</i> var. <i>purpurascens</i>		No	Vulnerable, Protected	
Flora	Fabaceae (Faboideae)	<i>Pultenaea parviflora</i>		No	Endangered, Protected	Vulnerable
Flora	Fabaceae (Mimosoideae)	<i>Acacia bynoeana</i>	Bynoe's Wattle	No	Endangered, Protected	Vulnerable
Flora	Fabaceae (Mimosoideae)	<i>Acacia gordonii</i>		No	Endangered, Protected	Endangered
Flora	Fabaceae (Mimosoideae)	<i>Acacia pubescens</i>	Downy Wattle	No	Vulnerable, Protected	Vulnerable
Flora	Fabaceae (Mimosoideae)	<i>Acacia terminalis</i> subsp. <i>terminalis</i>	Sunshine Wattle	No	Endangered, Protected	Endangered
Flora	Grammitidaceae	<i>Grammitis stenophylla</i>	Narrow-leaf Finger Fern	No	Endangered, Protected, Category 3 Sensitive Species	
Flora	Myrtaceae	<i>Callistemon linearifolius</i>	Netted Bottle Brush	No	Vulnerable, Protected, Category 3 Sensitive Species	
Flora	Myrtaceae	<i>Darwinia biflora</i>		No	Vulnerable, Protected	Vulnerable
Flora	Myrtaceae	<i>Eucalyptus camfieldii</i>	Camfield's Stringybark	No	Vulnerable, Protected	Vulnerable
Flora	Myrtaceae	<i>Eucalyptus fracta</i>	Broken Back Ironbark	No	Vulnerable, Protected	
Flora	Myrtaceae	<i>Eucalyptus nicholii</i>	Narrow-leaved Black Peppermint	No	Vulnerable, Protected	Vulnerable
Flora	Myrtaceae	<i>Eucalyptus pulverulenta</i>	Silver-leafed Gum	No	Vulnerable, Protected	Vulnerable
Flora	Myrtaceae	<i>Eucalyptus scoparia</i>	Wallangarra White Gum	No	Endangered, Protected	Vulnerable
Flora	Myrtaceae	<i>Leptospermum deanei</i>		No	Vulnerable, Protected	Vulnerable
Flora	Myrtaceae	<i>Melaleuca biconvexa</i>	Biconvex Paperbark	No	Vulnerable, Protected	Vulnerable
Flora	Myrtaceae	<i>Melaleuca deanei</i>	Deane's Paperbark	No	Vulnerable, Protected	Vulnerable
Flora	Myrtaceae	<i>Syzygium paniculatum</i>	Magenta Lilly Pilly	No	Endangered, Protected	Vulnerable
Flora	Myrtaceae	<i>Triplarina imbricata</i>	Creek <i>Triplarina</i>	No	Endangered, Protected	Endangered
Flora	Orchidaceae	<i>Caladenia tessellata</i>	Thick Lip Spider Orchid	No	Endangered, Protected, Category 2 Sensitive Species	Vulnerable
Flora	Orchidaceae	<i>Diuris arenaria</i>	Sand Doubletail	No	Endangered, Protected, Category 2 Sensitive Species	
Flora	Orchidaceae	<i>Genoplesium baueri</i>	Bauer's Midge Orchid	No	Endangered, Protected, Category 2 Sensitive Species	Endangered
Flora	Poaceae	<i>Dichanthium setosum</i>	Bluegrass	No	Vulnerable, Protected	Vulnerable
Flora	Proteaceae	<i>Persoonia hirsuta</i>	Hairy Geebung	No	Endangered, Protected, Category 3 Sensitive Species	Endangered
Flora	Proteaceae	<i>Persoonia nutans</i>	Nodding Geebung	No	Endangered, Protected	Endangered
Flora	Rutaceae	<i>Asterolasia buxifolia</i>		No	Endangered, Protected	
Flora	Santalaceae	<i>Thesium australe</i>	Austral Toadflax	No	Vulnerable, Protected	Vulnerable
Flora	Thymelaeaceae	<i>Pimelea curviflora</i> var. <i>curviflora</i>		No	Vulnerable, Protected	Vulnerable
Flora	Thymelaeaceae	<i>Pimelea spicata</i>	Spiked Rice-flower	No	Endangered, Protected	Endangered
Flora	Hydrophoraceae	<i>Camarophyllopsis kearneyi</i>		No	Endangered, Protected	

