ENVIRONMENTAL INVESTIGATION SERVICES

REPORT

TO

NBRS ARCHITECTURE

ON

PRELIMINARY STAGE 1 ENVIRONMENTAL SITE ASSESSMENT

FOR

PROPOSED SCHOOL ADDITIONS

AT

CANTERBURY SOUTH PUBLIC SCHOOL, HIGH STREET, CANTERBURY, NSW

20 DECEMBER 2017 **REF: E31040Krpt**

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EXECUTIVE SUMMARY

NBRS Architecture ('the client') commissioned Environmental Investigation Services (EIS) to undertake a Preliminary Stage 1 Environmental Site Assessment (ESA) for the proposed school additions at Canterbury South Public School, High Street, Canterbury, NSW. The site location is shown on Figure 1 and the assessment was confined to the site boundaries as shown on Figure 2.

The primary aims of the assessment were to identify any past or present potentially contaminating activities at the site, identify the potential for site contamination, and make a preliminary assessment of the soil contamination conditions. The assessment objectives were to:

- Provide an appraisal of the past site use(s) based on a review of historical records;
- Assess the current site conditions and use via a site walkover inspection;
- Identify potential contamination sources/areas of environmental concern (AEC) and contaminants of potential concern (CoPC);
- Assess the soil contamination conditions via implementation of a preliminary sampling and analysis program;
- Prepare a conceptual site model (CSM);
- Assess the potential risks posed by contamination to the receptors identified in the CSM (Tier 1 assessment);
- Provide a preliminary waste classification for off-site disposal of soil;
- Assess whether further intrusive investigation and/or remediation is required; and
- Assess the potential for acid sulfate soil (ASS) at the site.

The assessment included a desktop site history assessment and soil sampling from a total of ten geotechnical boreholes. The historical assessment identified various potential sources of contamination/AEC, including fill, use of pesticides, hazardous building materials and an offsite former mechanics.

Contaminants encountered during the investigation included:

- One elevated concentration of TRH C_{10}-C_{16} (F2) was encountered above the Health Screening Levels in one soil sample;
- Elevated concentrations of zinc, TRH C_{10}-C_{16} (F2) and C_{16}-C_{34} (F3) were encountered above the Ecological guidelines in one soil sample; and
- The site inspection identified several fibre cements fragments located in the southern section of the site. One representative sample was collected (HLF1) and analysed which contained asbestos.

EIS consider that it is technically feasible for the site to be made suitable for the proposed development provided that the following recommendations are implemented to address the data gaps and to manage the risks:

- Undertake a Stage 2 ESA to address the data gaps identified in Section 11.2. Including additional boreholes for soil sampling, groundwater monitoring wells and an asbestos quantification assessment are all required to adequately characterise the risk;
- Update the Asbestos Management Plan to take account to take into account of the findings of this investigation and any future investigations;
- After the detailed Stage 2 has been prepared a Remediation Action Plan (RAP) should be prepared, if necessary, to outline remedial measures for the site (when detailed proposed development plans are provided); and

- Prepare a Validation Assessment (VA) report on completion of remediation.

The conclusions and recommendations should be read in conjunction with the limitations presented in the body of the report.

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ABBREVIATIONS

Ambient Background Concentrations	**ABC**
Added Contaminant Limits	**ACL**
Asbestos Containing Material	**ACM**
Australian Drinking Water Guidelines	**ADWG**
Area of Environmental Concern	**AEC**
Australian Height Datum	**AHD**
Asbestos Health Screening Levels	**ASL**
Acid Sulfate Soil	**ASS**
Above-Ground Storage Tank	**AST**
Below Ground Level	**BGL**
Bureau of Meteorology	**BOM**
Benzene, Toluene, Ethylbenzene, Xylene	**BTEX**
Cation Exchange Capacity	**CEC**
Contaminated Land Management	**CLM**
Construction Management Plan	**CMP**
Contaminant(s) of Potential Concern	**CoPC**
Chain of Custody	**COC**
Conceptual Site Model	**CSM**
Data Quality Indicator	**DQI**
Data Quality Objective	**DQO**
Detailed Site Investigation	**DSI**
Ecological Investigation Levels	**EILs**
Ecological Screening Level	**ESL**
Environmental Management Plan	**EMP**
Excavated Natural Material	**ENM**
Environment Protection Authority	**EPA**
Environmental Site Assessment	**ESA**
Ecological Screening Level	**ESL**
Fibre Cement Fragments	**FCF**
General Approvals of Immobilisation	**GAI**
General Solid Waste	**GSW**
Health Investigation Level	**HILs**
Hardness Modified Trigger Values	**HMTV**
Health Screening Level	**HSLs**
International Organisation of Standardisation	**ISO**
Lab Control Spike	**LCS**
Light Non-Aqueous Phase Liquid	**LNAPL**
Local Government Authority	**LGA**
Map Grid of Australia	**MGA**
National Association of Testing Authorities	**NATA**
National Environmental Protection Measure	**NEPM**
Organochlorine Pesticides	**OCP**
Organophosphate Pesticides	**OPP**
Polycyclic Aromatic Hydrocarbons	**PAH**
Photo-ionisation Detector	**PID**
Practical Quantitation Limit	**PQL**

ABBREVIATIONS

Preliminary Site Investigation	**PSI**
Quality Assurance	**QA**
Quality Control	**QC**
Remediation Action Plan	**RAP**
Relative Percentage Difference	**RPD**
Restricted Solid Waste	**RSW**
Site Assessment Criteria	**SAC**
Sampling, Analysis and Quality Plan	**SAQP**
Site Audit Statement	**SAS**
Site Audit Report	**SAR**
Specific Contamination Concentration	**SCC**
Standard Penetration Test	**SPT**
Semi-Volatile Organic Compounds	**sVOC**
Standard Sampling Procedure	**SSP**
Standing Water Level	**SWL**
Standard Sampling Procedure	**SSP**
Trip Blank	**TB**
Toxicity Characteristic Leaching Procedure	**TCLP**
Total Recoverable Hydrocarbons	**TRH**
Trip Spike	**TS**
Upper Confidence Limit	**UCL**
United States Environmental Protection Agency	**USEPA**
Underground Storage Tank	**UST**
Virgin Excavated Natural Material	**VENM**
Volatile Organic Compounds	**VOC**
Work Health and Safety	**WHS**

1 INTRODUCTION

NBRS Architecture ('the client') commissioned Environmental Investigation Services (EIS)[1] to undertake a Preliminary Stage 1 Environmental Site Assessment (ESA) for the proposed school additions at Canterbury South Public School, High Street, Canterbury, NSW. The site location is shown on Figure 1 and the assessment was confined to the site boundaries as shown on Figure 2.

A Hazardous Building Materials Assessment was undertaken previous to this assessment. The results of the investigation are presented in a separate report (Ref. E31040Krpt-HAZ, dated 18 December 2017).

A geotechnical investigation was undertaken in conjunction with this assessment by JK Geotechnics[2]. The results of the investigation are presented in a separate report (Ref. 31040SBrpt, dated 12 December 2017[3]). This report should be read in conjunction with the JK report.

1.1 Proposed Development Details

EIS have not been provided with any proposed development plans. We have assumed that the proposed buildings will be typical school buildings of 1 to 2 storeys with no basement levels.

1.2 Background

EIS note existence of an Asbestos Management Plan for the site that was prepared by Parsons Brinckerhoff (Dated July 2013). Two zones of potential asbestos impacted fill were identified in the central section of the site and just outside the north-east boundary of the site.

1.3 Aim and Objectives

The primary aims of the assessment were to identify any past or present potentially contaminating activities at the site, identify the potential for site contamination, and make a preliminary assessment of the soil contamination conditions. The assessment objectives were to:

- Provide an appraisal of the past site use(s) based on a review of historical records;
- Assess the current site conditions and use via a site walkover inspection;
- Identify potential contamination sources/areas of environmental concern (AEC) and contaminants of potential concern (CoPC);
- Assess the soil contamination conditions via implementation of a preliminary sampling and analysis program;
- Prepare a conceptual site model (CSM);
- Assess the potential risks posed by contamination to the receptors identified in the CSM (Tier 1 assessment);

[1] Environmental consulting division of Jeffery & Katauskas Pty Ltd (J&K)

[2] Geotechnical consulting division of J&K

[3] Referred to as JK 2017 Report

- Provide a preliminary waste classification for off-site disposal of soil;
- Assess whether further intrusive investigation and/or remediation is required; and
- Assess the potential for acid sulfate soil (ASS) at the site.

1.4 Scope of Work

The assessment was undertaken generally in accordance with an EIS proposal (Ref: EP45963K) of 31 October 2017 and written acceptance from the client of 7 November 2017. The scope of work included the following:

- Review of site information, including background and site history information from a Lotsearch Pty Ltd *Environmental Risk and Planning Report* and other sources;
- A walkover site inspection;
- Design and implementation of a sampling, analysis and quality plan (SAQP);
- Interpretation of the analytical results against the adopted site assessment criteria (SAC);
- Assessment of data quality; and
- Preparation of an ESA report presenting the results of the assessment, including a CSM and Tier 1 risk assessment.

The report was prepared with reference to regulations/guidelines outlined in the table below. Individual guidelines are also referenced within the text of the report.

Table 1-1: Guidelines

Guidelines/Regulations/Documents
Contaminated Land Management Act (1997)[4]
State Environmental Planning Policy No.55 – Remediation of Land (1998)[5]
Managing Land Contamination, Planning Guidelines SEPP55 – Remediation of Land (1998)[6]
Guidelines for Consultants Reporting on Contaminated Sites (2011)[7]
Guidelines for the NSW Site Auditor Scheme, 3rd Edition (2017)[8]
National Environmental Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013)[9]

[4] NSW Government Legislation, (1997). *Contaminated Land Management Act 1997.* (referred to as CLM Act 1997)
[5] NSW Government, (1998). *State Environmental Planning Policy No. 55 – Remediation of Land.* (referred to as SEPP55)
[6] Department of Urban Affairs and Planning, and Environment Protection Authority, (1998). *Managing Land Contamination, Planning Guidelines SEPP55 – Remediation of Land*. (SEPP55 Planning Guidelines)
[7] NSW Office of Environment and Heritage (OEH), (2011). *Guidelines for Consultants Reporting on Contaminated Sites.* (referred to as Reporting Guidelines 2011)
[8] NSW EPA, (2017). *Guidelines for the NSW Site Auditor Scheme, 3rd ed.* (referred to as Site Auditor Guidelines 2017)
[9] National Environment Protection Council, (2013). *National Environmental Protection (Assessment of Site Contamination) Amendment Measure 1999* (as amended 2013). (referred to as NEPM 2013)

2 SITE INFORMATION

2.1 Site Identification

Table 2-1: Site Identification

Current Site Owner:	Minister of Education
Site Address:	Canterbury South Public School, High Street, Canterbury, NSW
Lot & Deposited Plan:	Lot 1 DP 123147, Lot 2 194469, (Lot 4, 5, 5, 7, 8 DP 8350), Lot B DP312359 and Lot A DP 312359
Current Land Use:	Primary School
Proposed Land Use:	Primary School
Local Government Authority (LGA):	Canterbury-Bankstown
Current Zoning:	R4, R3 and RE1
Site Area (ha):	1.792
RL (AHD in m) (approx.):	11-26
Geographical Location (decimal degrees) (approx.):	Latitude: -33.91785 Longitude: 151.116007

2.2 Site Location and Regional Setting

The site is located in a predominantly residential area of Canterbury. The site is bounded by High Street to the north-west, Napier Street to the south and France Street to the north-east. The site is located approximately 400m to the south-west of the Cooks River.

2.3 Topography

The site is located within a region of gently undulating terrain. The site itself slopes down towards the north-west and south-east at a general gradient of approximately 3°. Further to the south-west of the existing school buildings, the slope gradient increases to between 8 and 10°.

2.4 Site Inspection

A walkover inspection of the site was undertaken by EIS on 25 November 2017. The inspection was limited to accessible areas of the site and immediate surrounds. A summary of the findings are outlined in the following subsections:

2.4.1 Buildings, Structures and Roads

At the time of the inspection, the site consisted of twelve permanent brick and concrete buildings and one semi-permanent demountable classroom. The main administration building (Block J) was constructed in 1936 with the remaining buildings constructed between 1976 and 2010. Several of the older permanent buildings contained previously identified bonded asbestos materials in the form of fibre cement sheeting.

The site contained an asphaltic concrete car park located in the north-east corner of France Street and several concrete pathways between the buildings. No visible staining or extensive damage was identified.

2.4.2 Boundary Conditions, Soil Stability and Erosion

The northern boundary along High Street was marked by a small brick retaining wall approximately 0.9m high. The western, southern and eastern boundaries were marked by a tall metal fence approximately 2m high. The walls and fencing appeared to be in good condition. No areas of obvious erosion or soil instability were identified.

2.4.3 Visible or Olfactory Indicators of Contamination

Several fibre cement fragments (FCF) were identified in the southern corner of the site adjacent to the demountable classroom. One representative fragment was collected for analysis (HLF1).

2.4.4 Presence of Drums/Chemicals, Waste and Fill Material

The northern boundary along High Street was approximately 0.5m to 0.9m above the road level and bound by a brick wall. This area may have been historically filled to achieve existing levels.

2.4.5 Drainage and Services

The surface runoff was assumed to follow the general gradient of the site towards to the south-east and north-west. Several drainage pits were located across the site and were presumed to be connected to local stormwater. No major underground services were identified at the site that could provide a potential pathway for contamination.

2.4.6 Sensitive Environments

Sensitive environments such as wetlands, ponds, creeks or extensive areas of natural vegetation were not identified on site or in the immediate surrounds.

2.4.7 Landscaped Areas and Visible Signs of Plant Stress

Several brick lined garden beds were located throughout the site with native and exotic species of shrubs and flowering plants. Several medium to large native trees were scattered across the site. No visual signs of dieback or stress were noted during the site inspection.

2.5 Surrounding Land Use

During the site inspection, EIS observed the following land uses in the immediate surrounds:

- North – Low density residential;
- South – Low density residential and public parkland;
- East – Low density residential; and
- West – Low density residential.

EIS did not observe any land uses in the immediate surrounds that were identified as potential contamination sources for the site.

2.6 Underground Services

The 'Dial Before You Dig' (DBYD) plans were reviewed for the assessment in order to establish whether any major underground services exist at the site or in the immediate vicinity that could act as a preferential pathway for contamination migration. No major services were identified that would be expected to act as preferential pathways for contamination migration.

2.7 Section 149 Planning Certificate (Lot 1 DP 123147 Only)

The s149 (2 and 5) planning certificates were reviewed for the assessment. Copies of the certificates are attached in the appendices. A summary of the relevant information is outlined below:

- The site is not located in an area of ecological significance;
- The site is not deemed to be: significantly contaminated; subject to a management order; subject of an approved voluntary management proposal; or subject to an on-going management order under the provisions of the CLM Act 1997;
- The site is not subject to a Site Audit Statement (SAS);
- The site is not located within an ASS risk area; and
- The site is not located in a heritage conservation area.

3 GEOLOGY AND HYDROGEOLOGY

3.1 Regional Geology

Regional geological information presented in the Lotsearch report (attached in the appendices) indicated that the site on a geological boundary underlain by Ashfield Shale of the Wianamatta Group, which typically consists of black to dark grey shale and laminate (western section of the site) and Quaternary aged deposits of peaty quartz sand, silt, and clay with ferruginous and humic cementation in places and common shell layers (eastern section of the site).

3.2 Acid Sulfate Soil Risk and Planning

A review of the acid sulfate soil (ASS) risk map prepared by Department of Land and Water Conservation (1997[10]) indicated that the site is not located in an acid sulfate soil (ASS) risk area.

ASS information presented in the Lotsearch report (attached in the appendices) indicated that the site is located within a Class 5 area. Works in Class 5 areas that could pose an environmental risk in terms of ASS include works within 500m of adjacent Class 1,2,3,4 land which are likely to lower the water table below 1m AHD on the adjacent land.

We have assessed the risk posed to the environment by ASS to the development (in the western section of the site) as relatively low for the following reasons:

- The ASS risk map prepared by the Department of Land and Water Conservation indicates that the site is located within an area of no known occurrence of ASS;
- The JK Geotechnics boreholes indicate the site is underlain by a residual soil profile over sandstone bedrock. ASS are not usually associated with residual soil profiles;
- The site is located at approximately 11-26m AHD. ASS are not usually associated with soil horizons above 5m AHD.

Considering the above information there is still the possibility of encountering ASS is the eastern section of the site. As no borehole information was obtained from this area EIS cannot exclude ASS. Therefore, in the event that this area is proposed to be developed ASS will need to be considered further.

3.3 Hydrogeology

Hydrogeological information is presented in the Lotsearch report (attached in the appendices). There were a total of 11 registered bores within the report buffer of 2,000m. In summary:

- The nearest registered bore was located approximately 682m from the site. This was utilised for domestic purposes;
- The majority of the bores were registered for monitoring purposes; and

[10] Department of Land and Water Conservation, (1997). *1:25,000 Acid Sulfate Soil Risk Map (Series 9130S3, Ed 2).*

- The drillers log information from the closest registered bores typically identified fill and/or clay soil to depths of 1.0-6.0m, underlain by sandstone or shale bedrock. Standing water levels (SWLs) in the bores were 6.7mBGL.

The information reviewed for this assessment indicated that the subsurface conditions at the site are likely to consist of residual soils overlying relatively shallow bedrock. The potential for viable groundwater abstraction and use of groundwater under these conditions is considered to be low. Use of groundwater is not proposed as part of the development.

3.4 Receiving Water Bodies

The site location and regional topography indicates that excess surface water flows have the potential to enter the Cup and Saucer Creek located to the immediate west of the site. This water body could be a potential receptor.

4 SITE HISTORY INFORMATION

4.1 Review of Historical Aerial Photographs

Historical aerial photographs were included in the Lotsearch report (attached in the appendices). EIS has reviewed the photographs and summarised relevant information in the following table:

Table 4-1: Summary of Historical Aerial Photographs

Year	Details
1943	The eastern section of the site appeared to be covered by grasses and shrubbery. There appeared to be a slight depression in this section with possible outcrops observed at the surface in the central section of the site. The western section of the site appeared to be occupied by a U-Shaped building with three smaller buildings located adjacent to the south. The southern section of the site appeared to be occupied by multiply residential lots. What appeared to be two air raid trenches were located in the central section of the site. The surrounding area appeared to be occupied by predominantly residential properties.
1955	The site and immediate surrounds appeared to be generally similar to the 1943 aerial photograph. The air raid trenches were no longer visible.
1961	The site and immediate surrounds appeared to be generally similar to the 1955 aerial photograph.
1965	The site and immediate surrounds appeared to be generally similar to the 1961 aerial photograph.
1970	The site and immediate surrounds appeared to be generally similar to the 1965 aerial photograph. However, a new building appeared to have been constructed to the east of the U-Shaped building. The eastern section of the site appeared to be in the process of being filled.
1982	The immediate surrounds appeared to be generally similar to the 1970 aerial photograph. A number of buildings/residential properties and associated sheds appeared to have been demolished in the southern and western sections of the site. New buildings appeared to have been constructed in the western and southern sections of the site and appeared to be generally similar to the existing (2017) school buildings. The eastern section of the site appeared to have been filled and covered with grass.
1991	The site and immediate surrounds appeared to be generally similar to the 1982 aerial photograph. However, buildings in the southern section of the site appeared to have been demolished.
2003	The site and immediate surrounds appeared to be generally similar to the 1991 aerial photograph. However, buildings in the southern section of the site appeared to have been demolished. A new sports court appeared to have been constructed in the south western corner of the site.

Year	Details
2009	The site and immediate surrounds appeared to be generally similar to the 2003 aerial photograph.
2014	The site and immediate surrounds appeared to be generally similar to the 2009 aerial photograph.

4.2 Review of Historical Land Title Records (Lot 1 DP 123147 Only)

Historical land title records were reviewed for the assessment. The record search was undertaken by Advance Legal Searchers Pty Ltd. Copies of the title records are attached in the appendices. The historical land title records did not identify any particular land uses which could have resulted in significant contamination. The professions of the individuals listed on the title records are not considered to be associated with site related activities.

4.3 SafeWork NSW Records

A review of SafeWork NSW records for the site is currently underway. The results will be summarised in a separate letter when received.

4.4 NSW EPA Records

The Lotsearch report (attached in the appendices) included information from the NSW EPA databases for the following:

- Records maintained in relation to contaminated land under Section 58 of the CLM Act 1997;
- Records of notified sites under Section 60 of the CLM Act 1997 (Duty to Report Contamination); and
- Licensed activities under the Protection of the Environment Operations Act (1997[11]).

The search included the site area and surrounding areas in the report buffer of 1,000m. The search indicated the following:

- There were no records for the site or properties in the report buffer under Section 58 of the CLM Act 1997 which may pose a significant risk;
- The site has not been notified under Section 60 of the CLM Act 1997; and
- There were no records for licenced activities at the site under the POEO Act 1997. A former licence was identified at the site "Application of Herbicides". Historical use of herbicides is noted in the Lotsearch report for areas along the banks of the surrounding waterways. Herbicides were not included in the list of CoPC for this assessment as under typical application scenarios, herbicides are not commonly found at residual concentrations likely to pose a risk to human health or the environment.

[11] NSW Government Legislation, (1997). *Protection of the Environment Operations Act 1997.* (referred to as POEO Act 1997)

4.5 Historical Business Directory and Additional Lotsearch Information

Historical business records for the site and surrounding areas in the report buffer were included in the Lotsearch report (attached in the appendices). The records indicated the following:

- A motor mechanics business was registered to the north (approximately 51m) of the site between 1950 and 1961. This is up gradient from the site; and
- EIS are of the opinion that the historical businesses in the report buffer are unlikely to represent potential off-site sources of site contamination.

In addition to the above, EIS have reviewed additional information contained within the Lotsearch report and note the following:

- There were no local or state heritage items at the site or in the immediate surrounds; and
- There were no significant ecological constraints at the site or in the immediate surrounds.

4.6 Summary of Site History Information

A summary of the historical land uses and activities are presented in the table below. The information presented in the table is based on a weight of evidence assessment of the site history documentation and observations made by EIS.

Table 4-2: Summary of Historical Land Uses

Year(s)	Potential Land Use / Activities	Supporting Evidence
Pre-1943	Residential (southern section of the site), possibly the western section of the site.	Aerial photographs
1970	Filling of the site occurred in the eastern section of the site.	Potential earthworks were evident in the aerial photograph showing possible alterations to the site levels in the eastern section of the site.
1982	Filling in the eastern section of the site appeared to have been completed. Current schools buildings present.	Aerial photographs
1982-now	School	Land titles and aerial photographs

4.7 Integrity of Site History Information

The majority of the site history information has been obtained from government organisations as outlined in the relevant sections of this report. The veracity of the information from these sources is considered to be relatively high. A certain degree of information loss can be expected given the lack of

specific land use details over time. EIS has relied upon the Lotsearch report and has not independently verified any information contained within. However, it is noted that the Lotsearch report is generated based on databases maintained by various government agencies and is expected to be reliable.

5 CONCEPTUAL SITE MODEL

NEPM (2013) defines a CSM as a representation of site related information regarding contamination sources, receptors and exposure pathways between those sources and receptors. The CSM for the site is presented in the following sub-sections and is based on the site information (including the site inspection information) and the review of site history information. Reference should also be made to the figures attached in the appendices.

5.1 Potential Contamination Sources/AEC and CoPC

The potential contamination sources/AEC and CoPC are presented in the following table:

Table 5-1: Potential Contamination Sources/AEC and Contaminants of Potential Concern

Source / AEC	CoPC
Fill material - The site appears to have been historically filled to achieve the existing levels (primarily the eastern section of the site). The fill may have been imported from various sources and could be contaminated.	Heavy metals (arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc), petroleum hydrocarbons (referred to as total recoverable hydrocarbons – TRHs), benzene, toluene, ethylbenzene and xylene (BTEX), polycyclic aromatic hydrocarbons (PAHs), organochlorine pesticides (OCPs), organophosphate pesticides (OPPs), polychlorinated biphenyls (PCBs) and asbestos.
Use of pesticides – Pesticides may have been used beneath the buildings and/or around the site.	Heavy metals, OCPs and OPPs
Hazardous Building Material – Hazardous building materials may be present as a result of former building and demolition activities (in particular the southern and western sections of the site). These materials may also be present in the existing buildings/ structures on site.	Asbestos, lead and PCBs
Off-site area 1 – An old mechanics business was located approximately 50m up gradient from the site.	Heavy metals (lead), TRH and BTEX

5.2 Mechanism for Contamination, Affected Media, Receptors and Exposure Pathways

The mechanisms for contamination, affected media, receptors and exposure pathways relevant to the potential contamination sources/AEC are outlined in the following CSM table:

Table 5-2: CSM

Potential mechanism for contamination	Potential mechanisms for contamination include: • Fill material – importation of impacted material, 'top-down' impacts (e.g. leaching from surficial material), or sub-surface release (e.g. impacts from buried material); • Use of pesticides – 'top-down' and spills (e.g. during normal use, application and/or improper storage); and • Hazardous building materials – 'top-down' (e.g. demolition resulting in surficial impacts in unpaved areas); and • Mechanics workshop - 'top-down', spills (e.g. leaks through cracks in the pavement), or sub-surface release (e.g. from leaking separator/grease pits or sewer pipework).
Affected media	Soil/soil vapour and groundwater have been identified as potentially affected media.
Receptor identification	Human receptors include site occupants/users, construction workers and intrusive maintenance workers. Off-site human receptors include adjacent land users and recreational water users within the Cooks River. Ecological receptors include terrestrial organisms and plants within unpaved areas, and marine ecology in the Cooks River.
Potential Exposure pathways	Potential exposure pathways relevant to the human receptors include ingestion, dermal absorption and inhalation of dust (all contaminants) and vapours (volatile TRH, naphthalene and BTEX). The potential for exposure would typically be associated with the construction and excavation works, and use of buildings (i.e. vapour inhalation or incidental contact with groundwater seepage). Potential exposure pathways for ecological receptors include primary contact and ingestion.

6 SAMPLING, ANALYSIS AND QUALITY PLAN

6.1 Data Quality Objectives (DQO)

The NEPM 2013 defines the DQO process as a seven step iterative planning tool used to define the type, quantity and quality of data needed to inform decisions relating to the environmental condition of the site. The DQO process is detailed in the Site Auditor Guidelines 2017 and the USEPA documents Data Quality Objectives Processes for Hazardous Waste Site Investigations (2000) and Guidance on Systematic Planning Using the Data Quality Objectives Process (2006). These seven steps are applicable to this assessment as summarised in the table below:

Table 6-1: DQOs – Seven Steps

Step	Input
State the Problem	The CSM has identified AEC at the site which may pose a risk to the site receptors. An intrusive investigation is required to assess the risk and comment on the suitability of the site for the proposed development or intended landuse.
Identify the Decisions/ Goal of the Study	The data collection is project specific and has been designed based on the following information: • Review of site information including site history; • AEC, CoPC, receptors, pathways and medium identified in the CSM; • Development of SAC for each media; and • The use of decision statements outlined below: 1) Did the site inspection, or does the historical information identify potential contamination sources/AEC at the site? 2) Are any results above the SAC? 3) Was asbestos identified at the site? 4) Is the site suitable for the proposed development? 5) Is further investigation required? For this assessment, the individual results have been assessed as either above or below the SAC. Statistical evaluation of the dataset via calculation of mean values and/or 95% upper confidence limit (UCL) values has not been undertaken due to the spatial distribution of the data and the limited number of samples submitted for analysis.
Identify Information Inputs	The following information will be collected: • Soil samples based on subsurface conditions; • Fibre Cement Fragments (FCF) in the vicinity of the sampling points; • The SAC will be designed based on the criteria outlined in NEPM 2013. Other criteria will be used as required and detailed in this report; • The samples will be analysed in accordance with the analytical methods outlined in NEPM 2013; • Field screening information (i.e. PID data, presence of hydrocarbons etc.) will be taken into consideration in selecting the analytical schedule; and

Step	Input
	• Any additional information that may arise during the field work will also be used as data inputs.
Define the Study Boundary	The sampling will be confined to the site boundaries as shown in Figure 2.
Develop the analytical approach (or decision rule)	The following acceptable limits will be adopted for the data quality assessment: • The following acceptance criteria will be used to assess the RPD results: ➢ results > 10 times the practical quantitation limit (PQL), RPDs < 50% are acceptable; ➢ results between 5 and 10 times PQL, RPDs < 75% are acceptable; ➢ results < 5 times PQL, RPDs < 100% are acceptable; and ➢ An explanation is provided if RPD results are outside the acceptance criteria. • Non-compliance to be documented in the report; • The following acceptance criteria will be used to assess the primary laboratory QA/QC results. Non-compliance to be documented: ➢ <u>RPDs</u>: - Results that are < 5 times the PQL, any RPD is acceptable; and - Results > 5 times the PQL, RPDs between 0-50% are acceptable; ➢ <u>LCS recovery and matrix spikes</u>: - 70-130% recovery acceptable for metals and inorganics; - 60-140% recovery acceptable for organics; and - 10-140% recovery acceptable for VOCs; ➢ <u>Surrogate spike recovery</u>: - 60-140% recovery acceptable for general organics; and - 10-140% recovery acceptable for VOCs; ➢ <u>Blanks</u>: All less than PQL.
Specify the performance or acceptance criteria	NEPM 2013 defines decision errors as '*incorrect decisions caused by using data which is not representative of site conditions'*. This can arise from errors during sampling or analytical testing. A combination of these errors is referred to as '*total study error*'. The study error can be managed through the correct choice of sample design and measurement. Decision errors can be controlled through the use of hypothesis testing. The test can be used to show either that the baseline condition is false or that there is insufficient evidence to indicate that the baseline condition is false. The null hypothesis is an assumption that is assumed to be true in the absence of contrary evidence. In this case, for example, the CoPC identified in the CSM is considered to pose a risk to receptors unless proven not to. The null hypothesis has been adopted for this assessment.
Optimise the design for obtaining data	The most resource-effective design will be used in an optimum manner to achieve the assessment objectives.

6.2 Soil Sampling Plan and Methodology

The soil sampling plan and methodology adopted for this assessment is outlined in the table below:

Table 6-2: Soil Sampling Plan and Methodology

Aspect	Input
Sampling Density	The NSW EPA Contaminated Sites Sampling Design Guidelines (1995[12]) recommend a sampling density for an environmental assessment based on the size of the investigation area. The guideline provides a minimum number of sampling points required for the investigation on a systematic sampling pattern. The guidelines recommend sampling from a minimum of 28 evenly spaced sampling points for this site with an area of approximately 1,792ha (a slightly smaller site area that what was originally calculated at the proposal stage). Samples for this investigation were obtained from 10 sampling points as shown on the attached Figure 2. This density is approximately 36% of the minimum sampling density recommended by the EPA.
Exclusion Areas (Data Gaps)	Sampling was not undertaken in inaccessible areas of the site such as beneath existing buildings. These areas have been excluded from the investigation.
Sampling Equipment	Soil samples were obtained on 25 November 2017 in accordance with the standard sampling procedure (SSP) attached in the appendices. Sampling locations were set out using a tape measure. In-situ sampling locations were cleared for underground services by an external contractor prior to sampling as outlined in the SSP. The sample locations were drilled using the following equipment as shown on the borehole logs attached in the appendices: • Hydraulically operated drill rig equipped with spiral flight augers. Soil samples were obtained from a Standard Penetration Test (SPT) sampler or directly from the auger when conditions did not allow use of the SPT sampler; and • Hand equipment in hard to access areas.
Sampling Collection and Field QA/QC	Soil samples were collected from the fill and natural profiles based on field observations. The sampling depths are shown on the logs attached in the appendices. Additional samples were obtained when relatively deep fill (>0.5m) was encountered. Samples were also obtained when there was a distinct change in lithology or based on the observations made during the investigation. During sampling, soil at selected depths was split into primary and duplicate samples for field QA/QC analysis.

[12] NSW EPA, (1995), *Contaminated Sites Sampling Design Guidelines.* (referred to as EPA Sampling Design Guidelines 1995)

Aspect	Input
	Samples were placed in glass jars with plastic caps and teflon seals with minimal headspace. Samples for asbestos analysis were placed in zip-lock plastic bags. Sampling personnel used disposable nitrile gloves during sampling activities. The samples were labelled with the job number, sampling location, sampling depth and date in accordance with the SSP.
Field PID Screening for VOCs	A portable Photoionisation Detector (PID) was used to screen the samples for the presence of VOCs and to assist with selection of samples for hydrocarbon analysis. The sensitivity of the PID is dependent on the organic compound and varies for different mixtures of hydrocarbons. Some compounds give relatively high readings and some can be undetectable even though present in identical concentrations. The portable PID is best used semi-quantitatively to compare samples contaminated by the same hydrocarbon source. The PID is calibrated before use by measurement of an isobutylene standard gas. All the PID measurements are quoted as parts per million (ppm) isobutylene equivalents. PID screening for VOCs was undertaken on soil samples using the soil sample headspace method. VOC data was obtained from partly filled zip-lock plastic bags following equilibration of the headspace gases.
Sample Preservation	Soil samples were preserved by immediate storage in an insulated sample container with ice in accordance with the SSP. On completion of the fieldwork, the samples were delivered in the insulated sample container to a NATA registered laboratory for analysis under standard COC procedures.

6.3 Analytical Schedule

The analytical schedule is outlined in the following table:

Table 6-3: Analytical Schedule

CoPC	Fill Samples	Natural Soil Samples
Heavy Metals	10	4
TRH/BTEX	10	4
PAHs	10	4
OCPs/OPPs	10	4

CoPC	Fill Samples	Natural Soil Samples
PCBs	10	4
Asbestos	10	Na
TCLP Metals (lead only)	2	Na
Asbestos in Fibre Cement Fragments (FCF)	1	Na

6.3.1 Laboratory Analysis

The samples were analysed by the NATA Accredited laboratory/s using the analytical methods detailed in Schedule B(3) of NEPM 2013. Reference should be made to the laboratory reports attached in the appendices for further details.

Table 6-4: Laboratory Details

Samples	Laboratory	Report Reference
All primary samples and field QA/QC samples including (intra-laboratory duplicate)	Envirolab Services Pty Ltd NSW, NATA Accreditation Number – 2901 (ISO/IEC 17025 compliance)	180756 and 180756-A

7 SITE ASSESSMENT CRITERIA (SAC)

The SAC adopted for the assessment is outlined in the table below. The SAC has been derived from the NEPM 2013 and other guidelines as applicable. The guideline values for individual contaminants are presented in the attached report tables.

Table 7-1: SAC Adopted for this Investigation

Guideline	Applicability
Health Investigation Levels (HILs) (NEPM 2013)	The HIL-A criteria for 'residential with accessible soil' have been adopted for this assessment.
Health Screening Levels (HSLs) (NEPM 2013)	The HSL-A criteria for 'residential with accessible soil' have been adopted for this assessment.
Ecological Assessment Criteria (NEPM 2013)	A preliminary screening of ecological risk has been undertaken based on the limited information available at this stage. The ecological criteria for 'urban residential and public open space (URPOS)' exposure setting have been adopted. The EILs for selected metals have been derived as follows: • The ABC values for high traffic (25th percentiles) areas for old suburbs of NSW published in Olszowy et. al. (1995[13]) has been adopted for this assessment; and • Soil parameters: pH; cation exchange capacity (CEC); and clay content have not been analysed for the assessment. On this basis, the EIL and ESL calculations have taken the 'worst case' scenario in order to generate the ecological criteria.
Asbestos in Soil	The 'presence/absence' of asbestos in soil has been adopted as the assessment criterion for the Preliminary Site Investigation (PSI).
Waste Classification (WC) Criteria	The criteria outlined in the NSW EPA Waste Classification Guidelines - Part 1: Classifying Waste (2014[14]) has been adopted to classify the material for off-site disposal.

[13] Olszowy, H., Torr, P., and Imray, P., (1995), *Trace Element Concentrations in Soils from Rural and Urban Areas of Australia. Contaminated Sites Monograph Series No. 4*. Department of Human Services and Health, Environment Protection Agency, and South Australian Health Commission.

[14] NSW EPA, (2014), *Waste Classification Guidelines, Part 1: Classifying Waste.* (referred to as Waste Classification Guidelines 2014)

8 INVESTIGATION RESULTS

8.1 Subsurface Conditions

A summary of the subsurface conditions encountered during the investigation is presented in the table below. Reference should be made to the borehole logs attached in the appendices for further details.

Table 8-1: Summary of Subsurface Conditions

Profile	Description (m in bgl)
Fill	Fill material was encountered at the surface in all boreholes (expect for borehole 5) and extended to depths of approximately 0.3m to 1.4m. BH9 to BH10 were terminated in the fill at a maximum depth of approximately 0.7m. The fill typically comprised of: silty sand; gravelly sandy clay; and silty gravelly sand. The fill contained inclusions of: igneous, sandstone, ironstone gravel; root fibres; tile and metal fragments.
Natural Soil	Natural silty sand was encountered at the surface in BH5. Natural soil was encountered at a depth of 0.3m in BH2 and BH8 and was assessed as sand and gravelly silty sand respectively.
Bedrock	Sandstone bedrock was encountered (in BH 1 to BH8) at depths ranging from 0.4m to 1.4m and was assessed to be extremely to slightly weathered.
Groundwater	Groundwater seepage was not encountered in the boreholes during drilling. All boreholes remained dry on completion of drilling and a short time after.

8.2 Field Screening

A summary of the field screening results are presented in the table below.

Table 8-2: Summary of Field Screening

Aspect	Details (m in bgl)
PID Screening of Soil Samples for VOCs	PID soil sample headspace readings are presented in attached report tables and the COC documents attached in the appendices. All results were 0 ppm equivalent isobutylene which indicates a lack of PID detectable VOCs.

8.3 Soil Laboratory Results

The soil laboratory results are compared to the relevant SAC in the attached report tables. A summary of the results assessed against the SAC is presented below.

Table 8-3: Summary of Soil Laboratory Results

Analyte	Results Compared to SAC
Heavy Metals	**HILs:** All heavy metal results were below the HIL-A criteria. **EILs:** BH8 (0-0.2m) encountered a zinc result of 200mg/kg above the EIL-URPOS criteria of 192mg/kg. **WC:** Two lead results were above the CT1 but below the SCC criterion. The remaining heavy metals were below the CT1 criteria. TCLP leachates were prepared from the two samples and analysed for lead. The results were less than the TCLP1 criteria.
TRH	**HSLs:** BH8 (0-0.2m) encountered a C_{10}-C_{16} (F2) result of 150mg/kg above the HSL-A criterion of 110mg/kg. **ESLs:** BH8 (0-0.2m) encountered a C_{10}-C_{16} (F2) result of 150mg/kg above the ESL-URPOS criterion of 120mg/kg and C_{16}-C_{34} (F3) result of 770mg/kg above the HSL-A criterion of 300mg/kg. **WC:** All TRH results were less than the relevant CT1 and SCC1 criteria.
BTEX	**HSLs:** All BTEX results were below the HSL-A criteria. **ESLs:** All BTEX results were below the ESL-URPOS criteria. **WC:** All BTEX results were less than the relevant CT1 and SCC1 criteria.
PAHs	**HILs:** All PAH results were below the HIL-A criteria. **HSLs:** All naphthalene results were below the HSL-A criteria. **ESLs:**

Analyte	Results Compared to SAC
	All benzo(a)pyrene results were below the ESL-URPOS criteria, **EILs:** All naphthalene results were below the EIL-URPOS criteria. **WC:** All PAH results were less than the relevant CT1 and SCC1 criteria.
OCPs & OPPs	**HILs:** All OCP and OPP results were below the HIL-A criteria. **EILs:** All DDT results were below the EIL-URPOS criteria. **WC:** All OCP and OPP results were less than the relevant CT1 and SCC1 criteria.
PCBs	**HILs:** All PCB results were below the HIL-A criterion. **WC:** All PCB results were less than the SCC1 criterion.
Asbestos	Asbestos was not detected in the soil samples analysed for the investigation. One representative FCF (HLF1) collected from the southern corner of the site contained Chrysotile and Amosite Asbestos.

9 DATA QUALITY ASSESSMENT

As part of the data quality assessment the following data quality indicators (DQIs) were assessed: precision, accuracy, representativeness, completeness and comparability as outlined in the table below. Reference should be made to the appendices for an explanation of the individual DQI.

Table 9-1: Assessment of DQIs

Completeness

Field Considerations:

- The investigation was designed as a preliminary screening and sampling was confined to accessible areas of the site (see Figure 2);
- Samples were obtained from various depths based on the subsurface conditions encountered at the sampling locations. All samples were recorded on the borehole logs. All sampling points are shown on the attached Figure 2;
- The investigation was undertaken by trained staff in accordance with the SSP; and
- Documentation maintained during the field work is attached in the appendices where applicable.

Laboratory Considerations:

- Selected samples were analysed for a range of CoPC;
- All samples were analysed by a NATA registered laboratory in accordance with the analytical methods outlined in NEPM 2013;
- Appropriate analytical methods and PQLs were used by the laboratory; and
- Appropriate sample preservation, handling, holding time and COC procedures were adopted for the investigation.

Comparability

Field Considerations:

- The investigation was undertaken by trained staff in accordance with the SSP;
- The climate conditions encountered during the field work were noted on the site description record maintained in the job file; and
- Consistency was maintained during sampling in accordance with the SSP.

Laboratory Considerations:

- All samples were analysed in accordance with the analytical methods outlined in NEPM 2013;
- Appropriate PQLs were used by the laboratory for all analysis (other than those outlined above);
- All primary, intra-laboratory duplicate and other QA/QC samples were analysed by the same laboratory; and
- The same units were used by the laboratory for all of the analysis.

Representativeness

Field Considerations:

- The investigation was designed to obtain appropriate media encountered during the field work as outlined in the SAQP; and

- All media based on the subsurface conditions encountered during the field work was sampled.

Laboratory Considerations:

- All samples were analysed in accordance with the SAQP.

Precision

Field Considerations:

- The investigation was undertaken in accordance with the SSP.

Laboratory Considerations:

- Analysis of field QA/QC samples including intra-laboratory duplicates as outlined below;
- The field QA/QC frequency adopted for the investigation is outlined below;
- Calculation of the Relative Percentage Difference (RPD) from the primary and duplicate results (the RPD calculation equation is outlined in the attached appendices);
- Assessment of RPD results against the acceptance criteria outlined in Section 6.1.

Intra-laboratory RPD Results:

Soil Samples at a frequency of 8% of the primary samples:

- Dup AF1 is a soil duplicate of primary sample BH6 (0-0.2m).

The intra-laboratory results are presented in the attached report tables. The results indicated that field precision was acceptable.

The RPD values for a range of heavy metals were outside the acceptance criteria. Values outside the acceptable limits have been attributed to sample heterogeneity and the difficulties associated with obtaining homogenous duplicate samples of heterogenous matrices.

As both the primary and duplicate sample results were less than the SAC, the exceedances are not considered to have had an adverse impact on the data set as a whole.

The inter-laboratory results are presented in the attached report tables. The results indicated that field precision was acceptable.

10 PRELIMINARY WASTE CLASSIFICATION OF SOIL FOR OFF-SITE DISPOSAL

10.1 Preliminary Waste Classification of Fill

Based on the results of the assessment, and at the time of reporting, the fill material is classified as **General Solid Waste (non-putrescible) containing Special Waste (asbestos)**. Surplus fill should be disposed of to a landfill that is licensed by the NSW EPA to receive this waste stream. The landfill should be contacted to obtain the required approvals prior to commencement of excavation.

10.2 Classification of Natural Soil and Bedrock

The natural soil is likely to be classified as VENM subject to further testing following the removal of the fill material.

11 DISCUSSION

11.1 Tier 1 Risk Assessment and Review of CSM

11.1.1 Sources and Extent of Contamination

FCF could have been imported onto the site along with the fill. Alternatively demolition of the former buildings in the southern section of the site could have resulted in remnant FCFs at the surface and possibly in the fill.

11.1.2 Review of CSM

For a contaminant to represent a risk to a receptor, the following three conditions must be present:

1. Source – The presence of a contaminant;
2. Pathway – A mechanism or action by which a receptor can become exposed to the contaminant; and
3. Receptor – The human or ecological entity which may be adversely impacted following exposure to contamination.

If one of the above components is missing, the potential for adverse risks is relatively low.

The assessment has identified the following contamination issues at the site:

Table 11-1: Tier 1 Risk Assessment and Review of CSM

CoPC	Receptor and Exposure Pathway	Discussion and Risk Rating
Asbestos in FCF	Human Receptors: Inhalation of airborne asbestos fibres	The investigation encountered FCF containing asbestos. During sampling the FCF were assessed to be in good conditions and could not be broken by hand pressure. Hence the material was assessed to be 'non-friable' based on field information. EIS are of the opinion that the risk posed to human receptors is low to moderate and will require remediation and/or management.
C_{10}-C_{16} (F2)	Human Receptors: Inhalation	A minor elevation of C_{10}-C_{16} (F2) above the HSL-A criteria was detected in sample BH8 (0-0.2m). Based on the available data this appears to be an isolated occurrence. There is the possibility that the result may be an anomaly associated with plant oils generated by trees in the area. These results will need to be considered during the next stage of investigative works. EIS are of the opinion that the risk posed to on-site human receptors is relatively low.

