



Douglas Partners
Geotechnics | Environment | Groundwater

Report on
Detailed Site Investigation for Contamination

Proposed Winx Stand
Royal Randwick Racecourse
43 Alison Road, Randwick

Prepared for
Mostyn Copper Group Pty Ltd

Project 86781.01
October 2019

Integrated Practical Solutions



Document History

Document details

Project No.	86781.01	Document No.	R.001.Rev2
Document title	Report on Detailed Site Investigation for Contamination Proposed Winx Stand		
Site address	43 Alison Road, Randwick		
Report prepared for	Mostyn Copper Group Pty Ltd		
File name	86781.01.R.001.Rev2		



Document status and review

Status	Prepared by	Reviewed by	Date issued
Revision 0	Tom Graham	Paul Gorman	2 July 2019
Revision 1	Nizam Ahamed	Paul Gorman	9 October 2019
Revision 2	Nizam Ahamed	Paul Gorman	29 October 2019

Distribution of copies

Status	Electronic	Paper	Issued to
Revision 0	1	0	Emily Lynch, Mostyn Copper Group Pty Ltd
Revision 1	1	0	Emily Lynch, Mostyn Copper Group Pty Ltd
Revision 2	1	0	Emily Lynch, Mostyn Copper Group Pty Ltd

The undersigned, on behalf of Douglas Partners Pty Ltd, confirm that this document and all attached drawings, logs and test results have been checked and reviewed for errors, omissions and inaccuracies.

Signature	Date
Author 	29 October 2019
Reviewer 	29 October 2019



Douglas Partners Pty Ltd
 ABN 75 053 980 117
www.douglaspartners.com.au
 96 Hermitage Road
 West Ryde NSW 2114
 PO Box 472
 West Ryde NSW 1685
 Phone (02) 9809 0666

Table of Contents

	Page
1. Introduction.....	1
2. Scope of Works.....	1
3. Site Identification and Proposed Development.....	2
4. Site Walkover.....	3
5. Previous Reports.....	4
6. Topography, Geology and Hydrogeology.....	8
7. Site History.....	9
7.1 Historical Aerial Photographs.....	9
7.2 Regulatory Notice Search.....	11
7.3 Historical Business Activity.....	12
7.4 SafeWork NSW Records Search.....	12
7.5 Historical Title Deeds.....	12
7.6 Council Planning 10.7 Certificate.....	14
7.7 Council Records.....	14
8. Potential Contamination Sources and Preliminary Conceptual Site Model.....	14
8.1 Potential Contamination Sources.....	15
8.2 Potential Receptors.....	15
8.2.1 Human Health Receptors.....	15
8.2.2 Environmental Receptors.....	16
8.2.3 Potential Pathways.....	16
8.3 Preliminary Conceptual Site Model.....	16
9. Field Work and QA/QC.....	17
9.1 Sample Locations and Rationale.....	17
9.2 Drilling and Soil Sampling Procedures.....	18
9.3 Groundwater Monitoring Well Installation and Development.....	18
9.4 Groundwater Sampling.....	19
9.5 Quality Assurance and Quality Control.....	19
10. Assessment Criteria.....	20
10.1 Soil.....	20
10.1.1 Health Investigation Levels.....	20
10.1.2 Health Screening Levels for Vapour Intrusion.....	21
10.1.3 Ecological Investigation Levels.....	22
10.1.4 Ecological Screening Levels.....	23

10.1.5	Management Limits.....	24
10.1.6	Asbestos in Soil.....	25
10.2	Groundwater	25
10.2.1	Groundwater Investigation Levels.....	25
10.2.2	Health Screening Levels for Vapour Intrusion	27
10.2.3	Other Guidelines	28
11.	Results of Investigation	28
11.1	Sub-Surface Conditions.....	28
11.2	Field Screening Results for Soil.....	29
11.3	Groundwater Levels	29
11.4	Analytical Laboratory Results	30
11.5	Data Quality Assurance and Quality Control	30
12.	Laboratory Analytical Rationale and Results	30
12.1	Analytical Rationale	30
12.2	Summary of Analytical Results	31
12.3	Soil Contaminants.....	31
12.3.1	Metals.....	31
12.3.2	PAH.....	31
12.3.3	TRH, BTEX and VOC	31
12.3.4	OCP, OPP and PCB	31
12.3.5	Total Phenols	31
12.3.6	Asbestos	31
12.4	Groundwater Contaminants.....	32
13.	Discussion and Recommendations.....	32
13.1	Site History Summary	32
13.2	Contaminants in Soil and Groundwater	32
14.	Conclusion.....	33
15.	Limitations	33

Appendices

Appendix A:	About this Report and Drawings
Appendix B:	Site Photographs
Appendix C:	Lotsearch Report
	2019 Aerial Photograph
Appendix D:	SafeWork NSW Records
Appendix E:	Historical Title Deeds
Appendix F:	Groundwater Field Sheets
	Explanatory Notes
	Borehole Logs (BH501 to BH509)
Appendix G:	QA/QC Procedures and Results
Appendix H:	Tables H1, H2 and H3 (Summary of Laboratory Test Results)
Appendix I:	Laboratory Certificates of Analysis
	Chain of Custody Documentation
	Sample Receipt Advice

Report on Detailed Site Investigation for Contamination

Proposed Winx Stand

43 Alison Road, Randwick

1. Introduction

This report presents the results of a Detailed Site Investigation (DSI) undertaken for a proposed Winx Stand on the Leger Lawn at Royal Randwick Racecourse (RRR), 43 Alison Road, Randwick. The investigation was commissioned by Mostyn Copper Group Pty Ltd (MCG) on behalf of Australian Turf Club Limited and was undertaken in accordance with Douglas Partners' proposal SYD190353 dated 5 April 2019.

The objectives of the DSI were to:

- Identify potential sources of contamination and associated potential contaminants from historical information (i.e. undertake a Preliminary Site Investigation);
- Identify potential receptors to contamination;
- Establish a preliminary conceptual site model (CSM);
- Collect and analyse soil and groundwater samples to assess the contamination status of the site; and
- Determine if the site of the proposed development is suitable or can be made suitable for the proposed development from a contamination perspective.

2. Scope of Works

The scope of work for the DSI is as follows:

- Review proposed development plans;
- Conduct a site walkover to identify site and surrounding features and current uses as well as indicators and potential sources of contamination;
- Review previous geotechnical and contamination reports pertaining to the site;
- Review published soil, geological, acid sulfate soils and topography maps;
- Review registered groundwater bore data held by WaterNSW;
- Conduct an internet search for information on the Royal Randwick Racecourse;
- Obtain and review historical aerial photographs;
- Obtain and review historical title deeds records;
- Review the NSW EPA website for published records under the *Protection of the Environment Operations Act 1997* and the *Contaminated Land Management Act 1997*;
- Obtain and review SafeWork NSW database records pertaining to hazardous chemicals;

- Drill nine boreholes for the collection of soil samples;
- Log the soil profile at each borehole;
- Install a groundwater monitoring well at one borehole location;
- Laboratory analysis on selected soil samples for:
 - Eight priority metals (arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc);
 - Total recoverable hydrocarbons (TRH);
 - Benzene, toluene, ethylbenzene and xylene (BTEX);
 - Polycyclic aromatic hydrocarbons (PAH);
 - Total phenols;
 - Polychlorinated biphenyls (PCB);
 - Organochlorine pesticides (OCP);
 - Organophosphorus pesticides (OPP);
 - Asbestos;
 - pH; and
 - Cation exchange capacity (CEC);
- Develop the groundwater monitoring well;
- Collect groundwater samples from the groundwater monitoring well;
- Laboratory analysis of the groundwater samples for eight priority metals, TRH, BTEX, PAH, total phenols, PCB, OCP, OPP, VOC and hardness;
- Laboratory analysis of replicate samples, trip spikes and trip blanks for QA/QC purposes; and
- Preparation of this report.

3. Site Identification and Proposed Development

The site covers an area of approximately 5,300 m² and is located within the Leger Lawn, which is located toward the northern corner of the Royal Randwick Racecourse. The Spectator Precinct is located to the north-east and the recently constructed multi-storey car park is located to the north-west and west. The racecourse proper is located to the south-east and east of the site. The site is located within Lot 2009 on Deposited Plan 1169042. The site boundary is shown on Drawing 1, Appendix A. The local government authority is Randwick City Council.

The site is located on relatively flat ground, with surface levels between about RL 30 m to RL 31 m, and it appears that the site has been raised above the racecourse level.

The site is currently open grass with a free-standing building located within the western portion of the site, which covers approximately 25% of the site area.

The St Leger Stand was previously located in the western corner of the site (where the existing marquee is) and is understood to have been demolished in the 1980's.

The proposed Winx Stand development is for a two-storey structure to be used for functions. It is understood that the ground floor area of approximately 4,000 m² is expected to be sealed, with external areas to be public lawns. It is understood that all current buildings on the site will be demolished prior to commencement of the proposed development. Although bulk excavation is not proposed, shallow excavation is expected for foundation preparation and the lift core.

4. Site Walkover

A site walkover was conducted on 20 May 2019 by a DP Environmental Engineer. The findings are summarised below. External site features are shown on Drawing 1, Appendix A.

At the time of inspection, the majority of the site was observed to be undeveloped lawn, with a large freestanding shed style building present in the western portion of the site. The site was observed to be split into 3 main sections; a raised grassy area in the eastern portion of the site, a lower grassy area in the central portion of the site and the freestanding building in the western portion of the site. The eastern and central grassy portions were observed to slope gently downwards from the north west to the south east, and were separated by a grassy depression with drainage grates. The eastern portion of the site was observed to be approximately 0.5 m higher than the central portion of the site. A line of four small fig trees was present in between the central and western portions of the site.

The freestanding structure in the western portion of the site was observed to be predominantly of steel frame construction with a steel roof, mostly steel side panels, a concrete floor with a rubber soft-fall coating and some timber cladding in the southern corner. Partitions, and wall labels were present along the western wall of the structure, consistent with the building being used as day stalls for horses, and a large 'horse wash stall' was present in the eastern corner of the building.

No chemicals were observed to be stored anywhere within the site boundary, and no obvious signs of gross contamination were observed during the inspection.

The adjacent land uses include:

- North East: Large Grandstand associated with the racecourse;
- South East: Public lawns then the race track;
- South West: Maintenance building associated with the racecourse; and
- North West: A large multi storey car park.

All vegetation on the site and in the surrounding region was observed to be in good condition, with no obvious signs of stress.

Selected site photographs are presented in Appendix B.

5. Previous Reports

The following reports were reviewed as part of this DSI:

- DP, *Preliminary Waste Classification, Proposed New Day Stalls, Randwick Racecourse, Alison Road, Randwick*, November 2007, ref 45236 (DP, 2007);
- DP, *Supplementary Waste Classification Proposed New Day Stalls, Randwick Racecourse, Alison Road, Randwick*, 15 April 2008, ref 45236.03 (DP, 2008);
- DP, *Final Report on Contamination and Validation Assessment, New Day Stalls site, Randwick Racecourse*, March 2010, ref 45236.08 (DP, 2010a);
- DP, *Environmental Management Plan, New Day Stalls site, Randwick Racecourse*, March 2010, ref 45236.08 (DP, 2010b);
- DP, *Supplementary Contamination Assessment, Proposed Spectator Precinct, Royal Randwick Racecourse*, February 2012, ref 71976.03-1 (DP, 2012);
- DP, *Environmental Management Plan, Spectator Precinct, Royal Randwick Racecourse (Extension of Day Stalls EMP), Randwick*, July 2013, ref 71976.08 (DP, 2013); and
- DP, *Preliminary Site (contamination) Investigation, Royal Randwick Infield Training Ground, 77-79 Alison Road, Randwick*, August 2018, ref 86502.00.R.001.Rev1 (DP, 2018).

DP, 2007

This assessment comprised the excavation of three test pits to obtain a preliminary waste classification of the *in situ* materials in the inferred footprint of the proposed Day Stalls building, shown on Drawing 2 in Appendix A. The results of the DP, 2007 assessment indicated that the concentrations of PAH [including benzo(a)pyrene] in filling materials were at levels ranging from Inert and Solid to Industrial and Hazardous waste (under the former waste classification system). The DP, 2007 assessment, therefore, concluded that in view of the limited sampling regime, additional testing would be required to ascertain the final waste classification of the filling material.

DP, 2008

This assessment comprised the excavation of 13 test pits around the DP, 2007 sampling locations to delineate the extent of the previously identified contaminated filling with a focus on confirming, or otherwise, the extent of the fill classified as hazardous waste. From 13 test pits, 26 soil samples were collected and analysed for a range of common contaminants. The results of the DP, 2008 assessment indicated that, while the majority of the soil samples analysed were within the threshold criteria for Inert Waste (under the then current waste classification system) and also within the health based investigation levels for recreational open spaces, minor PAH and TPH C10-C36 exceedances were found in four samples collected from three sampling locations. It was noted that the exceedances detected in one test pit were associated with the samples collected from a filling layer comprising slag and ash present at a depth of 0.9 m - 1.4 m bgl. Therefore, on the basis of the analytical results, the DP 2008 report concluded that the filling material in the three sampling locations was not suitable to remain on site and should be disposed of to a suitably licensed Solid Waste Landfill (i.e., General Solid Waste Landfill under the former waste classification system). In addition, the report also recommended that the excavation of materials from the three sampling locations should be supervised by an environmental consultant and validated to confirm its removal.

DP, 2010a

This assessment focussed on the New Day Stalls site and comprised a site history review, soil sampling from twenty four test pits and groundwater sampling from four groundwater monitoring wells placed within the Day Stalls site. In this regard, the western boundary of the current site investigation area adjoins the New Day Stalls boundary. DP's investigation at the Day Stalls' site between March 2009 and March 2010 included two sampling locations (TP107 and TP109) in parts of the Day Stalls site that now lie within the current site investigation area, shown on Drawing 1 in Appendix A. Therefore, the findings of the assessment at the New Day Stalls site are considered to be relevant to this assessment. It is also noted that the findings of the assessment were the subject of a statutory site audit by Mr Mike Hayter (a NSW Environment Protection Authority [NSW EPA] accredited site auditor).

The results of the site history search which is relevant to the overall RRR are presented in Section 6 of this report. Subsurface conditions at the Day Stalls site included filling at all sampling locations to nominal depths ranging between 0.3 m - 3.4 m below ground level (bgl). The deepest fill was encountered in the south-western portion of the Day Stalls site. The fill at the site typically comprised brown silty sand filling with trace amounts of gravel, brick, concrete, sandstone fragments, asphalt, ash and slag underlain by natural white and yellow sands.

The laboratory results indicated that the concentrations of PCB, OCP, OPP, BTEX and phenols in all analysed soil samples were below the limit of reporting and, therefore, within the adopted site assessment criteria (SAC) for a commercial land use. Further, asbestos or respirable asbestos fibres were not detected in the analysed soil samples. Whilst heavy metals were detected at low concentrations, they were below the SAC in all cases. Further, groundwater was assessed at four locations across the New Day Stalls site and was not found to be contaminated.

The principal chemical contaminants in the soil above the site acceptance criteria (SAC) were medium to heavy fraction petroleum hydrocarbons (TPH C10-C36) (ranging between 2040 mg/kg and 9250 mg/kg) and PAH (ranging between 232.4 mg/kg and 2639.8 mg/kg) which were associated with a buried road profile at a nominal depth of 1.0 m - 1.5 m bgl at TP109 located in the south-western portion of the Days Stalls site and on the boundary of the current site investigation area. The results of toxicity characteristic leaching procedure tests (TCLP) showed that the leachable concentration of PAH in the road profile was below the laboratory practical quantitation limits (PQL) suggesting that the PAH associated with the road materials was immobilised. Further, in view of the nature of the detected contamination, it was considered that the elevated TPH C10 - C36 in the sample was attributable to the PAH present in the road tar. On this basis, the profile of road tar present at TP109 at a depth of 1 - 1.5 m bgl was characterised as being impacted by medium to long chain TPH and PAH. Importantly, the same contaminant concentrations in the fill profile overlying and under the buried road surface at TP109 were generally low and within the adopted SAC. Further, the DP report also noted that whilst the extent of the road tar profile was expected to be limited to the south-western section of the New Day Stalls site, the possibility of encountering the profile in other portions of the Day Stalls site could not be ruled out. Whilst a small section of the buried road profile was excavated and disposed of off-site during recent bulk excavation works, residual sections of the road profile potentially remained in the south-western and other portions of the New Day Stalls site.

In addition to the above, asbestos was also identified as a contaminant of concern during potential construction works. Asbestos-cement drainage pipes, at a nominal depth of 1.8 m bgl in south-western portion of the site, were uncovered during bulk excavation works. The DP, 2010a report noted that whilst sections of the asbestos-containing pipes within the areas designated for bulk

excavation were removed and validated, residual pipes may still be present in the portion of the Day Stalls site that was not bulk excavated.

In view of the nature of the contamination at the New Day Stalls site, that is, the immobile PAH associated with the buried road profile and the in situ asbestos pipes, the DP report recommended that a 'Cap and Contain' Strategy would be the most suitable means of rendering the Day Stalls site suitable for the proposed development. The strategy therefore, comprised the capping and containment of the road tar impacted profile and the residual asbestos-containing pipes under the existing filling material and management of the contamination in perpetuity by means of an Environmental Management Plan (EMP) as agreed by all parties, including Randwick Council. No information has been viewed to confirm or otherwise whether this strategy was implemented.

DP, 2010b

The EMP for the New Day Stalls site outlined the requirements for managing capped, contaminated fill at the site under normal commercial usage. The EMP also included an unexpected asbestos finds protocol and procedures for any intrusive works that may require breaching of the cap at the New Day Stalls site. The EMP boundary is shown on Drawing 3, Appendix A (reproduced from DP, 2010b).

DP, 2012

This report detailed the findings of a supplementary contamination assessment on an area identified as the proposed Spectator Precinct, which encompassed the current site, shown on Drawing 2 in Appendix A. This investigation included excavation of seven test pits within the site area and the drilling and installation of a groundwater monitoring well, a review of previous reports undertaken on the site by DP and a preliminary waste classification.

Sub-surface conditions encountered during the investigation can be summarised as follows:

- Fill – predominantly comprised of brown and grey sand fill with building rubble including brick, glass, concrete, sandstone, plastic, ceramic tiles, metal and ash, to depths between 1.0 m bgl to 2.7 m bgl, with the fill being deeper within the southern portion of the site; overlying
- Sand – white, brown and light grey fine grained sand to depths between 2.1 m bgl to 4.2 m bgl; and
- Sand – yellow sand to depths of 7.0 m bgl.

The analytical results for the soil samples analysed during the assessment indicate that the concentration of TPH C6-C9, BTEX, PCB, OCP and phenols in all analysed soil samples were below the laboratory's limit of reporting and also within the adopted SAC for a commercial/industrial site. Further, whilst low concentrations of heavy metals were detected in some of the samples, the recorded concentrations were nevertheless well within the adopted SAC for a commercial/industrial site.

In regard to PAH, with the exception two soil samples (TP223/1.8-2.0 and TP224/0.1-0.3), the recorded PAH concentration in the remainder of the analysed soil samples was generally low and within the adopted SAC. In sample TP224/0.1-0.3 (8 mg/kg), the concentration of benzo(a)pyrene (B(a)P) exceeded the threshold criteria of 5 mg/kg. In sample TP223/1.8-2.0, the concentration of total PAH (175.7 mg/kg) and B(a)P (14 mg/kg) exceeded the adopted SAC of 100 mg/kg and 5 mg/kg, respectively. In this regard, the B(a)P concentration in sample TP223/1.8-2.0 was recorded at

'hotspot' levels (i.e., 2.5 times the adopted SAC). It is noted that this sample was collected from TP223 at a depth of 1.8 - 2.0 m bgl where a buried road profile was observed between 1.8 - 2.2 m bgl. The detected PAH exceedance in this sample is therefore most likely attributable to the buried road profile seen at this sampling location.

In regard to the B(a)P exceedance, the sample was subjected to toxicity characteristic leaching procedure (TCLP) analysis to ascertain the leachable concentration of B(a)P in the road materials. The results of the leachability analysis showed that the leachable concentration of B(a)P in the sample was less than the laboratory's limit of reporting, suggesting that the PAH are immobilised within the road materials.

The road profile was not observed at sample locations TP211 and TP222 which are located adjacent to TP223, suggesting that the buried road surface is limited to the north-western corner of the Leger Lawn i.e., the immediate vicinity of TP223.

In regard to TPH C₁₀-C₃₆ (medium to heavy fraction hydrocarbons), one soil sample collected during the investigation (TP223/1.8 - 2.0) and a soil sample collected during the DP, 2010a assessment at the Day Stalls site (GW1/0 - 0.5), the concentration of medium to heavy fraction hydrocarbons in the remainder of the soil samples was generally low and within the adopted SAC. In samples TP223/1.8 - 2.0 (1130 mg/kg) and GW1/0 - 0.5 (1330 mg/kg), the concentration of medium to heavy fraction hydrocarbons marginally exceeded the adopted SAC of 1000 mg/kg. In this regard, the TPH C₁₀-C₃₆ exceedance at TP223/1.8 - 2.0 would most likely be attributable to the buried road surface seen at this sampling location.

No asbestos was identified during this investigation.

Groundwater on the site was reported to be between RL 25.37 to 27.04 m AHD. Groundwater analytical results showed that all chemicals of concern were reported either below the laboratory PQL or the adopted SAC. PAH was not detected above the laboratory PQL which indicated that there was no leaching issue associated with elevated PAH in soil.

The fill was provisionally preclassified as General Solid Waste (Non-Putrescible) with the exception of fill in the vicinity of test pit TP102, in which asbestos fibres were detected. The fill from the area in the vicinity of test pit TP102 described as red mottled, brown silty sand filling present at a depth of 0.3 - 1.0 m bgl was provisionally classified as Special Waste (Asbestos Waste).

DP, 2012 concluded that, the Spectator Precinct site is suitable for its intended land use, posing no immediate or long-term risk to public health or the environment and is fit for occupation by persons, pursuant to the extension of the Days Stalls EMP to cover the north-western portion of the Leger Lawn within the Spectator Precinct. Results from DP, 2012 are included in Tables H1, H2 and H3 in Appendix H.

DP, 2013

The EMP for the Spectator Precinct outlined the requirements for managing capped, contaminated fill at the site under normal commercial usage. The EMP for the Spectator Precinct utilises the same strategy as DP, 2010b. The EMP boundary is shown on Drawing 4, Appendix A (reproduced from DP, 2013).

DP, 2018

This report detailed the findings of a preliminary site contamination investigation for a proposed infield training ground within the racecourse. This investigation does not cover the site area, however the desktop searches undertaken as part of this investigation have been reviewed in Section 7 of this report and relevant sections are attached in Appendices C, D, E and F.

6. Topography, Geology and Hydrogeology

Reference to the Sydney 1:100 000 Series Geological Sheet indicates the site is underlain by medium to fine-grained marine sand with podzols of Quaternary age. The site and wider existing racecourse track is located on relatively flat ground with surface levels typically ranging from approximately RL32 m to RL 30 m AHD, with a slight fall towards the south and west.

Reference to the Sydney Soil Landscape 1:100 000 Map Sheet the site is underlain by aeolian sand and disturbed terrain as detailed in Lotsearch (pg 130 - 131).

A review of the Department of Land and Water Conservation (now Department of Water and Energy - DWE) Acid Sulphate Soil Risk Map for Botany Bay (Edition 2, 1997) indicated that there is no known occurrence at the site and Acid Sulphate Soil (ASS) is not expected to occur in the surrounding environments.

The NSW Acid Sulphate Soil (ASS) Risk Map indicates that the site is not within an area of known ASS and hence the potential presence of ASS is considered to be low. This is consistent with the site's elevation (above 30 m AHD) and the site's geological setting (discussed above).

A search of the NSW Department of Primary Industries Office of Water database was undertaken and is reported in the Lotsearch Report (pp. 80 - 102, Appendix C). A total of 10 registered groundwater bores were identified within the RRR site with recorded depths of between 22 m and 30 m bgl. The boreholes were drilled for a combination of recreational and industrial purposes. There was limited data available on these wells, although the information that was available indicated geological settings generally consistent with the mapping, viz. natural sands and clays with occasional peat bands and sandstone encountered at a depth of 20.50 m in one borehole. The static groundwater level of the RRR site was recorded at 3.0 m and 4.90 m bgl.

The Botany Sand Beds, Botany Basin, NSW Northern, Southern and Western Zones Status Report No. 2 prepared by the Department of Land and Water Conservation (GWMA018, March 2000) provides an overview of the Botany sand beds. The report indicates that there are two groundwater systems operating in the region, one being a deeper confined aquifer system in the fractured Triassic bedrock and a shallower unconfined to semi-confined system which is present within the unconsolidated sediments of the Botany Sand Beds. The saturated portion of the Botany Sand Beds is known as the Botany Sands Aquifer.

Groundwater flow directions are typically towards the main surface water systems (Alexandria Canal and Botany Bay being the closest to the site) with gradients variable but in the order 1 in 120. Alexandria Canal is located approximately 3.5 km west of the site. Botany Bay is located approximately 6 km south east of the site. The nearest receptor and surface water body is considered to be Musgrave Pond located approximately 2 km north-east of the site.

The average saturated thickness of the Botany Sands Aquifer is 15 m to 20 m. Hydraulic conductivity within the sand beds is highly variable and is typically around 20 m/day in clean sand. This value decreases to 5 m/day to 10 m/day in silty or peaty sands and to less than 4 m/day in sandy peat or clay.

Water quality in the Botany Sand Aquifer is typically of low salinity (less than 150 $\mu\text{S/m}$) and pH varies between 4.3 and 8.9.

The area of the Botany Sand Aquifer, extending from Botany Bay to Surry Hills and Centennial Park, contains 32 monitoring bores operated by the NSW Office of Water (formerly DWLC) and approximately 500 licensed bores. Extracted groundwater is used for industrial, domestic and irrigation purposes. Groundwater is used for irrigation at Randwick Racecourse and the University of New South Wales. The site does not fall within any of the Botany Groundwater Management Zones.

In a study of groundwater levels within the Botany Basin, Merrick (1994)¹ reported variations of up to 2 m due to long-term seasonal, climatic, well pumping and other factors.

7. Site History

Site history was predominantly compiled using information obtained from DP, 2018. The following sections below contain information identified during the previous investigation, and have been updated with recent searches.

7.1 Historical Aerial Photographs

Historical aerial photographs were obtained from databases held by the NSW Land & Property Information Division for the years 1943, 1955, 1961, 1965, 1970, 1982, 1991, 2000, 2009 and 2016. Extracts of the photographs are provided in the Lotsearch Report (pages 56 - 65) (undertaken as part of DP, 2018), Appendix C. It should be noted that the 2016 aerial photograph provided by Lotsearch appears to be an older photo than the 2009 aerial photograph. As such this aerial photograph has been ignored, and a 2019 aerial photograph sourced from Nearmap has been included in the review, Appendix C.

1943 – the northern section of the site appeared to be occupied by a large grandstand type building, the central section appeared to be relatively cleared, and the southern section appeared to be occupied by a large grandstand type structure. The south eastern edge of the site appeared to be predominantly cleared and grassy. Surrounding land to the north and, east and west was predominantly grandstands and other facilities associated with the race course, whilst the racecourse proper was present to the east of the site. Regional land use was the racecourse to the north, east and south and residential to the west of the site. A large military camp was observed to be present approximately 140 metres to the south east of the site, within the infield of the track. Historical records indicate the camp was mainly for the purpose of embarking soldiers for the Boer War and both World Wars I & II.

¹ Merrick, N., 1994, "A groundwater flow model of the Botany Basin", IAH/IEA Water Down Under '94, Adelaide, Australia, 21-25 November, 1994

1955 – no significant changes were observed to the site from the 1943 aerial photograph. The military camp to the south east had been removed.

1961 – no significant changes to the site or surrounding land were observed from the 1955 aerial photograph.

1965 – no significant changes to the site or surrounding land were observed from the 1961 aerial photograph.

1970 – no significant changes to the site or surrounding land were observed from the 1965 aerial photograph.

1982 – two small sheds appeared to have been constructed in the central portion of the site, and asphaltic concrete appeared to have been laid in this section. Two sheds appeared to have been constructed directly to the north west of the site. Three ponds appeared to have been constructed approximately 120 metres to the east of the site.

1991 – by this time, the grandstand in the southern portion of the site appeared to have been demolished. The two sheds in the central portion of the site appeared to have been demolished and a small larger shed appeared to have been constructed in the central portion. The western site boundary appeared to be used for car parking. A small building associated with the racecourse appeared to have been constructed approximately 50 metres to the south west of the site. There was evidence of some minor residential style development to the west of the site.

2000 – by this time, the grandstand structure on the northern section of the site appeared to have been demolished and replaced with a cleared grassed area. All structures on the central and southern sections of the site appeared to have been demolished and these areas appeared to be undergoing earthworks, with potential draining lines being installed. Significant earthworks appeared to be underway on the racecourse approximately 150 meters to the north east of the site, for the installation of a tunnel. No other significant changes were observed from the 1991 aerial photograph.

2009 – by this time, the site appeared to be comprised of a cleared grassed area. No other significant changes were observed to the site or surrounding land since the 200 aerial photograph.

2019 – by this time the large freestanding building currently present in the southern portion of the site appeared to have been constructed and the site appeared to be developed to its current configuration. A new large grandstand structure appeared to have been constructed to the north east of the site. A large multi storey car park appeared to have been constructed to the north of the site. A small building appeared to have been constructed bordering the south western site boundary. A large tram depot appeared to have been constructed approximately 100 metres to the north of the site. There was evidence of further construction associated with the racecourse.

The historical maps included in the Lotsearch are consistent with the aerial photographs of the site.

7.2 Regulatory Notice Search

The EPA publishes records of contaminated sites under Section 58 of the CLM Act on a public database, accessible via the internet. The notices relate to investigation and/or remediation of significant contaminated as defined under the CLM Act. More specifically the notices relate to the following:

- Actions taken by the EPA under Sections 15, 17, 19, 21, 23, 26 or 28 of the CLM Act;
- Actions taken by the EPA under Sections 35 or 36 of the Environmentally Hazardous Chemicals Act 1985; and
- Site audit statements provided to the EPA under Section 52 of the CLM Act on sites subject to an in-force remediation order.

The NSW EPA also issues environmental protection licenses under Section 308 of the POEO Act.

The register contains:

- Environmental protection licenses;
- Applications for new licenses and to transfer or vary or extend licenses;
- Environment protection and noise control licenses;
- Convictions and prosecutions under the POEO Act;
- The result of civil proceedings;
- License review information;
- Exemptions and provisions of the POEO Act or Regulations;
- Approvals granted under Clause 9 of the POEO (Control of Burning) Regulation; and
- Approvals granted under Clause 7a of the POEO (Clean Air) Regulation.

A search of the public databases was undertaken on 25 July 2018, summarised in the Lotsearch Report (pp. 7 - 16), which indicated that:

- There were six properties within 550 m of the larger Royal Randwick Racecourse site that were notified to the NSW EPA under the duty to report contamination. These included two Caltex Service Stations, a former Ampol Service Station, two 7-Eleven service stations (one of which is currently regulated under the CLM act) and a footpath area, adjacent to a service station site. All properties were at lower elevations than the larger Royal Randwick Racecourse site, with the exception of one Caltex site (2 Alison Road, 580 m north of the site), which was at a similar elevation to the site with an anticipated groundwater flow direction parallel to that at the site. None of these properties are considered a concern for this assessment;
- There are no records of sites with a Record of Notice within 500 m of the site;
- There are no records of former gasworks within 500 m of the site;
- There are no properties on the national waste management site database within 500 m of the site;
- There are no properties currently subject to the EPA PFAS (Perfluorooctanesulfonic acid, commonly used in firefighting products) Investigation Programme within 500 m of the site;
- There are no sites identified as a former James Hardie asbestos manufacturing sites within 500 m of the site;

- There are no properties within 500 m of the site listed to undertake licenced activities;
- There are no sites within 500 m of the site listed as having a delicensed activity; and
- There are no surrendered licenses listed for properties within 500 m of the site.

7.3 Historical Business Activity

A review of historical business activities was undertaken by reviewing the UBDs Business to Business Directory for 1950, 1961, 1965, 1970, 1975, 1978, 1982, 1986 and 1991 (Lotsearch Report, pp. 19 - 56). Noting the site's location in an area which has been utilised as a permanent racecourse since prior to 1900, the search was limited to businesses within the wider racecourse area.

- A review of the historical business directory for the racecourse indicates that two farrier workshops operated as early as 1961 and a veterinary surgeon operated onsite in 1965. These businesses were not listed following the 1970 business directory records.

In broad terms, the businesses listed above are those that have been operated within the confines of the wider Racecourse area which pose a potential threat from a contamination standpoint. Further details are provided in Appendix C.

In regard to the businesses, surrounding the racecourse, all businesses are at least 500 m away from the specific site of development and are not considered to pose a significant risk of contamination for the site due to their distance.

7.4 SafeWork NSW Records Search

A Safework NSW Site Search of Schedule 11 Hazardous Chemicals was carried out for licenses to store hazardous chemicals at the Royal Randwick Racecourse, Appendix D. The results of the search indicated that no hazardous chemicals were stored within the boundaries of the site currently being investigated. The records did indicate that three underground storage tanks (USTs), two above ground storage tanks (ASTs), oil storage drums and two bowzers had been present in the vicinity of the maintenance workshop located to the south west of the site. It should be noted that DP undertook a remediation and validation assessment for the removal of the above mentioned USTs and ASTs in 2009, the results of which were presented in DP, *Remediation and Validation Assessment, High Street Connection, Randwick Racecourse*, dated February 2009, ref 45781.01-3.

The former storage of hazardous chemicals associated with the former maintenance workshop is not considered to pose a contamination risk to the site.

7.5 Historical Title Deeds

A historical title deeds search was conducted for the larger Royal Randwick Racecourse site by Infotrack Pty Ltd and was used to obtain ownership and occupancy information including company names and the occupations of individuals. The title information can assist in the identification of previous land uses by the company names or the site owners and can, therefore, assist in establishing whether there were potentially contaminating activities occurring at the site. A summary of the title

deeds and possible land uses (with reference to the aerial photographs and historical business directory) is presented in Table 1 and in Appendix E.

Table 1: Lot 2009 D.P. 1169042

Date of Acquisition and Term Held	Registered Proprietor(s) & Occupations where available	Potential Land Use
01.06.1915 (1915 to 1917)	Henry Cary Dangar (Esquire) Adrian Knox (Barrister at Law) Edmund Fosbery (Member of the Legislative Council)	Racecourse / Livestock Grazing
09.11.1917 (1917 to 1917)	Adrian Knox (Barrister at Law) Edmund Fosbery (Member of the Legislative Council)	
09.11.1917 (1917 to 1932)	Adrian Knox (Barrister at Law) Samuel Hordern (Esquire) Richard Halifax Dangar (Esquire)	
11.08.1932 (1932 to 1932)	Samuel Hordern (Esquire) Richard Halifax Dangar (Esquire)	
11.08.1932 (1932 to 1941)	Samuel Hordern (Esquire) Richard Halifax Dangar (Esquire) Thomas Lloyd Forster Rutledge (Grazier)	
13.03.1941 (1941 to 1941)	Samuel Hordern (Esquire) Thomas Lloyd Forster Rutledge (Grazier)	
13.03.1941 (1941 to 1955)	Samuel Hordern (Esquire) Thomas Lloyd Forster Rutledge (Grazier) George Main (Grazier)	Racecourse
04.07.1955 (1955 to 1963)	Samuel Hordern (Esquire) Thomas Lloyd Forster Rutledge (Grazier)	
04.07.1955 (1955 to 1963)	Thomas Lloyd Forster Rutledge (Grazier) William McCulloch Gollan (Member of the Legislative Assembly) Maurice Victorian Point (Grazier)	
26.08.1963 (1963 to 1980)	William McCulloch Gollan (Member of the Legislative Assembly) Maurice Victorian Point (Grazier)	
13.10.1980 (1980 to 1983)	Sidney George White Robert William Askin Laurie John Ferguson	
21.06.1983 (1983 to 2006)	Laurie John Ferguson Tristan Antico Leslie Frederick Bridge	
07.03.2006 (2006 to 2009)	Leslie Frederick Bridge Ken Arthur Murray Paul Francis Patrick Whelan	
21.05.2009 (2009 to 2013)	Ken Arthur Murray Paul Francis Patrick Whelan	
27.08.2013 (2013 to date)	# Randwick Racecourse Trust	

Denotes Current Registered Proprietor

Leases: -

- During the course of our search we came across various Leases to the Chairman of the Australian Jockey Club that have since expired, these have not been investigated;
- 12.08.1982 (T15486) Sub-Lease to The Sydney County Council of Substation premises No.2919 (First Floor Level) together with rights of way and easements for electricity purposes. Now surrendered;
- 21.03.1991 (J469606) Sub-Lease to The Sydney County Council of Substation premises No.6787 together with a right of way and easement for electricity purposes. Now surrendered;
- 09.07.1992 (Z404960) Sub-Lease to The Sydney County Council of Substation premises No.6787 together with a right of way and easement for electricity purposes. Now surrendered;
- 06.04.2009 (AE596578) Lease to Australian Jockey Club Limited, expires 20.01.2107:
 - a) (AJ107513) Lessee now Australian Turf Club Limited; and
 - b) (AJ38052) Lease of Lease AE596578 to Trainers Association Limited of premises known as suite 3, ground floor ATC Administration Building, Royal Randwick Racecourse, Alison Road, Randwick. Expires 01.06.2016 with option to renew of 3 years.

Easements: -

26.10.1964 (J758496) Easement for water sewerage & drainage 7.62 metres wide.

7.6 Council Planning 10.7 Certificate

A copy of the Council Section 10.7 (2) Planning Certificate was not able to be obtained from council. As such it has not been included in this report.

7.7 Council Records

Copies of available Council Records were requested and a list of available records was provided by the City of Randwick Council. The list was extensive and detailed a range of records which were predominantly minor modifications to the wider racecourse area. Individual records were not made available under the GIPA Access Application free of charge from Council so further detail was not able to be obtained.

8. Potential Contamination Sources and Preliminary Conceptual Site Model

A conceptual site model (CSM) is a representation of site-related information regarding contamination sources, receptors and exposure pathways between those sources and receptors. The CSM provides the framework for identifying how the site became contaminated and how potential receptors may be exposed to contamination either in the present or the future i.e., it enables an assessment of the potential source – pathway – receptor linkages.

8.1 Potential Contamination Sources

Based on site history, previous investigations and observations, the potential sources of contamination and associated contaminants are summarised in Table 2 below:

Table 2: Potential Contamination Sources and Contaminants of Concern

Potential Source	Description of Potential Contaminating Activity	Contaminants of Concern
S1 - Deterioration and demolition of site former structures	Impact on soils in central area of site due to demolition and removal of potential hazardous building material sections of the buildings as part of building alterations and/or deterioration of these structures.	Asbestos, lead based paints, PCB capacitors, synthetic mineral fibres (SMF).
S2 - Imported fill	Use of uncontrolled fill to level the site prior to construction of the racecourse and more recently.	Asbestos, heavy metals, TRH, BTEX, PAH, OCP, OPP, PCB and phenols
S3 – Buried road surface	A buried road surface is present beneath the southern portion of the site.	TRH and PAH

Notes:

TRH -	total petroleum hydrocarbon
BTEX -	benzene, toluene, ethylbenzene, xylene
PAH -	polycyclic aromatic hydrocarbons
PCB -	polychlorinated biphenyls
OCP -	organochlorine pesticides
OPP -	organophosphorus pesticides

- (S1) Imported fill to level the site. The contaminants associated with fill are considered to include: metals, total petroleum hydrocarbons (TPH), BTEX, PAH, OCP, OPP, PCB, phenols and asbestos;
- (S2) Hazardous building materials from previous structures that were demolished. Based on aerial photographs, there was a structure on the site from at least 1943 until at least 1980s and hazardous building materials from this structure may have impacted surface soils when it was demolished. Potential contaminants associated with hazardous building materials include lead, asbestos and PCB; and
- (S3) Buried road surface is present in the southern portion of the site as identified during previous investigations. Potential contaminants associated with the buried road surface are TRH and BTEX.

8.2 Potential Receptors

8.2.1 Human Health Receptors

R1 Current site users (recreational);

- R2 End users (recreational);
- R3 Construction and maintenance workers; and
- R4 Adjacent site users (recreational).

8.2.2 Environmental Receptors

- R5 Groundwater; and
- R6 Terrestrial ecology.

Surface water bodies have not been considered further to due to the distance from the site (Alexandra Canal 3.5 km west of the site).

8.2.3 Potential Pathways

Potential pathways for the identified contamination to impact on the receptors include the following:

- P1 Ingestion and dermal contact;
- P2 Inhalation of dust and / or vapour;
- P3 Leaching of contaminants and vertical migration into groundwater;
- P4 Lateral migration of groundwater; and
- P5 Contact with terrestrial ecology.

8.3 Preliminary Conceptual Site Model

A 'source-pathway-receptor' approach has been used to assess the potential risks of harm being caused to human or environmental receptors from contamination sources via exposure pathways (complete pathways). The possible pathways between the above listed sources and receptors are provided in Table 3 below.

Table 3: Preliminary Conceptual Site Model

Potential Source and Contaminants of Concern	Pathway	Receptor	Risk Management Action Recommended
S1 - Deterioration and demolition of site former structures - Asbestos, lead based paints, PCB capacitors, SMF. S2 - Imported fill - Asbestos, heavy metals, TRH, BTEX, PAH, OCP, OPP, PCB and phenols. S3 – Buried Road Surface - TRH and PAH	P1 – Ingestion and dermal contact	R1 - Current users R2 - End users R3 - Construction and maintenance workers	Soil and groundwater sampling has been undertaken as part of this DSI to assess these source-pathway-receptor linkages.
	P2 – Inhalation of dust and/or vapours	R1 - Current users R2 - End users R3 - Construction and maintenance workers R4 – Adjacent site users	
	P3 – Leaching and vertical migration into groundwater	R5 –Groundwater	
	P4 – Lateral migration of groundwater	R6 – Surface water	
	P5 – Contact with terrestrial ecology	R7 – Terrestrial ecology	

9. Field Work and QA/QC

9.1 Sample Locations and Rationale

The site covers approximately 5,300 m². According to NSW EPA, *Sampling Design Guidelines*, 1995, a minimum of 14 systematic sampling points is recommended to characterise a site of this size, however, approximately two-thirds of the site was accessible for sampling given that there is a structure at the south-western part of the site, so nine sample points have been adopted. Previous investigations have been undertaken on the site, including 4 test pits (TP107, TP109, TP223 and TP211) within or adjacent to the footprint of the building in the southern portion of the site, the results of which have been included in Tables H1, H2 and H3 in Appendix H.

Borehole BH509 was designated as a groundwater monitoring well in order to test groundwater along the southern site boundary which is estimated to be at a (somewhat) down-gradient hydrogeological locations.

Borehole locations are shown on Drawing 1, Appendix A.

9.2 Drilling and Soil Sampling Procedures

The field work for the investigation was completed on 20 May 2019, and included a site walkover by an environmental scientist, drilling of nine boreholes (BH501 to BH509) for contamination purposes, and the installation of a groundwater monitoring well at the locations shown on Drawing 1 in Appendix A. The boreholes were all drilled using a tracked, short masted drilling rig. Each borehole was extended at least 0.5 m into the natural soils, with the exception of BH507, which encountered refusal on concrete at 2.1 m bgl.

The positions and surface levels of boreholes were determined using a high precision GPS instrument and the co-ordinates are recorded on the borehole logs. The co-ordinates are considered to have an accuracy of 1 m in plan and 0.1 m in elevation.

Samples were generally collected at nominal depth intervals of 0.5 m and based on observed changes in strata, PID response and upon obvious sign of contamination such as strong hydrocarbon odour or staining / discolouration. All sampling data was recorded on DP's borehole logs provided in Appendix F.

Environmental sampling was performed according to standard operating procedures outlined in the DP *Field Procedures Manual*. All sampling data was recorded on DP chain of custody sheets. The general sampling and sample management procedures comprised:

- Collection of samples into laboratory-prepared glass jars with Teflon lined lids by hand, capping immediately and ensuring headspace within the sample jar is minimised;
- Collection of a replicate sample in a zip-lock bag for PID screening;
- A new disposable nitrile glove was worn by the field scientist / engineer for each sample collected thereby precluding potential cross-contamination;
- Collection of 10% replicate samples for QC purposes;
- Labelling of sample containers with individual and unique identification details, including project number, sample location and sample depth (where applicable); and
- Placement of the sample jars into a cooled, insulated and sealed container for transport to the laboratory.

The headspace in the zip-lock bag sample was allowed to equilibrate and was screened using the PID. The PID had a 10.6eV lamp and was calibrated with isobutylene gas at 100 ppm and with fresh air prior to commencement of each successive day's field work.

9.3 Groundwater Monitoring Well Installation and Development

Borehole BH509 was extended to a depth of 8.5 m bgl for installation of a groundwater monitoring well. Well construction details are provided on the borehole logs in Appendix F.

The well was constructed of 50 mm diameter acid washed, class 18, PVC casing and machine slotted well screen intervals. Joints were screw threaded, thereby avoiding the use of glues and solvents which may contaminate the groundwater. The well was completed with a gravel pack extending above the well screen and then a bentonite plug. A Gatic cover and concrete was used to at the ground

surface to complete the installation. The slotted well screen and base of the bentonite plug were within the natural soil profile.

The groundwater monitoring well was developed by a DP environmental scientist on 21 May 2019 using a plastic pump and bailer. Groundwater levels were measured prior to sampling using an electronic interface probe which can detect the presence of separate phase liquid in the water column [such as light non-aqueous phase liquids (LNAPL) including petroleum hydrocarbons]. The groundwater field sheet is provided in Appendix F.

9.4 Groundwater Sampling

Groundwater sampling was undertaken by a DP environmental scientist on 11 March 2019 and was performed according to standard operating procedures outlined in the DP *Field Procedures Manual*. Groundwater samples were collected using a low flow geo-sub pump in order to minimise aeration of the sample and disturbance to the water column thereby enhancing the quality of results for oxygen sensitive volatile analytes, DO and redox. The sampling method is described as follows:

- Measure the static water level using an electronic interface probe and record the thickness of any LNAPL (if encountered);
- Fit the pump with a bore dedicated disposable tubing to minimise the risk of cross-contamination;
- Set the pump at the lowest rate possible that could produce laminar flow out of the well;
- Measure physical parameters (pH, temperature, dissolved oxygen, electrical conductivity and redox) by continuously by passing the purged water through a flow cell; and
- Fill the appropriate laboratory prepared sample bottles following stabilisation of the field parameters.

The following sample handling and transport were employed:

- Laboratory prepared sample bottles were labelled with individual and unique identification, including project number and sample number;
- Placement of the sample bottles into a cooled, insulated and sealed container for transport to the laboratory; and
- Chain of custody documentation was maintained at all times and countersigned by the receiving laboratories on transfer of samples.

9.5 Quality Assurance and Quality Control

The field QC procedures for sampling were undertaken as prescribed in Douglas Partners' *Field Procedures Manual* and included the use of trip spikes and trip blanks as well as the collection of blind replicate samples. The results of field QA/QC procedures as well as a discussion of Data Quality Objectives (DQO) and Data Quality Indicators (DQI) for the assessment are provided in Appendix G.

EnviroLab Services Pty Ltd (NATA accreditation number: 2901) was used for the analysis of soil samples. The laboratory is required to carry out routine in-house QC procedures and one inter-laboratory duplicate was sent to Eurofins Environment Testing Australia Pty Ltd (NATA accreditation

number 1261). The chain of custody documentation (Laboratory) is included in Appendix I and discussed in Appendix G.

10. Assessment Criteria

10.1 Soil

The assessment criteria applied to soils are informed by the preliminary CSM which identified receptors to potential contamination at the site. Analytical results were assessed (as a Tier 1 assessment) against the assessment criteria comprising the investigation levels, screening levels and management limits of Schedule B1, *National Environment Protection (Assessment of Site Contamination) Measure 1999*, as amended 2013 (NEPC, 2013). The investigation levels, screening levels and management limits are applicable to generic land use settings and include consideration of, where relevant, the soil type and the depth of contamination. The investigation levels, screening levels and management limits are not intended to be used as clean up levels. Rather, they establish concentrations above which further appropriate investigation (e.g. Tier 2 assessment) should be undertaken. They are intentionally conservative and are based on a reasonable worst-case scenario.

The assessment criteria for soil adopted for this investigation are listed in the following sub-sections.

10.1.1 Health Investigation Levels

Health Investigation Levels (HIL) are applicable to assessing health risk arising via all relevant pathways of exposure for a range of metals and organic substances. The HIL are generic to all soil types and apply generally to a depth of 3 m below the surface.

Given that the proposed development includes buildings essentially used for recreational purposes and external areas that have extensive access to soil (see Section 3 for list of proposed uses and site features), the generic HIL (C) for a site have been adopted and are summarised in Table 4, below.

Table 4: Health Investigation Levels

	Contaminant	HIL C (mg/kg)
Metals	Arsenic	300
	Cadmium	100
	Chromium (VI)	240
	Copper	20 000
	Lead	600
	Mercury (inorganic)	400
	Nickel	800
	Zinc	30000
PAH	Benzo(a)pyrene TEQ ¹	4
	Total PAH	400
Phenol	Pentachlorophenol	140
	Phenol	45 000
	Cresols	4 700
OCP	Aldrin + Dieldrin	9
	Chlordane	80
	DDT+DDE+DDD	400
	Endosulfan	400
	Endrin	20
	Heptachlor	9
	HCB	15
	Methoxychlor	500
OPP	Chlorpyrifos	300
Other Organics	PCB ²	2

 Notes: ¹ sum of carcinogenic PAH

² non dioxin-like PCB only

10.1.2 Health Screening Levels for Vapour Intrusion

Health Screening Levels (HSL) for vapour intrusion are applicable to selected petroleum compounds and fractions to assess the risk to human health via the inhalation pathway. HSL have been developed for different land uses, soil types and depths to contamination.

Given that the proposed development includes buildings essentially used for recreational purposes (see Section 3 for the list of proposed uses and site features), the generic HSL (C) for a commercial / industrial site have been adopted.

The adopted HSL C are shown in Table 5, below. The HSL shown are for contamination at a depth of 0 m to <1 m and are the most conservative values for sand, silt and clays given that various soil types are present at the site. Less conservative HSL may be applicable depending on the contamination depth and soil profile.

Table 5: Health Screening Levels for Vapour Intrusion

Contaminant		HSL D for Vapour Intrusion (mg/kg)
PAH	Naphthalene	NL
TPH	TPH C ₆ -C ₁₀ (less BTEX)	NL
	TPH >C ₁₀ -C ₁₆ (less Naphthalene)	NL
BTEX	Benzene	NL
	Toluene	NL
	Ethylbenzene	NL
	Xylenes	NL

Note: The soil saturation concentration is defined as the soil concentration at which the porewater phase cannot dissolve any more of an individual chemical. The soil vapour that is in equilibrium with the porewater will be at its maximum. If the derived soil HSL exceeds C_{sat}, a soil vapour source concentration for a petroleum mixture could not exceed a level that would result in the maximum allowable vapour risk for the given scenario. For these scenarios, no HSL is presented for these chemicals and the HSL is shown as 'not limiting' or 'NL'.

10.1.3 Ecological Investigation Levels

Ecological Investigation Levels (EIL) have been derived for selected metals and organic compounds and are applicable for assessing risk to terrestrial ecosystems (NEPC, 2013). EIL depend on specific soil physiochemical properties and land use scenarios and generally apply to the top 2 m of soil, which corresponds to the root zone and habitation zone of many species. The EIL is determined for a contaminant based on the sum of the ambient background concentration (ABC) and an added contaminant limit (ACL). The ABC of a contaminant is the soil concentration in a specific locality that is the sum of naturally occurring background levels and the contaminants levels that have been introduced from diffuse or non-point sources (e.g. motor vehicle emissions). The ACL is the added concentration (above the ABC) of a contaminant above which further appropriate investigation and evaluation of the impact on ecological values is required.

The EIL is calculated using the following formula:

$$\text{EIL} = \text{ABC} + \text{ACL},$$

The ABC is determined through direct measurement at an appropriate reference site or through the use of methods defined by Olszowy et al, *Trace element concentrations in soils from rural and urban areas of Australia*, Contaminated Sites monograph no. 4, South Australian Health Commission, Adelaide, Australia 1995 (Olszowy, 1995) or Hamon et al, *Geochemical indices allow estimation of heavy metal background concentrations in soils*, Global Biogeochemical Cycles, vol. 18, GB1014, (Hamon, 2004). ACL is based on soil characteristics.

An *Interactive (Excel) Calculation Spreadsheet* may be used for calculating site-specific EIL and has been provided in the ASC NEPM Toolbox available on the NEPC website.

The adopted EIL, derived from the *Interactive (Excel) Calculation Spreadsheet* are shown in Table 6, below. The following site-specific data and assumptions have been used to determine the EIL:

- The site is used for recreational purposes;
- Given the site history, the contamination is considered as “aged” (>2 years);
- NSW is the state;
- The traffic volume is low;
- A pH of 8.3 given that this is the average of the two site specific pH results (see laboratory certificates, Appendix I);
- A CEC of 9.2 meq/100g given that this is the (rounded) average of the two site specific CEC results (see laboratory certificates, Appendix I);
- An organic carbon content of 1% has been used as a conservative value in the absence of site-specific test results; and
- A clay content of 1% has been used as a conservative value in the absence of site-specific test results.

Table 6: Ecological Investigation Levels

Contaminant		EIL – Recreational (mg/kg)
Metals	Arsenic	100
	Copper	190
	Nickel	140
	Chromium III	410
	Lead	1100
	Zinc	450
PAH	Naphthalene	170
OCP	DDT	180

EIL are considered to be applicable to locations where grass is proposed on the site (i.e. EIL need not be applied to proposed building footprints, driveway and pavement areas as these areas will have very limited ecological value).

10.1.4 Ecological Screening Levels

Ecological Screening Levels (ESL) are used to assess the risk of selected hydrocarbon compounds to terrestrial ecosystems. ESL generally apply to the top 2 m of the soil profile as for EIL. ESL have been derived in NEPC (2013) for petroleum fractions as well as BTEX and benzo(a)pyrene. The adopted ESL are shown in Table 7, below, and are for a generic urban residential and public open space land use scenario. The more conservative ESL for coarse soil textures are shown given that coarse soil types are present at the site. Less conservative ESL may be applicable depending on the soil type. ESL are considered to be applicable to locations where grass is on the site (i.e., ESL need not be applied to the proposed building footprints, driveway and pavement areas as these areas will have very limited ecological value).

Table 7: Ecological Screening Levels

Contaminant		ESL - Urban Residential and Public Open Space (mg/kg)
TPH	C ₆ -C ₁₀ (less BTEX)	180*
	>C ₁₀ -C ₁₆	120*
	>C ₁₆ -C ₃₄	300*
	>C ₃₄ -C ₄₀	2800
BTEX	Benzene	50
	Toluene	85
	Ethylbenzene	70
	Xylenes	105
PAH	Benzo(a)pyrene	0.7

Note: ESL are low reliability apart from those marked with * which indicates that the ESL is of moderate reliability

10.1.5 Management Limits

In addition to appropriate consideration and application of the health-based and ecological assessment criteria, there are additional considerations which reflect the nature and properties of petroleum hydrocarbons, including:

- Formation of observable light non-aqueous phase liquids (LNAPL);
- Fire and explosion hazards; and
- Effects on buried infrastructure e.g., penetration of, or damage to, in-ground services.

Management Limits to avoid or minimise these potential effects have been adopted in NEPC (2013) as Tier 1 guidance. The adopted Management Limits are shown in Table 8, below, and are for a generic residential, parkland and public open space land use scenario. The more conservative values for coarse soil textures are shown given that coarse soil types are present at the site. Less conservative Management Limits may be applicable depending on the soil type. Management Limits may apply to any depth within the soil profile.

Table 8: Management Limits

Analyte		Management Limit – Residential, Parkland and Public Open Space (mg/kg)
TPH	C ₆ – C ₁₀	700
	>C ₁₀ -C ₁₆	1000
	>C ₁₆ -C ₃₄	2500
	>C ₃₄ -C ₄₀	10 000

10.1.6 Asbestos in Soil

A detailed asbestos assessment has not been undertaken as part of this investigation. Visual observations for possible asbestos-containing materials (ACM) and the presence/absence of asbestos at a limit of reporting of 0.1 g/kg have been adopted as assessment criteria for this investigation (as an initial screen).

10.2 Groundwater

The assessment criteria used for contamination in groundwater are based on the potential uses or risks posed by contaminated groundwater at or down-gradient of the site. The potential receptors (informed by the preliminary CSM) are considered to be:

- Surface water body ecosystems including Musgrave Pond (freshwater) or Botany Bay (marine water);
- Down-gradient users of groundwater via bores. Extracted groundwater may be being used for domestic purposes and recreation purposes; and
- Human receptors (site users, construction workers, maintenance workers and adjacent site users) via the vapour inhalation pathway.

The adopted assessment criteria for groundwater based on the above potential receptors are listed in the following sub-sections.

10.2.1 Groundwater Investigation Levels

The adopted groundwater investigation levels (GIL) for the Alexandria Canal, as the nearest potential receiving water body ecosystem, and down-gradient users of groundwater are:

- Freshwater default guideline values (DGV) for a slightly to moderately disturbed ecosystem from *Australian and New Zealand Governments (ANZG), Australian and New Zealand Guidelines for Fresh and Marine Water Quality*, 2018 (ANZG, 2018); and
- National Health and Medical Research Council (NHMRC) and Natural Resource Management Ministerial Council (NRMMC), *Australian Drinking Water Guidelines 6*, Version 3.5 Updated August 2018, (NHMRC & NRMMC, 2018).

The GIL are shown in Table 9, below.

Table 9: Groundwater Investigation Levels

Contaminant		GIL		
		Freshwater DGV (µg/L)	Australian Drinking Water Guideline (µg/L)	
			Health	Aesthetic
Metals	Arsenic (total)	-	10	-
	Arsenic (III)	24	-	-
	Arsenic (V)	13	-	-
	Cadmium	0.2	2	-
	Chromium (III)	3.3	-	-
	Chromium (VI)	1.0	50	-
	Copper	1.4	2000	1000
	Lead	3.4	10	-
	Mercury	0.06	1	-
	Nickel	11	20	-
	Zinc	8	-	3000
PAH	Anthracene	0.01	-	-
	Naphthalene	16	-	-
	Fluoranthene	1	-	-
	Benzo(a)pyrene	0.1	0.01	-
	Phenanthrene	0.6	-	-
BTEX & VOC	Benzene	950	1	-
	Toluene	180	800	-
	Ethylbenzene	80	300	3
	Xylene (total)	-	600	20
	m-xylene	75	-	-
	o-xylene	350	-	-
	p-xylene	200	-	-
	Isopropylbenzene	30	-	-
	Tetrachloroethene	70	50	-
	Trichloroethene	330	-	-
	1,1-Dichloroethene	700	30	-
	1,2-Dichloroethene	-	60	-
	1,3-Dichloropropene	0.8	100	-
	Chloroethene (vinyl chloride)	100	0.3	-
	Chlorobenzene	55	300	10
	Trichlorobenzene (total)	-	30	5
	1,2,3-Trichlorobenzene	3	-	-
	1,2,4-Trichlorobenzene	85	-	-
	1,2-Dichlorobenzene	160	1500	1
	1,3-Dichlorobenzene	260	-	20
	1,4-Dichlorobenzene	60	40	0.3
	1,1,2,2-Tetrachloroethane	400	-	-
	1,1,1--Trichloroethane	270	-	-
	1,1,2-Trichloroethane	6500	-	-
	1,2-Dichloroethane	1900	3	-
	Carbon tetrachloride	240	3	-
	Chloroform	370	-	-
	Chloromethane	4000	-	-
	1,2-Dichloropropane	900	-	-
	1,3-Dichloropropane	1100	-	-
	Trihalomethanes (total)	-	250	-
	Styrene	-	30	4
	Hexachlorobutadiene	-	0.7	-

Contaminant		GIL		
		Freshwater DGV (µg/L)	Australian Drinking Water Guideline (µg/L)	
			Health	Aesthetic
OCP	Aldrin	0.001	-	-
	Chlordane	0.03	2	-
	DDE	0.03	-	-
	DDT	0.006	9	-
	Dieldrin	0.01	-	-
	Aldrin & Dieldrin (combined)	-	0.3	-
	Endosulfan	0.03	20	-
	Endrin	0.01	-	-
	Heptachlor	0.01	-	-
	Heptachlor & Heptachlor Epoxide	-	0.3	-
	Lindane	0.2	10	-
	Methoxychlor	0.005	300	-
	Mirex	0.04	-	-
OPP	Azinphos methyl	0.01	30	-
	Chlorpyrifos	0.01	10	-
	Diazinon	0.01	4	-
	Dichlorovos	-	5	-
	Dimethoate	0.15	7	-
	Fenitrothion	0.2	7	-
	Malathion	0.05	70	-
	Parathion	0.004	20	-
	Methyl Parathion	-	0.7	-
	Bromophos ethyl	-	10	-
	Ethion	-	4	-
PCB	Aroclor 1242	0.3	-	-
	Aroclor 1254	0.01	-	-

10.2.2 Health Screening Levels for Vapour Intrusion

The generic HSL for vapour intrusion from NEPC (2013) are considered appropriate for the assessment of contamination at the site. Given that the proposed development includes buildings essentially used for recreational purposes and uses (see Section 3 for the list of proposed uses and site features), the generic HSL (C) for a recreational site have been adopted.