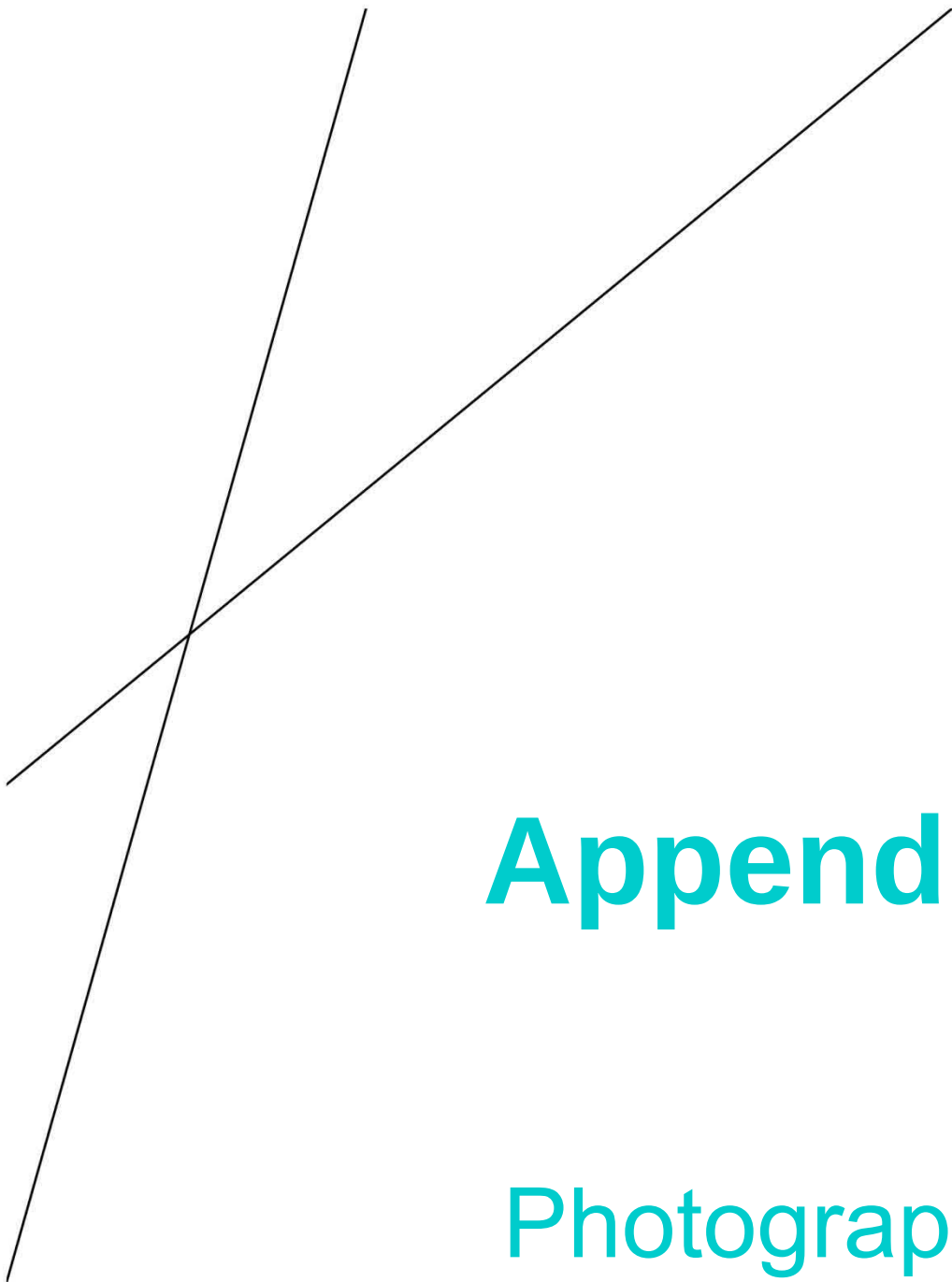
Class	Family	Scientific	Common	Exotic	NSW Status	Commonwealth Status
Flora	Hygrophoraceae	Hygrocybe anomala var. ianthinomarginata		No	Vulnerable, Protected	
Flora	Hygrophoraceae	Hygrocybe aurantipes		No	Vulnerable, Protected	
Flora	Hygrophoraceae	Hygrocybe austropratensis		No	Endangered, Protected	
Flora	Hygrophoraceae	Hygrocybe collucera		No	Endangered, Protected	
Flora	Hygrophoraceae	Hygrocybe griseoramosa		No	Endangered, Protected	
Flora	Hygrophoraceae	Hygrocybe lanecovensensis		No	Endangered, Protected	
Flora	Hygrophoraceae	Hygrocybe reesiaae		No	Vulnerable, Protected	
Flora	Hygrophoraceae	Hygrocybe rubronivea		No	Vulnerable, Protected	