CoPC	Receptor and Exposure Pathway	Discussion and Risk Rating
Zinc, C_{10}-C_{16} (F2) and C_{16}-C_{34} (F3)	Environmental Receptors: Direct exposure to plants and animals	The CoPC were above the ecological criteria adopted for this investigation and that may pose a risk to environmental receptors. However, the risk is considered to be low as the results were only marginally elevated and confined to one of the boreholes. These results will need to be considered during the next stage of investigative works.

11.1.3 Fate and Transport

The potential fate and transport of CoPC identified at the site is summarised in the following table:

Table 11-2: Fate and Transport of CoPC

CoPC	Fate and Transport
Non-volatile contaminants including: metals, and asbestos	With the exception of asbestos, non-volatile contaminants are predominantly confined to the soil and groundwater medium. The mobility of these contaminants varies depending on: the nature and type of contaminant present (e.g. leachability, viscosity etc.); soil type/porosity; surface water infiltration; groundwater levels; and the rate of groundwater movement. **Presence of Asbestos** The potential transport of asbestos fibres is associated with the disturbance of asbestos contaminated soils and release of fibres into the atmosphere. This is likely to occur during excavation works. A number of studies have found that soils effectively filter out asbestos fibres and retain them within the soil matrix. The studies concluded that there is no significant migration of asbestos fibres, either through soil or groundwater.
Volatile contaminants including: TPH	Volatile contaminants are usually more mobile when compared to the non-volatile compounds. The potential for migration of volatile contaminants such as TPH is relatively high in sandy soil with a high water table. These contaminants break down rapidly as a result of microbial activity and availability of nutrients including nitrogen, oxygen etc. The mobile contaminants would be expected to move down to the rock surface or groundwater table and migrate down gradient from the source. The mobility would depend on a range of factors such as: soil type/porosity; surface water infiltration; groundwater levels; confining layers within the aquifer; solubility in groundwater etc.

11.2 Data Gaps

The assessment has identified the following data gaps:

- Areas beneath the existing buildings have not been included in the assessment;
- The NSW EPA minimum density recommended in the NSW EPA Sampling Design Guidelines has not been met; and
- The extent of the asbestos have not been adequately quantified at this stage.

12 CONCLUSION

EIS consider that the report objectives outlined in **Section 1.3** have been addressed.

Based on the scope of works undertaken, EIS are of the opinion that the CoPC identified at the site pose a risk to the receptors.

12.1 Decision Statements

The decision statements are addressed below:

Did the site inspection, or does the historical information identify potential contamination sources/AEC at the site? Yes

Are any results above the SAC? Yes

Was asbestos identified at the site? Yes

Is the site suitable for the proposed development? *No, further characterisation and remediation will be required.*

Is further investigation required? Yes, see below

EIS consider that it is technically feasible for the site to be made suitable for the proposed development provided that the following recommendations are implemented to address the data gaps and to manage the risks:

1. Undertake a Stage 2 ESA to address the data gaps identified in **Section 11.2.** Including additional boreholes for soil sampling, groundwater monitoring wells and an asbestos quantification assessment are all required to adequately characterise the risk**;**

2. Update the Asbestos Management Plan to take account to take into account of the findings of this investigation and any future investigations;

3. After the detailed Stage 2 has been prepared a Remediation Action Plan (RAP) should be prepared, if necessary, to outline remedial measures for the site (when detailed proposed development plans are provided); and

4. Prepare a Validation Assessment (VA) report on completion of remediation.

12.2 Regulatory Requirement

The regulatory requirements applicable for the site are outlined in the following table:

Table 12-1: Regulatory Requirement

Guideline	Applicability
Duty to Report Contamination 2015[15]	The requirement to notify the NSW EPA regarding site contamination should be assessed once the results of the additional investigation work have been reviewed and a remedial strategy (if necessary) has been selected. Please note that in the event the recommendations for additional work and remediation/management are not undertaken, there may be justification to notify the EPA. EIS can be contacted for further advice regarding notification.
POEO Act 1997	Section 143 of the POEO Act 1997 states that if waste is transported to a place that cannot lawfully be used as a waste facility for that waste, then the transporter and owner of the waste are each guilty of an offence. The transporter and owner of the waste have a duty to ensure that the waste is disposed of in an appropriate manner.
Work Health and Safety Code of Practice 2011[16]	Sites contaminated with asbestos become a 'workplace' when work is carried out there and require a register and asbestos management plan.

[15] NSW Department of Environment and Climate Change, (2015). *Guidelines on the Duty to Report Contamination under the Contaminated Land Management Act 1997.* (referred to as Duty to Report Contamination 2015)

[16] WorkCover NSW, (2011), *WHS Regulation: Code of Practice – How to Manage and Control Asbestos in the Workplace.*

13 LIMITATIONS

The report limitations are outlined below:

- EIS accepts no responsibility for any unidentified contamination issues at the site. Any unexpected problems/subsurface features that may be encountered during development works should be inspected by an environmental consultant as soon as possible;
- Previous use of this site may have involved excavation for the foundations of buildings, services, and similar facilities. In addition, unrecorded excavation and burial of material may have occurred on the site. Backfilling of excavations could have been undertaken with potentially contaminated material that may be discovered in discrete, isolated locations across the site during construction work;
- This report has been prepared based on site conditions which existed at the time of the investigation; scope of work and limitation outlined in the EIS proposal; and terms of contract between EIS and the client (as applicable);
- The conclusions presented in this report are based on investigation of conditions at specific locations, chosen to be as representative as possible under the given circumstances, visual observations of the site and immediate surrounds and documents reviewed as described in the report;
- Subsurface soil and rock conditions encountered between investigation locations may be found to be different from those expected. Groundwater conditions may also vary, especially after climatic changes;
- The investigation and preparation of this report have been undertaken in accordance with accepted practice for environmental consultants, with reference to applicable environmental regulatory authority and industry standards, guidelines and the assessment criteria outlined in the report;
- Where information has been provided by third parties, EIS has not undertaken any verification process, except where specifically stated in the report;
- EIS has not undertaken any assessment of off-site areas that may be potential contamination sources or may have been impacted by site contamination, except where specifically stated in the report;
- EIS accept no responsibility for potentially asbestos containing materials that may exist at the site. These materials may be associated with demolition of pre-1990 constructed buildings or fill material at the site;
- EIS have not and will not make any determination regarding finances associated with the site;
- Additional investigation work may be required in the event of changes to the proposed development or landuse. EIS should be contacted immediately in such circumstances;
- Material considered to be suitable from a geotechnical point of view may be unsatisfactory from a soil contamination viewpoint, and vice versa; and
- This report has been prepared for the particular project described and no responsibility is accepted for the use of any part of this report in any other context or for any other purpose.

LIST OF IN-TEXT TABLES

IMPORTANT INFORMATION ABOUT THIS REPORT

These notes have been prepared by EIS to assist with the assessment and interpretation of this report.

The Report is based on a Unique Set of Project Specific Factors
This report has been prepared in response to specific project requirements as stated in the EIS proposal document which may have been limited by instructions from the client. This report should be reviewed, and if necessary, revised if any of the following occur:

- The proposed land use is altered;
- The defined subject site is increased or sub-divided;
- The proposed development details including size, configuration, location, orientation of the structures or landscaped areas are modified;
- The proposed development levels are altered, eg addition of basement levels; or
- Ownership of the site changes.

EIS/J&K will not accept any responsibility whatsoever for situations where one or more of the above factors have changed since completion of the assessment. If the subject site is sold, ownership of the assessment report should be transferred by EIS to the new site owners who will be informed of the conditions and limitations under which the assessment was undertaken. No person should apply an assessment for any purpose other than that originally intended without first conferring with the consultant.

Changes in Subsurface Conditions
Subsurface conditions are influenced by natural geological and hydrogeological process and human activities. Groundwater conditions are likely to vary over time with changes in climatic conditions and human activities within the catchment (e.g. water extraction for irrigation or industrial uses, subsurface waste water disposal, construction related dewatering). Soil and groundwater contaminant concentrations may also vary over time through contaminant migration, natural attenuation of organic contaminants, ongoing contaminating activities and placement or removal of fill material. The conclusions of an assessment report may have been affected by the above factors if a significant period of time has elapsed prior to commencement of the proposed development.

This Report is based on Professional Interpretations of Factual Data
Site assessments identify actual subsurface conditions at the actual sampling locations at the time of the investigation. Data obtained from the sampling and subsequent laboratory analyses, available site history information and published regional information is interpreted by geologists, engineers or environmental scientists and opinions are drawn about the overall subsurface conditions, the nature and extent of contamination, the likely impact on the proposed development and appropriate remediation measures.

Actual conditions may differ from those inferred, because no professional, no matter how qualified, and no subsurface exploration program, no matter how comprehensive, can reveal what is hidden by earth, rock and time. The actual interface between materials may be far more gradual or abrupt than an assessment indicates. Actual conditions in areas not sampled may differ from predictions. Nothing can be done to prevent the unanticipated, but steps can be taken to help minimise the impact. For this reason, site owners should retain the services of their consultants throughout the development stage of the project, to identify variances, conduct additional tests which may be needed, and to recommend solutions to problems encountered on site.

Assessment Limitations
Although information provided by a site assessment can reduce exposure to the risk of the presence of contamination, no environmental site assessment can eliminate the risk. Even a rigorous professional assessment may not detect all contamination on a site. Contaminants may be present in areas that were not surveyed or sampled, or may migrate to areas which showed no signs of contamination when sampled. Contaminant analysis cannot possibly cover every type of contaminant which may occur; only the most likely contaminants are screened.

Misinterpretation of Site Assessments by Design Professionals

Costly problems can occur when other design professionals develop plans based on misinterpretation of an assessment report. To minimise problems associated with misinterpretations, the environmental consultant should be retained to work with appropriate professionals to explain relevant findings and to review the adequacy of plans and specifications relevant to contamination issues.

Logs Should not be Separated from the Assessment Report

Borehole and test pit logs are prepared by environmental scientists, engineers or geologists based upon interpretation of field conditions and laboratory evaluation of field samples. Logs are normally provided in our reports and these should not be re-drawn for inclusion in site remediation or other design drawings, as subtle but significant drafting errors or omissions may occur in the transfer process. Photographic reproduction can eliminate this problem, however contractors can still misinterpret the logs during bid preparation if separated from the text of the assessment. If this occurs, delays, disputes and unanticipated costs may result. In all cases it is necessary to refer to the rest of the report to obtain a proper understanding of the assessment. Please note that logs with the 'Environmental Log' header are not suitable for geotechnical purposes as they have not been peer reviewed by a Senior Geotechnical Engineer.

To reduce the likelihood of borehole and test pit log misinterpretation, the complete assessment should be available to persons or organisations involved in the project, such as contractors, for their use. Denial of such access and disclaiming responsibility for the accuracy of subsurface information does not insulate an owner from the attendant liability. It is critical that the site owner provides all available site information to persons and organisations such as contractors.

Read Responsibility Clauses Closely

Because an environmental site assessment is based extensively on judgement and opinion, it is necessarily less exact than other disciplines. This situation has resulted in wholly unwarranted claims being lodged against consultants. To help prevent this problem, model clauses have been developed for use in written transmittals. These are definitive clauses designed to indicate consultant responsibility. Their use helps all parties involved recognise individual responsibilities and formulate appropriate action. Some of these definitive clauses are likely to appear in the environmental site assessment, and you are encouraged to read them closely. Your consultant will be pleased to give full and frank answers to any questions.

REPORT FIGURES

AERIAL IMAGE SOURCE: GOOGLE EARTH PRO 7.1.5.1557
AERIAL IMAGE ©: 2015 GOOGLE INC.

This plan should be read in conjunction with the EIS report.

Title: **SITE LOCATION PLAN**

Location: CANTERBURY SOUTH PUBLIC SCHOOL
HIGH STREET, CANTERBURY, NSW

Report No: E31040K

Figure No: 1

ENVIRONMENTAL INVESTIGATION SERVICES

EIS

PLOT DATE: 11/12/2017 11:10:44 AM DWG FILE: S:\S EIS\SC EIS JOBS\31000'S\E31040K CANTERBURY\CAD\E31040K.DWG

LEGEND

APPROXIMATE SITE BOUNDARY

BH (Fill Depth) BOREHOLE LOCATION, NUMBER AND DEPTH OF FILL (m)

0 10 20 30 40 50

SCALE 1:1000 @A3 METRES

This plan should be read in conjunction with the EIS report.

Title: **SAMPLE LOCATION PLAN**

Location: CANTERBURY SOUTH PUBLIC SCHOOL
HIGH STREET, CANTERBURY, NSW

Report No: E31040K

Figure No: 2

ENVIRONMENTAL INVESTIGATION SERVICES

EIS

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LEGEND

APPROXIMATE SITE BOUNDARY

BH (Fill Depth) BOREHOLE LOCATION, NUMBER AND DEPTH OF FILL (m)

FCF FIBRE CEMENT FRAGMENTS (FCF)

SAMPLE ID	DEPTH (metres)
CHEMICAL	CONCENTRATION

SOIL CONTAMINATION ABOVE SAC FOR HUMAN HEALTH RISK (mg/kg)

0 10 20 30 40 50

SCALE 1:1000 @A3 METRES

This plan should be read in conjunction with the EIS report.

Title: **SITE CONTAMINATION DATA PLAN**

Location: CANTERBURY SOUTH PUBLIC SCHOOL
HIGH STREET, CANTERBURY, NSW

Report No: E31040K

Figure No: 3

ENVIRONMENTAL INVESTIGATION SERVICES

EIS

PLOT DATE: 15/12/2017 2:49:49 PM DWG FILE: S:\5 EIS\5C EIS JOBS\31000'S\E31040K CANTERBURY\CAD\E31040K.DWG

EIS

LABORATORY SUMMARY TABLES

TABLE A
SOIL LABORATORY RESULTS COMPARED TO HILs
All data in mg/kg unless stated otherwise

			HEAVY METALS								PAHs		ORGANOCHLORINE PESTICIDES (OCPs)							OP PESTICIDES (OPPs)	TOTAL PCBs	ASBESTOS FIBRES
			Arsenic	Cadmium	Chromium VI [2]	Copper	Lead	Mercury	Nickel	Zinc	Total PAHs	B(a)P TEQ [3]	HCB	Endosulfan	Methoxychlor	Aldrin & Dieldrin	Chlordane	DDT, DDD & DDE	Heptachlor	Chlorpyrifos		
PQL - Envirolab Services			4	0.4	1	1	1	0.1	1	1	-	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	100
Site Assessment Criteria (SAC) [1]			100	20	100	6000	300	40	400	7400	300	3	10	270	300	6	50	240	6	160	1	Detected/Not Detected
Sample Reference	**Sample Depth**	**Sample Description**																				
BH1	0.0-0.2	Fill: silty sand	5	LPQL	11	14	35	LPQL	8	72	0.28	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH1	1.0-1.2	Sandstone	8	LPQL	25	2	14	LPQL	2	13	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	NA
BH2	0.1-0.2	Fill: silty sand	LPQL	LPQL	14	20	66	0.2	8	140	1.2	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH3	0-0.12	Fill: silty sand	14	LPQL	32	10	64	LPQL	2	130	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH3	0.5-0.95	Sandstone	8	LPQL	25	LPQL	7	LPQL	LPQL	15	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	NA
BH4	0-0.2	Silty sand	5	LPQL	19	10	47	LPQL	7	35	1.1	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH5	0-0.2	Silty sand	LPQL	LPQL	8	10	55	LPQL	5	84	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH6	0-0.2	Fill: silty sand	LPQL	LPQL	10	24	46	LPQL	7	99	0.9	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH6	0.5-0.95	Fill: Sandy Clay	8	LPQL	13	4	29	LPQL	1	16	2.4	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	NA
BH7	0-0.2	Fill: silty sand	LPQL	LPQL	13	19	69	LPQL	6	120	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH7	0.5-0.95	Fill: gravelly sandy clay	11	LPQL	27	LPQL	9	LPQL	LPQL	21	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH8	0-0.2	Fill: Silty sand	LPQL	LPQL	13	52	150	LPQL	6	200	2.5	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH9	0-0.2	Silty gravelly sand	8	LPQL	24	14	170	1.6	9	120	0.28	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH10	0-0.2	Fill: silty sand	5	LPQL	11	28	44	LPQL	20	180	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
HLF1	Surface	Material	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Chrysotile and Amosite Asbestos Detected
Total Number of Samples			14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	11
Maximum Value			14	LPQL	32	52	170	1.6	20	200	2.5	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	NC

Explanation:

1 - Site Assessment Criteria (SAC): NEPM 2013, HIL-A: 'Residential with garden/accessible soils; children's day care centers; preschools; and primary schools'

2 - The results are for Total Chromium which includes Chromium III and VI. For initial screening purposes, we have assumed that the samples contain only Chromium VI unless demonstrated otherwise by additional analysis.

3 - B(a)P TEQ - Benzo(a)pyrene Toxicity Equivalence Quotient has been calculated based on 8 carcinogenic PAHs and their Toxic Equivalence Factors (TEFs) outlined in NEPM 2013

Concentration above the SAC **VALUE**

Abbreviations:

PAHs: Polycyclic Aromatic Hydrocarbons
B(a)P: Benzo(a)pyrene
PQL: Practical Quantitation Limit
LPQL: Less than PQL
OPP: Organophosphorus Pesticides
OCP: Organochlorine Pesticides
PCBs: Polychlorinated Biphenyls
UCL: Upper Level Confidence Limit on Mean Value
HILs: Health Investigation Levels
NA: Not Analysed
NC: Not Calculated
NSL: No Set Limit
SAC: Site Assessment Criteria
NEPM: National Environmental Protection Measure

TABLE B
SOIL LABORATORY RESULTS COMPARED TO HSLs
All data in mg/kg unless stated otherwise

					C_6-C_{10} (F1)	>C_{10}-C_{16} (F2)	Benzene	Toluene	Ethylbenzene	Xylenes	Naphthalene	PID [2]
PQL - Envirolab Services					25	50	0.2	0.5	1	3	1	
HSL Land Use Category [1]					**RESIDENTIAL WITH ACCESSIBLE SOIL**							
Sample Reference	**Sample Depth**	**Sample Description**	**Depth Category**	**Soil Category**								
BH1	0.0-0.2	Fill: silty sand	0m to < 1m	Sand	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH1	1.0-1.2	Sandstone	1m to <2m	Sand	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH2	0.1-0.2	Fill: silty sand	0m to < 1m	Sand	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH3	0-0.12	Fill: silty sand	0m to < 1m	Sand	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH3	0.5-0.95	Sandstone	0m to < 1m	Sand	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH4	0-0.2	Silty sand	0m to < 1m	Sand	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH5	0-0.2	Silty sand	0m to < 1m	Sand	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH6	0-0.2	Fill: silty sand	0m to < 1m	Sand	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH6	0.5-0.95	Fill: Sandy Clay	0m to < 1m	Clay	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH7	0-0.2	Fill: silty sand	0m to < 1m	Sand	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH7	0.5-0.95	Fill: gravelly sandy clay	0m to < 1m	Clay	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH8	0-0.2	Fill: Silty sand	0m to < 1m	Sand	LPQL	150	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH9	0-0.2	Silty gravelly sand	0m to < 1m	Sand	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
BH10	0-0.2	Fill: silty sand	0m to < 1m	Sand	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0
Total Number of Samples					14	14	14	14	14	14	14	14
Maximum Value					LPQL	150	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL

Explanation:
1 - Site Assessment Criteria (SAC): NEPM 2013
2 - Field PID values obtained during the investigation

Concentration above the SAC **VALUE**
The guideline corresponding to the elevated value is highlighted in grey in the Site Assessment Criteria Table below

Abbreviations:
UCL: Upper Level Confidence Limit on Mean Value
HSLs: Health Screening Levels
NA: Not Analysed
NC: Not Calculated
NL: Not Limiting
SAC: Site Assessment Criteria
PQL: Practical Quantitation Limit
LPQL: Less than PQL
NEPM: National Environmental Protection Measure

SITE ASSESSMENT CRITERIA

					C_6-C_{10} (F1)	>C_{10}-C_{16} (F2)	Benzene	Toluene	Ethylbenzene	Xylenes	Naphthalene
PQL - Envirolab Services					25	50	0.2	0.5	1	3	1
HSL Land Use Category [1]					**RESIDENTIAL WITH ACCESSIBLE SOIL**						
Sample Reference	**Sample Depth**	**Sample Description**	**Depth Category**	**Soil Category**							
BH1	0.0-0.2	Fill: silty sand	0m to < 1m	Sand	45	110	0.5	160	55	40	3
BH1	1.0-1.2	Sandstone	1m to <2m	Sand	70	240	0.5	220	NL	60	NL
BH2	0.1-0.2	Fill: silty sand	0m to < 1m	Sand	45	110	0.5	160	55	40	3
BH3	0-0.12	Fill: silty sand	0m to < 1m	Sand	45	110	0.5	160	55	40	3
BH3	0.5-0.95	Sandstone	0m to < 1m	Sand	45	110	0.5	160	55	40	3
BH4	0-0.2	Silty sand	0m to < 1m	Sand	45	110	0.5	160	55	40	3
BH5	0-0.2	Silty sand	0m to < 1m	Sand	45	110	0.5	160	55	40	3
BH6	0-0.2	Fill: silty sand	0m to < 1m	Sand	45	110	0.5	160	55	40	3
BH6	0.5-0.95	Fill: Sandy Clay	0m to < 1m	Clay	50	280	0.7	480	NL	110	5
BH7	0-0.2	Fill: silty sand	0m to < 1m	Sand	45	110	0.5	160	55	40	3
BH7	0.5-0.95	Fill: gravelly sandy clay	0m to < 1m	Clay	50	280	0.7	480	NL	110	5
BH8	0-0.2	Silty sand	0m to < 1m	Sand	45	110	0.5	160	55	40	3
BH9	0-0.2	Silty gravelly sand	0m to < 1m	Sand	45	110	0.5	160	55	40	3
BH10	0-0.2	Fill: silty sand	0m to < 1m	Sand	45	110	0.5	160	55	40	3

TABLE C
SOIL LABORATORY RESULTS COMPARED TO WASTE CLASSIFICATION GUIDELINES
All data in mg/kg unless stated otherwise

			HEAVY METALS								PAHs		OC/OP PESTICIDES				Total PCBs	TRH					BTEX COMPOUNDS				ASBESTOS FIBRES
			Arsenic	Cadmium	Chromium	Copper	Lead	Mercury	Nickel	Zinc	Total PAHs	B(a)P	Total Endosulfans	Chloropyrifos	Total Moderately Harmful [2]	Total Scheduled[3]		C_6-C_9	C_{10}-C_{14}	C_{15}-C_{28}	C_{29}-C_{36}	Total C_{10}-C_{36}	Benzene	Toluene	Ethyl benzene	Total Xylenes	
PQL - Envirolab Services			4	0.4	1	1	1	0.1	1	1	-	0.05	0.1	0.1	0.1	0.1	0.1	25	50	100	100	250	0.2	0.5	1	3	100
General Solid Waste CT1 [1]			100	20	100	NSL	100	4	40	NSL	200	0.8	60	4	250	<50	<50	650		NSL		10,000	10	288	600	1,000	-
General Solid Waste SCC1 [1]			500	100	1900	NSL	1500	50	1050	NSL	200	10	108	7.5	250	<50	<50	650		NSL		10,000	18	518	1,080	1,800	-
Restricted Solid Waste CT2 [1]			400	80	400	NSL	400	16	160	NSL	800	3.2	240	16	1000	<50	<50	2600		NSL		40,000	40	1,152	2,400	4,000	-
Restricted Solid Waste SCC2 [1]			2000	400	7600	NSL	6000	200	4200	NSL	800	23	432	30	1000	<50	<50	2600		NSL		40,000	72	2,073	4,320	7,200	-
Sample Reference	**Sample Depth**	**Sample Description**																									
BH1	0.0-0.2	Fill: silty sand	5	LPQL	11	14	35	LPQL	8	72	0.28	0.08	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH1	1.0-1.2	Sandstone	8	LPQL	25	2	14	LPQL	2	13	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	NA
BH2	0.1-0.2	Fill: silty sand	LPQL	LPQL	14	20	66	0.2	8	140	1.2	0.2	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	220	220	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH3	0-0.12	Fill: silty sand	14	LPQL	32	10	64	LPQL	2	130	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH3	0.5-0.95	Sandstone	8	LPQL	25	LPQL	7	LPQL	LPQL	15	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	NA
BH4	0-0.2	Silty sand	5	LPQL	19	10	47	LPQL	7	35	1.1	0.1	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH5	0-0.2	Silty sand	LPQL	LPQL	8	10	55	LPQL	5	84	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH6	0-0.2	Fill: silty sand	LPQL	LPQL	10	24	46	LPQL	7	99	0.9	0.1	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH6	0.5-0.95	Fill: Sandy Clay	8	LPQL	13	4	29	LPQL	1	16	2.4	0.3	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	NA
BH7	0-0.2	Fill: silty sand	LPQL	LPQL	13	19	69	LPQL	6	120	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH7	0.5-0.95	Fill: gravelly sandy clay	11	LPQL	27	LPQL	9	LPQL	LPQL	21	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH8	0-0.2	Fill: Silty sand	LPQL	LPQL	13	52	**150**	LPQL	6	200	2.5	0.3	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	60	460	550	1070	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH9	0-0.2	Silty gravelly sand	8	LPQL	24	14	**170**	1.6	9	120	0.28	0.08	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
BH10	0-0.2	Fill: silty sand	5	LPQL	11	28	44	LPQL	20	180	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	No asbestos detected
HLF1	Surface	Material	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Chrysotile and Amosite Asbestos Detected
Total Number of samples			14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	0
Maximum Value			14	LPQL	32	52	170	1.6	20	200	2.5	0.3	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	60	460	550	1070	LPQL	LPQL	LPQL	LPQL	NC

Explanation:

[1] - NSW EPA Waste Classification Guidelines, Part 1: Classifying Waste (2014)

[2] - Assessment of Total Moderately Harmful pesticides includes: Dichlorovos, Dimethoate, Fenitrothion, Ethion, Malathion and Parathion

[3] - Assessment of Total Scheduled pesticides include: HBC, alpha-BHC, gamma-BHC, beta-BHC, Heptachlor, Aldrin, Heptachlor Epoxide, gamma-Chlordane, alpha-chlordane, pp-DDE, Dieldrin, Endrin, pp-DDD, pp-DDT, Endrin Aldehyde

Concentration above the CT1 — **VALUE**
Concentration above SCC1 — **VALUE**
Concentration above the SCC2 — **VALUE**

Abbreviations:

PAHs: Polycyclic Aromatic Hydrocarbons
B(a)P: Benzo(a)pyrene
PQL: Practical Quantitation Limit
LPQL: Less than PQL
PID: Photoionisation Detector
PCBs: Polychlorinated Biphenyls
UCL: Upper Level Confidence Limit on Mean Value
NA: Not Analysed
NC: Not Calculated
NSL: No Set Limit
SAC: Site Assessment Criteria
TRH: Total Recoverable Hydrocarbons
CT: Contaminant Threshold
SCC: Specific Contaminant Concentration
HILs: Health Investigation Levels
NEPM: National Environmental Protection Measure
BTEX: Monocyclic Aromatic Hydrocarbons

TABLE D

SOIL LABORATORY TCLP RESULTS

All data in mg/L unless stated otherwise

			Arsenic	Cadmium	Chromium	Lead	Mercury	Nickel	B(a)P
PQL - Envirolab Services			0.05	0.01	0.01	0.03	0.0005	0.02	0.001
TCLP1 - General Solid Waste [1]			5	1	5	5	0.2	2	0.04
TCLP2 - Restricted Solid Waste [1]			20	4	20	20	0.8	8	0.16
TCLP3 - Hazardous Waste [1]			>20	>4	>20	>20	>0.8	>8	>0.16
Sample Reference	**Sample Depth**	**Sample Description**							
BH8	0-0.2	Silty sand	NA	NA	NA	0.05	NA	NA	NA
BH9	0-0.2	Silty gravelly sand	NA	NA	NA	0.1	NA	NA	NA
Total Number of samples			NC	NC	NC	2	NC	NC	NC
Maximum Value			NC	NC	NC	0.1	NC	NC	NC

Explanation:

1 - NSW EPA Waste Classification Guidelines, Part 1: Classifying Waste (2014)

General Solid Waste	**VALUE**
Restricted Solid Waste	**VALUE**
Hazardous Waste	**VALUE**

Abbreviations:

PQL: Practical Quantitation Limit

LPQL: Less than PQL

B(a)P: Benzo(a)pyrene

NC: Not Calculated

NA: Not Analysed

TCLP: Toxicity Characteristics Leaching Procedure

TABLE E
SOIL LABORATORY RESULTS COMPARED TO EILs AND ESLs
All data in mg/kg unless stated otherwise

Land Use Category [1]				URBAN RESIDENTIAL AND PUBLIC OPEN SPACE																		
							AGED HEAVY METALS-EILs						EILs		ESLs							
				pH	CEC ($cmol_c/kg$)	Clay Content (% clay)	Arsenic	Chromium	Copper	Lead	Nickel	Zinc	Naphthalene	DDT	C_6-C_{10} (F1)	>C_{10}-C_{16} (F2)	>C_{16}-C_{34} (F3)	>C_{34}-C_{40} (F4)	Benzene	Toluene	Ethylbenzene	Total Xylenes	B(a)P
PQL - Envirolab Services				-	1	-	4	1	1	1	1	1	0.1	0.1	25	50	100	100	0.2	0.5	1	3	0.05
Ambient Background Concentration (ABC) [2]				-	-	-	NSL	13	28	163	5	122	NSL	NSL	NSL	NSL	NSL	NSL	NSL	NSL	NSL	NSL	NSL
Sample Reference	**Sample Depth**	**Sample Description**	**Soil Texture**																			
BH1	0.0-0.2	Fill: silty sand	Coarse	NA	NA	NA	5	11	14	35	8	72	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0.08
BH1	1.0-1.2	Sandstone	Coarse	NA	NA	NA	8	25	2	14	2	13	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL
BH2	0.1-0.2	Fill: silty sand	Coarse	NA	NA	NA	LPQL	14	20	66	8	140	LPQL	LPQL	LPQL	LPQL	200	110	LPQL	LPQL	LPQL	LPQL	0.2
BH3	0-0.12	Fill: silty sand	Coarse	NA	NA	NA	14	32	10	64	2	130	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL
BH3	0.5-0.95	Sandstone	Coarse	NA	NA	NA	8	25	LPQL	7	LPQL	15	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL
BH4	0-0.2	Silty sand	Coarse	NA	NA	NA	5	19	10	47	7	35	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0.1
BH5	0-0.2	Silty sand	Coarse	NA	NA	NA	LPQL	8	10	55	5	84	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL
BH6	0-0.2	Fill: silty sand	Coarse	NA	NA	NA	LPQL	10	24	46	7	99	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0.1
BH6	0.5-0.95	Fill: Sandy Clay	Fine	NA	NA	NA	8	13	4	29	1	16	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0.3
BH7	0-0.2	Fill: silty sand	Coarse	NA	NA	NA	LPQL	13	19	69	6	120	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL
BH7	0.5-0.95	Fill: gravelly sandy clay	Fine	NA	NA	NA	11	27	LPQL	9	LPQL	21	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL
BH8	0-0.2	Fill: Silty sand	Coarse	NA	NA	NA	LPQL	13	52	150	6	200	LPQL	LPQL	LPQL	150	770	180	LPQL	LPQL	LPQL	LPQL	0.3
BH9	0-0.2	Silty gravelly sand	Coarse	NA	NA	NA	8	24	14	170	9	120	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	0.08
BH10	0-0.2	Fill: silty sand	Coarse	NA	NA	NA	5	11	28	44	20	180	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL	LPQL
Total Number of Samples				NC	NC	NC	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
Maximum Value				NC	NC	NC	14	32	52	170	20	200	LPQL	LPQL	LPQL	150	770	180	LPQL	LPQL	LPQL	LPQL	0.3

Explanation:

1 - Site Assessment Criteria (SAC): NEPM 2013

2 - ABC Values for selected metals has been adopted from the published background concentrations presented in Olszowy et. al., (1995), Trace Element Concentrations in Soils from Rural and Urban New South Wales (the 25th percentile values for new suburbs with high traffic have been quoted)

Concentration above the SAC VALUE

The guideline corresponding to the elevated value is highlighted in grey in the EIL and ESL Assessment Criteria Table below

Abbreviations:

EILs: Ecological Investigation Levels
B(a)P: Benzo(a)pyrene
PQL: Practical Quantitation Limit
UCL: Upper Level Confidence Limit on Mean Value
ESLs: Ecological Screening Levels
NA: Not Analysed
LPQL: Less than PQL
SAC: Site Assessment Criteria
NEPM: National Environmental Protection Measure
NC: Not Calculated
NSL: No Set Limit
ABC: Ambient Background Concentration

EIL AND ESL ASSESSMENT CRITERIA

Land Use Category [1]				URBAN RESIDENTIAL AND PUBLIC OPEN SPACE																		
							AGED HEAVY METALS-EILs						EILs		ESLs							
				pH	CEC ($cmol_c/kg$)	Clay Content (% clay)	Arsenic	Chromium	Copper	Lead	Nickel	Zinc	Naphthalene	DDT	C_6-C_{10} (F1)	>C_{10}-C_{16} (F2)	>C_{16}-C_{34} (F3)	>C_{34}-C_{40} (F4)	Benzene	Toluene	Ethylbenzene	Total Xylenes	B(a)P
PQL - Envirolab Services				-	1	-	4	1	1	1	1	1	0.1	0.1	25	50	100	100	0.2	0.5	1	3	0.05
Ambient Background Concentration (ABC) [2]				-	-	-	NSL	13	28	163	5	122	NSL	NSL	NSL	NSL	NSL	NSL	NSL	NSL	NSL	NSL	NSL
Sample Reference	**Sample Depth**	**Sample Description**	**Soil Texture**																			
BH1	0.0-0.2	Fill: silty sand	Coarse	NA	NA	NA	100	203	88	1263	35	192	170	180	180	120	300	2800	50	85	70	105	33
BH1	1.0-1.2	Sandstone	Coarse	NA	NA	NA	100	203	88	1263	35	192	170	180	180	120	300	2800	50	85	70	105	33
BH2	0.1-0.2	Fill: silty sand	Coarse	NA	NA	NA	100	203	88	1263	35	192	170	180	180	120	300	2800	50	85	70	105	33
BH3	0-0.12	Fill: silty sand	Coarse	NA	NA	NA	100	203	88	1263	35	192	170	180	180	120	300	2800	50	85	70	105	33
BH3	0.5-0.95	Sandstone	Coarse	NA	NA	NA	100	203	88	1263	35	192	170	180	180	120	300	2800	50	85	70	105	33
BH4	0-0.2	Silty sand	Coarse	NA	NA	NA	100	203	88	1263	35	192	170	180	180	120	300	2800	50	85	70	105	33
BH5	0-0.2	Silty sand	Coarse	NA	NA	NA	100	203	88	1263	35	192	170	180	180	120	300	2800	50	85	70	105	33
BH6	0-0.2	Fill: silty sand	Coarse	NA	NA	NA	100	203	88	1263	35	192	170	180	180	120	300	2800	50	85	70	105	33
BH6	0.5-0.95	Fill: Sandy Clay	Fine	NA	NA	NA	100	203	88	1263	35	192	170	180	180	120	1300	5600	60	105	125	45	33
BH7	0-0.2	Fill: silty sand	Coarse	NA	NA	NA	100	203	88	1263	35	192	170	180	180	120	300	2800	50	85	70	105	33
BH7	0.5-0.95	Fill: gravelly sandy clay	Fine	NA	NA	NA	100	203	88	1263	35	192	170	180	180	120	1300	5600	60	105	125	45	33
BH8	0-0.2	Silty sand	Coarse	NA	NA	NA	100	203	88	1263	35	192	170	180	180	120	300	2800	50	85	70	105	33
BH9	0-0.2	Silty gravelly sand	Coarse	NA	NA	NA	100	203	88	1263	35	192	170	180	180	120	300	2800	50	85	70	105	33
BH10	0-0.2	Fill: silty sand	Coarse	NA	NA	NA	100	203	88	1263	35	192	170	180	180	120	300	2800	50	85	70	105	33

TABLE F

SOIL INTRA-LABORATORY DUPLICATE RESULTS & RPD CALCULATIONS

All results in mg/kg unless stated otherwise

SAMPLE	ANALYSIS	Envirolab PQL	INITIAL	REPEAT	MEAN	RPD %
Sample Ref = BH6(0-0.2m)	Arsenic	4	LPQL	LPQL	NC	NC
Dup Ref = DUP1	Cadmium	0.4	LPQL	LPQL	NC	NC
	Chromium	1	10	9	9.5	11
Envirolab Report: 180756	Copper	1	24	23	23.5	4
	Lead	1	46	43	44.5	7
	Mercury	0.1	LPQL	LPQL	NC	NC
	Nickel	1	7	6	6.5	15
	Zinc	1	99	90	94.5	10

Explanation:

The RPD value is calculated as the absolute value of the difference between the initial and repeat results divided by the average value expressed as a percentage. The following acceptance criteria will be used to assess the RPD results:

Results > 10 times PQL = RPD value <= 50% are acceptable

Results between 5 & 10 times PQL = RPD value <= 75% are acceptable

Results < 5 times PQL = RPD value <= 100% are acceptable

If result is LPQL then 50% of the PQL is used for the calculation

RPD Results Above the Acceptance Criteria VALUE

Abbreviations:

PQL: Practical Quantitation Limit

LPQL: Less than PQL

NA: Not Analysed

NC: Not Calculated

OCP: Organochlorine Pesticides

OPP: Organophosphorus Pesticides

PCBs: Polychlorinated Biphenyls

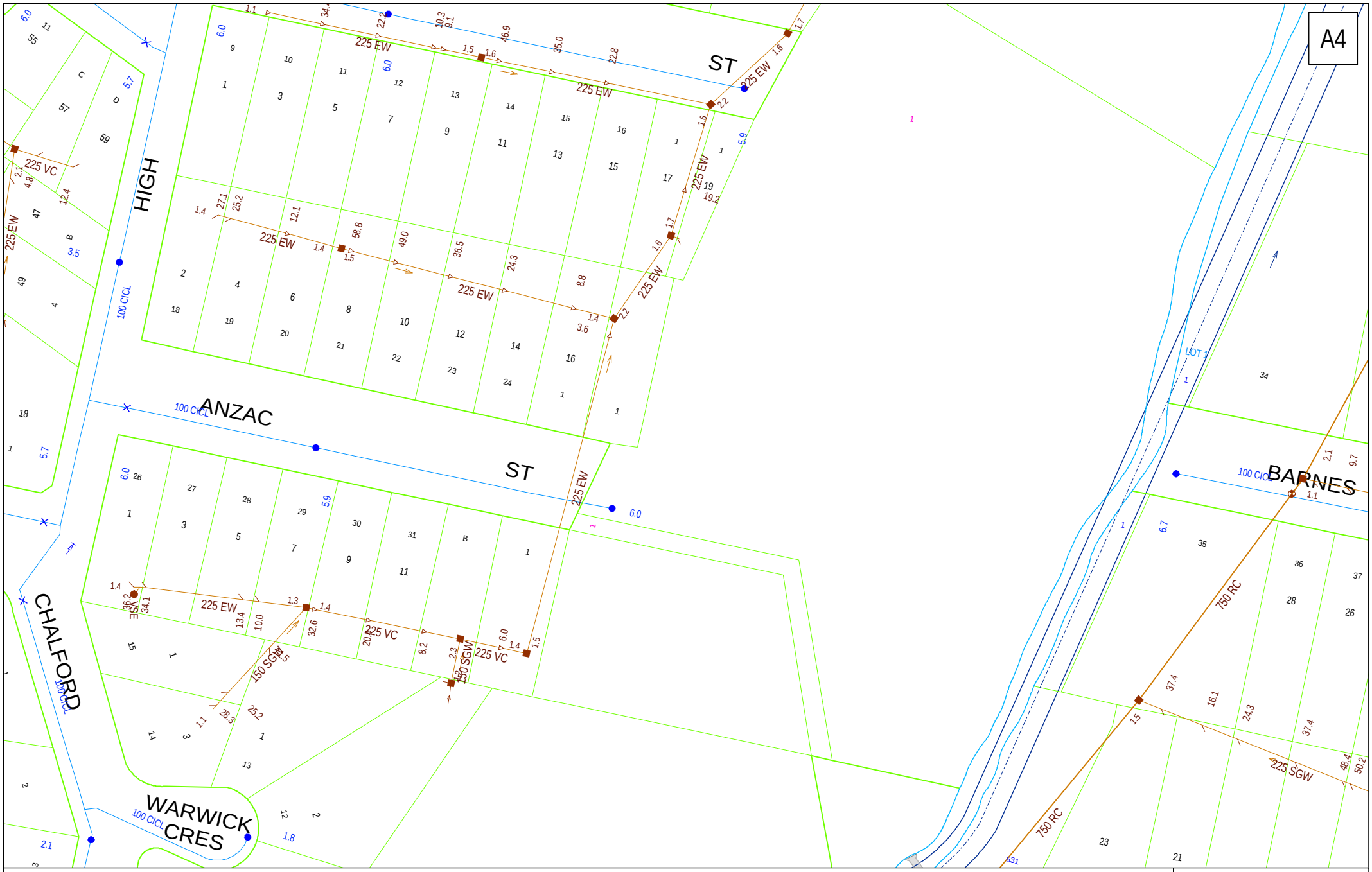
TRH: Total Recoverable Hydrocarbons

REPORT APPENDICES

Appendix A: Site Information including Site History

EIS

Selected Underground Services Plans



DBYD Address:
n/a High Street
Canterbury NSW
2193

DBYD Job No: 13223772

DBYD Sequence No: 65998131

No warranty is given that the information shown is complete or accurate.