The adopted HSL C are shown in Table 10, below. The HSL are shown for groundwater at a depth of 2 m to <4 m and are the most conservative values for sand given that various sandy soils are predominantly present at the site. Less conservative HSL may be applicable depending on the actual groundwater depth and soil profile.

Table 10: Health Screening Levels for Vapour Intrusion

Contaminant		HSL C for Vapour Intrusion (µg/L)
PAH	Naphthalene	NL
TPH	TPH C ₆ -C ₁₀ (less BTEX)	NL
	TPH >C ₁₀ -C ₁₆ (less Naphthalene)	NL
BTEX	Benzene	NL
	Toluene	NL
	Ethylbenzene	NL
	Xylenes	NL

Note: The solubility limit is defined as the groundwater concentration at which the water cannot dissolve any more of an individual chemical based on a petroleum mixture. The soil vapour which is in equilibrium with the groundwater will be at its maximum. If the derived groundwater HSL exceeds the water solubility limit, a soil-vapour source concentration for a petroleum mixture could not exceed a level that would result in the maximum allowable vapour risk for a given scenario. For these scenarios no HSL is presented for these chemicals. These are denoted as not limiting 'NL'.

10.2.3 Other Guidelines

Where there are insufficient Australian guideline values, alternative international references will be used as appropriate. These references include:

- Groundwater Intervention Values from the Dutch *Soil Remediation Circular* 2013. The intervention values are used to assess the risk of a contaminant to both ecology and human health; and
- United States Environmental Protection Agency (USEPA), Regional Screening Levels (RSL) for Residential Tap Water (target hazard quotient of 1.0), November 2018. The RSL are used to assess the risk of a contaminant to human health.

11. Results of Investigation

11.1 Sub-Surface Conditions

The borehole logs are included in Appendix F and should be read in conjunction with the accompanying standard notes defining classification methods and descriptive terms. The subsurface conditions are broadly summarised as follows:

FILL	Sand or silty sand fill with traces of brick, gravel, concrete, crushed sandstone, glass, ceramic, tile, wood and ash, to depths in the range 1.4 - 2.4 m bgl; overlying; and
SAND	Fine to medium grained sand, to depths in the range 1.4 - 8.5 m bgl.

Refusal on concrete was met at a depth of 2.1 m bgl in BH507

There was no evidence of gross contamination, staining or odours at the time of drilling.

Free groundwater was observed within borehole BH509 at the time of drilling at 5.5 m bgl. It should be noted that groundwater levels are affected by climatic conditions and soil permeability and will therefore vary with time.

11.2 Field Screening Results for Soil

Replicate soil samples collected in zip-lock plastic bags were allowed to equilibrate under ambient temperatures before screening for total photo ionisable compounds (i.e. VOC) using a calibrated PID. Results of sample screening are shown on borehole and test pit logs presented in Appendix F. The PID readings were all generally low (<5 ppm). The screening results suggest the general absence of gross VOC / petroleum hydrocarbon contamination.

11.3 Groundwater Levels

The groundwater well was surveyed using a dGPS and the groundwater level was gauged on 21 May 2019 using an electronic oil/water interface meter prior to developing the wells and again on 27 May 2019 prior to sampling. The measured water levels are shown in the following Table 11, below.

Table 11: Summary of Groundwater Level Measurements 21-27 May 2019

Borehole ID	Surface Elevation* (RL, AHD)	SWL Measurements 21 May 2019		SWL Measurements 27 May 2019	
		Depth (m)	Elevation (RL)	Depth (m)	Elevation (RL)
BH509	30.7	5.59	25.11	5.32	25.38

Notes: *Surveyed by dGPS or laser level
 AHD – Australian Height Datum
 SWL – Standing water level
 RL – Reduced level
 bgl – Below ground level

Physical parameters were measured whilst sampling (where possible) and are summarised in the following Table 12, below.

Table 12: Summary of Groundwater Quality Parameters

Borehole ID	Temperature (°C)	DO (mg/L)	EC (mS/cm)	pH	Turbidity (NTU)	Redox potential (mV)	Water colour
BH509	20.2	1.25	688	6.4	14	118	Clear

Notes: The values shown are the final values obtained during sampling; "DO" denotes Dissolved Oxygen; "EC" denotes Electrical Conductivity; "NTU" denotes Nephelometric Turbidity Unit.

No LNAPL was observed whilst sampling.

11.4 Analytical Laboratory Results

Summary results tables including analytical results and relevant assessment criteria are included in Appendix H as follows:

- Table H1: Summary Results for Soil – Metals, TRH, BTEX and PAH;
- Table H2: Summary Results for Soil – Phenol, OCP, OPP, PCB, Asbestos; and
- Table H3: Summary Results for Groundwater.

Laboratory certificates of analysis with associated chain of custody documentation are presented in Appendix I.

11.5 Data Quality Assurance and Quality Control

Field and laboratory quality assurance and quality control (QA/QC) procedures formed an integral part of the DSI. The QA/QC procedures and results are presented in Appendix G. Overall, the standard operating procedures (SOPs) were complied with in the field, and the field and laboratory QC samples were generally within the acceptance criteria. On this basis, it is considered that an acceptable level of field and laboratory precision, accuracy, representativeness, completeness and comparability was achieved and that the laboratory data sets are reliable, accurate and useable for this assessment.

12. Laboratory Analytical Rationale and Results

12.1 Analytical Rationale

Soil samples were selected for analysis based on field observations and the preliminary conceptual site model. Almost all selected samples for analysis were from fill given that fill is a potential source of contamination and signs of contamination were not associated with natural soil. At least one sample from each borehole was analysed for eight priority metals, TRH, BTEX, PAH, OCP, OPP, PCB and total phenols to obtain data for each sample point (i.e. to provide site coverage). Additional fill samples were selected for chemical analysis from boreholes where fill was encountered to greater depths. Analysis for asbestos was undertaken on selected samples which were identified to have anthropogenic materials.

A total of two natural samples from boreholes 502 and 509 were analysed for pH and CEC.

Primary groundwater samples from the groundwater monitoring well was analysed for a suite of potential contaminants comprising eight priority metals, TRH, BTEX, PAH, OCP, OPP, PCB, total phenols and VOC to provide data for each groundwater sampling point. The primary sample was also analysed for hardness.

12.2 Summary of Analytical Results

Results for analysis of soil samples are summarised in Table H1. Laboratory certificates and chain of custody for the current investigation are provided in Appendix I.

Results for analysis of groundwater samples are summarised in Table H2. Laboratory certificates and chain of custody are provided in Appendix I.

12.3 Soil Contaminants

12.3.1 Metals

Concentrations of heavy metals were reported either below the laboratory practical quantitation limit (PQL) or below the adopted SAC.

12.3.2 PAH

Soil concentrations of total PAH, naphthalene and benzo(a)pyrene TEQ were within the adopted SAC.

Concentrations of benzo(a)pyrene were recorded below the adopted SAC with the exception of:

- BH502/0.1 (0.75 mg/kg), BH506/1.0 (1.6 mg/kg) and BH508/1.0 (0.89 mg/kg);

Which exceeded the low reliability ESL of 0.7 mg/kg. It is noted that CRC CARE, *Technical Report No. 39, Risk-based management and remediation guidance for benzo(a)pyrene*, 2017 provides a high reliability ecological guideline of 33 mg/kg for fresh benzo(a)pyrene for urban residential and public open space sites (and the bioavailability and bio-accessibility of aged benzo(a)pyrene tends to be less than that of fresh benzo(a)pyrene which means that the ecological guideline is conservative for aged benzo(a)pyrene). The concentrations of benzo(a)pyrene were well within the ecological guideline.

12.3.3 TRH, BTEX and VOC

Concentrations of TRH were reported either below the laboratory PQL or below the adopted SAC.

12.3.4 OCP, OPP and PCB

Concentrations of OCP, OPP and PCB were reported below the laboratory PQL.

12.3.5 Total Phenols

Concentrations of total phenols were reported below the laboratory PQL.

12.3.6 Asbestos

Asbestos was not detected at the limit of reporting in any analysed sample.

12.4 Groundwater Contaminants

Concentrations of all contaminants of concern were below the laboratory PQL with exception of copper, zinc, naphthalene and total PAH. Concentrations of zinc, naphthalene and total PAH were recorded at concentrations below the adopted SAC. Concentrations of copper (0.003 mg/L) were identified above the freshwater GIL of 0.001 mg/L. This concentration is considered to be consistent with background concentrations, particularly given that copper materials are common in an urban setting.

13. Discussion and Recommendations

13.1 Site History Summary

The site history and field observations suggest that the site has a relatively low potential for contamination. The site appears to have undergone modifications since at least the 1860s and has been used as a racecourse since at least 1917. The majority of the site appeared to be occupied by grandstands and other associated racecourse infrastructure.

13.2 Contaminants in Soil and Groundwater

Although metals and PAH have been identified in the soil during this investigation, it is considered that concentrations of tested contaminants in soil are at levels which do not pose a risk to human health, terrestrial ecology or in-ground structures for the proposed development.

PAH and TRH were identified in previous investigations to be an issue in the southern portion of the site, beneath the large freestanding structure, associated with the buried road surface. This area is understood to be covered by an EMP (DP, 2013).

As discussed in Section 5, given the low risk status of the buried road surface, a 'Cap and Contain' strategy was previously adopted at the Day Stalls site. The strategy comprised the capping and containment of the road tar impacted profile under the existing fill profile (which was within the adopted SAC) and management of the contamination in perpetuity by means of an Environmental Management Plan (EMP) as agreed by all parties. The assessment, remediation strategy and the EMP for the Day Stalls site was the subject of an audit by a NSW EPA accredited auditor and received approval from the Randwick City Council (Council). Further, to ensure long-term management of the strategy, the EMP was made legally enforceable and had appropriate public notification mechanisms such as inclusion on the S. 149 certificate or S.88b instrument.

Given that the road surface identified in DP, 2012 in the Spectator Precinct, which is located within the boundary of the current site investigation, is an extension of the road surface at the Day Stalls site (at TP223 and TP109 respectively), and that a legally enforceable EMP is already in place for the same contamination issue at the adjoining site and the low risk status of the contamination, it is considered that the cap and contain strategy can be extended to the southern portion of the site, which will make it suitable for the proposed recreational land use. The strategy would essentially be identical to that utilised at the Day Stalls site and would comprise leaving the buried road surface *in situ* under existing fill that is compatible with a recreational land use. The existing filling will form a cap which separates

the site users from the underlying road pavement. The health and environmental risk associated with the recorded PAH levels in the former road pavement would therefore be low to negligible as all exposure pathways would be incomplete. The proposed strategy is already in place at the Day Stalls site and, because the Day Stalls EMP already applies to the RRR and is annotated on the Title or the 88b instrument, which includes the current Spectator Precinct, only minimal changes will be required to make the Day Stalls EMP applicable to the western end of the Spectator Precinct.

Based on the results of the investigation, it is considered that remediation (and a Remediation Action Plan) is not required for the proposed development.

Given the variable fill at the site, an Unexpected Finds Protocol (UFP) should be prepared for site development. The UFP would detail the requirements and procedures for encountering contamination, or signs of contamination, during excavation works.

Soils requiring off-site disposal will need to be given a waste classification in accordance with NSW EPA, *Waste Classification Guidelines*, 2014 (EPA, 2014) and disposed of accordingly.

Concentrations of contaminants in groundwater are considered to not pose a risk to human health or ecological receptors or site or down gradient of the site for the proposed development.

14. Conclusion

Based on the findings of this DSI which included an assessment of soil and groundwater, it is considered that the site is suitable for the proposed development from a contamination perspective pursuant to the recommendation outlined in Section 13.

15. Limitations

Douglas Partners (DP) has prepared this report for the proposed Winx Stand on Leger Lawn at Royal Randwick Racecourse in accordance with the Consultancy Services Agreement between Australian Turf Club Limited (ATC) and Douglas Partners Pty Ltd (DP). This report is provided for the exclusive use of ATC for this project only and for the purposes as described in the report. It should not be used by or relied upon for other projects or purposes on the same or other site or by a third party. Any party so relying upon this report beyond its exclusive use and purpose as stated above, and without the express written consent of DP, does so entirely at its own risk and without recourse to DP for any loss or damage. In preparing this report DP has necessarily relied upon information provided by the client and/or their agents.

The results provided in the report are indicative of the sub-surface conditions on the site only at the specific sampling and/or testing locations, and then only to the depths investigated and at the time the work was carried out. Sub-surface conditions can change abruptly due to variable geological processes and also as a result of human influences. Such changes may occur after DP's field testing has been completed.

DP's advice is based upon the conditions encountered during this investigation. The accuracy of the advice provided by DP in this report may be affected by undetected variations in ground conditions across the site between and beyond the sampling and/or testing locations. The advice may also be limited by budget constraints imposed by others or by site accessibility.

This report must be read in conjunction with all of the attached and should be kept in its entirety without separation of individual pages or sections. DP cannot be held responsible for interpretations or conclusions made by others unless they are supported by an expressed statement, interpretation, outcome or conclusion stated in this report.

This report, or sections from this report, should not be used as part of a specification for a project, without review and agreement by DP. This is because this report has been written as advice and opinion rather than instructions for construction.

Asbestos has not been detected by observation or by laboratory analysis, either on the surface of the site, or in filling materials at the test locations sampled and analysed. Building demolition materials, such as concrete, brick, tile, glass, wood and plastic, were, however, located in previous below-ground filling, and these are considered as indicative of the possible presence of hazardous building materials (HBM), including asbestos.

Although the sampling plan adopted for this investigation is considered appropriate to achieve the stated project objectives, there are necessarily parts of the site that have not been sampled and analysed. This is either due to undetected variations in ground conditions or to budget constraints (as discussed above), or to parts of the site being inaccessible and not available for inspection/sampling. It is therefore considered possible that HBM, including asbestos, may be present in unobserved or untested parts of the site, between and beyond sampling locations, and hence no warranty can be given that asbestos is not present.

The contents of this report do not constitute formal design components such as are required, by the Health and Safety Legislation and Regulations, to be included in a Safety Report specifying the hazards likely to be encountered during construction and the controls required to mitigate risk. This design process requires risk assessment to be undertaken, with such assessment being dependent upon factors relating to likelihood of occurrence and consequences of damage to property and to life. This, in turn, requires project data and analysis presently beyond the knowledge and project role respectively of DP. DP may be able, however, to assist the client in carrying out a risk assessment of potential hazards contained in the Comments section of this report, as an extension to the current scope of works, if so requested, and provided that suitable additional information is made available to DP. Any such risk assessment would, however, be necessarily restricted to the (geotechnical / environmental / groundwater) components set out in this report and to their application by the project designers to project design, construction, maintenance and demolition.

Douglas Partners Pty Ltd

Appendix A

Notes About this Report
and Drawings

About this Report

Douglas Partners



Introduction

These notes have been provided to amplify DP's report in regard to classification methods, field procedures and the comments section. Not all are necessarily relevant to all reports.

DP's reports are based on information gained from limited subsurface excavations and sampling, supplemented by knowledge of local geology and experience. For this reason, they must be regarded as interpretive rather than factual documents, limited to some extent by the scope of information on which they rely.

Copyright

This report is the property of Douglas Partners Pty Ltd. The report may only be used for the purpose for which it was commissioned and in accordance with the Conditions of Engagement for the commission supplied at the time of proposal. Unauthorised use of this report in any form whatsoever is prohibited.

Borehole and Test Pit Logs

The borehole and test pit logs presented in this report are an engineering and/or geological interpretation of the subsurface conditions, and their reliability will depend to some extent on frequency of sampling and the method of drilling or excavation. Ideally, continuous undisturbed sampling or core drilling will provide the most reliable assessment, but this is not always practicable or possible to justify on economic grounds. In any case the boreholes and test pits represent only a very small sample of the total subsurface profile.

Interpretation of the information and its application to design and construction should therefore take into account the spacing of boreholes or pits, the frequency of sampling, and the possibility of other than 'straight line' variations between the test locations.

Groundwater

Where groundwater levels are measured in boreholes there are several potential problems, namely:

- In low permeability soils groundwater may enter the hole very slowly or perhaps not at all during the time the hole is left open;

- A localised, perched water table may lead to an erroneous indication of the true water table;
- Water table levels will vary from time to time with seasons or recent weather changes. They may not be the same at the time of construction as are indicated in the report; and
- The use of water or mud as a drilling fluid will mask any groundwater inflow. Water has to be blown out of the hole and drilling mud must first be washed out of the hole if water measurements are to be made.

More reliable measurements can be made by installing standpipes which are read at intervals over several days, or perhaps weeks for low permeability soils. Piezometers, sealed in a particular stratum, may be advisable in low permeability soils or where there may be interference from a perched water table.

Reports

The report has been prepared by qualified personnel, is based on the information obtained from field and laboratory testing, and has been undertaken to current engineering standards of interpretation and analysis. Where the report has been prepared for a specific design proposal, the information and interpretation may not be relevant if the design proposal is changed. If this happens, DP will be pleased to review the report and the sufficiency of the investigation work.

Every care is taken with the report as it relates to interpretation of subsurface conditions, discussion of geotechnical and environmental aspects, and recommendations or suggestions for design and construction. However, DP cannot always anticipate or assume responsibility for:

- Unexpected variations in ground conditions. The potential for this will depend partly on borehole or pit spacing and sampling frequency;
- Changes in policy or interpretations of policy by statutory authorities; or
- The actions of contractors responding to commercial pressures.

If these occur, DP will be pleased to assist with investigations or advice to resolve the matter.

About this Report

Site Anomalies

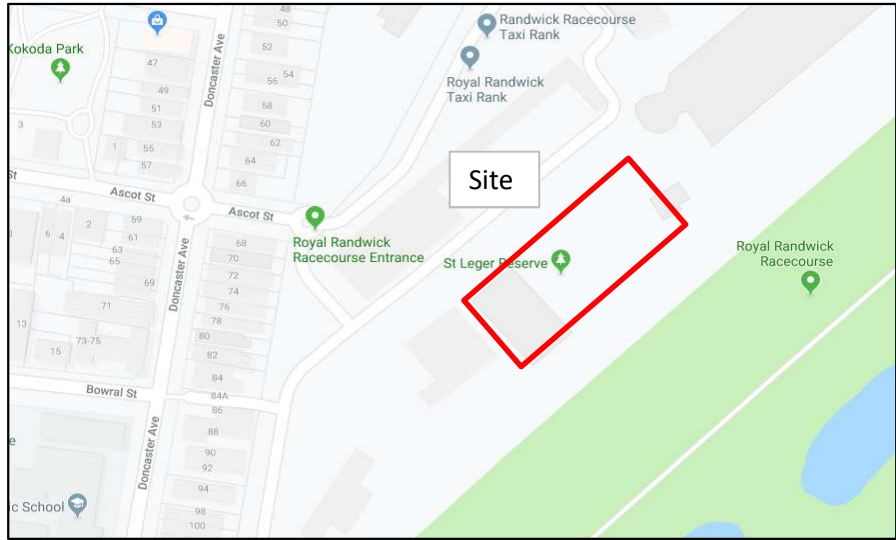
In the event that conditions encountered on site during construction appear to vary from those which were expected from the information contained in the report, DP requests that it be immediately notified. Most problems are much more readily resolved when conditions are exposed rather than at some later stage, well after the event.

Information for Contractual Purposes








Where information obtained from this report is provided for tendering purposes, it is recommended that all information, including the written report and discussion, be made available. In circumstances where the discussion or comments section is not relevant to the contractual situation, it may be appropriate to prepare a specially edited document. DP would be pleased to assist in this regard and/or to make additional report copies available for contract purposes at a nominal charge.

Site Inspection


The company will always be pleased to provide engineering inspection services for geotechnical and environmental aspects of work to which this report is related. This could range from a site visit to confirm that conditions exposed are as expected, to full time engineering presence on site.



Legend




-  - Soil Borehole Locations
-  - Groundwater Well Locations
-  - Previous Groundwater Well 2012
-  - Previous Test Pit 2012
-  - Previous Test Pit 2010
-  - Previous Groundwater Well 2010
-  - Site Boundary

Source: Nearmap

 Douglas Partners <i>Geotechnics Environment Groundwater</i>	CLIENT: Mostyn Copper Group		TITLE: Borehole and Test Pit Locations Proposed Winx Stand Leger Lawn, Royal Randwick Racecourse, Alison Road, Randwick	PROJECT No: 86781.01
	OFFICE: Sydney	DRAWN BY: TG		DRAWING No: 1
	SCALE: Not to Scale	DATE: 6/17/2019		REVISION: 2



Legend

-  - Boundary of Current Site Investigation
-  - Boundary of Spectator Precinct from DP, 2012
-  - Boundary of Day Stalls from DP, 2007

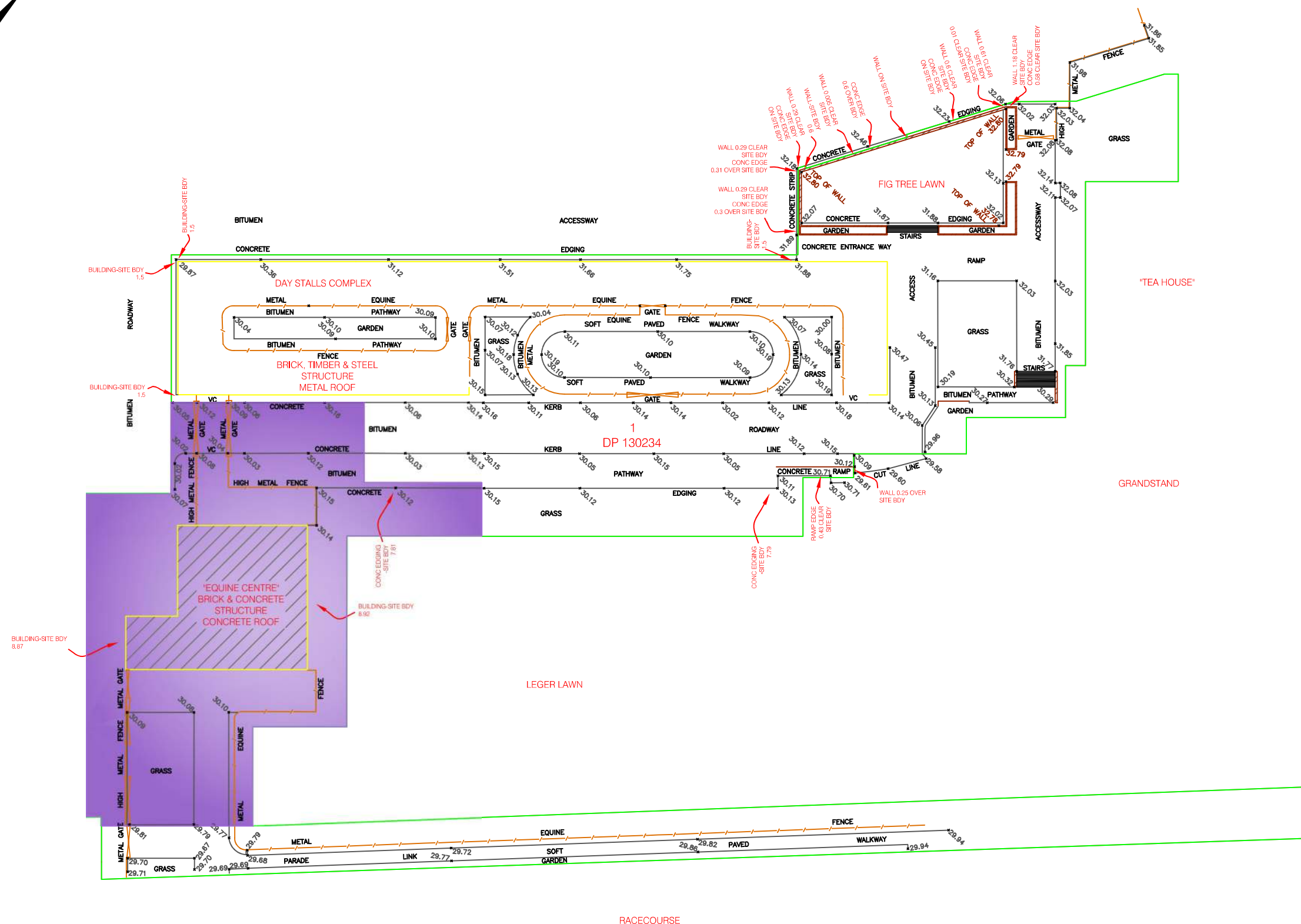
Source: Nearmap

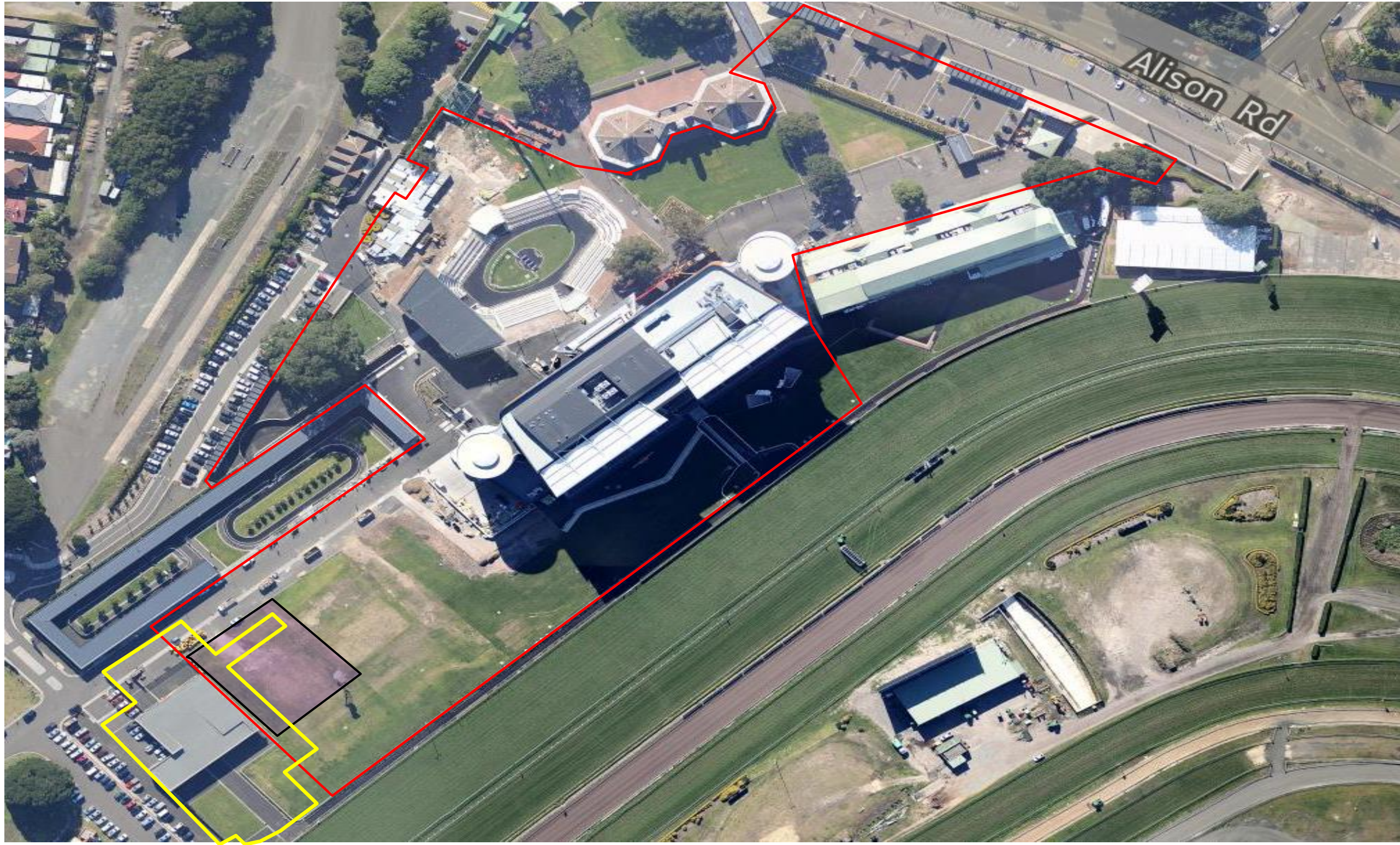


CLIENT: Mostyn Copper Group	
OFFICE: Sydney	DRAWN BY: TG
SCALE: Not to Scale	DATE: 7/1/2019

TITLE: **Site Boundary and Former Investigation Areas**
Proposed Winx Stand
Leger Lawn, Royal Randwick Racecourse, Alison Road, Randwick

PROJECT No:	86781.01
DRAWING No:	2
REVISION:	2





LEGEND	
	Spectator Precinct Boundary
	Areas within Spectator Precinct Where Buried Road Profile May Be Encountered
	Areas within Adjoining Day Stalls Site Currently Being Managed under Days Stalls EMP



Client: Mostyn Copper Group

DRAWN BY: NSA

SCALE: As shown

OFFICE: Sydney

APPROVED BY

TITLE:

**Areas Where Contamination (Buried Road Profile) May Be Encountered
(Reproduced from DP (2013))**
Proposed Winx Stand
Royal Randwick Racecourse, Randwick

Project 86781.01

Drawing No: 4

Revision: 2

Appendix B

Site Photographs



Photo 1 - Leger Lawn with freestanding building in the southern portion (looking south)



Photo 2 -Leger Lawn showing carpark in background (looking west)



Site Photographs
Proposed Winx Stand
Royal Randwick Racecourse

CLIENT: Australian Turf Club

PROJECT: 86781.01

PLATE No: 1

REV: A

DATE: 15-Jun-19



Photo 3 - Leger Lawn showing height difference (looking west)



Photo 4 - BH509 groundwater well location with freestanding structure in background (looking west)



Site Photographs

Proposed Winx Stand

Royal Randwick Racecourse

CLIENT: Australian Turf Club

PROJECT: 86781.01

PLATE No: 2

REV: A

DATE: 15-Jun-19



Photo 5 -Leger Lawn with main grandstand in background (looking north)



Photo 6 - Interior of the freestanding building (looking north)



Site Photographs

Proposed Winx Stand

Royal Randwick Racecourse

CLIENT: Australian Turf Club

PROJECT: 86781.01

PLATE No: 3

REV: A

DATE: 15-Jun-19



Photo 7 - Leger Lawn showing raised profile (looking east)



Photo 8 - Leger Lawn with Track in background (looking east)



Site Photographs

Proposed Winx Stand

Royal Randwick Racecourse

CLIENT: Australian Turf Club

PROJECT: 86781.01

PLATE No: 4

REV: A

DATE: 15-Jun-19

Appendix C

Lotsearch Report
2019 Aerial Photograph



LOTSEARCH

LOTSEARCH ENVIRO PROFESSIONAL

Date: 25 Jul 2018 16:22:48

Reference: LS003775

Address: 77-97 Alison Road, Randwick, NSW 2031

Disclaimer:

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

Table of Contents

Location Confidences.....	2
Dataset Listings.....	3
Site Location Aerial	6
Contaminated Land & Waste Management Facilities.....	7
EPA PFAS Investigation Program	11
EPA Other Sites with Contamination Issues	12
EPA Current Licensed Activities.....	13
EPA Delicensed & Former Licensed Activities.....	15
UPSS Sensitive Zones.....	17
Historical Business Activities.....	18
Historical Aerial Imagery & Maps	57
Topographic Features	71
Elevation Contours.....	78
Hydrogeology & Groundwater.....	79
Geology.....	127
Naturally Occurring Asbestos Potential.....	129
Soils	130
Acid Sulfate Soils	134
Dryland Salinity	138
Mining Subsidence Districts	139
State Environmental Planning.....	140
Local Environmental Planning.....	141
Heritage	147
Natural Hazards	153
Ecological Constraints.....	154
Terms & Conditions.....	165

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 confidence is given under the field heading “LocConf” or “Location Confidence”.

Location Confidence	Description
Premise Match	Georeferenced to the site location / premise or part of site
Area Match	Georeferenced with the confidence of the general/approximate area
Road Match	Georeferenced to the road or rail
Road Intersection	Georeferenced to the road intersection
Buffered Point	Feature is a buffered point
Network of Features	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	25/07/2018	25/07/2018	Daily	-	-	-	-
Topographic Data	Dept. Finance, Services & Innovation	17/07/2018	17/07/2018	As required	-	-	-	-
List of NSW contaminated sites notified to EPA	Environment Protection Authority	06/07/2018	02/07/2018	Monthly	1000	0	2	6
Contaminated Land Records of Notice	Environment Protection Authority	06/07/2018	06/07/2018	Monthly	1000	0	0	1
Former Gasworks	Environment Protection Authority	04/07/2018	11/10/2017	Monthly	1000	0	0	0
National Waste Management Site Database	Geoscience Australia	04/07/2018	07/03/2017	Quarterly	1000	0	0	0
EPA PFAS Investigation Program	Environment Protection Authority	04/07/2018	04/07/2018	Monthly	2000	0	0	0
EPA Other Sites with Contamination Issues	Environment Protection Authority	11/01/2018	11/01/2018	As required	1000	0	0	0
Licensed Activities under the POEO Act 1997	Environment Protection Authority	13/07/2018	13/07/2018	Monthly	1000	1	1	1
Delicensed POEO Activities still Regulated by the EPA	Environment Protection Authority	13/07/2018	13/07/2018	Monthly	1000	0	0	3
Former POEO Licensed Activities now revoked or surrendered	Environment Protection Authority	13/07/2018	13/07/2018	Monthly	1000	0	1	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	5	6
UBD Business to Business Directory 1991 (Road & Area Matches)	Hardie Grant			Not required	150	-	1	1
UBD Business to Business Directory 1986 (Premise & Intersection Matches)	Hardie Grant			Not required	150	0	16	36
UBD Business to Business Directory 1986 (Road & Area Matches)	Hardie Grant			Not required	150	-	6	6
UBD Business Directory 1982 (Premise & Intersection Matches)	Hardie Grant			Not required	150	0	11	23
UBD Business Directory 1982 (Road & Area Matches)	Hardie Grant			Not required	150	-	5	5
UBD Business Directory 1978 (Premise & Intersection Matches)	Hardie Grant			Not required	150	0	18	34
UBD Business Directory 1978 (Road & Area Matches)	Hardie Grant			Not required	150	-	5	5
UBD Business Directory 1975 (Premise & Intersection Matches)	Hardie Grant			Not required	150	0	21	37
UBD Business Directory 1975 (Road & Area Matches)	Hardie Grant			Not required	150	-	7	7
UBD Business Directory 1970 (Premise & Intersection Matches)	Hardie Grant			Not required	150	2	26	46
UBD Business Directory 1970 (Road & Area Matches)	Hardie Grant			Not required	150	-	19	19
UBD Business Directory 1965 (Premise & Intersection Matches)	Hardie Grant			Not required	150	2	39	63
UBD Business Directory 1965 (Road & Area Matches)	Hardie Grant			Not required	150	-	21	21
UBD Business Directory 1961 (Premise & Intersection Matches)	Hardie Grant			Not required	150	2	54	76
UBD Business Directory 1961 (Road & Area Matches)	Hardie Grant			Not required	150	-	6	7
UBD Business Directory 1950 (Premise & Intersection Matches)	Hardie Grant			Not required	150	0	77	116
UBD Business Directory 1950 (Road & Area Matches)	Hardie Grant			Not required	150	-	29	29

Dataset Name	Custodian	Supply Date	Currency Date	Update Frequency	Dataset Buffer (m)	No. Features Onsite	No. Features within 100m	No. Features within Buffer
UBD Business Directory Drycleaners & Motor Garages/Service Stations (Premise & Intersection Matches)	Hardie Grant			Not required	500	0	39	168
UBD Business Directory Drycleaners & Motor Garages/Service Stations (Road & Area Matches)	Hardie Grant			Not required	500	-	2	9
Points of Interest	Dept. Finance, Services & Innovation	17/07/2018	17/07/2018	Quarterly	1000	2	4	118
Tanks (Areas)	Dept. Finance, Services & Innovation	17/07/2018	17/07/2018	Quarterly	1000	0	0	0
Tanks (Points)	Dept. Finance, Services & Innovation	17/07/2018	17/07/2018	Quarterly	1000	1	1	1
Major Easements	Dept. Finance, Services & Innovation	17/07/2018	17/07/2018	As required	1000	0	0	3
State Forest	Dept. Finance, Services & Innovation	18/01/2018	18/01/2018	As required	1000	0	0	0
NSW National Parks and Wildlife Service Reserves	NSW Office of Environment & Heritage	18/01/2018	30/09/2017	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
Botany Groundwater Management Zones	NSW Department of Primary Industries	15/03/2018	01/10/2005	As required	1000	0	0	0
Groundwater Boreholes	NSW Dept. of Primary Industries - Water NSW; Commonwealth of Australia (Bureau of Meteorology)	21/03/2016	01/12/2015	Annually	2000	10	28	654
Geological Units 1:100,000	NSW Dept. of Industry, Resources & Energy	20/08/2014		None planned	1000	2	-	3
Geological Structures 1:100,000	NSW Dept. of Industry, Resources & Energy	20/08/2014		None planned	1000	0	-	0
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	3	-	5
Atlas of Australian Soils	CSIRO	19/05/2017	17/02/2011	As required	1000	1	1	3
Standard Local Environmental Plan Acid Sulfate Soils	NSW Planning and Environment	07/10/2016	07/10/2016	As required	500	0	-	-
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	1
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	11/04/2018	16/03/2018	Quarterly	1000	1	17	99
LEP - Minimum Subdivision Lot Size	NSW Planning and Environment	04/04/2018	23/03/2018	Quarterly	0	0	-	-
LEP - Height of Building	NSW Planning and Environment	04/04/2018	23/03/2018	Quarterly	0	0	-	-
LEP - Floor Space Ratio	NSW Planning and Environment	04/04/2018	23/03/2018	Quarterly	0	0	-	-
LEP - Land Application	NSW Planning and Environment	04/04/2018	23/03/2018	Quarterly	0	1	-	-
LEP - Land Reservation Acquisition	NSW Planning and Environment	04/04/2018	09/03/2018	Quarterly	0	1	-	-
State Heritage Items	NSW Office of Environment & Heritage	04/04/2018	30/09/2016	Quarterly	500	0	1	4

Dataset Name	Custodian	Supply Date	Currency Date	Update Frequency	Dataset Buffer (m)	No. Features Onsite	No. Features within 100m	No. Features within Buffer
Local Heritage Items	NSW Planning and Environment	04/04/2018	23/03/2018	Quarterly	500	2	17	82
Bush Fire Prone Land	NSW Rural Fire Service	10/05/2018	23/01/2018	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	3	7
RAMSAR Wetlands	Commonwealth of Australia Department of the Environment	08/10/2014	24/06/2011	As required	1000	0	0	0
Groundwater Dependent Ecosystems	Bureau of Meteorology	14/08/2017	15/05/2017	Unknown	1000	0	0	3
Inflow Dependent Ecosystems Likelihood	Bureau of Meteorology	14/08/2017	15/05/2017	Unknown	1000	0	0	3
NSW BioNet Species Sightings	NSW Office of Environment & Heritage	23/07/2018	23/07/2018	Daily	10000	-	-	-

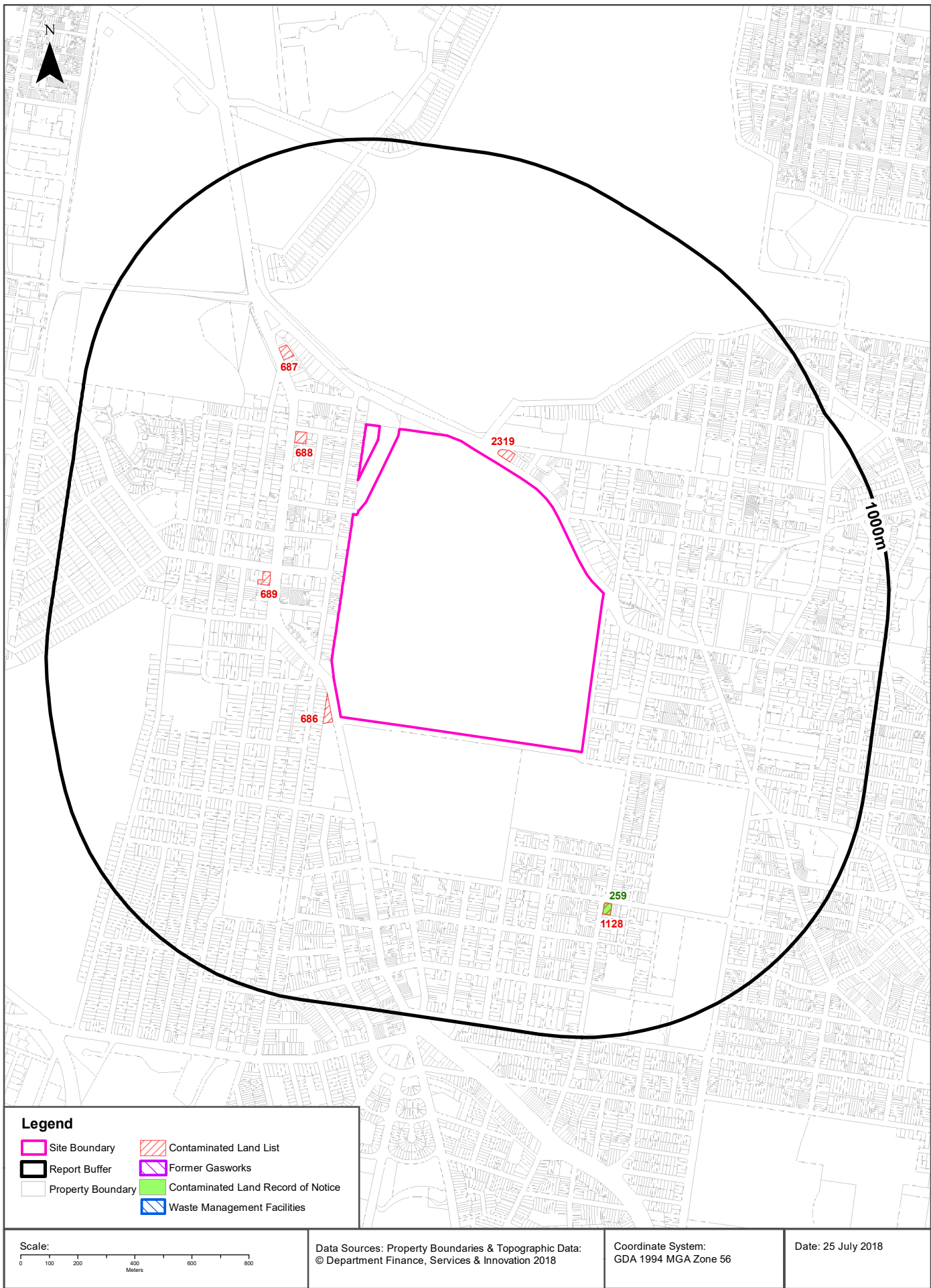
Aerial Imagery 2017

77 - 97 Alison Road, Randwick, NSW 2031



Contaminated Land & Waste Management Facilities

77-97 Alison Road, Randwick, NSW 2031



Contaminated Land & Waste Management Facilities

77-97 Alison Road, Randwick, NSW 2031

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
2319	Caltex Service Station	2 Alison Road	Randwick	Service Station	Regulation under CLM Act not required	Current EPA List	Premise Match	27m	North
686	Caltex Service Station	211-213 Anzac Parade	Kensington	Service Station	Regulation under CLM Act not required	Current EPA List	Premise Match	31m	South West
688	Former Ampol Service Station	76-82 Anzac Parade	Kensington	Service Station	Regulation under CLM Act not required	Current EPA List	Premise Match	200m	North West
689	7-Eleven Kensington	135 Anzac Parade	Kensington	Service Station	Regulation under CLM Act not required	Current EPA List	Premise Match	254m	West
687	Footpath adjacent to 10-20 Anzac Parade	10-20 Anzac Parade	Kensington	Service Station	Regulation under CLM Act not required	Current EPA List	Premise Match	350m	North West
1128	7-Eleven Service Station	126-130 Barker Street	Randwick		Contamination currently regulated under CLM Act	Current EPA List	Premise Match	533m	South East

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

EPA site management class	Explanation
Contamination being managed via the planning process (EP&A Act)	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation. The contamination of this site is managed by the consent authority under the Environmental Planning and Assessment Act 1979 (EP&A Act) planning approval process, with EPA involvement as necessary to ensure significant contamination is adequately addressed. The consent authority is typically a local council or the Department of Planning and Environment.
Contamination currently regulated under CLM Act	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation under the Contaminated Land Management Act 1997 (CLM Act). Management of the contamination is regulated by the EPA under the CLM Act. Regulatory notices are available on the EPA's Contaminated Land Public Record of Notices.
Contamination currently regulated under POEO Act	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation. Management of the contamination is regulated under the Protection of the Environment Operations Act 1997 (POEO Act). The EPA's regulatory actions under the POEO Act are available on the POEO public register.
Contamination formerly regulated under the CLM Act	The EPA has determined that the contamination is no longer significant enough to warrant regulation under the Contaminated Land Management Act 1997 (CLM Act). The contamination was addressed under the CLM Act.
Contamination formerly regulated under the POEO Act	The EPA has determined that the contamination is no longer significant enough to warrant regulation. The contamination was addressed under the Protection of the Environment Operations Act 1997 (POEO Act).
Contamination was addressed via the planning process (EP&A Act)	The EPA has determined that the contamination is no longer significant enough to warrant regulation. The contamination was addressed by the appropriate consent authority via the planning process under the Environmental Planning and Assessment Act 1979 (EP&A Act).
Ongoing maintenance required to manage residual contamination (CLM Act)	The EPA has determined that ongoing maintenance, under the Contaminated Land Management Act 1997 (CLM Act), is required to manage the residual contamination. Regulatory notices under the CLM Act are available on the EPA's Contaminated Land Public Record of Notices.

EPA site management class	Explanation
Regulation being finalised	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation under the Contaminated Land Management Act 1997. A regulatory approach is being finalised.
Regulation under the CLM Act not required	The EPA has completed an assessment of the contamination and decided that regulation under the Contaminated Land Management Act 1997 is not required.
Under assessment	The contamination is being assessed by the EPA to determine whether regulation is required. The EPA may require further information to complete the assessment. For example, the completion of management actions regulated under the planning process or Protection of the Environment Operations Act 1997. Alternatively, the EPA may require information via a notice issued under s77 of the Contaminated Land Management Act 1997 or issue a Preliminary Investigation Order.

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

Contaminated Land & Waste Management Facilities

77-97 Alison Road, Randwick, NSW 2031

Contaminated Land: Records of Notice

Record of Notices within the dataset buffer:

Map Id	Name	Address	Suburb	Notices	Area No	Location Confidence	Distance	Direction
259	7-Eleven Service Station	126-130 Barker Street	Randwick	8 current and 3 former	3257	Premise Match	533m	South East

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											

Waste Management Facilities Data Source: Geoscience Australia
Creative Commons 3.0 © Commonwealth of Australia <http://creativecommons.org/licenses/by/3.0/au/deed.en>

EPA PFAS Investigation Program

77-97 Alison Road, Randwick, NSW 2031

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
© State of New South Wales through the Environment Protection Authority

EPA Other Sites with Contamination Issues

77-97 Alison Road, Randwick, NSW 2031

EPA Other Sites with Contamination Issues

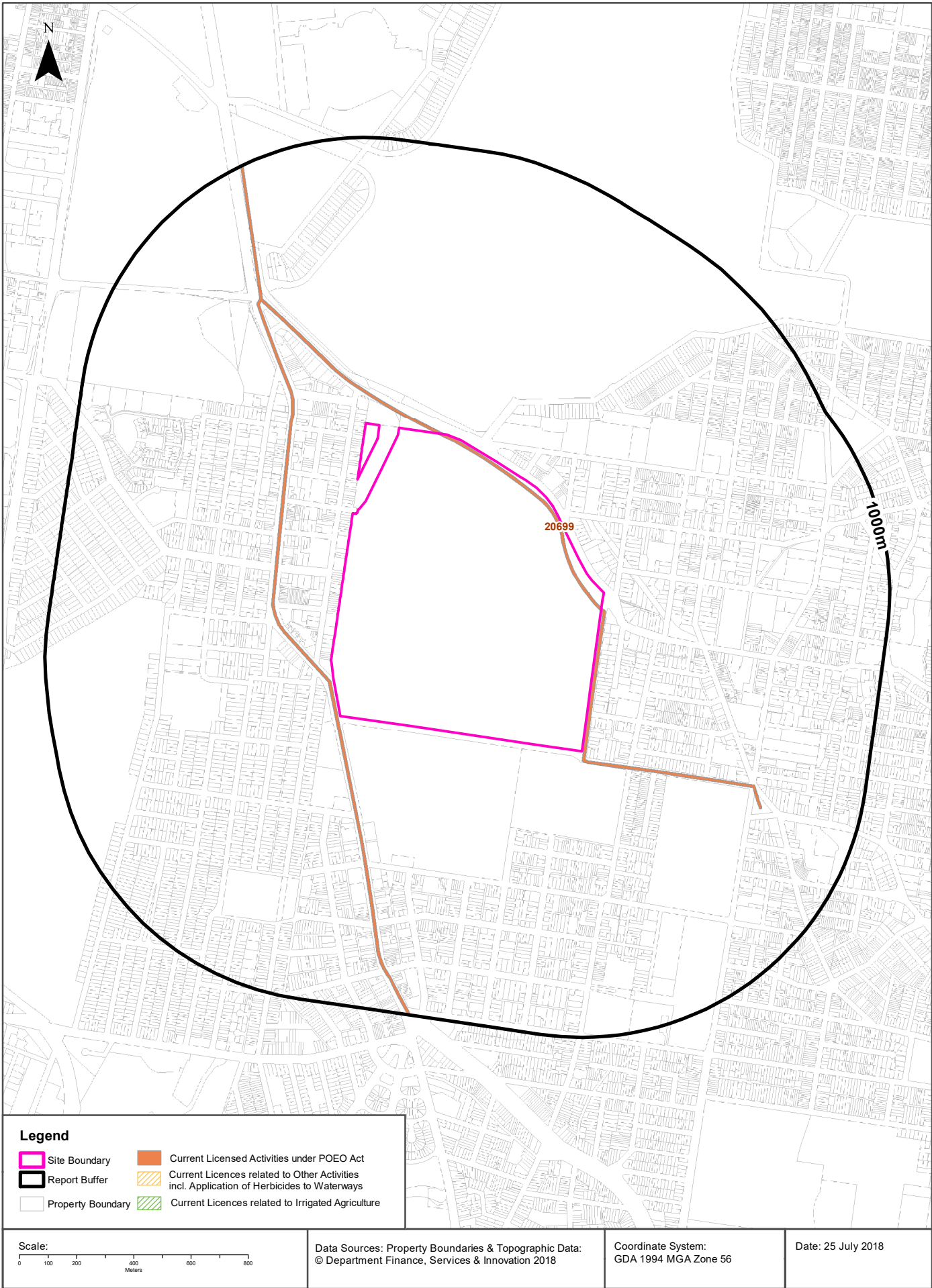
This dataset contains other sites identified on the EPA website as having contamination issues. This dataset currently includes:

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

Sites within the dataset buffer:

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

EPA Other Sites with Contamination Issues: Environment Protection Authority
© State of New South Wales through the Environment Protection Authority



EPA Activities

77-97 Alison Road, Randwick, NSW 2031

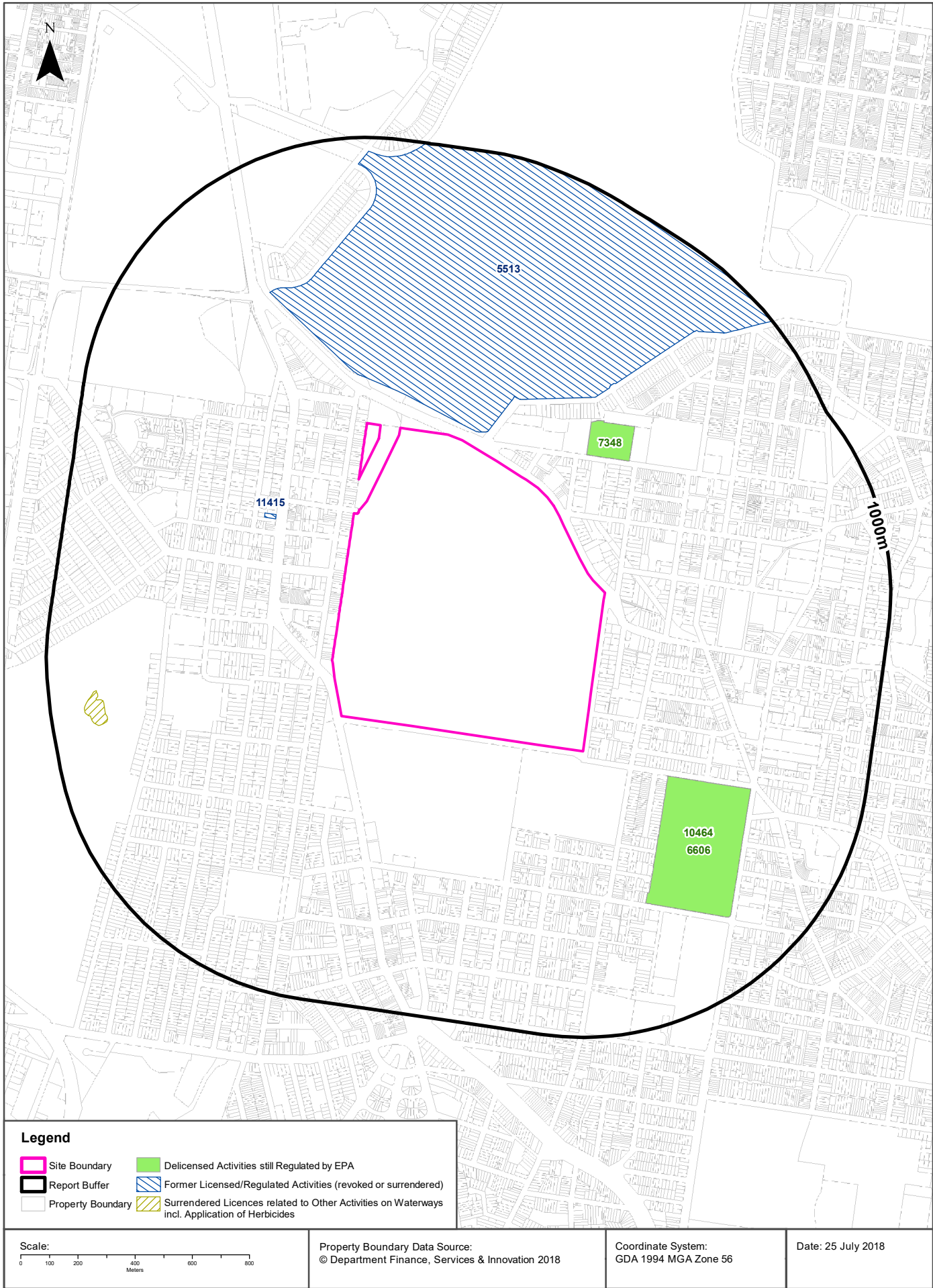
Licensed Activities under the POEO Act 1997

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
20699	ACCIONA INFRASTRUCTUR E AUSTRALIA PTY LTD	CBD and South East Light Rail	CBD and South East Light Rail Alignment and Ancillary Sites	SYDNEY	Land-based extractive activity	Road Match	0m	Onsite

POEO Licence Data Source: Environment Protection Authority

© State of New South Wales through the Environment Protection Authority



EPA Activities

77-97 Alison Road, Randwick, NSW 2031

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
7348	STATE TRANSIT AUTHORITY OF NSW	STATE TRANSIT AUTHORITY	36 KING ST	RANDWICK	Hazardous, Industrial or Group A Waste Generation or Storage	Premise Match	202m	North East
10464	P.O.W. HOSPITAL PTY LIMITED	PRINCE OF WALES PRIVATE HOSPITAL	Barker Street	RANDWICK	Hazardous, Industrial or Group A Waste Generation or Storage	Premise Match	309m	South East
6606	SOUTH EASTERN SYDNEY AND ILLAWARRA AREA HEALTH SERVICE	PRINCE OF WALES HOSPITAL	BARKER STREET	RANDWICK	Hazardous, Industrial or Group A Waste Generation or Storage	Premise Match	309m	South East

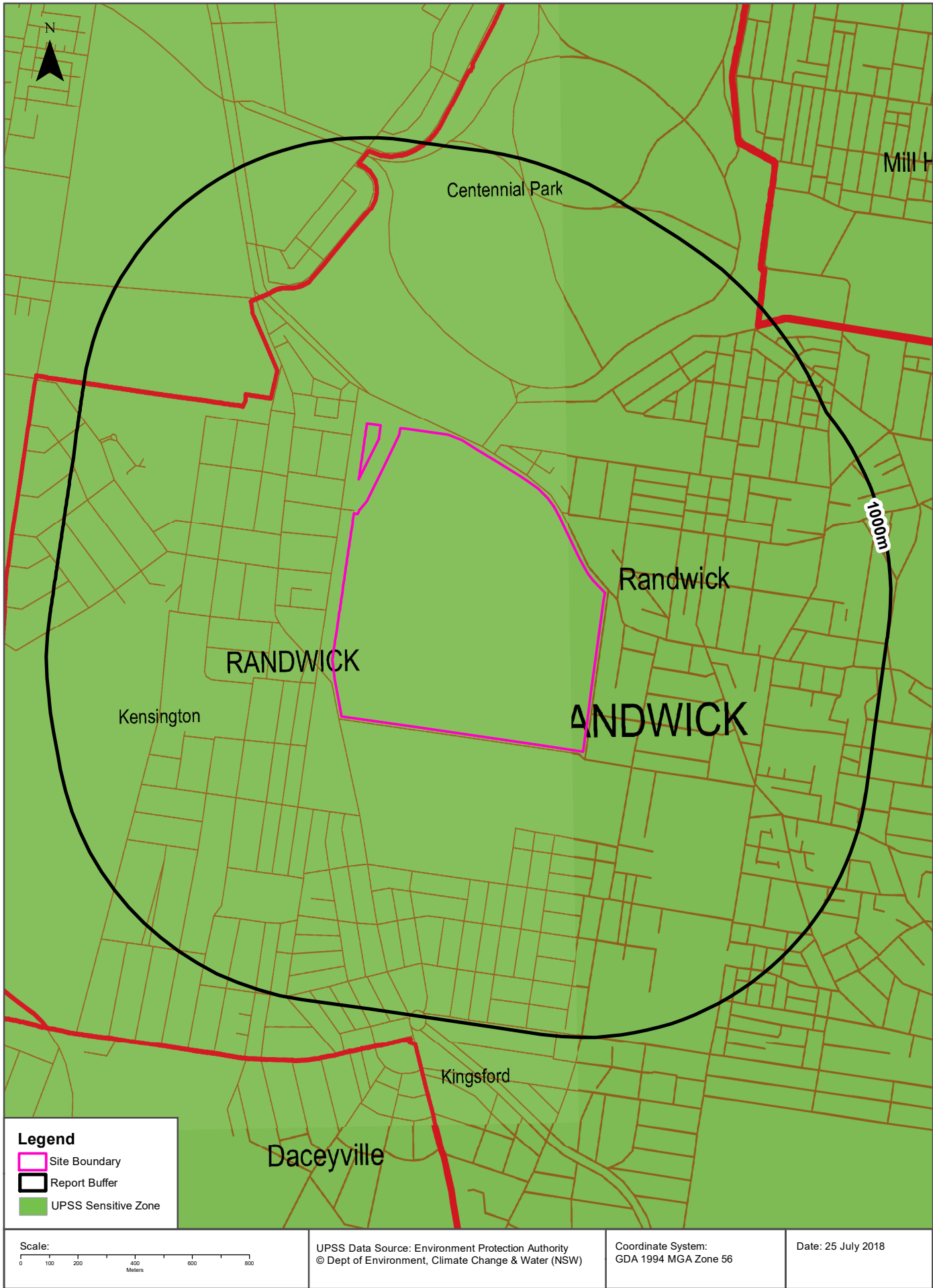
Delicensed Activities Data Source: Environment Protection Authority
© State of New South Wales through the Environment Protection Authority