Data does not include records not defined as either endangered or vulnerable, and category 1 sensitive species are also excluded. NSW Office of Environment and Heritage's Atlas of NSW Wildlife, which holds data from a number of custodians. Data obtained 05/04/2017

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Appendix C

Photographic Log

PHOTOGRAPHIC LOG

Site Name: Waterloo Metro Quarter		Site Location: Waterloo, NSW	Project No: 60521100
Photo No. 1	Date: 10/04/2017		
Direction Photo Taken: South along Botany Road			
Description: Commercial properties (shop fronts) located on the southern end of Botany Road within the Study Area			

Photo No. 2	Date: 10/04/2017	
Direction Photo Taken: South from near the corner of Cope Street and Wellington Street		
Description: Light industrial property located on the southern end of Cope Street within the Study Area		

PHOTOGRAPHIC LOG

Site Name: Waterloo Metro Quarter		Site Location: Waterloo, NSW	Project No: 60521100
Photo No. 3	Date: 10/04/2017		
Direction Photo Taken: North along Cope Street			
Description: Typical brick construction of properties within the Study Area.			

Photo No. 4	Date: 10/04/2017	
Direction Photo Taken: Southeast from the corner of Botany Road and Raglan Street		
Description: Building canopy potentially containing asbestos containing material (ACM) .		