SYDNEY WATER CORPORATION

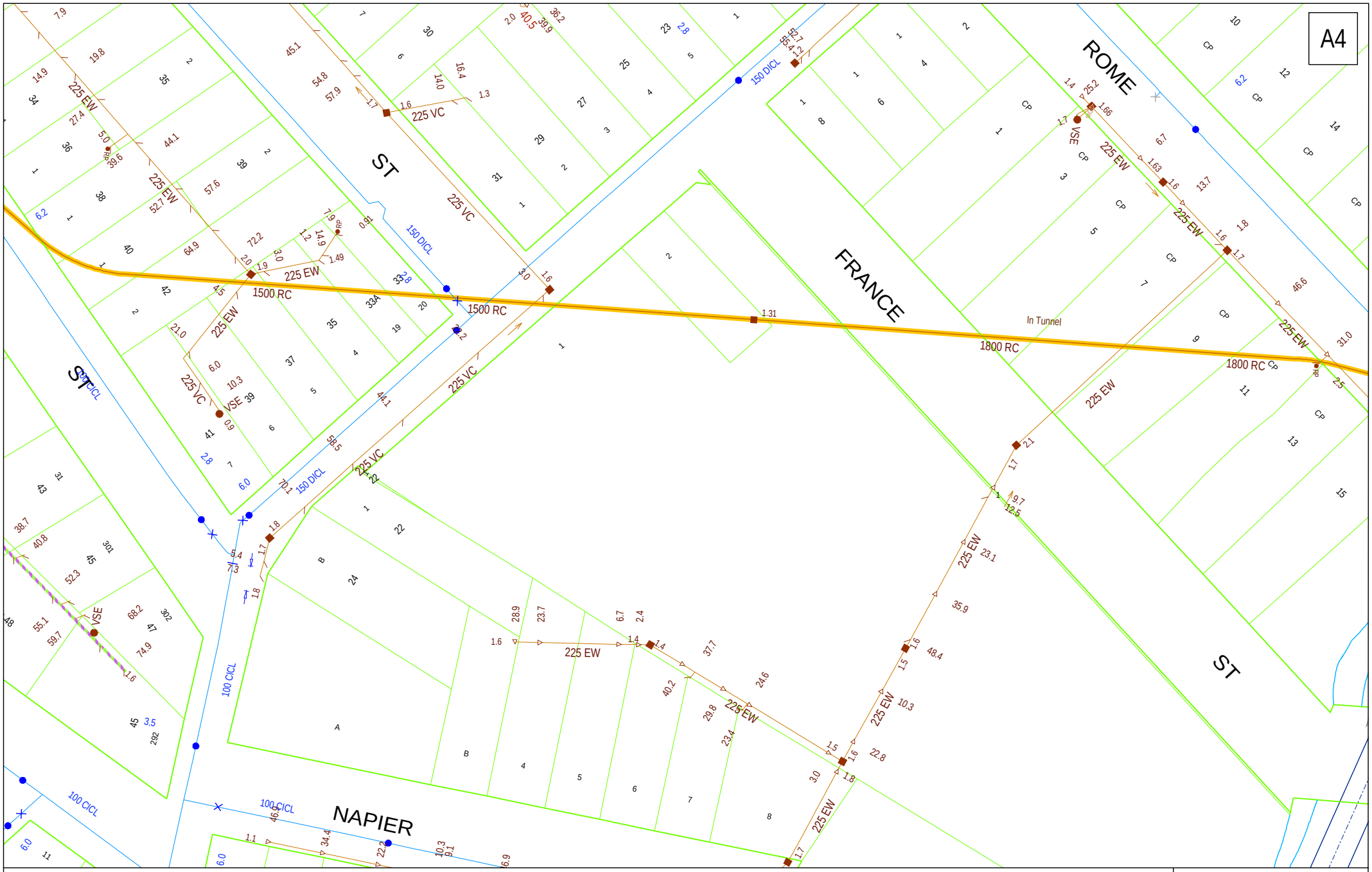
Scale: 1:1000

Date of Production: 07/11/2017

Plan 1 of 2

N

0m 5m 10m 15m 20m



DBYD Address:
n/a High Street
Canterbury NSW
2193

DBYD Job No: 13223772

DBYD Sequence No: 65998131

SYDNEY WATER CORPORATION

Scale: 1:1000

Date of Production: 07/11/2017

Plan 2 of 2

N

0m 5m 10m 15m 20m

Lotsearch Environmental Risk and Planning Report

Lotsearch

Environmental Risk and Planning Report

Canterbury South Public School, Canterbury, NSW 2193

Report Date: **10 Nov 2017 09:03:18**

Table of Contents

Location Confidences

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

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

Dataset Listing

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

Dataset Name	Custodian	Supply Date	Currency Date	Update Frequency	Dataset Buffer (m)	No. Features Onsite	No. Features within 100m	No. Features within Buffer
Cadastre Boundaries	Dept. Finance, Services & Innovation	10/11/2017	10/11/2017	Daily	-	-	-	-
Topographic Data	Dept. Finance, Services & Innovation	10/04/2015	01/04/2015	As required	-	-	-	-
List of NSW contaminated sites notified to EPA	Environment Protection Authority	09/11/2017	04/09/2017	Monthly	1000	0	0	1
Contaminated Land: Records of Notice	Environment Protection Authority	30/10/2017	30/10/2017	Monthly	1000	0	0	1
Former Gasworks	Environment Protection Authority	23/10/2017	12/09/2017	Monthly	1000	0	0	0
National Waste Management Site Database	Geoscience Australia	23/10/2017	07/03/2017	Quarterly	1000	0	0	0
EPA PFAS Investigation Program	Environment Protection Authority	23/10/2017	23/10/2017	Monthly	2000	0	0	0
EPA Other Sites with Contamination Issues	Environment Protection Authority	23/10/2017	23/10/2017	Quarterly	1000	0	0	0
Licensed Activities under the POEO Act 1997	Environment Protection Authority	04/10/2017	04/10/2017	Monthly	1000	0	0	2
Delicensed POEO Activities still Regulated by the EPA	Environment Protection Authority	04/10/2017	04/10/2017	Monthly	1000	0	0	0
Former POEO Licensed Activities now revoked or surrendered	Environment Protection Authority	04/10/2017	04/10/2017	Monthly	1000	3	3	5
UPSS Environmentally Sensitive Zones	Environment Protection Authority	14/04/2015	12/01/2010	As required	1000	1	1	1
UBD Business to Business Directory 1991 (Premise & Intersection Matches)	Hardie Grant			Not required	150	0	0	0
UBD Business to Business Directory 1991 (Road & Area Matches)	Hardie Grant			Not required	150	-	0	0
UBD Business to Business Directory 1986 (Premise & Intersection Matches)	Hardie Grant			Not required	150	0	0	0
UBD Business to Business Directory 1986 (Road & Area Matches)	Hardie Grant			Not required	150	-	0	0
UBD Business Directory 1982 (Premise & Intersection Matches)	Hardie Grant			Not required	150	0	0	0
UBD Business Directory 1982 (Road & Area Matches)	Hardie Grant			Not required	150	-	1	1
UBD Business Directory 1978 (Premise & Intersection Matches)	Hardie Grant			Not required	150	0	1	1
UBD Business Directory 1978 (Road & Area Matches)	Hardie Grant			Not required	150	-	1	1
UBD Business Directory 1975 (Premise & Intersection Matches)	Hardie Grant			Not required	150	0	0	0
UBD Business Directory 1975 (Road & Area Matches)	Hardie Grant			Not required	150	-	1	1
UBD Business Directory 1970 (Premise & Intersection Matches)	Hardie Grant			Not required	150	0	0	1
UBD Business Directory 1970 (Road & Area Matches)	Hardie Grant			Not required	150	-	1	1
UBD Business Directory 1965 (Premise & Intersection Matches)	Hardie Grant			Not required	150	0	0	0
UBD Business Directory 1965 (Road & Area Matches)	Hardie Grant			Not required	150	-	0	0
UBD Business Directory 1961 (Premise & Intersection Matches)	Hardie Grant			Not required	150	0	2	3
UBD Business Directory 1961 (Road & Area Matches)	Hardie Grant			Not required	150	-	1	1
UBD Business Directory 1950 (Premise & Intersection Matches)	Hardie Grant			Not required	150	0	6	10
UBD Business Directory 1950 (Road & Area Matches)	Hardie Grant			Not required	150	-	1	1
UBD Business Directory Drycleaners & Motor Garages/Service Stations (Premise & Intersection Matches)	Hardie Grant			Not required	500	0	2	40
UBD Business Directory Drycleaners & Motor Garages/Service Stations (Road & Area Matches)	Hardie Grant			Not required	500	-	4	18

Dataset Name	Custodian	Supply Date	Currency Date	Update Frequency	Dataset Buffer (m)	No. Features Onsite	No. Features within 100m	No. Features within Buffer
Points of Interest	Dept. Finance, Services & Innovation	01/02/2017	01/02/2017	Annually	1000	1	2	29
Tanks (Areas)	Dept. Finance, Services & Innovation	01/02/2017	01/02/2017	Annually	1000	0	0	0
Tanks (Points)	Dept. Finance, Services & Innovation	01/02/2017	01/02/2017	Annually	1000	0	0	0
Major Easements	Dept. Finance, Services & Innovation	01/02/2017	01/02/2017	As required	1000	1	4	19
State Forest	Dept. Finance, Services & Innovation	01/02/2017	29/06/2016	As required	1000	0	0	0
NSW National Parks and Wildlife Service Reserves	NSW Office of Environment & Heritage	01/02/2017	31/12/2016	Annually	1000	0	0	0
Hydrogeology Map of Australia	Commonwealth of Australia (Geoscience Australia)	08/10/2014	17/03/2000	As required	1000	1	1	1
Groundwater Boreholes	NSW Dept. of Primary Industries - Office of Water / Water Administration Ministerial Corporation; Commonwealth of Australia (Bureau of Meteorology)	21/03/2016	01/12/2015	Annually	2000	0	0	11
Geological Units 1:100,000	NSW Dept. of Industry, Resources & Energy	20/08/2014		None planned	1000	2	-	4
Geological Structures 1:100,000	NSW Dept. of Industry, Resources & Energy	20/08/2014		None planned	1000	0	-	1
Naturally Occurring Asbestos Potential	NSW Dept. of Industry, Resources & Energy	04/12/2015	24/09/2015	Unknown	1000	0	0	0
Soil Landscapes	NSW Office of Environment & Heritage	12/08/2014		None planned	1000	2	-	5
Atlas of Australian Soils	CSIRO	19/05/2017	17/02/2011	As required	1000	1	1	1
Standard Local Environmental Plan Acid Sulfate Soils	NSW Planning and Environment	07/10/2016	07/10/2016	As required	500	1	-	-
Atlas of Australian Acid Sulfate Soils	CSIRO	19/01/2017	21/02/2013	As required	1000	1	1	3
Dryland Salinity - National Assessment	National Land and Water Resources Audit	18/07/2014	12/05/2013	None planned	1000	0	0	0
Dryland Salinity Potential of Western Sydney	NSW Office of Environment & Heritage	12/05/2017	01/01/2002	None planned	1000	-	-	-
Mining Subsidence Districts	Dept. Finance, Services & Innovation	13/07/2017	01/07/2017	As required	1000	0	0	0
SEPP 14 - Coastal Wetlands	NSW Planning and Environment	17/12/2015	24/10/2008	Annually	1000	0	0	0
SEPP 26 - Littoral Rainforest	NSW Planning and Environment	17/12/2015	05/02/1988	Annually	1000	0	0	0
SEPP 71 - Coastal Protection	NSW Planning and Environment	17/12/2015	01/08/2003	Annually	1000	0	0	0
SEPP Major Developments 2005	NSW Planning and Environment	09/03/2013	25/05/2005	Under Review	1000	0	0	0
SEPP Strategic Land Use Areas	NSW Planning and Environment	01/08/2017	28/01/2014	Annually	1000	0	0	0
LEP - Land Zoning	NSW Planning and Environment	23/09/2017	23/09/2017	Quarterly	1000	3	8	65
LEP - Minimum Subdivision Lot Size	NSW Planning and Environment	23/09/2017	23/09/2017	Quarterly	0	1	-	-
LEP - Height of Building	NSW Planning and Environment	23/09/2017	23/09/2017	Quarterly	0	1	-	-
LEP - Floor Space Ratio	NSW Planning and Environment	23/09/2017	23/09/2017	Quarterly	0	2	-	-
LEP - Land Application	NSW Planning and Environment	23/09/2017	23/09/2017	Quarterly	0	1	-	-
LEP - Land Reservation Acquisition	NSW Planning and Environment	23/09/2017	23/09/2017	Quarterly	0	1	-	-
State Heritage Items	NSW Office of Environment & Heritage	01/08/2017	27/05/2016	Quarterly	1000	0	0	3
Local Heritage Items	NSW Planning and Environment	23/09/2017	23/09/2017	Monthly	1000	0	2	22
Bush Fire Prone Land	NSW Rural Fire Service	24/09/2017	06/09/2017	Quarterly	1000	0	0	0
Native Vegetation of the Sydney Metropolitan Area	NSW Office of Environment & Heritage	01/03/2017	16/12/2016	As required	1000	1	1	4
RAMSAR Wetlands	Commonwealth of Australia Department of the Environment	08/10/2014	24/06/2011	As required	1000	0	0	0
Groundwater Dependent Ecosystems	The Bureau of Meteorology	14/08/2017	15/05/2017	Unknown	1000	0	0	0
NSW BioNet Species Sightings	NSW Office of Environment & Heritage	10/11/2017	10/11/2017	Daily	10000	-	-	-

Aerial Imagery 2015

Canterbury South Public School, Canterbury, NSW 2193

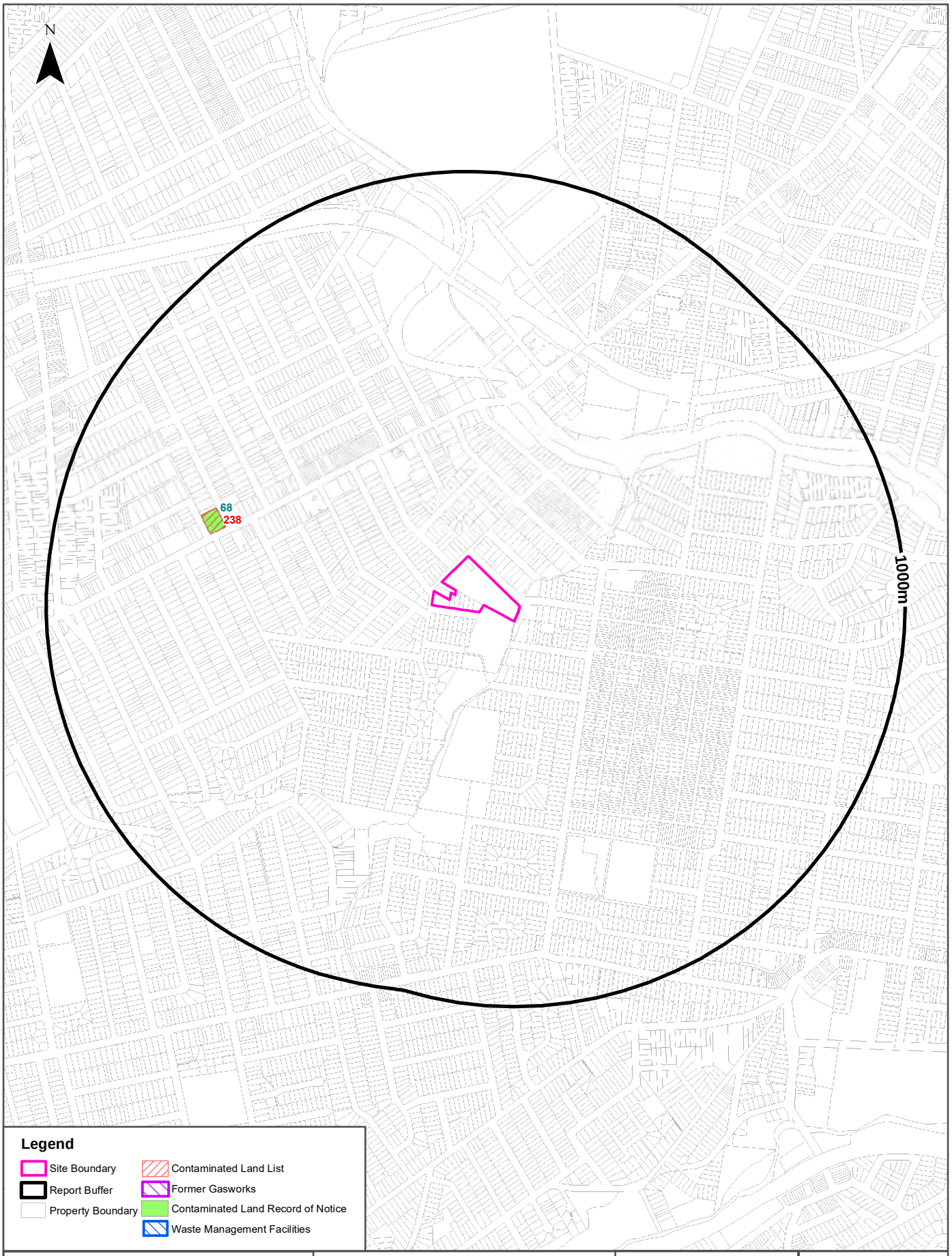
Data Sources: Aerial Imagery © 2017 Google Inc, used with permission. Google and the Google logo are registered trademarks of Google Inc.

Coordinate System: GDA 1994 MGA Zone 56

Date: 07 November, 2017

Contaminated Land & Waste Management Facilities

Canterbury South Public School, Canterbury, NSW 2193



Data Sources: Property Boundaries & Topographic Data: © Department Finance, Services & Innovation 2017

Coordinate System: GDA 1994 MGA Zone 56

Date: 09 November 2017

Contaminated Land & Waste Management Facilities

Canterbury South Public School, Canterbury, NSW 2193

List of NSW contaminated sites notified to EPA

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

Map Id	Site	Address	Suburb	Activity	Management Class	Status	Location Confidence	Dist (m)	Direction
238	Budget Petroleum and adjacent property	403 Canterbury Road and 1 Una Street	Campsie	Service Station	Contamination currently regulated under CLM Act	Current EPA List	Premise Match	567m	West

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

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

NSW EPA Contaminated Land List Data Source: Environment Protection Authority

Contaminated Land & Waste Management Facilities

Canterbury South Public School, Canterbury, NSW 2193

Contaminated Land: Records of Notice

Record of Notices within the dataset buffer:

Map Id	Name	Address	Suburb	Notices	Area No	Location Confidence	Distance	Direction
68	Budget Petroleum and adjacent property	403 Canterbury Road and 1 Una Street	Campsie	1 current	3361	Premise Match	567m	West

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

Former Gasworks

Former Gasworks within the dataset buffer:

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

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

National Waste Management Site Database

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

Site Id	Owner	Name	Address	Suburb	Class	Landfill	Reprocess	Transfer	Comments	Loc Conf	Dist (m)	Direction
N/A	No records in buffer											

Wate Management Facilities Data Source: Australian Governement Geoscience Australia
Creative Commons 3.0 © Commonwealth of Australia http://creativecommons.org/licenses/by/3.0/au/deed.en

EPA PFAS Investigation Program

Canterbury South Public School, Canterbury, NSW 2193

EPA PFAS Investigation Program

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

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

EPA PFAS Investigation Program: Environment Protection Authority

EPA Other Sites with Contamination Issues

Canterbury South Public School, Canterbury, NSW 2193

EPA Other SIte s with Contamination Issues

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

- James Hardie asbestos manufacturing and waste disposal sites
- Radiological investigation sites in Hunter's Hill

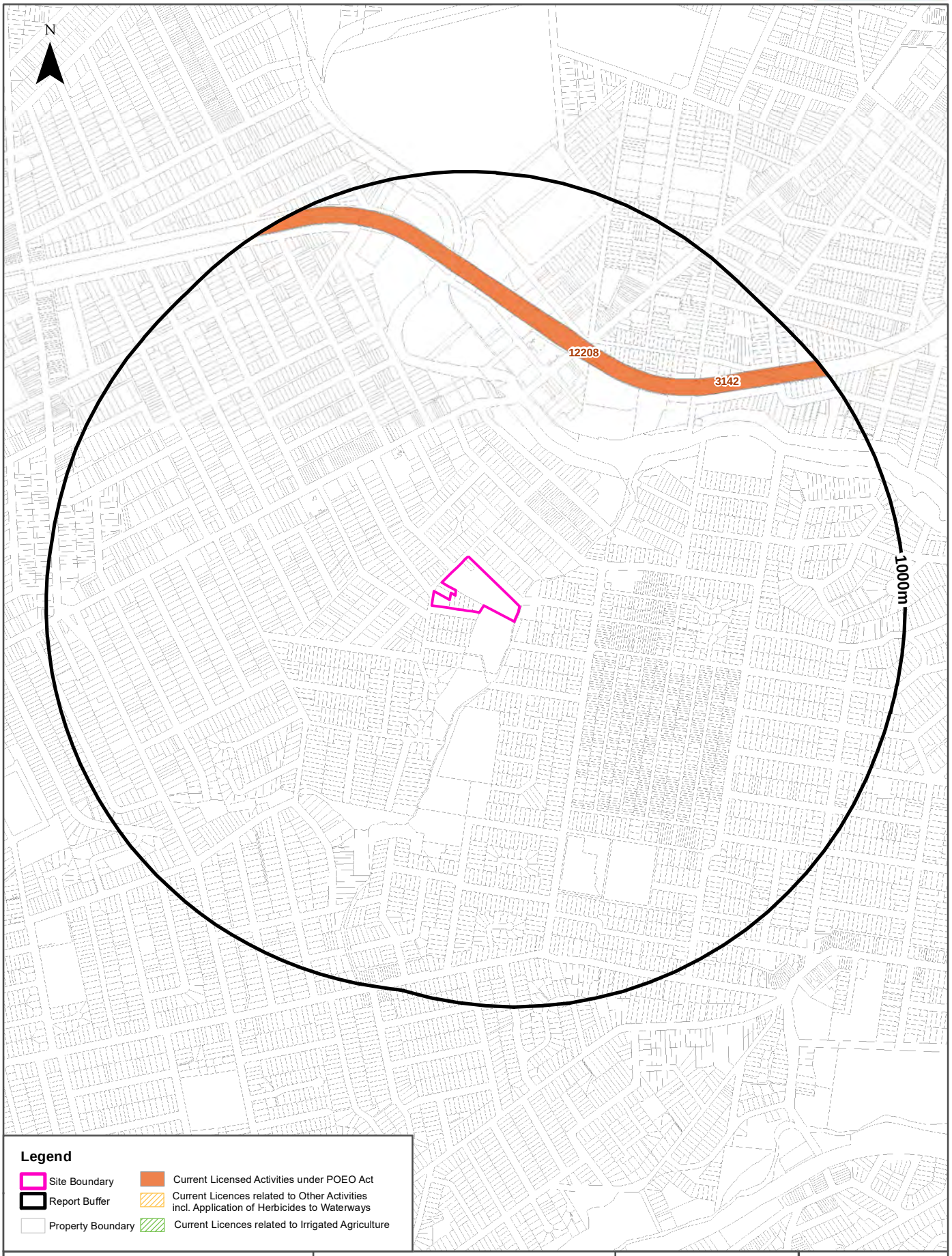
Sites within the dataset buffer:

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

EPA Other Sites with Contamination Issues: Environment Protection Authority

Current EPA Licensed Activities

Canterbury South Public School, Canterbury, NSW 2193



EPA Activities

Canterbury South Public School, Canterbury, NSW 2193

Licensed Activities under the POEO Act 1997

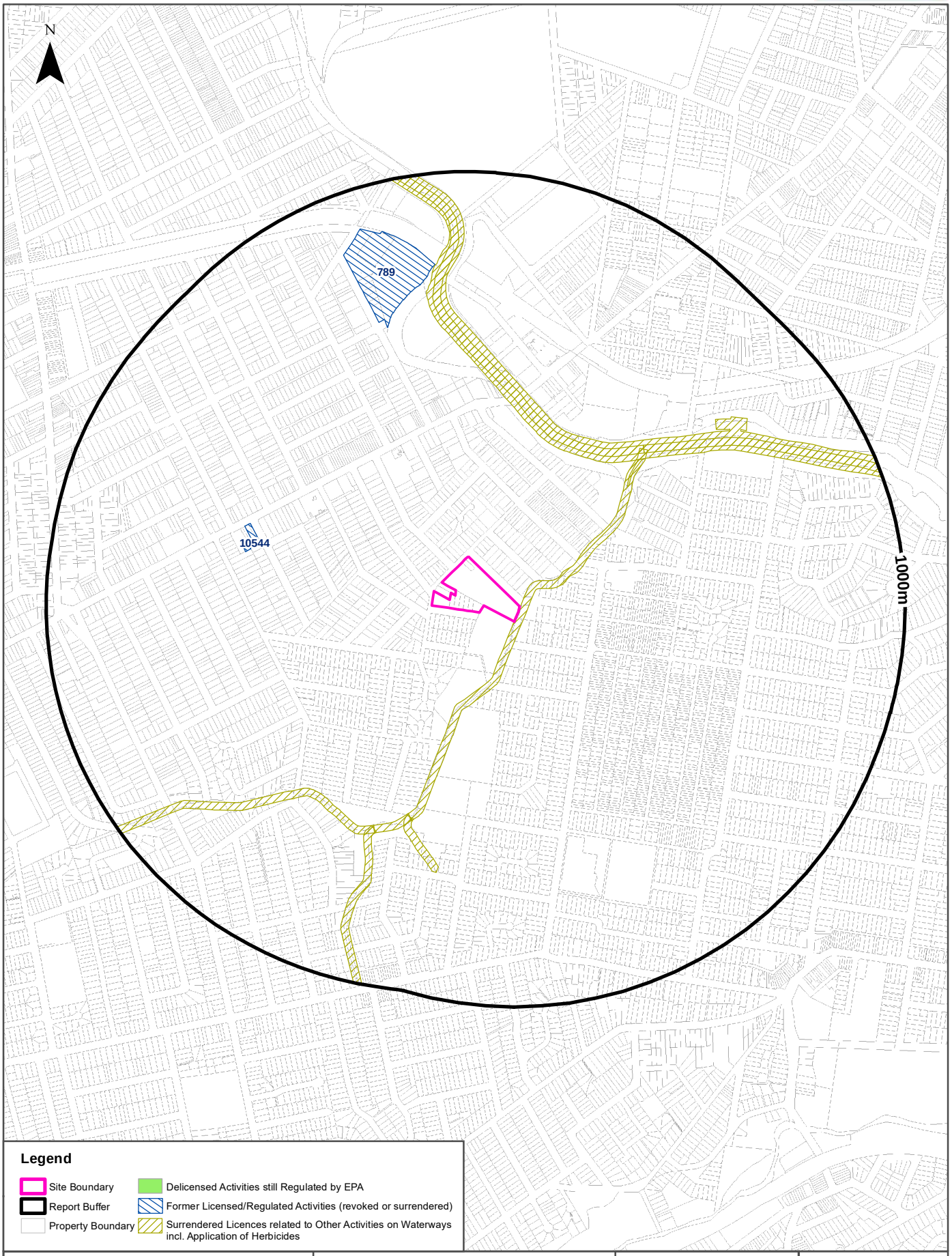
Licensed activities under the Protection of the Environment Operations Act 1997, within the dataset buffer:

EPL	Organisation	Name	Address	Suburb	Activity	Loc Conf	Distance	Direction
12208	SYDNEY TRAINS		PO BOX K349, HAYMARKET, NSW 1238		Railway systems activities	3	590m	North West
3142	AUSTRALIAN RAIL TRACK CORPORATION LIMITED		GPO BOX 14, SYDNEY, NSW 2001		Railway systems activities	3	590m	West

POEO Licence Data Source: Environment Protection Authority

Delicensed & Former Licensed EPA Activities

Canterbury South Public School, Canterbury, NSW 2193



EPA Activities

Canterbury South Public School, Canterbury, NSW 2193

Delicensed Activities still regulated by the EPA

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

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

Delicensed Activities Data Source: Environment Protection Authority

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

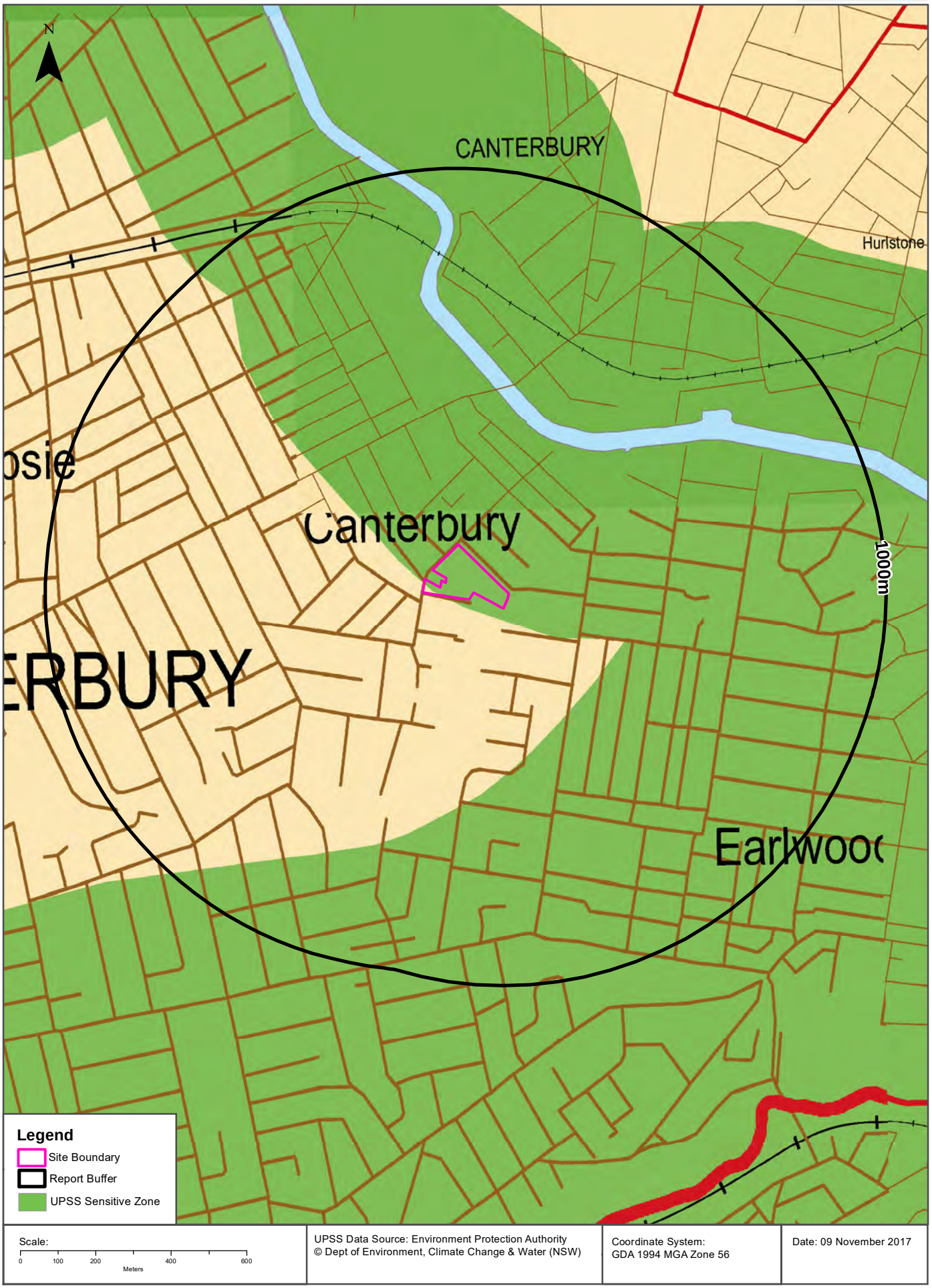
Former Licensed activities under the Protection of the Environment Operations Act 1997, now revoked or surrendered, within the dataset buffer:

Licence No	Organisation	Location	Status	Issued Date	Activity	Loc Conf	Distance	Direction
4653	LUHRMANN ENVIRONMENT MANAGEMENT PTY LTD	WATERWAYS THROUGHOUT NSW	Surrendered		Other Activities / Non Scheduled Activity - Application of Herbicides	7	0m	Onsite
4838	Robert Orchard	Various Waterways throughout New South Wales - SYDNEY NSW 2000	Surrendered		Other Activities / Non Scheduled Activity - Application of Herbicides	7	0m	Onsite
6630	SYDNEY WEED & PEST MANAGEMENT PTY LTD	WATERWAYS THROUGHOUT NSW - PROSPECT, NSW, 2148	Surrendered		Other Activities / Non Scheduled Activity - Application of Herbicides	7	0m	Onsite
10544	ALL CHROME SHOP PTY LTD	390 CANTERBURY ROAD, CANTERBURY, NSW 2193	Surrendered	23/02/2000	Hazardous, Industrial or Group A Waste Generation or Storage	1	469m	West
789	CANTERBURY CITY COUNCIL	PHILLIPS AVE, CANTERBURY, NSW 2193	Surrendered	26/04/2000	Miscellaneous licensed discharge to waters (at any time)	1	630m	North

Former Licensed Activities Data Source: Environment Protection Authority

UPSS Sensitive Zones

Canterbury South Public School, Canterbury, NSW 2193



Historical Business Directories

Canterbury South Public School, Canterbury, NSW 2193

1991 Business to Business Directory Records
Premise or Road Intersection Matches

Records from the 1991 UBD Business to Business Directory, mapped to a premise or road intersection, within the dataset buffer:

Business Activity	Organisation	Address	Ref No.	Location Confidence	Distance to Feature Point	Direction
N/A	No records in buffer					

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

1991 Business to Business Directory Records
Road or Area Matches

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

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

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

Historical Business Directories

Canterbury South Public School, Canterbury, NSW 2193

1986 Business to Business Directory Records
Premise or Road Intersection Matches

Records from the 1986 UBD Business to Business Directory, mapped to a premise or road intersection, within the dataset buffer:

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

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

1986 Business to Business Directory Records
Road or Area Matches

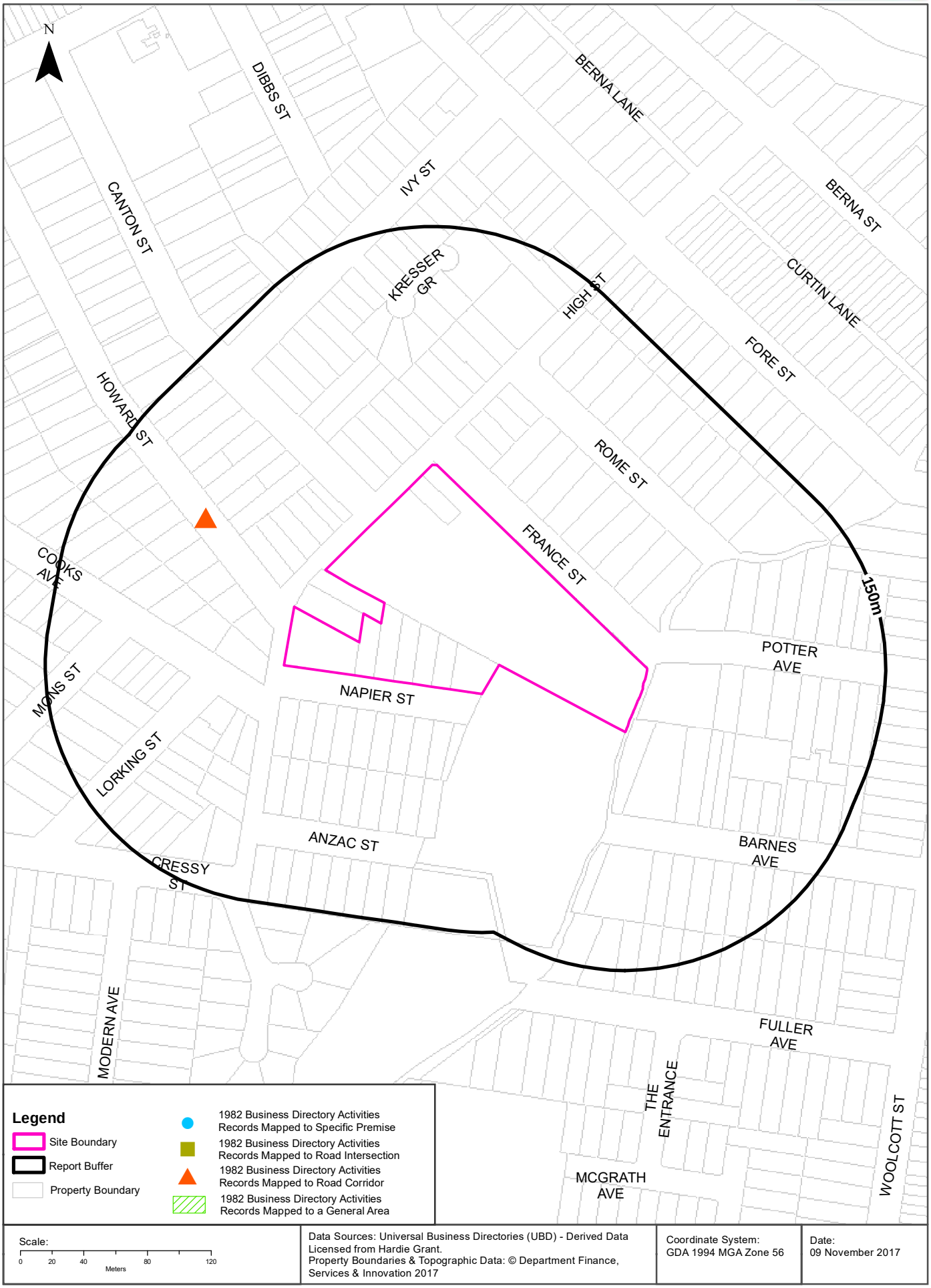
Records from the 1986 UBD Business to Business Directory, mapped to a road or an area, within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found, or the road has been renumbered since the directory was published:

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

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

1982 Historical Business Directory Records

Canterbury South Public School, Canterbury, NSW 2193



Historical Business Directories

Canterbury South Public School, Canterbury, NSW 2193

1982 Business Directory Records
Premise or Road Intersection Matches

Records from the 1982 UBD Business Directory, mapped to a premise or road intersection, within the dataset buffer:

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

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

1982 Business Directory Records
Road or Area Matches

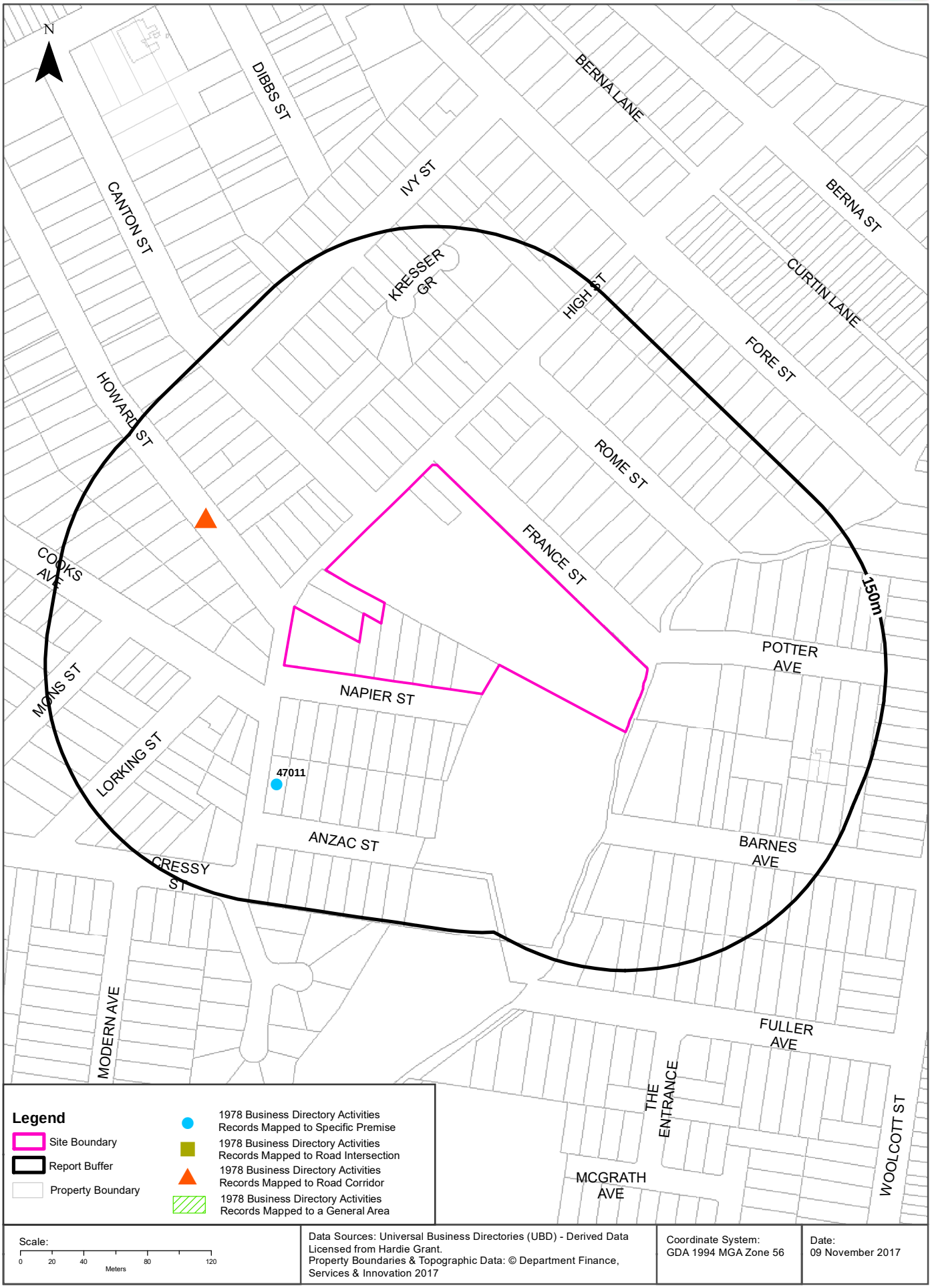
Records from the 1982 UBD Business Directory, mapped to a road or an area, within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found, or the road has been renumbered since the directory was published:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	Amoco Canterbury Service Station, Howard St., Canterbury. 2193.	55960	Road Match	10m

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

1978 Historical Business Directory Records

Canterbury South Public School, Canterbury, NSW 2193



Historical Business Directories

Canterbury South Public School, Canterbury, NSW 2193

1978 Business Directory Records
Premise or Road Intersection Matches

Records from the 1978 UBD Business Directory, mapped to a premise or road intersection, within the dataset buffer:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Feature Point	Direction
MIXED BUSINESSES.	Ross, J. B., 2 Anzac St., Canterbury.	47011	Premise Match	75m	South West

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

1978 Business Directory Records
Road or Area Matches

Records from the 1978 UBD Business Directory, mapped to a road or an area, within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found, or the road has been renumbered since the directory was published:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Amoco Service Station. Howard St., Canterbury.	49248	Road Match	10m

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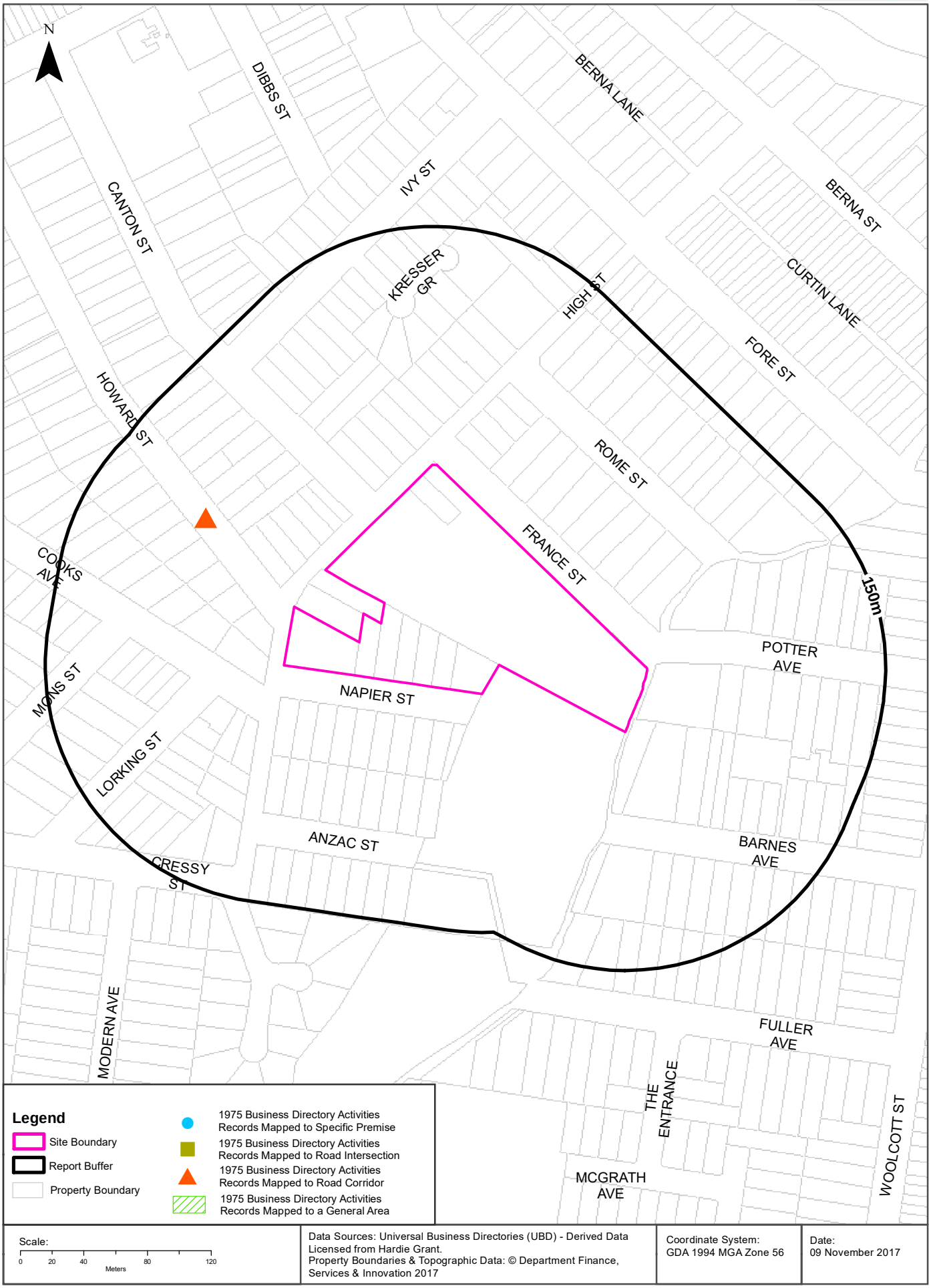
1975 Historical Business Directory Records

Canterbury South Public School, Canterbury, NSW 2193



Historical Business Directories

Canterbury South Public School, Canterbury, NSW 2193

1975 Business Directory Records
Premise or Road Intersection Matches

Records from the 1975 UBD Business Directory, mapped to a premise or road intersection, within the dataset buffer:

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

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

1975 Business Directory Records
Road or Area Matches

Records from the 1975 UBD Business Directory, mapped to a road or an area, within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found, or the road has been renumbered since the directory was published:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
MOTOR GARAGES &/OR ENGINEERS.	Amoco Service Station, Howard St., Canterbury.	58334	Road Match	10m