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

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

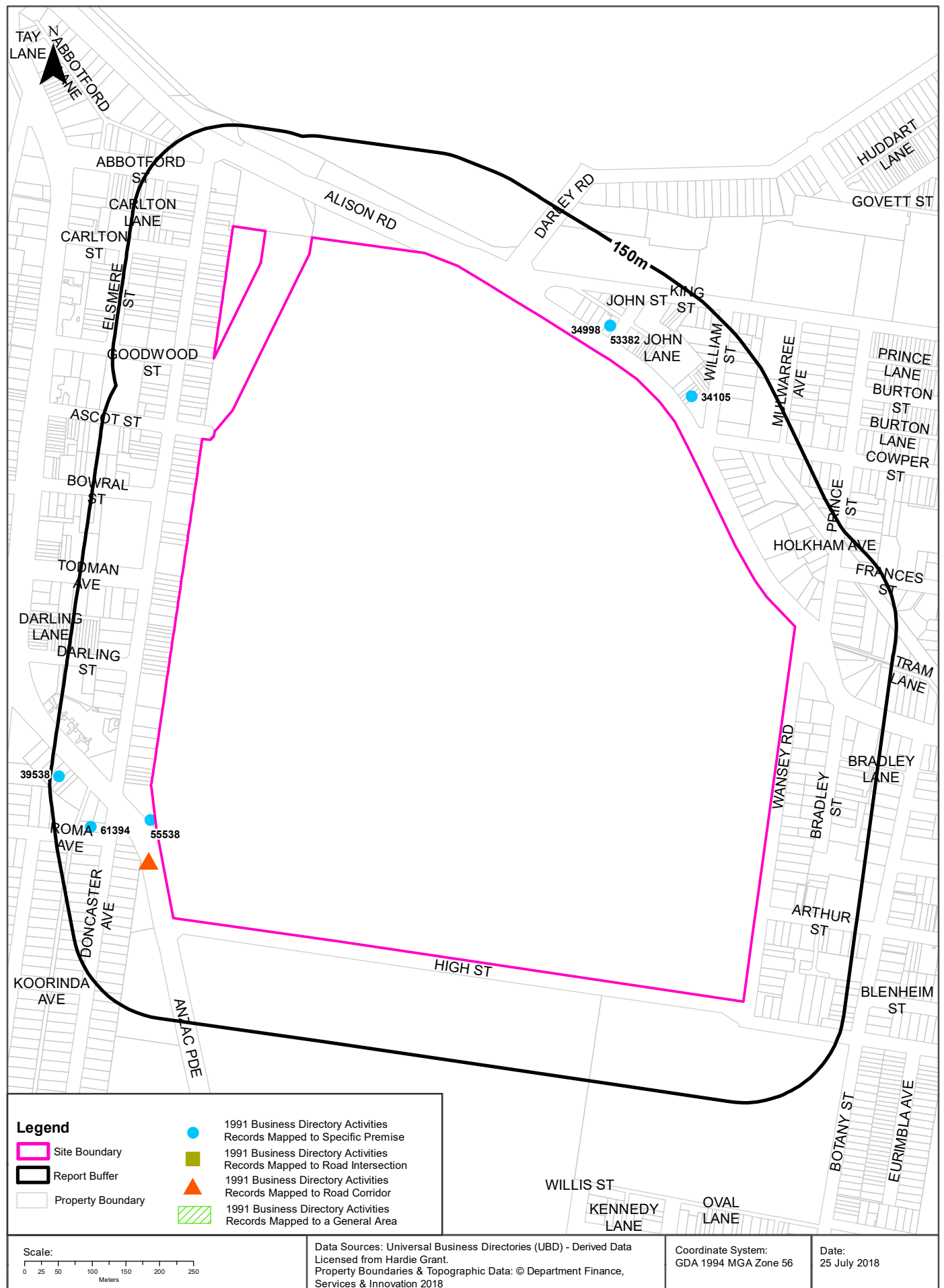
Licence No	Organisation	Location	Status	Issued Date	Activity	Loc Conf	Distance	Direction
5513	CENTENNIAL PARK AND MOORE PARK TRUST	Oxford Street, PADDINGTON, NSW 2021	Surrendered	21/06/2000	Other activities; Non-scheduled activity - Application of Herbicide(s)	General Area/ Suburb Match	49m	North
11415	DENWIL PTY LIMITED	Level 1, 91 Anzac Parade, KENSINGTON, NSW 2033	Surrendered	16/10/2001		Premise Match	267m	North West
6630	SYDNEY WEED & PEST MANAGEMENT PTY LTD	WATERWAYS THROUGHOUT NSW - PROSPECT, NSW, 2148	Surrendered		Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	805m	-
4653	LUHRMANN ENVIRONMENT MANAGEMENT PTY LTD	WATERWAYS THROUGHOUT NSW	Surrendered		Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	805m	-
4838	Robert Orchard	Various Waterways throughout New South Wales - SYDNEY NSW 2000	Surrendered		Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	805m	-

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



1991 Historical Business Directory Records

77-97 Alison Road, Randwick, NSW 2031



Historical Business Directories

77-97 Alison Road, Randwick, NSW 2031

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	Premise	Ref No.	Location Confidence	Distance to Feature Point	Direction
Motor Tuning Specialists	Kensington Auto Port, 300 Anzac Pde Kensington 2033	55538	Premise Match	7m	South West
Airconditioning Automotive	Alison Road Auto Port, 54 Alison Rd., Randwick 2031	34105	Premise Match	43m	North East
Motor Engineers	Petukh Sam Auto Service, 16 Alison Rd Randwick 2031	53382	Premise Match	43m	North East
Auto Electricians	Petukh, Sam Auto Service, 16 Alison Rd, Randwick 2031	34998	Premise Match	43m	North East
Saddlers	Brighton Saddlery, 113 Doncaster Ave Kensington 2033	61394	Premise Match	96m	South West
Clothing Mfrs &/or W/salers Shirt &/or Collar &/or Pyjama	Lotus Productions Pty. Ltd.,. 185 Anzac Pde., Kensington. 2033	39538	Premise Match	136m	West

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

1991 Business to Business Directory Records Road or Area Matches

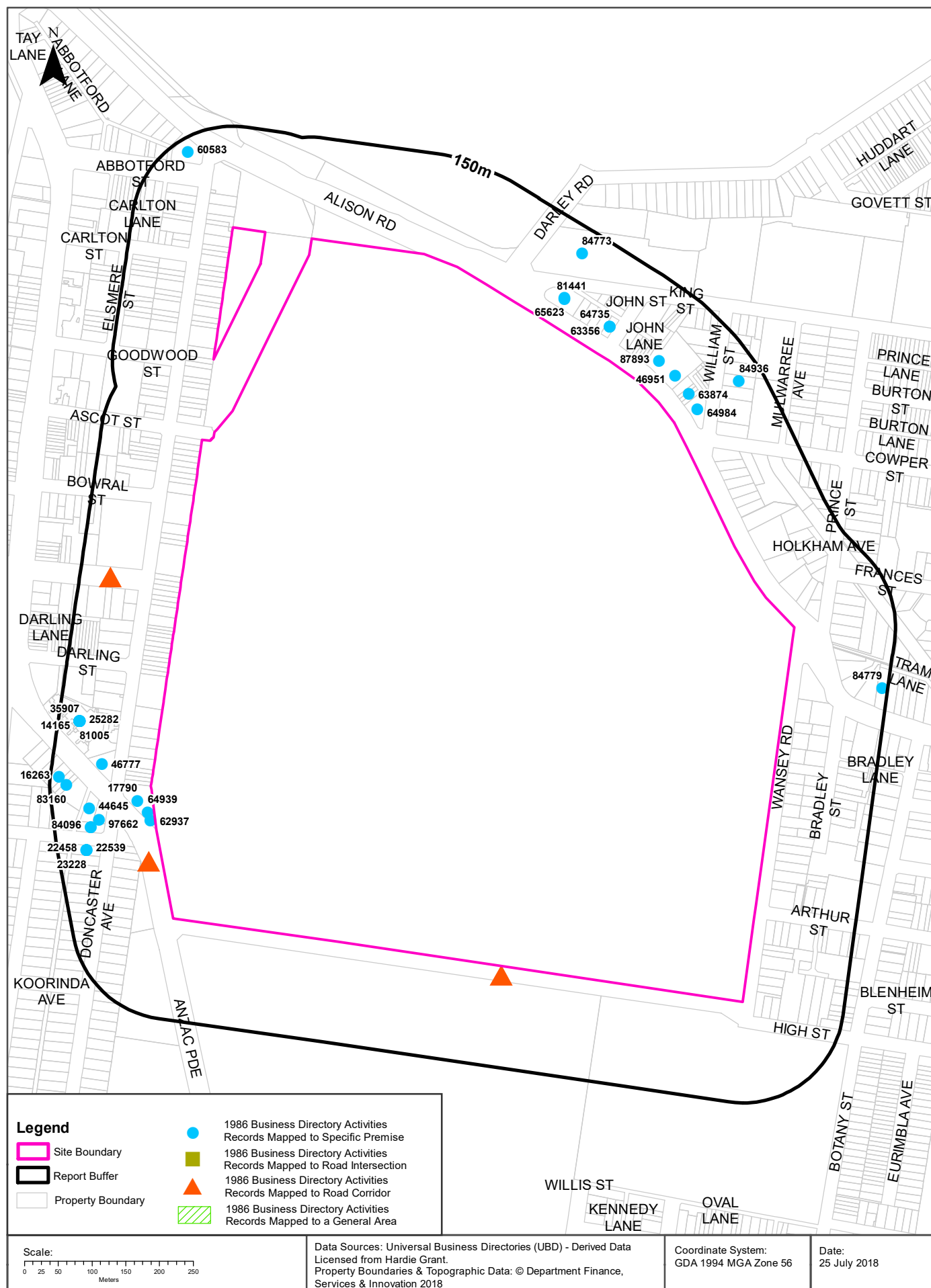
Records from the 1991 UBD Business to Business Directory, mapped to a road or an area, within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found, or the road has been renumbered since the directory was published:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
Motor Garages & Service Stations	Kensington Auto Port,. Anzac Pde, Kensington. 2033	53764	Road Match	0m

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

1986 Historical Business Directory Records

77-97 Alison Road, Randwick, NSW 2031



Historical Business Directories

77-97 Alison Road, Randwick, NSW 2031

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
MOTOR ELECTRICIANS.	Kensington Auto Port, 300 Anzac Pde, Kensington,.	62937	Premise Match	7m	South West
MOTOR GARAGES & SERVICE STATIONS.	Kensington Auto Port, 300 Anzac Pde., Kensington.	64939	Premise Match	10m	South West
CLOTHING-RETAIL-LADIES &/OR GIRLS WEAR.	Robyn's Nest, 278 Anzac Pde., Kensington.	17790	Premise Match	23m	South West
MOTOR GARAGES & SERVICE STATIONS.	Lightning Service Station, 72 Alison Rd., Randwick.	64984	Premise Match	40m	North East
RESTAURANTS.	Denwar Malaysian, 2 Alison Rd., Randwick.	81441	Premise Match	42m	North
MOTOR GARAGES & SERVICE STATIONS.	Total Randwick Service Station, 2 Alison Rd., Randwick.	65623	Premise Match	43m	North
MOTOR GARAGES & SERVICE STATIONS.	Alison Road Auto Port, 54 Alison Rd., Randwick.	63874	Premise Match	43m	North East
MOTOR GARAGES & SERVICE STATIONS.	George Anthony Mechanical Repairs, 16 Alison Rd., Randwick.	64735	Premise Match	43m	North East
MOTOR ENGINEERS.	George Anthony Mechanical Repairs, 16 Alison Rd., Randwick.	63356	Premise Match	43m	North East
SQUASH COURTS.	Racecourse Squash Centre, 36 Alison Rd., Randwick.	87893	Premise Match	43m	North East
HOTELS-LICENSED.	Racecourse Hotel, The, 42 Alison Rd., Randwick.	46951	Premise Match	45m	North East
HOTELS-LICENSED.	Hotel Doncaster, 272 Anzac Pde , Kensington.	46777	Premise Match	77m	West
VIDEO RECORDER &/OR CASSETTE SALES &/OR HIRE &/OR SERVICE.	Mega Video, 111C Doncaster Ave., Kensinton.	97662	Premise Match	83m	South West
HARDWARE MERCHANTS RETAIL.	Kensington Hardware, 201 Anzac Pde., Kensington.	44645	Premise Match	95m	South West
SADDLERS SUPPLIES.	Brighton Saddlery, 113 Doncaster Ave., Kensington.	84096	Premise Match	96m	South West
SADDLERS.	Brighton Saddlery, 113 Doncaster Ave., Kensington.	84077	Premise Match	96m	South West
DENTISTS.	Courtenay, A. P., 115 Doncaster Ave., Kensington.	22458	Premise Match	107m	South West
DENTISTS.	Donaldson, W. R., 115 Doncaster Ave., Kensington.	22524	Premise Match	107m	South West
DENTISTS.	Dunn, D., 115 Doncaster Ave , Kensington.	22539	Premise Match	107m	South West
DENTISTS.	Reeve, J. H., 115 Doncaster Ave., Kensington.	23228	Premise Match	107m	South West
SCHOOLS, COLLEGES - TECHNICAL.	Randwick Technical College, Darley St., Randwick.	84773	Premise Match	113m	North
SCHOOLS - KINDERGARTEN, DAY NURSERY.	Nursery Nook Kindergarten, 7A William St., Randwick,	84936	Premise Match	114m	North East
DRY CLEANERS & PRESSERS.	Doncaster Co-op Laundry, Doncaster Shopping Centre, 260 Anzac Pde., Kensington.	25282	Premise Match	118m	West
LAUNDRIES &/OR LAUNDRETTES.	Doncaster Co-op Laundry, Doncaster Shopping Centre, 260 Anzac Pde., Kensington.	51131	Premise Match	118m	West
CHEMISTS-PHARMACEUTICAL.	Doncaster Centre Pharmacy, Doncaster Shopping Centre, 260 Anzac Pde., Kensington.	14165	Premise Match	118m	West

Business Activity	Premise	Ref No.	Location Confidence	Distance to Feature Point	Direction
BUTCHERS-RETAIL.	Doncaster Meats, Doncaster Shopping Centre, 260 Anzac Pe.,	9832	Premise Match	118m	West
GROCERS-RETAIL.	Flemings, Doncaster Shopping Centre, 260 Anzac Pde., Kensington.	40649	Premise Match	118m	West
HAIRDRESSER LADIES &/OR BEAUTY SALONS	Taki's Hair Den, Doncaster Shopping Centre, 260 Anzac Pde., Kensington.	43263	Premise Match	118m	West
TAKE-AWAY FOODS.	Archies, Doncaster Shopping Centre, 260 Anzac Pde., Kensington.	90413	Premise Match	118m	West
RESTAURANTS.	Archies, Doncaster Shopping Centre, 260 Anzac Pde., Kensington.	81005	Premise Match	118m	West
DELICATESSENS.	Argy's, Doncaster Shopping Centre, 260 Anzac Pde., Kensington.	21524	Premise Match	118m	West
FRUITERERS &/OR GREENGROCERS.	Doncaster Fruit Market, Doncaster Shopping Centre, 240 Anzac Pde., Kensington.	35907	Premise Match	118m	West
RESTAURANTS.	Wong Shins Kee, 189 Anzac Pde., Kensington. -	83160	Premise Match	125m	West
MOTELS.	Glensynd Motel, 35 Alison Rd., Randwick.	60583	Premise Match	130m	North West
CLOTHING MFRS. &/OR W/SALERS.-SHIRT &/OR PYJAMA.	Lotus Productions Pty. Ltd., 185 Anzac Pde., Kensington.	16263	Premise Match	136m	West
SCHOOLS - KINDERGARTEN, DAY NURSERY.	Alis-N-Wonderland Kindergarten, 122 Alison Rd., Randwick.	84779	Premise Match	141m	East

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

1986 Business to Business Directory Records Road or Area Matches

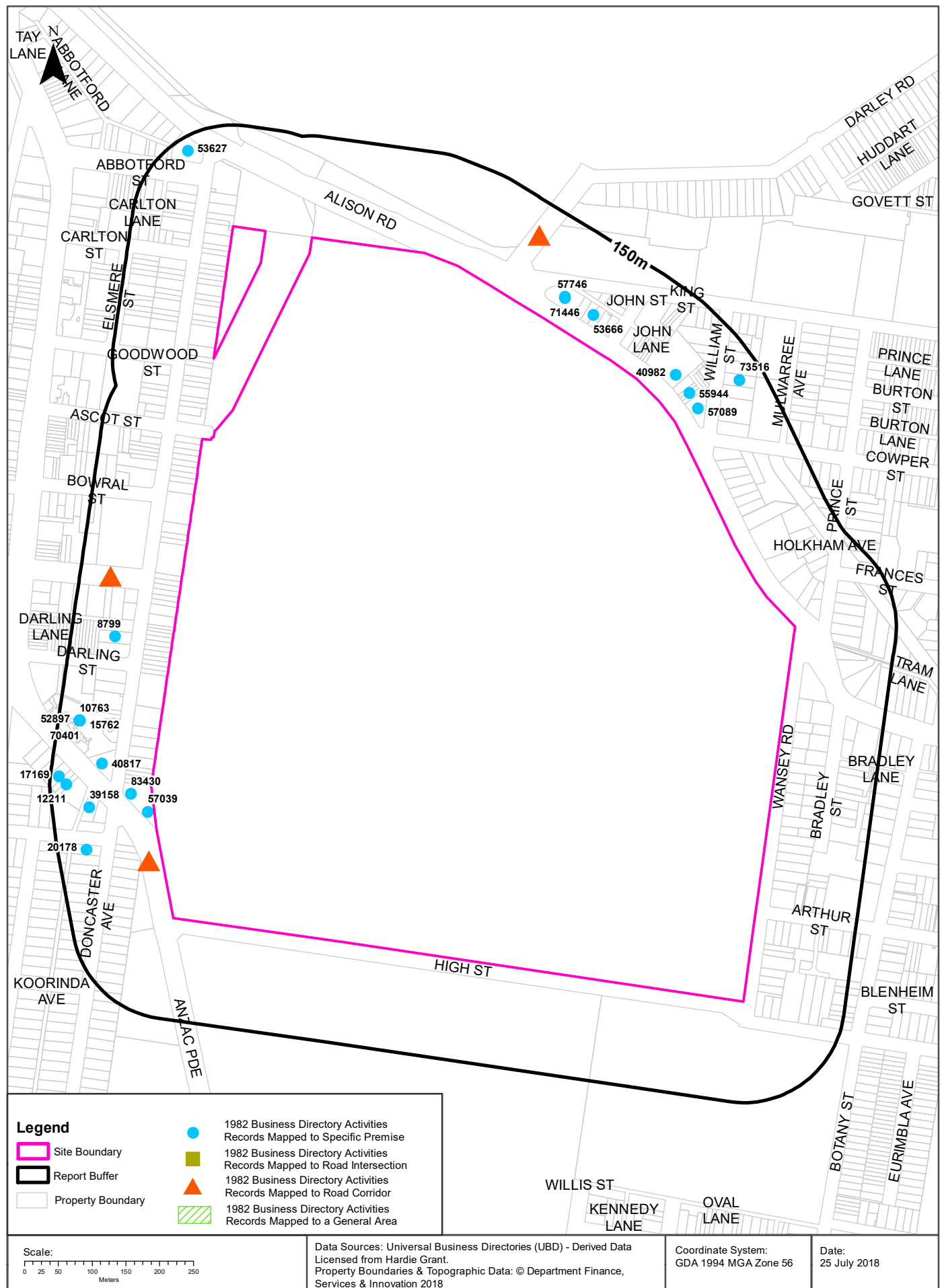
Records from the 1986 UBD Business to Business Directory, mapped to a road or an area, within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found, or the road has been renumbered since the directory was published:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
MEDICAL PRACTITIONERS.	Donnellan, M. J., 65 High St., Randwick.	54581	Road Match	0m
CLUBS &/OR SPORTING BODIES.	Moore Park Golf Club, Anzac Pde., Kensington.	18952	Road Match	0m
MOTOR GARAGES & SERVICE STATIONS.	Vasilas, J. & S. & H. Pty. Ltd. Esso Self Serve, Anzac Pde., Kensington.	65666	Road Match	0m
CONTAINER TRANSPORT SERVICES.	Brambles Seacargo Division, Todman Ave., Waterloo.	20191	Road Match	60m
FREIGHT FORWARDERS.	Brambles Seacargo Division, Todman Ave., Waterloo.	35382	Road Match	60m
TOBACCO PROCESSORS.	Wills, W. D. & H. O. Australia Ltd., Todman Ave., Kensington.	93708	Road Match	60m

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

1982 Historical Business Directory Records

77-97 Alison Road, Randwick, NSW 2031



Historical Business Directories

77-97 Alison Road, Randwick, NSW 2031

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
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	Kensington Auto Port. 300 Anzac Pde Kensington. 2033.	57039	Premise Match	10m	South West
VETERINARY SURGEONS. (V2000)	Baker, K. D., 274 Anzac Pde., Kensington. 2033.	83430	Premise Match	31m	South West
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	Lightning Service Station, 72 Alison Rd., Randwick. 2031.	57089	Premise Match	40m	North East
RESTAURANTS. (R5180)	Odd's On, 2 Alison Rd., Randwick. 2031.	71446	Premise Match	42m	North
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	Total Randwick Service Station, 2 Alison Rd., Randwick. 2031.	57746	Premise Match	43m	North
MOTELS. (M4620)	Randwick House Motel, 2A Alison Rd., Randwick. 2031.	53666	Premise Match	43m	North
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	Alison Road Auto Port, 54 Alison Rd., Randwick. 2031.	55944	Premise Match	43m	North East
HOTELS - LICENSED. (H7150)	Racecourse Hotel, The, 42 Alison Rd., Randwick, 2031.	40982	Premise Match	45m	North East
HOTELS - LICENSED. (H7150)	Hotel Doncaster, 272 Anzac Pde., Kensington. 2033.	40817	Premise Match	77m	West
BRICKLAYERS. (B6260)	Morgan, D, 85 Doncaster Ave., Kensington. 2033.	8799	Premise Match	85m	West
HARDWARE MERCHANTS - RETAIL (H2050)	Kensington Hardware, 201 Anzac Pde., Kensington. 2033.	39158	Premise Match	95m	South West
DENTISTS. (D1800)	Donaldson, W. R., 115 Doncaster Ave Kensington. 2033.	20178	Premise Match	107m	South West
SCHOOLS - KINDERGARTEN, DAY.NURSERY. (S1470)	Nursery Nook Kindergarten, 7A William St., Randwick. 2031.	73516	Premise Match	114m	North East
CHEMISTS - PHARMACEUTICAL. (C4110)	Thrift Pharmacy, Doncaster Shopping Centre, 260 Anzac Pde,Kensington. 2033.	15762	Premise Match	118m	West
MIXED BUSINESSES. (M4060)	Asian Variety Store, Doncaster Shopping Centre, 260 Anzac Pde.,Kensington. 2033.	52897	Premise Match	118m	West
BUTCHERS - RETAIL. (B8040)	Doncaster Meats, Doncaster Shopping Centre. 260 Anzac Pde., Kensington. 2033.	10763	Premise Match	118m	West
BEAUTY SALONS &/OR LADIES HAIRDRESSERS. (B2000)	Taki's Hair Den, Doncaster Shopping Centre, 260 Anzac Pde.,Kensington. 2033.	6614	Premise Match	118m	West
TAKE-AWAY FOODS. (T0235)	Archies, Doncaster Shopping Centre, 260 Anzac Pde , Kensington.2033.	78115	Premise Match	118m	West
RESTAURANTS. (R5180)	Archies, Doncaster Shopping Centre, 260 Anzac Pde., Kensington.2033.	70401	Premise Match	118m	West
DELICATESSENS, (D1250)	Argy's, Doncaster Shopping Centre, 260 Anzac Pde., Kensington.2033.	19237	Premise Match	118m	West

Business Activity	Premise	Ref No.	Location Confidence	Distance to Feature Point	Direction
CAFES, TEA ROOMS &/OR COFFEELOUNGES. (C0345)	Elite Cafe, 189 Anzac Pde , Kensington. 2033.	12211	Premise Match	125m	West
MOTELS. (M4620)	Glensynd Motel, 35 Alison Rd., Randwick. 2031.	53627	Premise Match	130m	North West
CLOTHING - UNDERWEAR MFRS.&/OR W/SALERS. (C5703)	Lotus Productions Pty. Ltd., 185 Anzac Pde., Kensington. 2033.	17169	Premise Match	136m	West

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

1982 Business Directory Records Road or Area Matches

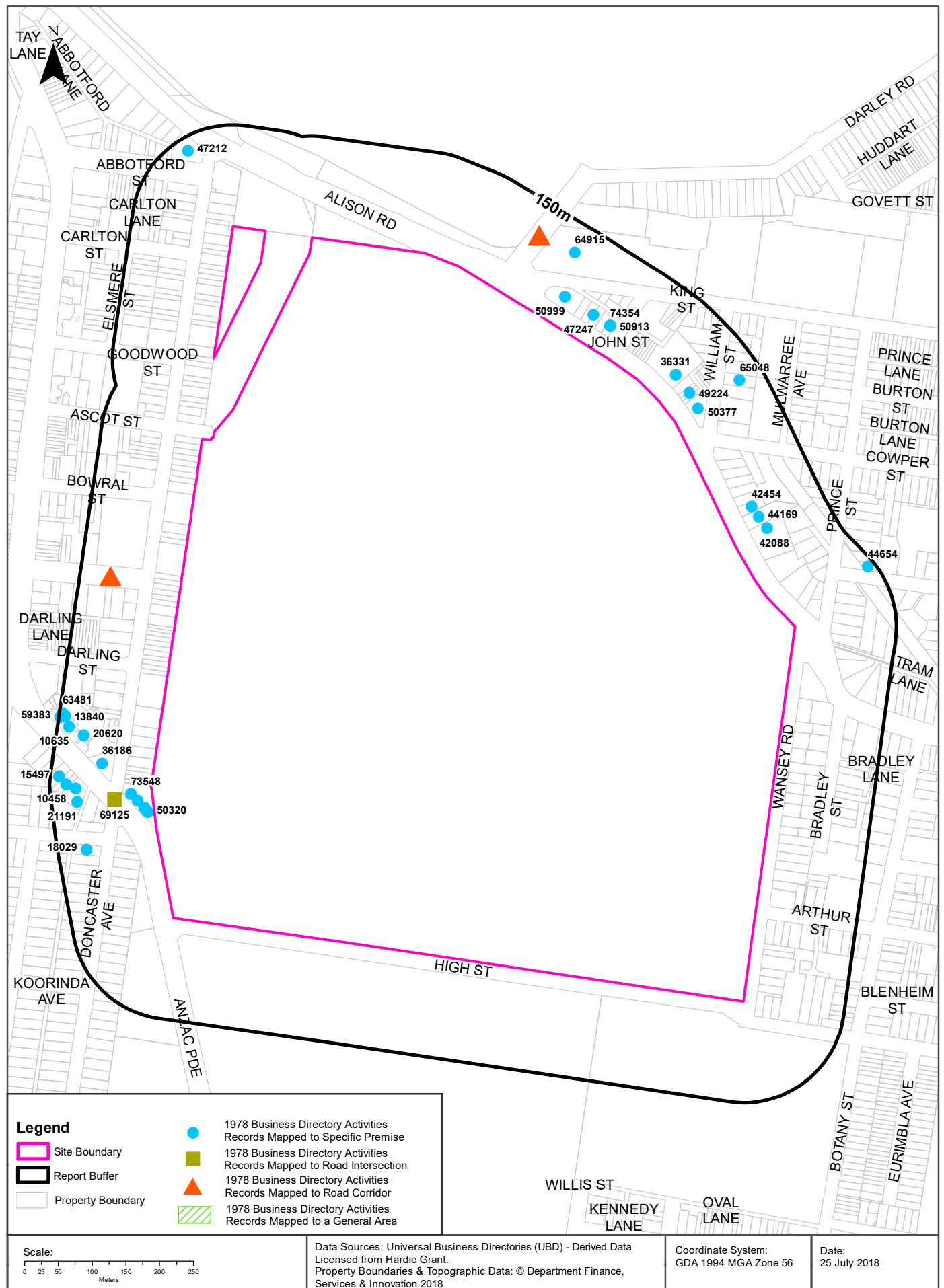
Records from the 1982 UBD Business Directory, mapped to a road or an area, within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found, or the road has been renumbered since the directory was published:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
CLUBS &/OR SPORTING BODIES.(C5730)	Moore Park Golf Club, Anzac Pde., Kensington. 2033.	17279	Road Match	0m
SCHOOLS, COLLEGES-TECHNICAL, (S1425)	Randwick Technical College, Darley St., Randwick. 2031.	73368	Road Match	44m
CONTAINER TRANSPORT SERVICES. (C7485)	Brambles Seacargo Division, Todman Ave., Waterloo. 2017.	17879	Road Match	60m
FREIGHT FORWARDERS. (F6185)	Brambles Seacargo Division, Todman Ave., Waterloo. 2017.	32983	Road Match	60m
TOBACCO PROCESSORS. (T5125)	Wills, W. D. & H. O. Australia Ltd., Todman Ave., Kensington. 2033.	80484	Road Match	60m

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

1978 Historical Business Directory Records

77-97 Alison Road, Randwick, NSW 2031



Historical Business Directories

77-97 Alison Road, Randwick, NSW 2031

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
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Kensington Auto Port, 300 Anzac Pde., Kensington.	50320	Premise Match	10m	South West
BUILDERS &/OR BUILDING CONTRACTORS.	Clovelly Constructions, 284 Anzac Pde., Kensington.	7632	Premise Match	14m	South West
BUILDING ALTERATIONS &/OR ' REPAIRS.	Clovelly Constructions, 284 Anzac Pde., Kensington.	8388	Premise Match	14m	South West
CHIROPRACTORS.	Cashmere. M., 278 Anzac Pde., Kensington.	14234	Premise Match	23m	South West
VETERINARY SURGEONS.	Baker, K. D., 274 Anzac Pde., Kensington.	73548	Premise Match	31m	South West
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Lightning Service Station, 72 Alison Rd., Randwick.	50377	Premise Match	40m	North East
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Total Service Station, 2 Alison Rd., Randwick.	50999	Premise Match	43m	North
MOTELS.	Randwick House Motel. 2 A Alison Rd., Randwick.	47247	Premise Match	43m	North
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Alison Road Auto Port, 54 Alison Rd., Randwick.	49224	Premise Match	43m	North East
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Swanson Service Station, 16 Alison Rd., Randwick.	50913	Premise Match	43m	North East
WELDERS-ELECTRIC &/OR OXY.	Swanson Service Station, 16 Alison Rd., Randwick.	74354	Premise Match	43m	North East
MOTOR ACCESSORIES DEALERS.	Swanson Service Station, 16 Alison Rd., Randwick.	47513	Premise Match	43m	North East
HOTELS-LICENSED.	Racecourse Hotel, The, 42 Alison Rd., Randwick.	36331	Premise Match	45m	North East
MEDICAL PRACTITIONERS.	Clifford. K.D.H., 90 Alison Rd., Randwick.	42454	Premise Match	47m	North East
MEDICAL PRACTITIONERS.	Scarf. C M., 92 Alison Rd., Randwick.	44169	Premise Match	50m	North East
MEDICAL PRACTITIONERS.	Baker, R.S., 94 Alison Rd., Randwick.	42088	Premise Match	54m	East
TAILORS-LADIES &/OR GENTS.	Shapiro, A., 111c Doncaster Ave., Kensington.	69125	Road Intersection	56m	South West
HOTELS-LICENSED.	Hotel Doncaster, 272 Anzac Pde., Kensington.	36186	Premise Match	77m	West
SCHOOLS, COLLEGES-TECHNICAL.	Randwick Technical College, Darley St., Randwick.	64915	Premise Match	107m	North
DENTISTS.	Donaldson, W. R., 115 Doncaster Ave., Kensington.	18029	Premise Match	107m	South West
DRESSMAKERS &/OR COSTUMIERS.	Ramos, C., 262 Anzac Pde., Kensington.	20620	Premise Match	109m	West
DYERS &/OR BLEACHERS-TRADE.	Luton Dyeworks Pty. Ltd., 197 Anzac Pde., Kensington.	21191	Premise Match	112m	West
BUTCHERS-RETAIL.	Thompson. D., 193 Anzac Pde., Kensington.	9984	Premise Match	112m	West
SCHOOLS-KINDERGARTEN, DAY NURSERY.	Nursery Nook Kindergarten, 7a William St., Randwick.	65048	Premise Match	114m	North East
CAFES, TEA ROOMS &/OR COFFEE LOUNGES.	Elite Cafe. 189 Anzac Pde., Kensington.	10458	Premise Match	125m	West

Business Activity	Premise	Ref No.	Location Confidence	Distance to Feature Point	Direction
MOTELS.	Glensynd Motel. 35 Alison Rd.. Randwick.	47212	Premise Match	130m	North West
CAFES, TEA ROOMS &/OR COFFEE LOUNGES.	Sun Sung Cafe. 258 Anzac Pde., Kensington.	10635	Premise Match	133m	West
CLOTHING - UNDERWEAR MFRS. &/OR W/SALERS.	Lotus Productions Pty. Ltd., 185 Anzac Pde., Kensington.	15497	Premise Match	136m	West
MEDICAL PRACTITIONERS.	Williams, R., 2 Francis St., Randwick.	44654	Premise Match	140m	East
CHEMISTS-PHARMACEUTICAL.	Snelling. E., 250 Anzac Pde., Kensington.	13840	Premise Match	141m	West
PHOTOGRAPHIC SUPPLIES.	Snelling E.. 250 Anzac Pde., Kensington	56834	Premise Match	141m	West
RESTAURANTS.	Willow Restaurant, 248 Anzac Pde., Kensington.	63481	Premise Match	146m	West
PRINTERS-LETTERPRESS.	Clarendon Press Pty. Ltd.. The, 256 Anzac Pde., Kensington.	58951	Premise Match	148m	West
PRINTERS-LITHOGRAPHIC	Clarendon Press Pty. Ltd.. The, 256 Anzac Pde., Kensington.	59383	Premise Match	148m	West

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

1978 Business Directory Records Road or Area Matches

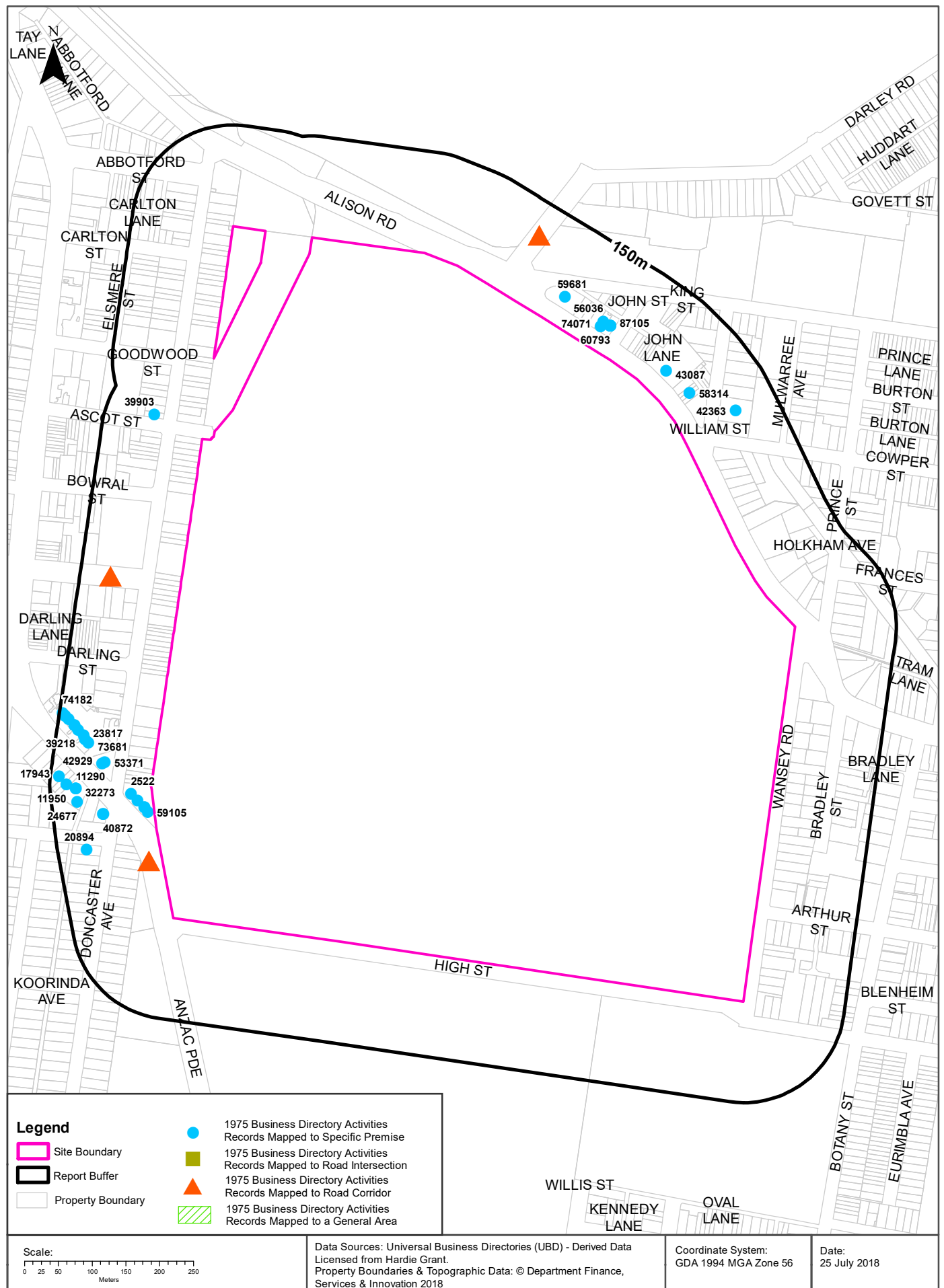
Records from the 1978 UBD Business Directory, mapped to a road or an area, within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found, or the road has been renumbered since the directory was published:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
MIXED BUSINESSES.	Mangos. K.. Darley Rd.. Randwick.	46875	Road Match	44m
CONTAINER REPAIR & STORAGE.	Brambles Seacargo Division, Todman Ave., Waterloo.	16141	Road Match	60m
FREIGHT FORWARDERS.	Brambles Seacargo Division, Todman Ave., Waterloo.	29874	Road Match	60m
TOBACCO MERCHANTS-W/SALE.	Tobacco Products Distributors (Aust.) Pty. Ltd., Todman Ave., Kensington.	71075	Road Match	60m
TOBACCO PROCESSORS.	Wills, W. D. & H. O. Australia Ltd., Todman Ave., Kensington.	71080	Road Match	60m

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

1975 Historical Business Directory Records

77-97 Alison Road, Randwick, NSW 2031



Historical Business Directories

77-97 Alison Road, Randwick, NSW 2031

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
MOTOR GARAGES &/OR ENGINEERS.	Kensington Auto Port. 300 Anzac Pde., Kensington.	59105	Premise Match	10m	South West
BUILDERS &/OR BUILDING CONTRACTORS.	Clovelly Constructions, 284 Anzac Pde., Kensington	8401	Premise Match	14m	South West
BUILDING ALTERATIONS &/OR REPAIRS.	Clovelly Constructions. 284 Anzac Pde., Kensington.	9448	Premise Match	14m	South West
CHIROPRACTORS.	Cashmere. M., 278 Anzac Pde., Kensington.	16358	Premise Match	23m	South West
ANTIQUE DEALERS.	A Delightful Muddle. 274 Anzac Pde., Kensington.	2522	Premise Match	31m	South West
RESTAURANTS.	Randwick Travel Terminus Licensed Restaurant, 14 Alison Rd., Randwick.	74071	Premise Match	35m	North East
HOTELS-LICENCED	Racecourse Hotel, The, 42 Alison Rd., Randwick	43087	Premise Match	39m	North East
MOTELS	Randwick House Motel. 2A Alison Rd., Randwick.	56036	Premise Match	42m	North East
MOTOR GARAGES &/OR ENGINEERS.	Total Service Station. 2 Alison Rd., Randwick.	59681	Premise Match	43m	North
MOTOR GARAGES &/OR ENGINEERS.	Alison Road Auto Port, 54 Alison Rd., Randwick.	58314	Premise Match	43m	North East
MOTOR PAINTERS.	G. & N. Smash Repairs, 16 Alison Rd Randwick.	60134	Premise Match	43m	North East
WELDERS., Electric &/OR OXY.	Swanson Service Station, 16 Alison Rd., Randwick.	87105	Premise Match	43m	North East
MOTOR GARAGES &/OR ENGINEERS.	Swanson Service Station. 16 Alison Rd., Randwick.	59607	Premise Match	43m	North East
MOTOR PANEL BEATERS.	G. & N. Smash Repairs, 16 Alison Rd., Randwick.	60793	Premise Match	43m	North East
MOTOR ACCESSORIES DEALERS.	Swanson Service Station. 16 Alison Rd., Randwick.	56305	Premise Match	43m	North East
MILK, FRUIT JUICE BARS &/OR CONFECTIONERS.	Doncaster Junction, 270 Anzac Pde., Kensington.	53371	Premise Match	73m	West
TAILORS., LADIES &/OR GENTS.	Shapiro, A. 111c Doncaster Ave., Kensington.	81723	Premise Match	75m	South West
HAIRDRESSERS-GENTS.	Sam's Hairdresser, 111B Doncaster Ave., Kensington	40872	Premise Match	76m	South West
HOTELS-LICENCED	Hotel Doncaster, 272 Anzac Pde., Kensington.	42929	Premise Match	77m	West
GROCERS-RETAIL	Sun, C., 57 Doncaster Ave., Kensington.	39903	Premise Match	79m	North West
HOMES &/OR INSTITUTIONS.	Roma, 9 William St., Randwick.	42363	Premise Match	87m	North East
RESTAURANTS.	Doncaster Theatre Restaurant, 266 Anzac Pde., Kensington.	73681	Premise Match	101m	West
DENTISTS.	Donaldson, W. R., 115 Doncaster Ave., Kensington.	20894	Premise Match	107m	South West
GROCERS-RETAIL	Citumanis Kensington Grocery, 264 Anzac Pde., Kensington.	39218	Premise Match	107m	West
DRESSMAKERS &/OR COSTUMIERS.	Ramos, C., 262 Anzac Pde., Kensington.	23817	Premise Match	109m	West
DYERS &/OR BLEACHERS-TRADE	Luton Dye works Pty. Ltd., 197 Anzac Pde., Kensington	24677	Premise Match	112m	West

Business Activity	Premise	Ref No.	Location Confidence	Distance to Feature Point	Direction
BUTCHERS-RETAIL	Thompson, D., 193 Anzac Pde., Kensington.	11290	Premise Match	112m	West
FISHMERCHANTS-RETAIL	Australian Fish Bar 191 Anzac Pde., Kensington.	32273	Premise Match	112m	West
CAFES, TEA ROOMS &/OR COFFEE LOUNGES.	Sun Sung Cafe. 258 Anzac Pde., Kensington.	12297	Premise Match	119m	West
PRINTERS-LITHOGRAPHIC (OFFSET).	Clarendon Press Pty. Ltd., (The), 256 Anzac Pde., Kensington.	69836	Premise Match	125m	West
PRINTERS-LETTERPRESS.	Clarendon Press Pty. Ltd., (The) 256 Anzac Pde., Kensington.	69367	Premise Match	125m	West
CAFES, TEA ROOMS &/OR COFFEE LOUNGES.	Elite Cafe, 189 Anzac Pde., Kensington.	11950	Premise Match	125m	West
MILK, FRUIT JUICE BARS &/OR CONFECTIONERS.	Waratah Milk Bar, (The), 252 Anzac Pde., Kensington.	53951	Premise Match	135m	West
CLOTHING-UNDERWEAR MFRS &/OR W/SALERS	Lotus Productions Pty. Ltd., 185 Anzac Pde., Kensington.	17943	Premise Match	136m	West
PHOTOGRAPHIC SUPPLIES.	Snelling, E., 250 Anzac Pde., Kensington	66992	Premise Match	141m	West
CHEMISTS-PHARMACEUTICAL	Snelling, E., 250 Anzac Pde., Kensington.	15917	Premise Match	141m	West
RESTAURANTS.	Willow Restaurant, 248 Anzac Pde., Kensington.	74182	Premise Match	146m	West

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

1975 Business Directory Records Road or Area Matches

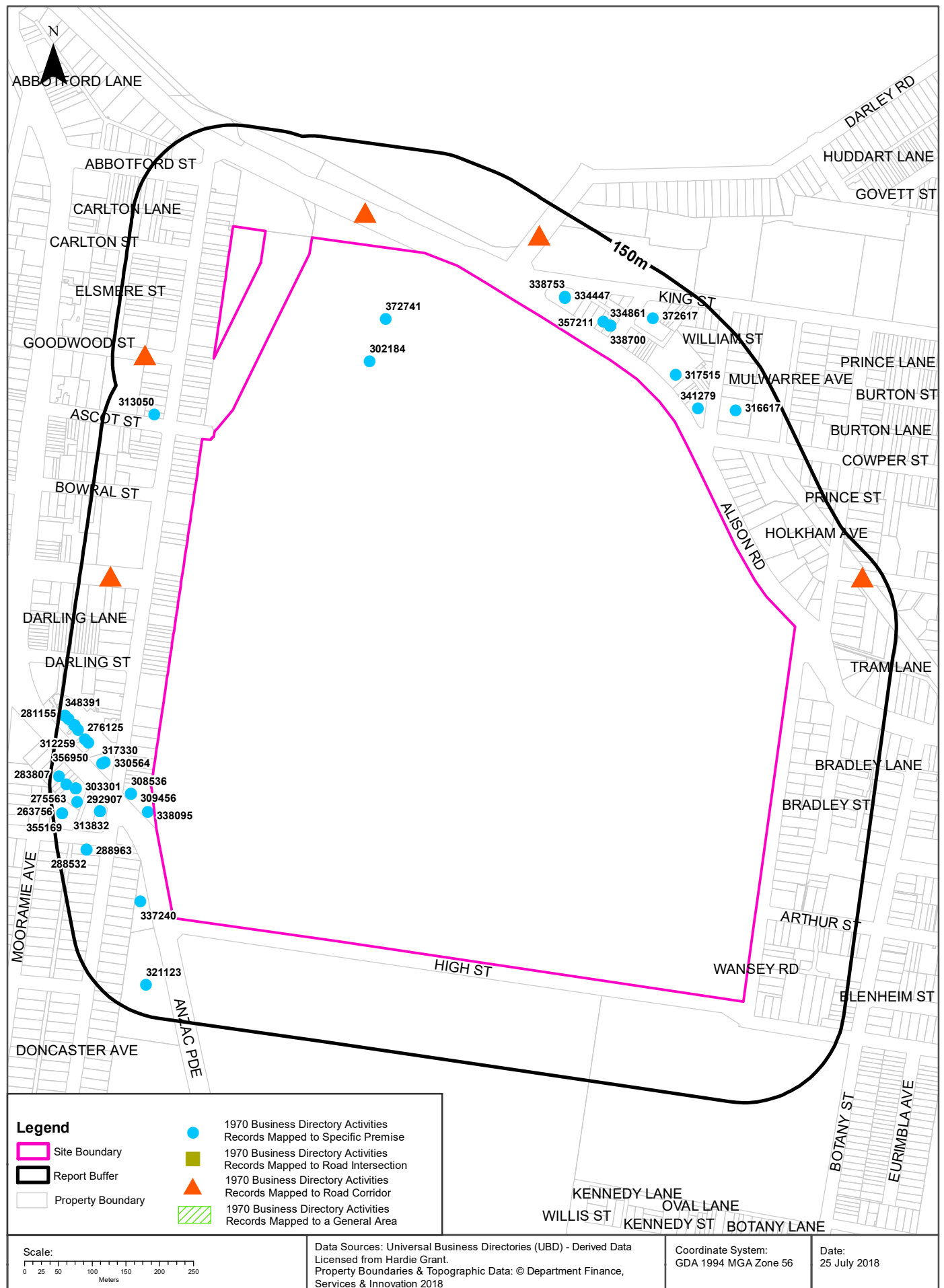
Records from the 1975 UBD Business Directory, mapped to a road or an area, within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found, or the road has been renumbered since the directory was published:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
PROPERTY MANAGEMENT.	Forsyth & Jones Pty. Ltd., 334a Anzac Pde., Kingsford.	70616	Road Match	0m
SPORTS GOODS RETAILERS.	Whiting, F., 334 Anzac Pde., Kingsford.	79144	Road Match	0m
SCREEN PROCESS PRINTERS	Associated Display Pty. Ltd., 299 Darley Rd., Randwick	76199	Road Match	44m
ADVERTISING-DISPLAY SPECIALISTS.	Associated Display Pty. Ltd., 299 Darley Rd., Randwick.	1164	Road Match	44m
TOBACCO MERCHANTS., W/SALE.	Tobacco Products Distributors (Aust.) Pty. Ltd., Todman Ave., Kensington.	83602	Road Match	60m
CIGARETTE MFRS. &/OR W/SALERS.	Wills, W. D. & H. O. (Australia) Ltd. Raleigh Park, Todman Ave. Kensington	16413	Road Match	60m
TOBACCO PROCESSORS.	Wills. W. D. & H. O. Australia Ltd., Todman Ave., Kensington	83607	Road Match	60m

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

1970 Historical Business Directory Records

77-97 Alison Road, Randwick, NSW 2031



Historical Business Directories

77-97 Alison Road, Randwick, NSW 2031

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
FARRIERS (F070)	Higgins,F.J.,Randwick Racecourse	302184	Premise Match	0m	Onsite
VETERINARY SURGEONS (V150)	McFadden,W.J.,Australian Jockey Club,Randwick Racecourse,Alison Rd.,Randwick	372741	Premise Match	0m	Onsite
MOTOR GARAGES & ENGINEERS(M6S6)	Kensington Auto Port, 300 Anzac Pde.KENSINGTON	338095	Premise Match	10m	South West
CARPET & FLOOR COVERING RETAILERS &/OR SPECIALISTS (C135)	Gillies, H.I., Bondi Carrying Co. 274 Anzac Pde., Kensington	277749	Premise Match	31m	South West
FURNISHINGS-SOFT-RETAIL (F690)	Gillies,H.I.,Bondi Carrying Co. 274 Anzac Pde., Kensington	308536	Premise Match	31m	South West
FURNITURE-HOUSEHOLD-RETAILERS RETAILERS (F740)	Gillies,H.I.,Bondi Carrying Co./ 274 Anzac Pde.,Kensington	309456	Premise Match	31m	South West
MOTOR SERVICE STATIONS-PETROL,OIL,Etc. (M716)	Lightning Service Station, 72 Alison Rd.RANDWICK	341279	Premise Match	40m	North East
MOTELS (M442)	Randwick House Motel, 2 Alison Rd., Randwick	334447	Premise Match	42m	North
RESTAURANTS (R320)	Randwick Travel Terminus Licensed Restaurant, 14 Alison Rd., Randwick	357211	Premise Match	42m	North East
MOTOR GARAGES & ENGINEERS(M6S6)	Total Service Station, 2 Alison Rd.RANDWICK	338753	Premise Match	43m	North
WELDERS-ELECTRIC &/OR OXY (W145)	Moule, Les, 16 Alison Rd., Randwick	373847	Premise Match	43m	North East
MOTOR GARAGES & ENGINEERS(M6S6)	Moule, Les, 16 Alison Rd.RANDWICK	338301	Premise Match	43m	North East
WELDERS-ELECTRIC &/OR OXY (W145)	Swanson Service Station, 16 Alison Rd., Randwick	374003	Premise Match	43m	North East
MOTOR GARAGES & ENGINEERS(M6S6)	Swanson Service Station, 16 Alison Rd.RANDWICK	338700	Premise Match	43m	North East
MOTOR ACCESSORIES/DEALERS (M448)	Moule, Les, 16 Alison Rd., Randwick	334765	Premise Match	43m	North East
MOTOR ACCESSORIES/DEALERS (M448)	Swanson Service Station, 16 Alison Rd., Randwick	334861	Premise Match	43m	North East
MOTOR GARAGES & ENGINEERS(M6S6)	B.P. Garage, 211 Anzac Pde.KENSINGTON	337240	Premise Match	43m	South West
HOTELS-LICENSED (H690)	Racecourse Hotel (The), 52 Alison Rd., Randwick	317515	Premise Match	45m	North East
MILK,FRUIT JUICE BARS/CONFECTIONERS (M336)	Doncaster Junction Sundae Shop, 270 Anzac Pde., Kensington	330564	Premise Match	73m	West
HOTELS-LICENSED (H690)	Hotel Doncaster, 272 Anzac Pde., Kensington	317330	Premise Match	77m	West
GROCERS-RETAIL (G655)	Sun,C., 57 Doncaster Ave., Kensington	313050	Premise Match	79m	North West
HAIRDRESSERS (GENT.'S) (H070)	Doncaster Corner Lucky Agency, 207 Anzac Pde., Kensington	313832	Premise Match	80m	South West
BOOT & SHOE REPAIRERS (B580)	Doncaster Shoe Store, 205 Anzac Pde., Kensington.	268815	Premise Match	80m	South West
FOOTWEAR RETAILERS (F495)	Doncaster Shoe Store, 205 Anzac Pde., Kensington	305516	Premise Match	80m	South West
VETERINARY SUPPLIES &INSTRUMENTS-MFRS.&/OR DISTRIBUTORS (V130)	Doyle, T.G.& Son, 9 King St., Randwick	372617	Premise Match	87m	North East

Business Activity	Premise	Ref No.	Location Confidence	Distance to Feature Point	Direction
HOMES & INSTITUTIONS (H490)	Roma, 9 William St., Randwick	316617	Premise Match	87m	North East
RESTAURANTS (R320)	Doncaster Theatre Restaurant, 266 Anzac Pde., Kensington	356950	Premise Match	101m	West
DENTISTS (D140)	Donaldson, W.R.Bruce, 115 Doncaster Ave., Kensington	288532	Premise Match	107m	South West
DENTISTS (D140)	Reeve, J.H. & Donaldson, W.R.B., 115 Doncaster Ave., Kensington	288963	Premise Match	107m	South West
JEWELLERS/WATCHMAKERS-RETAIL (J060)	Jilek, E., 215 Anzac Pde., Kensington	321123	Premise Match	107m	South West
GROCERS-RETAIL (G655)	Caliamanis Kensington Grocery, 264 Anzac Pde., Kensington	312259	Premise Match	107m	West
DYERS/BLEACHERS-TRADE (D830)	Luton Dyeworks Pty.Ltd., 197 Anzac Pde., Kensington	292907	Premise Match	112m	West
BUTCHERS-RETAIL (B860)	Thompson, David, 193 Anzac Pde., Kensington	274675	Premise Match	112m	West
FISH MERCHANTS-RETAIL (F245)	Australian Fish Bar, 191 Anzac Pda.Kensington	303301	Premise Match	112m	West
FRUITERS/GREENGROCERS (F640)	Wong Jan & Son, 195 Anzac Pde., Kensington	308185	Premise Match	112m	West
CAFES, COFFEE LOUNGES, Etc. (C030)	Sun Sung Cafe, 258 Anzac Pde., Kensington	276125	Premise Match	119m	West
PRINTERS-LETTERPRESS (P806)	Clarendon Press Pty. Ltd., 256 Anzac Pde., Kensington, 2033	351983	Premise Match	125m	West
PRINTERS-LITHOGRAPHIC (OFFSET)(P810)	Clarendon Press Pty. Ltd., 256 Anzac Pde., Kensington, 2033	352510	Premise Match	125m	West
CAFES, COFFEE LOUNGES, Etc. (C030)	Elite Cafe, 189 Anzac Pde., Kensington	275563	Premise Match	125m	West
STATIONERS-COMMERCIAL (S507)	Thorne, E. N. & Co. Pty. Ltd., 256 Anzac Pde., Kensington	364289	Premise Match	125m	West
MILK, FRUIT JUICE BARS/CONFECTIONERS (M336)	Waratah Milk Bar, 252 Anzac Pde., Kensington	331355	Premise Match	135m	West
AUCTIONEERS-REAL ESTATE (A625)	Dudley, H Pty. Ltd., 22 Roma Ave., Kensington	263756	Premise Match	136m	South West
REAL ESTATE AGENTS/VALUERS (R205)	Dudley, H. Pty. Ltd., 22 Roma Ave. KENSINGTON	355169	Premise Match	136m	South West
CLOTHING MFRS. &/OR W'SALERS-UNDERWEAR (C476)	Lotus Productions Pty. Ltd., 185-187 Anzac Pde., Kensington	283807	Premise Match	136m	West
CHEMISTS-PHARMACEUTICAL (C286)	Snelling, E., 250 Anzac Pde., Kensington	281155	Premise Match	141m	West
PHOTOGRAPHIC SUPPLIES (P300)	Snelling, E., 250 Anzac Pde., Kensington	348391	Premise Match	141m	West

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:

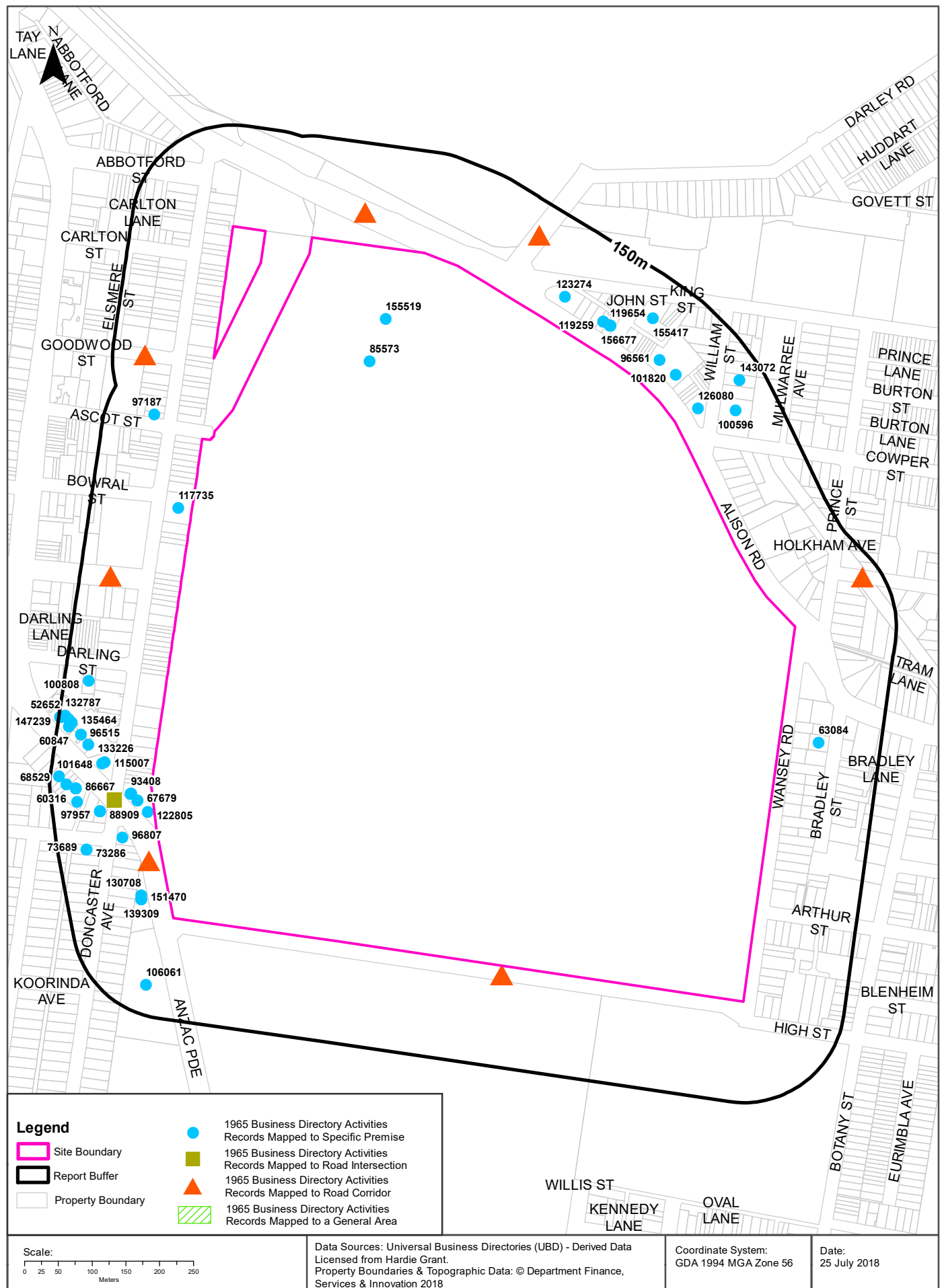
Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
CLUBS & SPORTING BODIES (C487)	Australian Jockey Club, Alison Rd., Randwick	283967	Road Match	0m
ADVERTISING DISPLAY SPEC. (A160)	Associated Display Pty. Ltd., 299 Darley Rd., Randwick	260136	Road Match	44m
DISPLAY FITTINGS-MFRS.&/OR SUPPLIERS (D350)	Associated Display Pty.Ltd., 299 Darley Rd., Randwick, 2031	289744	Road Match	44m
SCREEN PROCESS PRINTERS (S168)	Associated Displays Pty. Ltd., 299 Darley Rd., Randwick	359933	Road Match	44m
PRINTERS-LITHOGRAPHIC (OFFSET)(P810)	LEIGH S T & CO (A DIVISION OF LEIGH-MARDON PTY. LTD) TODMAN AVE., KENSINGTON, 2033	352604	Road Match	60m

Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
CARDBOARD BOX & CARTON MANUFACTURERS (C111)	Leigh, S. T. & Co., Todman Ave., Kensington	277479	Road Match	60m
ALUMINIUM PRODUCTS MFRS. (A320)	Leigh, S.T. & Co. Todman Ave., Kensington	261247	Road Match	60m
CAN & DRUM MANUFACTURERS (C056)	Leigh, S.T. & Co., Todman Ave., Kensington	277077	Road Match	60m
BOTTLE SEALS, CAPS & CORKS MANUFACTURERS (B615)	Leigh, S.T. & Co, Todman Ave, Kensington	269406	Road Match	60m
PRINTERS-LETTERPRESS (P806)	Leigh,S. T. & Co. Todman Ave.,Kensington	352169	Road Match	60m
LABELS-GENERAL (L020)	Leigh,S. T. & Co.,Todman Ave.,Kensington	322300	Road Match	60m
METAL PRESSERS/STAMPERS (M268)	Leigh,S. T. & Co.,Todman Ave.,Kensington	329968	Road Match	60m
PACKAGING/PACKING SPEC. (P 004)	Leigh,S. T. & Co.,Todman Ave.,Kensington	345766	Road Match	60m
PACKING MATERIALS (P010)	Leigh,S. T. & Co.,Todman Ave.,Kensington	345910	Road Match	60m
PRINTERS-LITHOGRAPHIC (OFFSET)(P810)	Leigh,S. T. & Co.,Todman Ave.,Kensington	352606	Road Match	60m
TINPLATE PRINTERS (T420)	Leigh,S.T. & Co.,Todman Ave.,Kensington	369152	Road Match	60m
CIGARETTE IMPORTERS &/OR DIST.(C353)	Tobacco Products Distributors (N.S.W.) Pty. Ltd., Todman Ave., Kensington	281792	Road Match	60m
CLUBS & SPORTING BODIES (C487)	Kensington War Memorial Club, Goodwood St., Kensington	284329	Road Match	63m
SCHOOLS-KINDERGARTEN/DAY NURSERY (S149)	Randwick-Coogee Kindergarten,Frances St., Randwick	359691	Road Match	94m

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

1965 Historical Business Directory Records

77-97 Alison Road, Randwick, NSW 2031



Historical Business Directories

77-97 Alison Road, Randwick, NSW 2031

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
Farriers	Higgins, F. J., Randwick Racecourse	85573	Premise Match	0m	Onsite
Veterinary Surgeons	McFadden, W. J., Australian Jockey Club, Randwick Racecourse, Alison Rd., Randwick	155519	Premise Match	0m	Onsite
Motor Garages & Engineers	Kensington Auto Port, 300 Anzac Pde. Kensington	122805	Premise Match	10m	South West
Mixed Businesses	Kensington School Mixed & Milk Bar, 90 Doncaster Ave., Kensington	117735	Premise Match	20m	North West
Clothing Mfrs. &/or W'salers - Ladies' Coats & Costumes	Miller Clothing Manufacturing Co., 278 Anzac Pde., Kensington	67442	Premise Match	23m	South West
Clothing Mfrs. &/or W'salers - Ladies' Dresses & Gowns	Miller Clothing Manufacturing Co., 278 Anzac Pde., Kensington	67679	Premise Match	23m	South West
Carriers & Cartage Contractors	Bondi Carrying Co., 274-276 Anzac Pde., Kensington	62891	Premise Match	31m	South West
Carpet & Floor Covering Retailers &/Specialists	Gillies, H. I., "Bondi Carrying Co." , 274 Anzac Pde., Kensington	62486	Premise Match	31m	South West
Furniture Dealers - Second - Hand	Gillies, H. I. "Bondi Carrying Co." , 274 Anzac Pde. Kensington	93034	Premise Match	31m	South West
Furniture Removalists/Storage	Gillies, H. I. "Bondi Carrying Co." , 274 Anzac Pde., Kensington	94153	Premise Match	31m	South West
Furnishing - Soft - Retail	Gillies, H. I. "Bondi Carrying Co." , 274 Anzac Pde., Kensington	92715	Premise Match	31m	South West
Furniture - Household - Retailers	Gillies, H. I. "Bondi Carrying Co." , 274 Anzac Pde., Kensington	93504	Premise Match	31m	South West
Furniture Hirers - Weddings/ Parties	Gillies, H. I. (Bondi Carrying Co.) , 274-276 Anzac Pde., Kensington	93408	Premise Match	31m	South West
Motor Service Stations - Petrol, Oil, Etc.	Lightning Service Station, 72 Alison Rd. Randwick	126080	Premise Match	40m	North East
Paint, Varnish, Oils/Colour Merchants	Abid Tile Co., 213 Anne Pde., Kensington	130708	Premise Match	40m	South West
Tile Mfrs. &/or Dist. - Floor & Wall	Abid Tile Co. , 213 Anzac Pde., Kensington	151470	Premise Match	41m	South West
Real Estate Agents/Valuers	Drisin, B. , 213 Anzac Pde. Kensington	139309	Premise Match	41m	South West
Motels	Randwick Travel Terminus & Restaurant (Licensed), 14 Alison Rd., Randwick	119259	Premise Match	42m	North East
Restaurants	Randwick Travel Terminus Licensed Restaurant, , 14 Alison Rd., Randwick	140580	Premise Match	42m	North East
Motor Garages & Engineers	Total Service Station, 2 Alison Rd. Randwick	123274	Premise Match	43m	North
Motor Garages & Engineers	Moule, Les, 16 Alison Rd. Randwick	123267	Premise Match	43m	North East
Welders - Electric &/or Oxy	Moule, Les., , 16 Alison Rd., Randwick	156677	Premise Match	43m	North East
Motor Garages & Engineers	Swanson Service Station, 16 Alison Rd. Randwick	123273	Premise Match	43m	North East
Grocers - Retail	Grealy, N. , 38 Alison Rd., Randwick	96561	Premise Match	43m	North East
Motor Accessories - Dealers	Moule, Les, 16 Alison Rd., Randwick	119570	Premise Match	43m	North East
Motor Accessories - Dealers	Swanson Service Station, 16 Alison Rd., Randwick	119654	Premise Match	43m	North East
Hotels - Licensed	Racecourse Hotel (The), 52 Alison Rd.. Randwick	101820	Premise Match	45m	North East

Business Activity	Premise	Ref No.	Location Confidence	Distance to Feature Point	Direction
Grocers - Retail	McGuinness, W. J. , 209 Anzac Pde., Kensington	96807	Premise Match	52m	South West
Beauty Salons &/or Ladies Hairdressers	Evelyn Beauty Salon, , 111c Doncaster Ave., Kensington	50602	Road Intersection	56m	South West
Manufacturers' Agents	Hartley, A. & L. W. (Cawley-Victoria), 111b Doncaster Ave., Kensington	109565	Road Intersection	57m	South West
Carriers & Cartage Contractors	Johnston, W., 3 Bradley St., Randwick	63084	Premise Match	59m	East
Milk, Fruit Juice Bars/Confectioners	Doncaster Junction Sundae Shop, 270 Anzac Pde., Kensington	115007	Premise Match	73m	West
Hotels - Licensed	Hotel Doncaster, 272 Anzac Pde., Kensington	101648	Premise Match	77m	West
Grocers - Retail	Sun, C. , 57 Doncaster Ave., Kensington	97187	Premise Match	79m	North West
Hairdressers (Gent.'s)/Tobacconists	Doncaster Corner Lucky Agency, , 207 Anzac Pde., Kensington	97957	Premise Match	80m	South West
BOOT & SHOE REPAIRERS	Doncaster Shoe Store, 205 Anzac Pde., Kensington	53230	Premise Match	80m	South West
Footwear Retailers	Doncaster Shoe Store, 205 Anzac Pde., Kensington	88909	Premise Match	80m	South West
Veterinary Supplies & Instruments - Mfrs. &/or Distributors	Doyle, T. C. & Son, 9 King St., Randwick	155417	Premise Match	87m	North East
Homes & Institutions	Roma, 9 William St., Randwick	100596	Premise Match	87m	North East
Picture Theatres (Suburban)	Kensington New Doncaster Junction Theatre, , 266 Anzac Pde., Kensington	133226	Premise Match	101m	West
DENTISTS	Donaldson, W. R. Bruce, 115 Doncaster Ave., Kensington	73286	Premise Match	107m	South West
Dentists	Reeve, J. H. & Donaldson, W. R. B., 115 Doncaster Ave., Kensington	73689	Premise Match	107m	South West
Jewellers/Watchmakers - Retail	Jilek, E., 215 Anzac Pde., Kensington	106061	Premise Match	107m	South West
Dyers/Bleachers - Trade	Luton Dye Works, 197 Anzac Pde., Kensington	76699	Premise Match	112m	West
Butchers - Retail	Thompson, David, , 193 Anzac Pde., Kensington	59395	Premise Match	112m	West
Fish Merchants - Retail	Australian Fish Bar, 191 Anzac Pde., Kensington	86667	Premise Match	112m	West
Fruiterers & Greengrocers	Wong Jan & Son, , 195 Anzac Pde., Kensington	92391	Premise Match	112m	West
Schools - Kindergarten/Day Nursery	Nursery Nook, , 7 William St., Randwick	143072	Premise Match	114m	North East
Hospitals - Private	Alencon Convalescent, 2 Darling St., Kensington	100808	Premise Match	114m	West
Grocers - Retail	Freeman's Kensington Grocery, , 264 Anzac Pde., Kensington	96515	Premise Match	114m	West
Cafes, Tea Rooms, Coffee Lounges, Etc.	Elite Cafe , 189 Anzac Pde., Kensington	60316	Premise Match	125m	West
Butchers - Retail	Kensington Butchery , 254 Anzac Pde., Kensington	58627	Premise Match	130m	West
Poultry Dealers - Retail	Kensington Butchery, , 254 Anzac. Pde., Kensington	135464	Premise Match	130m	West
Cafes, Tea Rooms, Coffee Lounges, Etc.	Sun Sung Cafe , 258 Anzac Pde., Kensington	60847	Premise Match	133m	West
Milk, Fruit Juice Bars/Confectioners	Waratah Milk Bar, 252 Anzac Pde., Kensington	115735	Premise Match	135m	West
Clothing Mfrs. &/or W'salers - Underwear	Lotus Productions Pty. Ltd., 185-187 Anzac Pde., Kensington	68529	Premise Match	136m	West
Chemists - Pharmaceutical	Snelling, E., 250 Anzac Pde., Kensington	65645	Premise Match	141m	West
Photographic Supplies	Snelling, E., 250 Anzac Pde., Kensington	132787	Premise Match	141m	West
BOOKBINDERS	Thorne, E. N. & Co, Pty. Ltd, 256 Anzac Pde., Kensington	52652	Premise Match	148m	West
Printers - Letterpress	Thorne, E. N. & Co. Pty. Ltd. , 256 Anzac Pde., Kensington	136345	Premise Match	148m	West
STATIONERS-WHOLESALE	Thorne, E. N. & Co. Pty. Ltd. , 256 Anzac Pde., Kensington	147876	Premise Match	148m	West
STATIONERS—COMMERCIAL	Thorne, E. N. & Co. Pty. Ltd. , 256 Anzac Pde., Kensington	147239	Premise Match	148m	West
Duplicating/Typing Specs.	Thorne, S. N. & Co. Pty. Ltd., 256 Anzac Pde., Kensington	76582	Premise Match	148m	West

1965 Business Directory Records Road or Area Matches

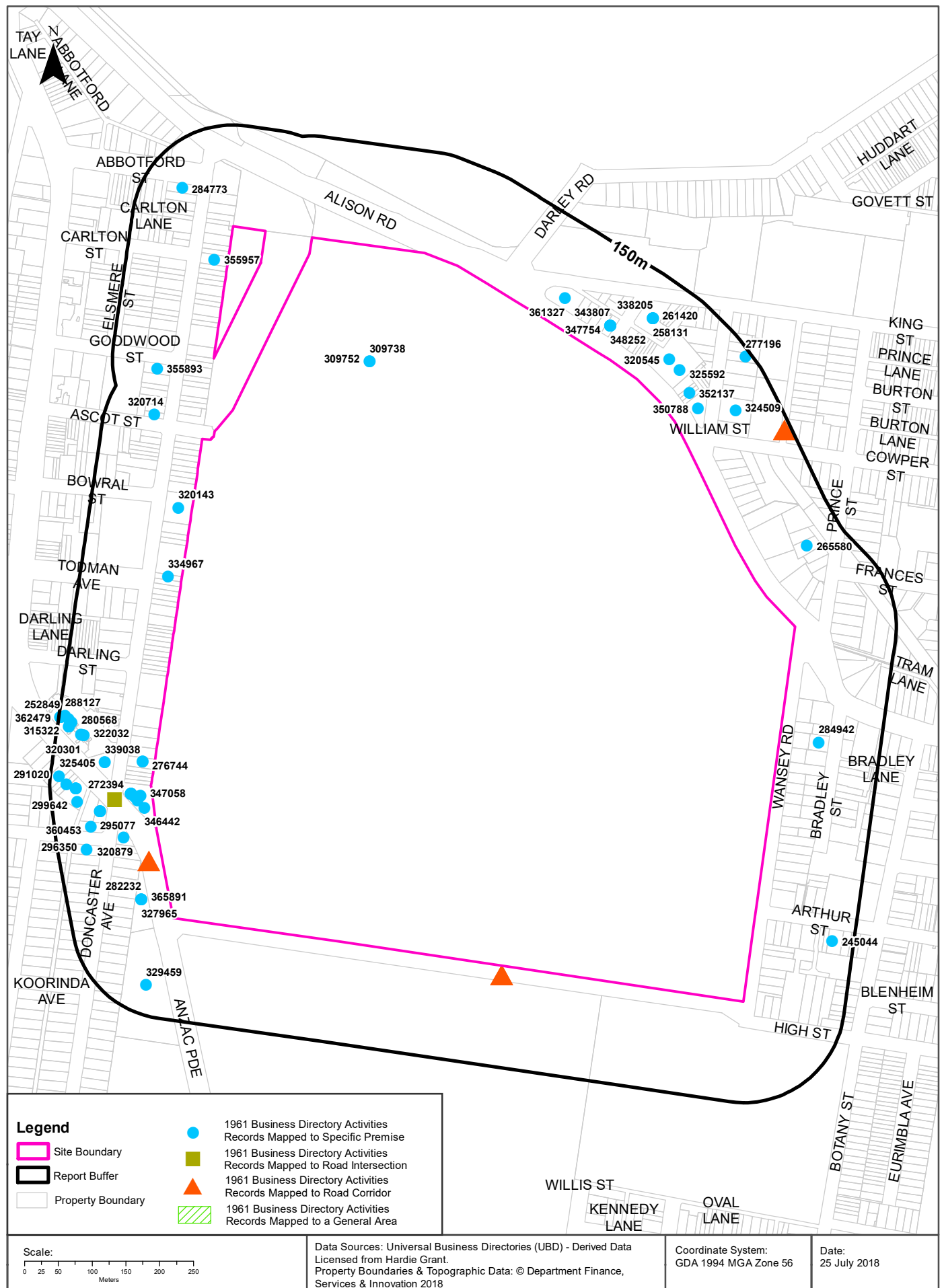
Records from the 1965 UBD Business Directory, mapped to a road or an area, within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found, or the road has been renumbered since the directory was published:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
Clubs & Sporting Bodies	Australian Jockey Club, Alison Rd., Randwick	68690	Road Match	0m
Piano Tuners &/or Repairers	Continental Piano Co., 22 High St., Randwick	133049	Road Match	0m
Electric Cleaner - Industrial - Mfrs. &/or Dists.	Drysdale & Sons Pty. Ltd., Anzac Pde., Kensington	77230	Road Match	0m
Ambulances	Eastern Suburbs Ambulance, , High St., Randwick	46106	Road Match	0m
Govt. Depts. - State	University of New South Wales, , Anzac Pde., Kensington	95848	Road Match	0m
Schools/Colleges - Private/Public	University of New South Wales, , Anzac Pde., Kensington	143001	Road Match	0m
Schools/Colleges - Commercial	Yates, J. H. , Alison Rd., Randwick	142763	Road Match	0m
School Supplies - Mfrs. &/or Dist.	Yates, J. R. , Alison Rd., Randwick	142692	Road Match	0m
Screen Process Printers	Associated Displays Pty. Ltd. , 299 Darley Rd., Randwick	143297	Road Match	44m
Display Fittings - Mfrs. &/or Suppliers	Associated Displays Pty. Ltd., 299 Darley Rd., Randwick	74395	Road Match	44m
Hospitals - Private	Earlsdon, 104 Darley Rd., Randwick	100891	Road Match	44m
Printers - Letterpress	Leigh, S. T. & Co. Pty. Ltd., Raleigh Park, Todman Ave., Kensington	136151	Road Match	60m
Printers - Lithographic	Leigh, S. T. & Co. Pty. Ltd. , Raleigh Park, Todman Ave., Kensington	136481	Road Match	60m
TOBACCO MERCH.—W'SALE	Tobacco Products Distributors Pty. Ltd. , Raleigh Park, Todman Ave., Kensington	152060	Road Match	60m
Cigar Import. &/or Dist.	Tobacco Products Distributors Pty. Ltd., Raleigh Park, Todman Ave., Kensington	66356	Road Match	60m
Cigarette Importers &/or Dists.	Tobacco Products Distributors Pty. Ltd., Raleigh Park, Todman Ave., Kensington	66369	Road Match	60m
TOBACCO PROCESSORS	Wills, W. D. & H. O. (Australia) Ltd. , Raleigh Park, Todman Ave., Kensington	152074	Road Match	60m
TOBACCO MERCH.—W'SALE	Wills, W. D. & H. O. (Australia) Ltd. , Raleigh Park, Todman Ave., Kensington	152066	Road Match	60m
Cigarette Manufacturers &/or Wholesalers	Wills, W. D. & H. O. (Australia) Ltd., Raleigh Park, Todman Ave., Kensington	66386	Road Match	60m
Clubs & Sporting Bodies	Kensington War Memorial Club, Goodwood St., Kensington	69006	Road Match	63m
Schools - Kindergarten/Day Nursery	Randwick-Coogee Kindergarten, , Francis St., Randwick	143080	Road Match	94m

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

1961 Historical Business Directory Records

77-97 Alison Road, Randwick, NSW 2031



Historical Business Directories

77-97 Alison Road, Randwick, NSW 2031

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
FARRIERS	Archibald, W., Randwick Racecourse	309738	Premise Match	0m	Onsite
FARRIERS	Higgins, F., Randwick Racecourse	309752	Premise Match	0m	Onsite
MOTOR GARAGE EQUIPMENT/TOOL MFRS./DISTRIBUTORS	Reliable Service, 284 Anzac Pde., Kensington	346442	Premise Match	14m	South West
MOTOR GARAGES & ENGINEERS	Doncaster Garage, 290 Anzac Pde. KENSINGTON	347058	Premise Match	17m	South West
MOTOR GARAGES & ENGINEERS	Reliable Service, 284 Anzac Pde., KENSINGTON	348008	Premise Match	17m	South West
BUILDERS & CONTRACTORS-(M.M.B.A.)	Abid Construction Company 170 Doncaster Ave. KENSINGTON	276744	Premise Match	18m	West
REAL ESTATE AGENTS/VALUERS	Drisin, B., 170 Doncaster Ave. KENSINGTON	365888	Premise Match	18m	West
GROCERS-RETAIL	Bishop, A. D., 90 Doncaster Ave., Kensington	320143	Premise Match	20m	North West
PAINTERS, PAPERHANGERS/DECORATORS	Bush, H. C., 18 Doncaster Ave., Kensington	355957	Premise Match	20m	North West
MEDICAL PRACTITIONERS	Derkatsch, Helen, 112 Doncaster Ave., Kensington	334967	Premise Match	20m	West
CLOTHING MFRS. &/OR W'SALERS-GENERAL	Como Clothing Manufacturing Co., 278-282 Anzac Pde., Kensington	289397	Premise Match	23m	South West
FLORISTS-RETAIL	Clements, Ethel, 276 Anzac Pde., Kensington	311821	Premise Match	27m	South West
CARRIERS & CARTAGE CONTRACTORS	Bondi Carrying Co., 274-276 Anzac Pde., Kensington	284563	Premise Match	31m	South West
CARPET & FLOOR COVERING RETAILERS &/OR SPECIALISTS	Gillies, H. I., "Bondi Carrying Co.," 274 Anzac Pde., Kensington	284348	Premise Match	31m	South West
FURNITURE HIRERS-WEDDINGS/PARTIES	Bondi Carrying Co., 274-276 Anzac Pde., Kensington	317049	Premise Match	31m	South West
FURNITURE REMOVALISTS/STORAGE	Gillies H. I. "Bondi Carrying Co" 274-276 Anzac Pde., Kensington	317088	Premise Match	31m	South West
FURNITURE REMOVALISTS/STORAGE	Gillies, H. I., "Bondi Carrying Co.," 274 Anzac Pde., Kensington	317089	Premise Match	31m	South West
FURNITURE-HOUSEHOLD-RETAILERS	Gillies, H. I., "Bondi Carrying Co.," 274 Anzac Pde., Kensington	317757	Premise Match	31m	South West
FURNISHINGS-SOFT-RETAIL	Gillies, H. I., "Bondi Carrying Co.," 274 Anzac Pde., Kensington	316843	Premise Match	31m	South West
FURNITURE DEALERS-SECOND-HAND	Gillies, H. I., "Bondi Carrying Co.," 274 Anzac Pde., Kensington	316978	Premise Match	31m	South West
REAL ESTATE AGENTS/VALUERS	Gillies, H. I., "Bondi Carrying Co.," 274-276 Anzac Pde. KENSINGTON	365889	Premise Match	31m	South West
MOTOR SERVICE STATIONS—PETROL, OIL, Etc.	Lightning Service Station, 72 Alison Rd. RANDWICK	350788	Premise Match	40m	North East
CAFES, TEA ROOMS, COFFEE LOUNGES, Etc.	Home Cooked Snack Bar, 213 Anzac Pde Kensington	282232	Premise Match	41m	South West
REAL ESTATE AGENTS/VALUERS	Phillips, S., 211 Anzac Pde. KENSINGTON	365891	Premise Match	41m	South West
INSURANCE AGENTS	Phillips, S., 211 Anzac Pde., Kensington	327965	Premise Match	41m	South West
PORCELAIN ENAMELLERS	Neon, Claude Ltd., 2 Alison Rd., Randwick	361327	Premise Match	42m	North

Business Activity	Premise	Ref No.	Location Confidence	Distance to Feature Point	Direction
MOTOR GARAGES & ENGINEERS	Moule, Les, 16 Alison Rd. RANDWICK	347754	Premise Match	43m	North East
WELDERS-ELECTRIC &/OR OXY	Moule, Les., 16 Alison Rd., Randwick	262322	Premise Match	43m	North East
MOTOR GARAGES & ENGINEERS	Swanson Service Station, 16 Alison Rd. RANDWICK	348252	Premise Match	43m	North East
WELDERS-ELECTRIC &/OR OXY	Swanson Service Station, 16 Alison Rd., Randwick	262493	Premise Match	43m	North East
MOTOR TOWING SERVICES	Lightning Service Station, 72 Alison Rd., Randwick	352137	Premise Match	43m	North East
MOTOR ACCESSORIES/DEALERS	Swanson Service Station, 16 Alison Rd., Randwick	343807	Premise Match	43m	North East
GROCERS-RETAIL	McGulnness, W. J., 209 Anzac Pde., Kensington	320879	Premise Match	50m	South West
HOTELS—LICENSED	Racecourse Hotel (The), 52 Alison Rd., Randwick	325592	Premise Match	54m	North East
GROCERS-RETAIL	Grealy, N., 38 Alison Rd., Randwick	320545	Premise Match	55m	North East
BEAUTY SALONS & LADIES' HAIRDRESSERS	Evelyn Beauty Salon, 111c Doncaster Ave., Kensington	272394	Road Intersection	56m	South West
CARRIERS & CARTAGE CONTRACTORS	Johnston, W., 3 Bradley St., Randwick	284942	Premise Match	59m	East
HOTELS—LICENSED	Hotel Doncaster, 272 Anzac Pde., Kensington	325405	Premise Match	73m	West
MILK, FRUIT JUICE BARS/CONFECTIONERS	Doncaster Junction Sundae Shop, 270 Anzac Pde., Kensington	339038	Premise Match	73m	West
GROCERS-RETAIL	Juyorksun, C., 57 Doncaster Ave., Kensington	320714	Premise Match	79m	North West
BOOT & SHOE REPAIRERS	Doncaster Shoe Store, 203 Anzac Pde., Kensington	274743	Premise Match	80m	South West
HAIRDRESSERS (GENT.'S) /TOBACCONISTS	Saunders, A. V., 207 Anzac Pde., Kensington	322491	Premise Match	80m	South West
FOOTWEAR RETAILERS	Doncaster Shoe Store, 205 Anzac Pde., Kensington	313085	Premise Match	80m	South West
DELICATESENS	Morris, F., 203 Anzac Pde., Kensington	295077	Premise Match	80m	South West
PAINTERS, PAPERHANGERS/DECORATORS	Anderson, R., 45 Doncaster Ave., Kensington	355893	Premise Match	85m	North West
METAL PRESSERS/STAMPERS	Doyle W J & Co Pty Ltd 9 King St., Randwick	338204	Premise Match	87m	North East
METAL PRESSERS/STAMPERS	Doyle, W. J. & Co. Pty. Ltd., 9 King St., Randwick	338205	Premise Match	87m	North East
DIE & PRESS TOOL,MAKERS	Doyle, W. J. & Co. Pty. Ltd., 9 King St., Randwick	296796	Premise Match	87m	North East
TOOL MAKERS	Doyle, W. J. & Co. Pty. Ltd., 9 King St., Randwick	258131	Premise Match	87m	North East
WASHER MANUFACTURERS	Doyle, W. J. & Co. Pty. Ltd., 9 King St., Randwick	261420	Premise Match	87m	North East
HOMES & INSTITUTIONS	Roma, 9 William St., Randwick	324509	Premise Match	87m	North East
ACCOUNTANTS & AUDITORS	Quigg, B. D., 4 Holkham Ave., Randwick	265580	Premise Match	92m	East
CARRIERS & CARTAGE CONTRACTORS	Flinn, J., 5 Doncaster Ave., Kensington	284773	Premise Match	94m	North West
PLUMBERS, GASFITTERS/DRAINLAYERS	Garth, S. C., 113 Doncaster Ave., Kensington	360453	Premise Match	96m	South West
JEWELLERS—COSTUME—RETAIL	Jilek, Edward, 215 Anzac Pde., Kensington	329459	Premise Match	107m	South West
DENTISTS	Reeve, Jno. H., 115 Doncaster Ave., Kensington	296350	Premise Match	107m	South West
BEAUTY SALONS & LADIES' HAIRDRESSERS	Fisher, B., 262 Anzac Pde., Kensington	272408	Premise Match	109m	West
HAIRDRESSERS (GENT.'S) /TOBACCONISTS	Fisher, W., 262 Anzac Pde., Kensington	322032	Premise Match	109m	West
DYERS/BLEACHERS-TRADE	Luton Dye Works, 197 Anzac Pde., Kensington	299642	Premise Match	112m	West
BUTCHERS-RETAIL	Airlie Butchery, 193 Anzac Pde., Kensington	279803	Premise Match	112m	West

Business Activity	Premise	Ref No.	Location Confidence	Distance to Feature Point	Direction
FISH MERCHANTS-RETAIL	Australian Fish Bar, 191 Anzac Pde., Kensington	310877	Premise Match	112m	West
FRUITERERS/GREENGROCERS	Wong Jan & Son, 195 Anzac Pde., Kensington	316448	Premise Match	112m	West
GROCERS-RETAIL	Conway's Grocers, 264 Anzac Pde., Kensington	320301	Premise Match	114m	West
REAL ESTATE AGENTS/VALUERS	Mirow, W., 16 Arthur St. RANDWICK	245044	Premise Match	118m	South East
CAFES, TEA ROOMS, COFFEE LOUNGES, Etc.	Elite Cafe, 189 Anzac Pde., Kensington	282147	Premise Match	125m	West
BUTCHERS-RETAIL	Jones, L. H. & Son, 254 Anzac Pde., Kensington; & Waverley	280568	Premise Match	130m	West
FRUITERERS/GREENGROCERS	Economos, A., 260 Anzac Pde., Kensington	315322	Premise Match	133m	West
CAFES, TEA ROOMS, COFFEE LOUNGES, Etc.	Sun Sung Cafe, 258 Anzac Pde., Kensington	282572	Premise Match	133m	West
MILK, FRUIT JUICE BARS/CONFECTIONERS	Waratah Milk Bar, 252 Anzac Pde., Kensington	339738	Premise Match	135m	West
CLOTHING MFRS. &/OR W'SALERS-UNDERWEAR	Lotus Products Pty. Ltd., 185-187 Anzac Pde., Kensington	291020	Premise Match	136m	West
BUILDERS & CONTRACTORS-(M.M.B.A.)	Hayes, Charles Constructions Pty. Ltd 5a William St. RANDWICK	277196	Premise Match	141m	North East
CHEMISTS-PHARMACEUTICAL	Snelling, E., 250 Anzac Pde., Kensington	288127	Premise Match	141m	West
BOOKBINDERS	Thorne, E. N. and Co., 256 Anzac Pde., Kensington	274263	Premise Match	148m	West
PRINTERS-LETTERPRESS	Thorne, E. N. and Co., 256 Anzac Pde., Kensington	362479	Premise Match	148m	West
STATIONERS-WHOLESALE	Thorne, E. N & Co., 256 Anzac Pde., Kensington	253189	Premise Match	148m	West
STATIONERS-COMMERCIAL	Thorne, E. N. and Co., 256 Anzac Pde., Kensington	252849	Premise Match	148m	West

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

1961 Business Directory Records Road or Area Matches

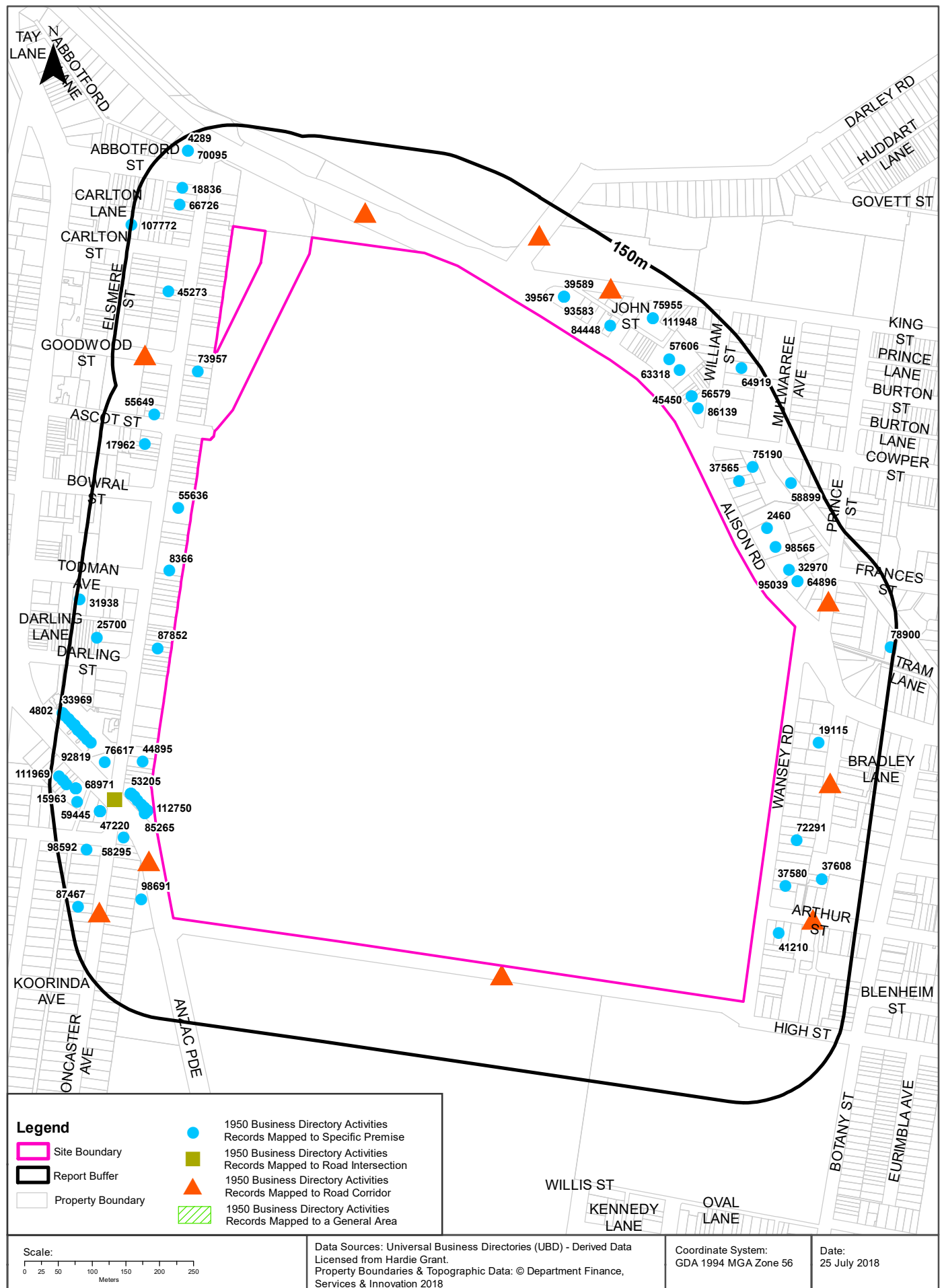
Records from the 1961 UBD Business Directory, mapped to a road or an area, within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found, or the road has been renumbered since the directory was published:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
PIANO TUNERS &/OR REPAIRERS	Continental Piano Co., 22 High St., Randwick	358219	Road Match	0m
MOTOR PAINTERS	Doncaster Garage, 290 Anzac Pde., Kensington	348796	Road Match	0m
MOTOR PANEL BEATERS	Doncaster Garage, 290 Anzac Pde., Kensington	349533	Road Match	0m
ELECTRIC CLEANER-INDUSTRIAL-MFRS. &/OR DIST.	Drysdale & Sons Pty. Ltd., Anzac Pde., Kensington	300207	Road Match	0m
AMBULANCES	Eastern Suburbs Ambulance, High St., Randwick	267744	Road Match	0m
CLUBS & SPORTS BODIES	Municipal Golf Links, High St., Randwick	291656	Road Match	0m
ACCOUNTANTS & AUDITORS	Rose, Charles, Mulwarree Ave., Randwick	265637	Road Match	125m

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

1950 Historical Business Directory Records

77-97 Alison Road, Randwick, NSW 2031



Historical Business Directories

77-97 Alison Road, Randwick, NSW 2031

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
BOILERMAKERS	Express Welders, 290 Anzac Pde., Kensington	9068	Premise Match	10m	South West
MOTOR PAINTERS	Doncaster Garage, 290 Anzac Pde., Kensington	84788	Premise Match	10m	South West
WELDERS-ELECTRIC &/OR OXY	Doncaster Garage, 290 Anzac Pde., Kensington	112750	Premise Match	10m	South West
WELDERS-ELECTRIC &/OR OXY	Express Welders, 290 Anzac Pde., Kensington	112774	Premise Match	10m	South West
SHEET METAL WORKERS	Express Welders, 290 Anzac Pde., Kensington	101698	Premise Match	10m	South West
MOTOR PANEL BEATERS	Doncaster Garage, 290 Anzac Pde., Kensington	85252	Premise Match	10m	South West
MOTOR PAINTERS	Express Welders, 294 Anzac Pde., Kensington	84799	Premise Match	14m	South West
MOTOR PANEL BEATERS	Express Welders, 294 Anzac Pde., Kensington	85265	Premise Match	14m	South West
MERCHANTS & IMPORTERS	South Pacific Traders, 284 Anzac Pde., Kensington	75605	Premise Match	14m	South West
REAL ESTATE AGENTS	Graham, H. J., 284 Anzac Pde., Kensington	98298	Premise Match	14m	South West
PUBLISHERS	Ross, A. G. and Co., 284 Anzac Pde., Kensington	96275	Premise Match	14m	South West
MOTOR SERVICE STATIONS-PETROL, Etc.	Doncaster Garage, 290 Anzac Pde., Kensington	85927	Premise Match	15m	South West
MOTOR GARAGES &/OR ENGINEERS	Doncaster Garage, 290 Anzac Pde., Kensington	83689	Premise Match	15m	South West
MOTOR GARAGES &/OR ENGINEERS	Wilson, P. F., 290 Anzac Pde., Kensington	84573	Premise Match	15m	South West
FURRIERS-RETAIL	Canadian Fur Expert, 282 Anzac Pde., Kensington	53815	Premise Match	18m	South West
FLATS, RESIDENTIALS, Etc.	Ambassadors (The), 170 Doncaster Ave., Kensington	44895	Premise Match	18m	West
GROCERS-RETAIL	Sexton, P. J., 90 Doncaster Ave., Kensington	55636	Premise Match	20m	North West
BLACKSMITHS	Solomons Farriers and Hoof Specialists, 110 Doncaster Ave., Kensington	8366	Premise Match	20m	West
NEWSAGENTS	Boyle, C. A., 138 Doncaster Ave., Kensington	87852	Premise Match	20m	West
DENTISTS	Alexander, R. H., 278 Anzac Pde., Kensington	31643	Premise Match	23m	South West
FURNITURE REMOVALISTS &/OR STORAGE	Bondi Carrying Co., 276 Anzac Pde., Kensington	53165	Premise Match	27m	South West
FLORISTS-RETAIL	Clements, E., 276 Anzac Pde., Kensington	45826	Premise Match	27m	South West
MEDICAL PRACTITIONERS	Thomson, V. M., 52 Doncaster Ave., Kensington	73957	Premise Match	30m	North West
CARRIERS & CARTAGE CONTRACTORS	Bondi Carrying Co., 274-276 Anzac Pde., Kensington	18446	Premise Match	31m	South West
CARRIERS & CARTAGE CONTRACTORS	Gillies, H. I. (Bondi Carrying Co.), 274-276 Anzac Pde., Kensington	18896	Premise Match	31m	South West
FURNISHINGS-SOFT-RETAILERS	Bondi Carrying Co., 274 Anzac Pde., Kensington	52257	Premise Match	31m	South West
FURNITURE DEALERS-SECONDHAND	Bondi Carrying Co., 274-276 Anzac Pde., Kensington	52493	Premise Match	31m	South West
REAL ESTATE AGENTS	Bondi Carrying Co., 274-276 Anzac Pde., Kensington	97975	Premise Match	31m	South West

Business Activity	Premise	Ref No.	Location Confidence	Distance to Feature Point	Direction
FURNITURE-HOUSEHOLD-RETAILERS	Bondi Carrying Co., 274-276 Anzac Pde., Kensington; 212 Bondi Rd., Bondi	53386	Premise Match	31m	South West
FURNITURE REMOVALISTS &/OR STORAGE	Gillies, H. I. Bondi Carrying Co., 274-276 Anzac Pde., Kensington	53205	Premise Match	31m	South West
FURNITURE HIRERS-WEDDINGS, PARTIES	Gillies, H. I. Bondi Carrying Co., 274-276 Anzac Pde., Kensington	52599	Premise Match	31m	South West
FLORISTS-RETAIL	Gillies, H. I. Bondi Carrying Co., 274-276 Anzac Pde., Kensington	45918	Premise Match	31m	South West
CHINA, CROCKERY, CUTLERY HIRERS	Gillies, H. I. Bondi Carrying Co., 274-276 Anzac Pde., Kensington	22287	Premise Match	31m	South West
REAL ESTATE AGENTS	Gillies, H. I., 274-276 Anzac Pde., Kensington	98277	Premise Match	31m	South West
ENGINEERS-GENERAL &/OR MANUFACTURING &/OR MECHANICAL	Rollex Products, 4 Arthur St., Randwick	41210	Premise Match	38m	South East
ELECTRICAL CONTRACTORS &/OR ELECTRICIANS	Hall, Martin, 37 Wansey Rd., Randwick	37580	Premise Match	38m	South East
MOTOR SERVICE STATIONS-PETROL, Etc.	Lightning Service Station, 72 Alison Rd., Randwick	86139	Premise Match	40m	North East
REAL ESTATE AGENTS	Phillips, 5., 211 Anzac Pde., Kensington	98691	Premise Match	41m	South West
FLUORESCENT LIGHTING SPECIALISTS	Claude Neon Ltd., 2 Alison Rd.	46374	Premise Match	42m	North
ENAMELLERS	Claude Neon Ltd., 2 Alison Rd., Randwick	39567	Premise Match	42m	North
PORCELAIN ENAMELLERS	Claude Neon Ltd., 2 Alison Rd., Randwick	93583	Premise Match	42m	North
ENAMELLERS	Porcelain Products Co., 2 Alison Rd., Randwick	39589	Premise Match	42m	North
MOTOR GARAGES &/OR ENGINEERS	Swanson, C. O., 16 Alison Rd., Randwick	84448	Premise Match	43m	North East
GROCERS-RETAIL	Browne, R. J., 54 Alison Rd., Randwick	56579	Premise Match	43m	North East
FLATS, RESIDENTIALS, Etc.	Tapp, E., 64 Alison Rd., Randwick	45450	Premise Match	43m	North East
MEDICAL PRACTITIONERS	Aarons, M. V., 27 Wansey Rd., Randwick	72291	Premise Match	46m	South East
ELECTRICAL CONTRACTORS &/OR ELECTRICIANS	Griffin, J., 84 Alison Rd., Randwick	37565	Premise Match	47m	North East
PRINTERS-GENERAL	Michael, R., 102 Alison Rd., Randwick	95039	Premise Match	49m	East
INSURANCE AGENTS	Jackson, R. H., 102 Alison Rd., Randwick	64896	Premise Match	49m	East
DISINFECTANT MANUFACTURERS & SUPPLIERS	Pan-Tol Distributors, 100 Alison Rd., Randwick	32970	Premise Match	50m	East
GROCERS-RETAIL	McGuinness, W. J., 209 Anzac Pde., Kensington	58295	Premise Match	50m	South West
REAL ESTATE AGENTS	McMahon, M., 96 Alison Rd., Randwick	98565	Premise Match	51m	East
ARCHITECTS	Toomey, J. L., 94 Alison Rd., Randwick	2460	Premise Match	54m	East
HOTELS-LICENSED	Podesta's Randwick Hotel, 52 Alison Rd., Randwick	63318	Premise Match	54m	North East
GROCERS-RETAIL	Grealy, N., 38 Alison Rd., Randwick	57606	Premise Match	55m	North East
BEAUTY SALONS &/OR LADIES' HAIRDRESSERS	Evelyn Beauty Salon, 111c Doncaster Ave., Kensington	7121	Road Intersection	56m	South West
LIBRARIES-LENDING	Cameo Lending Library (The), 111b Doncaster Ave., Kensington	68548	Road Intersection	56m	South West
FLATS, RESIDENTIALS, Etc.	Doncaster Flats, 111 Doncaster Ave., Kensington	45083	Road Intersection	56m	South West
LIBRARIES-LENDING	Tills, I., 111b Doncaster Ave., Kensington	68971	Road Intersection	56m	South West
CARRIERS & CARTAGE CONTRACTORS	Johnston, W., 3 Bradley St., Randwick	19115	Premise Match	59m	East
MILK BARS & CONFECTIONERS	Doncaster Junction Sundae Shop, 270 Anzac Pde., Kensington	76617	Premise Match	73m	West
MERCHANTS & IMPORTERS	Holmes, W. M. and E. Agencies, 2 Cowper St., Randwick	75190	Premise Match	74m	North East
GROCERS-RETAIL	Shaw, A. L., 57 Doncaster Ave., Kensington	55649	Premise Match	79m	North West

Business Activity	Premise	Ref No.	Location Confidence	Distance to Feature Point	Direction
BOOT & SHOE REPAIRERS	Doncaster Shoe Store, 205 Anzac Pde., Kensington	10127	Premise Match	80m	South West
HAIRDRESSERS (GENT.'S) &/OR TOBACCONISTS	Foster, A. J., 207 Anzac Pde., Kensington	59445	Premise Match	80m	South West
HAIRDRESSERS (GENT.'S) &/OR TOBACCONISTS	Kilgannan, J., 203 Anwe Pde., Kensington	59659	Premise Match	80m	South West
FOOTWEAR-RETAILERS	Doncaster Shoe Store, 205 Anzac Pde., Kensington	47220	Premise Match	80m	South West
TRANSPORT SERVICES-INTERSTATE	Hills Transport Services, 203 Anzac Pde., Kensington	110241	Premise Match	80m	South West
DELICATESSENS & SMALLGOODS DEALERS	Kookaburra, 203 Anzac Pde., Kensington	30750	Premise Match	80m	South West
FLATS, RESIDENTIALS, Etc.	Malvern Flats, 27 Doncaster Ave., Kensington	45273	Premise Match	81m	North West
CARPENTERS & JOINERS	Morrison, R. S., 63 Doncaster Ave., Kensington	17962	Premise Match	83m	North West
JUSTICES OF THE PEACE	Pickard, R. E., 9 Doncaster Ave., Kensington	66726	Premise Match	85m	North West
METAL PRESSERS & STAMPERS	Doyle, W. J. and Co., 9 King St., Randwick	75955	Premise Match	87m	North East
VETERINARY SURGEONS & HOSPITALS	Doyle, T. G., 9 King St., Randwick	111948	Premise Match	87m	North East
ELECTRICAL CONTRACTORS &/OR ELECTRICIANS	Hibberson, M. McC., 3 Arthur St., Randwick	37608	Premise Match	90m	South East
CARRIERS & CARTAGE CONTRACTORS	Flinn, J., 5 Doncaster Ave., Kensington	18836	Premise Match	94m	North West
PICTURE THEATRES-SUBURBAN	Kensington Doncaster Junction, 266 Anzac Pde., Kensington	92819	Premise Match	97m	West
GROCERS-RETAIL	Wyatts, 264 Anzac Pde., Kensington	56227	Premise Match	104m	West
REAL ESTATE AGENTS	Moore, E. C., 115 Doncaster Ave., Kensington	98592	Premise Match	107m	South West
BEAUTY SALONS &/OR LADIES' HAIRDRESSERS	Fisher, B., 262 Anzac Pde., Kensington	7145	Premise Match	109m	West
HAIRDRESSERS (GENT.'S) &/OR TOBACCONISTS	Fisher, W., 262 Anzac Pde., Kensington	59434	Premise Match	109m	West
COMMISSION AGENTS	Duffy, W. E., 27 Darling St., Kensington	25700	Premise Match	111m	West
DYERS-TRADE	Luton Dye Works, 197 Anzac Pde., Kensington	36080	Premise Match	112m	West
BUTCHERS-RETAIL	Craswell, H., 193 Anzac Pde., Kensington	13339	Premise Match	112m	West
CAFES, TEA ROOMS, COFFEE LOUNGES, Etc.	Australian Fish Bar, 191 Anzac Pd., Kensington	15199	Premise Match	112m	West
FRUITERERS & GREENGROCERS	Fallone, T., 195 Anzac Pde., Kensington.	50044	Premise Match	112m	West
MILK BARS & CONFECTIONERS	Fallone, T., 195 Anzac Pde., Kensington	76658	Premise Match	112m	West
FRUITERERS & GREENGROCERS	Economos, A., 260 Anzac Pde., Kensington	50008	Premise Match	114m	West
GROCERS-WHOLESALE	Rhodes, K. E. L., 6 Cowper St., Randwick	58899	Premise Match	115m	North East
FISH MERCHANTS-RETAIL	Doncaster Fish Cafe, 258 Anzac Pde., Kensington	44311	Premise Match	119m	West
CAFES, TEA ROOMS, COFFEE LOUNGES, Etc.	Doncaster Fish Cafe, 258 Anzac Pde., Kensington	15424	Premise Match	119m	West
FISH MERCHANTS-RETAIL	Martyn's Cafe, 258 Anzac Pde, Kensington	44445	Premise Match	119m	West
CAFES, TEA ROOMS, COFFEE LOUNGES, Etc.	Martyns Cafe, 258 Anzac Pde., Kensington	15737	Premise Match	119m	West
BOOKBINDERS	Thome, E. N. and Co., 256 Anzac Pde., Kensington	9282	Premise Match	125m	West
PRINTERS-GENERAL	Thorne, E. N. and Co., 256 Anzac Pde., Kensington	95225	Premise Match	125m	West
CAFES, TEA ROOMS, COFFEE LOUNGES, Etc.	Rogers, W., 189 Anzac Pde., Kensington	15963	Premise Match	125m	West
STATIONERS-COMMERCIAL	Thorne, E. N. and Co., 256 Anzac Pde., Kensington	104988	Premise Match	125m	West
FLORISTS-RETAIL	Ward, Patricia, 256 Anzac Pde., Kensington	46232	Premise Match	125m	West
PRODUCE MERCHANTS-GRAIN & SEED-RETAIL	Ward, S. J., 256 Anzac Pde., Kensington	95753	Premise Match	125m	West

Business Activity	Premise	Ref No.	Location Confidence	Distance to Feature Point	Direction
NURSERYMEN	Ward, S. J., 256 Anzac Pde., Kensington	89323	Premise Match	125m	West
INSURANCE AGENTS	Marks, J., 5 William St., Randwick	64919	Premise Match	126m	North East
AUTOMATIC SLOT MACHINE MANUFACTURERS	Levenson, J., 35 Alison Rd., Kensington	4289	Premise Match	130m	North West
MACHINERY MERCHANTS &/OR IMPORTERS	Levenson, J., 35 Alison Rd., Kensington	70095	Premise Match	130m	North West
BUTCHERS-RETAIL	Diggie, W., 254 Anzac Pde., Kensington	13380	Premise Match	130m	West
BEAUTY SALONS &/OR LADIES' HAIRDRESSERS	Eve's Beauty Salon, 187 Anzac Pde., Kensington	7120	Premise Match	131m	West
FURNITURE-HOUSEHOLD-RETAILERS	Doncaster Furnishing Pty. Ltd., 187 Anzac Pde., Kensington	53454	Premise Match	131m	West
MUSIC TEACHERS	Kahn, Miss E., 127 Doncaster Ave., Kensington	87467	Premise Match	135m	South West
MIXED BUSINESSES & GENERAL STORES	Waratah Milk Bar (The), 252 Anzac Pde., Kensington	81194	Premise Match	135m	West
CAFES, TEA ROOMS, COFFEE LOUNGES, Etc.	Dorothy Tea Rooms (The), 252 Anzac Pde., Kensington	15426	Premise Match	135m	West
VETERINARY SURGEONS & HOSPITALS	Larkin, T. J., 185 Aniac Pde., Kensington	111969	Premise Match	136m	West
CHEMISTS-PHARMACEUTICAL	Owen's Pharmacy, 250 Anzac Pde., Kensington	21897	Premise Match	141m	West
MILLINERY-RETAIL	O'Sullivan, Mrs. B., 8 Kynaston Ave., Randwick	78900	Premise Match	145m	East
DENTISTS	Griffiths, J. J., 161 Todman Ave., Kensington	31938	Premise Match	145m	West
BABY & CHILDREN'S WEAR-RETAIL	Sharkey, Mrs. R., 248 Anzac Pde., Kensington	4802	Premise Match	146m	West
DRAPERS-RETAIL	Sharkey, R., 248 Anzac Pde., Kensington	33969	Premise Match	146m	West
TENTS & TARPULINS	Gardiner, H. J., 11 Carlton St Kensington	107772	Premise Match	149m	North West

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

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
REAL ESTATE AGENTS	Aikman, R. and Co., Alison Rd., Randwick	97898	Road Match	0m
FLATS, RESIDENTIALS, Etc.	Deblacam, High St., Randwick	45075	Road Match	0m
ENGINEERS-GENERAL &/OR MANUFACTURING &/OR MECHANICAL	Donald, A. and Son, 22 High St., Randwick	40635	Road Match	0m
AMBULANCES	Eastern Suburbs Ambulance, High St., Randwick	1715	Road Match	0m
MOTOR RADIATOR SPECIALISTS & REPAIRERS	Eastern Suburbs Auto Radiator Repairs, C/o Alison Service Station, Alison Rd., Randwick	85686	Road Match	0m
CHEMISTS-PHARMACEUTICAL	Enright, J., Alison Rd., Randwick	21501	Road Match	0m
MANUFACTURERS' AGENTS	Evans, R., Alison Rd., Randwick	71118	Road Match	0m
HOTELS-LICENSED	Hotel Doncaster, Anzac Pde., Kensington	63143	Road Match	0m
HALLS	Kensington Masonic Hall, Anzac Pde., Kensington	60362	Road Match	0m
FLATS, RESIDENTIALS, Etc.	Lisrouan, High St., Randwick	45244	Road Match	0m

Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
FLATS, RESIDENTIALS, Etc.	Oakleigh Flats, Anzac Pde., Kensington	45331	Road Match	0m
FLATS, RESIDENTIALS, Etc.	Regal Court, Anzac Pde., Kensington	45369	Road Match	0m
FLATS, RESIDENTIALS, Etc.	Talana, Anzac Pde., Kensington	45448	Road Match	0m
FLATS, RESIDENTIALS, Etc.	Johaven, Arthur St., Randwick	45194	Road Match	19m
INDENTORS & INDENT AGENTS	Manton, L., Arthur St., Randwick	64203	Road Match	19m
MANUFACTURERS' AGENTS	Manton, Leonard, Arthur St., Randwick	71482	Road Match	19m
FLATS, RESIDENTIALS, Etc.	Marlborough House, Arthur St., Randwick	45280	Road Match	19m
CARRIERS & CARTAGE CONTRACTORS	Hobbs, L., King St., Doncaster East	19032	Road Match	28m
NEWSAGENTS	Palmer, A. S., King St., Randwick	88259	Road Match	28m
NEWSAGENTS	White, L. A., King St., Randwick	88433	Road Match	28m
FLATS, RESIDENTIALS, Etc.	Barraba, Prince St., Randwick	44928	Road Match	36m
FLATS, RESIDENTIALS, Etc.	Carthona Court, Doncaster Ave., Kensington	45012	Road Match	40m
FLATS, RESIDENTIALS, Etc.	Clarice Court, Doncaster Ave., Kensington	45036	Road Match	40m
FLATS, RESIDENTIALS, Etc.	Miriam Court, Doncaster Ave., Kensington	45300	Road Match	40m
GROCERS-RETAIL	Hynard, B., Darley Rd., Randwick	57846	Road Match	44m
FLATS, RESIDENTIALS, Etc.	Lallas, W., Goodwood St., Kensington	45234	Road Match	63m
RADIO SALES &/OR SERVICEMEN	Sheedy, T. J., 18 Woodwood St., Kensington	97604	Road Match	63m
FLATS, RESIDENTIALS, Etc.	Indapur, Bradley St., Randwick	45188	Road Match	71m
FLATS, RESIDENTIALS, Etc.	Redlands, Bradley St., Randwick	45368	Road Match	71m