PHOTOGRAPHIC LOG

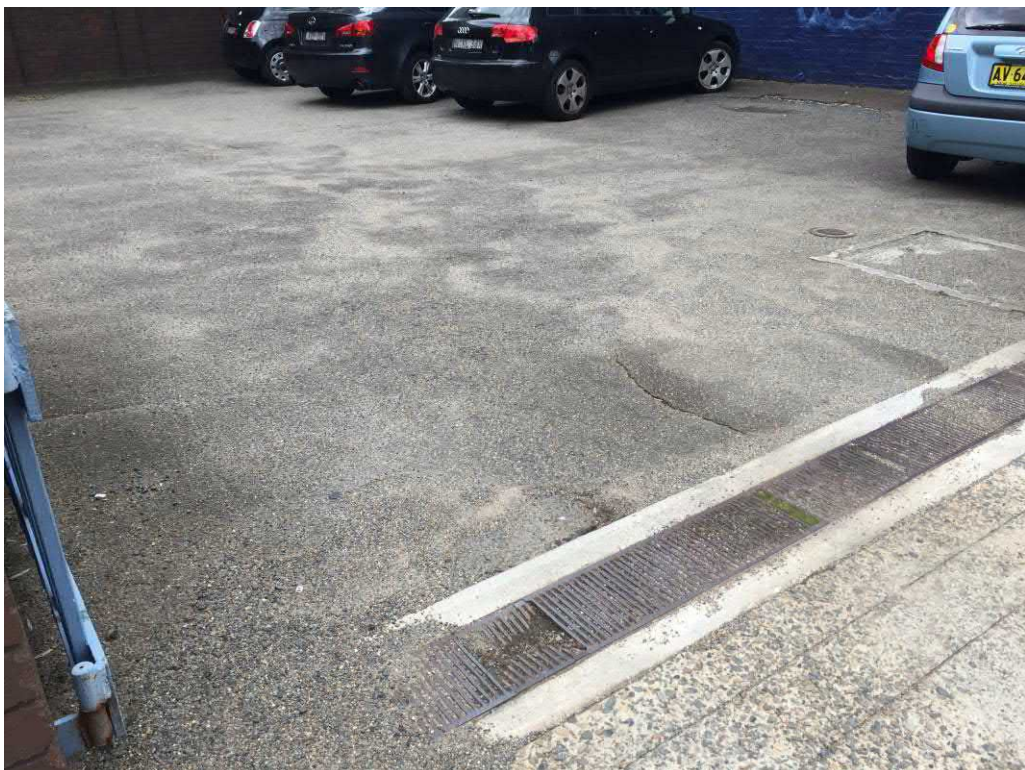
Site Name: Waterloo Metro Quarter		Site Location: Waterloo, NSW	Project No: 60521100
Photo No. 5	Date: 10/04/2017		
Direction Photo Taken: North from Wellington Street, near the corner of Botany Road and Wellington Street			
Description: Unsealed car parking area with unsealed surface and evidence of hydrocarbon staining.			

Photo No. 6	Date: 10/04/2017	
Direction Photo Taken: South along Botany Road		
Description: Mature trees in good condition along Botany Road.		

PHOTOGRAPHIC LOG

Site Name: Waterloo Metro Quarter		Site Location: Waterloo, NSW	Project No: 60521100
Photo No. 7	Date: 10/04/2017		
Direction Photo Taken: East along Wellington Street			
Description: Nature strip along Wellington Street. Only nature strips were observed along Wellington Street within the Study Area. Evidence of erosion and exposed soil in photograph.			

Photo No. 8	Date: 10/04/2017
Direction Photo Taken: North and south along Cope Street	
Description: Poor condition concrete/asphalt footpath along Cope Street	

	
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PHOTOGRAPHIC LOG

Site Name: Waterloo Metro Quarter		Site Location: Waterloo, NSW	Project No: 60521100
Photo No. 9	Date: 10/04/2017		
Direction Photo Taken: North along Cope Street from the corner of Cope Street and Wellington Street			
Description: Trench reinstatement along Cope Street adjacent to Karolina York (design studio) and La Porte Space (office suites). Overall, footpath appears to have been recently reinstated and in good condition.			

Photo No. 10	Date: 10/04/2017
Direction Photo Taken: East from Botany Road	
Description: Raised garden bed in front of Waterloo Congregation Church where fill material may have been imported to the Study Area. Vegetation noted to be in a good condition with no sign of die back.	

A photograph showing a raised garden bed bordered by a green metal fence with decorative finials. The garden bed is filled with various green plants and foliage. The ground in front of the fence is paved. The background shows more greenery and a building.

PHOTOGRAPHIC LOG

Site Name: Waterloo Metro Quarter		Site Location: Waterloo, NSW	Project No: 60521100
Photo No. 11	Date: 10/04/2017		
Direction Photo Taken: East across Cope Street			
Description: Medium density housing (i.e. Waterloo Social Housing Estate) on the block east of the Study Area with some open space areas.			

Photo No. 12	Date: 10/04/2017	
Direction Photo Taken: Southwest along Botany Road		
Description: Commercial buildings located on the block west of the Study Area		

PHOTOGRAPHIC LOG

Site Name: Waterloo Metro Quarter		Site Location: Waterloo, NSW	Project No: 60521100
Photo No. 13	Date: 10/04/2017		
Direction Photo Taken: South from the corner of Cope Street and Wellington Street			
Description: Low density residential housing on the southern part of the block located to the west of the Study Area.			

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