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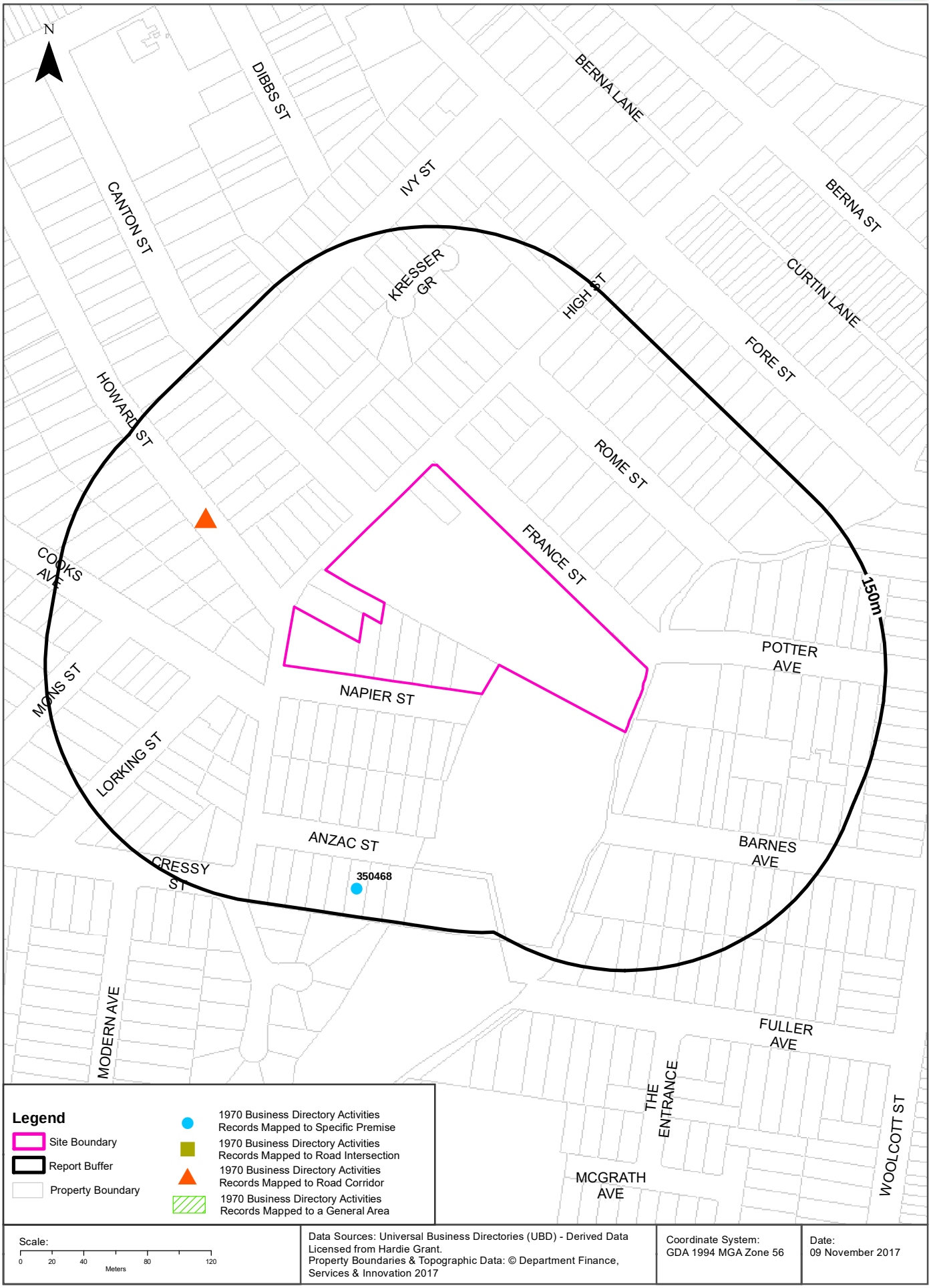
1970 Historical Business Directory Records

Canterbury South Public School, Canterbury, NSW 2193



Historical Business Directories

Canterbury South Public School, Canterbury, NSW 2193

1970 Business Directory Records
Premise or Road Intersection Matches

Records from the 1970 UBD Business Directory, mapped to a premise or road intersection, within the dataset buffer:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Feature Point	Direction
PLUMBERS,GASFITTERS/DRAIN LAYERS(P608)	Callaghan,W. G.,11 Anzac St.CANTERBURY	350468	Premise Match	133m	South

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

1970 Business Directory Records
Road or Area Matches

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

Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
MOTOR GARAGES & ENGINEERS(M6S6)	Amoco Service Station,Howard St.CANTERBURY	337193	Road Match	10m

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

Historical Business Directories

Canterbury South Public School, Canterbury, NSW 2193

1965 Business Directory Records
Premise or Road Intersection Matches

Records from the 1965 UBD Business Directory, mapped to a premise or road intersection, within the dataset buffer:

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

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

1965 Business Directory Records
Road or Area Matches

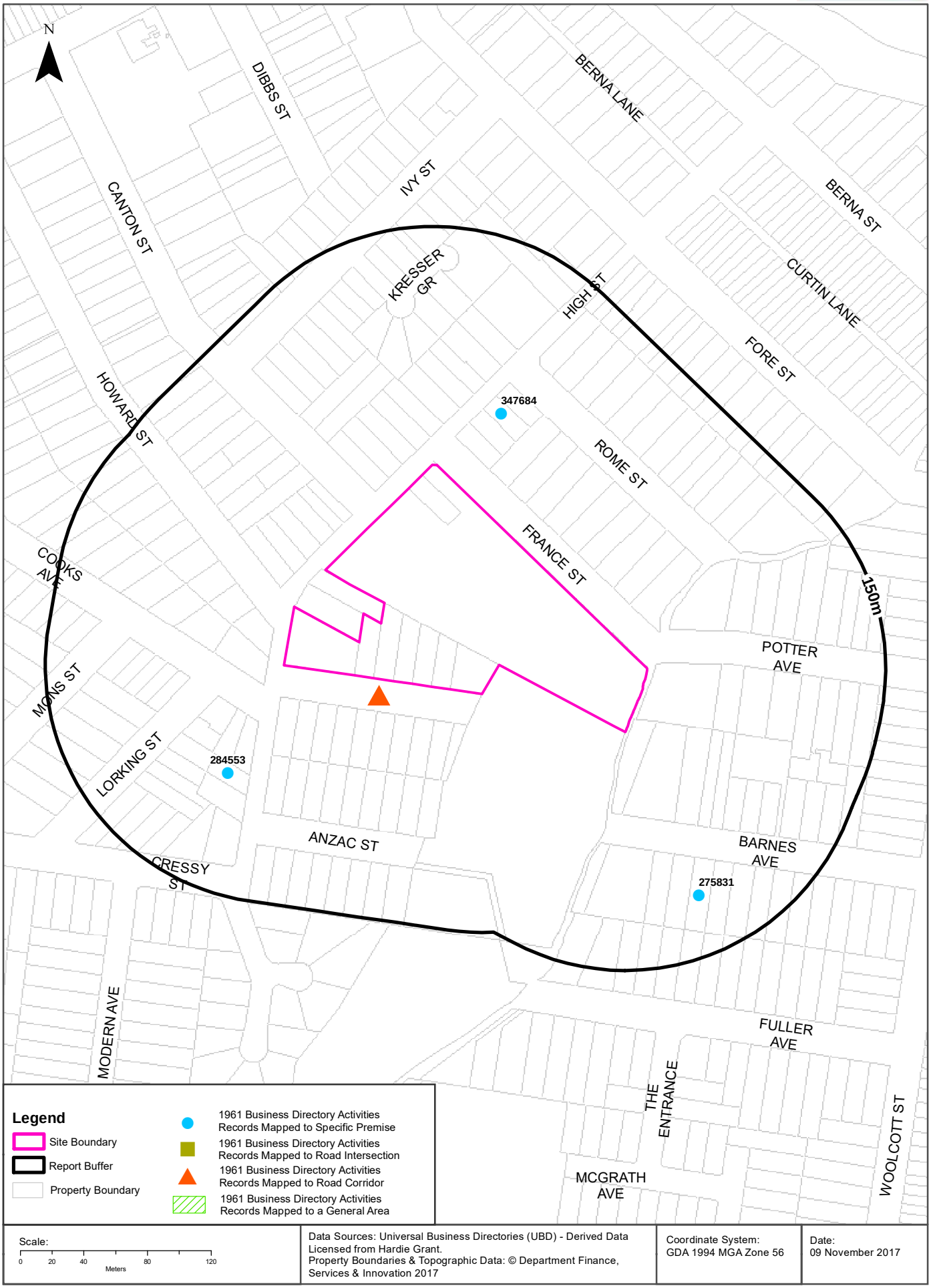
Records from the 1965 UBD Business Directory, mapped to a road or an area, within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found, or the road has been renumbered since the directory was published:

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

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

1961 Historical Business Directory Records

Canterbury South Public School, Canterbury, NSW 2193



Historical Business Directories

Canterbury South Public School, Canterbury, NSW 2193

1961 Business Directory Records
Premise or Road Intersection Matches

Records from the 1961 UBD Business Directory, mapped to a premise or road intersection, within the dataset buffer:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Feature Point	Direction
MOTOR GARAGES & ENGINEERS	McLaughlin, R. N., 4 High St. CANTERBURY	347684	Premise Match	51m	North
CARRIERS & CARTAGE CONTRACTORS	Blakey, R., 47 High St., Canterbury	284553	Premise Match	77m	South West
BRICKLAYERS & BRICKLAYING CONTRACTORS	Garrick, J. C., 24 Barnes Ave., Canterbury	275831	Premise Match	113m	South East

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

1961 Business Directory Records
Road or Area Matches

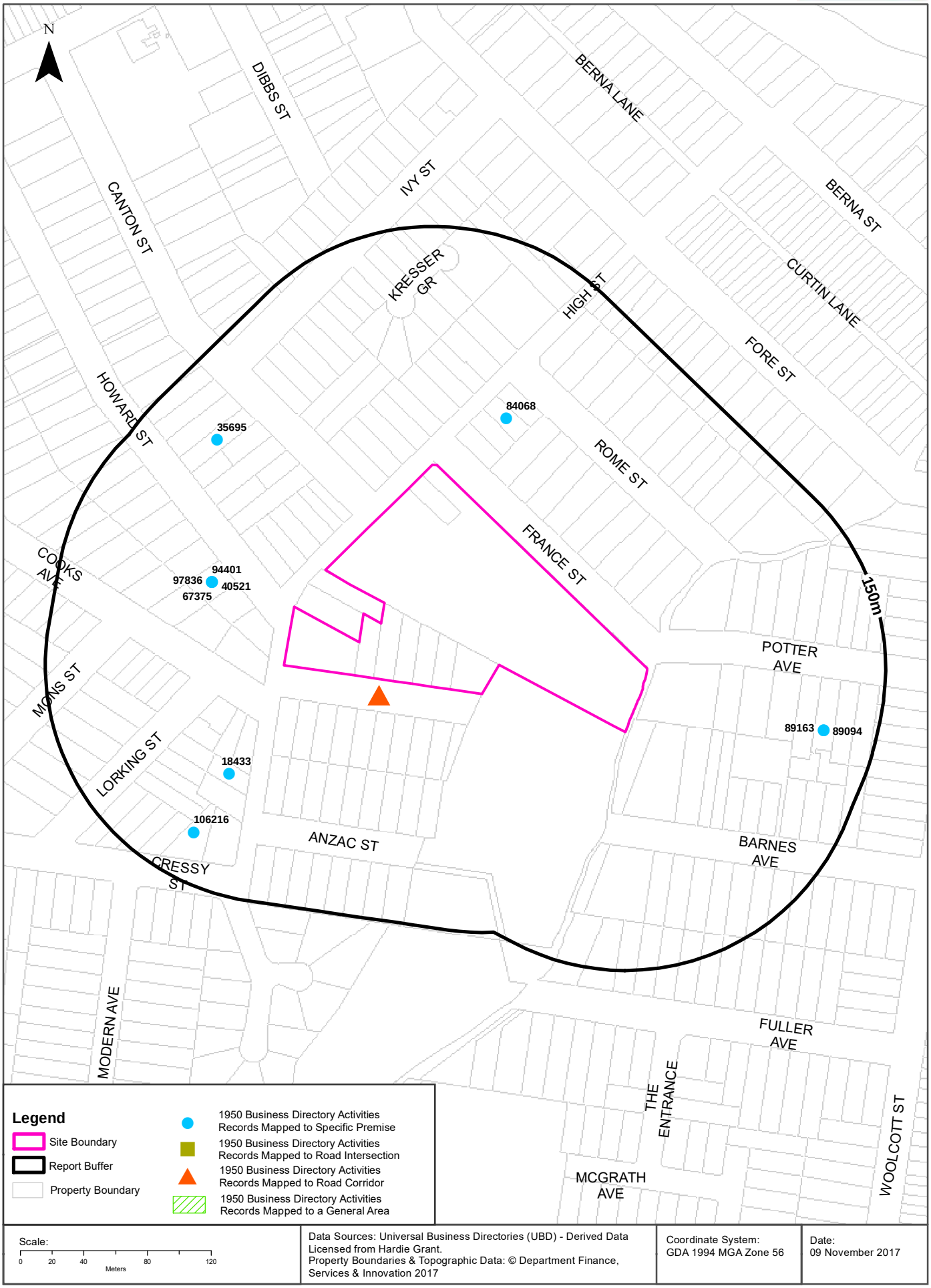
Records from the 1961 UBD Business Directory, mapped to a road or an area, within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found, or the road has been renumbered since the directory was published:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
ENGINEERS-HOT WATER, HEATING/VENTILATING	Belson, F., 12 Napier St., Canterbury	307311	Road Match	0m

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

1950 Historical Business Directory Records

Canterbury South Public School, Canterbury, NSW 2193



Historical Business Directories

Canterbury South Public School, Canterbury, NSW 2193

1950 Business Directory Records
Premise or Road Intersection Matches

Records from the 1950 UBD Business Directory, mapped to a premise or road intersection, within the dataset buffer:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Feature Point	Direction
MOTOR GARAGES &/OR ENGINEERS	McLaughlin, R. N., 4 High St., Canterbury	84068	Premise Match	51m	North
RANGES-STOVES-COKE DISTRIBUTORS	Burn Stove and Lamp Co 43 Howard St., Canterbury	97836	Premise Match	54m	West
ENGINEERS-GENERAL &/OR MANUFACTURING &/OR MECHANICAL	Burn Stove and Lamp Co., 43 Howard St., Canterbury	40521	Premise Match	54m	West
LAMPS & STOVES-SPIRIT-MANUFACTURERS	Burn Stove and Lamp Co., 43 Howard St., Canterbury	67375	Premise Match	54m	West
POULTRY FARMERS' SUPPLIERS	Burn Stove and Lamp Co., 43 Howard St., Canterbury.	94401	Premise Match	54m	West
CARRIERS & CARTAGE CONTRACTORS	Blakey, R., 47 High St., Canterbury	18433	Premise Match	77m	South West
DRY CLEANERS, PRESSERS & DYERS	Sovereign Dry Cleaners, 34 Howard St., Canterbury	35695	Premise Match	106m	North West
NURSERYMEN	Fitzpatrick, W., 6 Potter Ave., Earlwood	89094	Premise Match	117m	East
NURSERYMEN	Joyner, F., 6 Potter Ave., Canterbury	89163	Premise Match	117m	East
TAILORS-LADIES &/OR GENT.'S	Bush, C., 16 Cressy St., Canterbury	106216	Premise Match	120m	South West

1950 Business Directory Records
Road or Area Matches

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

Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
ENGINEERS-HOT WATER, HEATING & VENTILATING	Belson, F., 12 Napier St, Canterbury	41487	Road Match	0m

Historical Business Directories

Canterbury South Public School, Canterbury, NSW 2193

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

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

Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Feature Point	Direction
MOTOR GARAGES & ENGINEERS	McLaughlin, R. N., 4 High St. CANTERBURY	347684	1961	Premise Match	51m	North
MOTOR GARAGES &/OR ENGINEERS	McLaughlin, R. N., 4 High St., Canterbury	84068	1950	Premise Match	51m	North
DRY CLEANERS, PRESSERS & DYERS	Sovereign Dry Cleaners, 34 Howard St., Canterbury	35695	1950	Premise Match	106m	North West
MOTOR GARAGES & ENGINEERS	Carey Smith, H., 20 Fore St. Canterbury	346816	1961	Premise Match	252m	North
MOTOR GARAGES &/OR ENGINEERS	Carey-Smith, H., 20 Fore St., Canterbury	83546	1950	Premise Match	252m	North
MOTOR GARAGES & ENGINEERS	Atlantic Service Centre, 306 Canterbury Rd., Canterbury	346535	1961	Premise Match	314m	North West
MOTOR GARAGES & ENGINEERS	Atlantic Service Station 306 Canterbury Rd., Canterbury	346536	1961	Premise Match	314m	North West
MOTOR SERVICE STATIONS—PETROL, OIL, Etc.	Atlantic Service Station, 306 Canterbury Rd.	350320	1961	Premise Match	314m	North West
MOTOR SERVICE STATIONS—PETROL, OIL, Etc.	Taxi Centre Pty. Ltd., 306 Canterbury Rd. CARINGBAH	351154	1961	Premise Match	314m	North West
MOTOR SERVICE STATIONS - PETROL, OIL	Esso Servicenter 306 Canterbury Rd., Canterbury.	61722	1975	Premise Match	315m	North West
MOTOR GARAGES & ENGINEERS	Pallister, A. H., 314 Canterbury Rd. CARINGBAH	347840	1961	Premise Match	333m	North West
MOTOR GARAGES & SERVICE STATIONS.	Esso Canterbury Service Station, 306 Canterbury Rd., Canterbury.	64616	1986	Premise Match	334m	North West
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	Esso Canterbury Service Station, 306 Canterbury Rd., Canterbury.2193.	56685	1982	Premise Match	334m	North West
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Esso Servicenter, 306 Canterbury Rd., Canterbury.	50014	1978	Premise Match	334m	North West
MOTOR SERVICE STATIONS-PETROL,OIL,Etc. (M716)	Esso Servicenter,306 Canterbury Rd.CANTERBURY	341068	1970	Premise Match	334m	North West
Motor Service Stations - Petrol, Oil, Etc. - Canterbury	Esso Service Centre, 306 Canterbury Rd.	125556	1965	Premise Match	334m	North West
Motor Service Stations - Petrol, Oil, Etc. - Canterbury	Esso Servicenter, 306 Canterbury Rd.	125555	1965	Premise Match	334m	North West
BATTERY SERVICE STATIONS	Pallister, A. H., 314 Canterbury Rd., Canterbury	6630	1950	Premise Match	339m	North West
MOTOR GARAGES &/OR ENGINEERS	Pallister, A. H., 314 Canterbury Rd., Canterbury	84171	1950	Premise Match	339m	North West
MOTOR GARAGES &/OR ENGINEERS.	Foremost Service Station. 282 Canterbury Rd., Canterbury.	58889	1975	Premise Match	340m	North
MOTOR GARAGES & SERVICE STATIONS.	BP Canterbury, 322 Canterbury Rd., Canterbury.	64115	1986	Premise Match	342m	North West
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Foremost Service Station, 282 Canterbury Rd., Canterbury.	50066	1978	Premise Match	350m	North
MOTOR GARAGES & ENGINEERS(M6S6)	Foremost Service Station,282 Canterbury Rd.CANTERBURY	337816	1970	Premise Match	350m	North
Motor Garages & Engineers - Canterbury	Foremost Service Station, 282 Canterbury Rd.	122369	1965	Premise Match	350m	North
MOTOR GARAGES & ENGINEERS	Wattle Hill Service Station, 348 Canterbury Rd. HURSTVILLE	348407	1961	Premise Match	371m	North West
MOTOR GARAGES &/OR ENGINEERS.	Wattle Hill Service Station, 348 Canterbury Rd. Hurlstone Park.	59748	1975	Premise Match	372m	North West
Motor Service Stations - Petrol, Oil, Etc. - Canterbury	Amoco, Cnr. Howard St. & Canterbury Rd.	125550	1965	Road Intersection	379m	North West

Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Feature Point	Direction
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	Grey, Bob Automatics, 364 Canterbury Rd., Canterbury.2193.	56908	1982	Premise Match	405m	North West
MOTOR SERVICE STATIONS-PETROL,OIL,Etc. (M716)	Quick Delivery Motor Trimmers,233 Canterbury Rd.CANTERBURY	341413	**1970**	Premise Match	416m	North
Motor Service Stations - Petrol, Oil, Etc. - Canterbury	Quick Delivery Motor Trimmers, 233 Canterbury Rd.	125557	1965	Premise Match	416m	North
MOTOR SERVICE STATIONS-PETROL,OIL,Etc. (M716)	Breen,J. H.,231 Canterbury Rd.CANTERBURY	340901	**1970**	Premise Match	419m	North
MOTOR SERVICE STATIONS-PETROL,OIL,Etc. (M716)	Canterbury Service Station,231 Canterbury Rd.CANTERBURY	340948	**1970**	Premise Match	419m	North
MOTOR SERVICE STATIONS-PETROL, Etc.	Breen, J. H., 231 Canterbury Rd., Canterbury	85815	1950	Premise Match	419m	North
MOTOR SERVICE STATIONS-PETROL, Etc.	Canterbury Service Station, 231 Canterbury Rd., Canterbury	85851	1950	Premise Match	419m	North
MOTOR GARAGES &/OR ENGINEERS	Ogden, C. S., 372 Canterbury Rd., Canterbury	84153	1950	Premise Match	420m	North West
MOTOR SERVICE STATIONS - PETROL, OIL	Canterbury Service Station, 231 Canterbury Rd., Canterbury.	61629	1975	Premise Match	427m	North
Motor Service Stations - Petrol, Oil, Etc. - Canterbury	Breen, J. H., 231 Canterbury Rd.	125551	1965	Premise Match	427m	North
Motor Service Stations - Petrol, Oil, Etc. - Canterbury	Canterbury Service Station, 231 Canterbury Rd.	125552	1965	Premise Match	427m	North
DRY CLEANERS, PRESSERS & DYERS	Union Hat Cleaners (The), 111 Canterbury Rd., Canterbury; 282 Beamish St. Campsie	35806	1950	Premise Match	469m	North
MOTOR GARAGES & SERVICE STATIONS.	Bob Grey Automatics, Rear 384 Canterbury Rd., Canterbury.	64060	1986	Premise Match	486m	West

Historical Business Directories

Canterbury South Public School, Canterbury, NSW 2193

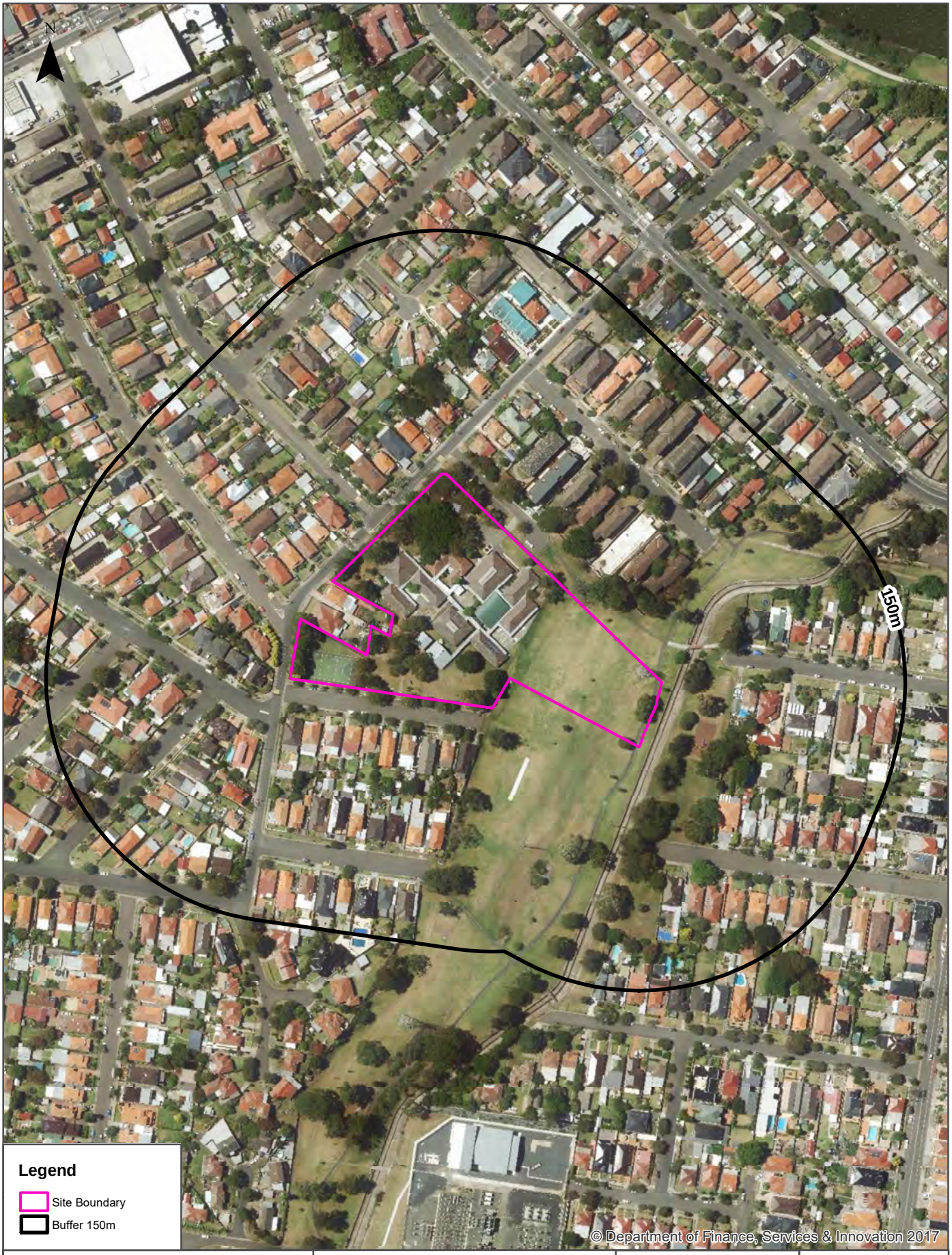
Dry Cleaners, Motor Garages & Service Stations Road or Area Matches

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

Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	Amoco Canterbury Service Station, Howard St., Canterbury. 2193.	55960	1982	Road Match	10m
MOTOR GARAGES &/OR ENGINEERS.	Amoco Service Station, Howard St., Canterbury.	58334	1975	Road Match	10m
MOTOR GARAGES & ENGINEERS(M6S6)	Amoco Service Station,Howard St.CANTERBURY	337193	1970	Road Match	10m
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Amoco Service Station. Howard St., Canterbury.	49248	1978	Road Match	10m
MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Entrance North Motel (The), Hutton & Hargrave Cnr., The Entrance North, The Entrance	226935	1961	Road Match	190m
Dry Cleaners, Pressers/Dyers	Canterbury Dry Cleaner, At Station Entrance, Canterbury Rd., Canterbury	76112	1965	Road Match	337m
DRY CLEANERS,PRESSERS/DYERS (D710)	Canterbury Dry Cleaner,at Station Entrance,Canterbury Rd.,Canterbury	292232	1970	Road Match	337m
Motor Service Stations - Petrol, Oil, Etc. - Canterbury	Donaldson & Wall, 95-103 Canterbury Rd.	125554	1965	Road Match	337m
MOTOR GARAGES & ENGINEERS	Foremost Service Station, 282 Canterbury Rd.	347150	1961	Road Match	337m
BATTERY SERVICE STATIONS	Guyder, H. Auto Electric Service, 104 Canterbury Rd., Canterbury	272037	1961	Road Match	337m
MOTOR GARAGES &/OR ENGINEERS.	Hurlstone Heights Auto Port (Shefl), Canterbury Rd., Hurlstone Park.	59066	1975	Road Match	337m
BATTERY SERVICE STATIONS	Marshall Battery Mfr. Co. Pty. Ltd., Canterbury Rd., Canterbury	272056	1961	Road Match	337m
MOTOR GARAGES &/OR ENGINEERS.	Rokov, T & E., 93 Canterbury Rd., Canterbury.	59480	1975	Road Match	337m
MOTOR SERVICE STATIONS-PETROL,OIL,Etc. (M716)	Wall,A.,95 Canterbury Rd.CANTERBURY	341605	1970	Road Match	337m
MOTOR GARAGES & SERVICE STATIONS.	Canterbury Service Centre, Canterbury Rd., Campsie.	64427	1986	Road Match	419m
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	Canterbury Service Centre, Canterbury Rd., Campsie. 2194.	56481	1982	Road Match	419m
MOTOR GARAGES &/OR ENGINEERS	Don's Garage and Service, Station, Canterbury Rd., Campsie	83688	1950	Road Match	419m
Motor Garages & Service Stations	Precision Mechaical Repairs Canterbury Rd., Campsie	53781	1991	Road Match	419m

Aerial Imagery 2014

Canterbury South Public School, Canterbury, NSW 2193



Scale: 0 25 50 100 150 Meters

Data Sources: Historical Aerials: © Department Finance, Services & Innovation

Coordinate System: GDA 1994 MGA Zone 56

Date: 09 November 2017

Aerial Imagery 2009

Canterbury South Public School, Canterbury, NSW 2193

Scale:
0 25 50 100
Meters

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Coordinate System:
GDA 1994 MGA Zone 56

Date: 07 November, 2017

Aerial Imagery 2003

Canterbury South Public School, Canterbury, NSW 2193

Scale:
0 25 50 100
Meters

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Coordinate System:
GDA 1994 MGA Zone 56

Date: 07 November, 2017

Aerial Imagery 1991

Canterbury South Public School, Canterbury, NSW 2193

Aerial Imagery 1982

Canterbury South Public School, Canterbury, NSW 2193

Aerial Imagery 1970

Canterbury South Public School, Canterbury, NSW 2193

Scale: 0 25 50 100 Meters	Data Sources: Historical Aerials: © Department Finance, Services & Innovation	Coordinate System: GDA 1994 MGA Zone 56	Date: 07 November, 2017

Aerial Imagery 1965

Canterbury South Public School, Canterbury, NSW 2193

Scale: 0 25 50 100 Meters	Data Sources: Historical Aerials: © Department Finance, Services & Innovation	Coordinate System: GDA 1994 MGA Zone 56	Date: 07 November, 2017

Aerial Imagery 1961

Canterbury South Public School, Canterbury, NSW 2193

Data Sources: Historical Aerials: © Department Finance, Services & Innovation

Coordinate System: GDA 1994 MGA Zone 56

Date: 07 November, 2017

Aerial Imagery 1955

Canterbury South Public School, Canterbury, NSW 2193

Data Sources: Historical Aerials: © Department Finance, Services & Innovation	Coordinate System: GDA 1994 MGA Zone 56	Date: 07 November, 2017

Aerial Imagery 1943

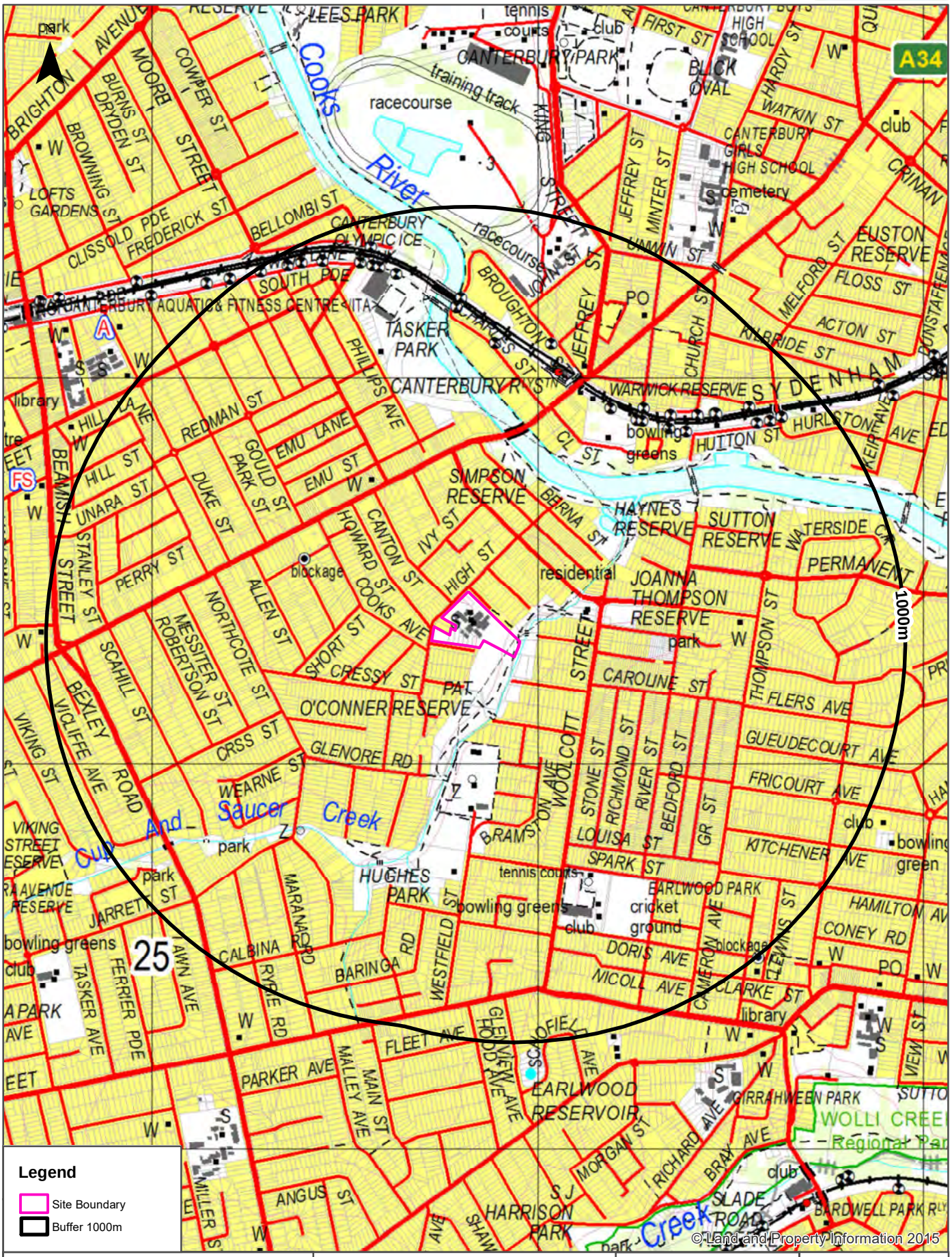
Canterbury South Public School, Canterbury, NSW 2193

Scale:	Data Sources: Aerial Imagery © Department Finance, Services & Innovation	Coordinate System: GDA 1994 MGA Zone 56	Date: 10 November 2017

0 25 50 100 150
Meters

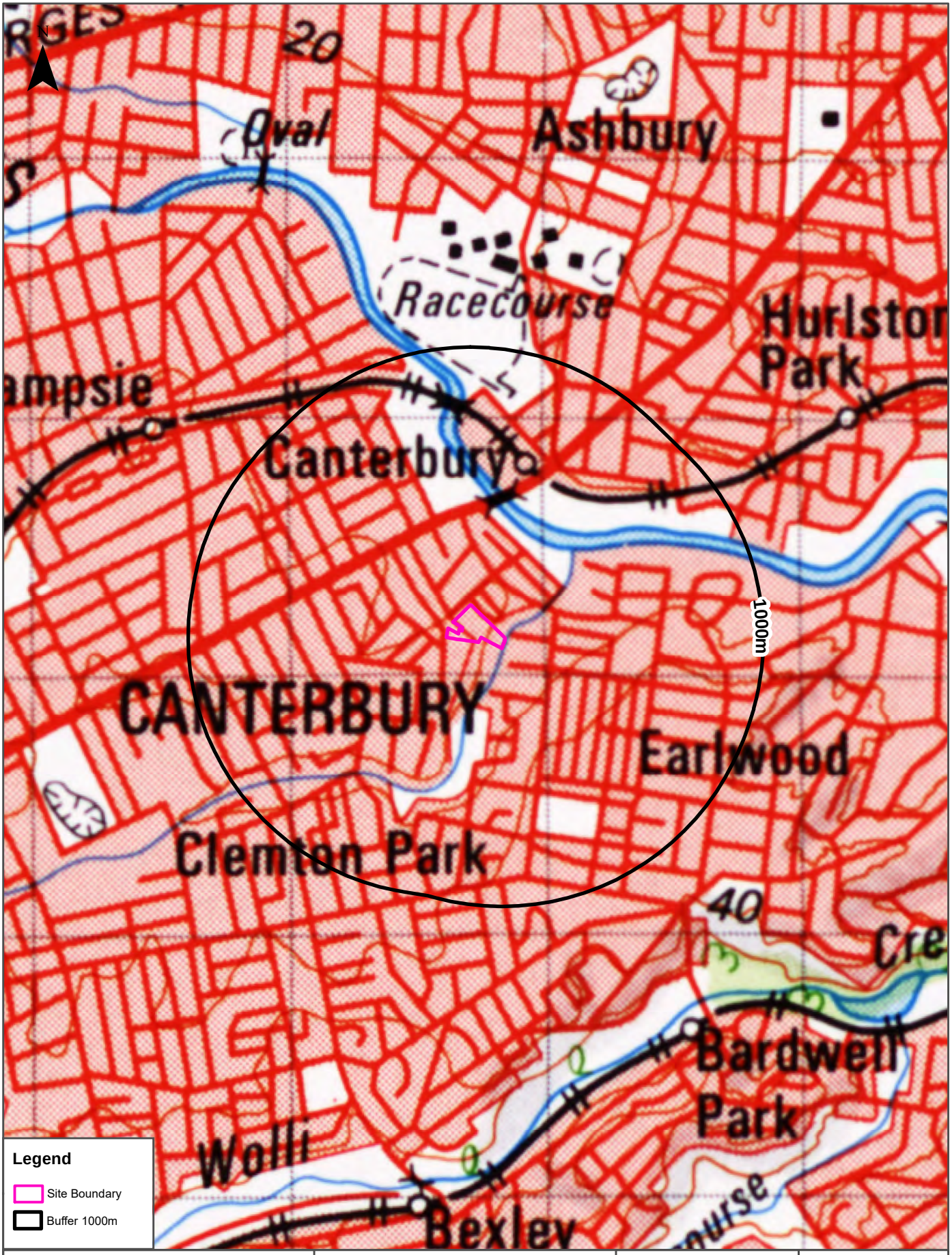
Topographic Map 2015

Canterbury South Public School, Canterbury, NSW 2193



Historical Map 1975

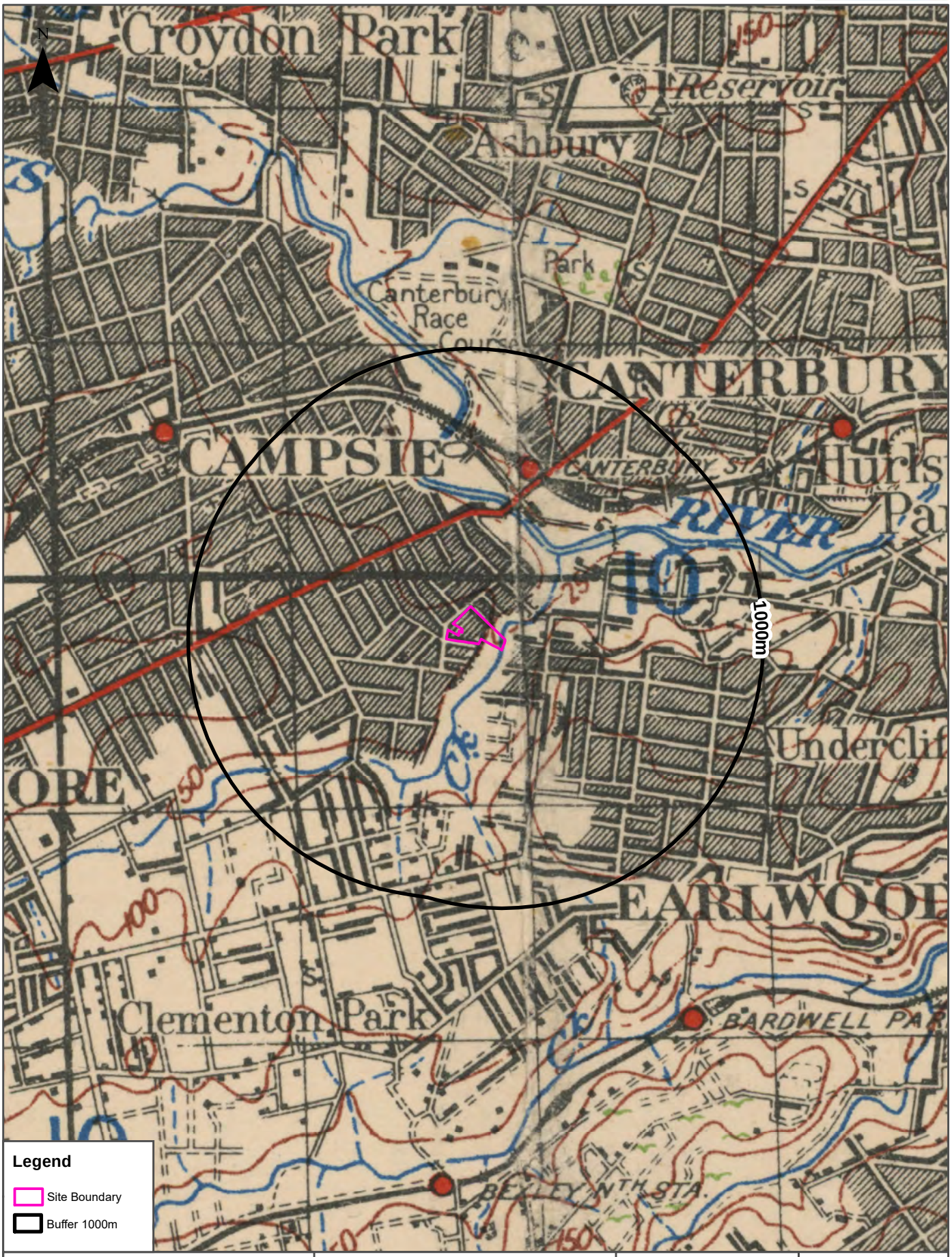
Canterbury South Public School, Canterbury, NSW 2193



Scale: 0 250 500 1,000 Meters	Data Sources: Sheet 9130, Edition 1, Sydney, NSW National Topographic Map Series Commonwealth of Australia	Coordinate System: GDA 1994 MGA Zone 56	Date: 10 November 2017

Historical Map 1949

Canterbury South Public School, Canterbury, NSW 2193



Scale: 0 250 500 1,000 Meters	Data Sources: Australia 1:63360 Sheet 423, Sydney, New South Wales. Prepared by Commonwealth Section Imperial General Staff	Coordinate System: GDA 1994 MGA Zone 56	Date: 10 November 2017

Historical Map 1917

Canterbury South Public School, Canterbury, NSW 2193

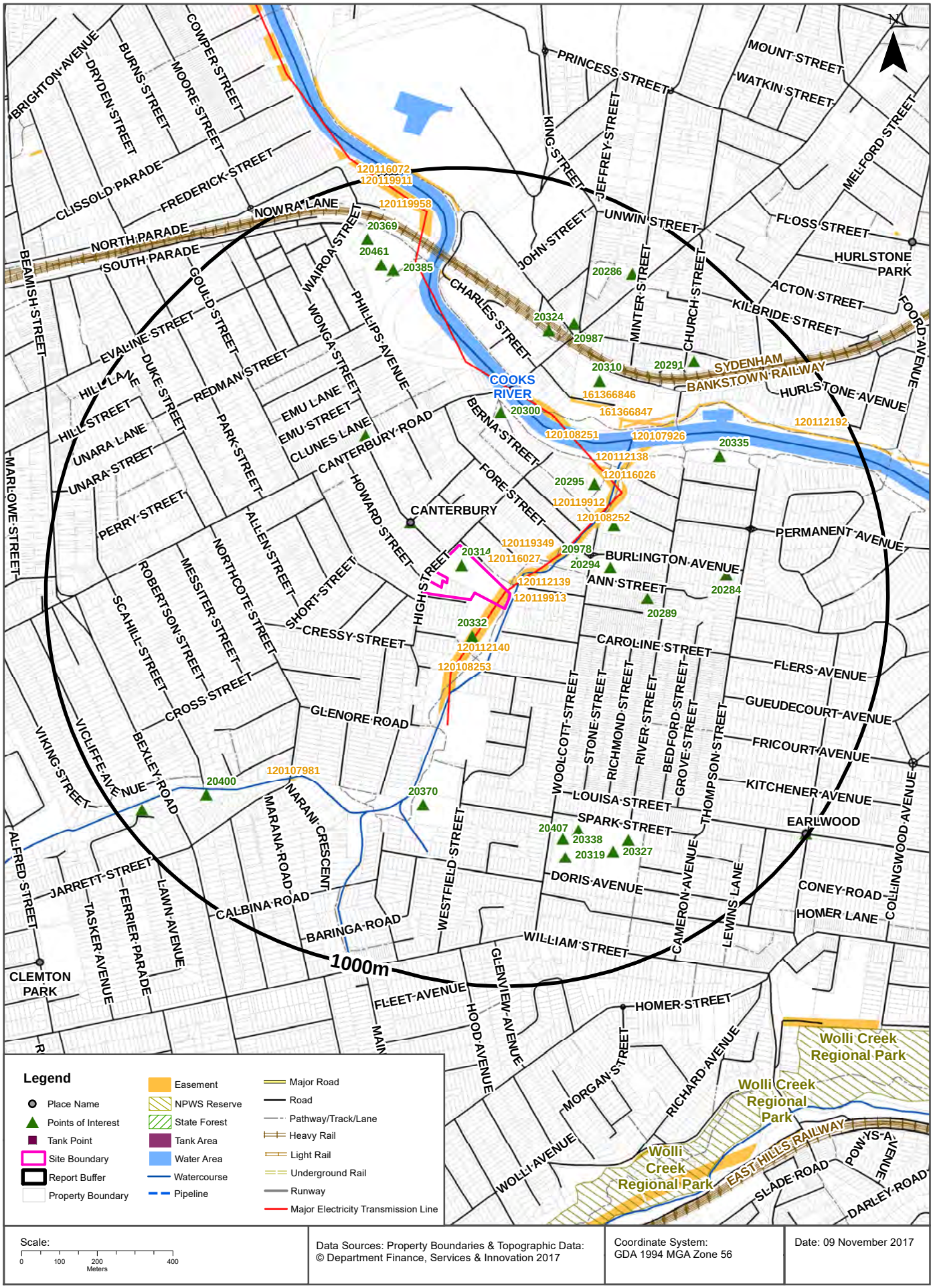
Data Sources: Australia 1:63360 Sheet 423, Sydney, New South Wales. Prepared by Commonwealth Section Imperial General Staff

Coordinate System: GDA 1994 MGA Zone 56

Date: 10 November 2017

Topographic Features

Canterbury South Public School, Canterbury, NSW 2193



Topographic Features

Canterbury South Public School, Canterbury, NSW 2193

Points of Interest

What Points of Interest exist within the dataset buffer?