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

Historical Business Directories

77-97 Alison Road, Randwick, NSW 2031

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 & SERVICE STATIONS.	Kensington Auto Port, 300 Anzac Pde., Kensington.	64939	1986	Premise Match	10m	South West
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	Kensington Auto Port. 300 Anzac Pde Kensington. 2033.	57039	1982	Premise Match	10m	South West
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Kensington Auto Port, 300 Anzac Pde., Kensington.	50320	1978	Premise Match	10m	South West
MOTOR GARAGES &/OR ENGINEERS.	Kensington Auto Port. 300 Anzac Pde., Kensington.	59105	1975	Premise Match	10m	South West
MOTOR GARAGES & ENGINEERS(M6S6)	Kensington Auto Port, 300 Anzac Pde.KENSINGTON	338095	1970	Premise Match	10m	South West
Motor Garages & Engineers	Kensington Auto Port, 300 Anzac Pde. Kensington	122805	1965	Premise Match	10m	South West
MOTOR GARAGES &/OR ENGINEERS	Doncaster Garage, 290 Anzac Pde., Kensington	83689	1950	Premise Match	15m	South West
MOTOR SERVICE STATIONS-PETROL, Etc.	Doncaster Garage, 290 Anzac Pde., Kensington	85927	1950	Premise Match	15m	South West
MOTOR GARAGES &/OR ENGINEERS	Wilson, P. F., 290 Anzac Pde., Kensington	84573	1950	Premise Match	15m	South West
MOTOR GARAGES & ENGINEERS	Doncaster Garage, 290 Anzac Pde. KENSINGTON	347058	1961	Premise Match	17m	South West
MOTOR GARAGES & ENGINEERS	Reliable Service, 284 Anzac Pde., KENSINGTON	348008	1961	Premise Match	17m	South West
MOTOR GARAGES & SERVICE STATIONS.	Lightning Service Station, 72 Alison Rd., Randwick.	64984	1986	Premise Match	40m	North East
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	Lightning Service Station, 72 Alison Rd., Randwick. 2031.	57089	1982	Premise Match	40m	North East
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Lightning Service Station, 72 Alison Rd., Randwick.	50377	1978	Premise Match	40m	North East
MOTOR SERVICE STATIONS-PETROL,OIL,Etc. (M716)	Lightning Service Station, 72 Alison Rd.RANDWICK	341279	1970	Premise Match	40m	North East
Motor Service Stations - Petrol, Oil, Etc.	Lightning Service Station, 72 Alison Rd. Randwick	126080	1965	Premise Match	40m	North East
MOTOR SERVICE STATIONS—PETROL, OIL, Etc.	Lightning Service Station, 72 Alison Rd. RANDWICK	350788	1961	Premise Match	40m	North East
MOTOR SERVICE STATIONS-PETROL, Etc.	Lightning Service Station, 72 Alison Rd., Randwick	86139	1950	Premise Match	40m	North East
MOTOR GARAGES & SERVICE STATIONS.	Total Randwick Service Station, 2 Alison Rd., Randwick.	65623	1986	Premise Match	43m	North
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	Total Randwick Service Station, 2 Alison Rd., Randwick. 2031.	57746	1982	Premise Match	43m	North
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Total Service Station, 2 Alison Rd., Randwick.	50999	1978	Premise Match	43m	North
MOTOR GARAGES &/OR ENGINEERS.	Total Service Station. 2 Alison Rd., Randwick.	59681	1975	Premise Match	43m	North
MOTOR GARAGES & ENGINEERS(M6S6)	Total Service Station, 2 Alison Rd.RANDWICK	338753	1970	Premise Match	43m	North
Motor Garages & Engineers	Total Service Station, 2 Alison Rd. Randwick	123274	1965	Premise Match	43m	North

Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Feature Point	Direction
MOTOR GARAGES & SERVICE STATIONS.	Alison Road Auto Port, 54 Alison Rd., Randwick.	63874	1986	Premise Match	43m	North East
MOTOR GARAGES & SERVICE STATIONS.	George Anthony Mechanical Repairs, 16 Alison Rd., Randwick.	64735	1986	Premise Match	43m	North East
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	Alison Road Auto Port, 54 Alison Rd., Randwick. 2031.	55944	1982	Premise Match	43m	North East
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Alison Road Auto Port, 54 Alison Rd., Randwick.	49224	1978	Premise Match	43m	North East
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Swanson Service Station, 16 Alison Rd., Randwick.	50913	1978	Premise Match	43m	North East
MOTOR GARAGES &/OR ENGINEERS.	Alison Road Auto Port, 54 Alison Rd., Randwick.	58314	1975	Premise Match	43m	North East
MOTOR GARAGES &/OR ENGINEERS.	Swanson Service Station. 16 Alison Rd., Randwick.	59607	1975	Premise Match	43m	North East
MOTOR GARAGES & ENGINEERS(M6S6)	Moule, Les, 16 Alison Rd.RANDWICK	338301	1970	Premise Match	43m	North East
MOTOR GARAGES & ENGINEERS(M6S6)	Swanson Service Station, 16 Alison Rd.RANDWICK	338700	1970	Premise Match	43m	North East
Motor Garages & Engineers	Moule, Les, 16 Alison Rd. Randwick	123267	1965	Premise Match	43m	North East
Motor Garages & Engineers	Swanson Service Station, 16 Alison Rd. Randwick	123273	1965	Premise Match	43m	North East
MOTOR GARAGES & ENGINEERS	Moule, Les, 16 Alison Rd. RANDWICK	347754	1961	Premise Match	43m	North East
MOTOR GARAGES & ENGINEERS	Swanson Service Station, 16 Alison Rd. RANDWICK	348252	1961	Premise Match	43m	North East
MOTOR GARAGES &/OR ENGINEERS	Swanson, C. O., 16 Alison Rd., Randwick	84448	1950	Premise Match	43m	North East
MOTOR GARAGES & ENGINEERS(M6S6)	B.P. Garage, 211 Anzac Pde.KENSINGTON	337240	1970	Premise Match	43m	South West
DRY CLEANERS & PRESSERS.	Doncaster Co-op Laundry, Doncaster Shopping Centre, 260 Anzac Pde., Kensington.	25282	1986	Premise Match	118m	West
DRY CLEANERS, PRESSERS&/OR DYERS.	Twin Star Dry Cleaners, 240 Anzac Pde., Kensington	24389	1975	Premise Match	165m	West
DRY CLEANERS,PRESSERS/DYERS (D710)	Twin Star Dry Cleaning & Pressing Service, 240 Anzac Pde., Kensington	292557	1970	Premise Match	165m	West
Dry Cleaners, Pressers/Dyers	Twin Star Dry Cleaning & Pressing Service, 240 Anzac Pde., Kensington	76369	1965	Premise Match	165m	West
DRY CLEANERS, PRESSERS / DYERS	Twin Star Dry Cleaning & Pressing Service, 240 Anzac Pde., Kensington	299305	1961	Premise Match	165m	West
DRY CLEANERS, PRESSERS & DYERS	Brennan, A. C., 240 Anzac Pde., Kensington	35136	1950	Premise Match	165m	West
DRY CLEANERS, PRESSERS & DYERS	Twin Star, 240 Anzac Pde., Kensington	35805	1950	Premise Match	165m	West
DRY CLEANERS, PRESSERS & DYERS	London Dry Cleaners, 202 Anzac Pde, Kensington	35426	1950	Premise Match	198m	West
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Howard, N. 9 Ascot St., Kensington.	50265	1978	Premise Match	209m	North West
MOTOR GARAGES & ENGINEERS(M6S6)	Howard, Ned, 9 Ascot St. KENSINGTON	338022	1970	Premise Match	209m	North West
Motor Garages & Engineers	Howard, Ned, 9 Ascot St. Kensington	122804	1965	Premise Match	209m	North West
MOTOR GARAGES & ENGINEERS	Howard, Ned, 9 Ascot St. KENSINGTON	347399	1961	Premise Match	209m	North West
MOTOR GARAGES &/OR ENGINEERS	Howard, Ned, 9 Ascot St., Kensington	83888	1950	Premise Match	209m	North West
DRY CLEANERS, PRESSERS&/OR DYERS.	Westley Dry Cleaners, 161 Anzac Pde., Kensington.	24419	1975	Premise Match	211m	West
DRY CLEANERS, PRESSERS & DYERS	Tasman Dry Cleaners. 160b Anzac Pd., Kensington	35752	1950	Premise Match	217m	West
MOTOR GARAGES & ENGINEERS	Aisbett's Garage, 104 Anzac Pde., Kensington	346480	1961	Premise Match	218m	North West
MOTOR GARAGES & ENGINEERS	Joseph Bros. Pty. Ltd., 104 Anzac Pde. KENSINGTON	347469	1961	Premise Match	218m	North West

Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Feature Point	Direction
MOTOR GARAGES &/OR ENGINEERS	Kenso Garage, 104 Anzac Pde., Kensington	83946	1950	Premise Match	218m	North West
MOTOR SERVICE STATIONS- PETROL, Etc.	Kenso Garage, 104 Anzac Pde., Kensington	86098	1950	Premise Match	218m	North West
Motor Garages & Service Stations	Ampol Kensington Service Station, 76 Anne Pde., Kensington. 2033	53472	1991	Premise Match	220m	North West
MOTOR GARAGES & SERVICE STATIONS.	Ampol Kensington, 76 Anzac Pde., Kensington.	63930	1986	Premise Match	220m	North West
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	Ampol Kensington, 82 Anzac Pde., Kensington. 2033.	56012	1982	Premise Match	220m	North West
MOTOR GARAGES & SERVICE STATIONS.	Mobil Self Service Kensington, 110 Anzac Pde., Kensington.	65119	1986	Premise Match	224m	North West
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	Mobil Self Service Kensington, 110 Anzac Pde., Kensington. 2033.	57232	1982	Premise Match	224m	North West
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Kensington Filling Station, 110 Anzac Pde., Kensington.	50321	1978	Premise Match	224m	North West
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Magnetic Service Station, 82 Anzac Pde., Kensington.	50412	1978	Premise Match	224m	North West
MOTOR SERVICE STATIONS - PETROL, OIL	Kensington Filling Station, 110 Anzac Pde., Kensington.	61831	1975	Premise Match	224m	North West
MOTOR GARAGES &/OR ENGINEERS.	Magnetic Service Station. 82 Anzac Pde., Kensington.	59185	1975	Premise Match	224m	North West
MOTOR SERVICE STATIONS- PETROL,OIL,Etc. (M716)	Kensington Filling Station, 110 Anzac Pde.KENSINGTON	341240	1970	Premise Match	224m	North West
MOTOR SERVICE STATIONS- PETROL,OIL,Etc. (M716)	Magnetic Service Station, 82 Anzac Pde.KENSINGTON	341291	1970	Premise Match	224m	North West
MOTOR GARAGES & ENGINEERS(M6S6)	Magnetic Service Station, 82 Anzac Pde.KENSINGTON	338189	1970	Premise Match	224m	North West
Motor Service Stations - Petrol, Oil, Etc.	Kensington Filling Station, 110 Anzac Pde. Kensington	125792	1965	Premise Match	224m	North West
Motor Service Stations - Petrol, Oil, Etc.	Magnetic Service Slation, 82 Anzac Pde. Kensington	125793	1965	Premise Match	224m	North West
Motor Garages & Engineers	Magnetic Service Station, 82 Anzac Pde. Kensington	122806	1965	Premise Match	224m	North West
MOTOR SERVICE STATIONS—PETROL, OIL, Etc.	Kensington Station, 110 Anzac Pde. KENSINGTON	350746	1961	Premise Match	224m	North West
MOTOR SERVICE STATIONS—PETROL, OIL, Etc.	Magnetic Service Station, 82 Anzac Pde. KENSINGTON	350813	1961	Premise Match	224m	North West
Motor Garages & Engineers	Alison Service Station, 140 Alison Rd. Randwick	123258	1965	Road Intersection	231m	East
MOTOR GARAGES & ENGINEERS	Alison Service Station, 140 Alison Rd. RANDWICK	346491	1961	Road Intersection	231m	East
MOTOR GARAGES &/OR ENGINEERS	Alison Service Station, 140 Alison Rd., Randwick	83369	1950	Road Intersection	231m	East
MOTOR SERVICE STATIONS- PETROL, Etc.	Alison Service Station, 140 Alison Rd., Randwick	85742	1950	Road Intersection	231m	East
MOTOR GARAGES & ENGINEERS	Magnetic Service Station, Cnr. Carlton St. & Anzac Pde., KENSINGTON	347618	1961	Road Intersection	251m	North West
MOTOR GARAGES & ENGINEERS	Gillies, I. D., 15 Arthur St. RANDWICK	347227	1961	Premise Match	255m	South East
MOTOR GARAGES &/OR ENGINEERS	Gillies, I. D., 15 Arthur St., Randwick	83802	1950	Premise Match	255m	South East
DRY CLEANERS & PRESSERS.	Florida Dry Cleaners Pty. Ltd., 145A Anzac Pde., Kensington.	25306	1986	Premise Match	266m	West
DRY CLEANERS & PRESSERS. (D8500)	Golden Dry Cleaners Pty. Ltd., 145A Anzac Pde., Kensington. 2033.	23852	1982	Premise Match	266m	West
DRY CLEANERS, PRESSERS &/OR DYERS	Golden Dry Cleaners Pty. Ltd., 145a Anzac Pde., Kensington.	20791	1978	Premise Match	266m	West
DRY CLEANERS, PRESSERS&/OR DYERS.	Murrays Dry Cleaning, 145a Anzac Pde., Kensington	24233	1975	Premise Match	266m	West
DRY CLEANERS,PRESSERS/DYERS (D710)	Murray's Dry Cleaning, 145a Anzac Pde., Kensington	292411	1970	Premise Match	266m	West
MOTOR GARAGES & SERVICE STATIONS.	Esso Self Serve, 135 Anzac Pde., Kensington.	64662	1986	Premise Match	269m	West

Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Feature Point	Direction
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Esso Servicenter, 131 Anzac Pde., Kensington.	50001	1978	Premise Match	269m	West
MOTOR GARAGES &/OR ENGINEERS.	Esso Servicenter, 131 Anzac Pde., Kensington.	58834	1975	Premise Match	269m	West
MOTOR GARAGES & ENGINEERS(M6S6)	Esso Servicenter, 131 Anzac Pde.KENSINGTON	337757	1970	Premise Match	269m	West
MOTOR GARAGES & ENGINEERS(M6S6)	Smith,R. J. & J. M., 127-131 Anzac Pde.KENSINGTON	338614	1970	Premise Match	269m	West
Motor Garages & Engineers	Esso Service Centre, 131 Anzac Pde. Kensington	122800	1965	Premise Match	269m	West
MOTOR GARAGES & ENGINEERS	Traino, F. (Atlantic), 127-131 Anzac Pde. KENSINGTON	348317	1961	Premise Match	269m	West
Dry Cleaners, Pressers/Dyers	Murray's Dry Cleaning Service (Office), 145 Anzac Pde., Kensington	76253	1965	Premise Match	275m	West
DRY CLEANERS, PRESSERS / DYERS	Murray's Dry Cleaning Service (Office), 145 Anzac Pde., Kensington	299192	1961	Premise Match	275m	West
DRY CLEANERS, PRESSERS & DYERS	Murray, D. 145 Anzac Pde., Kensington	35541	1950	Premise Match	275m	West
DRY CLEANERS, PRESSERS & DYERS	Murrays Dry Cleaning & Service, 145 Anzac Pde., Kensington	35546	1950	Premise Match	275m	West
DRY CLEANERS, PRESSERS & DYERS	Sharpe Bros., 146 Alison Rd., Randwick	35687	1950	Premise Match	278m	East
MOTOR GARAGES & SERVICE STATIONS.	Leevers Motors Pty. Ltd., 9 Anzac Pd., Kensington.	64979	1986	Premise Match	280m	North West
MOTOR GARAGES & ENGINEERS(M6S6)	Parade Service Station, 9 Anzac Pde.KENSINGTON	338379	1970	Premise Match	280m	North West
Motor Garages & Engineers	Parade Service Station, 9 Anzac Pde. Kensington	122807	1965	Premise Match	280m	North West
MOTOR GARAGES & ENGINEERS	Parade Service Station, 9 Anzac Pde. KENSINGTON	347847	1961	Premise Match	280m	North West
MOTOR GARAGES &/OR ENGINEERS	Parade Service Station, 9 Anzac Pde., Kensington	84174	1950	Premise Match	280m	North West
MOTOR SERVICE STATIONS-PETROL, Etc.	Parade Service Station, 9 Anzac Pde., Kensington	86261	1950	Premise Match	280m	North West
DRY CLEANERS, PRESSERS & DYERS	Normays Dry Cleaners, 97 Anzac Pde., Kensington	35564	1950	Premise Match	283m	West
MOTOR GARAGES & ENGINEERS(M6S6)	Peter's Panel Beating Service, 77-79 Anzac Pde.KENSINGTON	338415	1970	Premise Match	287m	North West
Motor Garages & Engineers	Peter's Panel Beating Service, 77-79 Anzac Pde. Kensington	122808	1965	Premise Match	287m	North West
MOTOR SERVICE STATIONS-PETROL, Etc.	Ajax Motors, 59 Anzac Pde., Kensington	85739	1950	Premise Match	287m	North West
MOTOR GARAGES & SERVICE STATIONS.	V. W. Village, 19 Anzac Pde., Kensington.	65660	1986	Premise Match	289m	North West
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	V.W. Village, 15 Anzac Pde., Kensington.	51032	1978	Premise Match	295m	North West
MOTOR GARAGES & ENGINEERS(M6S6)	Royal Service Station (The), 15-17 Anzac Pde.KENSINGTON	338552	1970	Premise Match	295m	North West
Motor Garages & Engineers	Royal Service Station (The), 15-17 Anzac Pde. Kensington	122809	1965	Premise Match	295m	North West
MOTOR SERVICE STATIONS—PETROL, OIL, Etc.	Royal Service Station, 15-17 Anzac Pde. KENSINGTON	351047	1961	Premise Match	295m	North West
MOTOR SERVICE STATIONS-PETROL, Etc.	Royal Service Station, 15-17 Anzac Pde., Kensington	86366	1950	Premise Match	295m	North West
MOTOR GARAGES &/OR ENGINEERS	Royal Service Station, 15-17 Anzac Pde., Kensington	84328	1950	Premise Match	295m	North West
MOTOR GARAGES &/OR ENGINEERS	Danswan, 40 Anzac Pde., Kensington	83660	1950	Premise Match	304m	North West
Motor Garages & Engineers	Grand Prix Garage, Cnr. Day Ave. & Day Lane Kensington	122801	1965	Road Intersection	339m	South West
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	BP Doncaster Service Station 217 Anzac Pde., Kensington, 2033.	56204	1982	Premise Match	357m	South West
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	BP Doncaster Service Station. 217 Anzac Pde.. Kensington.	49538	1978	Premise Match	357m	South West

Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Feature Point	Direction
MOTOR SERVICE STATIONS - PETROL, OIL	BP Doncaster Service Station, 217 Anzac Pde., Kensington.	61495	1975	Premise Match	357m	South West
MOTOR SERVICE STATIONS-PETROL,OIL,Etc. (M716)	B.P. Doncaster Service Station, 217 Anzac Pde., Kensington, 2033	340797	1970	Premise Match	357m	South West
Motor Garages & Engineers	Green Frog (The), 217 Anzac Pde. Kensington	122803	1965	Premise Match	357m	South West
MOTOR GARAGES & ENGINEERS	Green Frog (The), 217 Anzac Pde. KENSINGTON	347271	1961	Premise Match	357m	South West
MOTOR SERVICE STATIONS—PETROL, OIL, Etc.	Green Frog, 217 Anzac Pde. KENSINGTON	350647	1961	Premise Match	357m	South West
MOTOR SERVICE STATIONS-PETROL, Etc.	Green Frog (The), 217 Anzac Pde., Kensington	86009	1950	Premise Match	357m	South West
MOTOR SERVICE STATIONS-PETROL, Etc.	Green Frog (The), 217 Anzac Pde., Kensington	86008	1950	Premise Match	357m	South West
MOTOR GARAGES &/OR ENGINEERS	Green Frog (The), 217 Anzac Pde., Kensington	83822	1950	Premise Match	357m	South West
MOTOR GARAGES & SERVICE STATIONS.	Caltex Service Station, 219A Anzac Pde., Kensington.	64402	1986	Premise Match	373m	South West
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	Cooneys (Golden Fleece) Service Station, 219 Anzac Pde.,Kensington. 2033.	56565	1982	Premise Match	373m	South West
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	Esso Kensington Service Station, 219A Anzac Pde., Kensington.2033.	56702	1982	Premise Match	373m	South West
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Cooneys (Golden Fleece) Service Station, 219 Anzac Pde., Kensington.	49840	1978	Premise Match	373m	South West
MOTOR GARAGES &/OR ENGINEERS.	Cooney, N., 219 Anzac Pde., Kensington.	58697	1975	Premise Match	373m	South West
MOTOR GARAGES &/OR ENGINEERS.	Cooney's Service Station Pty. Ltd., 219a Anzac Pde., Kensington.	58696	1975	Premise Match	373m	South West
MOTOR GARAGES & ENGINEERS(M6S6)	Cooneys Service Station Pty. Ltd., 219a Anzac Parade.KENSINGTON	337611	1970	Premise Match	373m	South West
Motor Garages & Engineers	Golden Fleece Service Station, 219a Anzac Pde. Kensington	122802	1965	Premise Match	373m	South West
MOTOR SERVICE STATIONS—PETROL, OIL, Etc.	University Service Station Pty. Ltd., 219a Anzac Pde. KENSINGTON	351242	1961	Premise Match	373m	South West
MOTOR GARAGES & SERVICE STATIONS.	BP Kensington Service Station, 10 Anzac Pde., Kensington.	64156	1986	Premise Match	378m	North West
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	BP Kensington Service Station, 10 Anzac Pde., Kensington. 2033.	56231	1982	Premise Match	378m	North West
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	BP Kensington Service Station, 10 Anzac Pde., Kensington.	49559	1978	Premise Match	378m	North West
MOTOR GARAGES &/OR ENGINEERS.	B P Kensington Service Station. 10 Anzac Pde., Kensington.	58389	1975	Premise Match	378m	North West
MOTOR SERVICE STATIONS-PETROL,OIL,Etc. (M716)	BP Kensington Service Station, 10 Anzac Pde.KENSINGTON	340876	1970	Premise Match	378m	North West
Motor Garages & Service Stations	BP Kensington Service Station 10 Anzac Pde, Kensington	66560	1991	Premise Match	379m	North West
MOTOR GARAGES &/OR ENGINEERS	Morrow and Smith, 188 Alison Rd., Randwick	84108	1950	Premise Match	385m	East
MOTOR SERVICE STATIONS-PETROL, Etc.	Morrow and Smith, 188 Alison Rd., Randwick	86223	1950	Premise Match	385m	East
Motor Garages & Engineers	Nock, G., 190 Alison Rd. Randwick	123268	1965	Premise Match	388m	East
DRY CLEANERS, PRESSERS&/OR DYERS.	Sharpe Bros., 5 Belmore Rd., Randwick.	24327	1975	Premise Match	399m	East
DRY CLEANERS, PRESSERS & DYERS	Sharpe Bros., 5 Belmore Rd., Randwick	35690	1950	Premise Match	399m	East
DRYCLEANING MACHINERY & SUPPLIES MFRS. &/OR DIST.	Auto-Coin-Dry Cleaning Pty. Ltd., 221 Anzac Pde., Kensington.	20998	1978	Premise Match	404m	South West
DRY CLEANERS, PRESSERS &/OR DYERS	Peter, Barry Laundries Pty. Ltd., 221 Anzac Pde., Kensington.	20913	1978	Premise Match	404m	South West
DRYCLEANING MACHINERY & SUPPLIES MFRS. &/OR DIST.	Auto-Coin-Dry Cleaning Pty. Ltd., 221 Anzac Pde., Kensington.	24433	1975	Premise Match	404m	South West
DRY CLEANERS, PRESSERS&/OR DYERS.	Kensington Norge Village. 221 Anzac Pde., Kensington.	24103	1975	Premise Match	404m	South West

Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Feature Point	Direction
DRY CLEANING MACHINERY & SUPPLIES-MFRS.&/OR DIST. (D720)	Auto-Coin Dry Cleaning Pty.Ltd., 221 Anzac Pde., Kensington	292584	1970	Premise Match	404m	South West
DRY CLEANERS,PRESSERS/DYERS (D710)	Kensington Norge Village, 221 Anzac Pde., Kensington (&Branch)	292360	1970	Premise Match	404m	South West
Dry Cleaners, Pressers/Dyers	Kensington Norge Village, 221 Anzac Pde., Kensington (& Branch)	76215	1965	Premise Match	404m	South West
DRY CLEANERS,PRESSERS/DYERS (D710)	Havana Dry Cleaning 66 Belmore Rd.,Randwick	292337	1970	Premise Match	447m	South East
Dry Cleaners, Pressers/Dyers	Havana Dry Cleaning, 66 Belmore Rd., Randwick	76186	1965	Premise Match	447m	South East
DRY CLEANERS, PRESSERS / DYERS	Hanava Dry Cleaning, 66 Belmore Rd., Randwick	299129	1961	Premise Match	447m	South East
DRY CLEANERS, PRESSERS & DYERS	Hanava Dry Cleaning, 66 Belmore Rd., Randwick	35273	1950	Premise Match	447m	South East
MOTOR GARAGES & SERVICE STATIONS.	Rob & Robb Automotive, Rear 231 Anzac Pde., Kingsford.	65347	1986	Premise Match	449m	South West
DRY CLEANERS, PRESSERS & DYERS	Lyke-Nu Dry Cleaning Co. Ltd. 37 Belmore Rd., Randwick	35468	1950	Premise Match	455m	East
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	White. Peter Service Station, 241 Anzac Pde., Kensington.	51103	1978	Premise Match	490m	South West
MOTOR GARAGES &/OR ENGINEERS.	White, Peter Service Station, 241 Anzac Pde., Kensington,	59779	1975	Premise Match	490m	South West
MOTOR GARAGES & ENGINEERS(M6S6)	White, Peter Service Station, 241 Anzac Pde.KENSINGTON	338880	1970	Premise Match	490m	South West
Motor Garages & Engineers	White, Peter Service Station, 241 Anzac Pde. Kensington	122810	1965	Premise Match	490m	South West
MOTOR GARAGES & ENGINEERS	White, Peter Service Station, 241 Anzac Pde. Kensington	348441	1961	Premise Match	490m	South West
MOTOR SERVICE STATIONS—PETROL, OIL, Etc.	White, Peter, 241 Anzac Pde. Kensington	351285	1961	Premise Match	490m	South West
MOTOR SERVICE STATIONS-PETROL, Etc.	White, Peter, 241 Anzac Pde., Kensington	86523	1950	Premise Match	490m	South West

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

Historical Business Directories

77-97 Alison Road, Randwick, NSW 2031

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 & Service Stations	Kensington Auto Port, Anzac Pde, Kensington. 2033	53764	1991	Road Match	0m
MOTOR GARAGES & SERVICE STATIONS.	Vasilas, J. & S. & H. Pty. Ltd. Esso Self Serve, Anzac Pde., Kensington.	65666	1986	Road Match	0m
MOTOR GARAGES &/OR ENGINEERS.	Varsity Auto Centre, Botany St., Randwick.	59716	1975	Road Match	165m
MOTOR GARAGES & ENGINEERS(M6S6)	Varsity Auto Centre,Botany St. RANDWICK	338813	1970	Road Match	165m
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Grand Prix Garage, Day Ave., Kensington.	50188	1978	Road Match	322m
MOTOR GARAGES & ENGINEERS(M6S6)	Grand Prix Garage,Day Ave.KENSINGTON	337925	1970	Road Match	322m
MOTOR GARAGES &/OR ENGINEERS.	Grand Prix Garage. Day Ave., Kensington.	58985	1975	Road Match	322m
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	Varsity Auto Centre, Barker St., Kensington. 2033.	57786	1982	Road Match	488m
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Varsity Auto Centre, Barker St., Kensington.	51034	1978	Road Match	488m

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



Aerial Imagery 2009

77 - 97 Alison Road, Randwick, NSW 2031



Aerial Imagery 2000

77 - 97 Alison Road, Randwick, NSW 2031



Scale: 0 100 200 400 Meters	Data Source Aerial Imagery: © 2018 Google Inc, used with permission. Google and the Google logo are registered trademarks of Google Inc.	Coordinate System: GDA 1994 MGA Zone 56	Date: 23 July 2018
-----------------------------------	--	--	--------------------



Scale: 0 25 50 100 150 200 250 Meters	Data Sources: Aerial Imagery © Department Finance, Services & Innovation	Coordinate System: GDA 1994 MGA Zone 56	Date: 25 July 2018
---	---	--	--------------------

Aerial Imagery 1982

77-97 Alison Road, Randwick, NSW 2031



Legend

- Site Boundary
- Buffer 150m

Scale:
0 25 50 100 150 200 250
Meters

Data Sources: Aerial Imagery © Department Finance,
Services & Innovation

Coordinate System:
GDA 1994 MGA Zone 56

Date: 25 July 2018



Scale: 0 25 50 100 150 200 250 Meters	Data Sources: Aerial Imagery © Department Finance, Services & Innovation	Coordinate System: GDA 1994 MGA Zone 56	Date: 25 July 2018
---	---	--	--------------------

Aerial Imagery 1965

77 - 97 Alison Road, Randwick, NSW 2031



Aerial Imagery 1961

77 - 97 Alison Road, Randwick, NSW 2031



Aerial Imagery 1955

77 - 97 Alison Road, Randwick, NSW 2031

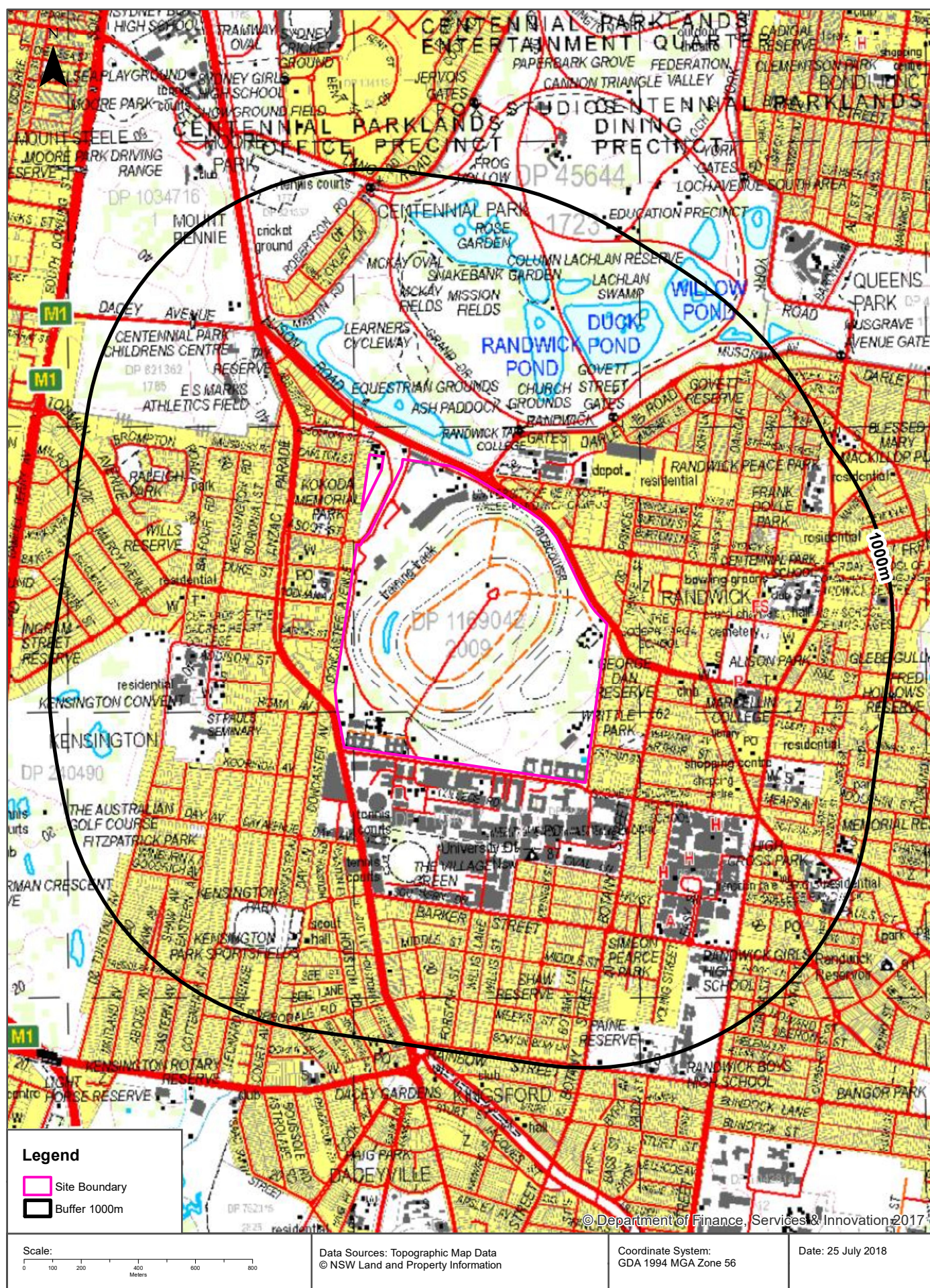


Scale: 0 100 200 400 Meters	Data Source Aerial Imagery: © NSW Department Finance, Services & Innovation	Coordinate System: GDA 1994 MGA Zone 56	Date: 23 July, 2018
-----------------------------------	--	--	---------------------



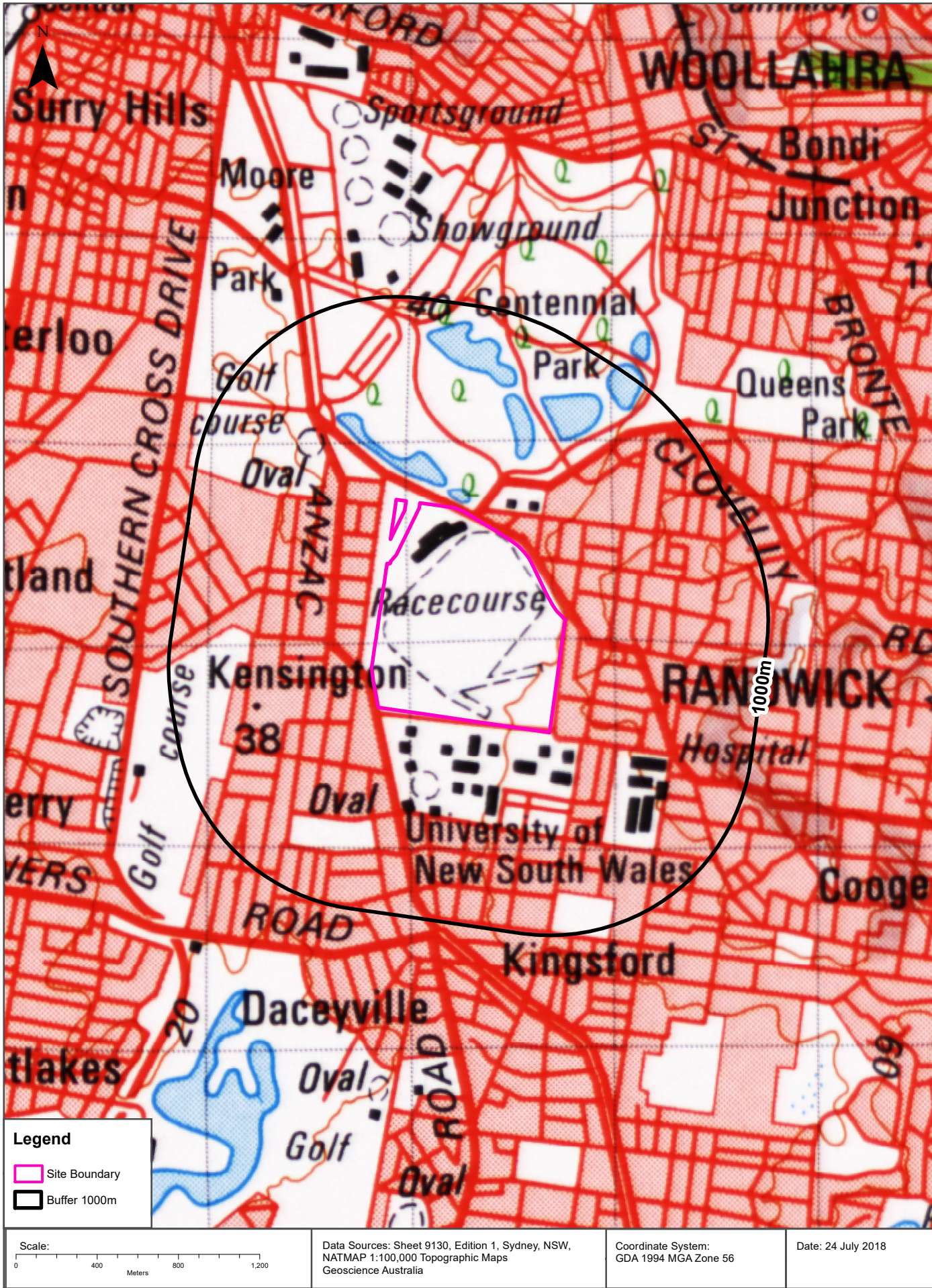
Topographic Map 2015

77-97 Alison Road, Randwick, NSW 2031



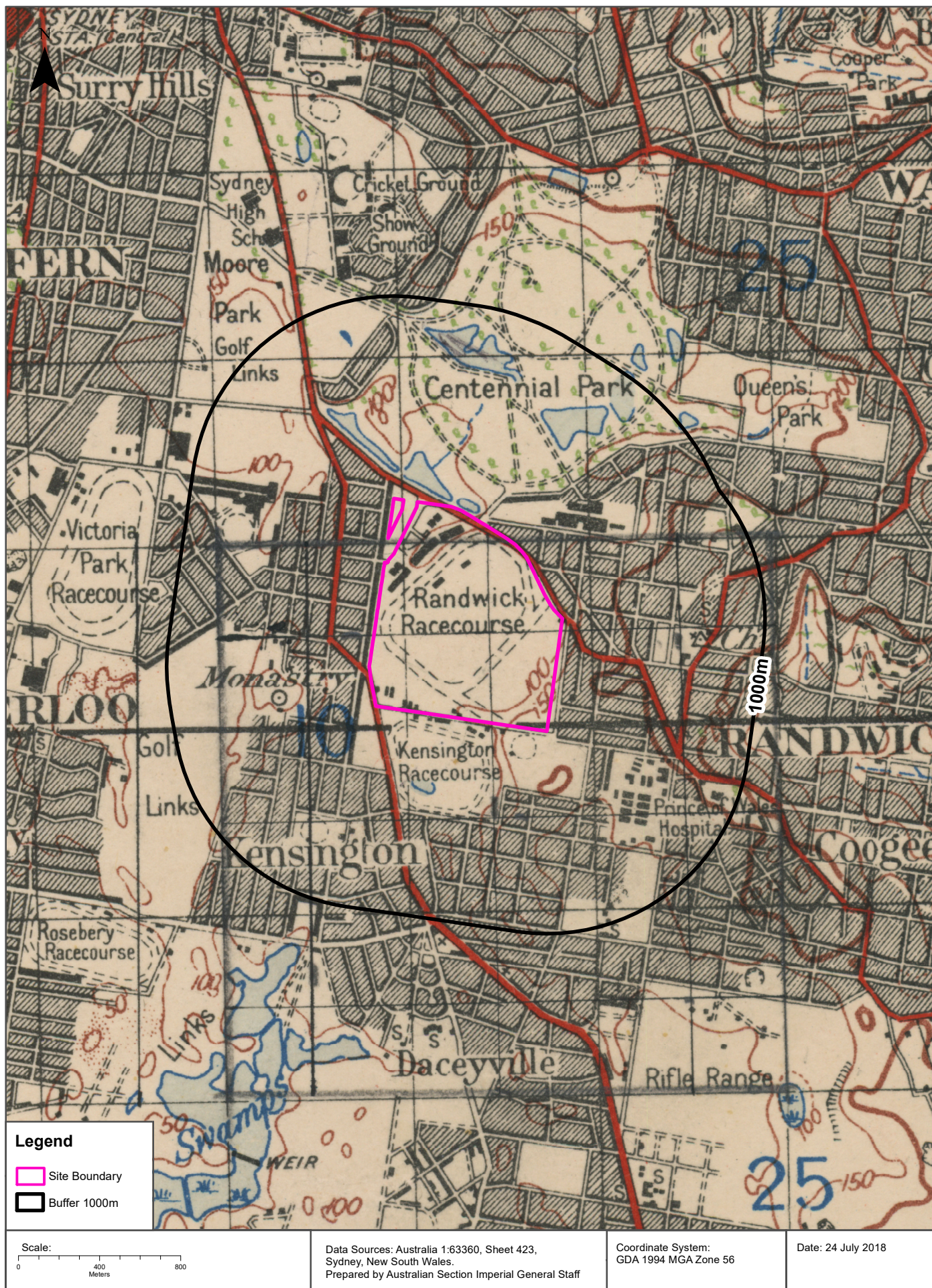
Historical Map 1975

77 - 97 Alison Road, Randwick, NSW 2031



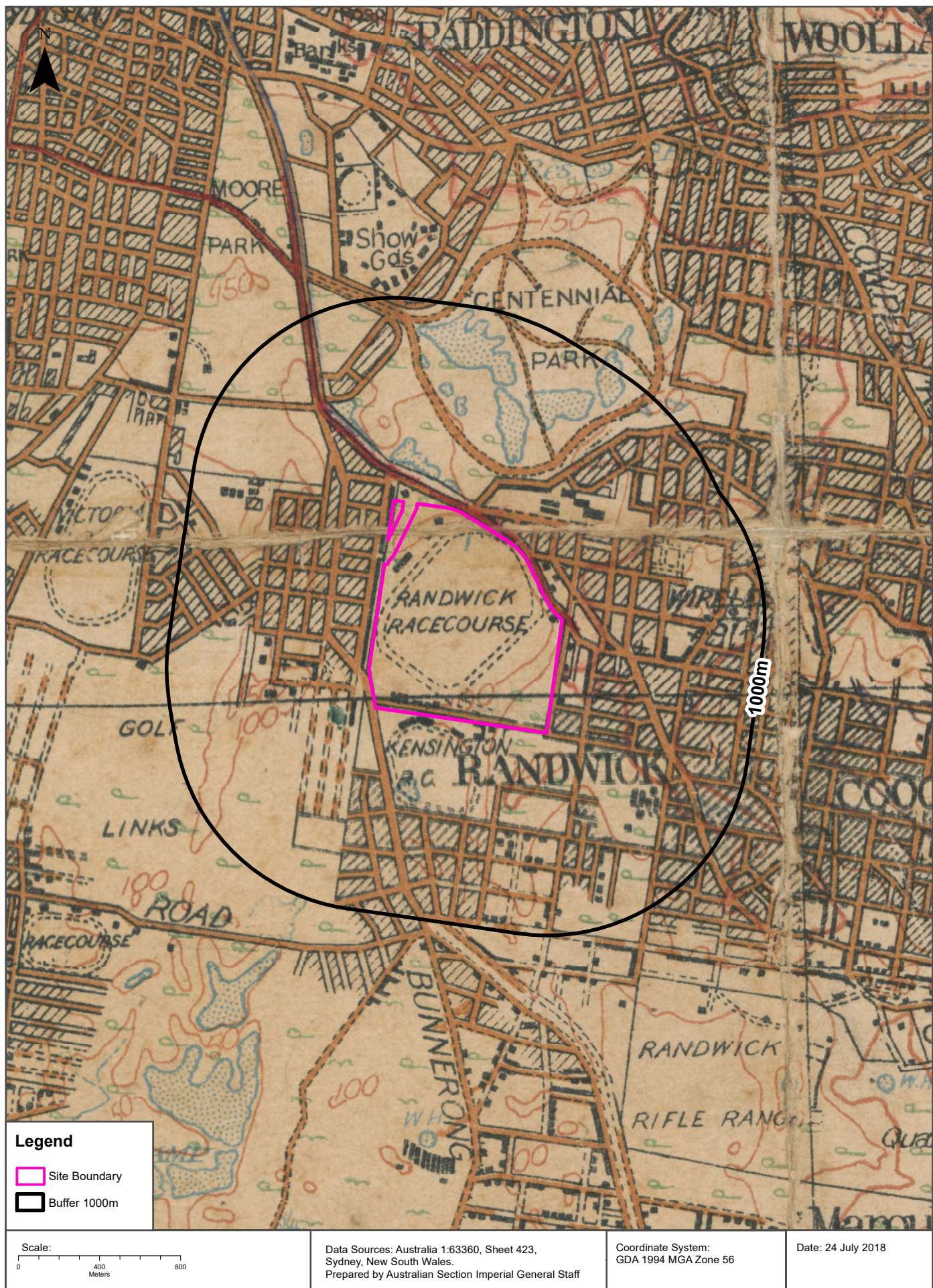
Historical Map c.1949

77 - 97 Alison Road, Randwick, NSW 2031



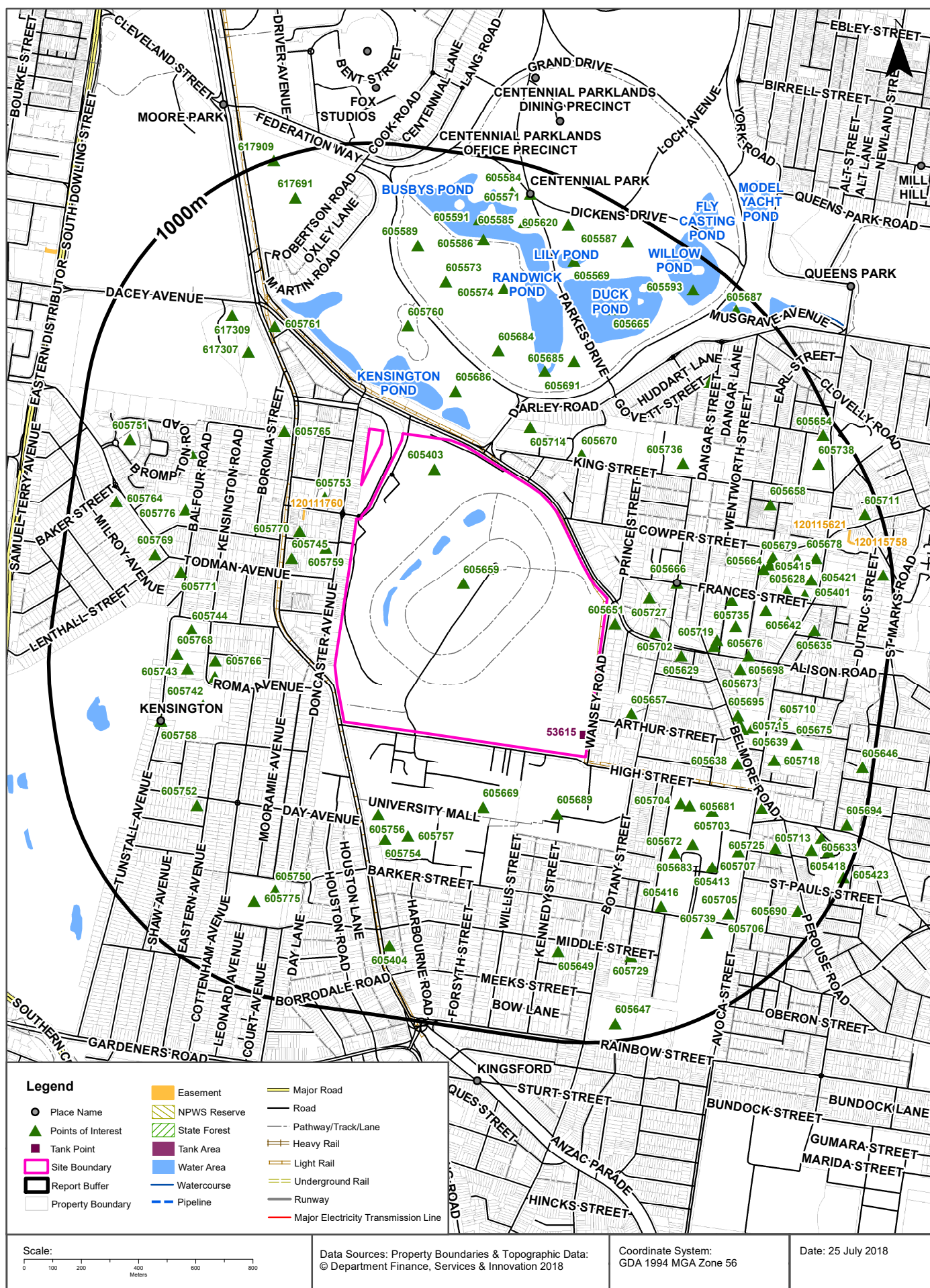
Historical Map c.1917

77 - 97 Alison Road, Randwick, NSW 2031



Topographic Features

77-97 Alison Road, Randwick, NSW 2031



Topographic Features

77-97 Alison Road, Randwick, NSW 2031

Points of Interest

What Points of Interest exist within the dataset buffer?

Map Id	Feature Type	Label	Distance	Direction
605403	Community Facility	AUSTRALIAN JOCKEY CLUB	0m	Onsite
605659	Racecourse	ROYAL RANDWICK RACECOURSE	0m	Onsite
605651	Park	GEORGE DAN RESERVE	38m	East
605759	Primary School	KENSINGTON PUBLIC SCHOOL	90m	North West
605753	Park	KOKODA MEMORIAL PARK	134m	North West
605657	Park	WRITTLE PARK	137m	South East
605727	Park	KYNASTON AVENUE RESERVE	146m	East
605686	Park	ASH PADDOCK	173m	North
605714	TAFE College	RANDWICK TAFE COLLEGE	175m	North
605702	Special School	THE JOSEPH VARGA SCHOOL	181m	East
605770	Place Of Worship	ST GEORGE COPTIC ORTHODOX CHURCH	190m	North West
605762	Manmade Waterbody	KENSINGTON POND	194m	North West
605670	University	UNIVERSITY OF NEW SOUTH WALES RANDWICK CAMPUS	198m	North East
605745	Post Office	KENSINGTON POST OFFICE	204m	West
605689	Post Office	UNIVERSITY OF NSW POST OFFICE	212m	South East
605669	University	UNIVERSITY OF NEW SOUTH WALES KENSINGTON CAMPUS	226m	South
605666	Suburb	RANDWICK	249m	East
605629	Club	RANDWICK LABOR CLUB	282m	East
605765	Embassy	CONSULATE OF THE PEOPLE'S REPUBLIC OF CHINA	292m	North West
605756	Sports Court	TENNIS COURTS	305m	South West
605684	Park	EQUESTRIAN GROUNDS	353m	North
605757	Sports Field	THE VILLAGE GREEN	363m	South
605704	Childrens Hospital	SYDNEY CHILDREN'S HOSPITAL	369m	South East
605691	Manmade Waterbody	RANDWICK POND	370m	North
605760	Park	LEARNERS CYCLEWAY	379m	North
605754	Sports Court	TENNIS COURTS	386m	South
605719	Place Of Worship	RANDWICK PRESBYTERIAN CHURCH	391m	East
605676	Primary School	COOGEE BOYS PREPARATORY SCHOOL	399m	East
605681	Special School	SYDNEY CHILDRENS HOSPITAL SCHOOL	401m	South East
605766	Primary School	OUR LADY OF THE ROSARY CATHOLIC PRIMARY SCHOOL	417m	West

Map Id	Feature Type	Label	Distance	Direction
605772	Place Of Worship	OUR LADY OF THE ROSARY KENSINGTON	420m	West
605735	Child Care Centre	RANDWICK COOGEE PRE-SCHOOL	433m	East
605685	Park	CHURCH GROUNDS	453m	North East
605683	General Hospital	ROYAL HOSPITAL FOR WOMEN	456m	South East
605656	Park	ALISON PARK	457m	East
605736	Nursing Home	RANDWICK MONTEFIORE HOME	470m	North East
605742	Convent/Monastery	ST PAULS SEMINARY	473m	West
605703	General Hospital	PRINCE OF WALES HOSPITAL	481m	South East
605672	General Hospital	PRINCE OF WALES PRIVATE HOSPITAL	482m	South East
605761	Park	TAY RESERVE	488m	North West
605673	High School	MARCELLIN COLLEGE	493m	East
617307	Sports Field	E S MARKS ATHLETICS FIELD	501m	North West
605695	Library	MARGARET MARTIN LIBRARY	507m	East
605744	High School	OUR LADY OF THE SACRED HEART COLLEGE	512m	West
605743	Convent/Monastery	KENSINGTON CONVENT	514m	West
605698	Police Station	RANDWICK POLICE STATION	515m	East
605636	Post Office	RANDWICK POST OFFICE	517m	South East
605638	Shopping Centre	RANDWICK PLAZA	529m	South East
605715	Medical Centre	RANDWICK EARLY CHILDHOOD CENTRE	529m	South East
605573	Sports Field	MCKAY FIELDS	548m	North
605768	Community Home	ST JOSEPHS AGED CARE FACILITY FOR RELIGIOUS	552m	West
605631	Fire Station	RANDWICK FIRE STATION	554m	East
605642	Cemetery	Cemetery	555m	East
605639	Shopping Centre	ROYAL RANDWICK SHOPPING CENTRE	563m	South East
605574	Sports Field	MISSION FIELDS	563m	North
605628	Club	RANDWICK BOWLING CLUB	579m	East
605771	Place Of Worship	ST MARTIN'S ANGLICAN CHURCH	580m	West
605416	Ambulance Station	RANDWICK AMBULANCE STATION	584m	South East
605413	Helipad	Helipad	585m	South East
605752	Park	FITZPATRICK PARK	591m	South West
605776	Park	WILLS RESERVE	595m	West
605664	Sports Field	BOWLING GREENS	595m	East
605749	Park	Park	604m	North West
617309	Park	CENTENNIAL PARK CHILDRENS CENTRE	623m	North West
605707	Community Home	PRINCE OF WALES COMMUNITY HEALTH SERVICE	627m	South East
605634	Local Government Chambers	RANDWICK CITY COUNCIL	627m	East
605758	Suburb	KENSINGTON	628m	West

Map Id	Feature Type	Label	Distance	Direction
605717	Place Of Worship	ST JUDE'S ANGLICAN CHURCH	635m	East
605750	Park	KENSINGTON PARK	637m	South West
605652	Park	HIGH CROSS PARK	641m	South East
605718	Place Of Worship	OUR LADY OF THE SACRED HEART	654m	South East
605658	Park	FRANK DOYLE PARK	656m	East
605710	Community Home	MILFORD HOUSE NURSING HOME	657m	East
605589	Sports Field	MCKAY OVAL	660m	North
605679	Primary School	RANDWICK PUBLIC SCHOOL	677m	East
605769	Community Home	CASTELLORIZIAN NURSING HOME	678m	West
605665	Manmade Waterbody	DUCK POND	679m	North East
605649	Park	SHAW RESERVE	686m	South
605401	Community Facility	RANDWICK TOWN HALL	689m	East
605645	Park	GOVETT RESERVE	701m	North East
605775	Sports Field	KENSINGTON PARK SPORTSFIELDS	701m	South West
605586	Park	SNAKEBANK	712m	North
605729	Park	SIMEON PEARCE PARK	714m	South East
605415	High School	SATURDAY SCHOOL OF COMMUNITY LANGUAGES RANDWICK CE	715m	East
605421	High School	NSW SCHOOL OF LANGUAGES	715m	East
605675	Primary School	OUR LADY OF THE SACRED HEART SCHOOL	724m	South East
605635	Place Of Worship	UNITING CHURCH	731m	East
605725	Place Of Worship	GRACEPOINT CHRISTIAN CHURCH	735m	South East
605705	Medical Centre	RANDWICK DEVELOPMENTAL CLINIC TUMBATIN BUILDING	741m	South East
605706	Medical Centre	SYDNEY CHILDREN'S COMMUNITY HEALTH CENTRE	741m	South East
605678	Special School	CENTENNIAL PARK SCHOOL	742m	East
605739	High School	RANDWICK GIRLS HIGH SCHOOL	746m	South East
605404	Community Facility	CASTELLORIZIAN CLUB	752m	South
605569	Manmade Waterbody	LILY POND	752m	North
605591	Manmade Waterbody	BUSBYS POND	779m	North
605585	Park	COLUMN GARDEN	804m	North
605751	Park	RALEIGH PARK	822m	North West
605764	Embassy	CONSULATE OF GREECE	839m	West
617691	Sports Field	CRICKET GROUND	850m	North West
605633	High School	BRIGIDINE COLLEGE RANDWICK	853m	South East
605620	Park	LACHLAN RESERVE	854m	North
605713	Retirement Village	STRATHALLEN VILLAGE	871m	South East
605738	Combined Primary-Secondary School	EMANUEL SCHOOL	875m	East
605593	Manmade Waterbody	WILLOW POND	890m	North East

Map Id	Feature Type	Label	Distance	Direction
605584	Park	ROSE GARDEN	896m	North
605587	Park	LACHLAN SWAMP	906m	North East
605571	Suburb	CENTENNIAL PARK	907m	North
605418	Nursing Home	CATHOLIC HEALTHCARE BRIGIDINE HOUSE	909m	South East
605690	Post Office	ST PAULS POST OFFICE	916m	South East
605687	Manmade Waterbody	ONE MORE SHOT POND	936m	North East
605647	Park	PAINE RESERVE	938m	South
605694	Primary School	CLAREMONT COLLEGE	942m	South East
605711	Community Home	SUMMITCARE RANDWICK	946m	East
605654	Park	RANDWICK PEACE PARK	946m	North East
605646	Park	Park	963m	East
605632	General Hospital	EASTERN SUBURBS PRIVATE HOSPITAL	966m	East
605423	Nursing Home	ST BASILS NURSING HOME	994m	South East
617909	Sports Court	TENNIS COURTS	997m	North West

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

Creative Commons 3.0 © Commonwealth of Australia <http://creativecommons.org/licenses/by/3.0/au/deed.en>

Topographic Features

77-97 Alison Road, Randwick, NSW 2031

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
53615	Water	Operational		05/10/2000	0m	Onsite

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

Creative Commons 3.0 © Commonwealth of Australia <http://creativecommons.org/licenses/by/3.0/au/deed.en>

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
120111760	Primary	Undefined		182m	North West
120115621	Primary	Undefined		863m	East
120115758	Primary	Undefined		865m	East

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

Creative Commons 3.0 © Commonwealth of Australia <http://creativecommons.org/licenses/by/3.0/au/deed.en>

Topographic Features

77-97 Alison Road, Randwick, NSW 2031

State Forest

What State Forest exist within the dataset buffer?

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

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

Creative Commons 3.0 © Commonwealth of Australia <http://creativecommons.org/licenses/by/3.0/au/deed.en>

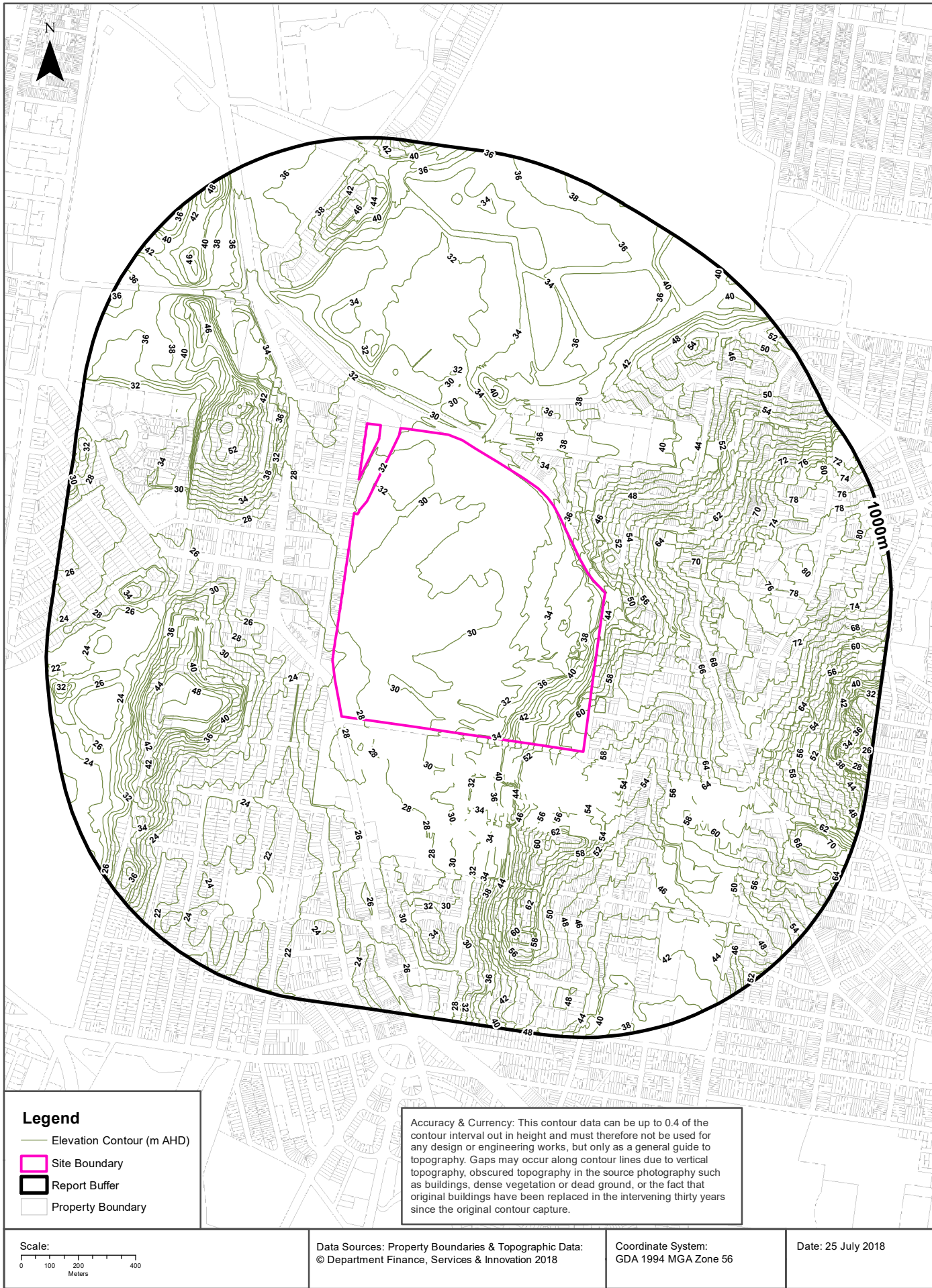
National Parks and Wildlife Service Reserves

What NPWS Reserves exist within the dataset buffer?

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

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

Creative Commons 3.0 © Commonwealth of Australia <http://creativecommons.org/licenses/by/3.0/au/deed.en>



Hydrogeology & Groundwater

77-97 Alison Road, Randwick, NSW 2031

Hydrogeology

Description of aquifers on-site:

Description
Porous, extensive highly productive aquifers

Description of aquifers within the dataset buffer:

Description
Porous, extensive highly productive aquifers

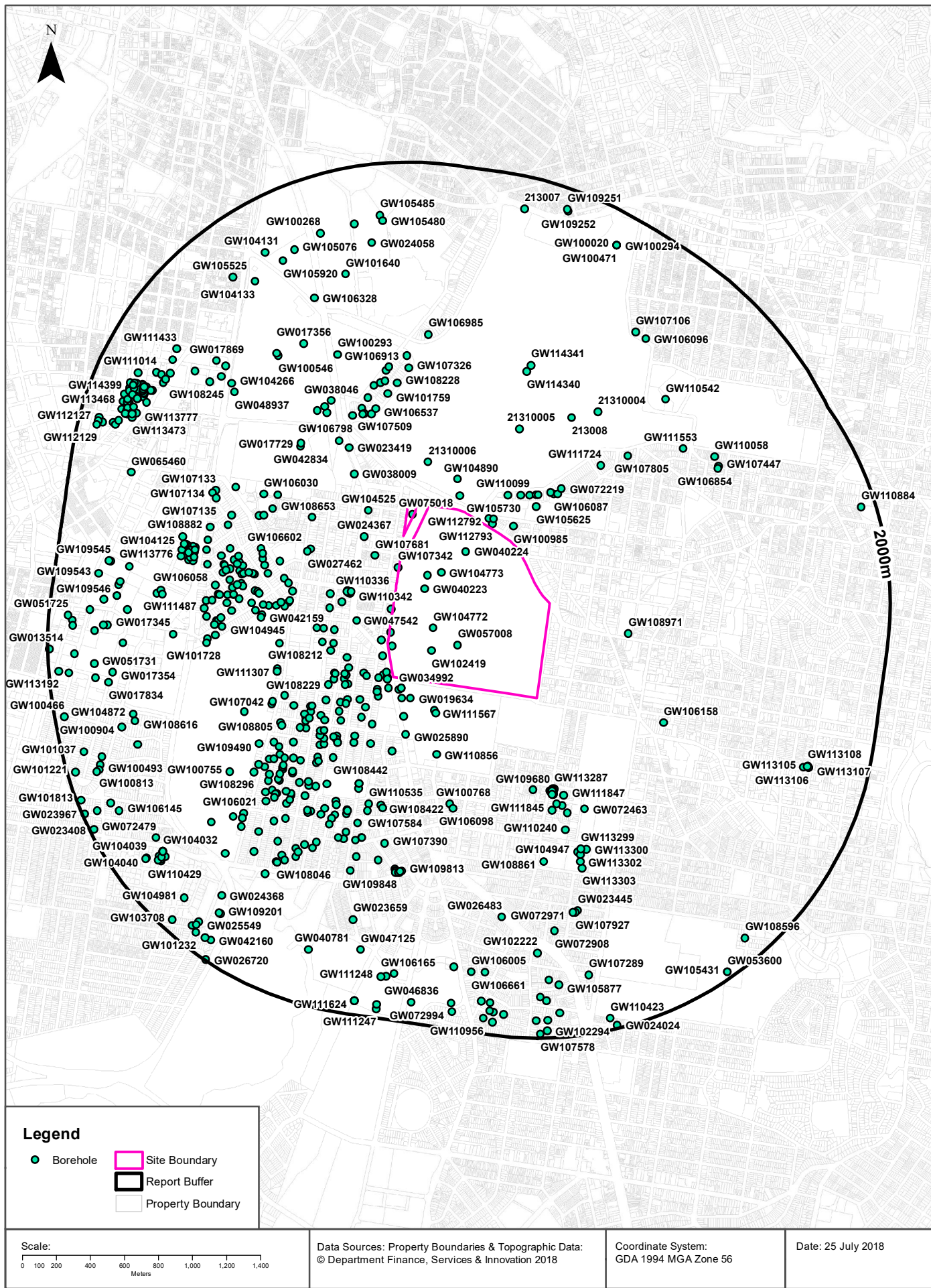
Hydrogeology Map of Australia : Commonwealth of Australia (Geoscience Australia)
Creative Commons 3.0 © Commonwealth of Australia <http://creativecommons.org/licenses/by/3.0/au/deed.en>

Botany Groundwater Management Zones

Groundwater management zones relating to the Botany Sand Beds aquifer within the dataset buffer:

Management Zone No.	Restriction	Distance	Direction
N/A	No records in buffer		

Botany Groundwater Management Zones Data Source : NSW Department of Primary Industries



Hydrogeology & Groundwater

77-97 Alison Road, Randwick, NSW 2031

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
GW040223		Spear	Private	Recreation			7.00	7.15				28.37	0m	Onsite
GW104773	10BL161316, 10BL162009, 10CA114623	Bore	Private	Recreation	B & B Drilling Inc	20/02/2003	25.00	25.00	290	4.90	3.000		0m	Onsite
GW102419	10BL156872, 10CA114623	Bore		Industrial		01/01/1978	22.00			3.00	10.000		0m	Onsite
GW057008	10BL124553	Bore	Private	Industrial		01/10/1981	30.00	30.00					0m	Onsite
GW047542	10BL110201, 10CA114623	Bore	Private	Industrial, Irrigation		01/01/1978	30.50	30.50					0m	Onsite
GW040224		Spear	Private	Recreation			7.00	7.00				30.04	0m	Onsite
GW104772	10BL161316, 10BL162010, 10CA114623	Bore	Private	Recreation	B & B Drilling Inc	20/02/2003	25.00	25.00	290	4.90	3.000		0m	Onsite
GW047543	10BL110202, 10CA114623	Bore	Private	Industrial, Irrigation		01/01/1978	30.50	30.50					0m	Onsite
GW075018		Bore	NSW Office of Water	Monitoring	McDermott Drilling Pty Ltd	08/07/1998	43.00	44.00		0.48		8.59	0m	Onsite
GW047544	10BL108893, 10CA114623	Bore	Private	Industrial, Irrigation		01/07/1978	23.00	23.00					0m	Onsite
GW107342	10BL165349, 10WA113965	Spear	Private	Domestic		25/08/2005	5.18	5.19	Good	3.35	1.000		5m	North West
GW106554	10BL162310, 10WA113400	Spear	Private	Domestic	B & B Drilling Inc	13/11/2004	6.00	6.00	Good	3.00	0.500		8m	West
GW112793	10BL602685	Bore	Private	Monitoring	Ability Plus Environmental and Geotechnical Drilling Pty Ltd	03/09/2013	4.80	4.80		2.50			29m	North
GW113051	10BL602811	Bore	Private	Monitoring	Macquarie Drilling	13/11/2008	7.50	7.50					33m	South West
GW113050	10BL602811	Bore	Private	Monitoring	Macquarie Drilling	12/11/2008	10.50	10.50					35m	South West
GW113049	10BL602811	Bore	Private	Monitoring	Macquarie Drilling	21/10/2013	8.00	8.00					36m	South West
GW104969	10BL160301, 10WA113307	Bore	Private	Domestic		27/11/2001	6.00	6.00		3.00	1.000		38m	West
GW024677	10BL018344	Spear	Private	General Use		01/06/1966	4.80	4.90	Good				39m	South West
GW112792	10BL602685	Bore	Private	Monitoring	Ability Plus Environmental and Geotechnical Drilling Pty Ltd	03/09/2013	5.00	5.00		2.50			44m	North
GW113048	10BL602811	Bore	Private	Monitoring		13/11/2008	8.50	8.50					54m	South West
GW112791	10BL602685	Bore	Private	Monitoring	Ability Plus Environmental and Geotechnical Drilling Pty Ltd	03/09/2013	3.30	3.30		1.90			55m	North

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
GW019635	10BL012860	Bore	Other Govt	Recreation		01/09/1955	28.40	28.50					58m	South West
GW028827	10BL022485	Bore	Other Govt	Recreation		01/07/1968	32.60	32.60					58m	South West
GW034992	10BL030088, 10BL156719, 10WA114637	Bore	Private	Industrial, Recreation	Panorama Drilling Company	08/08/1995	41.00	41.00	Fresh	7.50	19.000		70m	South West
GW019612	10BL012857	Bore	Other Govt	Recreation		01/10/1955	31.30	31.40					73m	South West
GW103124	10BL156139, 10CA114621	Excavation		Recreation		01/01/1995	75.00	75.00			40.000		80m	North
GW100985	10BL156951, 10WA113088	Spear	Private	Domestic		28/08/1995	5.18	5.18	Good	2.14	1.000		83m	North East
GW106378	10BL163862, 10WA113695	Spear	Private	Domestic	B & B Drilling Inc	23/08/2004	7.00	7.00	Good	5.00	0.500		83m	South West
GW019634	10BL012859	Bore	Other Govt	Recreation		01/04/1954	32.60	32.60					111m	South West
GW105676	10BL162667, 10WA113468	Spear	Private	Domestic		08/03/2004	9.15	9.15			1.000		118m	South West
GW101682	10BL156791, 10WA114637	Bore	Private	Industrial, Recreation	Panorama Drilling Company	23/08/1995	33.00	41.00	Fresh				119m	South West
GW105978	10BL162744, 10WA113480	Spear	Private	Domestic		29/03/2004	8.23	8.24		5.18	1.000		130m	South West
GW107651	10BL165685, 10WA114019	Spear	Private	Domestic	B & B Drilling Inc	29/11/2005	7.00	7.00	Good	5.00	0.500		144m	South West
GW107681	10BL163088	Bore				15/12/2006							149m	North West
GW108674	10BL601443, 10WA114349	Spear	Private	Domestic		10/04/2007	8.00	8.00					152m	South West
GW111567	10BL604946	Bore	Private	Monitoring	Groundtek Drilling	01/08/2011	8.00	8.00	145	5.20			160m	South
GW101453	10BL158478, 10WA113246	Spear	Private	Domestic		03/02/1998	6.00	6.00					166m	South West
GW104890	10BL161843, 10BL162062, 10CA114621	Bore	Other Govt	Irrigation	Intertec Drilling Services	19/06/2003	25.00	25.80	104	0.90	1.000		174m	North
GW111568	10BL604946	Bore	Private	Monitoring	Groundtek Drilling	01/08/2011	8.60	8.60	123	5.20			178m	South
GW023290	10BL016656, 10WA112832	Spear	Private	General Use		01/09/1965	4.20	4.30					199m	West
GW101699	10BL158646, 10WA113259	Bore		Domestic		03/06/1998	7.00	7.00					217m	North
GW102016	10BL156792, 10WA114637	Bore		Industrial, Recreation	Panorama Drilling Company	11/09/1995	32.00	35.00	Fresh	7.20	18.000		221m	South West
GW104525	10BL160923	Bore	Private	Monitoring	Intertec Drilling Services	13/11/2002	17.65	17.65	Good	2.00	7.000		225m	North West
GW024367	10BL018457	Spear	Private	General Use		01/07/1966	4.20	4.30	Good				231m	North West
GW106797	10BL163649, 10WA113642	Spear	Private	Domestic		11/10/2004	7.00	7.00					237m	South West
GW107638	10BL162367, 10WA113415	Spear	Private	Domestic	B & B Drilling Inc	27/10/2005	5.00	5.00	Good	3.00	0.500		243m	South West
GW101225	10BL158321, 10WA113222	Spear	Private	Domestic	A Korkadis	09/12/1997	6.00	6.00	Good	3.05	1.000		246m	South West
GW106249	10BL163304, 10WA113555	Spear	Private	Domestic		02/06/2004	6.00	6.00					247m	West
GW105625	10BL162884, 10BL164953, 10WA114735	Bore		Recreation	Intertec Drilling Services	06/12/2004	13.80	14.00	172	4.60	0.900		252m	North East
21310006				UNK								31.69	253m	North
GW110337	10BL165553	Well	Private	Monitoring		20/10/2004	4.00	4.00	136	2.16			256m	West
GW105730	10BL162270, 10WA113386	Bore	Private	Domestic		15/11/2003	8.00	8.00					257m	North East
GW110338	10BL165553	Well	Private	Monitoring		20/10/2004	4.00	4.00	237	2.24			257m	West

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
GW110342	10BL165553	Well	Private	Monitoring		23/11/2004	4.00	4.00	261	2.40			258m	West
GW110339	10BL165553	Well	Private	Monitoring		20/10/2004	4.00	4.00	315	2.42			261m	West
GW103644	10BL159632, 10WA113294	Bore	Private	Domestic		03/04/2000	7.00	7.00					266m	South West
GW110336	10BL165553	Well	Private	Monitoring		18/10/2004	4.00	4.00	251	2.57			266m	West
GW110341	10BL165553	Well	Private	Monitoring		23/11/2004	4.00	4.00	140	2.51			269m	West
GW107614	10BL164804, 10WA113863	Spear	Private	Domestic	B & B Drilling Inc	24/10/2005	6.00	6.00	Good	3.00	0.500		271m	South West
GW113251	10WA118703	Spear	Private	Domestic		01/01/2000	7.50	7.50		4.00	0.200		276m	South West
GW110340	10BL165553	Well	Private	Monitoring		21/10/2004	4.00	4.00	140	2.36			278m	West
GW110335	10BL165553	Well	Private	Monitoring		18/10/2004	4.00	4.00	133	2.88			281m	West
GW102611	10BL159396, 10WA113286	Bore		Domestic		25/09/1999	6.00	6.00					282m	South West
GW109117	10BL602224, 10WA114465	Spear	Private	Domestic	Combined Drilling Services	25/07/2008	9.00						285m	South West
GW110099	10BL162241, 10WA113374	Bore	Private	Domestic		01/01/2003	8.00			2.00	2.500		287m	North East
GW106973	10BL163973, 10WA113712	Spear	Private	Domestic	B & B Drilling Inc	18/02/2005	6.00	6.00	Good	3.00	0.500		301m	South West
GW107431	10BL165301, 10WA113952	Spear	Private	Domestic		08/09/2005	7.63	7.63	Good	3.50	1.000		302m	West
GW105754	10BL162297, 10WA113398	Spear	Private	Domestic		27/11/2003	5.18	5.19		1.52	1.000		303m	South West
GW106774	10BL164077, 10WA113723	Spear	Private	Domestic		23/10/2004	8.23	8.24	Good	5.85	1.000		304m	South West
GW108207	10BL162227, 10WA113369	Spear		Domestic		01/01/2004	9.50			5.00	1.000		310m	North East
GW111445	10BL601938, 10WA114423	Spear	Private	Domestic		09/04/2011	8.00	8.00					315m	West
GW106671	10BL162426, 10WA113425	Spear	Private	Domestic		15/10/2004	9.50	9.50					316m	North East
GW107641	10BL165333, 10WA113962	Spear	Private	Domestic		01/11/2005	7.50	7.50					318m	South West
GW109062	10BL601484, 10WA114362	Bore	Private	Domestic	B & B Drilling Inc	16/07/2008	7.00		Good	5.00	0.500		319m	West
GW025890	10BL014914, 10BL600316, 10WA112802	Bore	Other Govt	Irrigation		01/07/1965	31.30	31.40	0-500 ppm				324m	South West
GW107142	10BL165146, 10WA113926	Spear	Private	Domestic		20/06/2005	17.80	17.80		11.5 5	1.000		331m	South West
GW107612	10BL164378, 10WA113786	Spear	Private	Domestic		18/12/2004	12.81	12.81	Good	10.6 8	1.000		333m	South West
GW100815	10BL156330, 10WA113038	Bore				01/01/1994	14.00			8.00			336m	West
GW107129	10BL164723, 10WA113842	Spear	Private	Domestic		11/05/2005	12.81	12.81	Good	7.32	1.000		342m	South West
GW107653	10BL165654, 10WA114012	Spear	Private	Domestic		12/12/2005	9.50	9.50					344m	South West
GW038009	10BL101948	Bore	Private	Recreation		01/09/1969	21.30	22.90	Good				359m	North West
GW108428	10BL600893, 10WA114240	Bore	Private	Domestic		08/01/2007	8.00	8.00					366m	West
GW106078	10BL162975, 10WA113514	Spear	Private	Domestic		14/04/2004	7.32	7.32		4.27	1.000		372m	North East
GW106862	10BL164871, 10WA113878	Spear	Private	Domestic		10/03/1995	7.63	7.63	Good	4.58	1.000		375m	South West
GW107336	10BL165316, 10WA113959	Spear	Private	Domestic		15/08/2005	7.00	7.00					376m	West
GW106087	10BL162976	Spear	Private	Domestic		14/04/2004	7.63	7.63		4.58	1.000		376m	North East

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
GW108229	10BL600466, 10WA114152	Spear	Private	Domestic		06/08/2006	17.00	17.00					381m	South West
GW108212	10BL600131, 10WA114105	Spear	Private	Domestic	Chris Mylonas	18/09/2006	12.00			9.00			382m	West
GW109035	10BL600556, 10WA114164	Spear	Private	Domestic		14/07/2008	12.00						383m	West
GW108166	10BL600428, 10WA114145	Spear		Domestic		29/05/2007	8.00				10.000		393m	North East
GW101219	10BL158306, 10WA113218	Spear	Private	Domestic	A Korkadis	02/12/1997	4.88	4.88	Good	2.13	0.750		400m	South West
GW107728	10BL165893, 10WA114056	Spear	Private	Domestic		13/01/2006	7.00	7.00					416m	South West
GW108036	10BL600152, 10WA114113	Spear	Private	Domestic	B & B Drilling Inc	27/03/2006	6.00	6.00		3.00	0.500		416m	South West
GW101967	10BL158599, 10WA113257	Bore		Domestic		28/04/1998	7.00	7.00					417m	South West
GW110856	10BL601283	Bore	Private	Monitoring	Water Works	22/07/2004	13.20	13.20	176	10.000	1.000		417m	South
GW108275	10BL600132, 10WA114106	Spear	Private	Domestic	Chris Mylonas	01/05/2006	12.00			8.00			424m	West
GW072219		Spear	Private	Domestic		28/02/1995	8.00	8.00					431m	North East
GW101452	10BL158479, 10WA113247	Spear	Private	Domestic		17/02/1998	6.00	6.00					434m	South West
GW101455	10BL158480, 10WA113248	Spear	Private	Domestic		15/02/1998	6.00	6.00					452m	South West
GW023419	10BL017015, 10WA112858	Spear	Private	Domestic		07/08/1974					0.080		472m	North West
GW106766	10BL162335, 10WA113407	Spear	Private	Domestic	B & B Drilling Inc	12/12/2004	6.00	6.00	Good	3.00	0.500		477m	South West
GW102598	10BL159410, 10WA113287	Bore		Domestic		09/10/1999	6.00	6.00					481m	South West
GW105630	10BL162435, 10WA113427	Spear	Private	Domestic		08/12/2003	5.18	5.19		3.36	1.500		482m	South West
GW108971	10BL601798, 10BL602256, 10WA109523	Bore	Other Govt	Recreation	Britt's Water Solutions	27/06/2008	216.00	216.00	Fresh	27.000	0.050		483m	East
GW101458	10BL158491, 10WA113251	Spear	Private	Domestic		05/03/1998	6.00	6.00					496m	South West
GW107335	10BL165306, 10WA113955	Spear	Private	Domestic	Water Works	17/09/2005	7.00	7.00		3.00	0.500		497m	South West
GW101456	10BL158481, 10WA113249	Bore	Private	Domestic		04/02/1998	6.00	6.00					506m	South West
GW107327	10BL165206, 10WA113935	Spear	Private	Domestic	B & B Drilling Inc	22/07/2005	7.00	7.00	Good	5.00	0.500		506m	South West
GW108918	10BL601790, 10WA114415	Spear	Private	Domestic		17/06/2008	7.93		Good	4.58	1.000		514m	South West
GW107417	10BL164727, 10WA113844	Spear	Private	Domestic	B & B Drilling Inc	12/10/2005	7.00	7.00	Good	5.00	0.500		516m	South West
GW108700	10BL601663, 10WA114403	Spear	Private	Domestic		12/05/2007	7.93	7.93	Good	3.96	1.000		525m	South West
GW109098	10BL162923, 10WA113510	Spear	Private	Domestic		23/07/2008	10.68			6.10	1.000		529m	West
GW110874	10BL601374, 10WA114330	Spear	Private	Domestic		10/03/2007	7.93			7.00			533m	South West
GW110524	10BL601622, 10WA109195	Bore	Private	Domestic		18/11/2009	1.50	1.50					542m	South
GW105019	10BL153144, 10CA114621	Bore	Private	Recreation		26/05/1993	30.00	30.00		7.80	1.890		543m	North West
GW027462	10BL020600	Bore	Private	General Use		01/07/1967	20.70	20.70	Other				543m	West
GW111615	10BL163626, 10WA113635	Spear	Private	Domestic		01/10/2004	7.00	7.00	good				543m	South West
GW113289	10BL604337	Bore	Private	Monitoring	Macquarie Drilling	01/05/2010	4.00	4.00					544m	South East
GW109313	10BL602424, 10WA114510	Spear	Private	Domestic	Ultra Drilling	09/09/2008	84.00		200	23.000	1.000		545m	North West

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
GW113287	10BL604337	Bore	Private	Monitoring	Macquarie Drilling	01/05/2010	3.90	3.90		2.50			547m	South East
GW109679	10BL602763, 10WA109553	Well	Private	GW Remediation	Macquarie Drilling	13/10/2008	6.00	6.00					548m	South East
GW023117	10BL016870, 10WA112849	Spear	Private	General Use		01/11/1965	6.00	6.10					550m	South West
GW114951	10WA119158	Spear	Private	Domestic	B&B Drilling	06/07/2015	6.00	6.00		3.00	0.500		552m	South West
GW113288	10BL604337	Bore	Private	Monitoring	Macquarie Drilling	01/05/2010	4.00	4.00					553m	South East
GW109680	10BL602763, 10WA109553	Well	Private	GW Remediation	Macquarie Drilling	14/10/2008	5.50	5.50					553m	South East
GW111554	10BL602666	Bore	Private	Monitoring	Geoprobe	03/09/2008	4.00	4.00		2.58			555m	South East
GW109681	10BL602763, 10WA109553	Well	Private	GW Remediation	Macquarie Drilling	13/10/2008	6.00	6.00					562m	South East
GW107509	10BL163643, 10WA113640	Spear	Private	Domestic		25/08/2005	10.00	10.00					563m	North West
GW109052	10BL602180, 10WA114460	Spear	Private	Domestic		15/07/2008	10.00						564m	South West
GW110448	10BL602895, 10WA114553	Spear	Private	Domestic		28/02/2009	9.00	9.00	Other	5.00	1.000		565m	South West
GW106297	10BL163795, 10WA113685	Spear	Private	Domestic		10/08/2004	8.23	8.24	Good	5.18	1.000		567m	South West
GW112858	10BL603083	Bore	Private	Monitoring	TERRATEST	14/05/2009	3.50	3.50					571m	South East
GW023996	10BL017432, 10WA112897	Spear	Private	Domestic		01/01/1966	4.50	4.60	Good				574m	South West
GW112855	10BL603083	Bore	Private	Monitoring	TERRATEST	05/05/2009	6.50	6.50		2.23			574m	South East
GW112856	10BL603083	Bore	Private	Monitoring	TERRATEST	14/05/2009	5.00	5.00					576m	South East
GW112857	10BL603083	Bore	Private	Monitoring	TERRATEST	05/05/2009	5.20	5.20					577m	South East
GW106177	10BL163428, 10BL600644, 10WA114187	Spear	Private	Domestic	B & B Drilling Inc	01/01/2007	8.00	8.00		2.00	2.500		582m	North West
GW106537	10BL163696, 10WA113653	Spear	Private	Domestic		09/10/2004	10.00	10.00					582m	North West
GW106435	10BL163960, 10WA113708	Spear	Private	Domestic		20/09/2004	12.81	12.81		8.23	1.000		583m	North West
21310005				UNK								37.92	586m	North
GW105438	10BL162238, 10WA113373	Bore		Domestic		03/11/2003	7.63	7.63		4.58	1.000		587m	South West
GW108442	10BL600983, 10WA114258	Spear	Private	Domestic		06/01/2007	8.00	8.00					590m	South West
GW029637	10BL023577, 10WA112997	Spear	Private	General Use		01/02/1969	4.40	4.40	Good				593m	South West
GW111847	10BL602843	Bore	Local Govt	Monitoring		11/08/2009	5.00	5.00		3.77			596m	South East
GW107534	10BL165409, 10WA113973	Spear	Private	Domestic		05/09/2005	6.10	6.10	Good	2.44	1.000		597m	West
GW107137	10BL164534, 10WA113808	Spear	Private	Domestic		03/05/2005	7.63	7.63		3.96	1.000		604m	West
GW106798	10BL163600, 10WA113627	Spear	Private	Domestic		19/12/2004	10.00	10.00					606m	North West
GW105969	10BL162735, 10WA113479	Spear	Private	Domestic		25/05/2006	9.46	9.46	Good	7.01	1.000		607m	South West
GW107430	10BL165324, 10WA113961	Spear	Private	Domestic		12/09/2005	9.15	9.15	Good	3.10	1.000		613m	West
GW104057	10BL160241, 10WA113304	Bore		Domestic	Southern Tablelands Drilling	02/11/2000	14.00	14.00					614m	North West
GW105717	10BL162470, 10WA113435	Bore	Private	Domestic	B & B Drilling Inc	07/01/2004	6.00	6.00	Good	3.50	0.500		621m	South West
GW072922		Spear	Private	Domestic		22/02/1995	6.70	6.70					627m	West

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
GW104928	10BL160633, 10WA113319	Bore	Private	Domestic	B & B Drilling Inc	28/10/2002	9.00	9.00		5.80	0.400		628m	West
GW017851	10BL008581	Bore	Private	Commercial		01/03/1958	4.50	4.60					634m	South East
GW108433	10BL600969, 10WA114253	Spear	Private	Domestic		29/01/2007	12.81	12.81	Good	8.10	1.000		634m	West
GW111004	10BL604103, 10WA114603	Spear	Private	Domestic		19/07/2010	13.12	13.12	good	4.88	1.000		646m	South West
GW023998	10BL016443, 10WA112819	Bore	Private	General Use		01/09/1965	35.90	36.00					647m	South West
GW101759	10BL157335	Bore		Domestic		12/11/1995	10.98	10.98	Good	8.24	1.000		648m	North
GW111846	10BL602843	Bore	Local Govt	Monitoring		11/08/2009	5.60	5.60		2.94			651m	South East
GW105999	10BL162445, 10WA113429	Spear	Private	Domestic		22/03/2004	10.68	10.68			1.000		654m	West
GW107391	10BL163366, 10WA113565	Spear	Private	Domestic		10/12/2004	7.01	7.02	Good	3.66	1.000		656m	West
GW105919	10BL161675, 10WA113341	Bore				13/05/2005							659m	North West
GW023179	10BL016742, 10WA114771	Spear	Private	Irrigation			7.60	7.60	Good				660m	South West
GW013339	10BL006742	Bore	Private	Recreation		01/05/1956	16.40	16.50	Good			20.90	660m	South West
GW111307	10BL600465, 10WA114151	Bore	Private	Domestic		25/05/2010	18.00	18.00		14.00	1.000		661m	West
GW105567	10BL162124, 10WA113352	Bore		Domestic	B & B Drilling Inc	30/10/2003	7.00	7.00	Good	4.70	0.500		662m	South West
GW109216	10BL602549, 10WA114523	Spear	Private	Domestic		15/08/2008	30.00						665m	West
GW111845	10BL602843	Bore	Local Govt	Monitoring		11/08/2009	3.00	3.00		2.69			669m	South East
GW107093	10BL165718, 10WA114030	Bore		Domestic	A Korkadis	02/05/2006	13.73	13.73	Good	5.18	1.000		677m	South West
GW107348	10BL165062, 10WA113911	Spear	Private	Domestic		19/07/2005	13.42	13.42		9.15	1.000		681m	West
GW026468	10BL019000	Bore	Private	Recreation		01/07/1966	19.60	19.70					688m	South West
GW111724	10BL165065, 10WA113914	Spear	Private	Domestic		01/01/2008	6.00	6.00		4.50	1.000		693m	North East
GW100768	10BL157198, 10WA113124	Bore	Private	Domestic		01/10/1995	17.39	17.39	Good		0.500		693m	South
GW106028	10BL162949, 10WA113511	Spear	Private	Domestic	B & B Drilling Inc	21/06/2004	5.00	5.00	Good	3.00	0.500		696m	West
GW111844	10BL602843	Bore	Local Govt	Monitoring		11/08/2009	4.80	4.80		2.67			701m	South East
GW101162	10BL157033, 10WA113101	Spear	Private	Domestic		06/09/1995	6.10	6.10	Good	3.50	1.000		702m	South West
GW108228	10BL600464, 10WA114150	Spear	Private	Domestic		02/09/2006	17.00	17.00					705m	North
GW113145	10BL604599	Bore	Private	Monitoring	Total Drilling	13/05/2011	9.70	9.74					711m	North West
GW042834	10BL105619, 10BL162081, 10CA114621	Bore	Local Govt	Irrigation, Recreation		01/11/1976	31.10	31.10					712m	North West
GW072463	10BL156227, 10WA114625	Bore	Private	Industrial	B & B Drilling Inc	14/11/1994	43.00	43.00		8.60	1.870		713m	South East
GW106693	10BL164313, 10WA113773	Spear	Private	Domestic		21/11/2004	11.29	11.29	Good	7.93	1.000		714m	North West
GW110780	10BL601147, 10WA114289	Spear	Private	Domestic		10/02/2010	23.00	23.00		17.00	1.000		714m	South West
GW108805	10BL601712, 10WA114407	Spear	Private	Domestic		01/01/2007	20.00			15.00	1.000		716m	South West
GW017729	10BL008396	Bore	Local Govt	Recreation		01/01/1942	30.40	30.50	Good				718m	North West
GW106098	10BL162313, 10WA113401	Bore	Private	Domestic		22/01/2004	9.50	9.50					718m	South

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
GW109270	10BL164852, 10WA113871	Bore	Private	Domestic		26/08/2008	11.00			2.00	2.500		722m	North
GW105964	10BL162729, 10WA113478	(Unknown)	Private	Domestic		01/06/2004	9.50	9.50					722m	West
GW107041	10BL162902, 10WA113509	Spear	Private	Domestic	Water Works	29/04/2004	20.00		370	15.00	1.000		722m	South West
GW106730	10BL164248, 10WA113765	Spear	Private	Domestic	Water Works	28/10/2004	15.00	15.00	334	12.00	1.000		725m	North
GW107042	10BL162901, 10WA113508	Spear	Private	Domestic	Water Works	29/04/2004	20.00		370	15.00	1.000		730m	South West
GW023138	10BL017078, 10WA112863	Spear	Private	General Use		01/09/1965	4.80	4.90	Excellent				732m	South West
GW075021		Bore	NSW Office of Water	Monitoring	McDermott Drilling Pty Ltd	13/07/1998	43.00	44.50		3.23		8.54	742m	South West
GW113144	10BL604599	Bore	Private	Monitoring	Total Drilling	12/05/2011	9.75	9.75					746m	North West
GW038046	10BL102456, 10CA114621	Bore	Local Govt	Recreation		01/11/1974	24.30	24.40	Good				749m	North West
GW023572	10BL017647, 10WA112924	Spear	Private	General Use		01/01/1960	3.60	3.70	Good				755m	South West
GW075017		Bore	NSW Office of Water	Monitoring	McDermott Drilling Pty Ltd	07/07/1998	28.50	29.50	Fresh	1.75		8.56	755m	West
GW042159		Bore	NSW Office of Water	Monitoring			24.00					24.82	756m	West
GW105040	10BL161099, 10WA113326	Bore		Domestic		20/03/2003	8.00	8.00		5.00	1.000		756m	West
GW106945	10BL164837, 10WA113867	Spear	Private	Domestic		15/04/2005	9.50	9.50					756m	West
GW108422	10BL600820, 10WA114228	Spear	Private	Domestic		18/01/2007	14.00	14.00					758m	South West
GW112904	10BL604599	Bore	Private	Monitoring	Total Drilling	12/05/2011	9.00	9.00		8.10			759m	North West
GW106158	10BL162658, 10WA113466	Bore				29/06/2005							760m	South East
GW110535	10BL602777, 10WA114536	Bore	Private	Domestic		30/10/2009	12.00	12.00					761m	South West
GW106110	10BL162824, 10WA113493	Bore	Private	Domestic	Intertec Drilling Services	19/03/2004	20.50	23.20	239	4.40	2.000		764m	North West
GW107789	10BL162853, 10WA113498	Spear	Private	Domestic		01/06/2004	7.00	7.00					773m	South West
GW108653	10BL601557, 10WA114374	Spear	Private	Domestic		17/04/2007	12.00	12.00					782m	North West
GW108400	10BL600676, 10WA114193	Spear	Private			15/10/2007	7.01		Good	3.96	1.000		782m	West
GW103325	10BL159870, 10WA113297	Bore		Domestic		16/09/2000	7.00	7.00					785m	South West
GW105965	10BL162787, 10WA113486	(Unknown)	Private	Domestic		17/03/2004	9.50	9.50					786m	North
GW105551	10BL162406, 10WA113423	Bore		Domestic		01/02/2003	7.63	7.63		4.58	1.000		787m	South West
GW110538	10BL603119, 10WA114570	Spear	Private	Domestic		08/09/2009	8.00	8.00					789m	West
GW107444	10BL165466, 10WA113983	Spear	Private	Domestic	Water Works	10/09/2005	7.00	7.00	430	3.00	0.500		791m	South West
GW107326	10BL163784, 10WA113679	Spear	Private	Domestic		01/08/2005	9.00	9.00					791m	North
GW110240	10BL600416, 10BL602332, 10WA114779	Bore	Private	Recreation	Britt's Water Solutions	12/11/2008	150.00	150.00	100	16.50	0.500		796m	South East
GW100831	10BL157546, 10WA113164	Spear	Private	Domestic		12/03/1996	6.10	6.10	Good	3.50	1.000		796m	South West
GW112397	10WA118646	Spear	Private	Domestic		16/04/2013	7.32	7.32	Good	3.05	1.000		796m	West

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
GW107643	10BL164000, 10WA113718	Spear	Private	Domestic	B & B Drilling Inc	19/07/2005	7.00	7.00	Good	5.00	0.500		796m	West
GW110193	10BL600021, 10WA114081	Bore	Private	Domestic		22/02/2006	24.00	24.00	Good	18.00	1.000		798m	South West
GW108703	10BL601650, 10WA114398	Bore	Private	Domestic		01/01/1982	8.00				40.000		800m	West
GW110539	10BL601395, 10WA114336	Spear	Private	Domestic		07/10/2009	10.00	10.00					802m	West
GW107584	10BL165704, 10WA114025	Spear	Private	Domestic		10/10/2005	7.50	7.50					803m	South West
213008				UNK								39.12	804m	North East
GW103691	10BL160091, 10WA113302	Bore	Private	Domestic		03/05/2001	9.00	9.00					804m	North
GW108942	10BL601904, 10WA114422	Spear	Private	Domestic		19/06/2008	7.32		Good	3.96	1.000		806m	South West
GW105307	10BL163293, 10WA113553	Bore		Domestic		01/01/1970							806m	South West
GW102008	10BL158612, 10WA113258	Bore		Domestic		20/04/1998	6.10	6.10	Good	1.83	6.100		812m	South West
GW107154	10BL164908, 10WA113883	Spear	Private	Domestic		26/05/2005	7.93	7.93		4.88	1.000		812m	South West
GW109118	10BL602249, 10WA114472	Bore	Private	Domestic		25/07/2008	7.63		Good	3.05	1.000		815m	West
GW106602	10BL163744, 10WA113670	Spear	Private	Domestic		28/08/2004	6.10	6.10		3.50	1.000		817m	West
GW106875	10BL164501, 10WA113804	Spear	Private	Domestic		24/01/2005	5.80	5.80		3.05	1.000		819m	South West
GW105492	10BL162700, 10WA113474	Bore		Domestic		15/04/2004	6.71	6.71		4.58	1.000		824m	West
GW025781	10BL017054, 10WA112860	Spear	Private	General Use		01/10/1965	4.50	4.60	Good				824m	South West
GW106488	10BL163625, 10WA113634	Spear	Private	Domestic		01/11/2004	6.10	6.10	Good	3.50	1.000		828m	South West
GW106083	10BL162811, 10WA113488	Bore	Private	Domestic	Intertec Drilling Services	23/03/2004	18.90	20.10	295	1.70	3.500		829m	North West
GW106146	10BL157102, 10WA113112	Spear	Private	Domestic		21/09/1995	7.32	7.32	Good		1.000		829m	South West
GW104966	10BL160279, 10WA113306	Bore	Private	Domestic		29/09/2001	6.00	6.10		3.05	1.000		830m	South West
GW106076	10BL163154, 10WA113532	Spear	Private	Domestic		22/06/2004	5.80	5.80		1.83	1.000		832m	South West
GW103774	10BL156600, 10WA113072	Bore		Domestic		12/03/1995	6.00			4.00			833m	West
GW073459		Bore	Private	Domestic		24/10/1995	7.00	7.00	Good				840m	South West
GW101933	10BL156973, 10WA113092	Bore		Domestic		11/01/1996	2.20			2.10			845m	West
GW106030	10BL162823, 10WA113492	Bore	Private	Domestic	Intertec Drilling Services	17/03/2004	20.00	20.50	220	4.10	2.000		846m	North West
GW106106	10BL163269, 10WA113550	Spear	Private	Domestic		02/06/2004	7.01	7.02		3.96	1.000		848m	South West
GW107805	10BL165702, 10WA114024	Bore	Private	Domestic	Combined Drilling Services	27/02/2006							849m	North East
GW104646	10BL161240, 10WA113332	Bore	Private	Domestic		17/01/2003	10.00	10.00					850m	South West
GW110786	10BL602904, 10WA114555	Spear	Private	Domestic		11/03/2010	8.00	8.00					852m	South West
GW013629	10BL009006	Bore	Private	General Use		01/11/1955	21.90	21.90	0-500 ppm				855m	North West
GW106913	10BL164692, 10WA113833	Spear	Private	Domestic		10/04/2005	9.50	9.50					863m	North
GW106772	10BL157060, 10WA113107	Spear	Private	Domestic		10/09/1995	5.00	5.00					866m	West

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
GW107668	10BL164166, 10WA113744	Spear	Private	Domestic		12/12/2005	12.81	12.81	Good	6.41	1.000		872m	South West
GW072280	10BL154860, 10WA113013	Bore	Private	Domestic		02/06/1994	8.00	8.00					872m	South West
GW108705	10BL601552, 10WA114372	Spear	Private	Domestic		27/03/2004	13.72	13.73	Good	4.58	1.000		875m	South West
GW111585	10WA114280	Bore	Private	Domestic		01/01/2007	21.00	21.00					876m	South West
GW109490	10BL164954, 10WA113897	Bore	Private	Domestic	B & B Drilling Inc	21/04/2005	18.00	18.00	Good	12.00	0.400		880m	South West
GW106296	10BL163764, 10WA113672	Spear	Private	Domestic		09/08/2004	6.10	6.10	Good	3.05	1.000		882m	South West
GW108225	10BL600443, 10WA114146	Bore	Private	Domestic		19/08/2006	14.00	14.00					886m	South West
GW113310	10BL163382, 10WA113571	Spear	Private	Domestic		01/01/2004	9.00	9.00			4.000		891m	West
GW017341	10BL008542, 10CA114657	Bore	Private	Recreation			18.20						896m	South West
GW110270	10BL165643, 10WA114008	Bore	Private	Domestic	B & B Drilling Inc	16/01/2006	6.00	6.00	Good	4.00	0.500		898m	West
GW105575	10BL162490, 10WA113436	Bore	Private	Domestic		04/01/2004	7.00	7.00					900m	West
GW105508	10BL162631, 10WA113462	Bore		Domestic		01/01/2000	7.00				0.050		900m	West
GW108998	10BL601009, 10WA114263	Spear	Private	Domestic		09/07/2008	13.72		Good	4.58	1.000		902m	South West
GW108286	10BL600521, 10WA114159	Spear	Private	Domestic		13/11/2006	15.25	15.25		4.88	1.000		903m	South West
GW114340	10BL604956	Bore	Other Govt	Monitoring	Total Drilling	12/09/2011	5.55	5.55		3.42			904m	North
GW025718	10BL016426, 10WA112816	Spear	Private	General Use		01/11/1965	3.60	3.70	Good				905m	West
GW106364	10BL163835, 10WA113691	Bore				23/08/2005							908m	West
GW109119	10BL602250, 10WA114473	Spear	Private	Domestic		25/07/2008	7.63		Good	13.05	1.000		908m	South West
GW107593	10BL165651, 10WA114011	Spear	Private	Domestic		29/11/2005	12.20	12.20	Good	6.41	1.000		910m	South West
GW108660	10BL164127, 10WA113733	Spear	Private	Domestic		19/04/2007	16.00	16.00					914m	South West
21310004				UNK								42.05	917m	North East
GW107804	10BL165841, 10WA114048	Spear	Private	Domestic		20/01/2006	13.42	13.42	Good	7.63	1.000		918m	South West
GW106093	10BL162896, 10WA113507	Spear	Private	Domestic		18/04/2004	5.18	5.19		2.13	1.000		922m	West
GW111279	10BL600619, 10WA114180	Spear	Private	Domestic	B&B Drilling	14/11/2001	6.00	6.00					922m	South West
GW111696	10BL164365, 10WA113782	Bore	Private	Domestic		01/10/2008	22.00	22.00		16.00	1.000		923m	South West
GW110778	10BL601234, 10WA114305	Spear	Private	Domestic		25/01/2010	23.00	23.00		18.00	1.000		925m	South West
GW107551	10BL165618, 10WA114005	Spear	Private	Domestic		18/11/2005	6.71	6.71	Good	3.50	1.000		925m	West
GW113299	10BL604336	Well	Private	Monitoring	Numac	01/11/2010	5.20						926m	South East
GW107906	10BL600188, 10WA114118	Spear	Private	Domestic		01/04/2006	7.50	7.50					927m	South West
GW023144	10BL016800, 10WA112845	Spear	Private	General Use		01/01/1942	4.80		Good				928m	West
GW017473	10BL008402	Spear	Private	General Use			7.60	7.60					932m	South West
GW107213	10BL164994, 10WA113901	Spear	Private	Domestic	B & B Drilling Inc	05/07/2005	6.00	6.00		2.00	0.500		936m	West
GW105440	10BL162159, 10WA113357	Bore		Domestic		20/10/2003	5.19	5.19		2.75	1.000		936m	West
GW108734	10BL601448, 10WA114352	Spear	Private	Domestic		19/03/2007	6.10	6.10	Good		1.000		936m	West

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
GW113300	10BL604336	Bore	School	Monitoring	Numac	01/11/2010	5.20	5.20					938m	South East
GW104947	10BL160513	Bore		Test Bore	B & B Drilling Inc	21/02/2002	5.00	5.00	210	2.71	0.650		939m	South East
GW100359	10BL157618, 10WA113170	Spear	Private	Domestic		12/09/1995	5.50	5.50	Good	2.74	1.000		941m	West
GW106856	10BL163087, 10WA113524	Spear	Private	Domestic		21/12/2004	7.93	7.93	Good	2.13	1.000		941m	West
GW106237	10BL163544, 10WA113607	Bore	Private	Domestic	Water Works	24/06/2004	9.00	9.00		6.00	0.500		942m	South West
GW104991	10BL160432, 10WA113314	Bore	Private	Domestic		04/04/2002	9.00	9.00		6.50	1.000		943m	South West
GW106132	10BL162281, 10WA113391	Spear	Private	Domestic		27/04/2004	10.37	10.37	Good		1.000		945m	South West
GW106366	10BL163804, 10WA113690	Spear	Private	Domestic		18/09/2004	5.81	5.81	Good	3.05	1.000		946m	South West
GW114341	10BL604956	Bore	Other Govt	Monitoring	Total Drilling	12/09/2011	2.72	2.72		1.41			948m	North
GW111621	10BL164152, 10WA113739	Spear	Private	Domestic		01/01/2004	6.00	6.00		4.00			949m	West
GW073445		Spear	Private	Domestic		20/10/1995	10.00						953m	South West
GW107296	10BL163785, 10WA113680	Spear	Private	Domestic		16/04/2005	6.00	6.00					953m	South West
GW113301	10BL604336	Bore	School	Monitoring	Numac	01/11/2010	5.20	5.20					960m	South East
GW100293	10BL153233, 10CA114621	Bore	Private	Irrigation, Recreation	B & B Drilling Inc	23/02/1994	18.00	20.00	Good	6.90	7.500		962m	North West
GW100939	10BL156892, 10WA113082	Bore	Private	Domestic		21/08/1995	5.50	5.50	Good	2.44	1.000		963m	West
GW109054	10BL602149, 10WA114453	Spear	Private	Domestic		15/07/2008	8.00						964m	South West
GW108861	10BL164832, 10BL601893, 10WA109499	Bore	Local Govt	Recreation	Britt's Water Solutions	08/05/2008	114.00	114.00		20.00	2.210		964m	South
GW108507	10BL600353, 10WA114138	Spear	Private	Domestic		15/07/2006	8.00	8.00					964m	South West
GW105770	10BL162554, 10WA113446	Spear	Private	Domestic		07/01/2004	7.01	7.02		4.58	1.000		969m	South West
GW108440	10BL165741, 10WA114037	Spear	Private	Domestic	B & B Drilling Inc	03/11/2005	5.00	5.00	Good	3.00	0.500		970m	West
GW107603	10BL162349, 10WA113411	Spear	Private	Domestic		15/10/2004	7.00	7.00					971m	West
GW105736	10BL162854, 10WA113499	Bore				19/04/2005							972m	West
GW111465	10BL604400, 10WA114613	Spear	Private	Domestic	B&B Drilling	17/05/2011	9.00	9.00	good	7.00	0.500		973m	South West
GW108837	10BL163015, 10WA113519	Spear	Private	Domestic		21/01/2006	7.50	7.50					974m	South West
GW104945	10BL160495, 10WA113317	Bore	Private	Domestic		08/02/2000	7.32	7.32		4.27	1.000		976m	West
GW104834	10BL161173, 10WA113328	Bore	Private	Domestic	A Korkadis	07/12/2002	5.80	5.80		2.44	1.000		977m	West
GW107390	10BL164155, 10WA113740	Spear	Private	Domestic		13/09/2004	7.32	7.32	Good	4.88	1.000		977m	South
GW106031	10BL162808, 10WA113487	Spear	Private	Domestic		31/03/2004	5.80	5.80			1.000		977m	South West
GW103051	10BL159257, 10WA113283	Bore		Domestic	A Korkadis	28/06/1999	5.80	5.80	Good	3.05	1.000		988m	South West
GW108296	10BL600618, 10WA114179	Spear	Private	Domestic		05/11/2006	16.00	16.00					990m	South West
GW107881	10BL600088, 10WA114098	Spear		Domestic		20/03/2006	7.00						991m	West
GW106985	10BL164193, 10WA113752	Bore	Private	Domestic	Britt's Water Solutions	24/03/2005	159.00	159.00		14.00	0.130		994m	North
GW101783	10BL157374, 10WA113152	Bore		Domestic		18/12/1995	5.00	5.00					994m	South West

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
GW105940	10BL162321, 10WA113403	Bore				20/05/2005							996m	West
GW111438	10BL600923, 10WA114246	Spear	Private	Domestic		11/02/2007	6.10	6.10	good	3.50	1.000		997m	South West
GW113302	10BL604336	Bore	School	Monitoring		01/11/2010	5.20	5.20					998m	South East
GW106386	10BL163574, 10WA113615	Spear	Private	Domestic		24/09/2004	7.32	7.32		2.13	1.000		999m	South West
GW108632	10BL165385, 10WA113969	Spear	Private	Domestic		15/08/2005	7.32	7.32	Good	3.96	1.000		1002 m	West
GW108403	10BL600688, 10WA114196	Spear	Private	Domestic		15/12/2006	5.00	5.00					1003 m	West
GW104984	10BL160373, 10WA113310	Bore	Private	Domestic		24/01/2002	9.00	9.00		7.00	1.000		1011 m	South West
GW104832	10BL161176, 10WA113329	Bore	Private	Domestic		07/12/2000	7.32	7.32		3.96	1.250		1013 m	West
GW023585	10BL017518, 10WA112912	Spear	Private	General Use		01/03/1966	4.50	4.60					1014 m	West
GW111557	10BL600797, 10WA114224	Spear	Private	Domestic		25/01/2007	8.00	8.00					1014 m	West
GW106004	10BL162812, 10WA113489	Bore	Private	Domestic	Intertec Drilling Services	25/03/2004	19.50	23.20	305	4.10	2.000		1015 m	North West
GW105747	10BL162263, 10WA113382	Spear	Private	Domestic		15/12/2003	8.23	8.24		4.88	1.000		1016 m	West
GW105134	10BL157056, 10WA113105	Bore	Private	Domestic		11/09/1995	5.00	5.00					1018 m	West
GW108491	10BL600658, 10WA114191	Spear	Private	Domestic	B & B Drilling Inc	08/01/2007	7.00	7.00	Good	5.00	0.500		1018 m	West
GW108846	10BL601652	Bore	Private	Domestic		20/04/2006	8.00	8.00					1020 m	West
GW108418	10BL600796, 10WA114223	Spear	Private	Domestic		30/01/2007	6.00	6.00					1024 m	West
GW072787		Spear	Private	Domestic		14/01/1995	5.50	5.50	Good				1025 m	West
GW111136	10BL600564, 10WA114167	Spear	Private	Domestic	Combined Drilling Services	17/12/2006	11.00	11.00		3.50			1030 m	West
GW113303	10BL604336	Bore	School	Monitoring	Numac	01/11/2010	5.20	5.20					1037 m	South East
GW111592	10BL165354, 10WA113966	Bore	Private	Domestic		01/01/2005	20.00	20.00					1042 m	West
GW111452	10BL601572, 10WA114378	Spear	Private	Domestic		01/01/1962	9.00	9.00					1045 m	South West
GW107738	10BL165938, 10WA114063	Spear	Private	Domestic	B & B Drilling Inc	05/01/2006	7.00	7.00	Good	5.00	0.500		1046 m	South West
GW114917	10WA119150	Spear	Private	Domestic		04/03/2015	9.15	9.15		5.49	1.000		1050 m	West
GW112385	10WA118623	Spear	Private	Domestic		17/03/2013	5.49	5.49		3.05	1.000		1056 m	West
GW109946	10BL602187, 10WA114462	Spear	Private	Domestic	B & B Drilling Inc	05/02/2009	5.00	5.00	Good	2.00	0.500		1058 m	West
GW101728	10BL157144, 10WA113118	Bore		Domestic		10/10/1995	4.58	4.58	Good	1.52	1.000		1062 m	West
GW108595	10BL601333, 10WA114322	Spear	Private	Domestic		03/02/2007	8.00	8.00					1071 m	South West
GW111158	10BL600566, 10WA114169	Spear	Private	Domestic		01/01/2003	14.00	14.00					1074 m	West
GW101157	10BL157030, 10WA113099	Spear	Private	Domestic		06/09/1995	6.10	6.10	Good	3.96	1.000		1078 m	South West
GW101645	10BL154344, 10WA113011	Bore		Domestic		01/03/1994	7.00						1079 m	South
GW106182	10BL162821, 10WA113491	Spear	Private	Domestic	B & B Drilling Inc	14/07/2004	4.00	4.00	Good	2.00	0.500		1089 m	West
GW025717	10BL016557, 10WA112825	Spear	Private	General Use		01/10/1965	3.60						1097 m	West
GW107760	10BL165566, 10WA113995	Bore	Private	Domestic		19/01/2007	6.00						1101 m	South West

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
GW100755	10BL157572, 10CA114657	Bore	Private	Irrigation, Recreation	B & B Drilling Inc	30/10/1996	19.50	19.50		3.40	12.500		1110 m	South West
GW106178	10BL163264, 10WA113549	Spear	Private	Domestic	B & B Drilling Inc	03/07/2004	7.00	7.00		5.00	0.500		1112 m	South West
GW106058	10BL162559, 10WA113447	Spear	Private	Domestic		06/02/2004	7.50	7.50					1113 m	West
GW017356	10BL008397	Bore	Local Govt	Recreation		01/01/1942	30.40	30.50	Good				1116 m	North West
GW107514	10BL163864, 10WA113697	Spear	Private	Domestic		01/09/2005	7.50	7.50					1116 m	South West
GW109812	10BL601905	Well	Private	Monitoring	HLA Enviroscienc es	15/04/2007	9.00	9.00					1117 m	South
GW107135	10BL164591, 10WA113816	Spear	Private	Domestic		14/04/2005	7.00	7.00					1121 m	North West
GW109813	10BL601905	Well	Private	Monitoring	HLA Enviroscienc es	16/05/2007	9.00	9.00					1126 m	South
GW023612	10BL017351, 10WA112893	Spear	Private	General Use		01/01/1966	5.10	5.20	Good				1127 m	South
GW109811	10BL601905	Well	Private	Monitoring	HLA Enviroscienc es	16/05/2007	9.00	9.00					1129 m	South
GW107133	10BL164593, 10WA113818	Spear	Private	Domestic		14/04/2005	7.00	7.00					1129 m	North West
GW109848	10BL601020	Bore	Private	Monitoring	Macquarie Drilling	08/08/2006	8.70	8.70		6.40			1130 m	South
GW108882	10BL163403, 10WA113575	Bore	Private	Domestic		30/05/2008	6.00						1131 m	West
GW024118	10BL018436, 10WA112948	Spear	Private	General Use		01/01/1966	3.00	3.00	Good				1131 m	West
GW109066	10BL601956, 10WA114425	Spear	Private	Domestic		16/07/2008	7.50						1132 m	West
GW109849	10BL601020	Bore	Private	Monitoring	Macquarie Drilling	09/08/2006	8.50	8.50		6.10			1133 m	South
GW109810	10BL601905	Well	Private	Monitoring	HLA Enviroscienc es	17/05/2007	9.00	9.00					1134 m	South
GW109809	10BL601905	Well	Private	Monitoring	HLA Enviroscienc es	18/05/2007	9.00	9.00					1137 m	South
GW111553	10BL165565, 10WA113994	Bore	Private	Domestic		01/01/2005	14.00	14.00					1138 m	North East
GW109847	10BL601020	Bore	Private	Monitoring	Macquarie Drilling	07/08/2006	8.50	8.50		6.80			1138 m	South
GW107134	10BL164592, 10WA113817	Spear	Private	Domestic		14/04/2005	7.00	7.00					1146 m	North West
GW100546	10BL157958	Bore	Private	Test Bore	B & B Drilling Inc	09/03/1997	14.50	14.50	Good	6.40	9.500		1151 m	North West
GW108640	10BL165794, 10WA114042	Spear	Private	Domestic		01/03/2006	7.50	7.50					1158 m	South West
GW105771	10BL162543, 10WA113443	Spear	Private	Domestic		08/12/2004	7.01	7.02			1.000		1167 m	South West
GW042158		Bore	NSW Office of Water	Monitoring			21.15					43.71	1169 m	North West
GW109922	10BL602855, 10WA114547	Spear	Private	Domestic		20/01/2009	4.58	4.58		2.44	1.000		1170 m	South West
GW106069	10BL163194, 10WA113537	Spear	Private	Domestic		31/05/2004	7.01	7.02		4.58	1.000		1181 m	South West
GW106021	10BL162581, 10WA113452	Spear	Private	Domestic		22/03/2003	16.47	16.47		7.32	1.000		1191 m	South West
GW113768	10BL601746	Bore	Private	Monitoring		06/11/2006	5.00	5.00					1197 m	West
GW113762	10BL601746	Bore	Private	Monitoring		08/11/2006	4.30	4.30					1199 m	West
GW113766	10BL601746	Bore	Private	Monitoring		09/11/2006	5.50	5.50					1200 m	West

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
GW113764	10BL601746	Bore	Private	Monitoring		07/11/2006	5.00	5.00					1200 m	West
GW113770	10BL601746	Bore	Private	Monitoring		06/02/2014	5.00	5.00					1201 m	West
GW106915	10BL164684, 10WA113830	Spear	Private	Domestic		03/04/2005	7.50	7.50					1203 m	South West
GW113763	10BL601746	Bore	Private	Monitoring		08/11/2006	4.30	4.30					1205 m	West
GW028289	10BL018447, 10WA112950	Spear	Private	General Use		01/09/1966	6.00	6.10	Very Good				1206 m	South West
GW048937	10BL104270	Bore	Private	Recreation		01/06/1974	24.40	24.40					1208 m	North West
GW113760	10BL601746	Bore	Private	Monitoring		06/02/2014	5.00	5.00					1213 m	West
GW111238	10BL600173, 10WA114116	Bore	Private	Domestic		11/10/2010	12.00	12.00					1214 m	South West
GW113761	10BL601746	Bore	Private	Monitoring		06/11/2006	4.50	4.50					1216 m	West
GW113769	10BL601746	Bore	Private	Monitoring		06/11/2006	5.50	5.50					1221 m	West
GW113765	10BL601746	Bore	Private	Monitoring		07/11/2006	5.00	5.00					1223 m	West
GW113767	10BL601746	Bore	Private	Monitoring		09/11/2006	5.50	5.50					1227 m	West
GW113771	10BL601746	Bore	Private	Monitoring		07/11/2006	5.00	5.00					1229 m	West
GW113772	10BL601746	Bore	Private	Monitoring		08/11/2006	4.30	4.30					1233 m	West
GW113774	10BL601746	Bore	Private	Monitoring		08/11/2006	5.50	5.50					1235 m	West
GW106863	10BL164867, 10WA113877	Spear	Private	Domestic		15/03/2005	16.47	16.47	Good	7.93	1.000		1236 m	South West
GW110542	10BL603341, 10WA114577	Bore	Private	Domestic	Intertec Drilling Services	12/10/2009	27.80	28.00	134	12.20	0.600		1236 m	North East
GW017651	10BL008543, 10BL159954, 10CA114657	Bore	Private	Recreation		01/02/1954	29.20	29.30					1248 m	South West
GW104266	10BL160594	Bore	Private	Monitoring	Intertec Drilling Services	11/04/2002	22.80	35.60	134	5.85	9.000		1251 m	North West
GW113759	10BL601746	Bore	Private	Monitoring		06/11/2006	4.30	4.30					1251 m	West
GW107132	10BL164682, 10WA113829	Spear	Private	Domestic		23/05/2005	14.64	14.64	Good	7.32	1.000		1252 m	South West
GW109042	10BL602008, 10WA114429	Spear	Private	Domestic		14/07/2008	17.69		Good	8.54	1.000		1253 m	South West
GW113773	10BL601746	Bore	Private	Monitoring		07/11/2006	5.00	5.00					1259 m	West
GW023275	10BL016918	Spear	Local Govt	General Use		01/09/1965	5.70	5.80					1260 m	West
GW113758	10BL601746	Bore	Private	Monitoring		06/02/2014	4.50	4.50					1260 m	West
GW106854	10BL163505, 10WA113597	Spear	Private	Domestic		15/02/2005	7.00	7.00					1264 m	North East
GW113757	10BL601746	Bore	Private	Monitoring		06/11/2006	5.00	5.00					1266 m	West
GW107447	10BL163858, 10WA113693	Spear	Private	Domestic		17/06/2004	8.23	8.24	Good	5.49	1.000		1270 m	North East
GW023445	10BL016690, 10WA112836, 70WA606910	Spear	Private	Domestic		01/11/1965	4.20	4.30	Good				1275 m	South
GW110058	10BL600038, 10WA114085	Spear	Private	Domestic		01/01/2006	8.00			2.00	2.200		1275 m	North East
GW113775	10BL601746	Bore	Private	Monitoring		08/11/2006	5.00	5.00					1276 m	West
GW113776	10BL601746	Bore	Private	Monitoring		08/11/2006	4.30	4.30					1276 m	West