Map Id	Feature Type	Label	Distance	Direction
20314	Primary School	CANTERBURY SOUTH PUBLIC SCHOOL	0m	Onsite
20332	Park	PAT O'CONNER RESERVE	97m	South
20415	Suburb	CANTERBURY	133m	North West
20978	Community Facility	EARLWOOD CHILDRENS CENTRE	195m	East
20294	Park	JOANNA THOMPSON RESERVE	274m	East
20322	Community Home	THE GREEK COMMUNITY HOME FOR THE AGED	328m	East
20289	Park	Park	363m	East
20295	Park	HAYNES RESERVE	364m	North East
20300	Park	SIMPSON RESERVE	367m	North
20361	Place Of Worship	UNITING CHURCH	382m	North West
20370	Park	HUGHES PARK	556m	South
20310	Sports Field	BOWLING GREENS	571m	North East
20284	Place Of Worship	CHURCH OF CHRIST	574m	East
20324	Railway Station	CANTERBURY RAILWAY STATION	616m	North
20407	Sports Court	TENNIS COURTS	618m	South East
20338	Sports Field	BOWLING GREENS	629m	South
20987	Community Facility	CANTERBURY-HURLSTONE PARK RSL YOUTH CLUB	660m	North East
20335	Park	SUTTON RESERVE	663m	North East
20319	Club	EBP SPORTS	678m	South
20468	Park	EARLWOOD PARK	694m	South East
20327	Sports Field	CRICKET GROUND	703m	South East
20385	Park	TASKER PARK	750m	North
20461	Sports Centre	CANTERBURY AQUATIC & FITNESS CENTRE	771m	North
20291	Park	WARWICK RESERVE	781m	North East
20400	Park	Park	785m	South West
20369	Sports Centre	CANTERBURY OLYMPIC ICE RINK	846m	North
20286	Post Office	CANTERBURY POST OFFICE	851m	North East
20388	Park	Park	941m	South West
20412	Suburb	EARLWOOD	994m	South East

Topographic Features

Canterbury South Public School, Canterbury, NSW 2193

Tanks (Areas)

What are the Tank Areas located within the dataset buffer?
Note. The large majority of tank features provided by LPI are derived from aerial imagery & are therefore primarily above ground tanks.

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

Tanks (Points)

What are the Tank Points located within the dataset buffer?
Note. The large majority of tank features provided by LPI are derived from aerial imagery & are therefore primarily above ground tanks.

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

Major Easements

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

Map Id	Easement Class	Easement Type	Easement Width	Distance	Direction
120119913	Primary	Undefined		0m	Onsite
120108253	Primary	Undefined		0m	South
120112139	Primary	Undefined		21m	East
120116027	Primary	Undefined		27m	East
120119349	Primary	Undefined		137m	East
120112140	Primary	Undefined		152m	South
120108252	Primary	Undefined		212m	East
120107926	Primary	Undefined		285m	North East
120112138	Primary	Undefined		313m	North East
120119912	Primary	Undefined		321m	North East
120116026	Primary	Undefined		404m	North East
120108251	Primary	Undefined		413m	North East
120112192	Primary	Undefined		482m	North
161366846	Primary	Electricity	6m and Variable	486m	North East
161366847	Primary	Electricity	6m and Variable	527m	North East

Map Id	Easement Class	Easement Type	Easement Width	Distance	Direction
120107981	Primary	Undefined		599m	South West
120119911	Primary	Undefined		823m	North
120119958	Primary	Undefined		941m	North
120116072	Primary	Undefined		996m	North

State Forest

What State Forest exist within the dataset buffer?

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

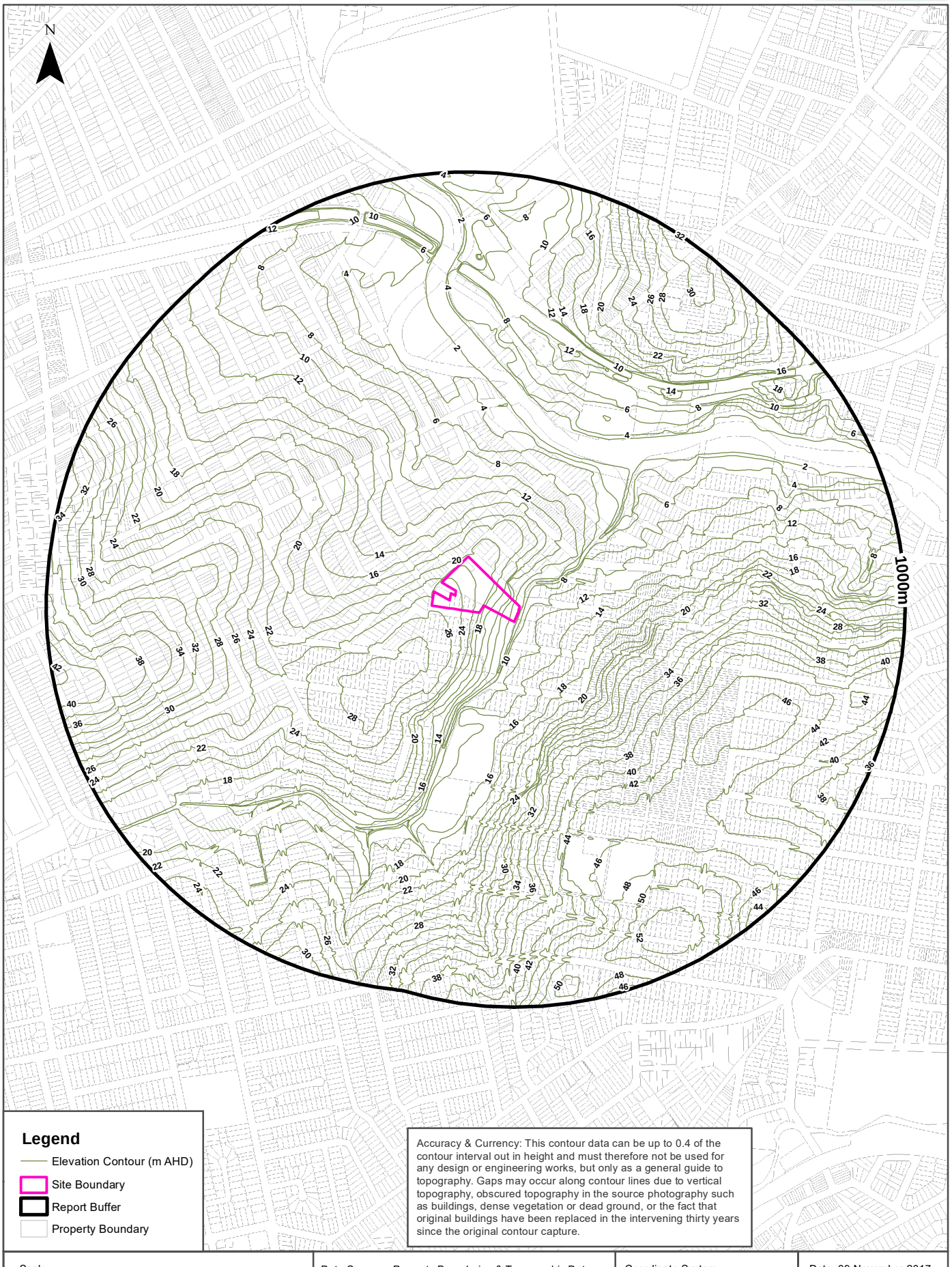
National Parks and Wildlife Service Reserves

What NPWS Reserves exist within the dataset buffer?

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

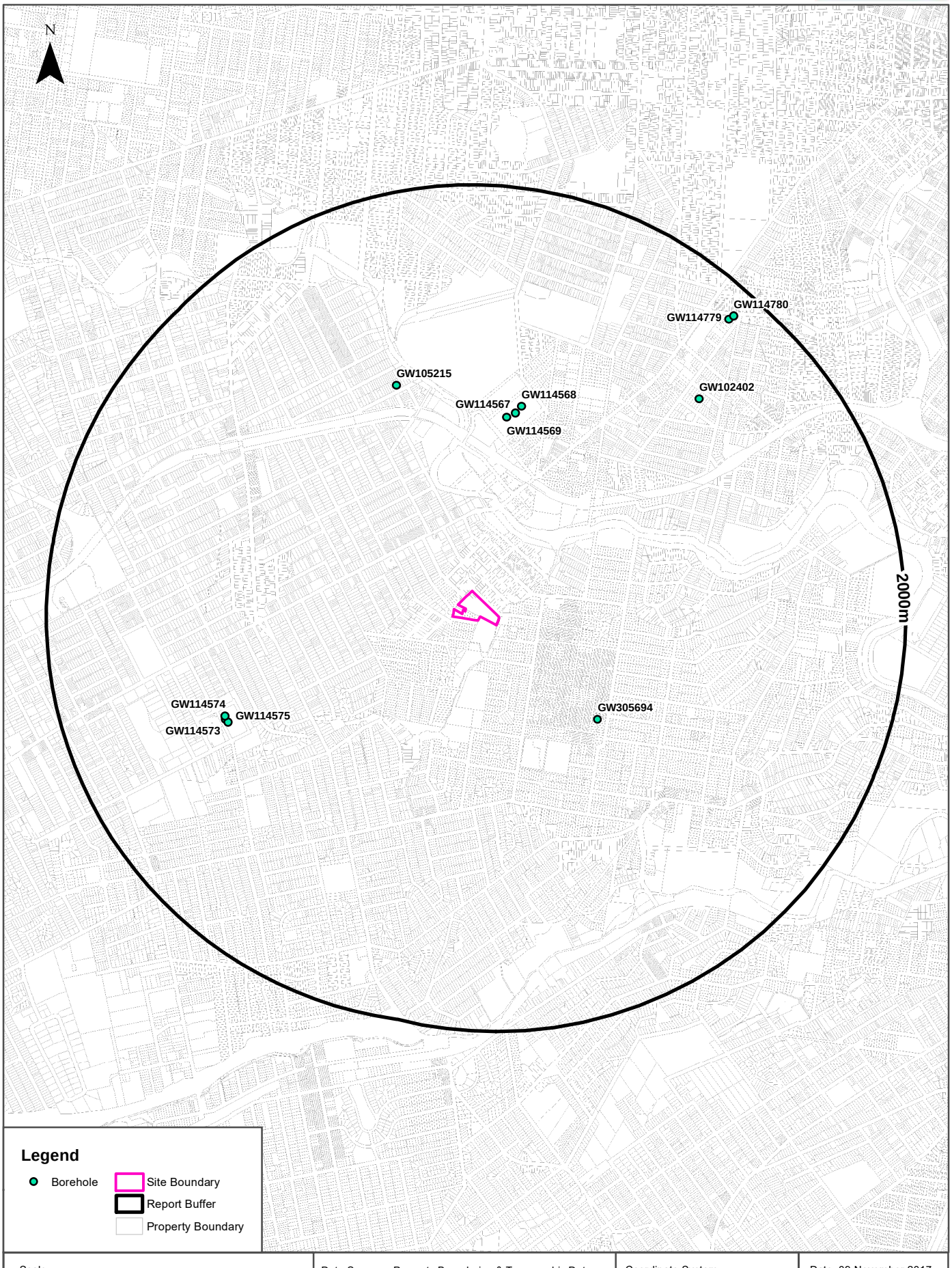
Elevation Contours (m AHD)

Canterbury South Public School, Canterbury, NSW 2193



Groundwater Boreholes

Canterbury South Public School, Canterbury, NSW 2193



Hydrogeology & Groundwater

Canterbury South Public School, Canterbury, NSW 2193

Hydrogeology

Description of aquifers on-site:

Description
Porous, extensive aquifers of low to moderate productivity

Description of aquifers within the dataset buffer:

Description
Porous, extensive aquifers of low to moderate productivity

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

Groundwater Boreholes

Boreholes within the dataset buffer:

GW No.	Licence No	Work Type	Owner Type	Purpose	Contractor	Complete Date	Final Depth (m)	Drilled Depth (m)	Salinity (mg/L)	SWL (m)	Yield (L/s)	Elev (AHD)	Dist	Dir
GW305694	30BL181476	Spear	Private	Domestic	Self Drilled	20/02/2003	5.00				0.300		682m	South East
GW114569	10BL604312	Bore	Private	Monitoring bore		30/03/2011	4.00	5.00					872m	North
GW114567	10BL604312	Bore	Private	Monitoring bore	EPOCA ENVIRONMENTAL	11/09/2014	4.00	5.00					900m	North
GW114568	10BL604312	Bore	Private	Monitoring bore		30/03/2011	4.00	5.00					940m	North
GW105215	10BL161418, 10WA108527	Bore	Private	Domestic		05/06/2003	15.00						1077 m	North
GW114575	10BL604526	Bore	Private	Monitoring bore		15/03/2011	7.50	7.50		6.70			1221 m	South West
GW114574	10BL604526	Bore	Private	Monitoring bore		15/03/2011	7.00	7.00		6.70			1221 m	South West
GW114573	10BL604526	Bore	Private	Monitoring bore		15/03/2011	7.00	7.00		6.70			1228 m	South West
GW102402	10BL157310, 10WA108367	Bore				01/01/1996	90.00						1457 m	North East
GW114779	10BL604238	Bore	Private	Monitoring bore		01/01/2010	6.00	6.00					1839 m	North East
GW114780	10BL604238	Bore	Private	Monitoring bore		01/01/2010	7.00	7.00					1868 m	North East

Borehole Data Source : NSW Department of Primary Industries - Office of Water / Water Administration Ministerial Corporation for all bores prefixed with GW. All other bores

Hydrogeology & Groundwater

Canterbury South Public School, Canterbury, NSW 2193

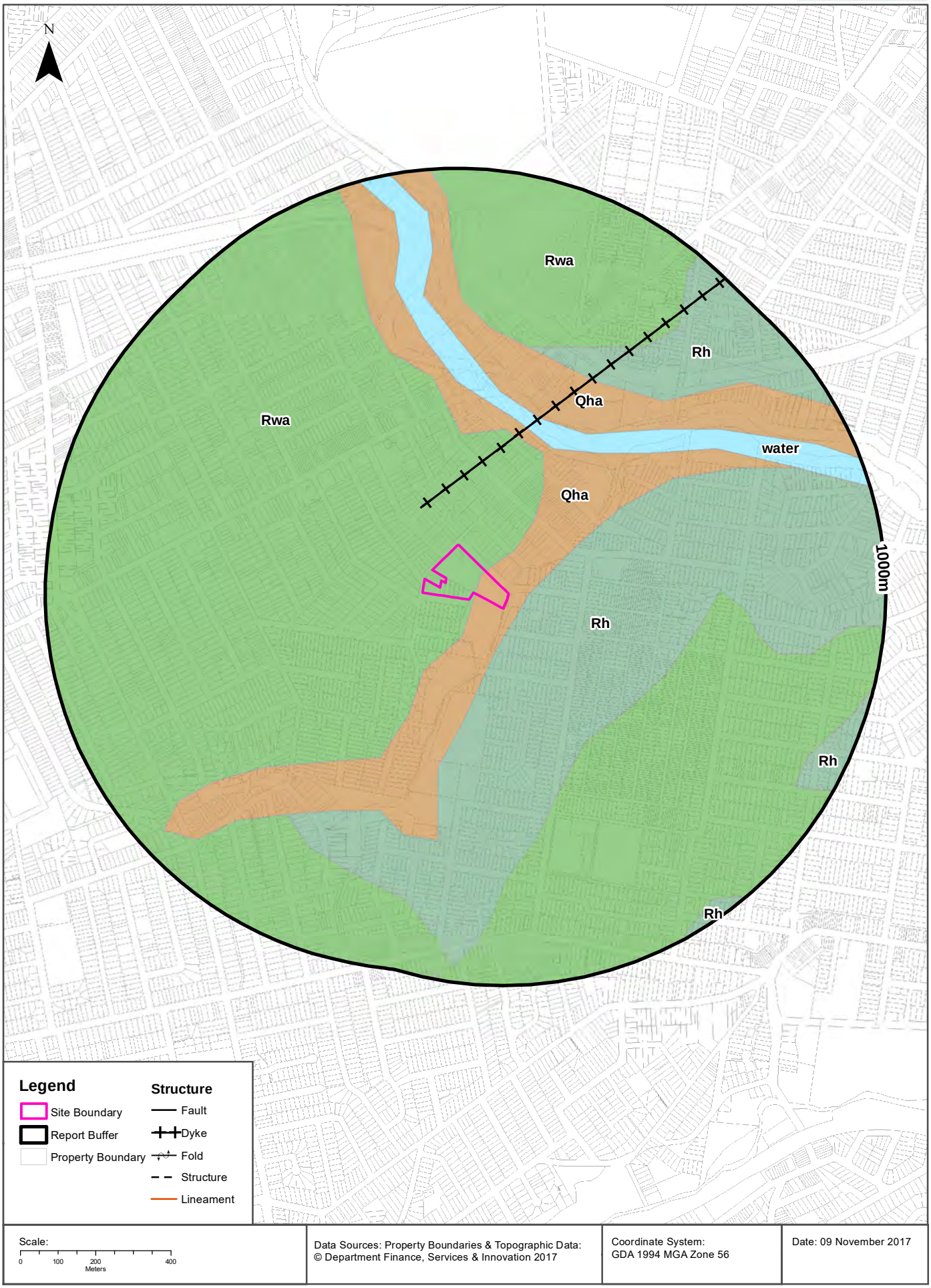
Driller's Logs

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

Groundwater No	Drillers Log	Distance	Direction
GW114569	0.00m-0.10m BITUMEN / ROADBASE 0.10m-0.30m FILL GRAVELLY CLAY GREY/BROWN,SOFT,LOW PLASTICITY 0.30m-1.00m SANDY CLAY YELLOW/BROWN, SOFT 1.00m-3.00m SANDSTONE WEATHRED YELLOW/BROWN,HARD 3.00m-5.00m SANDSTONE WEATHRED YELLOW/BROWN,HARD,WET	872m	North
GW114567	0.00m-0.10m BITUMEN / ROADBASE 0.10m-0.30m FILL: GRAVELLY CLAY,GREY/BROWN,SOFT 0.30m-1.00m SANDY CLAY YELLOW / BROWN 1.00m-3.00m SANDSTONE WEATHERED,YELLOW/BROWN,HARD 3.00m-5.00m SANDSTONE WEATHERED,YELLOW/BROWN,HARD	900m	North
GW114568	0.00m-0.10m BITUMEN / ROADBASE 0.10m-0.30m FILL,GRAVELLY CLAY.GREY BROWN,SOFT LOW PLASTICITY 0.30m-1.00m SANDY CLAY YELLOW/BROWN,SOFT 1.00m-3.00m WEATHERED SANDSTONE YELLOW BROWN HARD 3.00m-5.00m WEATHERED SANDSTONE YELLOW BROWN HARD	940m	North
GW114574	0.00m-0.20m FILL,LOOSE BEIGE,SANDY GRAVELLY CLAY 0.20m-3.20m FILL, SOFT TO FIRM B;ACK GRAVELLY CLAY 3.20m-4.50m SOFT BROWN SLIGHTLY GRAVELLY CLAY 4.50m-6.00m SOFT, LIGHT GREY GRAVELLY CLAY 6.00m-7.00m DARK GREY SHALE AND SANDSTONE	1221m	South West
GW114575	0.00m-0.20m FILL, CONCRETE 0.20m-0.40m STIFF GREY AND YELLOW CLAY 0.40m-7.50m GREY SHALE	1221m	South West
GW114573	0.00m-0.20m FILL,LOOSE,BEIGE,SANDY GRAVEL OF CONCRETE 0.20m-3.20m FILL.SPFT TO FIRM BLACK GRAVELLY CLAY 3.20m-4.50m SOFT BROWN SLIGHTLY GRAVELLY CLAY 4.50m-6.00m SOFT LIGHT GREY GRAVELLY CLAY 6.00m-7.00m DARK GREY SHALE AND SANDSTONE	1228m	South West

Geology 1:100,000

Canterbury South Public School, Canterbury, NSW 2193



Geology

Canterbury South Public School, Canterbury, NSW 2193

Geological Units

What are the Geological Units onsite?

Symbol	Description	Unit Name	Group	Sub Group	Age	Dom Lith	Map Sheet	Dataset
Qha	Silty to peaty quartz sand, silt, and clay. Ferruginous and humic cementation in places. Common shell layers				Quaternary		Sydney	1:100,000
Rwa	Black to dark grey shale and laminate	Ashfield Shale	Wianamatta Group		Triassic		Sydney	1:100,000

What are the Geological Units within the dataset buffer?

Symbol	Description	Unit Name	Group	Sub Group	Age	Dom Lith	Map Sheet	Dataset
Qha	Silty to peaty quartz sand, silt, and clay. Ferruginous and humic cementation in places. Common shell layers				Quaternary		Sydney	1:100,000
Rh	Medium to coarse grained quartz sandstone, very minor shale and laminate lenses				Triassic		Sydney	1:100,000
Rwa	Black to dark grey shale and laminate	Ashfield Shale	Wianamatta Group		Triassic		Sydney	1:100,000
water							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 dataset buffer?

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

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

Naturally Occurring Asbestos Potential

Canterbury South Public School, Canterbury, NSW 2193

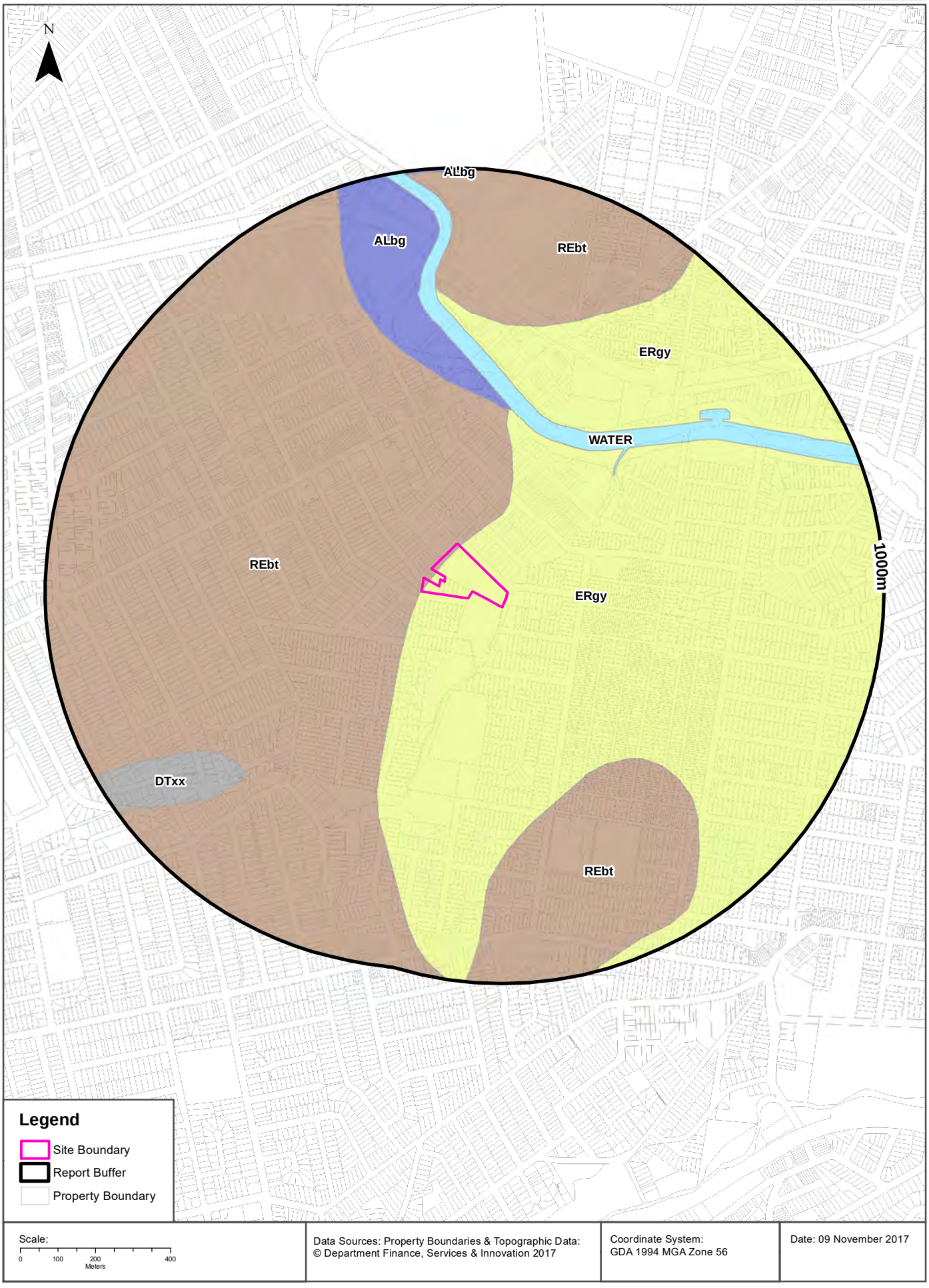
Naturally Occurring Asbestos Potential

Naturally Occurring Asbestos Potential within the dataset buffer:

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

Soil Landscapes

Canterbury South Public School, Canterbury, NSW 2193



Soils

Canterbury South Public School, Canterbury, NSW 2193

Soil Landscapes

What are the onsite Soil Landscapes?

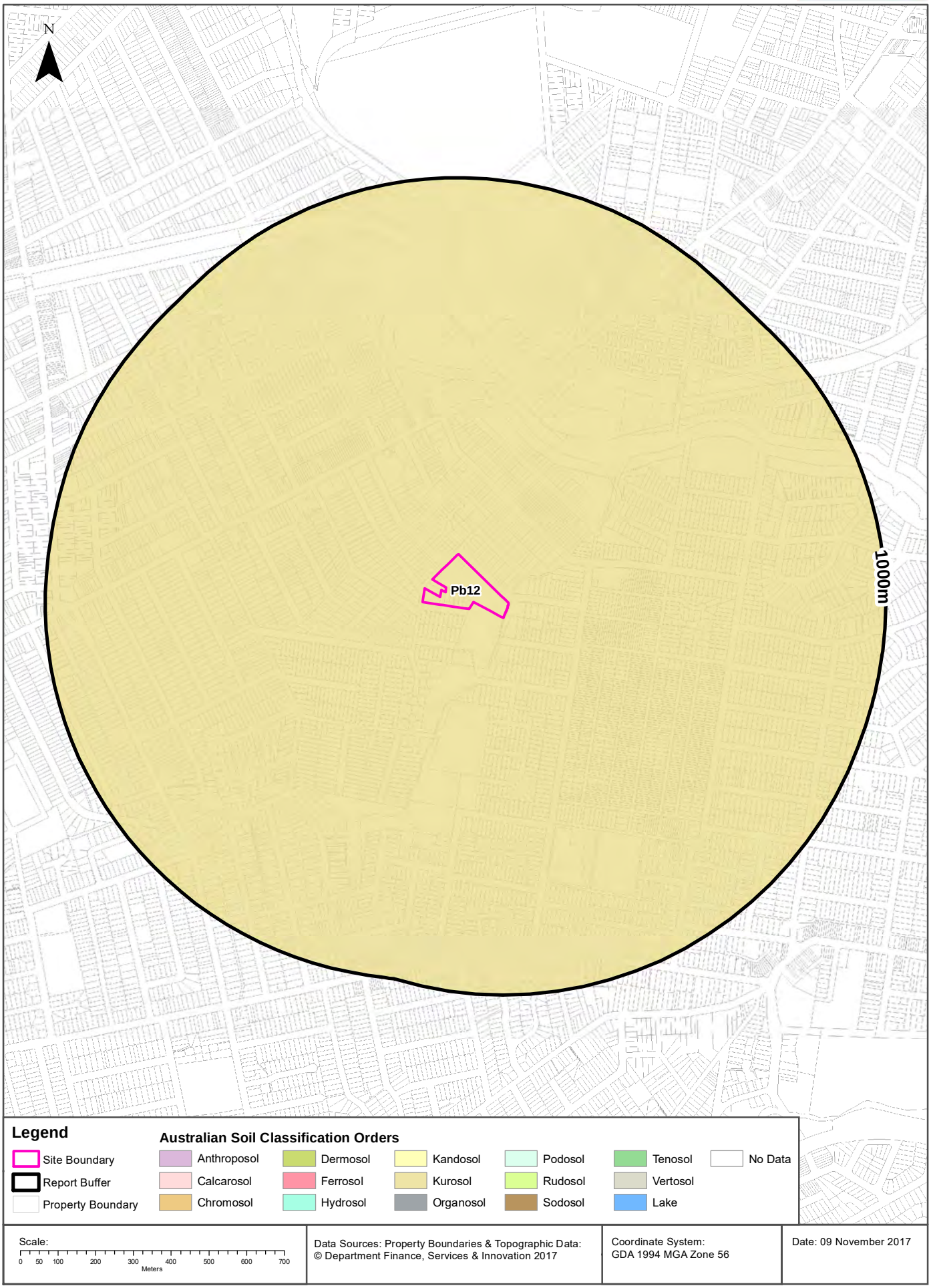
Soil Code	Name	Group	Process	Map Sheet	Scale
ERgy	GYMEA		EROSIONAL	Sydney	1:100,000
REbt	BLACKTOWN		RESIDUAL	Sydney	1:100,000

What are the Soil Landscapes within the dataset buffer?

Soil Code	Name	Group	Process	Map Sheet	Scale
ALbg	BIRRONG		ALLUVIAL	Sydney	1:100,000
DTxx	DISTURBED TERRAIN		DISTURBED TERRAIN	Sydney	1:100,000
ERgy	GYMEA		EROSIONAL	Sydney	1:100,000
REbt	BLACKTOWN		RESIDUAL	Sydney	1:100,000
WATER	WATER		WATER	Sydney	1:100,000

Atlas of Australian Soils

Canterbury South Public School, Canterbury, NSW 2193



Soils

Canterbury South Public School, Canterbury, NSW 2193

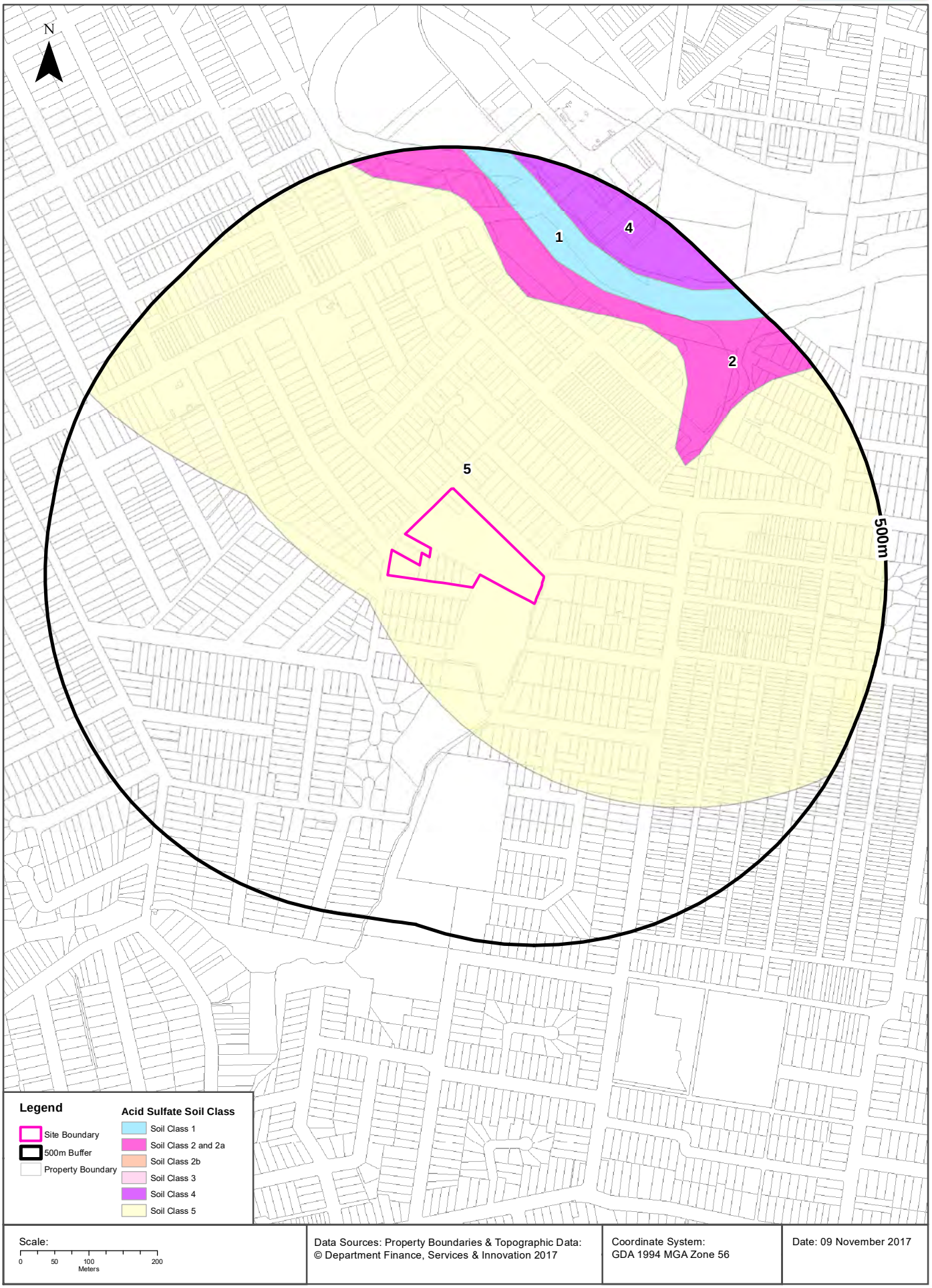
Atlas of Australian Soils

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

Map Unit Code	Soil Order	Map Unit Description	Distance
Pb12	Kurosol	Gently rolling to rounded hilly country with some steep slopes and broad valleys: chief soils are hard acidic red soils (Dr2.21) with hard neutral and acidic yellow mottled soils (Dy3.42 and Dy3.41) on lower slopes and in valleys. Associated are small areas of various soils including (Gn3.54) on some ridges, (Dr3.31) on some slopes; (Dr2.23) in saddles and some mid-slope positions, and some low- lying swampy areas of (Uf6) soils and (Uc1.2) soils with peaty surfaces. Small areas of other soils such as (Db1.2) are likely throughout.	0m

Acid Sulfate Soils

Canterbury South Public School, Canterbury, NSW 2193



Acid Sulfate Soils

Canterbury South Public School, Canterbury, NSW 2193

Standard Local Environmental Plan Acid Sulfate Soils

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

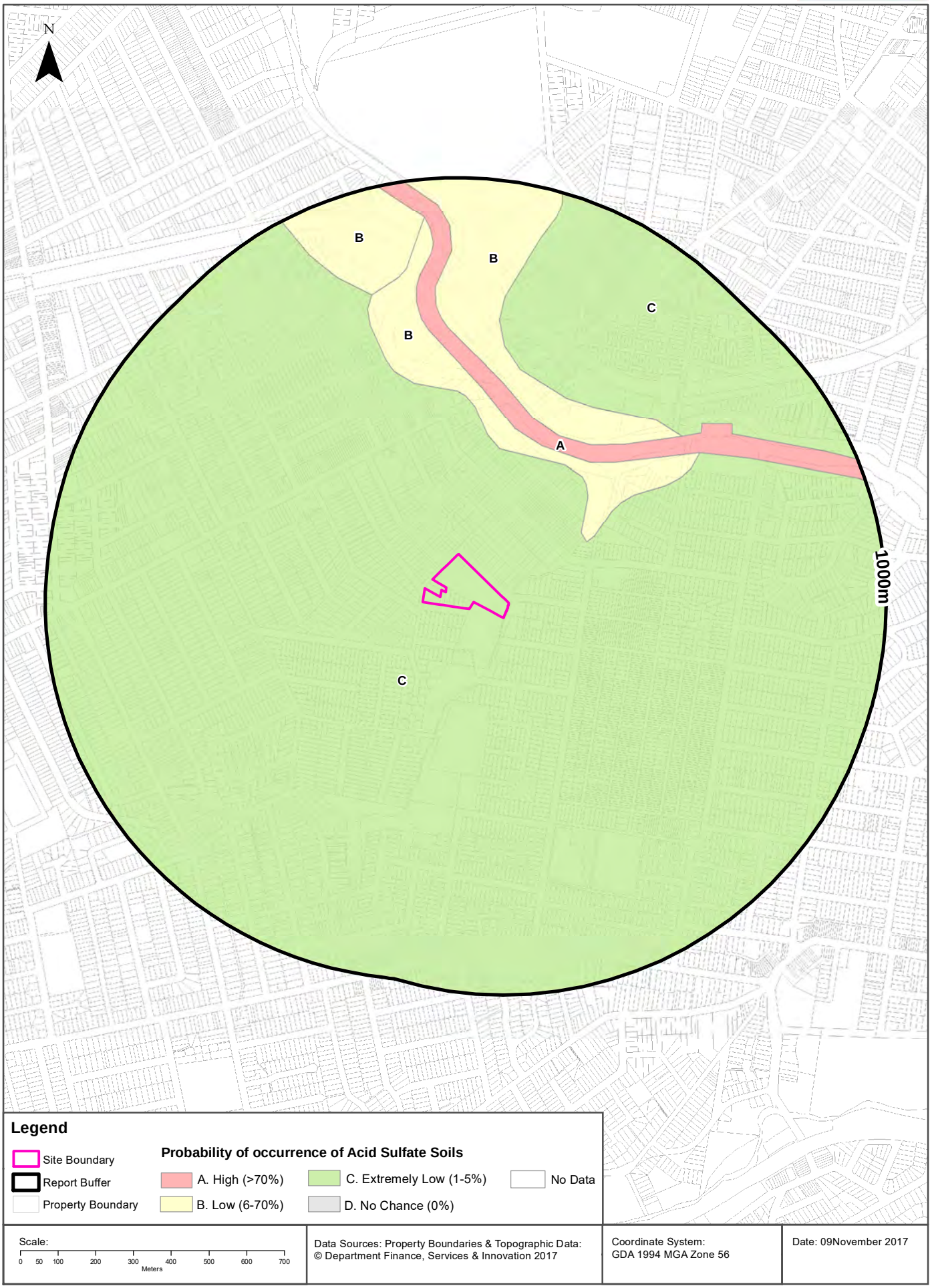
Soil Class	Description	LEP
5	Works within 500 metres of adjacent Class 1, 2, 3, or 4 land that is below 5 metres AHD and by which the watertable is likely to be lowered below 1 metre AHD on adjacent Class 1, 2, 3 or 4 land, present an environmental risk	Canterbury Local Environmental Plan 2012

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

Soil Class	Description	LEP	Distance	Direction
2	Works below natural ground surface present an environmental risk; Works by which the watertable is likely to be lowered present an environmental risk	Canterbury Local Environmental Plan 2012	262m	North East
1	Any works present an environmental risk	Canterbury Local Environmental Plan 2012	362m	North East
4	Works more than 2 metres below natural ground surface present an environmental risk; Works by which the watertable is likely to be lowered more than 2 metres below natural ground surface, present an environmental risk	Canterbury Local Environmental Plan 2012	410m	North East

Atlas of Australian Acid Sulfate Soils

Canterbury South Public School, Canterbury, NSW 2193



Acid Sulfate Soils

Canterbury South Public School, Canterbury, NSW 2193

Atlas of Australian Acid Sulfate Soils

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

Class	Description	Distance
C	Extremely low probability of occurrence. 1-5% chance of occurrence with occurrences in small localised areas.	0m
B	Low Probability of occurrence. 6-70% chance of occurrence.	261m
A	High Probability of occurrence. >70% chance of occurrence.	361m

Dryland Salinity

Canterbury South Public School, Canterbury, NSW 2193

Dryland Salinity - National Assessment

Is there Dryland Salinity - National Assessment data onsite?

No

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

No

What Dryland Salinity assessments are given?

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

Dryland Salinity Data Source : National Land and Water Resources Audit
The Commonwealth and all suppliers of source data used to derive the maps of "Australia, Forecast Areas Containing Land of High Hazard or Risk of Dryland Salinity from 2000 to 2050" do not warrant the accuracy or completeness of information in this product. Any person using or relying upon such information does so on the basis that the Commonwealth and data suppliers shall bear no responsibility or liability whatsoever for any errors, faults, defects or omissions in the information. Any persons using this information do so at their own risk.
In many cases where a high risk is indicated, less than 100% of the area will have a high hazard or risk.

Dryland Salinity Potential of Western Sydney

Dryland Salinity Potential of Western Sydney within the dataset buffer?