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
GW072971		Spear	Private	Commercial		27/02/1995	9.00	9.00					1279 m	South
GW107927	10BL600176, 10WA114117	Spear	Private	Domestic	Combined Drilling Services	28/03/2006	10.00						1281 m	South
GW104125	10BL159848, 10BL159859, 10WA114703	Bore	Private	Recreation	Southern Tablelands Drilling	01/08/2000	15.70	22.00	Fresh	0.50	9.800		1284 m	West
GW108046	10BL600288, 10WA114132	Spear	Private	Domestic		17/06/2006	15.86	15.86		8.23	1.000		1285 m	South West
GW108048	10BL600304, 10WA114134	Spear	Private	Domestic		12/06/2006	16.16	16.17		8.24	1.000		1287 m	South West
GW026483		Spear	Private	General Use		01/09/1966	4.80	4.90					1305 m	South
GW107741	10BL165165, 10WA113929	Spear	Private	Domestic		05/01/2006	9.00	9.00					1312 m	South West
GW106328	10BL162970, 10BL162972, 10BL603528, 10WA114586	Bore		Domestic		12/06/2004	9.50	9.50					1321 m	North West
GW017870	10BL008297	Bore	Private	Industrial		01/03/1955	17.90	18.00					1324 m	North West
GW017340	10BL008296	Bore	Private	Industrial		01/06/1958	18.50	18.60	Good				1340 m	North West
GW111488	10BL604480	Bore	Private	Monitoring		03/02/2011	3.00	3.00	1817	2.10	0.100		1352 m	West
GW111486	10BL604480	Bore	Private	Monitoring		03/02/2011	2.00	2.00					1363 m	West
GW108245	10BL159905, 10BL165753, 10BL602271, 10WA114749	Bore		Recreation	Intertec Drilling Services	21/09/2006	20.80	20.80	198	5.80	1.500		1365 m	North West
GW017652	10BL008544, 10CA114657	Bore	Private	Recreation			24.60						1367 m	South West
GW072908		Spear	Private	Domestic		19/02/1995	8.00	8.00					1374 m	South
GW060170	10BL131560, 10WA114635	Bore	Private	Industrial			20.00	20.00	Good				1382 m	South West
GW111487	10BL604480	Bore	Private	Monitoring		03/02/2011	2.40	2.40					1384 m	West
GW101640	10BL153145, 10CA114621	Bore	Private	Recreation		30/07/1993	17.90	17.90		7.00			1390 m	North
GW017869	10BL008298	Bore	Private	Industrial		01/01/1955	17.90	18.00	Good				1399 m	North West
GW106096	10BL162969, 10WA113513	Spear	Private	Domestic		15/05/2004	9.50	9.50					1431 m	North East
GW107106	10BL163311, 10WA113556	Spear	Private	Domestic		04/06/2005	9.50	9.50					1431 m	North East
GW017653	10BL008545, 10CA114657	Bore	Private	Recreation		01/11/1957	25.60	25.60					1433 m	South West
GW023659	10BL018050, 10WA112936	Spear	Private	General Use		01/01/1966	4.80	4.90	Good				1446 m	South
GW037956		Bore	Private	Industrial		01/04/1972	0.00	21.10					1471 m	North West
GW102222	10BL159077, 10WA113275	Spear	Private	Domestic		11/03/1999	9.50	9.50					1500 m	South
GW108616	10BL600256, 10WA114130	Spear	Private	Domestic		02/06/2006	18.00	18.00					1538 m	West
GW024058	10BL017827	Bore open thru rock	Private	Irrigation		01/11/1966	10.30	10.40					1540 m	North
GW072622	10BL156770, 10WA114631	Bore	Local Govt	Industrial, Recreation	B & B Drilling Inc	28/11/1994	16.00	16.00	9000	2.95	1.600		1541 m	West
GW104872	10BL161071, 10WA113324	Bore	Private	Domestic		04/12/2002	10.00	10.00		7.00	1.000		1542 m	West
GW105141	10BL157050, 10WA113103	Bore	Private	Domestic		19/09/1995	10.00	10.00					1554 m	South West

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
GW026142	10BL019576, 10WA112987	Bore	Private	General Use		01/02/1967	12.40	12.50					1555 m	West
GW109544	10BL601773	Bore	Local Govt	Monitoring	Nealings Drilling	04/06/2007	14.00			1.68			1567 m	West
GW104133	10BL159785, 10BL159928, 10WA114701	Bore		Recreation	Southern Tablelands Drilling	28/07/2000	20.50		Fresh				1579 m	North West
GW113470	10BL603970	Bore	Local Govt	Monitoring		11/02/2008	5.70	5.70					1592 m	North West
GW105920	10BL161710, 10BL600596, 10BL603529, 10WA114587	Bore		Domestic		13/05/2005				6.00			1599 m	North West
GW113471	10BL603970	Bore	Local Govt	Monitoring		11/02/2008	4.50	4.50					1600 m	North West
GW113472	10BL603970	Bore	Local Govt	Monitoring		11/02/2008	6.20	6.20					1602 m	North West
GW109547	10BL601773	Bore	Local Govt	Monitoring	Nealings Drilling	06/06/2007	13.60			2.43			1608 m	West
GW203387		Bore	Private	Monitoring bore	AD Envirotech	23/04/2015	7.00	7.00		2.50			1613 m	West
GW109546	10BL601773	Bore	Local Govt	Monitoring	Nealings Drilling	06/06/2007	8.14			2.32			1613 m	West
GW203386		Bore	Private	Monitoring bore		23/04/2015	2.80	2.80		2.30			1613 m	West
GW047125	10BL105641, 10BL601141	Bore	Local Govt	Recreation		01/05/1976	24.40	24.40		4.00			1616 m	South
GW111434	10BL604568	Bore	Private	Monitoring	SOIL CHECK	24/01/2011	8.00	8.00					1616 m	North West
GW100904	10BL156834, 10WA113078	Spear	Private	Domestic		14/08/1995	9.76	9.76	Good				1621 m	West
GW113105	10BL602800	Bore	Private	Monitoring	Macquarie Drilling	18/11/2008	4.90	4.90					1622 m	South East
GW017354	10BL008562	Bore	Private	Industrial		01/01/1939	16.40						1623 m	West
GW105076	10BL161711, 10BL162107, 10BL163813, 10BL603530, 10WA114588	Bore		Domestic		30/04/2003	10.00	10.00		6.00	1.000		1628 m	North West
GW111015	10BL603968	Bore	Private	Monitoring	HLA Envirosciences	18/02/2003	7.00	7.00					1633 m	North West
GW024368	10BL018351	Bore	Private	Recreation		01/02/1966	12.90	13.00				20.50	1634 m	South West
GW111433	10BL604568	Bore	Private	Monitoring		24/01/2011	6.30	7.00					1634 m	North West
GW042173		Spear	Local Govt	Stock								24.70	1636 m	South
GW065460		Bore	Private	Industrial		09/01/1992	12.00		Good				1636 m	West
GW111080	10BL603966	Bore	Private	Monitoring	HLA Envirosciences	02/09/2006	5.00	5.00					1639 m	North West
GW113109	10BL602800	Bore	Private	Monitoring	Macquarie Drilling	23/07/2009	3.50	3.50					1641 m	South East
GW106661	10BL164001, 10WA113719	Spear	Private	Domestic		10/10/2004	15.25	15.25		8.23	1.000		1642 m	South
GW113108	10BL602800	Bore	Private	Monitoring	Macquarie Drilling	23/07/2009	7.00	7.00					1644 m	South East
GW113781	10BL603971	Bore	Other Govt	Monitoring		17/11/2000	4.50	4.50					1646 m	North West
GW111081	10BL603966	Bore	Private	Monitoring	HLA Envirosciences	02/09/2006	4.00	4.00					1648 m	North West
GW017345		Bore	Private	Industrial		01/10/1954	13.70	13.70	Good	5.40	10.100		1649 m	West
GW113107	10BL602800	Bore	Private	Monitoring	Macquarie Drilling	20/07/2009	8.50	8.50					1650 m	South East

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
GW106005	10BL163101, 10WA113526	Spear	Private	Domestic		20/05/2004	12.29	12.29		7.93	1.000		1651 m	South
GW113106	10BL602800	Bore	Private	Monitoring	Macquarie Drilling	18/11/2008	5.50	5.50					1651 m	South East
GW017834	10BL008563	Bore	Private	Industrial		01/11/1955	14.90	15.00					1655 m	West
GW107289	10BL165159, 10WA113928	Spear	Private	Domestic		17/07/2005	14.03	14.03	Good	10.37	1.000		1659 m	South
GW105480	10BL162139, 10WA114713	Bore		Recreation	B & B Drilling Inc	23/07/2003	13.50	13.50		5.13	1.000		1661 m	North
GW111082	10BL603966	Bore	Private	Monitoring	HLA Envirosciences	02/09/2006	4.00	4.00					1661 m	North West
GW072974		Bore	Private	Domestic		06/05/1995	10.00	10.00					1661 m	South
GW100268	10BL152893	Bore	Private	Test Bore	B & B Drilling Inc	28/09/1993	18.00	18.00		8.20			1663 m	North
GW111014	10BL603968	Bore	Private	Monitoring	HLA Envirosciences	18/12/2003	6.50	6.50					1665 m	North West
GW024057	10BL017826, 10WA114713	Bore	Private	Irrigation		01/11/1966	13.10	13.10					1667 m	North
GW051729		Bore	Private	Monitoring		01/12/1980	8.50	8.50	0-500 ppm			20.82	1674 m	West
GW111406	10BL604132	Bore	Private	Monitoring		16/07/2010	4.80	4.80					1676 m	North West
GW113789	10BL603971	Bore	Other Govt	Monitoring		03/05/2006	10.95	10.95					1676 m	North West
GW114401	10BL603579	Bore	Other Govt	Monitoring	Terratest	05/08/2009	2.20	2.20					1677 m	North West
GW105525	10BL159952, 10WA113298	Bore		Domestic		18/11/2003	5.49	5.49		2.75	1.000		1678 m	North West
GW040781		Bore	Private				3.29						1680 m	South West
GW113777	10BL603971	Bore	Other Govt	Monitoring		13/11/2000	6.00	6.00					1680 m	North West
GW113787	10BL603971	Bore	Other Govt	Monitoring		02/05/2006	4.80	4.80					1681 m	North West
GW111405	10BL603966	Bore	Private	Monitoring		16/07/2010	4.80	4.80					1681 m	North West
GW109545	10BL601773	Bore	Local Govt	Monitoring	Nealings Drilling	06/11/2008	13.90			3.20			1681 m	West
GW113798	10BL603971	Bore	Other Govt	Monitoring		10/02/2014	4.80	4.80					1681 m	North West
GW072479	10BL156278, 10WA113028	Bore	Private	Domestic		21/11/1994	5.80	5.80		2.60	1.000		1684 m	South West
GW113786	10BL603971	Bore	Other Govt	Monitoring		02/05/2006	3.00	3.00					1685 m	North West
GW111407	10BL604132	Bore	Private	Monitoring		15/10/2010	4.80	4.80					1687 m	North West
GW113783	10BL603971	Bore	Other Govt	Monitoring		22/11/2000	4.60	4.60					1689 m	North West
GW203385		Bore	Private	Monitoring bore		23/04/2015	6.20	6.20		2.20			1689 m	West
GW114389	10BL603579	Bore	Other Govt	Monitoring	Terratest	27/07/2009	3.20	3.20					1689 m	North West
GW114392	10BL603579	Bore	Other Govt	Monitoring	Terratest	27/07/2009	2.40	2.40					1691 m	North West
GW109504	10BL601773	Bore	Local Govt	Monitoring	Nealings Drilling	05/06/2007	7.48			3.08			1692 m	West
GW104131	10BL159784, 10BL159927, 10WA114699	Bore		Recreation	Southern Tablelands Drilling	03/08/2000	20.00						1693 m	North West
GW114387	10BL603579	Bore	Other Govt	Monitoring	Terratest	27/07/2009	3.20	3.20					1693 m	North West
GW109752	10BL160787, 10BL605177	Well	Other Govt	Monitoring	HLA Envirosciences	05/08/2002	3.40	3.40					1694 m	North West

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
GW105877	10BL162678, 10WA113472	Bore				09/05/2005							1694 m	South
GW105485	10BL162140, 10WA114713	Bore		Recreation	B & B Drilling Inc	25/09/2003	11.50	11.50		7.20	0.500		1696 m	North
GW113473	10BL603970	Bore	Local Govt	Monitoring		07/07/2000	3.00	3.00					1697 m	North West
GW104034	10BL159958	Bore		Monitoring	Engineering Explorations Pty Ltd	09/11/2000	7.00	7.00		2.00			1698 m	South West
GW104033	10BL159958	Bore		Monitoring	Engineering Explorations Pty Ltd	08/11/2000	4.00	4.00		2.00			1698 m	South West
GW104038	10BL159958	Bore		Monitoring	Engineering Explorations Pty Ltd	10/11/2000	4.00	4.00		2.00			1698 m	South West
GW104032	10BL159958	Bore		Monitoring	Engineering Explorations Pty Ltd	08/11/2000	7.00	7.00		2.00			1698 m	South West
GW104035	10BL159958	Bore		Monitoring	Engineering Explorations Pty Ltd	09/11/2000	7.00	7.00		2.00			1698 m	South West
GW104031	10BL159958	Bore		Monitoring	Engineering Explorations Pty Ltd	08/11/2000	7.00	7.00		2.00			1698 m	South West
GW104036	10BL159958	Bore		Monitoring	Engineering Explorations Pty Ltd	09/11/2000	7.00	7.00		2.00			1698 m	South West
GW104037	10BL159958	Bore		Monitoring	Engineering Explorations Pty Ltd	09/11/2000	4.00	4.00		2.00			1698 m	South West
GW114402	10BL603579	Bore	Other Govt	Monitoring	Terratest	05/08/2009	2.20	2.20					1701 m	North West
GW114395	10BL603579	Bore	Other Govt	Monitoring	Terratest	27/07/2009	3.20	3.20					1704 m	North West
GW109748	10BL160787, 10BL605178	Well	Other Govt	Monitoring	HLA Envirosciences	02/08/2002	3.80	3.80					1704 m	North West
GW113778	10BL603971	Bore	Other Govt	Monitoring		13/11/2000	5.00	5.00					1705 m	North West
GW113785	10BL603971	Bore	Other Govt	Monitoring		22/11/2000	4.00	4.00					1705 m	North West
GW113782	10BL603971	Bore	Other Govt	Monitoring		17/11/2000	8.00	8.00					1705 m	North West
GW113788	10BL603971	Bore	Other Govt	Monitoring		10/02/2014	11.00	11.00					1705 m	North West
GW113784	10BL603971	Bore	Other Govt	Monitoring		22/11/2000	7.00	7.00					1706 m	North West
GW113779	10BL603971	Bore	Other Govt	Monitoring		13/11/2000	9.00	9.00					1706 m	North West
GW114388	10BL603579	Bore	Other Govt	Monitoring	Terratest	28/07/2009	5.20	5.20					1707 m	North West
GW110414	10BL160571	Bore	Private	Monitoring	Engineering Explorations Pty Ltd	13/02/2002	4.00	4.00					1708 m	South West
GW114386	10BL603579	Bore	Other Govt	Monitoring	Terratest	27/07/2009	5.20	5.20					1711 m	North West
GW109750	10BL160787, 10BL605177	Well	Other Govt	Monitoring	HLA Envirosciences	05/08/2002	3.50	3.50					1718 m	North West
GW109749	10BL160787, 10BL605177	Well	Other Govt	Monitoring	HLA Envirosciences	05/08/2002	4.50	4.50					1719 m	North West
GW114394	10BL603579	Bore	Other Govt	Monitoring	Terratest	28/07/2009	4.20	4.20					1719 m	North West
GW051730		Bore	Private	Monitoring		01/12/1980	0.00	8.30	0-500 ppm				1723 m	West
GW113790	10BL603971	Bore	Other Govt	Monitoring		03/05/2006	5.85	5.85					1724 m	North West
GW109201	10BL162437, 10WA114661	Spear	Other Govt	Recreation		12/08/2008	5.00						1724 m	South West

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
GW109747	10BL160787, 10BL605178	Well	Other Govt	Monitoring	HLA Envirosciences	02/08/2002	3.80	3.80					1725 m	North West
GW110431	10BL160571	Bore	Private	Monitoring	Engineering Explorations Pty Ltd	12/02/2002	5.00	5.00					1725 m	South West
GW102866	10BL157354	Bore		Recreation		01/01/1992	5.00						1725 m	South West
GW051731		Bore	Private	Monitoring		01/12/1980	8.00	8.00	501-1000 ppm				1728 m	West
GW114391	10BL603579	Bore	Private	Monitoring	Terratest	28/07/2009	4.20	4.20					1728 m	North West
GW106165	10BL163192, 10WA113536	Bore				29/06/2005							1728 m	South
GW028844	10BL023115	Bore open thru rock	Private	Industrial		01/11/1968	13.70	13.70					1728 m	West
GW114403	10BL603579	Bore	Other Govt	Monitoring	Terratest	05/08/2009	2.20	2.20					1728 m	North West
GW114397	10BL603579	Bore	Other Govt	Monitoring	Terratest	27/07/2009	3.20	3.20					1732 m	North West
GW113797	10BL603971	Bore	Other Govt	Monitoring		05/05/2006	4.13	4.13					1733 m	North West
GW110428	10BL160571	Bore	Private	Monitoring	Engineering Explorations Pty Ltd	12/02/2002	4.00	4.00					1734 m	South West
GW113780	10BL603971	Bore	Other Govt	Monitoring		16/11/2000	8.00	8.00					1735 m	North West
GW110430	10BL160571	Bore	Private	Monitoring	Engineering Explorations Pty Ltd	12/02/2002	4.00	4.00					1737 m	South West
GW109745	10BL160787, 10BL605177	Well	Other Govt	Monitoring	HLA Envirosciences	02/08/2002	3.50	3.50					1739 m	North West
GW113255	10BL604454	Bore	Other Govt	Monitoring		29/11/2010	4.00	4.00					1739 m	North West
GW109543	10BL601773	Bore	Local Govt	Monitoring	Nealings Drilling	04/06/2007	11.30			3.15			1739 m	West
GW113794	10BL603971	Bore	Other Govt	Monitoring		08/06/2006	11.15	11.15					1740 m	North West
GW112712	10BL604402	Bore	Other Govt	Monitoring		29/11/2010	4.00	4.00					1740 m	North West
GW112711	10BL604402	Bore	Other Govt	Monitoring		30/11/2010	3.60	3.60					1740 m	North West
GW113257	10BL604454	Bore	Other Govt	Monitoring		29/11/2010	4.10	4.10					1741 m	North West
GW110429	10BL160571	Bore	Private	Monitoring	Engineering Explorations Pty Ltd	12/02/2002	4.00	4.00					1741 m	South West
GW114390	10BL603579	Bore	Other Govt	Monitoring	Terratest	28/07/2009	3.20	3.20					1741 m	North West
GW113254	10BL604454	Bore	Other Govt	Monitoring		29/11/2010	3.60	3.60					1744 m	North West
GW109746	10BL160787, 10BL605177	Well	Other Govt	Monitoring	HLA Envirosciences	02/08/2002	4.20	4.20					1745 m	North West
GW113792	10BL603971	Bore	Other Govt	Monitoring		04/05/2006	3.70	3.70					1746 m	North West
GW112715	10BL604402	Bore	Other Govt	Monitoring		29/11/2010	4.10	4.10					1749 m	North West
GW042169		Bore - Nested (2)	NSW Office of Water	Monitoring			29.80	29.80				20.20	1749 m	South
GW110427	10BL160571	Bore	Private	Monitoring	Engineering Explorations Pty Ltd	13/02/2002	7.00	7.00					1750 m	South West

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
GW113256	10BL604454	Bore	Other Govt	Monitoring		29/11/2010	4.05	4.05					1750 m	North West
GW113791	10BL603971	Bore	Other Govt	Monitoring		04/05/2006	4.00	4.00					1750 m	North West
GW113258	10BL604454	Bore	Other Govt	Monitoring		29/11/2010	4.10	4.10					1752 m	North West
GW112713	10BL604402	Bore	Other Govt	Monitoring		29/11/2010	4.05	4.05					1753 m	North West
GW112714	10BL604402	Bore	Other Govt	Monitoring		29/11/2010	4.10	4.10					1755 m	North West
GW114393	10BL603579	Bore	Other Govt	Monitoring	Terratest	28/07/2009	4.20	4.20					1755 m	North West
GW114396	10BL603579	Bore	Other Govt	Monitoring	Terratest	28/07/2009	5.20	5.20					1756 m	North West
GW111248	10BL162151, 10BL601857, 10WA114799	Bore	Private	Recreation	STD	20/01/2004	30.00	30.00		6.00			1756 m	South
GW114400	10BL603579	Bore	Other Govt	Monitoring	Terratest	27/07/2009	3.20	3.20					1756 m	North West
GW109751	10BL160787, 10BL605178	Well	Private	Monitoring	HLA Envirosciences	05/08/2002	3.50	3.50					1759 m	North West
GW051728		Bore	Private	Monitoring		01/12/1980	8.30	8.30	0-500 ppm				1761 m	West
GW111016	10BL603969	Bore	Private	Monitoring	HLA Envirosciences	30/01/2004	4.40	4.50					1761 m	North West
GW108443	10BL600984, 10WA114259	Spear	Private	Domestic	Combined Drilling Services	12/01/2007	14.50			8.00			1762 m	South
GW113795	10BL603971	Bore	Other Govt	Monitoring		04/05/2006	3.90	3.90					1764 m	North West
GW113793	10BL603971	Bore	Other Govt	Monitoring		04/05/2006	4.10	4.10					1764 m	North West
GW113796	10BL603971	Bore	Other Govt	Monitoring		14/06/2006	11.05	11.05					1765 m	North West
GW113474	10BL603970	Bore	Local Govt	Monitoring		07/07/2009	6.00	6.00					1767 m	North West
GW109744	10BL160787, 10BL605177	Well	Other Govt	Monitoring	HLA Envirosciences	02/08/2002	4.00	4.00					1769 m	North West
GW114399	10BL603579	Bore	Other Govt	Monitoring	Terratest	28/07/2009	4.20	4.20					1770 m	North West
GW113469	10BL603970	Bore	Local Govt	Monitoring		19/01/2007	3.10	3.10					1771 m	North West
GW026482	10BL018808	Spear	Private	General Use		01/01/1966	5.40	5.50	Good				1774 m	West
GW113468	10BL603970	Bore	Local Govt	Monitoring		18/01/2007	3.50	3.50					1778 m	North West
GW114398	10BL603579	Bore	Other Govt	Monitoring	Terratest	28/07/2009	4.20	4.20					1779 m	North West
GW113475	10BL603970	Bore	Local Govt	Monitoring		07/07/2009	6.00	6.00					1780 m	North West
GW109774	10BL165829, 10WA114047	Spear	Private	Domestic		01/01/2005	10.00			3.00	0.500		1782 m	South
GW113467	10BL603970	Bore	Local Govt	Monitoring		18/01/2007	3.40	3.40					1784 m	North West
GW104981	10BL160365, 10WA113309	Bore	Private	Domestic		05/12/2001	6.00	6.00		3.00			1787 m	South West
GW106145	10BL157073, 10WA113108	Spear	Private	Domestic		14/09/1995	5.79	5.79	Good		0.800		1792 m	South West
GW111960	10BL605226	Bore	Private	Monitoring		07/08/2012	6.00	6.60	1124	3.52			1797 m	North West
GW100493	10BL157767, 10WA113175	Spear	Private	Domestic	Sydney Groundwater Co.	08/11/1996	9.75	9.75	Fresh	5.80			1797 m	South West
GW104039	10BL159958	Bore		Monitoring	Engineering Explorations Pty Ltd	10/11/2000	7.00	7.00		2.80			1798 m	South West

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
GW104040	10BL159958	Bore		Monitoring	Engineering Explorations Pty Ltd	10/11/2000	7.00	7.00		2.80			1804 m	South West
GW100471	10BL157011, 10WA108362	Bore		Domestic	B & E Bores	29/09/1995	6.00						1806 m	North East
GW100393	10BL154628	Bore	Private	Monitoring	Hydro Plan Pty Ltd	06/08/1993	20.00	20.00					1806 m	North East
GW100294	10BL153234	Bore	Private	Monitoring	Hydro Plan Pty Ltd	05/08/1993	20.00	20.00		6.70	6.110		1806 m	North East
GW100020	10BL156660, 10WA108348	Spear	School	Domestic	A Korkadis	01/05/1995	9.00	9.00	Good	6.70	1.000		1807 m	North
GW100841	10BL157561, 10WA108378	Spear	Private	Domestic		29/03/1996	10.00	10.00					1807 m	North East
213007				UNK								74.70	1810 m	North
GW023529	10BL016955, 10WA112853	Spear	Private	General Use		01/12/1965	6.70	6.70	Good				1812 m	South
GW100813	10BL156314, 10WA113035	Spear	Private	Domestic		25/11/1994	10.98	10.98	Good	7.93	0.800		1814 m	South West
GW108472	10BL601127, 10WA114288	Spear	Private	Domestic		06/01/2007	16.00	16.00					1815 m	South
GW101226	10BL158322, 10WA113223	Spear	Private	Domestic	A Korkadis	09/12/1997	5.30	5.30	Good	3.36	0.500		1818 m	South West
GW024023	10BL018142	Spear	Private	General Use		01/05/1966	8.20	8.20	Good				1827 m	South West
GW025549	10BL016301, 10WA112806	Spear	Private	General Use		01/11/1965	5.70	5.80					1839 m	South West
GW113190	10BL605409	Bore	Private	Monitoring	Rockwell Drilling	05/07/2013	9.00	9.00					1841 m	West
GW075025		Bore	NSW Office of Water	Monitoring	McDermott Drilling Pty Ltd	20/07/1998	24.20	25.50		9.13		8.52	1850 m	South
GW051727		Bore	Private	Monitoring		01/12/1980	8.00	8.00	0-500 ppm				1853 m	West
GW111959	10BL605226	Bore	Private	Monitoring		07/08/2012	6.00	6.00	1077	2.60			1856 m	North West
GW051726		Bore	Private	Monitoring		01/02/1980	8.00	8.00	0-500 ppm				1856 m	West
GW108448	10BL601046, 10WA114271	Spear	Private	Domestic		19/01/2007	16.00	16.00					1860 m	South
GW104165	10BL159953, 10WA113299	Bore		Domestic		13/12/1999	8.40	8.40	Good				1860 m	South West
GW106752	10BL164167, 10WA113745	Spear	Private	Domestic		30/10/2004	9.50	9.50					1863 m	South
GW108822	10BL165672, 10WA114016	Spear	Private	Domestic		12/12/2006	14.00	14.00	Good		1.000		1866 m	South
GW108596	10BL601365, 10WA114327	Spear	Private	Domestic		20/02/2007	16.00	16.00					1869 m	South East
GW109252	10BL602487	Bore	Private	Monitoring	Invirodrill	21/08/2008	2.70	2.70	Fresh	1.36			1869 m	North
GW101037	10BL158242, 10WA113209	Spear	Private	Domestic	A Korkadis	24/11/1997	4.88	4.88	Good		1.000		1870 m	West
GW025540	10BL016659, 10WA112833	Spear	Private	General Use		01/12/1965	4.80	4.90	Good				1872 m	South
GW046836	10BL107197, 10BL132425, 10WA114639	Bore	Local Govt	Industrial, Recreation		01/10/1970	37.80	37.80					1879 m	South
GW023982	10BL018271, 10WA112941	Spear	Private	General Use		01/02/1966	6.00	6.10	Good				1880 m	South West
GW109251	10BL602487	Bore	Private	Monitoring	Invirodrill	21/08/2008	3.00	3.00	Fresh	1.42			1880 m	North
GW113191	10BL605409	Bore	Private	Monitoring	Rockwell Drilling	05/07/2013	8.00	8.00					1881 m	West
GW112128	10BL160293	Bore	Private	Monitoring		03/10/2001	5.50	5.50					1883 m	North West
GW112127	10BL160293	Bore	Private	Monitoring		03/10/2001	4.50	4.50					1884 m	North West

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
GW042160		Bore	NSW Office of Water	Monitoring			32.00					22.15	1884 m	South West
GW051725		Bore	Private	Monitoring		01/02/1980	8.00	8.00	0-500 ppm				1885 m	West
GW112129	10BL160293	Bore	Private	Monitoring		03/10/2001	5.50	5.50					1887 m	North West
GW102739	10BL159450, 10WA113291	Bore		Domestic		09/11/1999	7.00	7.00					1891 m	South West
GW109769	10BL165796, 10WA114044	Spear	Private	Domestic		01/01/2005	8.00			2.00	2.500		1898 m	South
GW101232	10BL158389, 10WA113224	Spear	Private	Domestic		03/01/1998	6.00	6.00					1898 m	South West
GW072994	10BL156371, 10WA113044	Bore	Private	Domestic		20/08/1995	9.50	9.50					1899 m	South
GW101883	10BL157490, 10WA113161	Bore		Domestic		26/02/1996	10.00	10.00					1899 m	South
GW100367	10BL157662, 10WA113172	Spear	Private	Domestic		30/05/1995	6.00	6.00	Good	2.90	0.500		1908 m	South West
GW110956	10BL601399, 10WA114338	Spear	Private	Domestic		01/01/2007	12.19	12.19					1911 m	South
GW110884	10BL600695	Spear	Private	Test Bore	B & B Drilling Inc	26/03/2010	4.50	4.50					1916 m	East
GW111600	10BL604978	Bore	Private	Monitoring	UNSW	29/09/2011	20.00	20.00		5.00			1916 m	South
GW111624	10BL165365	Bore	Private	Monitoring		05/08/2005	36.00	36.00		5.00			1916 m	South
GW019633	10BL012858	(Unknown)	Other Govt	Recreation		01/11/1961	35.00	35.10					1921 m	South
GW108394	10BL600558, 10WA114165	Bore	Private	Domestic		26/10/2006	16.00	16.00					1925 m	South
GW103708	10BL160084, 10WA113301	Bore		Domestic		26/04/2001	6.00	6.00					1929 m	South West
GW110423	10BL602943, 10WA114561	Spear	Private	Domestic		19/03/2009	12.00	12.00	Other	7.50	1.000		1934 m	South
GW113192	10BL605409	Bore	Private	Monitoring	Rockwell Drilling	05/07/2013	5.30	5.30					1940 m	West
GW100466	10BL157947, 10WA113186	Spear	Private	Domestic		12/03/1997	5.00	5.00					1942 m	West
GW111247	10BL162151, 10BL601856, 10WA114799	Bore	Private	Recreation	STD	14/04/2004	36.00	36.00		7.00			1948 m	South
GW101221	10BL158317, 10WA113219	Spear	Private	Domestic	A Korkadis	12/12/1997	6.10	6.10	Good	2.13	1.000		1951 m	South West
GW102294	10BL159092, 10WA113276	Spear	Private	Domestic		06/03/1999	10.00	10.00					1959 m	South
GW053600	10BL120842, 10BL604569, 10BL604809, 10BL605130, 10WA114691, 10WA117791	Bore	Local Govt	Recreation		01/04/1981	29.00	30.50	0-500 ppm				1964 m	South East
GW105431	10BL163345, 10BL164439, 10BL604809, 10WA114723, 10WA117789	Bore		Recreation	Southern Tablelands Drilling	02/08/2004	30.00	30.00		8.10	10.000		1964 m	South East
GW101813	10BL157317, 10WA113139	Bore		Domestic		16/11/1995	8.54	8.54	Good	2.75	1.000		1973 m	South West
GW023408	10BL016677	Spear	Private	General Use		01/12/1965	7.00	7.00					1976 m	South West
GW107578	10BL164156, 10WA113741	Spear	Private	Domestic		10/11/2004	16.47	16.47	Good	12.81	1.000		1977 m	South
GW024024	10BL018394, 10WA112945	Spear	Private	General Use		01/12/1965	6.00	6.10	Good				1981 m	South
GW023967	10BL017821, 10WA112935	Spear	Private	General Use		01/05/1966	2.70	2.70	Good				1984 m	South West
GW013514	10BL008711	Spear	Private	Industrial		01/03/1958	9.10	9.10	Good				1988 m	West

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
GW026720	10BL017151, 10WA112868	Spear	Private	General Use		01/01/1966	6.00	6.10	Good				1994 m	South West

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

Hydrogeology & Groundwater

77-97 Alison Road, Randwick, NSW 2031

Driller's Logs

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

Groundwater No	Drillers Log	Distance	Direction
GW047542	0.00m-0.61m Loam Sandy 0.61m-1.22m Sand 1.22m-2.13m Sand Hard Cemented 2.13m-7.62m Sand 7.62m-10.06m Sand 10.06m-12.19m Sand Peaty 12.19m-14.02m Sand White 14.02m-15.24m Sand White Clayey 15.24m-17.37m Sand White 17.37m-20.73m Sand Peaty 20.73m-21.34m Sand White 21.34m-22.25m Sand Peaty 22.25m-23.16m Sand White Peaty 23.16m-24.38m Sand Slightly Peaty 24.38m-30.18m Sand White Clean 30.18m-30.48m Clay	0m	Onsite
GW047543	0.00m-30.48m Sand Water Supply	0m	Onsite
GW047544	0.00m-2.20m Sand 2.20m-3.50m Sand Yellow 3.50m-4.50m Sand White Water Supply 4.50m-7.50m Sand Water Supply 7.50m-16.20m Sand Yellow Water Supply 16.20m-17.00m Sand White Peaty Clay Water Supply 17.00m-18.00m Sand White Water Supply 18.00m-22.00m Sand Yellow Water Supply 22.00m-23.00m Sandstone Red Soft Water Supply	0m	Onsite
GW057008	0.00m-0.20m Topsoil 0.20m-3.00m Sand Grey 3.00m-13.50m Sand 13.50m-18.30m Sand Grey 13.50m-18.30m Peat Seams Clay Bands 18.30m-27.50m Sand Yellow 27.50m-30.00m Clay Grey	0m	Onsite
GW075018	0.00m-0.50m FILLING MATERIAL 0.50m-5.00m SAND,MED GRAINED YELLOW 5.00m-15.20m SAND,FINE GRAINED YELLOW 15.20m-19.50m SILTY SAND FINE GRAINED,GREY 19.50m-26.00m SANDY SILT 26.00m-26.50m SAND,MED GRAINED 26.50m-27.50m PEATY SAND 27.50m-29.00m CLAYEY SAND 29.00m-32.00m CLAY,SOFT,FINE 32.00m-39.50m SANDY CLAY,SOFT,MED TO FINE GRAINED 39.50m-43.00m SANDY SILT 43.00m-44.00m SANDY CLAY,SOFT	0m	Onsite
GW104772	0.00m-0.50m TOP FILL 0.50m-2.10m LIGHT BROWN SAND 2.10m-9.70m YELLOW SAND 9.70m-9.90m BROWN CLAY 9.90m-14.20m YELLOW SAND 14.20m-15.20m SILTY SAND/CLAY 15.20m-16.80m BROWN SAND 16.80m-20.50m WHITE SILTY SAND/CLAY 20.50m-24.10m DECOMPOSED SANDSTONE 24.10m-25.00m L/YELLOW HARD SANDSTONE	0m	Onsite

Groundwater No	Drillers Log	Distance	Direction
GW104773	0.00m-0.50m TOP FILL 0.50m-2.10m LIGHT BROWN SAND 2.10m-9.70m YELLOW SAND 9.70m-9.90m BROWN CLAY 9.90m-14.20m YELLOW SAND 14.20m-15.20m SILTY SAND/CLAY 15.20m-16.80m BROWN SAND 16.80m-20.50m WHITE SILTY SAND 20.50m-24.10m DECOMPOSED SANDSTONE 24.10m-25.00m LIGHT YELLOW SANDSTONE	0m	Onsite
GW107342	0.00m-5.18m Sand, unconsolidated	5m	North West
GW106554	0.00m-0.30m topsoil 0.30m-4.20m sand, brown 4.20m-6.00m sand, yellow	8m	West
GW104969	0.00m-6.00m SAND	38m	West
GW024677	0.00m-4.87m Sand Yellow Water Supply	39m	South West
GW019635	0.00m-2.43m Ash Clay 0.00m-2.43m Sand 2.43m-11.58m Sand Clay 11.58m-11.88m Peat Bands 11.88m-14.93m Peat Sandy Wet 14.93m-17.37m Sand Water Supply 17.37m-19.81m Sand White Water Supply 19.81m-21.33m Peat Sandy 21.33m-24.38m Sand Water Supply 24.38m-24.68m Peat Sandy Water Supply 24.68m-25.60m Sand White Coarse 25.60m-28.49m Sand Yellow Water Supply	58m	South West
GW028827	0.00m-3.65m Sand Dirty 3.65m-11.58m Sand Light Brown Clean 11.58m-13.10m Sand Peaty Water Supply 13.10m-18.89m Sand Grey Water Supply 18.89m-26.51m Sand Dark Brown Peaty Water Supply 26.51m-27.73m Sand Grey Clayey Silty Water Supply 27.73m-32.61m Sand Light Grey Water Supply 32.61m-32.62m Clay Grey Stiff Water Supply	58m	South West
GW034992	0.00m-1.00m SANDY SOIL, GREY/BROWN 1.00m-2.00m SAND, F.G. LT. BROWN 2.00m-3.00m SAND 3.00m-4.00m SAND, F.G. YELLOW/BROWN 4.00m-7.00m SAND/F.G. 7.00m-12.00m SAND F.G. 12.00m-13.00m A/A WITH THIN PEAT BED 13.00m-14.00m A/A MIN OR PEAT 14.00m-17.00m SAND F.G. WITH YELLOW MIN. PEAT 17.00m-20.00m SAND F.G. WH. 20.00m-21.00m A/A WITH PEAT 21.00m-27.00m SAND F.G. WITH SL COARSE AT BASE 27.00m-29.00m SAND F.G. WITH 10-20 % CLAY 29.00m-34.00m SAND F.G. WITH MIN CLAY AT COARSE 34.00m-36.50m PEAT MASSIVE, OILY 36.50m-38.00m CLAY WITH MIN PEAT 38.00m-41.00m PEAT & CLAY WITH 50:50	70m	South West
GW019612	0.00m-11.58m Sand Clay 11.58m-14.32m Sand Peaty Coloured 14.32m-15.24m Sand Wet 15.24m-19.50m Sand White Water Supply 19.50m-19.81m Peat 19.81m-20.42m Sand Peaty 20.42m-25.90m Sand Dark Brown Water Supply 25.90m-26.82m Sand Water Supply 26.82m-26.97m Clay 26.97m-31.39m Sand White Water Supply	73m	South West
GW100985	0.00m-5.18m UNCONSOLIDATED ALL SANDS	83m	North East
GW106378	0.00m-0.30m topsoil 0.30m-2.20m sand, yellow 2.20m-2.60m sand, dark brown 2.60m-7.00m sand, yellow	83m	South West

Groundwater No	Drillers Log	Distance	Direction
GW019634	0.00m-0.91m Sand Made Ground 0.91m-1.21m Ash Made Ground 1.21m-1.82m Sand Hard Cemented 1.82m-6.70m Sand Packed 6.70m-9.14m Sand Light Brown 9.14m-10.97m Sand Yellow 9.14m-10.97m Peat Bands 10.97m-20.11m Peat Some 10.97m-20.11m Sand Grey 20.11m-23.16m Sand Grey Coarse 20.11m-23.16m Peat Bands 23.16m-26.21m Sand Yellow 26.21m-31.39m Sand White 31.39m-32.61m Sand Yellow 31.39m-32.61m Clay Bands 32.61m-32.62m Peat	111m	South West
GW105676	0.00m-9.15m sand, unconsolidated	118m	South West
GW101682	0.00m-1.00m Topsoil 1.00m-3.00m Fill - ash and slag material 3.00m-12.00m Yellow/Brown Sand F.G. 12.00m-15.00m A/A with thin Peat and trace Clay 15.00m-17.00m Yellow/Brown Sand F.G. 17.00m-21.00m White Sand F.G. 21.00m-29.00m Light Brown Sand F.G. 29.00m-33.00m White Sand F.G. 33.00m-41.00m Peat, Clayey, black and oily	119m	South West
GW105978	0.00m-8.23m sand, unconsolidated	130m	South West
GW107651	0.00m-0.30m topsoil 0.30m-4.50m sand, yellow 4.50m-7.00m sand, grey	144m	South West
GW108674	0.00m-8.00m sand	152m	South West
GW111567	0.00m-0.03m ASPHALT 0.03m-0.10m SAND AND GRAVEL 0.10m-0.50m FILLING, DARK GREY SAND, TRACE OF GRAVEL 0.50m-0.70m FILLING, BROWN SAND 0.70m-4.00m SAND, ORANGE AND DARK BROWN, F/GRAINED 4.00m-4.50m SAND, LIGHT BROWN, F/GRAINED 4.50m-8.00m SAND, LIGHT YELLOW BROWN, F/GRAINED	160m	South
GW101453	0.00m-6.00m SAND	166m	South West
GW104890	0.00m-10.50m SAND, BROWN TO GREY 10.50m-13.50m SAND, L/GREY 13.50m-13.60m SANDY CLAY 13.60m-17.00m SAND, L/GREY 17.00m-21.00m SAND, L/GREY 21.00m-22.00m SAND/PEAT 22.00m-25.80m L/GREY	174m	North
GW111568	0.00m-0.03m ASPHALT 0.03m-0.10m SAND AND GRAVEL 0.10m-1.20m SAND, YELLOW AND BROWN, F/GRAINED 1.20m-8.60m SAND, LIGHT YELLOW BROWN F/GRAINED	178m	South
GW023290	0.00m-3.96m Sand Water Supply 3.96m-4.26m Sand Hard Cemented	199m	West
GW101699	0.00m-7.00m Sand	217m	North
GW102016	0.00m-1.00m Topsoil 1.00m-3.00m Fill material - ash and slag 3.00m-4.00m Light Brown Sand F.G., trace organic matter 4.00m-8.00m Light Brown Sand F.G. 8.00m-11.00m Yellow/Brown Sand F.G. 11.00m-14.00m Sand F.G. with thin peat stringers 14.00m-20.00m Light Brown Sand with trace peat 20.00m-33.00m White Sand F.G. 33.00m-35.00m Peat and Clay	221m	South West
GW104525	0.00m-0.50m FILL S/S CEMENT 0.50m-4.50m SAND/ GREY TO BROWN 4.50m-4.90m SANDY PEAT / D/BROWN 4.90m-16.80m SAND: YELLOW BROWN 16.80m-17.65m PEAT D/ BROWN WITH CEMENTED SAND	225m	North West

Groundwater No	Drillers Log	Distance	Direction
GW024367	0.00m-2.43m Sand 2.43m-4.26m Clay Sandy Water Supply	231m	North West
GW106797	0.00m-7.00m sand	237m	South West
GW107638	0.00m-0.30m topsoil 0.30m-5.00m sand, yellow	243m	South West
GW101225	0.00m-6.00m Unconsolidated - all sand.	246m	South West
GW106249	0.00m-6.00m sand	247m	West
GW105625	0.00m-1.00m SILTY SAND 1.00m-6.50m L/BROWN SAND 6.50m-8.00m SAND, SMALL CLAY BANDS 8.00m-10.00m W. L/BROWN SAND 10.00m-13.50m W. CREAM SAND 13.50m-13.80m DIRTY YELLOW SAND 13.80m-14.00m RED CLAY	252m	North East
GW110337	0.00m-1.00m FILL 1.00m-4.00m SAND	256m	West
GW105730	0.00m-8.00m sand	257m	North East
GW110338	0.00m-0.50m FILL 0.50m-1.00m FILL POSSIBLY NATURAL SAND 1.00m-4.00m SAND	257m	West
GW110342	0.00m-0.20m CONCRETE 0.20m-0.60m FILL 0.60m-4.00m SAND	258m	West
GW110339	0.00m-0.50m FILL 0.50m-4.00m SAND	261m	West
GW103644	0.00m-7.00m SAND	266m	South West
GW110336	0.00m-0.50m FILL 0.50m-1.90m FILL, (POSSIBLY NATURAL) 1.90m-4.00m SAND	266m	West
GW110341	0.00m-0.20m CONCRETE 0.20m-0.30m FILL 0.30m-4.00m SAND	269m	West
GW107614	0.00m-0.30m topsoil 0.30m-4.20m sand, yellow 4.20m-6.00m sand, dark yellow	271m	South West
GW110340	0.00m-0.80m FILL 0.80m-4.00m SAND	278m	West
GW110335	0.00m-0.20m CONCRETE 0.20m-0.80m FILL 0.80m-4.00m SAND	281m	West
GW102611	0.00m-6.00m SAND	282m	South West
GW106973	0.00m-0.30m Topsoil 0.30m-1.50m Sand, brown 1.50m-4.50m Sand, yellow 4.50m-6.00m Sand, grey	301m	South West
GW107431	0.00m-7.63m Sand, unconsolidated	302m	West
GW105754	0.00m-5.18m sand, unconsolidated	303m	South West
GW106774	0.00m-8.23m sand, unconsolidated	304m	South West
GW111445	0.00m-8.00m SAND	315m	West
GW106671	0.00m-9.50m sand	316m	North East
GW107641	0.00m-7.50m sand	318m	South West

Groundwater No	Drillers Log	Distance	Direction
GW025890	0.00m-0.30m Sand Grey 0.30m-10.05m Sand 10.05m-10.21m Sand Peaty 10.21m-10.97m Sand Dirty Wet 10.97m-12.19m Sand Wet 10.97m-12.19m Clay Bands 12.19m-13.71m Sand Dirty Wet 13.71m-15.24m Sand Water Supply 15.24m-16.76m Sand Grey Water Supply 16.76m-18.28m Sand Grey Peaty Water Supply 18.28m-19.81m Sand Grey Water Supply 19.81m-21.33m Sand Dark Brown Water Supply 19.81m-21.33m Clay Bands 21.33m-22.86m Sand Dark Brown Water Supply 22.86m-25.90m Sand Water Supply 25.90m-29.56m Sand Yellow Water Supply 29.56m-31.39m Sand Yellow Peat 29.56m-31.39m Clay Seams	324m	South West
GW107142	0.00m-17.05m sand	331m	South West
GW107612	0.00m-12.81m Sand, unconsolidated	333m	South West
GW107129	0.00m-12.81m Sand, unconsolidated	342m	South West
GW107653	0.00m-9.50m sand	344m	South West
GW038009	0.00m-3.65m Sand Rubble 3.65m-4.87m Sand Hard Cemented 4.87m-8.53m Sand 8.53m-10.97m Sand 8.53m-10.97m Clay Sandy Bands 10.97m-12.19m Sand Clean 12.19m-21.33m Sand Clean Water Supply 21.33m-22.86m Clay Sandy	359m	North West
GW108428	0.00m-8.00m Sand	366m	West
GW106078	0.00m-7.32m sand, unconsolidated	372m	North East
GW106862	0.00m-7.63m Sand, unconsolidated	375m	South West
GW106087	0.00m-7.63m sand, unconsolidated	376m	North East
GW107336	0.00m-7.00m sand	376m	West
GW108229	0.00m-17.00m sand	381m	South West
GW101219	0.00m-4.88m Unconsolidated - all sand.	400m	South West
GW107728	0.00m-7.00m sand	416m	South West
GW108036	0.00m-0.30m topsoil 0.30m-4.30m sand, yellow 4.30m-6.00m sand, white	416m	South West
GW101967	0.00m-7.00m Sand	417m	South West
GW110856	0.00m-13.00m SAND 13.00m-13.20m ROCKS	417m	South
GW072219		431m	North East
GW101452	0.00m-6.00m SAND	434m	South West
GW101455	0.00m-6.00m SAND	452m	South West
GW106766	0.00m-0.30m topsoil 0.30m-4.50m sand, yellow 4.50m-6.00m sand, brown	477m	South West
GW102598	0.00m-6.00m SAND	481m	South West
GW105630	0.00m-5.18m sand, unconsolidated	482m	South West

Groundwater No	Drillers Log	Distance	Direction
GW108971	0.00m-0.30m TOPSOIL 0.30m-1.80m SANDY CLAY 1.80m-3.50m WHITE CLAY 3.50m-9.00m COLOURED SANDSTONE 9.00m-39.00m WHITE SANDSTONE 39.00m-41.00m BLACK SANDSTONE 41.00m-208.00m WHITE SANDSTONE 208.00m-216.00m GREY SHALE	483m	East
GW101458	0.00m-6.00m SAND	496m	South West
GW107335	0.00m-7.00m sand	497m	South West
GW101456	0.00m-6.00m SAND	506m	South West
GW107327	0.00m-0.30m topsoil 0.30m-4.50m sand, yellow 4.50m-6.00m sand, white	506m	South West
GW107417	0.00m-0.30m topsoil 0.30m-5.50m sand, yellow 5.50m-7.00m sand, brown	516m	South West
GW108700	0.00m-7.93m sand	525m	South West
GW110874	0.00m-7.93m UNCONSOLIDATED ALL SANDS	533m	South West
GW110524	0.00m-1.50m ROCK	542m	South
GW027462	0.00m-0.60m Topsoil Sandy 0.60m-1.21m Sand 1.21m-2.13m Sand White 2.13m-6.40m Sand 6.40m-8.83m Sand Dark Brown Peaty 8.83m-13.10m Sand Water Supply 13.10m-14.93m Sand Grey Water Bearing 14.93m-15.84m Sand Water Supply 15.84m-16.76m Sand Clay Seams Water Supply 16.76m-19.50m Sand Water Supply 19.50m-20.72m Peat Fossils:wood	543m	West
GW105019	0.00m-0.30m SANDY TOPSOIL 0.30m-6.50m FILL, SAND, BRICKS 6.50m-9.60m LIGHT BROWN SAND 9.60m-18.00m WHITE BEACH SAND 18.00m-24.00m YELLOW SAND 24.00m-26.50m YELLOW SAND/SILTY 26.50m-27.50m YELLOW SAND MORE SILTY 27.50m-30.00m SOFT SANDSTONE	543m	North West
GW109679	0.00m-0.10m CONCRETE 0.10m-1.00m FILL, MOIST, SAND, GRAVEL 1.00m-4.00m SAND, MOIST GREY BROWN 4.00m-6.00m SANDSTONE, ORANGE BROWN	548m	South East
GW023117	0.00m-1.21m Sand 1.21m-1.52m Sand Hard Cemented 1.52m-6.09m Sand Water Supply	550m	South West
GW114951	0.00m-0.50m TOPSOIL 0.50m-4.00m SAND YELLOW 4.00m-6.00m SAND WHITE	552m	South West
GW109680	0.00m-0.50m CONCRETE 0.50m-0.70m FILL, PALE, ORANGE 0.70m-1.50m SAND 1.50m-1.90m SANDSTONE 1.90m-3.90m SAND 3.90m-5.50m SANDSTONE, MOIST, PALE, GREY	553m	South East
GW109681	0.00m-1.00m CONCRETE, FILL, MOIST ORANGE 1.00m-1.30m SAND 1.30m-2.10m SANDSTONE, MOIST, DARK 2.10m-3.50m SAND, WET, PALE 3.50m-6.00m SANDSTONE, SLIGHTLY MOIST, WEATHERED	562m	South East
GW107509	0.00m-10.00m sand	563m	North West
GW110448	0.00m-9.00m UNCONSOLIDATE ALL SANDS	565m	South West

Groundwater No	Drillers Log	Distance	Direction
GW106297	0.00m-8.23m sand	567m	South West
GW023996	0.00m-3.04m Sand White 3.04m-3.65m Sand Black Water Supply 3.65m-4.57m Sand White	574m	South West
GW106537	0.00m-10.00m sand	582m	North West
GW106435	0.00m-12.81m sand, unconsolidated	583m	North West
GW105438	0.00m-7.63m UNCONSOLIDATED ALL SANDS	587m	South West
GW108442	0.00m-8.00m Sand	590m	South West
GW029637	0.00m-4.41m Sand Water Supply	593m	South West
GW111847	0.00m-0.50m FILL, SLIGHTLY MOIST, PALE PINK, DENSE, SANDSTONE, SAND 0.50m-3.00m SAND, MOIST, PALE GREYS, BROWN, COARSE 3.00m-5.00m SAND, WET, PALE BROWN, MEDIUM GRAINED	596m	South East
GW107534	0.00m-6.10m Sand, unconsolidated	597m	West
GW107137	0.00m-7.63m Sand, unconsolidated	604m	West
GW106798	0.00m-10.00m sand	606m	North West
GW105969	0.00m-9.46m sand, unconsolidated	607m	South West
GW107430	0.00m-9.15m Sand, unconsolidated	613m	West
GW104057	0.00m-1.00m SANDY TOPSOIL 1.00m-2.00m DIRTY WHITE SAND 2.00m-3.00m LIGHT BROWN SAND 3.00m-7.00m LIGHT YELLOW SAND 7.00m-11.00m WHITE SAND 11.00m-12.00m WHITE SAND, BLACK PEAT 12.00m-13.00m WHITE SAND 13.00m-14.00m ROCK, ORANGE FATTY SANDS & CLAY	614m	North West
GW105717	0.00m-0.30m topsoil 0.30m-4.20m sand, light brown 4.20m-6.00m sand, yellow	621m	South West
GW072922	0.00m-6.70m Unconsolidated Sand	627m	West
GW104928	0.00m-0.20m TOPSOIL 0.20m-4.50m LIGHT BROWN SAND 4.50m-9.00m LIGHT YELLOW SAND	628m	West
GW017851	0.00m-4.57m Sand Water Supply	634m	South East
GW108433	0.00m-12.81m Sand, unconsolidated	634m	West
GW111004	0.00m-13.12m UNCONSOLIDATED ALL SAND	646m	South West
GW023998	0.00m-14.63m Sand Yellow 14.63m-15.39m Sand Grey Clean 15.39m-15.54m Sand Hard Cemented 15.54m-17.06m Sand Dark Brown Peaty 17.06m-19.50m Sand Grey 19.50m-24.38m Sand Light Brown Water Supply 24.38m-25.29m Sand Slightly Peaty Water Supply 25.29m-29.10m Sand Light Brown Clean Water Supply 29.10m-30.48m Sand Grey Clean Water Supply 30.48m-34.74m Sand Clean Water Supply 34.74m-35.96m Sand Slightly Clayey Water Supply 35.96m-35.98m Sandstone	647m	South West
GW101759	0.00m-10.98m Unconsolidated Sand	648m	North
GW111846	0.00m-0.20m BITUMEN 0.20m-0.50m FILL, MOIST, BROWN, DENSE, SAND, MINOR ASPHALT 0.50m-5.60m SAND, DENSE, MOIST, ORANGE, BROWN, SANDSTONE	651m	South East
GW105999	0.00m-10.68m sand, unconsolidated	654m	West

Groundwater No	Drillers Log	Distance	Direction
GW107391	0.00m-7.01m Sand, unconsolidated	656m	West
GW013339	0.00m-16.45m Sand Nominal Water Supply 0.00m-16.45m Mud Marine Nominal	660m	South West
GW023179	0.00m-1.21m Sand 1.21m-1.52m Sand Hard Cemented 1.52m-7.62m Sand Water Supply	660m	South West
GW111307	0.00m-0.10m SOIL 0.10m-18.00m SAND	661m	West
GW105567	0.00m-0.30m TOPSOIL 0.30m-2.30m BROWN SAND 2.30m-7.00m WHITE SAND	662m	South West
GW111845	0.00m-0.20m BITUMEN 0.20m-1.00m FILL, MOIST,ORANGE BROWN AND BLACK 1.00m-3.00m SAND MOIST,PALE,M/DENSE,COARSE	669m	South East
GW107093	0.00m-12.43m UNCONSOLIDATED ALL SANDS	677m	South West
GW107348	0.00m-13.42m Sand, unconsolidated	681m	West
GW026468	0.00m-0.91m Topsoil 0.91m-3.04m Sand Hard Cemented 3.04m-6.70m Clay Sandy 6.70m-7.31m Peat Wood 7.31m-9.14m Sand White Clean Water Supply 9.14m-10.05m Sand Yellow Clean Water Supply 10.05m-14.93m Sand White Clean Water Supply 14.93m-15.24m Sand Yellow Water Supply 15.24m-15.54m Sand Grey Water Supply 15.54m-19.66m Sand Grey Pete Water Supply 19.66m-19.67m Peat Water Supply	688m	South West
GW100768	0.00m-17.39m UNCONSOLIDATED ALL SANDS	693m	South
GW106028	0.00m-0.30m topsoil 0.30m-3.00m sand, yellow 3.00m-5.00m sand, brown	696m	West
GW111844	0.00m-0.15m FILL,MOIST,GREY BROWN,LOOSE,SAND 0.15m-3.00m SAND,MEDIUM DENSE,MOIST,GREY,M/GRAINED 3.00m-4.80m SAND,WET,PALE BROWN,COARSE GRAINED	701m	South East
GW101162	0.00m-6.10m UNCONSOLIDATED. ALL CLEAN SAND.	702m	South West
GW108228	0.00m-17.00m sand	705m	North
GW042834	0.00m-1.22m Made Ground 1.22m-10.36m Sand White 10.36m-21.95m Sand White Light Water Supply 21.95m-23.16m Peat Sand Water Supply 23.16m-29.87m Sand Grey Water Supply 29.87m-30.48m Sand Grey Clay Water Supply 30.48m-31.09m Clay Grey	712m	North West
GW072463	0.00m-7.00m GREY SAND 7.00m-8.00m GREY CLAY 8.00m-10.50m BROWN SANDSTONE 10.50m-11.00m BROWN SOFT SANDSTONE 11.00m-17.00m GREY SANDSTONE 17.00m-17.50m GREY CLAY 17.50m-43.00m WHITE SANDSTONE	713m	South East
GW106693	0.00m-11.29m sand	714m	North West
GW110780	0.00m-23.00m SAND	714m	South West
GW017729	0.00m-30.48m Sand Water Supply	718m	North West
GW106098	0.00m-9.50m sand	718m	South
GW105964	0.00m-9.50m sand	722m	West