Feature Id	Classification	Description	Distance	Direction
N/A	Outside Data Coverage			

Dryland Salinity Potential of Western Sydney Data Source : NSW Office of Environment and Heritage

Mining Subsidence Districts

Canterbury South Public School, Canterbury, NSW 2193

Mining Subsidence Districts

Mining Subsidence Districts within the dataset buffer:

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

Environmental Zoning

Canterbury South Public School, Canterbury, NSW 2193

State Environmental Planning Policy Protected Areas

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

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

State Environmental Planning Policy Major Developments (2005)

State Environmental Planning Policy Major Developments within the dataset buffer:

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

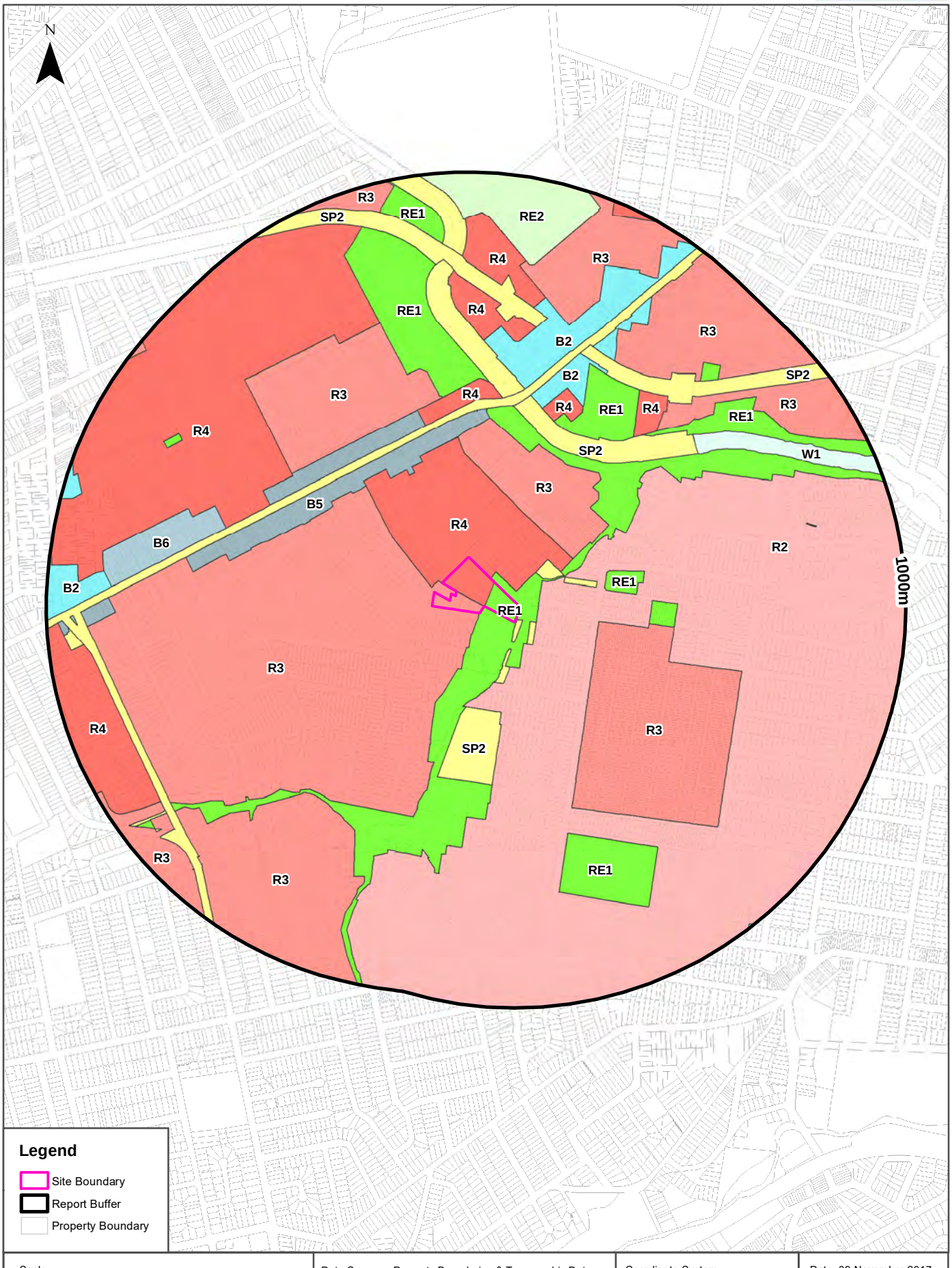
State Environmental Planning Policy Strategic Land Use Areas

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

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

LEP Planning Zones

Canterbury South Public School, Canterbury, NSW 2193



Local Environmental Plan

Canterbury South Public School, Canterbury, NSW 2193

Land Zoning

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

Zone	Description	Purpose	LEP or SEPP	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
R4	High Density Residential		Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	11/12/2015		0m	Onsite
RE1	Public Recreation		Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	11/12/2015		0m	Onsite
R3	Medium Density Residential		Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	11/12/2015		0m	Onsite
SP2	Infrastructure	Drainage	Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	11/12/2015		2m	South East
SP2	Infrastructure	Sewerage System	Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	11/12/2015		35m	South East
R2	Low Density Residential		Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	11/12/2015		46m	South East
SP2	Infrastructure	Drainage	Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	11/12/2015		71m	South
SP2	Infrastructure	Sewerage System	Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	11/12/2015		92m	East
SP2	Infrastructure	Sewerage System	Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	11/12/2015		130m	East
R3	Medium Density Residential		Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	11/12/2015		181m	North East
R3	Medium Density Residential		Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	11/12/2015		206m	South East
RE1	Public Recreation		Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	11/12/2015		224m	East
SP2	Infrastructure	Electricity Generating Works	Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	11/12/2015		236m	South
B5	Business Development		Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	11/12/2015		261m	North West
RE1	Public Recreation		Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	11/12/2015		336m	East
SP2	Infrastructure	Classified Road	Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	11/12/2015		337m	South West
B5	Business Development		Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	11/12/2015		354m	North West
R4	High Density Residential		Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	11/12/2015		360m	North
SP2	Infrastructure	Drainage	Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	11/12/2015		361m	North East
R3	Medium Density Residential		Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	11/12/2015		401m	North West
RE1	Public Recreation		Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	11/12/2015		413m	North East
R4	High Density Residential		Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	11/12/2015		416m	North East
RE1	Public Recreation		Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	11/12/2015		421m	North
SP2	Infrastructure	Drainage	Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	11/12/2015		424m	North
B2	Local Centre		Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	11/12/2015		431m	North East
B2	Local Centre		Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	11/12/2015		461m	North
R4	High Density Residential		Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	11/12/2015		476m	West
R4	High Density Residential		Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	11/12/2015		520m	North East
RE1	Public Recreation		Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	11/12/2015		541m	East

Zone	Description	Purpose	LEP or SEPP	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
RE1	Public Recreation		Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	11/12/2015		563m	South East
R4	High Density Residential		Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	11/12/2015		564m	North
B6	Enterprise Corridor		Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	11/12/2015		566m	West
R3	Medium Density Residential		Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	11/12/2015		573m	North East
R3	Medium Density Residential		Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	11/12/2015		578m	South West
SP2	Infrastructure	Railways	Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	11/12/2015		593m	North East
W1	Natural Waterways		Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	11/12/2015		607m	East
SP2	Infrastructure	Railways	Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	11/12/2015		619m	North West
B2	Local Centre		Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	11/12/2015		632m	North East
R3	Medium Density Residential		Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	11/12/2015		633m	North East
R3	Medium Density Residential		Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	11/12/2015		655m	North East
R4	High Density Residential		Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	11/12/2015		670m	North
RE1	Public Recreation		Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	11/12/2015		745m	North East
RE1	Public Recreation		Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	11/12/2015		764m	North West
SP2	Infrastructure	Sewerage System	Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	11/12/2015		772m	East
RE2	Private Recreation		Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	11/12/2015		774m	North
SP2	Infrastructure	Drainage	Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	11/12/2015		782m	North West
RE1	Public Recreation		Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	11/12/2015		816m	North
B5	Business Development		Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	11/12/2015		821m	West
B2	Local Centre		Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	11/12/2015		832m	West
R4	High Density Residential		Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	11/12/2015		852m	West
R3	Medium Density Residential		Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	11/12/2015		867m	South West
SP2	Infrastructure	Drainage	Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	11/12/2015		871m	South West
SP2	Infrastructure	Classified Road	Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	11/12/2015		909m	South West
SP2	Infrastructure	Electricity Generating Works	Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	11/12/2015		909m	West
RE1	Public Recreation		Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	11/12/2015		917m	South West
B5	Business Development		Canterbury Local Environmental Plan 2012	14/03/2014	14/03/2014	11/12/2015	Amendment No 4	920m	West
SP2	Infrastructure	Classified Road	Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	11/12/2015		922m	South West
R3	Medium Density Residential		Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	11/12/2015		924m	North West
B5	Business Development		Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	11/12/2015		943m	West
B2	Local Centre		Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	11/12/2015		950m	North West
R4	High Density Residential		Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	11/12/2015		963m	North
R3	Medium Density Residential		Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	11/12/2015		975m	North West
B2	Local Centre		Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	11/12/2015		990m	South East
RE1	Public Recreation		Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	11/12/2015		997m	North
B1	Neighbourhood Centre		Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	11/12/2015		999m	South

Local Environmental Plan

Canterbury South Public School, Canterbury, NSW 2193

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
G	460 m²	Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	01/01/2013		72.64

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
9	8.50 m	Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	13/04/2017		72.6

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
9	0.75	LEP	01/01/2013	01/01/2013	11/12/2015		48.7
4	0.50	LEP	01/01/2013	01/01/2013	11/12/2015		23.9

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	Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	01/01/2013		100

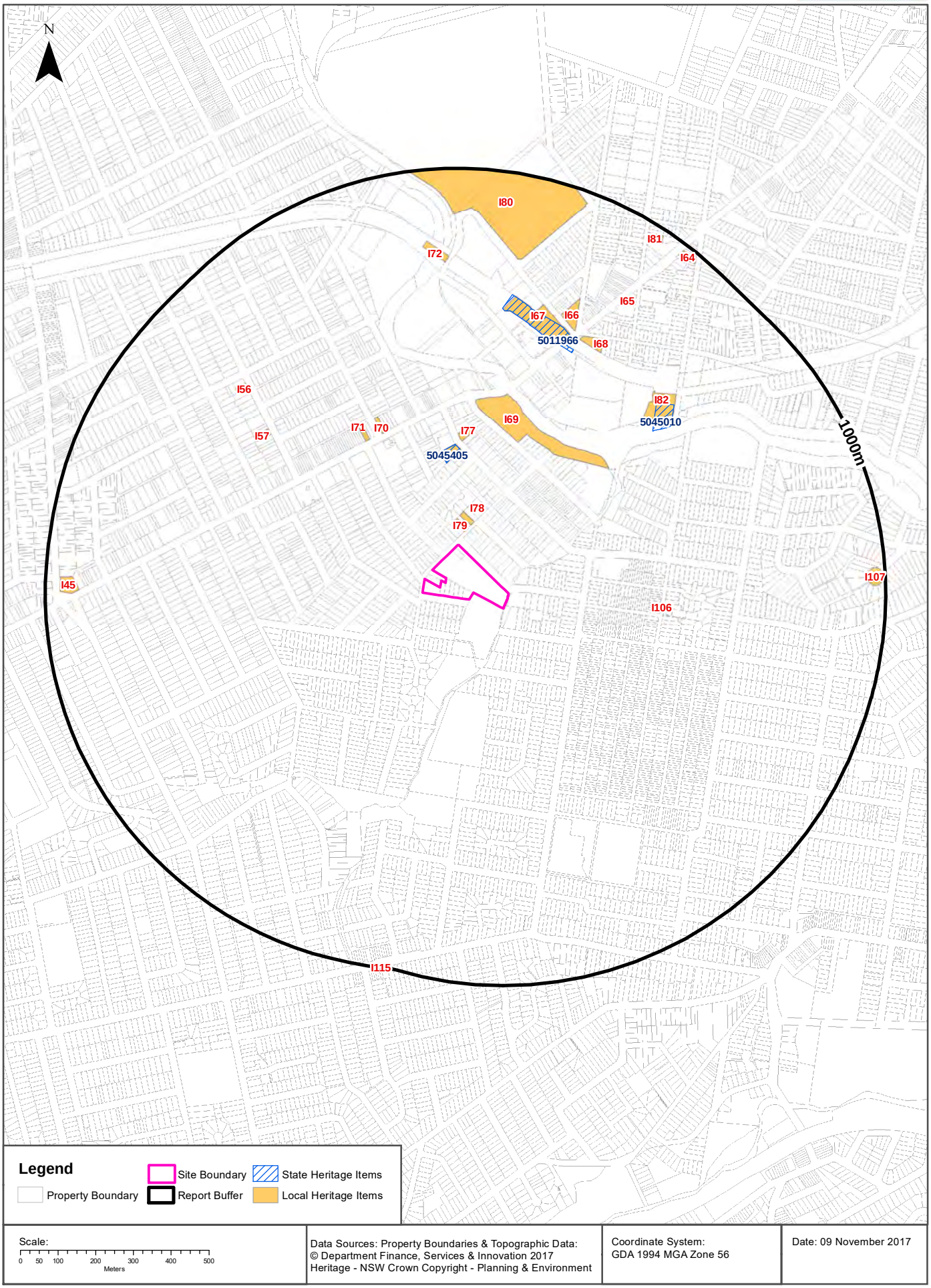
Land Reservation Acquisition

What are the onsite Local Environmental Plan Land Reservation Acquisitions?

Reservation	LEP	Published Date	Commenced Date	Currency Date	Amendment	Comments	Percentage of Site Area
Public Recreation	Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	01/01/2013			27.3

Heritage Items

Canterbury South Public School, Canterbury, NSW 2193



Heritage

Canterbury South Public School, Canterbury, NSW 2193

State Heritage Items

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

Map Id	Name	Address	LGA	Listing Date	Listing No	Plan No	Distance	Direction
5045405	Bethungra	9 Fore Street Canterbury	Canterbury	02/04/1999	224	531	220m	North
5045010	Old Sugarmill	Sugar House Road, Canterbury	Canterbury	02/04/1999	290		576m	North East
5011966	Canterbury Railway Station group	Bankstown railway, Canterbury	Canterbury	02/04/1999	1109	2428	592m	North

Local Heritage Items

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

Map Id	Name	Classification	Significance	LEP or Act	Published Date	Commenced Date	Currency Date	Distance	Direction
I79	Victorian stone house	Item - General	Local	Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	05/03/2015	39m	North
I78	Victorian stone house	Item - General	Local	Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	05/03/2015	61m	North
I76	Federation stone house, 'Bethungra'	Item - General	State	Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	05/03/2015	220m	North
I77	Federation house, 'Iserbrook'	Item - General	Local	Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	05/03/2015	276m	North
I69	Inter war urban park - Mary MacKillop Reserve	Item - General	Local	Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	05/03/2015	314m	North East
I70	Inter war shops with dwellings above	Item - General	Local	Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	05/03/2015	356m	North West
I71	Federation stone church (former Canterbury Methodist Church)	Item - General	Local	Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	05/03/2015	365m	North West
I106	Quarry face (former)	Item - General	Local	Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	05/03/2015	402m	East
I57	Victorian house	Item - General	Local	Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	05/03/2015	560m	North West
I82	Canterbury Sugar Mill (former)	Item - General	State	Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	05/03/2015	571m	North East
I67	Federation railway station buildings	Item - General	State	Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	05/03/2015	594m	North
I68	Inter war hotel (former Hotel Canterbury)	Item - General	Local	Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	05/03/2015	631m	North East
I66	Federation post office building (former Canterbury Post Office)	Item - General	Local	Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	05/03/2015	645m	North

Map Id	Name	Classification	Significance	LEP or Act	Published Date	Commenced Date	Currency Date	Distance	Direction
I56	Federation weatherboard house	Item - General	Local	Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	05/03/2015	689m	North West
I72	Federation railway bridge	Item - General	Local	Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	05/03/2015	752m	North
I65	Inter war motor garage - Holly's Garage	Item - General	Local	Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	05/03/2015	773m	North East
I80	Canterbury Park Racecourse	Item - General	Local	Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	05/03/2015	774m	North
I45	Inter war shop and motor garage, Dan's Corner	Item - General	Local	Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	05/03/2015	910m	West
I81	Victorian house, 'Fairview'	Item - General	Local	Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	05/03/2015	950m	North East
I107	Inter war street trees	Item - General	Local	Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	05/03/2015	953m	East
I64	Federation police station (former)	Item - General	Local	Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	05/03/2015	965m	North East
I115	Inter war shop with dwellings above - S & S Main Buildings	Item - General	Local	Canterbury Local Environmental Plan 2012	01/01/2013	01/01/2013	05/03/2015	999m	South

Natural Hazards

Canterbury South Public School, Canterbury, NSW 2193

Bush Fire Prone Land

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

Bush Fire Prone Land Category	Distance	Direction
No records within buffer		

Ecological Constraints - Native Vegetation & RAMSAR Wetlands

Canterbury South Public School, Canterbury, NSW 2193

Legend

Site Boundary	Rainforest	Forested Wetlands	Grasslands	Artificial Wetlands	RAMSAR Wetlands
Report Buffer	Wet Sclerophyll Forests	Grassy Woodlands	Freshwater Wetlands	Water	
Property Boundary	Dry Sclerophyll Forests	Heathlands	Saline Wetlands	Other	

Scale: 0 100 200 400 Meters

Propert Boundary Data Source:
© Department Finance, Services & Innovation 2017

Coordinate System:
GDA 1994 MGA Zone 56

Date: 09 November 2017

Ecological Constraints

Canterbury South Public School, Canterbury, NSW 2193

Native Vegetation

What native vegetation exists within the dataset 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	0m	Onsite
S_SW01	S_SW01: Estuarine Mangrove Forest			00: Not assessed	20: Previously cleared 1943	3: High	Mangroves	359m	North
Weed_Ex	Weed_Ex: Weeds and Exotics			00: Not assessed	00: Not assessed	0: Not assessed	Exotic Species >90%cover	629m	North East
S_FoW08	S_FoW08: Estuarine Swamp Oak Forest	Swamp Oak Floodplain Forest		31: Saltmarsh	25: Edge disturbances only	2: Moderate	C.glauca	886m	North

RAMSAR Wetlands

What RAMSAR Wetland areas exist within the dataset buffer?

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

Ecological Constraints

Canterbury South Public School, Canterbury, NSW 2193

Groundwater Dependent Ecosystems Atlas

Map Id	Type	GDE Potential	IDE Likelihood	Geomorphology	Ecosystem Type	Aquifer Geology	Distance
N/A	No records within buffer						

Ecological Constraints

Canterbury South Public School, Canterbury, NSW 2193

NSW BioNet Atlas

Species on the NSW BioNet Atlas that have a NSW or federal conservation status, a NSW sensitivity status, or are listed under a migratory species agreement, and are within 10km of the site?

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Animalia	Amphibia	Crinia tinnula	Wallum Froglet	Vulnerable	Not Sensitive	Not Listed	
Animalia	Amphibia	Litoria aurea	Green and Golden Bell Frog	Endangered	Not Sensitive	Vulnerable	
Animalia	Amphibia	Pseudophryne australis	Red-crowned Toadlet	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Actitis hypoleucos	Common Sandpiper	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Anthochaera phrygia	Regent Honeyeater	Critically Endangered	Not Sensitive	Critically Endangered	
Animalia	Aves	Apus pacificus	Fork-tailed Swift	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Ardea ibis	Cattle Egret	Not Listed	Not Sensitive	Not Listed	CAMBA;JAMBA
Animalia	Aves	Ardenna pacificus	Wedge-tailed Shearwater	Not Listed	Not Sensitive	Not Listed	JAMBA
Animalia	Aves	Ardenna tenuirostris	Short-tailed Shearwater	Not Listed	Not Sensitive	Not Listed	ROKAMBA;JAMBA
Animalia	Aves	Arenaria interpres	Ruddy Turnstone	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Artamus cyanopterus cyanopterus	Dusky Woodswallow	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Botaurus poiciloptilus	Australasian Bittern	Endangered	Not Sensitive	Endangered	
Animalia	Aves	Burhinus grallarius	Bush Stone-curlew	Endangered	Not Sensitive	Not Listed	
Animalia	Aves	Calidris acuminata	Sharp-tailed Sandpiper	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Calidris alba	Sanderling	Vulnerable	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Calidris bairdii	Baird's Sandpiper	Not Listed	Not Sensitive	Not Listed	ROKAMBA;JAMBA
Animalia	Aves	Calidris canutus	Red Knot	Not Listed	Not Sensitive	Endangered	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Calidris ferruginea	Curlew Sandpiper	Endangered	Not Sensitive	Critically Endangered	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Calidris mauri	Western Sandpiper	Not Listed	Not Sensitive	Not Listed	JAMBA
Animalia	Aves	Calidris melanotos	Pectoral Sandpiper	Not Listed	Not Sensitive	Not Listed	ROKAMBA;JAMBA
Animalia	Aves	Calidris ruficollis	Red-necked Stint	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Calidris tenuirostris	Great Knot	Vulnerable	Not Sensitive	Critically Endangered	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Callocephalon fimbriatum	Gang-gang Cockatoo	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Calyptorhynchus lathami	Glossy Black-Cockatoo	Vulnerable	Category 2	Not Listed	
Animalia	Aves	Charadrius leschenaultii	Greater Sand-plover	Vulnerable	Not Sensitive	Vulnerable	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Charadrius mongolus	Lesser Sand-plover	Vulnerable	Not Sensitive	Endangered	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Charadrius veredus	Oriental Plover	Not Listed	Not Sensitive	Not Listed	ROKAMBA;JAMBA
Animalia	Aves	Chlidonias leucopterus	White-winged Black Tern	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Circus assimilis	Spotted Harrier	Vulnerable	Not Sensitive	Not Listed	

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Animalia	Aves	Diomedea exulans	Wandering Albatross	Endangered	Not Sensitive	Endangered	JAMBA
Animalia	Aves	Ephippiorhynchus asiaticus	Black-necked Stork	Endangered	Not Sensitive	Not Listed	
Animalia	Aves	Epthianura albifrons	White-fronted Chat	Endangered Population, Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Esacus magnirostris	Beach Stone-curlew	Critically Endangered	Not Sensitive	Not Listed	
Animalia	Aves	Falco subniger	Black Falcon	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Gallinago hardwickii	Latham's Snipe	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Gelochelidon nilotica	Gull-billed Tern	Not Listed	Not Sensitive	Not Listed	CAMBA
Animalia	Aves	Glossopsitta pusilla	Little Lorikeet	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Haematopus fuliginosus	Sooty Oystercatcher	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Haematopus longirostris	Pied Oystercatcher	Endangered	Not Sensitive	Not Listed	
Animalia	Aves	Haliaeetus leucogaster	White-bellied Sea-Eagle	Vulnerable	Not Sensitive	Not Listed	CAMBA
Animalia	Aves	Hieraaetus morphnoides	Little Eagle	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Hirundapus caudacutus	White-throated Needletail	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Hydroprogne caspia	Caspian Tern	Not Listed	Not Sensitive	Not Listed	CAMBA;JAMBA
Animalia	Aves	Lathamus discolor	Swift Parrot	Endangered	Category 3	Critically Endangered	
Animalia	Aves	Limicola falcinellus	Broad-billed Sandpiper	Vulnerable	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Limosa lapponica	Bar-tailed Godwit	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Limosa limosa	Black-tailed Godwit	Vulnerable	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Lophochroa leadbeateri	Major Mitchell's Cockatoo	Vulnerable	Category 2	Not Listed	
Animalia	Aves	Lophoictinia isura	Square-tailed Kite	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Merops ornatus	Rainbow Bee-eater	Not Listed	Not Sensitive	Not Listed	JAMBA
Animalia	Aves	Neochmia ruficauda	Star Finch	Presumed Extinct	Not Sensitive	Endangered	
Animalia	Aves	Neophema pulchella	Turquoise Parrot	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Ninox strenua	Powerful Owl	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Numenius madagascariensis	Eastern Curlew	Not Listed	Not Sensitive	Critically Endangered	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Numenius minutus	Little Curlew	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Numenius phaeopus	Whimbrel	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Onychoprion fuscata	Sooty Tern	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Pandion cristatus	Eastern Osprey	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Petroica boodang	Scarlet Robin	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Petroica phoenicea	Flame Robin	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Philomachus pugnax	Ruff	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Plegadis falcinellus	Glossy Ibis	Not Listed	Not Sensitive	Not Listed	CAMBA
Animalia	Aves	Pluvialis fulva	Pacific Golden Plover	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Pluvialis squatarola	Grey Plover	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Ptilinopus superbus	Superb Fruit-Dove	Vulnerable	Not Sensitive	Not Listed	

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Animalia	Aves	Rostratula australis	Australian Painted Snipe	Endangered	Not Sensitive	Endangered	
Animalia	Aves	Sterna hirundo	Common Tern	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Sternula albifrons	Little Tern	Endangered	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Stictonetta naevosa	Freckled Duck	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Tringa brevipes	Grey-tailed Tattler	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Tringa glareola	Wood Sandpiper	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Tringa incana	Wandering Tattler	Not Listed	Not Sensitive	Not Listed	JAMBA
Animalia	Aves	Tringa nebularia	Common Greenshank	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Tringa stagnatilis	Marsh Sandpiper	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Tyto longimembris	Eastern Grass Owl	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Tyto novaehollandiae	Masked Owl	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Xenus cinereus	Terek Sandpiper	Vulnerable	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Mammalia	Arctocephalus pusillus doriferus	Australian Fur-seal	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Dasyurus viverrinus	Eastern Quoll	Endangered	Not Sensitive	Critically Endangered	
Animalia	Mammalia	Dugong dugon	Dugong	Endangered	Not Sensitive	Not Listed	
Animalia	Mammalia	Eubalaena australis	Southern Right Whale	Endangered	Not Sensitive	Endangered	
Animalia	Mammalia	Miniopterus australis	Little Bentwing-bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Miniopterus schreibersii oceanensis	Eastern Bentwing-bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Mormopterus norfolkensis	Eastern Freetail-bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Myotis macropus	Southern Myotis	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Perameles nasuta	Long-nosed Bandicoot	Endangered Population	Not Sensitive	Not Listed	
Animalia	Mammalia	Phascolarctos cinereus	Koala	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Mammalia	Pteropus poliocephalus	Grey-headed Flying-fox	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Mammalia	Saccolaimus flaviventris	Yellow-bellied Sheathtail-bat	Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Acacia bynoeana	Bynoe's Wattle	Endangered	Not Sensitive	Vulnerable	
Plantae	Flora	Acacia gordonii		Endangered	Not Sensitive	Endangered	
Plantae	Flora	Acacia prominens	Gosford Wattle	Endangered Population	Not Sensitive	Not Listed	
Plantae	Flora	Acacia pubescens	Downy Wattle	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Acacia terminalis subsp. terminalis	Sunshine Wattle	Endangered	Not Sensitive	Endangered	
Plantae	Flora	Caladenia tessellata	Thick Lip Spider Orchid	Endangered	Category 2	Vulnerable	
Plantae	Flora	Callistemon linearifolius	Netted Bottle Brush	Vulnerable	Category 3	Not Listed	
Plantae	Flora	Darwinia biflora		Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Deyeuxia appressa		Endangered	Not Sensitive	Endangered	
Plantae	Flora	Dillwynia tenuifolia		Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Epacris purpurascens subsp. purpurascens		Vulnerable	Not Sensitive	Not Listed	

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Plantae	Flora	Eucalyptus leucoxylon subsp. pruinosa	Boland Yellow Gum	Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Eucalyptus nicholii	Narrow-leaved Black Peppermint	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Eucalyptus pulverulenta	Silver-leafed Gum	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Eucalyptus scoparia	Wallangarra White Gum	Endangered	Not Sensitive	Vulnerable	
Plantae	Flora	Genoplesium baueri	Bauer's Midge Orchid	Endangered	Category 2	Endangered	
Plantae	Flora	Grevillea beadleana	Beadle's Grevillea	Endangered	Category 3	Endangered	
Plantae	Flora	Hibbertia puberula		Endangered	Not Sensitive	Not Listed	
Plantae	Flora	Hibbertia stricta subsp. furcatula		Endangered	Not Sensitive	Not Listed	
Plantae	Flora	Hypsela sessiliflora		Not Listed	Category 3	Extinct	
Plantae	Flora	Leucopogon exolasius	Woronora Beard-heath	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Macadamia tetraphylla	Rough-shelled Bush Nut	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Marsdenia viridiflora subsp. viridiflora	Native Pear	Endangered Population	Not Sensitive	Not Listed	
Plantae	Flora	Maundia triglochinoides		Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Melaleuca deanei	Deane's Paperbark	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Persoonia hirsuta	Hairy Geebung	Endangered	Category 3	Endangered	
Plantae	Flora	Persoonia nutans	Nodding Geebung	Endangered	Not Sensitive	Endangered	
Plantae	Flora	Pimelea curviflora subsp. curviflora		Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Pimelea spicata	Spiked Rice-flower	Endangered	Not Sensitive	Endangered	
Plantae	Flora	Pomaderris prunifolia	Plum-leaf Pomaderris	Endangered Population	Not Sensitive	Not Listed	
Plantae	Flora	Prostanthera marifolia	Seaforth Mintbush	Critically Endangered	Category 3	Critically Endangered	
Plantae	Flora	Pultenaea pedunculata	Matted Bush-pea	Endangered	Not Sensitive	Not Listed	
Plantae	Flora	Syzygium paniculatum	Magenta Lilly Pilly	Endangered	Not Sensitive	Vulnerable	
Plantae	Flora	Tetratheca glandulosa		Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Tetratheca juncea	Black-eyed Susan	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Wahlenbergia multicaulis	Tadgell's Bluebell	Endangered Population	Not Sensitive	Not Listed	
Plantae	Flora	Wilsonia backhousei	Narrow-leafed Wilsonia	Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Zannichellia palustris		Endangered	Not Sensitive	Not Listed	

Data does not include NSW category 1 sensitive species.

Data obtained 09/11/2017

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   (a) the Report is compiled from or using content (**Third Party Content**) which is comprised of:
      (i) content provided to Lotsearch by third party content suppliers with whom Lotsearch has contractual arrangements or content which is freely available (**Third Party Content Suppliers**);
      (j) content which is derived from content described in paragraph (i);
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   (f) the Report does not include any information relating to the actual state or condition of the Property;
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EIS

Land Title Records

ADVANCE LEGAL SEARCHERS PTY LIMITED

(ACN 147 943 842)
ABN 82 147 943 842

18/36 Osborne Road,
Manly NSW 2095

Telephone: +612 9977 6713
Mobile: 0412 169 809
Email: search@alsearchers.com.au

10th November 2017

ENVIRONMENTAL INVESTIGATION SERVICES
PO Box 976,
NORTH RYDE BC NSW 1670

Attention: Jake Cashman

RE: **Canterbury South Public School, High Street, Canterbury**
Ref: E31040K

Current Search

Folio Identifier 1/123147 (title attached)
DP 123147 (plan attached)
Dated 07th November 2017
Registered Proprietor:
MINISTER FOR EDUCATION

Title Tree
Lot 1 DP 123147

Folio Identifier 1/123147

Certificate of Title Volume 4442 Folio 195

Certificate of Title Volume 3753 Folio 177

PA 24558

Conveyance Book 491 No 283

****

Summary of proprietor(s)
Lot 1 DP 123147

Year	Proprietor(s)
	(Lot 1 DP 123147)
1990 – todate	Minister for Education
	(Part Lots 12 & 13 Bridgewater Estate – Area 3 Acres 1 Rood 15 ¾ Perches – CTVol 4442 Fol 195)
1930 – 1990	His Most Gracious Majesty King George the Fifth
	(Part Lots 12 & 13 Bridgewater Estate – Area 3 Acres 1 Rood 16 Perches – CTVol 3753 Fol 177)
1929 – 1930	His Most Gracious Majesty King George the Fifth
1925 – 1929	Ivy Viva Quigg, spinster
(1922 – 1929)	*(lease to William Barton, dairyman of cottage and sheds used as dwelling and dairy, High Street, Canterbury)*
1922 – 1925	John O'Hara Quigg, gentleman / executor Elizabeth Amy Quigg, married woman / executrix Ivy Viva Quigg, spinster / beneficary John Quigg, estate
	(Part Lots 12 & 13 Bridgewater Estate – Area 3 Acres 1 Rood 16 Perches – Conv Bk 491 No 283)
1892 – 1922	John Quigg, esquire

****

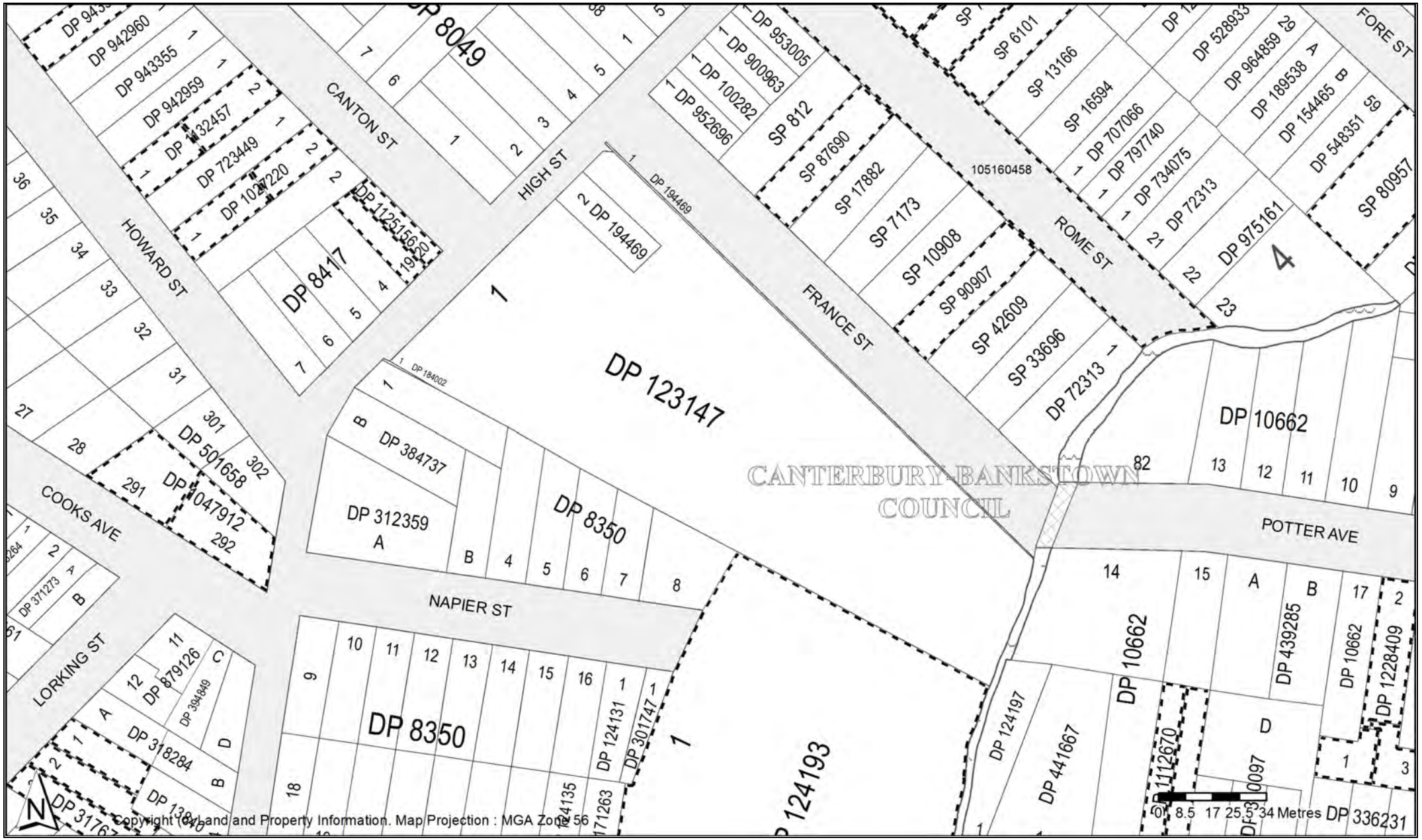
Land & Property Information

Cadastral Records Enquiry Report

Ref : Advance Legal Searchers Pty Ltd

Requested Parcel : Lot 1 DP 123147 **Identified Parcel :** Lot 1 DP 123147

Locality : CANTERBURY **LGA :** CANTERBURY-BANKSTOWN **Parish :** ST GEORGE **County :** CUMBERLAND



	Status	Surv/Comp	Purpose
DP124193			
Lot(s): 1			
DP1126689	REGISTERED	SURVEY	EASEMENT
DP317670			
Lot(s): 1, 2, 3			
DP266517	REGISTERED	SURVEY	EASEMENT
DP943957			
Lot(s): 15			
DP1229359	PRE-ALLOCATED	UNAVAILABLE	SUBDIVISION
DP1027220			
Lot(s): 1, 2			
DP8417	HISTORICAL	SURVEY	UNRESEARCHED
DP1047912			
Lot(s): 291, 292			
DP9484	HISTORICAL	SURVEY	UNRESEARCHED
DP1112670			
Lot(s): 321, 322			
DP10662	HISTORICAL	SURVEY	UNRESEARCHED
DP1125156			
Lot(s): 19, 20			
DP8417	HISTORICAL	SURVEY	UNRESEARCHED
DP1132457			
Lot(s): 1, 2			
DP925450	HISTORICAL	SURVEY	UNRESEARCHED
DP1228409			
Lot(s): 1, 3			
DP124172	HISTORICAL	COMPILATION	DEPARTMENTAL
Lot(s): 1, 2, 3			
DP10662	HISTORICAL	SURVEY	UNRESEARCHED
SP6101			
Lot(s):			
EX-SUR 70/54 DP980665			
SP77715			
DP975161	HISTORICAL	COMPILATION	UNRESEARCHED
DP1101785	REGISTERED	SURVEY	REDEFINITION
SP80957			
DP742316	HISTORICAL	COMPILATION	DEPARTMENTAL
DP799977	HISTORICAL	COMPILATION	DEPARTMENTAL
DP1125073	REGISTERED	SURVEY	CONSOLIDATION
SP85106			
DP975161	HISTORICAL	COMPILATION	UNRESEARCHED
DP1162767	REGISTERED	SURVEY	REDEFINITION
SP87690			
DP781287	HISTORICAL	COMPILATION	DEPARTMENTAL
DP1181318	REGISTERED	SURVEY	REDEFINITION
SP90907			
DP72313	HISTORICAL	SURVEY	UNRESEARCHED
DP1199260	REGISTERED	SURVEY	REDEFINITION
Road			
Polygon Id(s): 105160458			
EX-SUR 70/54 DP980665			

Plan	Surv/Comp	Purpose
DP2016	COMPILATION	UNRESEARCHED
DP8049	SURVEY	UNRESEARCHED
DP8350	SURVEY	UNRESEARCHED
DP8417	SURVEY	UNRESEARCHED
DP9484	SURVEY	UNRESEARCHED
DP10661	SURVEY	UNRESEARCHED
DP10662	SURVEY	UNRESEARCHED
DP13840	SURVEY	UNRESEARCHED
DP26919	SURVEY	UNRESEARCHED
DP72313	SURVEY	UNRESEARCHED
DP77338	SURVEY	UNRESEARCHED
DP79948	SURVEY	UNRESEARCHED
DP100282	SURVEY	UNRESEARCHED
DP103703	COMPILATION	UNRESEARCHED
DP123147	COMPILATION	DEPARTMENTAL
DP124131	COMPILATION	DEPARTMENTAL
DP124135	COMPILATION	DEPARTMENTAL
DP124186	COMPILATION	DEPARTMENTAL
DP124193	COMPILATION	DEPARTMENTAL
DP124197	COMPILATION	DEPARTMENTAL
DP150015	SURVEY	UNRESEARCHED
DP152238	COMPILATION	UNRESEARCHED
DP154465	COMPILATION	UNRESEARCHED
DP171263	COMPILATION	UNRESEARCHED
DP184002	SURVEY	UNRESEARCHED
DP189538	COMPILATION	UNRESEARCHED
DP194469	COMPILATION	DEPARTMENTAL
DP301747	COMPILATION	UNRESEARCHED
DP312359	COMPILATION	UNRESEARCHED
DP314281	COMPILATION	UNRESEARCHED
DP317670	COMPILATION	UNRESEARCHED
DP317795	COMPILATION	UNRESEARCHED
DP318284	COMPILATION	UNRESEARCHED
DP320097	COMPILATION	UNRESEARCHED
DP336231	COMPILATION	UNRESEARCHED
DP371273	SURVEY	UNRESEARCHED
DP384737	COMPILATION	UNRESEARCHED
DP394849	SURVEY	UNRESEARCHED
DP439285	SURVEY	UNRESEARCHED
DP441667	SURVEY	UNRESEARCHED
DP501658	COMPILATION	SUBDIVISION
DP528933	SURVEY	OLD SYSTEM CONVERSION
DP548351	SURVEY	OLD SYSTEM CONVERSION
DP707066	COMPILATION	DEPARTMENTAL
DP723368	COMPILATION	DEPARTMENTAL
DP723449	COMPILATION	DEPARTMENTAL
DP734075	COMPILATION	DEPARTMENTAL
DP738264	SURVEY	SUBDIVISION
DP783640	COMPILATION	DEPARTMENTAL
DP797740	COMPILATION	DEPARTMENTAL
DP879126	SURVEY	SUBDIVISION
DP900963	SURVEY	UNRESEARCHED
DP942959	SURVEY	UNRESEARCHED
DP942960	SURVEY	UNRESEARCHED
DP943355	SURVEY	UNRESEARCHED
DP943957	SURVEY	UNRESEARCHED
DP944504	COMPILATION	UNRESEARCHED
DP952696	SURVEY	UNRESEARCHED
DP953005	SURVEY	UNRESEARCHED
DP964859	COMPILATION	UNRESEARCHED
DP975161	COMPILATION	UNRESEARCHED
DP1027220	SURVEY	SUBDIVISION
DP1047912	SURVEY	SUBDIVISION
DP1112670	SURVEY	SUBDIVISION
DP1125156	SURVEY	SUBDIVISION
DP1132457	SURVEY	SUBDIVISION
DP1228409	SURVEY	SUBDIVISION
SP812	COMPILATION	STRATA PLAN
SP6101	COMPILATION	STRATA PLAN

Plan	Surv/Comp	Purpose
SP7173	COMPILATION	STRATA PLAN
SP10908	COMPILATION	STRATA PLAN
SP13166	COMPILATION	STRATA PLAN
SP16594	COMPILATION	STRATA PLAN
SP17882	COMPILATION	STRATA PLAN
SP33696	COMPILATION	STRATA PLAN
SP42609	COMPILATION	STRATA PLAN
SP77715	COMPILATION	STRATA PLAN
SP80957	COMPILATION	STRATA PLAN
SP85106	COMPILATION	STRATA PLAN
SP87690	COMPILATION	STRATA PLAN
SP87690	UNRESEARCHED	STRATA PLAN
SP90907	COMPILATION	STRATA PLAN

LT2/16

PLAN OF PART OF LOTS 12 AND 13 BRIDGEWATER ESTATE BEING LAND IN VOL. 14442 FOL. 193

Mun./~~Shire/City~~ CANTERBURY

Town or Locality CANTERBURY

Parish ST GEORGE

County CUMBERLAND

Reduction Ratio 1: 1250 Lengths are in metres

DP 123147

Registered: 11.7.1990

C.A.:

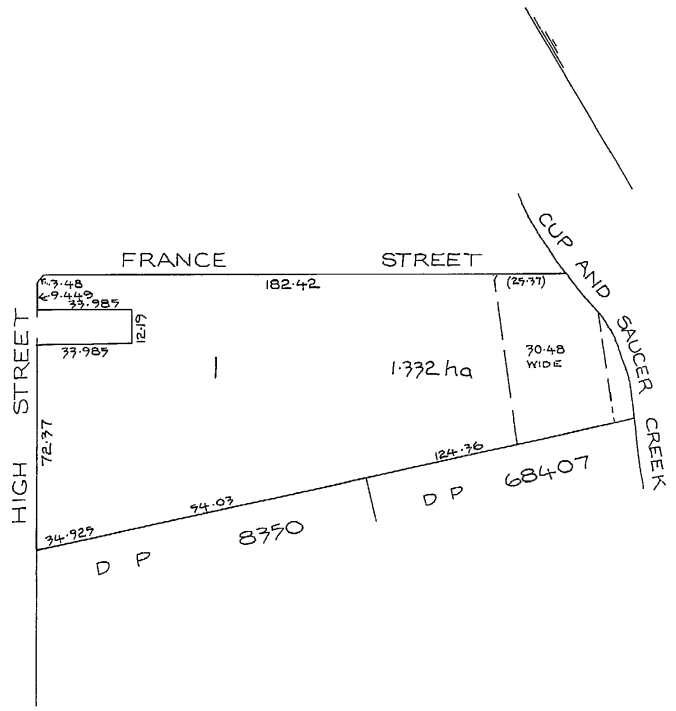
Title System: TORRENS

Purpose: DEPARTMENTAL

Ref. Map: CANTERBURY SH 11

Last Plan: DP 74558

B | D | I | O | N



10	20	30	40	50	60	70 Table of mm	110	120	130	140

This negative is a photograph made as a permanent record of a document in the custody of the Registrar General this day. 12th July, 1990

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - HISTORICAL SEARCH

SEARCH DATE
7/11/2017 2:35PM

FOLIO: 1/123147

First Title(s): OLD SYSTEM
Prior Title(s): VOL 4442 FOL 195

Recorded	Number	Type of Instrument	C.T. Issue
12/7/1990		CONVERTED TO COMPUTER FOLIO	FOLIO CREATED CT NOT ISSUED
11/2/1993	Z944756	REQUEST	
28/7/1993	I521483	APPLICATION	EDITION 1

*** END OF SEARCH ***

advlegs PRINTED ON 7/11/2017

No. 24558

New South Wales.

APPLICATION TO BRING LANDS UNDER THE PROVISIONS OF THE REAL PROPERTY ACT, 1900.

FEE SIMPLE.

This form may be modified to suit the case of a leasehold title.

Fees:—
Assurance ... 1 5
Certificate ... 1 5
Advertising ... 1 10
Office Copy ... 5
Plan...

Extra diag ...

CAUTION.—Applicants are reminded that by virtue of the provisions of the Crimes Act, 1900, the penalties of perjury are attached to a false declaration concerning any matter or procedure under the Act, and that the utmost care is therefore necessary in framing (or reading over, if the form be filled up by an Attorney) every statement herein. It is further provided by Section 135 of the Real Property Act, 1900, that any applicant procuring a Certificate through any fraud, error, omission, misrepresentation, or misdescription shall, notwithstanding the issue of such Certificate, remain liable for damages to any person thereby prejudiced; and any person who fraudulently procures, assists in fraudulently procuring, or is privy to the fraudulent procurement of any Certificate of Title, is declared guilty of a misdemeanor, and liable to a penalty not exceeding £500, or imprisonment not exceeding three years; and any Certificate thereby procured is rendered void as between all parties or privies to the fraud.

WE, ELIZABETH AMY NICHOLAS of Canterbury Wife of Frederick Augustus Nicholas of the same place Manufacturer and JOHN O'HARA QUIGG of the same place Gentleman Executors of the Will of John Quigg late of Canterbury deceased. do solemnly and sincerely declare, that we are seized for an Estate in fee simple of

All that piece of land being part of Lots 12 and 13 Bridgewater Estate Parish of St. George County of Cumberland as shown on a plan prepared by J. A. Harrison Licensed Surveyor dated 3rd. August 1922.

which land (including all improvements) is of the value of Seven Hundred & fifty Pounds and no more, and is part of Number one Cooks River Allotments 100 ac originally granted to Abraham Polack by Crown grant, under the hand of the Governor of the Colony, dated the Third day of October 1835.

And we further declare, that we verily believe there does not exist any lease or agreement for lease of the said land, for any term exceeding a tenancy for one year, or from year to year, [~~except as follows~~]

Also, that there does not exist any mortgage, lien, writ of execution, charge or encumbrance, will or settlement, or any deed or writing, contract, or dealing (other than such lease or tenancy as aforesaid), giving any right, claim, or interest in or to the said land, or any part thereof, to any other person than ourselves [~~except as follows~~] except the will of John Quigg deceased.

and we further declare, that there is no person in possession or occupation of the said land or any part thereof adversely to our Estate or Interest therein, and that the said land is now in the occupation of William Barton of High Street Canterbury dairyman as lessee under lease

and that the owners and occupiers of adjacent lands are as follows:—

State whether on North, South, East, or West.	Name.	State whether owner or occupier.	Address.
North	France Street		Canterbury Council.
West	High Street		ditto
East	Cup and Saucer Creek and		
	Intercolonial Building Society	owner	Castlereagh Street Sydney
	and Geo Potter.	Occupier	of Canterbury Sand Company Canton Street Canterbury
South	A.H. Barnes	owner	High Street Canterbury.
	T. J. Barnes	owner	Napier St Canterbury
		and occupier	Napier Street Canterbury
	Elizabeth Lane	owner	Napier St Canterbury
	F. Belson	owner and occupier	Napier Street Canterbury
	W. S. Haynes		
	C. J. Foord	owner	High Street Canterbury
	Mrs I. Peters	owner occupier	Napier St Canterbury

Cert. of Title issued Vol. 3753 Fol. 177

14209

(Margin notes: a This form may be modified to suit the case of a leasehold title. b Here insert Christian and surname ... c "I am" if the declarant is made by an attorney ... d Here give description of the property in full. If the land is shown on a plan lodged with the application, or is fully described in a deed, it will be sufficient to insert a reference to the area, town, parish, and county and words indicating that the land is shown on the plan or described in the deed in question. Unless the Registrar-General has previously dispensed with a plan of survey, an accurate plan, prepared and certified by a surveyor specially licensed under the Act, must accompany the application. If there be any rights of way or other rights or easements affecting the premises, the particulars should be stated. If the space for description be insufficient, it may be completed by annexure, which must however be identified as part of the declaration, by memorandum signed by the declarant and attesting officer. e If this valuation be inadequate or doubtful, the applicant will be subjected to the expense of an official valuation, under Section 110 (3). f State whether the whole or "part". g Insert allotment, with reference number and section on plan, if any, or if not, number of acres granted. h Name of Grantee. k If there be any Lease, here state particulars; if none, strike out the words within brackets. Witness should initial. l If any exception, here state particulars; if none, strike out the words within brackets. Witness should initial. m Insert "unoccupied," or "in the occupation of," adding names and addresses of tenants in full. State also nature of tenancy, if not under some lease before mentioned. Witness should initial. n Here insert names and residences of adjacent owners and occupiers on all sides.)

REGISTRAR-GENERAL NEW SOUTH WALES — NEW SOUTH WALES ONE POUND STAMP DUTY — 4 9 22 Z

And I/we further declare, that the annexed Schedule, to which my/our signature is/are affixed, and which is to be taken as part of this Declaration contains a full and correct list of all settlements, deeds, documents, or instruments, maps, plans and papers relating to the land comprised in this application, so far as I/we have any means of ascertaining the same, distinguishing such as being in my/our possession or under my/our control, are herewith lodged and indicating where or with whom, so far as known to me/us, any others thereof are deposited; Also, that there does not exist any fact or circumstance whatever material to the title, which is not hereby fully and fairly disclosed to the utmost extent of my/our knowledge, information, and belief; and that there is not, to my/our knowledge and belief, any action or suit pending affecting the said land, nor any person who has or claims any estate, right, title or interest therein, or in any part thereof, otherwise than by virtue and to the extent of some lease or tenancy hereby fully disclosed ~~[except as follows~~ :—] except as follows Ivy Viva Quigg beneficiary under the Will of John Quigg deceased.

* If any exception, state particulars; if none, strike out the words within brackets.

And I/we make this solemn Declaration, conscientiously believing the same to be true.

DATED at Sydney this day of 1922.

(RULE UP ALL BLANKS BEFORE SIGNING.)

Made and subscribed by the abovenamed
this 31st day of August 1922
in the presence of ²
F A Nicholas J.P.

Signature of Applicant: E A Nicholas
John O'Hara Quigg

NEW SOUTH WALES ONE POUND STAMP DUTY
4 9 22 Z

² The declaration must be attested by the Registrar-General or Deputy, or by a Notary Public, or by a Justice of the Peace, or Commissioner for Affidavits. If the signature be by mark, the attestation must state that it was read over to the declarant, and that he appeared fully to understand the contents. This applies also to the subjoined direction, particularly if a different person be nominated to receive certificate.

To the Registrar General.—

I/We Elizabeth Amy Nicholas and John O'Hara Quigg the above declarants, do hereby apply to have the land described in the above declaration brought under the provisions of the Real Property Act, and request you to issue the Certificate of Title in the name of * Ivy Viva Quigg of Canterbury Spinster

DATED at Canterbury this 31st day of August 1922

Witness to Signature—
F A Nicholas J.P.

(Signature of Applicant) E A Nicholas
John O'Hara Quigg

* If to Applicant, say "myself"; if to other person, write name at full length with address and occupation. If to two or more, state whether as joint tenants or tenants in common. If to an infant, the age should be stated, and verified by Certificate of Birth, or by Statutory Declaration. If to a married woman, the name of the husband, together with his residence and occupation, should be stated.

N.B.—The Schedule below and Certificate indorsed on fourth page should be also signed.

In no case can any alterations, however trifling, be allowed to be made after the application has been once declared, unless all the parties re-sign and re-declare the same. If it is discovered that any alterations are necessary, the applicant may make a statutory declaration setting out in what manner he desires the application to be altered, which declaration will then (unless the Registrar General considers that a fresh application ought to be made) be read as one with the application.

9763R

(RULE UP ALL BLANKS BEFORE SIGNING.)

SCHEDULE REFERRED TO.*

(TO BE SIGNED BY APPLICANT IMMEDIATELY BELOW THE LAST DOCUMENT SCHEDULED.)

Recd. Plan 36 ... 26.9.22

To include not only Title Deeds, &c., but also Plan, if any, and Surveyor's Declaration verifying same.

* For the particulars which this Schedule must comprise, see concluding part of Declaration, to which particular attention is directed, as any omission or misstatement will render applicant liable to the penalties of false Declaration. Such of the Deeds and Documents as are in applicant's possession or control, must be deposited with the application. Counterpart leases may be included, but these will be returned, if required.

After issue of the Certificate of Title, should delivery be desired of any of the documents to which the person lodging them is entitled, attested copies of such documents may be required. This does not apply to partially cancelled registered documents.

Surveyor's Plan	
6th. September 1875	Conveyance John George Catley to James McBean Registered No. 14 Book 152.
17th. October 1876.	Conveyance James McBean of the one part and Donald McBean of the other part Registered No. 582 Book 163.
1st. June 1885.	Mortgage James McBean to John Quigg Registered No. 796 Book 312.
3rd. January 1887	Conveyance Donald McBean to James McBean Registered No. 25 Book 357.
20th. June 1891	Mortgage James McBean to W.H. Pigott Registered No. 824 Book 464.
10th. March 1892.	Re-Conveyance W.H. Pigott to James McBean Registered No. 281 Book 491.

Should any transaction affecting the land in this application be entered into subsequent to the date of the application, but prior to the issue of the Certificate of Title, the Registrar General should be informed immediately, and all documents evidencing such transaction should be lodged.

SCHEDULE REFERRED TO—(*continued*).*

(TO BE SIGNED BY APPLICANT, IF UTILISED, IMMEDIATELY BELOW THE LAST DOCUMENT SCHEDULED.)

*See marginal notes under asterisk on page 2.

7	11th. March 1892.	Conveyance James McBean to John Quigg Registered No.282 Book 491.
8	27th. July 1881.	Conveyance Charles James Ford to James McBean Registered No. 551 Book 224.
9	6th. June 1882.	Mortgage James McBean to Sir George Allan Registered No. 396 Book 247.
10	29th. May 1885	Statutory acknowledgment discharging lastly scheduled Mortgage Registered No. 514 Book 310.
11	29th. April 1892	Conveyance James McBean to John Quigg Registered No.283 Book 491.
12		Lease to William Barton
13	24 Oct. 1922	Probate of John Quigg's Will.

E. A. Nicholas

John O'Hara Quigg

Recd 1 to 13 A. J. McDonald & Co 1/11/32

Noted docs 1 to 13 2 NOV 1932

X Vide letter 32/10419 as to delivery of docs. 1/3/34

Doc 13 returned
Received document 13.
Arthur J. McDonald & Co
per E. Cooke 12.4.23.

R 24/14831 14 25:3:1924 Stat. Decln. of E.A. Nicholas re adj. owners
L 25/33303 (15) 3. 6. 1925 — do — as to identity of land etc
L 25/39576 { 16. 10-7-25. Stat. Decln. of Elizabeth A. Nicholas & ors.
{ 17 do on Rate Notice No 9274.

Documents 1, 2, 4, 5, 6, 7, 12, 13 & 17 may be delivered to Messrs A. J. McDonald & Co
15/5/25

Recd docs. 1. 2. 4. 5. 6. 7. 12 13 & 17
A. J. McDonald & Co per [illegible] 15/5/25.

17/8/–

Lodged by
A.J. McDonald & Co
89 Pitt Street
Sydney

14 Nov 1962

I certify that the within application is correct for the purposes of the Real Property Act, 1900† and that I am the Solicitor for the unincumbered applicants

† Section 117 requires that this Certificate be signed by Applicant or his Solicitor *and renders liable any* person falsely or negligently certifying, to a penalty of £50; also, to damages recoverable by parties injured.
If by Solicitor, he should insert:—"And that I am the Solicitor of the within-named Applicant," and should add *his own address* to his signature. The signature should be that of the Solicitor himself, and not of his firm.

(RULE UP ALL BLANKS BEFORE SIGNING, EXCEPT SPACE IN SCHEDULE BELOW APPLICANT'S SIGNATURE.)

FEES.

PAYMENT OF THESE MUST ACCOMPANY THE APPLICATION.

1st.—*Where the Applicant is the Original Grantee from the Crown, and no transactions have been registered.*

New Certificate	£1 0 0
Add Assurance, ½d. in the £ on declared value	.....
Office Copy of Plan	0 5 0

2nd.—*Where the Applicant is not the Grantee from the Crown, or being the Grantee, the property has been dealt with by any Registered Instrument.*

FEES:—

Advertisement	£1 10 0
New Certificate	1 0 0
Office Copy of Plan	0 5 0
TOTAL	£2 15 0

In addition to the Assurance Fee of ½d. in the £ on the value.

☞ State to whom all correspondence relating to this Application should be sent, with address, as under, viz.:—

Name A J McDonald & Co

Occupation 89 Pitt Street

Post Town Sydney

LAND AND PROPERTY INFORMATION NEW SOUTH WALES - TITLE SEARCH

FOLIO: 1/123147

SEARCH DATE	TIME	EDITION NO	DATE
7/11/2017	2:35 PM	1	28/7/1993

LAND

LOT 1 IN DEPOSITED PLAN 123147
AT CANTERBURY
LOCAL GOVERNMENT AREA CANTERBURY-BANKSTOWN
PARISH OF ST GEORGE COUNTY OF CUMBERLAND
TITLE DIAGRAM DP123147

FIRST SCHEDULE

MINISTER FOR EDUCATION (AP I521483)

SECOND SCHEDULE (2 NOTIFICATIONS)

1 RESERVATIONS AND CONDITIONS IN THE CROWN GRANT(S)
2 H968961 EASEMENT FOR TRANSMISSION LINE AFFECTING PART OF THE LAND ABOVE DESCRIBED SHOWN 30.48 WIDE IN THE TITLE DIAGRAM
Z944756 TRANSFER OF EASEMENT TO SYDNEY ELECTRICITY

NOTATIONS

NOTE: THE CERTIFICATE OF TITLE FOR THIS FOLIO OF THE REGISTER DOES NOT INCLUDE SECURITY FEATURES INCLUDED ON COMPUTERISED CERTIFICATES OF TITLE ISSUED FROM 4TH JANUARY, 2004. IT IS RECOMMENDED THAT STRINGENT PROCESSES ARE ADOPTED IN VERIFYING THE IDENTITY OF THE PERSON(S) CLAIMING A RIGHT TO DEAL WITH THE LAND COMPRISED IN THIS FOLIO.

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

advlegs PRINTED ON 7/11/2017

Section 149 Certificates

JDC

CANTERBURY BANKSTOWN

28 NOV 2017

Campsie Customer Service Centre
137 Beamish Street,
CAMPSIE N.S.W. 2194
DX: 3813 Campsie
Telephone: (02) 9707 9000

Jake Cashman
C/- EIS
PO Box 976
NORTH RYDE BC NSW 1670

PLANNING CERTIFICATE

Section 149 of the Environmental Planning and Assessment Act, 1979.

Certificate No: 42482
23 November 2017

Land which Certificate is issued for:

Lot 1 DP 123147

10-20 High Street, CANTERBURY NSW 2193

CANTERBURY BANKSTOWN

Campsie Customer Service Centre
137 Beamish Street,
CAMPSIE N.S.W. 2194
DX: 3813 Campsie
Telephone: (02) 9707 9000

INFORMATION PROVIDED UNDER SECTION 149 (2) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979.

Land which Certificate is issued for:

Lot 1 DP 123147

10-20 High Street, CANTERBURY NSW 2193

PART 1:
ENVIRONMENTAL PLANNING INSTRUMENTS

1.1 Principal Environmental Planning Instrument

Canterbury Local Environmental Plan 2012

Date effective from

1 January 2013

Land Use Zones

ZONE RE1 PUBLIC RECREATION

1. Permitted without consent
Environmental protection works

2. Permitted with consent
Boat launching ramps; Building identification signs; Business identification signs; Car parks; Centre-based child care facilities; Community facilities; Environmental facilities; Flood mitigation works; Information and education facilities; Jetties; Kiosks; Markets; Recreation areas; Recreation facilities (indoor); Recreation facilities (major); Recreation facilities (outdoor); Research stations; Respite day care centres; Restaurants or cafes; Roads; Sewerage systems; Water recreation structures; Water supply systems

3. Prohibited
Any development not specified in item 1 or 2

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ZONE R4 HIGH DENSITY RESIDENTIAL

1. Permitted without consent
Home occupations

2. Permitted with consent
Attached dwellings; Bed and breakfast accommodation; Boarding houses; Building identification signs; Business identification signs; Business premises; Car parks; Centre-based child care facilities; Community facilities; Dual occupancies; Dwelling houses; Environmental protection works; Exhibition homes; Flood mitigation works; Home-based child care; Home businesses; Hostels; Multi dwelling housing; Neighbourhood shops; Office premises; Places of public worship; Recreation areas; Residential flat buildings; Respite day care centres; Restaurants or cafes; Roads; Semi-detached dwellings; Serviced apartments; Shop top housing; Shops

3. Prohibited
Any development not specified in item 1 or 2

1.2 State Environmental Planning Policies

Note:
The following information indicates those State Environmental Planning Policies (SEPP) which may apply to the subject land. A summary explanation of each SEPP can be sourced from the Department of Planning (DoP) website at www.planning.nsw.gov.au . The full wording of each SEPP can also be accessed via the DoP website.

State Environmental Planning Policies:
No. 19 - Bushland in Urban Areas
No. 21 - Caravan Parks
No. 30 - Intensive Agriculture
No. 33 - Hazardous and Offensive Development
No. 50 - Canal Estates
No. 55 - Remediation of Land
No. 64 - Advertising and Signage
No. 65 - Design Quality of Residential Flat Development
No. 71 - Coastal Protection
State Environmental Planning Policy - (Housing for Seniors or People with a Disability) 2004
State Environmental Planning Policy - Building Sustainability Index: BASIX 2004
State Environmental Planning Policy - (Repeal of Concurrence and Referral Provisions) 2004.
State Environmental Planning Policy - (Major Projects) 2005
State Environmental Planning Policy - (Mining, Petroleum Production and Extractive Industries) 2007
State Environmental Planning Policy - (Temporary Structures and Places of Public Entertainment) 2007
State Environmental Planning Policy - (Infrastructure) 2007
State Environmental Planning Policy (Repeal of Concurrence and Referral Provisions) 2008
State Environmental Planning Policy (Exempt and Complying Development Codes) 2008
State Environmental Planning Policy (Affordable Rental Housing) 2009
State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017

Proposed State Environmental Planning Policies
State Environmental Planning Policy (Competition) 2010
State Environmental Planning Policy (Coastal Management) 2016

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1.3 Proposed Environmental Planning Instruments (including any Planning Proposals) that are or have been the subject of community consultation or on public exhibition under the Act

The land is affected by a planning proposal which has been placed on public exhibition.

The planning proposal seeks to amend Canterbury Local Environmental Plan 2012 by adding emergency service facility as a permissible use in the RE1 Public Recreation zone.

Please contact Council's City Planning Division for further details.

1.4 Development Control Plans.

Canterbury Development Control Plan 2012
Contains detailed design guidelines and development standards for development in Canterbury City.

1.5 Contribution Plans.

Council has in place a Development Contributions Plan prepared and adopted under the Environmental Planning and Assessment Act, 1979.

PART 2:
RESTRICTIONS ON DEVELOPMENT

2.1 Heritage

Not applicable.

2.2 Coastal Protection

There is no notification that the subject property is affected by the provisions of Section 38 or 39 of the Coastal Protection Act, 1979.

2.3 Mine Subsidence

The subject land is not within a mine subsidence district within the meaning of Section 15 of the Mine Subsidence Compensation Act, 1961.

2.4 Road Widening and Road Realignment

Whether or not the land is affected by a road widening or road realignment proposal under Division 2 or Part 3 of the Roads Act 1993 or an environmental planning instrument;

The land is not affected by a road widening or road realignment proposal under Division 2 or Part 3 of the Roads Act 1993, or an environmental planning instrument.

Whether or not the land is affected by a road widening or road realignment proposal under any resolution of Council.

The land is not affected by a road widening or road realignment proposal under any resolution of Council.

2.5 Council and Other Public Authority Policies on Hazard Risk Restrictions

Whether or not the land is affected by a policy adopted by Council or adopted by any other public authority (and notified to the Council for the express purpose of its adoption by that authority being referred to) that restricts the development of the land because of the likelihood of:

- **Land Slip**
  The land is not affected by a policy restriction relating to landslip
- **Bushfire**
  The land is not bushfire prone land (as defined in the Act).
- **Tidal Inundation**
  The land is not affected by a policy restriction relating to tidal inundation

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Telephone: (02) 9707 9000

- **Subsidence**
  The land is not affected by a policy restriction relating to subsidence

- **Acid Sulfate Soils**
  The land is not affected by a policy restriction relating to acid sulfate soils.

- **Unhealthy Building Land**
  The land is not affected by a policy restriction relating to Unhealthy Building Land.

- **Any Other Risk**
  Not applicable.

2.6 **Flooding**

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

Development on the land, or part of the land, for any other purpose is not subject to flood related development controls.

2.7 **Matters arising under the Contaminated Land Management Act, 1997.**

Not applicable.

2.8 **Land Reserved For Acquisition**

The Environmental Planning Instrument applying to the land provides for the acquisition of the land (or part thereof) by a public authority, as referred to in Section 27 of the Act.

The Land Acquisition (Just Terms Compensation) Act, 1991 relating to the procedures for the acquisition of land for public purposes commenced on the 1st January 1992 and applies to the land.

The Act applies to the acquisition of land (or easements or other interests in land) BY AGREEMENT (where the land is not otherwise available for public sale) OR COMPULSORY PROCESS by authorities of the State (including councils) which are authorized by law to acquire land by compulsory process (i.e. resumption). The Land Acquisition (Just Terms Compensation) Act guarantees that, if and when the land is required by the relevant authority under that Act, the amount of compensation will be not less than market value (assessed under that Act) unaffected by the proposal.

2.9 **Property Vegetation Plans**

Not applicable

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

Not applicable

2.11 **Directions under Part 3A**

Not applicable

2.12 **Site Compatibility Certificates and Conditions for Seniors Housing**

Not applicable

2.13 **Site Compatibility Certificates for Infrastructure**

Not applicable

2.14 **Site Compatibility Certificates and Conditions for Affordable Rental Housing**

Not applicable

2.15 **Certain Information Relating to Beaches and Coasts**

Not applicable

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2.16 **Annual charges under Local Government Act 1993 for coastal protection services that relate to existing coastal protection works**
Not applicable

2.17 **Biodiversity Certified Land**
Not applicable

2.18 **Paper Subdivision Information**
Not applicable

2.19 **Site Verification Certificates**
Not applicable

2.20 **Loose-Fill Asbestos Ceiling Insulation**
Not applicable

2.21 **Complying Development**
Whether or not the land is land on which complying development may be carried out under each of the Codes for complying development because of the provisions of clauses 1.17A (c) and (d) and 1.19 of State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 and, if no complying development may be carried out on that land under that Policy, the reasons why complying development may not be carried out on that land.

Housing Code (if in a residential zone)	No. The land is excluded for the following reason(s): Land Reserved for a Public Purpose Land Reserved for Acquisition
Housing Alterations Code	Yes
General Development Code	Yes
Commercial and Industrial (New Buildings and Additions) Code	No. The land is excluded for the following reason(s): Land Reserved for a Public Purpose Land Reserved for Acquisition
Commercial and Industrial Alterations Code	Yes
Demolition Code	Yes
Subdivision Code	Yes
Fire Safety Code	Yes

Important Disclaimer: This clause of the Certificate only contains information in respect of that required by clause 3 of Schedule 4 of the Environmental Planning and Assessment Regulation 2000, in relation to Complying Development under State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. Other provisions contained in the SEPP, including but not limited to, minimum allotment size requirements, specified development standards or any other general exclusions, may preclude Complying Development under the SEPP from being able to be carried out. You will need to refer to the SEPP for complete details. It is your responsibility to ensure that you comply with all other general requirements of the SEPP. Failure to comply with these provisions may mean that any Complying Development Certificate issued under the provisions of the SEPP is invalid.

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PART 3

INFORMATION PROVIDED UNDER SECTION 149 (5) OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979.

Note: *When information pursuant to Section 149(5) is requested the Council is under no obligation to furnish any of the information supplied herein pursuant to that Section. Council draws your attention to Section 149(6), which states that a Council shall not incur any liability in respect of any advice provided in good faith pursuant to sub-section (5). The absence of any reference to any matter affecting the land shall not imply that the land is not affected by any matter not referred to in this Certificate.*

3.1 Amending Local Environmental Plans

Site specific and, where relevant, general amendments to the principal planning instrument are identified below:

Not applicable

3.2 Tree Preservation Order

A tree preservation order applies to the whole of the City of Canterbury.

3.3 Council Policy on Contaminated Land

On the 10 June 1999 Council adopted a policy on contaminated land. This policy will restrict development of land:

a) which is affected by contamination;
a) which has been used for certain purposes;
b) in respect of which there is not sufficient information about contamination;
c) which is proposed to be used for certain purposes;
d) in other circumstances contained in the policy.

3.4 General Advice Regarding Use of Property

Persons considering commencing a use of or purchasing a property are advised to seek confirmation that the current, or intended, use (as the case may be) has been approved by Council, or does not require Council approval. It is pointed out that the question of "existing use rights" within the meaning of the Environmental Planning and Assessment Act, 1979, is a complex matter, and that the commencement of a use without Council approval (where required) is unlawful and may be subject to enforcement action.

3.5 Other Matters

Not applicable.

per **MATTHEW STEWART**
GENERAL MANAGER

Appendix B: Borehole Logs

JK Geotechnics
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS

BOREHOLE LOG

Borehole No. 1
1/1

Client: NBRS ARCHITECTURE

Project: PROPOSED ADDITIONS TO CANTERBURY SOUTH PUBLIC SCHOOL

Location: HIGH STREET, CANTERBURY, NSW

Job No. 31040SB
Date: 25-11-17

Method: SPIRAL AUGER
JK300

Logged/Checked by: A.F./D.B.

R.L. Surface: N/A
Datum:

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION	■					0			FILL: Silty sand, fine to medium grained, brown, trace of igneous gravel, tile and metal fragments and root fibres.	D			
				■	N = SPT 15/10mm REFUSAL	0.5							
				■		1		-	SANDSTONE: fine to medium grained, light grey brown.	DW	VL		VERY LOW TO LOW 'TC' BIT RESISTANCE
	■										M		MODERATE TO HIGH RESISTANCE
						1.5			END OF BOREHOLE AT 1.3m				'TC' BIT REFUSAL
						2							
						2.5							
						3							
						3.5							

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GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS

BOREHOLE LOG

Borehole No. 2
1/1

Client: NBRS ARCHITECTURE

Project: PROPOSED ADDITIONS TO CANTERBURY SOUTH PUBLIC SCHOOL

Location: HIGH STREET, CANTERBURY, NSW

Job No. 31040SB
Date: 25-11-17
Method: SPIRAL AUGER JK300
Logged/Checked by: A.F./D.B.
R.L. Surface: N/A
Datum:

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION						0			PINE BARK: 100mm.t				
									FILL: Silty sand topsoil, fine to medium grained, brown, trace of roots and root fibres.	M			
								SP	SAND: fine grained, orange brown, trace of silt and clay fines.	D	L-MD		RESIDUAL
					N > 15 11,15/ 50mm	0.5							
					REFUSAL			-	SANDSTONE: fine to medium grained, light grey and orange brown.	DW	VL-L		VERY LOW 'TC' BIT RESISTANCE WITH LOW BANDS
						1							
						1.5				SW	M-H		MODERATE TO HIGH RESISTANCE
						2			END OF BOREHOLE AT 1.9m				'TC' BIT REFUSAL
						2.5							
						3							
						3.5							

JK Geotechnics
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS

BOREHOLE LOG

Borehole No. 3
1/1

Client: NBRS ARCHITECTURE

Project: PROPOSED ADDITIONS TO CANTERBURY SOUTH PUBLIC SCHOOL

Location: HIGH STREET, CANTERBURY, NSW

Job No. 31040SB
Date: 25-11-17

Method: SPIRAL AUGER
JK300

Logged/Checked by: A.F./D.B.

R.L. Surface: N/A
Datum:

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION	■			■		0			FILL: Silty sand, fine to medium grained, brown, trace of fine to coarse grained sandstone and ironstone gravel, and root fibres.	D			GRASS COVER
	■			■	N = 19 9,11,8	0.5		-	SANDSTONE: fine to medium grained, orange brown.	XW	EL		
						1				DW	VL		VERY LOW 'TC' BIT RESISTANCE
				■		1.5			as above, but light grey brown.	SW	M		MODERATE TO HIGH RESISTANCE
						2			END OF BOREHOLE AT 2.0m				
						2.5							
						3							
						3.5							

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BOREHOLE LOG

Borehole No. 4
1/1

Client: NBRS ARCHITECTURE

Project: PROPOSED ADDITIONS TO CANTERBURY SOUTH PUBLIC SCHOOL

Location: HIGH STREET, CANTERBURY, NSW

Job No. 31040SB
Date: 25-11-17

Method: SPIRAL AUGER
JK300

Logged/Checked by: A.F./D.B.

R.L. Surface: N/A
Datum:

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION	■			■		0			FILL: Silty sand, fine to medium grained, red brown, with fine to coarse grained ironstone gravel.	D			GRASS COVER
				■	N = 20 7,10,10	0.5		-	SANDSTONE: fine to medium grained, orange brow, with iron indurated bands.	XW	EL		
						1				DW	L		LOW TO MODERATE 'TC' BIT RESISTANCE
				■		1.5			as above, but light grey and orange brown.	SW	M-H		MODERATE TO HIGH RESISTANCE
									END OF BOREHOLE AT 1.7m				'TC' BIT REFUSAL
						2							
						2.5							
						3							
						3.5							

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GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS

BOREHOLE LOG

Borehole No. 5
1/1

Client: NBRS ARCHITECTURE

Project: PROPOSED ADDITIONS TO CANTERBURY SOUTH PUBLIC SCHOOL

Location: HIGH STREET, CANTERBURY, NSW

Job No. 31040SB
Date: 25-11-17

Method: SPIRAL AUGER
JK300

Logged/Checked by: A.F./D.B.

R.L. Surface: N/A
Datum:

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION	■					0		SM	SILTY SAND: fine to medium grained, brown, with fine to coarse grained ironstone gravel.	D			GRASS COVER POSSIBLY FILL
	■			■	N > 11 4,11/ 150mm	0.5		-	SANDSTONE: fine to medium grained, yellow brown.	XW	EL		
	■				REFUSAL					DW	VL-L		VERY LOW TO LOW 'TC' BIT RESISTANCE
				■		1							
						1.5			as above, but light grey.	SW	M-H		HIGH RESISTANCE
									END OF BOREHOLE AT 1.8m				'TC' BIT REFUSAL
						2							
						2.5							
						3							
						3.5							

JK Geotechnics
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS

BOREHOLE LOG

Borehole No. 6
1/1

Client: NBRS ARCHITECTURE

Project: PROPOSED ADDITIONS TO CANTERBURY SOUTH PUBLIC SCHOOL

Location: HIGH STREET, CANTERBURY, NSW

Job No. 31040SB
Date: 25-11-17

Method: SPIRAL AUGER
JK300

Logged/Checked by: A.F./D.B.

R.L. Surface: N/A
Datum:

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION	■			■		0			FILL: Silty sand, fine to medium grained, brown, trace of root fibres.	D			GRASS COVER
	■			■	N = 18 9,10,8	0.5			FILL: Sandy clay, low to medium plasticity, orange brown, with fine grained igneous, sandstone and ironstone gravel.	MC≈PL			APPEARS MODERATELY TO WELL COMPACTED
				■		1							
				■		1.5		-	SANDSTONE: fine to medium grained, light grey and orange brown.	SW	M-H		MODERATE TO HIGH 'TC' BIT RESISTANCE
									END OF BOREHOLE AT 1.6m				'TC' BIT REFUSAL
						2							
						2.5							
						3							
						3.5							

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GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS

BOREHOLE LOG

Borehole No. 7
1/1

Client: NBRS ARCHITECTURE

Project: PROPOSED ADDITIONS TO CANTERBURY SOUTH PUBLIC SCHOOL

Location: HIGH STREET, CANTERBURY, NSW

Job No. 31040SB
Date: 25-11-17
Method: SPIRAL AUGER JK300
Logged/Checked by: A.F./D.B.
R.L. Surface: N/A
Datum:

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION						0			FILL: Silty sand, fine grained, trace of fine grained igneous gravel and root fibres.	D			GRASS COVER
					N = 3 2,2,1	0.5			FILL: Gravelly sandy clay, low plasticity, yellow brown, fine grained sand, fine to coarse grained ironstone gravel.	MC>PL			APPEARS POORLY COMPACTED
						1							
						1.5		-	SANDSTONE: fine to medium grained, orange brown, with iron indurated bands.	DW	L		LOW TO MDOERATE 'TC' BIT RESISTANCE
						2			as above, but light grey.	SW	M-H		MODERATE TO HIGH RESISTANCE
						2.5			END OF BOREHOLE AT 2.5m				'TC' BIT REFUSAL
						3							
						3.5							

JK Geotechnics
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS

BOREHOLE LOG

Borehole No. 8
1/1

Client: NBRS ARCHITECTURE

Project: PROPOSED ADDITIONS TO CANTERBURY SOUTH PUBLIC SCHOOL

Location: HIGH STREET, CANTERBURY, NSW

Job No. 31040SB
Date: 25-11-17
Method: SPIRAL AUGER JK300
Logged/Checked by: A.F./D.B.
R.L. Surface: N/A
Datum:

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION						0			FILL: Silty sand, fine to medium grained, brown, trace of fine grained ironstone gravel and root fibres.	D			
					N = SPT 12/100mm REFUSAL	0.5		SP-SM	GRAVELLY SILTY SAND: fine to medium grained, orange brown, fine to coarse grained ironstone gravel.	D	MD		
						1							
						1.5		-	SANDSTONE: fine to medium grained, yellow brown.	DW	L		LOW 'TC' BIT RESISTANCE
						2				SW	M-H		MODERATE TO HIGH RESISTANCE
						2.5							
						3			END OF BOREHOLE AT 2.8m				'TC' BIT REFUSAL
						3.5							

JK Geotechnics
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS

BOREHOLE LOG

Borehole No. 9
1/1

Client: NBRS ARCHITECTURE

Project: PROPOSED ADDITIONS TO CANTERBURY SOUTH PUBLIC SCHOOL

Location: HIGH STREET, CANTERBURY, NSW

Job No. 31040SB
Date: 25-11-17

Method: SPIRAL AUGER
JK300

Logged/Checked by: A.F./D.B.

R.L. Surface: N/A
Datum:

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION	■			■	REFER TO DCP TEST RESULTS	0			FILL: Silty gravelly sand, fine to coarse grained, brown, fine to coarse grained ironstone gravel, trace of root fibres.	D			GRASS COVER
						0.5							
									END OF BOREHOLE AT 0.7m				HAND AUGER REFUSAL ON INFERRED SANDSTONE BEDROCK
						1							
						1.5							
						2							
						2.5							
						3							
						3.5							

JK Geotechnics
GEOTECHNICAL AND ENVIRONMENTAL ENGINEERS

BOREHOLE LOG

Borehole No. **10** 1/1

Client: NBRS ARCHITECTURE

Project: PROPOSED ADDITIONS TO CANTERBURY SOUTH PUBLIC SCHOOL

Location: HIGH STREET, CANTERBURY, NSW

Job No. 31040SB **Method:** HAND AUGER **R.L. Surface:** N/A

Date: 25-11-17 **Datum:**

Logged/Checked by: A.F./D.B.

Groundwater Record	SAMPLES ES	SAMPLES U50	SAMPLES DB	SAMPLES DS	Field Tests	Depth (m)	Graphic Log	Unified Classification	DESCRIPTION	Moisture Condition/ Weathering	Strength/ Rel. Density	Hand Penetrometer Readings (kPa.)	Remarks
DRY ON COMPLETION	■			■	REFER TO DCP TEST RESULTS	0			FILL: Silty sand, fine to medium grained, brown, with fine to coarse grained igneous and ironstone gravel.	D			GRASS COVER
									END OF BOREHOLE AT 0.2m				HAND AUGER REFUSAL ON OBSTRUCTION IN FILL
						0.5							
						1							
						1.5							
						2							
						2.5							
						3							
						3.5							

Appendix C: Laboratory Report/s & COC Documents

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

CERTIFICATE OF ANALYSIS 180756

Client Details

Client	Environmental Investigation Services
Attention	Michele Account-Richard, Jake Cashman
Address	PO Box 976, North Ryde BC, NSW, 1670

Sample Details

Your Reference	**E31040K, Canterbury**
Number of Samples	19 Soil, 1 Material
Date samples received	27/11/2017
Date completed instructions received	27/11/2017

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Please refer to the last page of this report for any comments relating to the results.

Report Details

Date results requested by	04/12/2017
Date of Issue	01/12/2017

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Asbestos Approved By
Analysed by Asbestos Approved Identifier: Lucy Zhu
Authorised by Asbestos Approved Signatory: Lulu Scott

Results Approved By
Dragana Tomas, Senior Chemist
Jeremy Faircloth, Organics Supervisor
Long Pham, Team Leader, Metals
Lulu Scott, Asbestos Supervisor
Paul Ching, Senior Analyst
Steven Luong, Senior Chemist

Authorised By

David Springer, General Manager

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		180756-1	180756-2	180756-3	180756-5	180756-6
Your Reference	UNITS	BH1	BH1	BH2	BH3	BH3
Depth		0.0-0.2	1.0-1.2	0.1-0.2	0-0.12	0.5-0.95
Date Sampled		25/11/2017	25/11/2017	25/11/2017	25/11/2017	25/11/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/11/2017	28/11/2017	28/11/2017	28/11/2017	28/11/2017
Date analysed	-	29/11/2017	29/11/2017	29/11/2017	29/11/2017	29/11/2017
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	88	86	87	86	81

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		180756-7	180756-9	180756-11	180756-12	180756-13
Your Reference	UNITS	BH4	BH5	BH6	BH6	BH7
Depth		0-0.2	0-0.2	0-0.2	0.5-0.95	0-0.2
Date Sampled		25/11/2017	25/11/2017	25/11/2017	25/11/2017	25/11/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/11/2017	28/11/2017	28/11/2017	28/11/2017	28/11/2017
Date analysed	-	29/11/2017	29/11/2017	29/11/2017	29/11/2017	29/11/2017
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	87	91	99	103	94

vTRH(C6-C10)/BTEXN in Soil					
Our Reference		180756-14	180756-15	180756-17	180756-18
Your Reference	UNITS	BH7	BH8	BH9	BH10
Depth		0.5-0.95	0-0.2	0-0.2	0-0.2
Date Sampled		25/11/2017	25/11/2017	25/11/2017	25/11/2017
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	28/11/2017	28/11/2017	28/11/2017	28/11/2017
Date analysed	-	29/11/2017	29/11/2017	29/11/2017	29/11/2017
TRH C_6 - C_9	mg/kg	<25	<25	<25	<25
TRH C_6 - C_{10}	mg/kg	<25	<25	<25	<25
vTPH C_6 - C_{10} less BTEX (F1)	mg/kg	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	91	89	91	99

svTRH (C10-C40) in Soil						
Our Reference		180756-1	180756-2	180756-3	180756-5	180756-6
Your Reference	UNITS	BH1	BH1	BH2	BH3	BH3
Depth		0.0-0.2	1.0-1.2	0.1-0.2	0-0.12	0.5-0.95
Date Sampled		25/11/2017	25/11/2017	25/11/2017	25/11/2017	25/11/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/11/2017	28/11/2017	28/11/2017	28/11/2017	28/11/2017
Date analysed	-	28/11/2017	28/11/2017	28/11/2017	28/11/2017	28/11/2017
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	220	<100	<100
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	200	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	110	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	310	<50	<50
Surrogate o-Terphenyl	%	85	74	81	78	74

svTRH (C10-C40) in Soil						
Our Reference		180756-7	180756-9	180756-11	180756-12	180756-13
Your Reference	UNITS	BH4	BH5	BH6	BH6	BH7
Depth		0-0.2	0-0.2	0-0.2	0.5-0.95	0-0.2
Date Sampled		25/11/2017	25/11/2017	25/11/2017	25/11/2017	25/11/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/11/2017	28/11/2017	28/11/2017	28/11/2017	28/11/2017
Date analysed	-	28/11/2017	28/11/2017	28/11/2017	28/11/2017	28/11/2017
TRH C_{10} - C_{14}	mg/kg	<50	<50	<50	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	<100	<100	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{10} -C_{16}	mg/kg	<50	<50	<50	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	<100	<100	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	78	83	81	78	78

svTRH (C10-C40) in Soil					
Our Reference		180756-14	180756-15	180756-17	180756-18
Your Reference	UNITS	BH7	BH8	BH9	BH10
Depth		0.5-0.95	0-0.2	0-0.2	0-0.2
Date Sampled		25/11/2017	25/11/2017	25/11/2017	25/11/2017
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	28/11/2017	28/11/2017	28/11/2017	28/11/2017
Date analysed	-	28/11/2017	28/11/2017	28/11/2017	28/11/2017
TRH C_{10} - C_{14}	mg/kg	<50	60	<50	<50
TRH C_{15} - C_{28}	mg/kg	<100	460	<100	<100
TRH C_{29} - C_{36}	mg/kg	<100	550	<100	<100
TRH >C_{10} -C_{16}	mg/kg	<50	150	<50	<50
TRH >C_{10} - C_{16} less Naphthalene (F2)	mg/kg	<50	150	<50	<50
TRH >C_{16} -C_{34}	mg/kg	<100	770	<100	<100
TRH >C_{34} -C_{40}	mg/kg	<100	180	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	1,100	<50	<50
Surrogate o-Terphenyl	%	79	92	78	78

PAHs in Soil						
Our Reference		180756-1	180756-2	180756-3	180756-5	180756-6
Your Reference	UNITS	BH1	BH1	BH2	BH3	BH3
Depth		0.0-0.2	1.0-1.2	0.1-0.2	0-0.12	0.5-0.95
Date Sampled		25/11/2017	25/11/2017	25/11/2017	25/11/2017	25/11/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/11/2017	28/11/2017	28/11/2017	28/11/2017	28/11/2017
Date analysed	-	28/11/2017	28/11/2017	28/11/2017	28/11/2017	28/11/2017
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	0.2	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	0.2	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	0.08	<0.05	0.2	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	0.3	<0.05	1.3	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	92	95	96	94	92

PAHs in Soil						
Our Reference		180756-7	180756-9	180756-11	180756-12	180756-13
Your Reference	UNITS	BH4	BH5	BH6	BH6	BH7
Depth		0-0.2	0-0.2	0-0.2	0.5-0.95	0-0.2
Date Sampled		25/11/2017	25/11/2017	25/11/2017	25/11/2017	25/11/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/11/2017	28/11/2017	28/11/2017	28/11/2017	28/11/2017
Date analysed	-	28/11/2017	28/11/2017	28/11/2017	28/11/2017	28/11/2017
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.2	<0.1	0.2	0.4	<0.1
Pyrene	mg/kg	0.2	<0.1	0.2	0.4	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	0.1	0.2	<0.1
Chrysene	mg/kg	0.1	<0.1	0.1	0.2	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	0.3	<0.2	0.2	0.4	<0.2
Benzo(a)pyrene	mg/kg	0.1	<0.05	0.1	0.3	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	<0.1	<0.1	0.2	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	0.1	<0.1	<0.1	0.2	<0.1
Total +ve PAH's	mg/kg	1.1	<0.05	1.0	2.4	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	94	94	96	94	94

PAHs in Soil					
Our Reference		180756-14	180756-15	180756-17	180756-18
Your Reference	UNITS	BH7	BH8	BH9	BH10
Depth		0.5-0.95	0-0.2	0-0.2	0-0.2
Date Sampled		25/11/2017	25/11/2017	25/11/2017	25/11/2017
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	28/11/2017	28/11/2017	28/11/2017	28/11/2017
Date analysed	-	28/11/2017	28/11/2017	28/11/2017	28/11/2017
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	0.3	0.1	<0.1
Pyrene	mg/kg	<0.1	0.3	0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	0.2	<0.1	<0.1
Chrysene	mg/kg	<0.1	0.2	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	0.7	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	0.3	0.08	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	0.2	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	0.2	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	2.4	0.3	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	92	94	98	95

Organochlorine Pesticides in soil						
Our Reference		180756-1	180756-2	180756-3	180756-5	180756-6
Your Reference	UNITS	BH1	BH1	BH2	BH3	BH3
Depth		0.0-0.2	1.0-1.2	0.1-0.2	0-0.12	0.5-0.95
Date Sampled		25/11/2017	25/11/2017	25/11/2017	25/11/2017	25/11/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/11/2017	28/11/2017	28/11/2017	28/11/2017	28/11/2017
Date analysed	-	28/11/2017	28/11/2017	28/11/2017	28/11/2017	28/11/2017
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	95	79	78	78	82

Organochlorine Pesticides in soil						
Our Reference		180756-7	180756-9	180756-11	180756-12	180756-13
Your Reference	UNITS	BH4	BH5	BH6	BH6	BH7
Depth		0-0.2	0-0.2	0-0.2	0.5-0.95	0-0.2
Date Sampled		25/11/2017	25/11/2017	25/11/2017	25/11/2017	25/11/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/11/2017	28/11/2017	28/11/2017	28/11/2017	28/11/2017
Date analysed	-	28/11/2017	28/11/2017	28/11/2017	28/11/2017	28/11/2017
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	86	78	84	81	79

Organochlorine Pesticides in soil					
Our Reference		180756-14	180756-15	180756-17	180756-18
Your Reference	UNITS	BH7	BH8	BH9	BH10
Depth		0.5-0.95	0-0.2	0-0.2	0-0.2
Date Sampled		25/11/2017	25/11/2017	25/11/2017	25/11/2017
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	28/11/2017	28/11/2017	28/11/2017	28/11/2017
Date analysed	-	28/11/2017	28/11/2017	28/11/2017	28/11/2017
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	78	75	79	77

Organophosphorus Pesticides						
Our Reference		180756-1	180756-2	180756-3	180756-5	180756-6
Your Reference	UNITS	BH1	BH1	BH2	BH3	BH3
Depth		0.0-0.2	1.0-1.2	0.1-0.2	0-0.12	0.5-0.95
Date Sampled		25/11/2017	25/11/2017	25/11/2017	25/11/2017	25/11/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/11/2017	28/11/2017	28/11/2017	28/11/2017	28/11/2017
Date analysed	-	28/11/2017	28/11/2017	28/11/2017	28/11/2017	28/11/2017
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	95	79	78	78	82

Organophosphorus Pesticides						
Our Reference		180756-7	180756-9	180756-11	180756-12	180756-13
Your Reference	UNITS	BH4	BH5	BH6	BH6	BH7
Depth		0-0.2	0-0.2	0-0.2	0.5-0.95	0-0.2
Date Sampled		25/11/2017	25/11/2017	25/11/2017	25/11/2017	25/11/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/11/2017	28/11/2017	28/11/2017	28/11/2017	28/11/2017
Date analysed	-	28/11/2017	28/11/2017	28/11/2017	28/11/2017	28/11/2017
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	86	78	84	81	79

Organophosphorus Pesticides					
Our Reference		180756-14	180756-15	180756-17	180756-18
Your Reference	UNITS	BH7	BH8	BH9	BH10
Depth		0.5-0.95	0-0.2	0-0.2	0-0.2
Date Sampled		25/11/2017	25/11/2017	25/11/2017	25/11/2017
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	28/11/2017	28/11/2017	28/11/2017	28/11/2017
Date analysed	-	28/11/2017	28/11/2017	28/11/2017	28/11/2017
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	78	75	79	77

PCBs in Soil						
Our Reference		180756-1	180756-2	180756-3	180756-5	180756-6
Your Reference	UNITS	BH1	BH1	BH2	BH3	BH3
Depth		0.0-0.2	1.0-1.2	0.1-0.2	0-0.12	0.5-0.95
Date Sampled		25/11/2017	25/11/2017	25/11/2017	25/11/2017	25/11/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/11/2017	28/11/2017	28/11/2017	28/11/2017	28/11/2017
Date analysed	-	28/11/2017	28/11/2017	28/11/2017	28/11/2017	28/11/2017
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	95	79	78	78	82

PCBs in Soil						
Our Reference		180756-7	180756-9	180756-11	180756-12	180756-13
Your Reference	UNITS	BH4	BH5	BH6	BH6	BH7
Depth		0-0.2	0-0.2	0-0.2	0.5-0.95	0-0.2
Date Sampled		25/11/2017	25/11/2017	25/11/2017	25/11/2017	25/11/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	28/11/2017	28/11/2017	28/11/2017	28/11/2017	28/11/2017
Date analysed	-	28/11/2017	28/11/2017	28/11/2017	28/11/2017	28/11/2017
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	86	78	84	81	79

PCBs in Soil					
Our Reference		180756-14	180756-15	180756-17	180756-18
Your Reference	UNITS	BH7	BH8	BH9	BH10
Depth		0.5-0.95	0-0.2	0-0.2	0-0.2
Date Sampled		25/11/2017	25/11/2017	25/11/2017	25/11/2017
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	28/11/2017	28/11/2017	28/11/2017	28/11/2017
Date analysed	-	28/11/2017	28/11/2017	28/11/2017	28/11/2017
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	78	75	79	77

Acid Extractable metals in soil						
Our Reference		180756-1	180756-2	180756-3	180756-5	180756-6
Your Reference	UNITS	BH1	BH1	BH2	BH3	BH3
Depth		0.0-0.2	1.0-1.2	0.1-0.2	0-0.12	0.5-0.95
Date Sampled		25/11/2017	25/11/2017	25/11/2017	25/11/2017	25/11/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	28/11/2017	28/11/2017	28/11/2017	28/11/2017	28/11/2017
Date analysed	-	28/11/2017	28/11/2017	28/11/2017	28/11/2017	28/11/2017
Arsenic	mg/kg	5	8	<4	14	8
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	11	25	14	32	25
Copper	mg/kg	14	2	20	10	<1
Lead	mg/kg	35	14	66	64	7
Mercury	mg/kg	<0.1	<0.1	0.2	<0.1	<0.1
Nickel	mg/kg	8	2	8	2	<1
Zinc	mg/kg	72	13	140	130	15

Acid Extractable metals in soil						
Our Reference		180756-7	180756-9	180756-11	180756-12	180756-13
Your Reference	UNITS	BH4	BH5	BH6	BH6	BH7
Depth		0-0.2	0-0.2	0-0.2	0.5-0.95	0-0.2
Date Sampled		25/11/2017	25/11/2017	25/11/2017	25/11/2017	25/11/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	28/11/2017	28/11/2017	28/11/2017	28/11/2017	28/11/2017
Date analysed	-	28/11/2017	28/11/2017	28/11/2017	28/11/2017	28/11/2017
Arsenic	mg/kg	5	<4	<4	8	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	19	8	10	13	13
Copper	mg/kg	10	10	24	4	19
Lead	mg/kg	47	55	46	29	69
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	7	5	7	1	6
Zinc	mg/kg	35	84	99	16	120

Acid Extractable metals in soil						
Our Reference		180756-14	180756-15	180756-17	180756-18	180756-19
Your Reference	UNITS	BH7	BH8	BH9	BH10	Dup1
Depth		0.5-0.95	0-0.2	0-0.2	0-0.2	-
Date Sampled		25/11/2017	25/11/2017	25/11/2017	25/11/2017	25/11/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	28/11/2017	28/11/2017	28/11/2017	28/11/2017	28/11/2017
Date analysed	-	28/11/2017	28/11/2017	28/11/2017	28/11/2017	28/11/2017
Arsenic	mg/kg	11	<4	8	5	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	27	13	24	11	9
Copper	mg/kg	<1	52	14	28	23
Lead	mg/kg	9	150	170	44	43
Mercury	mg/kg	<0.1	<0.1	1.6	<0.1	<0.1
Nickel	mg/kg	<1	6	9	20	6
Zinc	mg/kg	21	200	120	180	90

Moisture						
Our Reference		180756-1	180756-2	180756-3	180756-5	180756-6
Your Reference	UNITS	BH1	BH1	BH2	BH3	BH3
Depth		0.0-0.2	1.0-1.2	0.1-0.2	0-0.12	0.5-0.95
Date Sampled		25/11/2017	25/11/2017	25/11/2017	25/11/2017	25/11/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	28/11/2017	28/11/2017	28/11/2017	28/11/2017	28/11/2017
Date analysed	-	29/11/2017	29/11/2017	29/11/2017	29/11/2017	29/11/2017
Moisture	%	11	15	16	6.1	16

Moisture						
Our Reference		180756-7	180756-9	180756-11	180756-12	180756-13
Your Reference	UNITS	BH4	BH5	BH6	BH6	BH7
Depth		0-0.2	0-0.2	0-0.2	0.5-0.95	0-0.2
Date Sampled		25/11/2017	25/11/2017	25/11/2017	25/11/2017	25/11/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	28/11/2017	28/11/2017	28/11/2017	28/11/2017	28/11/2017
Date analysed	-	29/11/2017	29/11/2017	29/11/2017	29/11/2017	29/11/2017
Moisture	%	5.5	5.9	7.2	16	6.5

Moisture						
Our Reference		180756-14	180756-15	180756-17	180756-18	180756-19
Your Reference	UNITS	BH7	BH8	BH9	BH10	Dup1
Depth		0.5-0.95	0-0.2	0-0.2	0-0.2	-
Date Sampled		25/11/2017	25/11/2017	25/11/2017	25/11/2017	25/11/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	28/11/2017	28/11/2017	28/11/2017	28/11/2017	28/11/2017
Date analysed	-	29/11/2017	29/11/2017	29/11/2017	29/11/2017	29/11/2017
Moisture	%	15	9.0	4.3	8.4	7.0

Asbestos ID - soils						
Our Reference		180756-1	180756-3	180756-5	180756-7	180756-9
Your Reference	UNITS	BH1	BH2	BH3	BH4	BH5
Depth		0.0-0.2	0.1-0.2	0-0.12	0-0.2	0-0.2
Date Sampled		25/11/2017	25/11/2017	25/11/2017	25/11/2017	25/11/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	01/12/2017	01/12/2017	01/12/2017	01/12/2017	01/12/2017
Sample mass tested	g	Approx. 20g	Approx. 15g	Approx. 30g	Approx. 30g	Approx. 25g
Sample Description	-	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils						
Our Reference		180756-11	180756-13	180756-14	180756-15	180756-17
Your Reference	UNITS	BH6	BH7	BH7	BH8	BH9
Depth		0-0.2	0-0.2	0.5-0.95	0-0.2	0-0.2
Date Sampled		25/11/2017	25/11/2017	25/11/2017	25/11/2017	25/11/2017
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	01/12/2017	01/12/2017	01/12/2017	01/12/2017	01/12/2017
Sample mass tested	g	Approx. 20g	Approx. 15g	Approx. 45g	Approx. 15g	Approx. 35g
Sample Description	-	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks	Brown coarse-grained soil & rocks	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Asbestos ID - soils		
Our Reference		180756-18
Your Reference	UNITS	BH10
Depth		0-0.2
Date Sampled		25/11/2017
Type of sample		Soil
Date analysed	-	01/12/2017
Sample mass tested	g	Approx. 30g
Sample Description	-	Brown fine-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected

Asbestos ID - materials		
Our Reference		180756-20
Your Reference	UNITS	HLF1
Depth		-
Date Sampled		25/11/2017
Type of sample		Material
Date analysed	-	29/11/2017
Mass / Dimension of Sample	-	47x35x5mm
Sample Description	-	Grey fibre cement material
Asbestos ID in materials	-	Chrysotile asbestos detected Amosite asbestos detected

Method ID	Methodology Summary
ASB-001	Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004.
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Metals-020	Determination of various metals by ICP-AES.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Org-003	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-003	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis. Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
Org-005	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.
Org-005	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's. Note, the Total +ve reported DDD+DDE+DDT PQL is reflective of the lowest individual PQL and is therefore simply a sum of the positive individually report DDD+DDE+DDT.
Org-006	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD.
Org-006	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD. Note, the Total +ve PCBs PQL is reflective of the lowest individual PQL and is therefore" Total +ve PCBs" is simply a sum of the positive individual PCBs.
Org-008	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.

Method ID	Methodology Summary
Org-012	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013. For soil results:- 1. 'EQ PQL'values are assuming all contributing PAHs reported as <PQL are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present. 2. 'EQ zero'values are assuming all contributing PAHs reported as <PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL. 3. 'EQ half PQL'values are assuming all contributing PAHs reported as <PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above. Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PAHs" is simply a sum of the positive individual PAHs.
Org-014	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-016	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.
Org-016	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater. Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-6	180756-2
Date extracted	-			28/11/2017	18	28/11/2017	28/11/2017		28/11/2017	28/11/2017
Date analysed	-			29/11/2017	18	29/11/2017	29/11/2017		29/11/2017	29/11/2017
TRH C_6 - C_9	mg/kg	25	Org-016	<25	18	<25	<25	0	74	86
TRH C_6 - C_{10}	mg/kg	25	Org-016	<25	18	<25	<25	0	74	86
Benzene	mg/kg	0.2	Org-016	<0.2	18	<0.2	<0.2	0	73	81
Toluene	mg/kg	0.5	Org-016	<0.5	18	<0.5	<0.5	0	74	84
Ethylbenzene	mg/kg	1	Org-016	<1	18	<1	<1	0	71	83
m+p-xylene	mg/kg	2	Org-016	<2	18	<2	<2	0	75	90
o-Xylene	mg/kg	1	Org-016	<1	18	<1	<1	0	73	88
naphthalene	mg/kg	1	Org-014	<1	18	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	90	18	99	89	11	91	96

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	1	28/11/2017	28/11/2017		[NT]	[NT]
Date analysed	-			[NT]	1	29/11/2017	29/11/2017		[NT]	[NT]
TRH C_6 - C_9	mg/kg	25	Org-016	[NT]	1	<25	<25	0	[NT]	[NT]
TRH C_6 - C_{10}	mg/kg	25	Org-016	[NT]	1	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-016	[NT]	1	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-016	[NT]	1	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-016	[NT]	1	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-016	[NT]	1	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-016	[NT]	1	<1	<1	0	[NT]	[NT]
naphthalene	mg/kg	1	Org-014	[NT]	1	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	[NT]	1	88	92	4	[NT]	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-6	180756-2
Date extracted	-			28/11/2017	18	28/11/2017	28/11/2017		28/11/2017	28/11/2017
Date analysed	-			28/11/2017	18	28/11/2017	28/11/2017		28/11/2017	28/11/2017
TRH C_{10} - C_{14}	mg/kg	50	Org-003	<50	18	<50	<50	0	102	88
TRH C_{15} - C_{28}	mg/kg	100	Org-003	<100	18	<100	<100	0	112	99
TRH C_{29} - C_{36}	mg/kg	100	Org-003	<100	18	<100	<100	0	109	82
TRH >C_{10} -C_{16}	mg/kg	50	Org-003	<50	18	<50	<50	0	102	88
TRH >C_{16} -C_{34}	mg/kg	100	Org-003	<100	18	<100	<100	0	112	99
TRH >C_{34} -C_{40}	mg/kg	100	Org-003	<100	18	<100	<100	0	109	82
Surrogate o-Terphenyl	%		Org-003	77	18	78	79	1	88	74

QUALITY CONTROL: svTRH (C10-C40) in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	1	28/11/2017	28/11/2017		[NT]	[NT]
Date analysed	-			[NT]	1	28/11/2017	28/11/2017		[NT]	[NT]
TRH C_{10} - C_{14}	mg/kg	50	Org-003	[NT]	1	<50	<50	0	[NT]	[NT]
TRH C_{15} - C_{28}	mg/kg	100	Org-003	[NT]	1	<100	<100	0	[NT]	[NT]
TRH C_{29} - C_{36}	mg/kg	100	Org-003	[NT]	1	<100	<100	0	[NT]	[NT]
TRH >C_{10} -C_{16}	mg/kg	50	Org-003	[NT]	1	<50	<50	0	[NT]	[NT]
TRH >C_{16} -C_{34}	mg/kg	100	Org-003	[NT]	1	<100	<100	0	[NT]	[NT]
TRH >C_{34} -C_{40}	mg/kg	100	Org-003	[NT]	1	<100	<100	0	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-003	[NT]	1	85	79	7	[NT]	[NT]

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-6	180756-2
Date extracted	-			28/11/2017	18	28/11/2017	28/11/2017		28/11/2017	28/11/2017
Date analysed	-			28/11/2017	18	28/11/2017	28/11/2017		28/11/2017	28/11/2017
Naphthalene	mg/kg	0.1	Org-012	<0.1	18	<0.1	<0.1	0	89	88
Acenaphthylene	mg/kg	0.1	Org-012	<0.1	18	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-012	<0.1	18	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-012	<0.1	18	<0.1	<0.1	0	92	91
Phenanthrene	mg/kg	0.1	Org-012	<0.1	18	<0.1	<0.1	0	86	85
Anthracene	mg/kg	0.1	Org-012	<0.1	18	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-012	<0.1	18	<0.1	<0.1	0	83	81
Pyrene	mg/kg	0.1	Org-012	<0.1	18	<0.1	<0.1	0	88	86
Benzo(a)anthracene	mg/kg	0.1	Org-012	<0.1	18	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-012	<0.1	18	<0.1	<0.1	0	99	97
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-012	<0.2	18	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-012	<0.05	18	<0.05	<0.05	0	88	91
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	<0.1	18	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	<0.1	18	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	<0.1	18	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-012	95	18	95	95	0	118	113

QUALITY CONTROL: PAHs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	1	28/11/2017	28/11/2017		[NT]	[NT]
Date analysed	-			[NT]	1	28/11/2017	28/11/2017		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-012	[NT]	1	<0.1	<0.1	0	[NT]	[NT]
Acenaphthylene	mg/kg	0.1	Org-012	[NT]	1	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-012	[NT]	1	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-012	[NT]	1	<0.1	<0.1	0	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-012	[NT]	1	<0.1	<0.1	0	[NT]	[NT]
Anthracene	mg/kg	0.1	Org-012	[NT]	1	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-012	[NT]	1	0.1	0.1	0	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-012	[NT]	1	0.1	0.1	0	[NT]	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-012	[NT]	1	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-012	[NT]	1	<0.1	<0.1	0	[NT]	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-012	[NT]	1	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-012	[NT]	1	0.08	0.08	0	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	[NT]	1	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	[NT]	1	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	[NT]	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-012	[NT]	1	92	93	1	[NT]	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-6	180756-2
Date extracted	-			28/11/2017	18	28/11/2017	28/11/2017		28/11/2017	28/11/2017
Date analysed	-			28/11/2017	18	28/11/2017	28/11/2017		28/11/2017	28/11/2017
HCB	mg/kg	0.1	Org-005	<0.1	18	<0.1	<0.1	0	[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-005	<0.1	18	<0.1	<0.1	0	99	92
gamma-BHC	mg/kg	0.1	Org-005	<0.1	18	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-005	<0.1	18	<0.1	<0.1	0	105	91
Heptachlor	mg/kg	0.1	Org-005	<0.1	18	<0.1	<0.1	0	106	98
delta-BHC	mg/kg	0.1	Org-005	<0.1	18	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-005	<0.1	18	<0.1	<0.1	0	93	85
Heptachlor Epoxide	mg/kg	0.1	Org-005	<0.1	18	<0.1	<0.1	0	97	86
gamma-Chlordane	mg/kg	0.1	Org-005	<0.1	18	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-005	<0.1	18	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-005	<0.1	18	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-005	<0.1	18	<0.1	<0.1	0	114	102
Dieldrin	mg/kg	0.1	Org-005	<0.1	18	<0.1	<0.1	0	104	93
Endrin	mg/kg	0.1	Org-005	<0.1	18	<0.1	<0.1	0	94	85
pp-DDD	mg/kg	0.1	Org-005	<0.1	18	<0.1	<0.1	0	122	107
Endosulfan II	mg/kg	0.1	Org-005	<0.1	18	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-005	<0.1	18	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-005	<0.1	18	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-005	<0.1	18	<0.1	<0.1	0	94	82
Methoxychlor	mg/kg	0.1	Org-005	<0.1	18	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-005	83	18	77	85	10	105	98

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate				Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	1	28/11/2017	28/11/2017		[NT]	[NT]
Date analysed	-			[NT]	1	28/11/2017	28/11/2017		[NT]	[NT]
HCB	mg/kg	0.1	Org-005	[NT]	1	<0.1	<0.1	0	[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-005	[NT]	1	<0.1	<0.1	0	[NT]	[NT]
gamma-BHC	mg/kg	0.1	Org-005	[NT]	1	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-005	[NT]	1	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-005	[NT]	1	<0.1	<0.1	0	[NT]	[NT]
delta-BHC	mg/kg	0.1	Org-005	[NT]	1	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-005	[NT]	1	<0.1	<0.1	0	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-005	[NT]	1	<0.1	<0.1	0	[NT]	[NT]
gamma-Chlordane	mg/kg	0.1	Org-005	[NT]	1	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-005	[NT]	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-005	[NT]	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-005	[NT]	1	<0.1	<0.1	0	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-005	[NT]	1	<0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-005	[NT]	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-005	[NT]	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-005	[NT]	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-005	[NT]	1	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-005	[NT]	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-005	[NT]	1	<0.1	<0.1	0	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-005	[NT]	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-005	[NT]	1	95	98	3	[NT]	[NT]

QUALITY CONTROL: Organophosphorus Pesticides						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-6	180756-2
Date extracted	-			28/11/2017	18	28/11/2017	28/11/2017		28/11/2017	28/11/2017
Date analysed	-			28/11/2017	18	28/11/2017	28/11/2017		28/11/2017	28/11/2017
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-008	<0.1	18	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-008	<0.1	18	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos	mg/kg	0.1	Org-008	<0.1	18	<0.1	<0.1	0	112	92
Chlorpyriphos-methyl	mg/kg	0.1	Org-008	<0.1	18	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-008	<0.1	18	<0.1	<0.1	0	[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-008	<0.1	18	<0.1	<0.1	0	103	99
Dimethoate	mg/kg	0.1	Org-008	<0.1	18	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-008	<0.1	18	<0.1	<0.1	0	126	128
Fenitrothion	mg/kg	0.1	Org-008	<0.1	18	<0.1	<0.1	0	119	89
Malathion	mg/kg	0.1	Org-008	<0.1	18	<0.1	<0.1	0	111	111
Parathion	mg/kg	0.1	Org-008	<0.1	18	<0.1	<0.1	0	125	84
Ronnel	mg/kg	0.1	Org-008	<0.1	18	<0.1	<0.1	0	119	114
Surrogate TCMX	%		Org-008	83	18	77	85	10	82	76

QUALITY CONTROL: Organophosphorus Pesticides						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	1	28/11/2017	28/11/2017		[NT]	[NT]
Date analysed	-			[NT]	1	28/11/2017	28/11/2017		[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-008	[NT]	1	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-008	[NT]	1	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos	mg/kg	0.1	Org-008	[NT]	1	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos-methyl	mg/kg	0.1	Org-008	[NT]	1	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-008	[NT]	1	<0.1	<0.1	0	[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-008	[NT]	1	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-008	[NT]	1	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-008	[NT]	1	<0.1	<0.1	0	[NT]	[NT]
Fenitrothion	mg/kg	0.1	Org-008	[NT]	1	<0.1	<0.1	0	[NT]	[NT]
Malathion	mg/kg	0.1	Org-008	[NT]	1	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-008	[NT]	1	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-008	[NT]	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-008	[NT]	1	95	98	3	[NT]	[NT]

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-6	180756-2
Date extracted	-			28/11/2017	18	28/11/2017	28/11/2017		28/11/2017	28/11/2017
Date analysed	-			28/11/2017	18	28/11/2017	28/11/2017		28/11/2017	28/11/2017
Aroclor 1016	mg/kg	0.1	Org-006	<0.1	18	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-006	<0.1	18	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-006	<0.1	18	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-006	<0.1	18	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-006	<0.1	18	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-006	<0.1	18	<0.1	<0.1	0	130	122
Aroclor 1260	mg/kg	0.1	Org-006	<0.1	18	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCLMX	%		Org-006	83	18	77	85	10	82	76

QUALITY CONTROL: PCBs in Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	1	28/11/2017	28/11/2017		[NT]	[NT]
Date analysed	-			[NT]	1	28/11/2017	28/11/2017		[NT]	[NT]
Aroclor 1016	mg/kg	0.1	Org-006	[NT]	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-006	[NT]	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-006	[NT]	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-006	[NT]	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-006	[NT]	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-006	[NT]	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1260	mg/kg	0.1	Org-006	[NT]	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCLMX	%		Org-006	[NT]	1	95	98	3	[NT]	[NT]

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-6	180756-2
Date prepared	-			28/11/2017	18	28/11/2017	28/11/2017		28/11/2017	28/11/2017
Date analysed	-			28/11/2017	18	28/11/2017	28/11/2017		28/11/2017	28/11/2017
Arsenic	mg/kg	4	Metals-020	<4	18	5	6	18	113	102
Cadmium	mg/kg	0.4	Metals-020	<0.4	18	<0.4	<0.4	0	106	101
Chromium	mg/kg	1	Metals-020	<1	18	11	10	10	112	103
Copper	mg/kg	1	Metals-020	<1	18	28	24	15	110	110
Lead	mg/kg	1	Metals-020	<1	18	44	42	5	109	90
Mercury	mg/kg	0.1	Metals-021	<0.1	18	<0.1	<0.1	0	106	106
Nickel	mg/kg	1	Metals-020	<1	18	20	19	5	106	100
Zinc	mg/kg	1	Metals-020	<1	18	180	180	0	109	101

QUALITY CONTROL: Acid Extractable metals in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	1	28/11/2017	28/11/2017		[NT]	[NT]
Date analysed	-			[NT]	1	28/11/2017	28/11/2017		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	1	5	5	0	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	1	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	1	11	11	0	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	1	14	15	7	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	1	35	33	6	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	1	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	1	8	8	0	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	1	72	73	1	[NT]	[NT]

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: <5xPQL - any RPD is acceptable; >5xPQL - 0-50% RPD is acceptable.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals; 60-140% for organics (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Measurement Uncertainty estimates are available for most tests upon request.

Report Comments

Asbestos: Excessive sample volume was provided for asbestos analysis. A portion of the supplied sample was sub-sampled according to Envirolab procedures. We cannot guarantee that this sub-sample is indicative of the entire sample. Envirolab recommends supplying 40-50g (50mL) of sample in its own container as per AS4964-2004.
Note: Samples 180756-1, 3, 5, 7, 9, 11, 13, 15, 18 were sub-sampled from bags provided by the client.

Envirolab Services Pty Ltd
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ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

SAMPLE RECEIPT ADVICE

Client Details

Client	Environmental Investigation Services
Attention	Michele Account-Richard, Jake Cashman

Sample Login Details

Your reference	E31040K, Canterbury
Envirolab Reference	180756
Date Sample Received	27/11/2017
Date Instructions Received	27/11/2017
Date Results Expected to be Reported	04/12/2017

Sample Condition

Samples received in appropriate condition for analysis	YES
No. of Samples Provided	19 Soil, 1 Material
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	13.1
Cooling Method	Ice Pack
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Aileen Hie	Jacinta Hurst
Phone: 02 9910 6200	**Phone: 02 9910 6200**
Fax: 02 9910 6201	**Fax: 02 9910 6201**
Email: ahie@envirolab.com.au	**Email: jhurst@envirolab.com.au**

Analysis Underway, details on the following page:

Envirolab Services Pty Ltd
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Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticidesin soil	Organophosphorus Pesticides	PCBsin Soil	Acid Extractable metalsin soil	Asbestos ID - soils	Asbestos ID - materials	On Hold
BH1-0.0-0.2	✓	✓	✓	✓	✓	✓	✓	✓		
BH1-1.0-1.2	✓	✓	✓	✓	✓	✓	✓			
BH2-0.1-0.2	✓	✓	✓	✓	✓	✓	✓	✓		
BH2-0.3-0.6										✓
BH3-0-0.12	✓	✓	✓	✓	✓	✓	✓	✓		
BH3-0.5-0.95	✓	✓	✓	✓	✓	✓	✓			
BH4-0-0.2	✓	✓	✓	✓	✓	✓	✓	✓		
BH4-0.3-0.5										✓
BH5-0-0.2	✓	✓	✓	✓	✓	✓	✓	✓		
BH5-0.5-0.95										✓
BH6-0-0.2	✓	✓	✓	✓	✓	✓	✓	✓		
BH6-0.5-0.95	✓	✓	✓	✓	✓	✓	✓			
BH7-0-0.2	✓	✓	✓	✓	✓	✓	✓	✓		
BH7-0.5-0.95	✓	✓	✓	✓	✓	✓	✓	✓		
BH8-0-0.2	✓	✓	✓	✓	✓	✓	✓	✓		
BH8-0.5-1.0										✓
BH9-0-0.2	✓	✓	✓	✓	✓	✓	✓	✓		
BH10-0-0.2	✓	✓	✓	✓	✓	✓	✓	✓		
Dup1							✓			
HLF1									✓	

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.
Requests for longer term sample storage must be received in writing.

SAMPLE AND CHAIN OF CUSTODY FORM

TO:		FROM:
ENVIROLAB SERVICES PTY LTD	EIS Job Number: E31040K	ENVIRONMENTAL INVESTIGATION SERVICES
12 ASHLEY STREET		REAR OF 115 WICKS ROAD
CHATSWOOD NSW 2067		MACQUARIE PARK, NSW 2113
P: (02) 99106200	Date Results Required: STANDARD	P: 02-9888 5000 F: 02-9888 5001
F: (02) 99106201		Attention: Jake Cashman
Attention: Aileen	Page: 1 of 1.	

Location: Canterbury

Sampler: AF

Sample Preserved in Esky on Ice

Tests Required

Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	PID	Sample Description	Combo 6	Combo 6a	8 Metals	PAHs	TRH/BTEX	BTEX	Asbestos
25/11/17	1	BH1	0-0.2	G, A	0.0	sand-F		X					
	2	BH1	1.0-1.2	G,A		sandstone	X						
	3	BH2	0.1-0.2	G,A		sand-F		X					
	4	BH2	0.3-0.6	G,A		sand							
	5	BH3	0-0.2	G,A		sand-F		X					
	6	BH3	0.5-0.95	G,A		sandstone	X						
	7	BH4	0-0.2	G,A		sand-F		X					
	8	BH4	0.3-0.5	G,A		sandstone							
	9	BH5	0-0.2	G,A		sand-F		X					
	10	BH5	0.5-0.95	G,A		sandstone							
	11	BH6	0-0.2	G,A		sand-F		X					
	12	BH6	0.5-0.95	G,A		clay	X						
	13	BH7	0-0.2	G,A		sand-F		X					
	14	BH7	0.5-0.95	G,A		clay-F		X					
	15	BH8	0-0.2	G,A		sand-F		X					
	16	BH8	0.5-1.0	G,A		sand-F							
	17	BH9	0-0.2	G,A		sand.		X					
	18	BH10	0-0.2	G,A		sand-F		X					
	19	DUP1	—	G	—	sand			X				
	20	HLF1	—	A	—	material							X

Bag labelled as BH2 0.5-0.7

ENVIROLAB

Envirolab Services
12 Ashley St
Chatswood NSW 2067
Ph: (02) 9910 6200

Job No: 180756

Date Received: 27/11/17

Time Received: 16:30

Received by: AB

Temp: Cool/Ambient

Cooling: Ice/Icepack

Security: Intact/Broken/None

Remarks (comments/detection limits required):

Sample Containers:
G - 250mg Glass Jar
A - Ziplock Asbestos Bag
P - Plastic Bag

Relinquished By:	Date:	Time:	Received By:	Date:
	27/11/2017.		AB	27/11/17

Envirolab Services Pty Ltd
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customerservice@envirolab.com.au
www.envirolab.com.au

CERTIFICATE OF ANALYSIS 180756-A

Client Details

Client	Environmental Investigation Services
Attention	Jake Cashman
Address	PO Box 976, North Ryde BC, NSW, 1670

Sample Details

Your Reference	**E31040K, Canterbury**
Number of Samples	Additional Testing on 2 Soils
Date samples received	27/11/2017
Date completed instructions received	08/12/2017

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.

Samples were analysed as received from the client. Results relate specifically to the samples as received.

Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Report Details

Date results requested by	15/12/2017
Date of Issue	14/12/2017

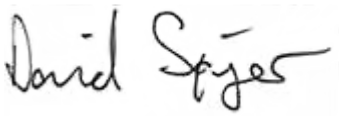
NATA Accreditation Number 2901. This document shall not be reproduced except in full.

Accredited for compliance with ISO/IEC 17025 - Testing. **Tests not covered by NATA are denoted with ***

Asbestos Approved By
Analysed by Asbestos Approved Identifier: Lucy Zhu
Authorised by Asbestos Approved Signatory: Lulu Scott

Results Approved By
Long Pham, Team Leader, Metals

Authorised By



David Springer, General Manager

Metals in TCLP USEPA1311			
Our Reference		180756-A-15	180756-A-17
Your Reference	UNITS	BH8	BH9
Depth		0-0.2	0-0.2
Date Sampled		25/11/2017	25/11/2017
Type of sample		Soil	Soil
Date extracted	-	13/12/2017	13/12/2017
Date analysed	-	13/12/2017	13/12/2017
pH of soil for fluid# determ.	pH units	8.5	8.5
pH of soil TCLP (after HCl)	pH units	1.6	1.6
Extraction fluid used	-	1	1
pH of final Leachate	pH units	5.0	5.0
Lead in TCLP	mg/L	0.05	0.1

Method ID	Methodology Summary
EXTRACT.7	Toxicity Characteristic Leaching Procedure (TCLP) using Zero Headspace Extraction (zHE) using AS4439 and USEPA 1311.
Inorg-001	pH - Measured using pH meter and electrode in accordance with APHA latest edition, 4500-H+. Please note that the results for water analyses are indicative only, as analysis outside of the APHA storage times.
Inorg-004	Toxicity Characteristic Leaching Procedure (TCLP) using in house method INORG-004.
Metals-020 ICP-AES	Determination of various metals by ICP-AES.

QUALITY CONTROL: Metals in TCLP USEPA1311						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			13/12/2017	[NT]	[NT]	[NT]	[NT]	13/12/2017	[NT]
Date analysed	-			13/12/2017	[NT]	[NT]	[NT]	[NT]	13/12/2017	[NT]
Lead in TCLP	mg/L	0.03	Metals-020 ICP-AES	<0.03	[NT]	[NT]	[NT]	[NT]	97	[NT]

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
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LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

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Laboratory Acceptance Criteria

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Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

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SAMPLE RECEIPT ADVICE

Client Details

Client	Environmental Investigation Services
Attention	Jake Cashman

Sample Login Details

Your reference	E31040K, Canterbury
Envirolab Reference	180756-A
Date Sample Received	27/11/2017
Date Instructions Received	08/12/2017
Date Results Expected to be Reported	15/12/2017

Sample Condition

Samples received in appropriate condition for analysis	YES
No. of Samples Provided	Additional Testing on 2 Soils
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	13.1
Cooling Method	Ice Pack
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Aileen Hie	Jacinta Hurst
Phone: 02 9910 6200	**Phone: 02 9910 6200**
Fax: 02 9910 6201	**Fax: 02 9910 6201**
Email: ahie@envirolab.com.au	**Email: jhurst@envirolab.com.au**

Analysis Underway, details on the following page:

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
www.envirolab.com.au

Sample ID	Metals in TCLP USEPA1311	On Hold
BH1-0.0-0.2		✓
BH1-1.0-1.2		✓
BH2-0.1-0.2		✓
BH2-0.3-0.6		✓
BH3-0-0.12		✓
BH3-0.5-0.95		✓
BH4-0-0.2		✓
BH4-0.3-0.5		✓
BH5-0-0.2		✓
BH5-0.5-0.95		✓
BH6-0-0.2		✓
BH6-0.5-0.95		✓
BH7-0-0.2		✓
BH7-0.5-0.95		✓
BH8-0-0.2	✓	
BH8-0.5-1.0		✓
BH9-0-0.2	✓	
BH10-0-0.2		✓
Dup1		✓
HLF1		✓

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.
Requests for longer term sample storage must be received in writing.

Aileen Hie

From: Jake Cashman <JCashman@jkgroup.net.au>
Sent: Friday, 8 December 2017 4:06 PM
To: Aileen Hie
Subject: Croydon and Canterbury (TCLP)

Hi Aileen,

Can you please arrange the following additional tests for the following two jobs.

Croydon (E31039K)

BH6	0.5-0.95	(TCLP) Lead and PAHs
BH7	0.5-0.95	(TCLP) Lead and PAHs
BH8	0.5-0.95	(TCLP) Lead
BH9	0.1-0.2	(TCLP) Nickel and Chromium and Chromium VI test

Canterbury (31040K)

BH8	0-0.2	(TCLP) Lead
BH9	0-0.2	(TCLP) Lead

15
17

Envirolab Ref: 180756A
Due: 15/12/17
Std T/A.

Regards,

Jake Cashman
Environmental Scientist

T: +612 9888 5000
F: +612 9888 5001
JCashman@jkgroup.net.au
www.jkgroup.net.au

EIS would like to take this opportunity to wish all our clients and suppliers Seasons Greetings and thank you all for contributing to another great year for EIS.
Our office will be closed from 5pm on Friday 22nd December 2017 until 8am on Tuesday 2nd January 2018.

ENVIRONMENTAL INVESTIGATION SERVICES
CONSULTING ENVIRONMENTAL ENGINEERS AND SCIENTISTS
PO Box 976, North Ryde BC NSW 1670
115 Wicks Rd, Macquarie Park NSW 2113

Appendix D: Report Explanatory Notes

STANDARD SAMPLING PROCEDURE (SSP)

These protocols specify the basic procedures to be used when sampling soils or groundwater for environmental site assessments undertaken by EIS.

The purpose of these protocols is to provide standard methods for: sampling, decontamination procedures for sampling equipment, sample preservation, sample storage and sample handling. Deviations from these procedures must be recorded.

Soil Sampling

- Prepare a borehole/test pit log or made a note of the sample description for stockpiles.
- Layout sampling equipment on clean plastic sheeting to prevent direct contact with ground surface. The work area should be at a distance from the drill rig/excavator such that the machine can operate in a safe manner.
- Ensure all sampling equipment has been decontaminated prior to use.
- Remove any surface debris from the immediate area of the sampling location.
- Collect samples and place in glass jar with a Teflon seal. This should be undertaken as quickly as possible to prevent the loss of any volatiles. If possible, fill the glass jars completely.
- Collect samples for asbestos analysis and place in a zip-lock plastic bag.
- Label the sampling containers with the EIS job number, sample location (eg. BH1), sampling depth interval and date. If more than one sample container is used, this should also be indicated (eg. 2 = Sample jar 1 of 2 jars).
- Photoionisation detector (PID) screening of volatile organic compounds (VOCs) should be undertaken on samples using the soil sample headspace method. Headspace measurements are taken following equilibration of the headspace gasses in partly filled zip-lock plastic bags. PID headspace data is recorded on the borehole/test pit log and the chain of custody forms.
- Record the lithology of the sample and sample depth on the borehole/test pit log generally in accordance with AS1726-1993[17].
- Store the sample in a sample container cooled with ice or chill packs. On completion of the sampling the sample container should be delivered to the lab immediately or stored in the refrigerator prior to delivery to the lab. All samples are preserved in accordance with the standards outlined in the report.
- Check for the presence of groundwater after completion of each borehole using an electronic dip metre or water whistle. Boreholes should be left open until the end of fieldwork. All groundwater levels in the boreholes should be rechecked on the completion of the fieldwork.
- Backfill the boreholes/test pits with the excavation cuttings or clean sand prior to leaving the site.

Decontamination Procedures for Soil Sampling Equipment

- All sampling equipment should be decontaminated between every sampling location. This excludes single use PVC tubing used for push tubes etc. Equipment and materials required for the decontamination include:
  - Phosphate free detergent (Decon 90);
  - Potable water;
  - Stiff brushes; and
  - Plastic sheets.

[17] Standards Australia, (1993), *Geotechnical Site Investigations.* (AS1726-1993)

- Ensure the decontamination materials are clean prior to proceeding with the decontamination.
- Fill both buckets with clean potable water and add phosphate free detergent to one bucket.
- In the bucket containing the detergent, scrub the sampling equipment until all the material attached to the equipment has been removed.
- Rinse sampling equipment in the bucket containing potable water.
- Place cleaned equipment on clean plastic sheets.

If all materials are not removed by this procedure, high-pressure water cleaning is recommended. If any equipment is not completely decontaminated by both these processes, then the equipment should not be used until it has been thoroughly cleaned.

Groundwater Sampling

Groundwater samples are more sensitive to contamination than soil samples and therefore adhesion to this protocol is particularly important to obtain reliable, reproducible results. The recommendations detailed in AS/NZS 5667.1:1998 are considered to form a minimum standard.

The basis of this protocol is to maintain the security of the borehole and obtain accurate and representative groundwater samples. The following procedure should be used for collection of groundwater samples from previously installed groundwater monitoring wells.

- After monitoring well installation, at least three bore volumes should be pumped from the monitoring wells (well development) to remove any water introduced during the drilling process and/or the water that is disturbed during installation of the monitoring well. This should be completed prior to purging and sampling.
- Groundwater monitoring wells should then be left to recharge for at least three days before purging and sampling. Prior to purging or sampling, the condition of each well should observed and any anomalies recorded on the field data sheets. The following information should be noted: the condition of the well, noting any signs of damage, tampering or complete destruction; the condition and operation of the well lock; the condition of the protective casing and the cement footing (raised or cracked); and, the presence of water between protective casing and well.
- Take the groundwater level from the collar of the piezometer/monitoring well using an electronic dip meter. The collar level should be taken (if required) during the site visit using a dumpy level and staff.
- Purging and sampling of piezometers/monitoring wells is done on the same site visit when using micro-purge (or other low flow) techniques.
- Layout and organize all equipment associated with groundwater sampling in a location where they will not interfere with the sampling procedure and will not pose a risk of contaminating samples. Equipment generally required includes:
    - Micropore filtration system or Stericup single-use filters (for heavy metals samples);
    - Filter paper for Micropore filtration system; Bucket with volume increments;
    - Sample containers: teflon bottles with 1 ml nitric acid, 75mL glass vials with 1 mL hydrochloric acid, 1 L amber glass bottles;
    - Bucket with volume increments;
    - Flow cell;
    - pH/EC/Eh/T meters;
    - Plastic drums used for transportation of purged water;
    - Esky and ice;
    - Nitrile gloves;
    - Distilled water (for cleaning);
    - Electronic dip meter;

- Low flow pump pack and associated tubing; and
- Groundwater sampling forms.

- If single-use stericup filtration is not used, clean the Micropore filtration system thoroughly with distilled water prior to use and between each sample. Filter paper should be changed between samples. 0.45um filter paper should be placed below the glass fibre filter paper in the filtration system.
- Ensure all non-disposable sampling equipment is decontaminated or that new disposable equipment is available prior to any work commencing at a new location. The procedure for decontamination of groundwater equipment is outlined at the end of this section.
- Disposable gloves should be used whenever samples are taken to protect the sampler and to assist in avoidance of contamination.
- Groundwater samples are obtained from the monitoring wells using low flow/micro-purge sampling equipment to reduce the disturbance of the water column and loss of volatiles.
- During pumping to purge the well, the pH, temperature, conductivity, dissolved oxygen, redox potential and groundwater levels are monitored (where possible) using calibrated field instruments to assess the development of steady state conditions. Steady state conditions are generally considered to have been achieved when the difference in the pH measurements was less than 0.2 units and the difference in conductivity was less than 10%.
- All measurements are recorded on specific data sheets.
- Once steady state conditions are considered to have been achieved, groundwater samples are obtained directly from the pump tubing and placed in appropriate glass bottles, BTEX vials or plastic bottles.
- All samples are preserved in accordance with water sampling requirements detailed in the NEPM 2013 and placed in an insulated container with ice. Groundwater samples are preserved by immediate storage in an insulated sample container with ice as outlined in the report text.
- Record the sample on the appropriate log in accordance with AS1726:1993. At the end of each water sampling complete a chain of custody form.

Decontamination Procedures for Groundwater Sampling Equipment

- All equipment associated with the groundwater sampling procedure (other than single-use items) should be decontaminated between every sampling location.
- The following equipment and materials are required for the decontamination procedure:
  - Phosphate free detergent;
  - Potable water;
  - Distilled water; and
  - Plastic Sheets or bulk bags (plastic bags).
- Fill one bucket with clean potable water and phosphate free detergent, and one bucket with distilled water.
- Flush potable water and detergent through pump head. Wash sampling equipment and pump head using brushes in the bucket containing detergent until all materials attached to the equipment are removed.
- Flush pump head with distilled water.
- Change water and detergent solution after each sampling location.
- Rinse sampling equipment in the bucket containing distilled water.
- Place cleaned equipment on clean plastic sheets.
- If all materials are not removed by this procedure that equipment should not be used until it has been thoroughly cleaned

QA/QC DEFINITIONS

The QA/QC terms used in this report are defined below. The definitions are in accordance with US EPA publication SW-846, entitled *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods* (1994[18]) methods and those described in *Environmental Sampling and Analysis, A Practical Guide,* (H. Keith 1991[19]).

Practical Quantitation Limit (PQL), Limit of Reporting (LOR) & Estimated Quantitation Limit (EQL)

These terms all refer to the concentration above which results can be expressed with a minimum 95% confidence level. The laboratory reporting limits are generally set at ten times the standard deviation for the Method Detection limit (MDL) for each specific analyte. For the purposes of this report the LOR, PQL, and EQL are considered to be equivalent.

When assessing laboratory data it should be borne in mind that values at or near the PQL have two important limitations.

"The uncertainty of the measurement value can approach, and even equal, the reported value. Secondly, confirmation of the analytes reported is virtually impossible unless identification uses highly selective methods. These issues diminish when reliably measurable amounts of analytes are present. Accordingly, legal and regulatory actions should be limited to data at or above the reliable detection limit" Keith 1991.

Precision

The degree to which data generated from repeated measurements differ from one another due to random errors. Precision is measured using the standard deviation or Relative Percent Difference (RPD). Acceptable targets for precision in this report will be less than 50% RPD for concentrations greater than ten times the PQL, less than 75% RPD for concentrations between five and ten times the PQL and less than 100% RPD for concentrations that are less than five times the PQL.

Accuracy

Accuracy is a measure of the agreement between an experimental result and the true value of the parameter being measured. The assessment of accuracy for an analysis can be achieved through the analysis of known reference materials or assessed by the analysis of surrogates, field blanks, trip spikes and matrix spikes.

The proximity of an averaged result to the true value, where all random errors have been statistically removed. Accuracy is measured by percent recovery. Acceptable limits for accuracy generally lie between 70% to 130% recoveries. Certain laboratory methods may allow for values that lie outside these limits.

Representativeness

Representativeness expresses the degree to which sample data accurately and precisely represents a characteristic of a population, parameter variations at a sampling point, or an environmental condition. Representativeness is primarily dependent upon the design and implementation of the sampling program. Representativeness of the data is partially ensured by the avoidance of contamination, adherence to sample handing and analysis protocols and use of proper chain-of-custody and documentation procedures.

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[18] US EPA, (1994), *SW-846: Test Methods for Evaluating Solid Waste, Physical/Chemical Methods.* (US EPA SW-846)

[19] Keith., H, (1991), *Environmental Sampling and Analysis, A Practical Guide.*

Completeness

Completeness is a measure of the number of valid measurements in a data set compared to the total number of measurements made and overall performance against DQIs. The following information is assessed for completeness:

- Chain-of-custody forms; Sample receipt form;
- All sample results reported; All blank data reported;
- All laboratory duplicate and RPDs calculated;
- All surrogate spike data reported;
- All matrix spike and lab control spike (LCS) data reported and RPDs calculated;
- Spike recovery acceptable limits reported; and
- NATA stamp on reports.

Comparability

Comparability is the evaluation of the similarity of conditions (eg. sample depth, sample homogeneity) under which separate sets of data are produced. Data comparability checks include a bias assessment that may arise from the following sources:

- Collection and analysis of samples by different personnel; Use of different techniques;
- Collection and analysis by the same personnel using the same methods but at different times; and
- Spatial and temporal changes (due to environmental dynamics).

Blanks

The purpose of laboratory and field blanks is to check for artifacts and interferences that may arise during sampling and analysis.

Matrix Spikes

Samples are spiked with laboratory grade standards to detect interactive effects between the sample matrix and the analytes being measured. Matrix Spikes are reported as a percent recovery and are prepared for 1 in every 20 samples. Sample batches that contain less than 20 samples may be reported with a Matrix Spike from another batch. The percent recovery is calculated using the formula below. Acceptable recovery limits are 70% to 130%.

$$\frac{\text{(Spike Sample Result – Sample Result) x 100}}{\text{Concentration of Spike Added}}$$

Surrogate Spikes

Samples are spiked with a known concentration of compounds that are chemically related to the analyte being investigated but unlikely to be detected in the environment. The purpose of the Surrogate Spikes is to check the accuracy of the analytical technique. Surrogate Spikes are reported as percent recovery.

Duplicates

Laboratory duplicates measure precision, expressed as Relative Percent Difference. Duplicates are prepared from a single field sample and analysed as two separate extraction procedures in the laboratory. The RPD is calculated using the formula where D1 is the sample concentration and D2 is the duplicate sample concentration:

$$\frac{(D1 - D2) \times 100}{\{(D1 + D2)/2\}}$$