Groundwater No	Drillers Log	Distance	Direction
GW106730	0.00m-15.00m sand	725m	North
GW023138	0.00m-4.87m Sand Water Supply	732m	South West
GW075021	0.00m-2.00m SAND,FINE GRAINED,WHITE 2.00m-6.00m SAND,MED GRAINED,YELLOW BROWN 6.00m-7.00m SILTY SAND 7.00m-13.00m SAND,MED TO FINE GRAINED 13.00m-19.00m SAND,VERY FINE GRAINED 19.00m-20.50m PEAT,FIRM 20.50m-24.00m PEAT FIRM,BLACK 24.00m-25.00m SAND,WHITE 25.00m-32.00m PEATY SAND 32.00m-34.00m CLAYEY SAND,FINE GRAINED 34.00m-35.00m SAND,MED GRAINED 35.00m-41.00m SILTY SAND,GREY WITH SILT 41.00m-44.00m SANDY CLAY,FINE TO MED GRAINED 44.00m-44.50m SANDY CLAY	742m	South West
GW038046	0.00m-0.30m Sand 0.30m-0.91m Rubble 0.91m-9.14m Sand 9.14m-12.19m Sand Water Supply 12.19m-13.71m Sand White Water Supply 13.71m-18.89m Sand Water Supply 18.89m-19.81m Sand Clay Bands 19.81m-24.38m Sand White Water Supply 24.38m-24.39m Clay Sandy	749m	North West
GW023572	0.00m-3.65m Sand Water Supply	755m	South West
GW075017	0.50m-3.00m SAND, MED TO FINE GRAINED,YELLOW 3.00m-4.00m PEATY SAND 4.00m-4.50m PEAT,FINE 4.50m-13.00m SILTY SAND 13.00m-18.00m SAND,DENSE,FINE 18.00m-19.00m PEATY SAND 19.00m-21.50m PEAT,SANDY PEAT,BLACK 21.50m-22.00m SAND 22.00m-23.00m PEAT, FIRM,BLACK 23.00m-27.00m SILTY SAND 27.00m-28.00m SANDY CLAY 28.00m-28.50m WEATHERED ROCK 28.50m-29.50m BED ROCK	755m	West
GW105040	0.00m-8.00m SAND	756m	West
GW106945	0.00m-9.50m sand	756m	West
GW108422	0.00m-14.00m Sand	758m	South West
GW110535	0.00m-12.00m SAND	761m	South West
GW106110	0.00m-1.80m fill 1.80m-9.00m sand 9.00m-10.50m sand, peat 10.50m-21.00m sand 21.00m-23.20m peat heavy	764m	North West
GW107789	0.00m-7.00m sand	773m	South West
GW108653	0.00m-12.00m sand	782m	North West
GW103325	0.00m-7.00m SAND	785m	South West
GW105965	0.00m-9.50m SAND	786m	North
GW105551	0.00m-7.63m UNCONSOLIDATED ALL SANDS	787m	South West
GW110538	0.00m-8.00m SAND	789m	West
GW107326	0.00m-9.00m sand	791m	North
GW107444	0.00m-7.00m sand	791m	South West
GW100831	0.00m-6.10m UNCONSOLIDATED ALL SAND	796m	South West

Groundwater No	Drillers Log	Distance	Direction
GW107643	0.00m-0.30m topsoil 0.30m-3.50m sand, yellow 3.50m-5.50m sand, brown 5.50m-7.00m sand, fine grey	796m	West
GW110240	0.00m-0.50m TOPSOIL 0.50m-10.70m SAND COLOURED 10.70m-17.00m SOFT SANDSTONE 17.00m-150.00m HARD SANDSTONE	796m	South East
GW112397	0.00m-7.32m UNCONSOLIDATED ALL SAND	796m	West
GW110193	0.00m-24.00m UNCONSOLIDATE ALL SAND	798m	South West
GW110539	0.00m-10.00m SAND	802m	West
GW107584	0.00m-7.50m sand	803m	South West
GW103691	0.00m-9.00m SAND	804m	North
GW102008	0.00m-6.10m Sand	812m	South West
GW107154	0.00m-7.93m sand	812m	South West
GW106602	0.00m-6.10m sand, unconsolidated	817m	West
GW106875	0.00m-5.79m Sand, unconsolidated	819m	South West
GW025781	0.00m-4.57m Sand Water Supply	824m	South West
GW105492	0.00m-6.71m UNCONSOLIDATED ALL SANDS	824m	West
GW106488	0.00m-6.10m sand	828m	South West
GW106083	0.00m-0.50m fill 0.50m-11.20m sand 11.20m-11.30m peat 11.30m-19.20m sand 19.20m-20.00m peat siff 20.00m-20.10m sandstone,	829m	North West
GW106146	0.00m-7.32m sand, unconsolidated	829m	South West
GW104966	0.00m-6.10m UNCONSOLIDATED ALL SAND	830m	South West
GW106076	0.00m-5.79m SAND, UNCONSOLIDATED	832m	South West
GW073459	0.00m-7.02m Unconsolidated Sand	840m	South West
GW106030	0.00m-1.00m fill 1.00m-4.00m sand, small rocks 4.00m-8.80m sand 8.80m-8.90m peat 8.90m-9.70m sand 9.70m-11.30m peat & sand 11.30m-13.10m sand 13.10m-13.20m peat 13.20m-14.70m sand 14.70m-14.80m peat 14.80m-19.90m sand 19.90m-20.40m clay 20.40m-20.50m sandstone	846m	North West
GW106106	0.00m-7.01m sand, unconsolidated	848m	South West
GW104646	0.00m-10.00m SAND	850m	South West
GW110786	0.00m-8.00m SAND	852m	South West
GW013629	0.00m-0.60m Topsoil Sandy 0.60m-12.19m Sand White Some Hard Cemented 12.19m-16.76m Sand 16.76m-16.91m Clay Seams 16.91m-21.64m Sand Water Supply 21.64m-21.94m Peat	855m	North West
GW106913	0.00m-9.50m Sand	863m	North

Groundwater No	Drillers Log	Distance	Direction
GW106772	0.00m-5.00m sand	866m	West
GW072280	0.00m-8.00m SAND	872m	South West
GW107668	0.00m-12.81m Sand, unconsolidated	872m	South West
GW108705	0.00m-13.72m sand	875m	South West
GW109490	0.00m-0.30m TOPSOIL 0.30m-13.00m YELLOW SAND 13.00m-18.00m WEATHERED SAND	880m	South West
GW106296	0.00m-6.10m sand	882m	South West
GW108225	0.00m-14.00m sand	886m	South West
GW110270	0.00m-0.30m TOPSOIL 0.30m-3.00m YELLOW SAND 3.00m-5.00m SAND, DARK BROWN 5.00m-6.00m SAND, LIGHT BROWN	898m	West
GW105575	0.00m-7.00m sand	900m	West
GW108286	0.00m-15.25m sand	903m	South West
GW114340	0.00m-5.55m SAND	904m	North
GW025718	0.00m-3.65m Sand Water Supply	905m	West
GW107593	0.00m-12.20m sand	910m	South West
GW108660	0.00m-16.00m sand	914m	South West
GW107804	0.00m-13.42m Sand, unconsolidated	918m	South West
GW106093	0.00m-5.18m sand, unconsolidated	922m	West
GW111696	0.00m-22.00m SAND	923m	South West
GW107551	0.00m-6.71m Sand, unconsolidated	925m	West
GW110778	0.00m-23.00m SAND	925m	South West
GW107906	0.00m-7.50m sand	927m	South West
GW017473	0.00m-7.62m Sand	932m	South West
GW105440	0.00m-5.18m UNCONSOLIDATED ALL SANDS	936m	West
GW107213	0.00m-0.30m topsoil 0.30m-1.50m sand, grey 1.50m-3.40m sand, brown 3.40m-6.00m sand, yellow	936m	West
GW108734	0.00m-6.10m sand	936m	West
GW104947	0.00m-0.30m TOPSOIL 0.30m-1.20m WHITE SAND 1.20m-1.40m ROCK COFFEE 1.40m-4.80m YELLOW SAND MG. 4.80m-5.00m YELLOW SILTY SAND	939m	South East
GW100359	0.00m-5.50m ALL SAND UNCONSOLIDATED	941m	West
GW106856	0.00m-7.93m sand, unconsolidated	941m	West
GW106237	0.00m-9.00m sand	942m	South West
GW104991	0.00m-9.00m SAND	943m	South West
GW106132	0.00m-10.37m sand, unconsolidated	945m	South West

Groundwater No	Drillers Log	Distance	Direction
GW106366	0.00m-5.81m sand	946m	South West
GW114341	0.00m-0.20m BITUMEN 0.20m-2.00m SAND 2.00m-2.72m CLAY / SANDSTONE	948m	North
GW107296	0.00m-6.00m sand	953m	South West
GW100293	0.00m-0.80m FILL 0.80m-12.80m YELLOW SAND 12.80m-15.20m WHITE SILTY SAND 15.20m-18.00m YELLOW SAND W.B. 18.00m-19.00m YELLOW SILTY SAND 19.00m-20.00m DECOMPOSED SANDSTONE	962m	North West
GW100939	0.00m-5.50m UNCONSOLIDATED ALL SANDS	963m	West
GW108507	0.00m-8.00m sand	964m	South West
GW108861	0.00m-0.10m TOPSOIL 0.10m-0.80m SANDY CLAY 0.80m-0.90m GREY CLAY 0.90m-4.00m RED YELLOW SANDSTONE 4.00m-114.00m WHITE SANDSTONE	964m	South
GW105770	0.00m-7.01m sand, unconsolidated	969m	South West
GW108440	0.00m-0.30m Topsoil 0.30m-3.50m Sand, yellow 3.50m-5.00m Sand, grey	970m	West
GW107603	0.00m-7.00m sand	971m	West
GW111465	0.00m-6.00m YELLOW SAND 6.00m-9.00m GREY SAND	973m	South West
GW108837	0.00m-7.50m sand	974m	South West
GW104945	0.00m-7.32m UNCONSOLIDATED ALL SANDS	976m	West
GW104834	0.00m-5.79m UNCONSOLIDATED ALL SANDS	977m	West
GW106031	0.00m-5.79m sand, unconsolidated	977m	South West
GW107390	0.00m-7.32m Sand, unconsolidated	977m	South
GW103051	0.00m-5.79m UNCONSOLIDATED ALL SAND	988m	South West
GW108296	0.00m-16.00m sand	990m	South West
GW101783	0.00m-5.00m Sand	994m	South West
GW106985	0.00m-0.30m Topsoil 0.30m-0.60m Sandstone, weathered 0.60m-7.00m Sandstone, with soft bands 7.00m-159.00m Sandstone, with Shale bands	994m	North
GW111438	0.00m-6.10m UNCONSOLIDATED ALL SAND	997m	South West
GW106386	0.00m-7.32m mud sand	999m	South West
GW108632	0.00m-7.32m sand	1002m	West
GW104984	0.00m-9.00m SAND	1011m	South West
GW104832	0.00m-7.32m UNCONSOLIDATED ALL SANDS	1013m	West
GW023585	0.00m-4.57m Sand Water Supply	1014m	West
GW111557	0.00m-8.00m ALL SAND	1014m	West

Groundwater No	Drillers Log	Distance	Direction
GW106004	0.00m-0.30m fill 0.30m-10.80m sand 10.80m-11.50m sand, peat 11.50m-16.50m sand 16.50m-17.00m sand, peat 17.00m-19.00m sand 19.00m-21.00m peat 21.00m-23.20m peat, sand	1015m	North West
GW105747	0.00m-8.23m sand, unconsolidated	1016m	West
GW105134	0.00m-5.00m SAND	1018m	West
GW108491	0.00m-0.30m Topsoil 0.30m-6.50m Sand, yellow 6.50m-7.00m Sand, dark grey	1018m	West
GW108846	0.00m-8.00m sand	1020m	West
GW108418	0.00m-6.00m sand	1024m	West
GW072787	0.00m-5.50m Unconsolidated Sand	1025m	West
GW107738	0.00m-0.30m topsoil 0.30m-4.50m sand, yellow 4.50m-7.00m sand, white	1046m	South West
GW114917	0.00m-9.15m UNCONSOLIDATED ALL SANDS	1050m	West
GW112385	0.00m-5.49m UNCONSOLIDATE ALL SANDS	1056m	West
GW109946	0.00m-0.30m TOPSOIL 0.30m-3.00m SAND BROWN 3.00m-5.00m SAND YELLOW	1058m	West
GW101728	0.00m-4.58m SAND, UNCONSOLIDATED	1062m	West
GW108595	0.00m-8.00m sand	1071m	South West
GW101157	0.00m-6.10m UNCONSOLIDATED, ALL CLEAN SAND	1078m	South West
GW106182	0.00m-0.30m topsoil 0.30m-3.00m sand, brown silty 3.00m-4.00m sand, light brown	1089m	West
GW100755	0.00m-0.30m TOPSOIL 0.30m-0.70m BROWN SAND 0.70m-4.50m WHITE SAND 4.50m-4.80m COFFEE ROCK 4.80m-15.20m WHITE SAND 15.20m-15.40m BLACK PEAT 15.40m-19.00m WHITE SAND 19.00m-19.50m GREY CLAY 19.50m-19.50m SANDSTONE	1110m	South West
GW106178	0.00m-0.30m topsoil 0.30m-5.00m sand,yellow 5.00m-7.00m sand, yellow with some shells	1112m	South West
GW106058	0.00m-7.50m sand	1113m	West
GW017356	0.00m-30.48m Sand Water Supply	1116m	North West
GW107514	0.00m-7.50m sand	1116m	South West
GW109812	0.00m-0.10m CONCRETE 0.10m-0.30m SILTY SAND,LOOSE,DRY,BROWN/GREY,SANDSTONE BRICK PIECES 0.30m-9.00m SAND,LOOSE,DRY,MOIST,ORANGE,BECOMES SATURATED	1117m	South
GW107135	0.00m-7.00m Sand	1121m	North West
GW109813	0.00m-1.00m GRAVELLY SILTY SAND,LOOSE,DRY,DARK GREY,PIECES OF RUBBLE 1.00m-9.00m SAND,MOIST,L/GREY,DARK BROWN,D/ORANGE,CREAM,SATURATED	1126m	South
GW023612	0.00m-5.18m Sand Water Supply	1127m	South

Groundwater No	Drillers Log	Distance	Direction
GW107133	0.00m-7.00m sand	1129m	North West
GW109811	0.00m-0.30m SILTY SAND, DRY, BROWN, GREY, MINOR GLASS 0.30m-9.00m SAND, DRY, L/GREY, BROWN/COPPER, MOIST, BECOMES SATURATED	1129m	South
GW109848	0.00m-0.20m CONCRETE 0.20m-1.70m FILL 1.70m-8.70m SAND	1130m	South
GW024118	0.00m-0.91m Sand Black 0.91m-3.04m Sand White Water Supply	1131m	West
GW109849	0.00m-0.20m CONCRETE 0.20m-1.00m FILL 1.00m-8.50m SAND	1133m	South
GW109810	0.00m-0.80m GRAVELLY SILTY SAND, FILL, LOOSE, DRY MOIST, DARK, BROWN, GREY 0.80m-9.00m SAND, MEDIUM DENSE, V/DARK BROWN/BLACK BECOMES SATURATED	1134m	South
GW109809	0.00m-0.20m CONCRETE 0.20m-0.60m GRAVELLY SILTY SAND, LOOSE, DRY 0.60m-9.00m SAND, MEDIUM DENSE/YELLOW, ORANGE, GRADES TO CREAM	1137m	South
GW109847	0.00m-1.00m FILL 1.00m-8.50m SAND	1138m	South
GW107134	0.00m-7.00m sand	1146m	North West
GW100546	0.00m-14.50m BOTANY BAY SANDS	1151m	North West
GW108640	0.00m-7.50m sand	1158m	South West
GW105771	0.00m-7.01m sand, unconsolidated	1167m	South West
GW109922	0.00m-4.58m UNCONSOLIDATED ALL SANDS	1170m	South West
GW106069	0.00m-7.01m sand, unconsolidated	1181m	South West
GW106021	0.00m-16.47m sand, unconsolidated	1191m	South West
GW106915	0.00m-7.50m Sand	1203m	South West
GW028289	0.00m-6.09m Sand Water Supply	1206m	South West
GW048937	0.00m-2.74m Made Ground 2.74m-12.19m Sand Light Brown Water Supply 12.19m-13.72m Sand Dirty Water Supply 13.72m-16.76m Sand Dirty Clay Bands Interlayered Water Supply 16.76m-17.98m Sand Water Supply 17.98m-22.71m Sand White Water Supply 22.71m-24.38m Clay Grey	1208m	North West
GW111238	0.00m-12.00m SAND	1214m	South West
GW106863	0.00m-16.47m Sand, unconsolidated	1236m	South West
GW110542	0.00m-1.00m SAND AND FILL 1.00m-7.00m SAND L/BROWN 7.00m-13.00m SAND L/GREY 13.00m-17.00m SAND YELLOW 17.00m-20.00m SAND GREY 20.00m-23.00m SAND D/GREY 23.00m-27.50m SAND CREAM 27.50m-28.00m SAND AND CLAY	1236m	North East

Groundwater No	Drillers Log	Distance	Direction
GW017651	0.00m-0.30m Topsoil 0.30m-0.91m Sand Yellow Hard Cemented 0.91m-3.65m Sand Yellow Clay 3.65m-6.09m Sand White Clean Water Supply 6.09m-9.75m Sand Packed Dry 9.75m-15.84m Sand White Clean Water Supply 15.84m-16.15m Clay Sandy Bands 16.15m-17.37m Sand White Clay 17.37m-17.67m Peat 17.67m-18.28m Sand Grey Clay 18.28m-19.20m Peat Clay Bands 19.20m-20.72m Peat Sand 20.72m-21.33m Sand Coarse Hard Cemented Clay 21.33m-23.62m Sand White Clay 23.62m-25.29m Sand Peaty clay 25.29m-29.26m Sand White	1248m	South West
GW104266	0.00m-2.60m BLACK SANDY CLAY/ROCK FILL 2.60m-4.60m DARK GREY SANDY CLAY/GRAVEL 4.60m-6.60m LT. BROWN FINE SAND 6.60m-8.60m LIGHT BROWN FINE SAND 8.60m-10.60m WHITE FINE SAND 10.60m-12.60m WHITE FINE SAND 12.60m-14.60m WHITE SANDY CLAY 14.60m-16.60m BROWN SANDY CLAY 20% 16.60m-18.60m BROWN SANDY CLAY 50% 18.60m-20.60m BROWN SANDY CLAY 70% 20.60m-22.60m PEAT 22.60m-24.60m DENSE PEAT 24.60m-26.60m DENSE PEAT 26.60m-28.60m LIGHT PEAT 28.60m-30.60m GREY CLAY 30.60m-32.60m GREY CLAY 32.60m-34.60m SANDY CLAY 34.60m-35.60m WEATHERED GREY TO HARD SANDSTONE	1251m	North West
GW107132	0.00m-14.64m Sand, unconsolidated	1252m	South West
GW023275	0.00m-5.79m Sand Water Supply	1260m	West
GW106854	0.00m-7.00m sand	1264m	North East
GW107447	0.00m-8.23m Sand, unconsolidated	1270m	North East
GW023445	0.00m-0.30m Sand 0.30m-3.35m Sand White Water Supply 3.35m-3.65m Loam 3.65m-4.26m Sand White	1275m	South
GW072971		1279m	South
GW104125	0.00m-1.00m SAND,LT,BROWN,LOAMY 1.00m-5.30m SAND,LT,BROWN 5.30m-8.10m SAND,LT BROWN 8.10m-14.20m PEAT,BLACK 14.20m-15.20m SAND, WHITE 15.20m-18.00m PEAT,BLACK 18.00m-22.00m CLAY,GREY,SANDY	1284m	West
GW108046	0.00m-15.86m sand	1285m	South West
GW108048	0.00m-16.16m sand	1287m	South West
GW026483	0.00m-4.87m Sand	1305m	South
GW107741	0.00m-9.00m sand	1312m	South West
GW106328	0.00m-9.50m SAND	1321m	North West
GW017870	0.00m-5.18m Made Ground 5.18m-6.70m Sand Dry Packed 6.70m-8.83m Sand White Water Supply 8.83m-10.05m Sand 10.05m-10.97m Sand Hard Cemented 10.97m-13.10m Sand Dirty Water Supply 13.10m-14.63m Sand Grey Water Supply 14.63m-14.93m Sand Grey Peaty 14.93m-16.76m Sand Grey Water Supply 16.76m-17.98m Clay	1324m	North West
GW017340	0.00m-15.24m Made Ground Sand 15.24m-18.59m Clay Water Supply Sand Peaty	1340m	North West

Groundwater No	Drillers Log	Distance	Direction
GW111488	0.00m-0.10m FILL, CONCRETE CORE 0.10m-1.00m FILL, GRAVELLY ROAD BASE, GREY, SAND BROWN 1.00m-1.60m CLAY SANDY, GRAVELLY, BROWN, DRY, SAND M/GRAINED 1.60m-3.00m SAND NATURAL, YELLOW, FINE TO MED. GRAINED	1352m	West
GW111486	0.00m-0.10m FILL CONCRETE CORE 0.10m-0.50m GRAVEL AND SAND , MINOR CLAY 0.50m-2.00m SAND NATURAL BROWN M/GRAINED	1363m	West
GW108245	0.00m-0.75m SANDSTONE ROCKS & FILL 0.75m-2.00m SAND AND RUBBISH 2.00m-5.00m SAND AND HEAVY PEAT 5.00m-13.00m SAND 13.00m-19.90m SAND WITH PEAT LAYERS 19.90m-20.80m SANDSTONE GREY	1365m	North West
GW072908		1374m	South
GW060170	0.00m-3.00m Sand White Peaty Water Supply 3.00m-14.00m Sand Light Brown Water Supply 14.00m-14.50m Peat Water Supply 14.50m-20.00m Sand White Peaty Water Supply	1382m	South West
GW111487	0.00m-0.10m FILL CONCRETE CORE 0.10m-0.50m GRAVEL AND SAND 0.50m-2.40m SAND, NATURAL BROWN, M/GRAINED	1384m	West
GW101640	0.00m-4.30m Topsoil with Fill 4.30m-6.50m Light Grey Sand 6.50m-7.00m Brown Sand 7.00m-9.60m Yellow Silty Sand 9.60m-10.50m Light Brown Sand WB 10.50m-14.80m White Sand WB 14.80m-16.60m Yellow Silty Sand 16.60m-17.90m Decomposed Sandstone	1390m	North
GW017869	0.00m-1.82m Made Ground 1.82m-3.65m Sand Dry Water Supply 3.65m-10.97m Sand Water Supply 10.97m-11.58m Clay Sandy Peat 11.58m-12.19m Sand Grey Water Supply 12.19m-12.80m Sand Grey Dirty Water Supply 12.80m-13.71m Sand Grey Peaty Water Supply 13.71m-14.93m Sand Dirty Water Supply 14.93m-16.15m Sand Water Supply Clay Peat 16.15m-16.45m Sand Water Supply 16.45m-16.76m Clay Water Supply 16.76m-17.37m Sand Grey Clean Water Supply 17.37m-17.98m Peat	1399m	North West
GW106096	0.00m-9.50m sand	1431m	North East
GW107106	0.00m-9.50m sand	1431m	North East
GW017653	0.00m-0.91m Sand White Dirty 0.91m-1.21m Sand Cemented Hard 1.21m-2.43m Sand Cemented Hard 2.43m-9.14m Sand Clean 9.14m-9.75m Sand Cemented Hard Bands 9.75m-11.27m Sand Clean Wet 11.27m-15.54m Sand Clean Water Supply 15.54m-16.00m Peat 16.00m-18.59m Sand Grey Water Supply 18.59m-18.74m Peat Wood 18.74m-19.20m Clay Peaty 19.20m-19.50m Peat Wood 19.50m-21.94m Sand Dirty Water Supply 21.94m-22.55m Peat Wood 22.55m-22.86m Sand White 22.86m-24.38m Sand Dirty 22.86m-24.38m Clay Grey 24.38m-25.60m Peat 24.38m-25.60m Sand Dirty	1433m	South West
GW023659	0.00m-3.65m Soil Clay 3.65m-4.87m Sand Yellow Water Supply	1446m	South

Groundwater No	Drillers Log	Distance	Direction
GW037956	0.00m-2.59m Made Ground 2.59m-3.04m Sand Grey 3.04m-5.02m Sand Yellow Clean 5.02m-6.40m Sand Yellow Clean Wet 6.40m-7.84m Sand Hard Cemented Very Fine 7.84m-7.92m Sand Hard Cemented 7.92m-10.51m Sand Yellow Water Supply 10.51m-11.73m Sand Dirty Water Supply 11.73m-11.81m Sand Hard Cemented 11.81m-13.56m Sand Grey Dirty Water Supply 13.56m-15.24m Sand Yellow Clean 15.24m-15.84m Clay Organic 15.84m-18.13m Sand Grey Water Supply 18.13m-20.11m Sand White Clean Water Supply 20.11m-21.10m Clay Dark Grey Water Supply	1471m	North West
GW102222	0.00m-9.50m Sand	1500m	South
GW108616	0.00m-18.00m sand	1538m	West
GW024058	0.00m-1.52m Sand Gravel 1.52m-4.57m Sand Dry 4.57m-6.09m Sand Grey Dry 6.09m-7.62m Sand White Dry 7.62m-10.36m Sandstone Soft Firm	1540m	North
GW072622	0.00m-1.00m FILL, ROCKS & SAND 1.00m-1.50m YELLOW SAND 1.50m-2.80m PEATY SAND 2.80m-8.30m YELLOW SAND 8.30m-11.00m DARK BROWN PEATY SAND 11.00m-11.50m BLACK PEATY SAND 11.50m-14.20m BROWN PEATY SAND 14.20m-15.30m PEAT 15.30m-16.00m STIFF GREY CLAY	1541m	West
GW104872	0.00m-10.00m SAND	1542m	West
GW105141	0.00m-10.00m SAND	1554m	South West
GW026142	0.00m-5.18m Sand Rubble 5.18m-12.49m Sand White Wet Clean Water Supply 12.49m-12.51m Peat Sandy Clay	1555m	West
GW203386	0.00m-0.05m Fill; Asphalt 0.05m-1.10m Sand; Fill, brown sand with a trace of sandstone pieces/gravel, fine to medium grained, dry 1.10m-2.80m Sand; grey, fine grained, moist from 2m, saturated @ 2.5m	1613m	West
GW203387	0.00m-0.40m Sand; fill, red/brown with a trace of sandstone gravels, fine to medium grained 0.40m-1.00m Sand, Silty; fille, dark brown silty sand, fine grained with some bricks & pieces, dry 1.00m-3.00m Sand; natural light grey/white sand, fine grained, dry 3.00m-7.00m Sand; natural, light grey/white sand, fine grained, moist - saturated	1613m	West
GW047125	0.00m-0.61m Made Ground 0.61m-3.05m Sand Yellow 3.05m-3.96m Peat 3.96m-5.79m Sand Grey Water Supply 5.79m-15.85m Sand White Water Supply 15.85m-18.59m Sand Water Supply 18.59m-18.75m Wood 18.75m-20.73m Sand Water Supply 20.73m-24.38m Sandstone Water Supply	1616m	South
GW111434	0.00m-0.50m FILL, SILTY SAND,FINE TO MEDIUM GRAINED 0.50m-2.00m SAND,FINE TO MEDIUM GRAINED,BROWN,TACE OF SILT 2.00m-8.00m SAND FINE TO MEDIUM GRAINED,BROWN	1616m	North West
GW100904	0.00m-9.76m UNCONSOLIDATED ALL SANDS	1621m	West
GW105076	0.00m-10.00m SAND	1628m	North West
GW111015	0.00m-0.30m CONCRETE 0.30m-1.00m SAND,GRAVELLY,SILTY,SANDSTONE AND ASH 1.00m-3.50m SAND, SILTY,M/DENSE 3.50m-4.40m SAND,GRAVELLY,DENSE,SATURATED,YELLOW 4.40m-4.80m SILTY SAND 4.80m-5.40m SAND,GRAVELLY,DENSE,SATURATED,YELLOW 5.40m-6.60m SAND,CLAYEY, MEDIUM DENSE,PALE,GREY 6.60m-7.00m CLAY,SANDY,SILTY,STIFF,MOIST	1633m	North West

Groundwater No	Drillers Log	Distance	Direction
GW024368	0.00m-4.27m Made Ground 4.27m-5.79m Sand Moist 5.79m-12.95m Sand White Wet Water Supply	1634m	South West
GW111433	0.00m-2.00m FILL, SILTY, GRAVELLY SAND 2.00m-7.00m SAND, LIGHT BROWN, GREY, BROWN	1634m	North West
GW111080	0.00m-0.20m CONCRETE SLAB 0.20m-0.60m SAND, FILL, MOIST, BROWN 0.60m-2.80m SILTY SAND, MOIST, BROWN, SLIGHT ODOUR 2.00m-4.00m SANDY SILT, SATURATED, L/PLASTICITY, GREY BLACK 4.00m-4.50m SANDY CLAY, MOIST, M/PLASTICITY 4.50m-5.00m CLAY, HIGH PLASTICITY, VERY MOIST, GREY	1639m	North West
GW106661	0.00m-15.25m sand, unconsolidated	1642m	South
GW111081	0.00m-0.25m CONCRETE SLAB 0.25m-0.90m SAND, FILL, DRY, GREY, NO ODOUR 0.90m-2.80m SILTY SAND, GRAVEL BITS, VERY MOIST, BROWN 2.80m-3.40m SANDY SILT, GRAVEL BITS 3.40m-4.00m SANDY SILT, MOIST, DARK BROWN	1648m	North West
GW017345	0.00m-0.60m Made Ground 0.60m-2.43m Sand Grey 2.43m-2.74m Wood 2.74m-4.26m Sand Wood 4.26m-6.70m Sand White Hard 6.70m-7.92m Sand White Hard Clay 7.92m-13.41m Sand Water Supply 13.41m-13.71m Clay	1649m	West
GW106005	0.00m-12.29m sand	1651m	South
GW017834	0.00m-1.22m Sand Dry 1.22m-1.68m Sand Hard Cemented 1.68m-2.44m Sand Some Hard Cemented 2.44m-6.10m Sand Dry Compacted 6.10m-14.17m Sand Grey Yellow Water Supply 14.17m-14.94m Rock Soft Sand Water Supply 14.94m-14.95m Clay	1655m	West
GW107289	0.00m-14.03m Sand, unconsolidated	1659m	South
GW072974		1661m	South
GW105480	0.00m-0.50m BITUMEN, FILL 0.50m-1.20m BROWN SAND 1.20m-4.60m YELLOW SAND 4.60m-5.90m YELLOW SAND WITH ORANGE SILT 5.90m-8.60m YELLOW SAND/DECOM. SANDSTONE 8.60m-10.30m YELLOW SAND/ORANGE SILT 10.30m-13.50m RED, WHITE, DECOMPOSED SANDSTONE	1661m	North
GW100268	0.00m-0.20m FILL 0.20m-4.50m YELLOW SAND 4.50m-6.00m LIGHT GREY SAND 6.00m-6.70m DARK BROWN PEATY SAND 6.70m-8.00m WHITE SAND 8.00m-12.20m YELLOW SAND- WATER BEARING 12.20m-13.00m BROWN SILTY SAND-WATER BEARING 13.00m-15.50m YELLOW SAND-HIGH WATER BEARING 15.50m-16.50m WHITE SAND (SILTY)-WATER BEARING 16.50m-18.00m DECOMPOSED SANDSTONE, GETTING HARDER	1663m	North
GW111014	0.00m-0.20m CONCRETE 0.20m-3.70m SAND 3.70m-6.10m SILTY SAND 6.10m-6.50m CLAY, GRAVELLY, SANDY, MOIST, IRONSTONE, GRAVEL	1665m	North West
GW024057	0.00m-1.52m Topsoil 0.00m-1.52m Loam Sandy 1.52m-3.04m Sand Dark Brown 3.04m-6.09m Sand Yellow Water Supply 6.09m-11.27m Sand Dark Brown Wet Water Supply 11.27m-11.88m Sand Light Brown Wet Water Supply 11.88m-13.10m Sand Light Brown Wet Water Supply 11.88m-13.10m Clay Veined Water Supply	1667m	North
GW051729	0.00m-0.80m Made Ground 0.80m-1.80m Sand Light Brown Fine-medium Some Fine 1.80m-5.70m Sand Dark Brown Fine-medium 5.70m-8.50m Sand Light Brown Fine-medium	1674m	West

Groundwater No	Drillers Log	Distance	Direction
GW111406	0.00m-0.12m CONCRETE SLAB 0.12m-0.60m GRAVELLY SILT,DARK BROWN,DRY,LOOSE 0.60m-1.20m GRAVELLY CLAY,FILL,ORANGE BROWN 1.20m-2.30m SILTY SAND,LIGHT GREY/BROWN 2.30m-2.60m CLAY DARK GREY,VERY MOIST 2.60m-3.40m SANDY CLAY DARK GREY 3.40m-4.50m CLAY LIGHT BROWN,TO L/GREY 4.50m-4.80m CLAY RED BROWN,MOIST,L/PLASTICITY,HARD	1676m	North West
GW105525	0.00m-2.75m SANDY CLAY,SOIL LAND FILL 2.75m-5.49m UNCONSOLIDATED ALL SANDS	1678m	North West
GW111405	0.00m-0.13m CONCRETE SLAB 0.13m-0.25m SAND FILL, LIGHT ORANGE BROWN 0.25m-0.85m GRAVELLY SAND,FILL,BLACK,MOIST,VERY DENSE 0.85m-1.10m GRAVELLY CLAY (FILL) 1.10m-1.20m SAND FILL RED BROWN 1.20m-2.30m SILTY SAND,FILL,MINOR CLAY 2.30m-3.30m SAND,DARK BROWN,SATURATED,M/GRAINED 3.30m-4.00m SILTY SAND LIGHT GREY 4.00m-4.80m CLAY LIGHT GREY,MOIST,MED.TO HIGH PLASTICITY	1681m	North West
GW072479	0.00m-5.80m UNCONSOLIDATED SANDS	1684m	South West
GW203385	0.00m-0.05m Fill; Asphalt 0.05m-1.10m Sand; Fill, brown sand with a trace of sandstone gravels, fine to medium grained, dry 1.10m-2.80m Sand; grey, fine, grained, moist from 2m, saturated @ 2.5m 2.80m-3.50m Peat; black peat, saturated 3.50m-6.20m Sand; dark brown, natural	1689m	West
GW109752	0.00m-0.80m SANDY SILT WITH GRAVEL,BLACK,BROWN,RED,SOFT,SLIGHTLY MOIST 0.80m-1.00m BLACK STAINED FILL 1.00m-2.80m SAND,BROWN,LOOSE TO DENSE,VERY MOIST TO SATURATED,WELL ROUNDED AND GRADED 2.80m-3.40m CLAY,LIGHT GREY,VERY STIFF,MOIST,M/H PLASTICITY,MINOR SAND	1694m	North West
GW105485	0.00m-0.50m BITUMEN/ROAD BASE FILL 0.50m-1.20m BROWN SAND FILL 1.20m-3.60m BRICK HILL/ROAD BASE 3.60m-9.50m YELLOW SAND 9.50m-11.50m RED/WHITE DECOMPOSED SANDSTONE	1696m	North
GW104031	0.00m-0.10m GRASS 0.10m-2.00m SAND,MEDIUM BROWN 2.00m-3.00m SAND,LIGHT MED. BROWN 3.00m-4.00m SAND:L IGH T BROWN 4.00m-5.00m AS ABOVE 5.00m-6.00m AS ABOVE,SATURED 6.00m-7.00m AS ABOVE	1698m	South West
GW104032	0.00m-0.10m GRASS 0.10m-2.00m FILL, SAND,LIGHT ORANGE 2.00m-5.00m SAND,MEDIUM BROWN 5.00m-7.00m SAND,LIGHT BROWN,MED. GRAINED	1698m	South West
GW104033	0.00m-2.00m FILL, SAND,DARK BROWN,YELLOW 2.00m-4.00m SAND,MEDIUM BROWN,SATURED	1698m	South West
GW104034	0.00m-2.00m FILL, SAND, GREY,DARK ORANGEY BROWN 2.00m-4.00m SAND,MEDIUM BROWN,NO ODOUR 4.00m-5.00m AS ABOVE,DENSE SAND 5.00m-7.00m SAND,LIGHT BROWN	1698m	South West
GW104035	0.00m-2.00m FILL, SAND MEDIUM DARK BROWN,GREYISH 2.00m-3.00m SAND,LIGHT BROWN,WET 3.00m-7.00m SAND AS ABOVE,SATURED,GARK BROWN	1698m	South West
GW104036	0.00m-1.00m fill 1.00m-2.00m peat 2.00m-7.00m sand	1698m	South West
GW104037	0.00m-0.10m GRASS 0.10m-4.00m SAND,MEDIUM GRAINED	1698m	South West
GW104038	0.00m-0.10m GRASS 0.10m-4.00m SAND:LIGHT BROWN	1698m	South West
GW109748	0.00m-0.20m CONCRETE 160mm 0.20m-0.40m SANDY SILT WITH GRAVEL,FILL,BROWN,SOFT,SLIGHTLY MOIST TO MOIST 0.40m-3.20m SAND,YELLOW,BROWN,LOOSE,MOIST TO SATURATED,WELL ROUNDED 3.20m-3.80m CLAY,GREY,RED,SOFT TO STIFF,MOIST, LOW TO MEDIUM PLASTICITY,WITH MINOR SAND	1704m	North West

Groundwater No	Drillers Log	Distance	Direction
GW110414	0.00m-0.10m GRASS 0.10m-1.00m SAND,ORANGE,BROWN,M/GRAINED,DRY 1.00m-2.00m SAND, AS ABOVE 2.00m-3.00m SAND,LIGHT BROWN,M/GRAINED,WELL SORTED 3.00m-4.00m SAND AS ABOVE,SATURATED	1708m	South West
GW109750	0.00m-0.10m CONCRETE 150mm 0.10m-0.30m SANDY GRAVEL,LOOSE,SLIGHTLY MOIST 0.30m-3.00m SAND,GREY,LOOSE,MOIST TO SATURATED,WELL, ROUNDED AND GRADED 3.00m-3.50m CLAY,LIGHT GREY,VERY STIFF,SLIGHTLY MOIST TO MOIST,M/H PLASTICITY	1718m	North West
GW109749	0.00m-1.00m SANDY GRAVEL (FILL),BLACK/BROWN,LOOSE,MOIST 1.00m-2.50m SAND,GREY,LOOSE,VERY MOIST TO SATURATED WELL ROUNDED & GRADED 2.50m-3.30m SILTY SAND,BROWN,TO GREY,VERY DENSE,SATURATED 3.30m-4.20m SAND,VERY DENSE,BROWN,SATURATED,COFFEE ROCK 4.20m-4.50m SILTY CLAY,DARK GREY,VERY STIFF,MOIST,LOW PLASTICITY	1719m	North West
GW051730	0.00m-3.30m Sand Reddish Fine-medium Some Fine 3.30m-8.30m Sand Greyish Light Brown Fine-medium	1723m	West
GW109747	0.00m-0.10m CONCRETE 140mm 0.10m-0.30m SANDY CLAY WITH GRAVEL,FILL,LIGHT BROWN,SOFT,MOIST 0.30m-0.50m CONCRETE 130mm 0.50m-0.70m SANDY CLAY WITH GRAVEL,FILL,BROWN,ORANGE,RED,SOFT,MOIST 0.70m-3.20m SAND,GREY,LOOSE,MOIST TO SATURATED,WELL ROUNDED,WELL GRADED 3.20m-3.40m SANDY CLAY,YELLOW,BROWN,SOFT,SATURATED 3.40m-3.80m CLAY,GREY,RED,STIFF,SLIGHTLY MOIST,LOW PLATICITY,MINOR SAND	1725m	North West
GW110431	0.00m-0.10m BITUMEN 0.10m-1.00m SAND,GREY BROWN 1.00m-2.00m SAND,GREY BROWN,M/GRAINED,DRY 2.00m-3.00m SAND,L/BROWN,DAMP,WELL SORTED 3.00m-4.00m SAND AS ABOVE,WET 4.00m-4.80m SAND,L/BROWN,WET,M/GRAINED 4.80m-5.00m SAND AS ABOVE	1725m	South West
GW028844	0.00m-0.30m Topsoil 0.30m-4.57m Sand Yellow 4.57m-6.09m Sand Yellow 4.57m-6.09m Sandstone Decomposed Seams 6.09m-10.66m Sand White Water Supply 10.66m-13.71m Sand Clayey Water Supply 13.71m-13.73m Clay Reddish Stiff Water Supply	1728m	West
GW051731	0.00m-0.25m Made Ground 0.25m-2.60m Sand Yellow Fine-medium Some Fine 2.60m-8.00m Sand Greyish Grey Fine-medium	1728m	West
GW110428	0.00m-0.10m BITUMEN 0.10m-0.50m SAND,GREY/BROWN,M/GRAINED,DRY 0.50m-2.00m SAND,YELLOW/ORANGE,M/GRAINED 2.00m-3.00m SAND,L/BROWN, M/GRAINED,DAMP 3.00m-3.80m SAND AS ABOVE ,WET 3.80m-4.00m SAND AS ABOVE ,SATURATED	1734m	South West
GW110430	0.00m-0.10m BITUMEN 0.10m-1.00m SAND, ORANGE/BROWN,FINE M/GRAINED 1.00m-2.00m SAND,WHITE/GREY,WELL SORTED F/M/GRAINED 2.00m-3.00m SAND,BROWN/GREY,WET,M/GRAINED 3.00m-3.80m SAND,AS ABOVE 3.80m-4.00m SAND AS ABOVE ,SATURATED	1737m	South West
GW109745	0.00m-1.20m SANDY GRAVEL,BLACK,WHITE,ORANGE,LOOSE,MOIST WITH ASH,CONCRETE,BRICK AND SANDSTONE 1.20m-2.80m SAND,GREY TO ORANGE,BROWN,LOOSE TO DENSE,MOIST TO SATURATED,WELL GRADED 2.80m-3.00m CLAYEY SAND,ORANGE,BROWN,DENSE,SATURATED,WELL GRADED 3.00m-3.50m CLAY,GREY/RED,VERY STIFF,MOIST,LOW PLASTICITY.	1739m	North West
GW110429	0.00m-0.10m BITUMEN 0.10m-1.00m SAND,GREY/BROWN,FINE,M/GRAINED 1.00m-2.00m SAND AS ABOVE 2.00m-3.00m SAND L/BROWN,M/GRAINED,WET,M/DENSE 3.00m-3.80m SAND AS ABOVE 3.80m-4.00m SAND AS ABOVE ,SATURATED	1741m	South West
GW109746	0.00m-1.00m GRAVELY SAND,FILL,BROWN/RED,LOOSE,MOIST,CONCRETE,SANDSTONE 1.00m-2.40m SAND,GREY TO ORANGE, BROWN,LOOSE,MOIST TO SATURATED 2.40m-2.80m SILTY SAND,BLACK,LOOSE,SATURATED 2.80m-3.80m SAND,BROWN,LOOSE,SATURATED,WELL ROUNDED,WELL GRADED 3.80m-4.20m CLAY,GREY,VERY STIFF,SLIGHTLY MOIST TO MOIST, LOW PLASTICITY.	1745m	North West

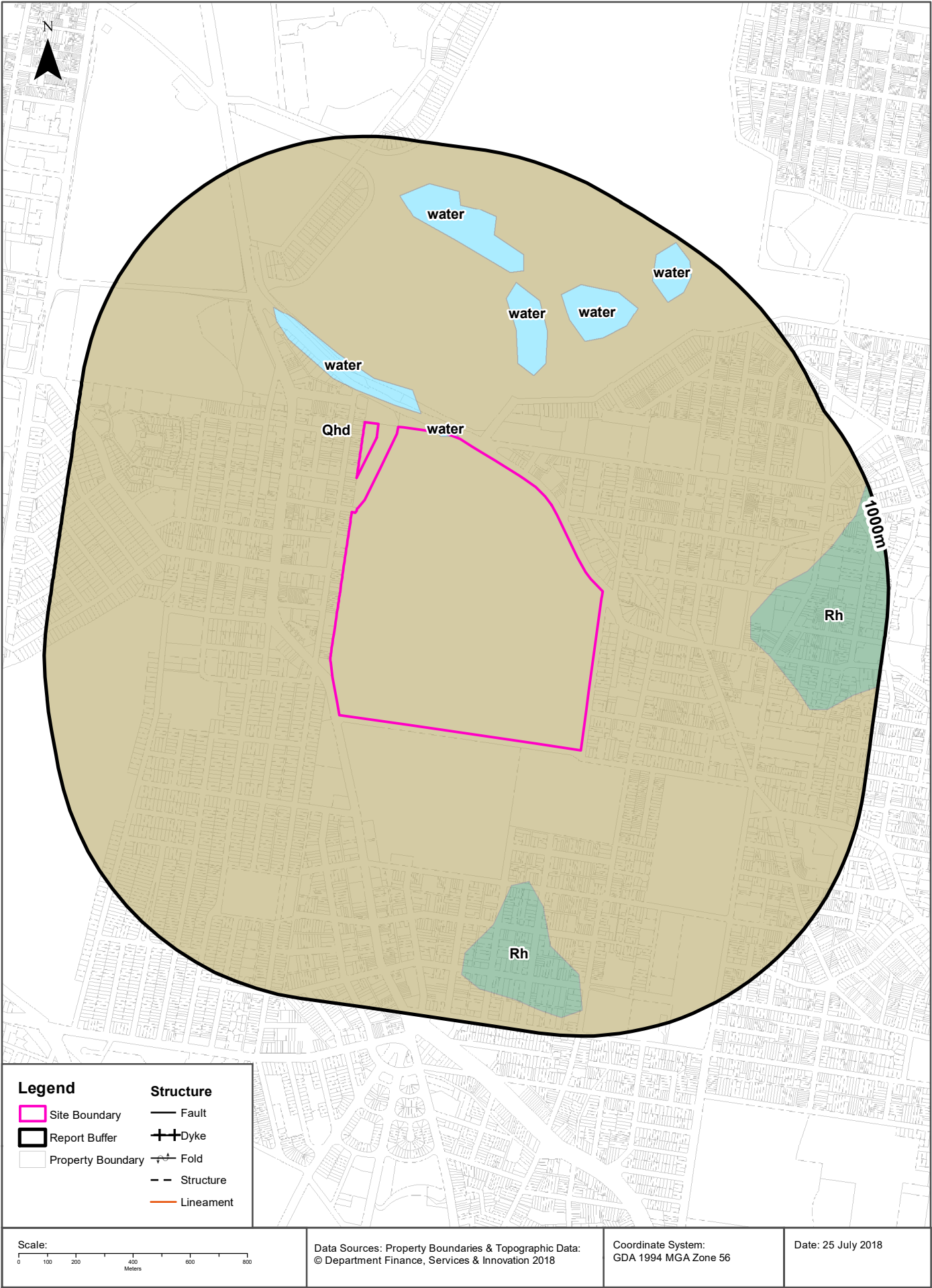
Groundwater No	Drillers Log	Distance	Direction
GW110427	0.00m-0.10m GRASS 0.10m-1.00m SAND, YELLOW ORANGE, M/GRAINED 1.00m-2.00m SAND GREY BROWN, M/GRAINED, DRY 2.00m-3.00m SAND AS ABOVE, WET 3.00m-4.00m SAND AS ABOVE, WET 4.00m-5.00m SAND LIGHT BROWN, M/GRAINED, SATURATED 5.00m-6.00m SAND AS ABOVE, SATURATED 6.00m-7.00m SAND AS ABOVE	1750m	South West
GW111248	0.00m-2.00m TOPSOIL 2.00m-16.00m SAND 16.00m-17.00m PEAT AND COAL 17.00m-30.00m SAND	1756m	South
GW109751	0.00m-0.10m CONCRETE 120mm 0.10m-0.90m SANDY GRAVEL, FILL, BROWN, LOOSE, SLIGHTLY MOIST 0.90m-1.50m SAND, GREY TO BROWN, LOOSE TO DENSE, MOIST TO VERY MOIST 1.50m-1.90m HUMIC CEMENTED SAND (COFFEE ROCK) 1.90m-3.20m SAND, RED, BROWN TO BROWN, LOOSE TO DENSE, V/MOIST TO SATURATED 3.20m-3.50m CLAY, YELLOW BROWN, VERY STIFF, MOIST, M/TO HIGH PLASTICITY/SAND	1759m	North West
GW051728	0.00m-1.00m Made Ground 1.00m-3.80m Sand Fine-medium Some Fine 3.80m-8.30m Sand Greyish Grey Fine-medium	1761m	West
GW111016	0.00m-0.20m CONCRETE 180 mm 0.20m-1.00m SAND, GRAVELLY CLAYEY, FILL, SANDSTONE 1.00m-3.40m SAND, SILTY, MEDIUM, DENSE, MOIST 3.40m-3.50m SAND, DENSE, SATURATED, YELLOW, MINOR CLAY 3.50m-4.40m SAND, CLAYEY, LOOSE TO MED. DENSE 4.40m-4.50m CLAY, GRAVELLY SILTY, FIRM, VERY MOIST	1761m	North West
GW109744	0.00m-0.60m SANDY GRAVEL, FILL, BLACK, RED, BROWN, LOOSE, MOIST/BRICK/SANDSTONE 0.60m-0.80m SILTY SAND, BLACK, LOOSE, MOIST 0.80m-2.00m SAND, GREY/BROWN, LOOSE, MOIST TO SATURATED, WELL ROUNDED 2.00m-3.60m SILTY SAND, ORANGE, BROWN TO BLACK, SATURATED, WITH PEAT 3.60m-4.00m SANDY CLAY, LIGHT GREY, MOIST, HIGH PLASTICITY	1769m	North West
GW026482	0.00m-5.48m Sand Water Supply	1774m	West
GW104981	0.00m-6.00m SAND	1787m	South West
GW106145	0.00m-5.79m sand, unconsolidated	1792m	South West
GW100493	0.00m-0.35m SANDY, GRAVELLY FILL 0.35m-0.60m SAND, GREY, FINE-MED, DRY 0.60m-4.00m SAND, ORANGE, FINE-MED 4.00m-5.80m SAND, LIGHT ORANGE, MOIST 5.80m-9.50m SAND, LIGHT GREY, FINE, WET	1797m	South West
GW111960	0.00m-1.60m FILL, SILTY SAND, GREY/BROWN 1.60m-2.80m CLAY, DENSE FINE GRAIN, YELLOW BROWN 2.80m-6.60m SAND, SILTY, DENSE LIGHT BROWN	1797m	North West
GW104039	0.00m-0.10m CONCRETE 0.10m-2.00m SAND, DARK BROWN 2.00m-7.00m SAND MEDIUM LIGHT BROWN	1798m	South West
GW104040	0.00m-0.10m CONCRETE 0.10m-2.00m FILL, SAND YELLOWISH 2.00m-6.50m SAND, MEDIUM BROWN 6.50m-7.00m SAND, LIGHT BROWN	1804m	South West
GW100294	0.00m-0.80m FILL 0.80m-8.00m YELLOW SAND 8.00m-12.20m WHITE SAND, WATER BEARING 12.20m-14.20m DARK BROWN PEATY SAND-WATER BEARING 14.20m-16.50m DARK BROWN SAND LESS PEATY-WATER BEARING 16.50m-18.00m LIGHT BROWN SAND, HIGH WATER BEARING 18.00m-19.00m YELLOW SILTY SAND WITH GREY CLAY 19.00m-20.00m DECOMPOSED SANDSTONE, GETTING HARDER	1806m	North East
GW100393	0.00m-0.80m FILL 0.80m-12.80m YELLOW SAND - WATER BEARING 12.80m-15.20m WHITE SILTY SAND - WATER BEARING 15.20m-18.00m YELLOW SAND - HIGH WATER BEARING 18.00m-19.00m YELLOW SILTY SAND WITH GREY CLAY 19.00m-20.00m DECOMPOSED SAND STONE	1806m	North East
GW100020	0.00m-9.00m UNCONSOLIDATED ALL CLEAN SAND	1807m	North
GW100841	0.00m-10.00m SAND	1807m	North East

Groundwater No	Drillers Log	Distance	Direction
GW023529	0.00m-0.91m Sand Grey 0.91m-6.70m Sand White Water Supply	1812m	South
GW100813	0.00m-10.98m UNCONSOLIDATED ALL SANDS	1814m	South West
GW108472	0.00m-16.00m sand	1815m	South
GW101226	0.00m-5.30m Unconsolidated - all sand.	1818m	South West
GW024023	0.00m-0.30m Sand White 0.30m-2.13m Sand Hard Cemented 2.13m-8.22m Sand Yellow Water Supply	1827m	South West
GW025549	0.00m-5.79m Sand Water Supply	1839m	South West
GW075025	0.00m-2.00m SAND,COFFEE BROWN 2.00m-5.00m SAND,MED GRAINED,YELLOW 5.00m-7.50m SAND,FINE,WHITE 7.50m-8.00m PEAT,FINE,BLACK 8.00m-12.00m PEATY SAND,DARK BROWN 12.00m-18.00m SILTY SAND,FINE GRAINED 18.00m-24.50m SAND,MED. COARSE 24.50m-25.50m BEDROCK	1850m	South
GW051727	0.00m-0.60m Made Ground 0.60m-4.60m Sand Yellow Dark Brown Fine-medium 4.60m-8.00m Sand Light Brown Fine-medium	1853m	West
GW051726	0.00m-0.80m Made Ground 0.80m-3.20m Sand Grey Yellow Yellowish Fine-medium Interlayere 3.20m-8.00m Sand Light Brown Grey Fine-medium	1856m	West
GW111959	0.00m-1.20m FILL, DENSE FINE GRAINED/BROWN 1.20m-2.20m CLAY SILTY,DENSE,RED/BROWN 2.20m-3.00m CLAY SILTY SANDY,DENSE, DARK BROWN 3.00m-3.50m SAND SILTY,DENSE FINE GRAINED 3.50m-5.60m SAND,DENSE,FINE GRAINED L/BROWN 5.60m-6.00m CLAY,DENSE,FINE GRAINED RED/YELLOW	1856m	North West
GW104165	0.00m-8.40m UNCONSOLIDATED ALL SANDS	1860m	South West
GW108448	0.00m-16.00m Sand	1860m	South
GW106752	0.00m-9.50m sand	1863m	South
GW108822	0.00m-14.00m sand	1866m	South
GW108596	0.00m-16.00m sand	1869m	South East
GW109252	0.00m-0.30m FILL,FINE TO MED GRAINED SAND 0.30m-2.70m SANDSTONE WEATHERED , WET @ 1.8m	1869m	North
GW101037	0.00m-4.88m UNCONSOLIDATED. ALL SAND	1870m	West
GW025540	0.00m-0.91m Sand Black 0.91m-4.87m Sand White Water Supply	1872m	South
GW046836	0.00m-6.10m Sand White 6.10m-7.92m Sand Yellow 7.92m-10.97m Sand Some Traces Clay Fine 10.97m-14.63m Sand White 14.63m-16.46m Sand 16.46m-18.29m Sand White 18.29m-18.90m Sand Water Supply 18.90m-21.95m Sand White Water Supply 21.95m-24.08m Sand Dirty Water Supply 24.08m-24.38m Sand White Water Supply 24.38m-25.91m Sand Water Supply 25.91m-35.97m Sand White Water Supply 35.97m-37.49m Sand Some Clay 37.49m-37.80m Clay Grey	1879m	South
GW023982	0.00m-6.09m Sand White Water Supply	1880m	South West
GW109251	0.00m-0.40m FILL,GRAVELY SILTY CLAY SANDSTONE 0.40m-3.00m SANDSTONE WEATHERED,WET AT1.95M	1880m	North
GW051725	0.00m-0.70m Made Ground 0.70m-3.50m Sand Dark Brown Fine-medium 3.50m-8.00m Sand Greyish Light Brown Fine-medium	1885m	West

Groundwater No	Drillers Log	Distance	Direction
GW102739	0.00m-7.00m SAND	1891m	South West
GW101232	0.00m-6.00m Sand	1898m	South West
GW072994		1899m	South
GW101883	0.00m-10.00m Sand	1899m	South
GW100367	0.00m-6.00m ALL SAND - UNCONSOLIDATED	1908m	South West
GW110884	0.00m-1.10m SAND AND SANDSTONES 1.10m-2.50m SAND BROWN 2.50m-4.50m SAND,SILTY,BROWN,DECOMPOSED SANDSTONE	1916m	East
GW111600	0.00m-20.00m SANDS,FINE,VERY FINE,DK GREY IN COLOUR	1916m	South
GW111624	0.00m-31.00m BOTANY SANDS 31.00m-36.00m HAWKESBURY SANDSTONE	1916m	South
GW019633	0.00m-4.57m Sand 4.57m-6.09m Sand Wet 6.09m-7.31m Sand Peaty 7.31m-10.97m Sand 10.97m-11.58m Sand Dark Brown 11.58m-14.63m Sand 14.63m-14.93m Clay Sandy 14.93m-16.15m Sand 16.15m-16.76m Clay Peaty 16.76m-18.28m Sand 18.28m-18.89m Peat Bands 18.89m-19.50m Clay Sandy 19.50m-20.72m Sand White 20.72m-21.94m Sand 21.94m-22.55m Sand Yellow 22.55m-24.99m Sand Gravel 24.99m-29.87m Sand Clean 29.87m-33.52m Sand White Clean 33.52m-34.13m Sand Yellow 34.13m-35.05m Sand Peaty	1921m	South
GW108394	0.00m-16.00m SAND	1925m	South
GW103708	0.00m-6.00m SAND	1929m	South West
GW110423	0.00m-12.00m UNCONSOLIDATED ALL SANDS	1934m	South
GW100466	0.00m-5.00m SAND	1942m	West
GW111247	0.00m-1.00m TOPSOIL 1.00m-3.00m SILT 3.00m-19.00m SAND 19.00m-20.00m PEAT/COAT 20.00m-36.00m SAND	1948m	South
GW101221	0.00m-6.10m Unconsolidated - all sand.	1951m	South West
GW102294	0.00m-10.00m Sand	1959m	South
GW053600	0.00m-2.50m Sand White 2.50m-13.00m Sand Yellow 13.00m-19.60m Sand White 19.60m-23.00m Sand White Peaty 23.00m-24.00m Peat Clay 24.00m-26.00m Sand Peaty 26.00m-30.00m Sand Yellow 30.00m-30.50m Clay Grey	1964m	South East
GW105431	0.00m-6.00m SAND BROWN 6.00m-30.00m SAND WHITE	1964m	South East
GW101813	0.00m-8.54m UNCONSOLIDATED SAND	1973m	South West
GW023408	0.00m-1.52m Soil Black Hard 1.52m-7.01m Sand Water Supply	1976m	South West
GW107578	0.00m-16.47m Sand, unconsolidated	1977m	South
GW024024	0.00m-0.60m Sand Grey 0.60m-6.09m Sand White Water Supply	1981m	South

Groundwater No	Drillers Log	Distance	Direction
GW023967	0.00m-1.82m Sand White 1.82m-2.43m Sand Grey Water Supply 2.43m-2.74m Mud Black	1984m	South West
GW013514	0.00m-9.14m Sand Water Supply	1988m	West
GW026720	0.00m-6.09m Sand Yellow Water Supply	1994m	South West

Drill Log Data Source: NSW Department of Primary Industries - Office of Water / Water Administration Ministerial Corp
Creative Commons 3.0 © Commonwealth of Australia <http://creativecommons.org/licenses/by/3.0/au/deed.en>



Geology

77-97 Alison Road, Randwick, NSW 2031

Geological Units

What are the Geological Units onsite?

Symbol	Description	Unit Name	Group	Sub Group	Age	Dom Lith	Map Sheet	Dataset
Qhd	Medium to fine-grained marine sand with podsols				Quaternary		Sydney	1:100,000
water							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
Qhd	Medium to fine-grained marine sand with podsols				Quaternary		Sydney	1:100,000
Rh	Medium to coarse grained quartz sandstone, very minor shale and laminate lenses				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
No features				1:100,000

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

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

Naturally Occurring Asbestos Potential

77-97 Alison Road, Randwick, NSW 2031

Naturally Occurring Asbestos Potential

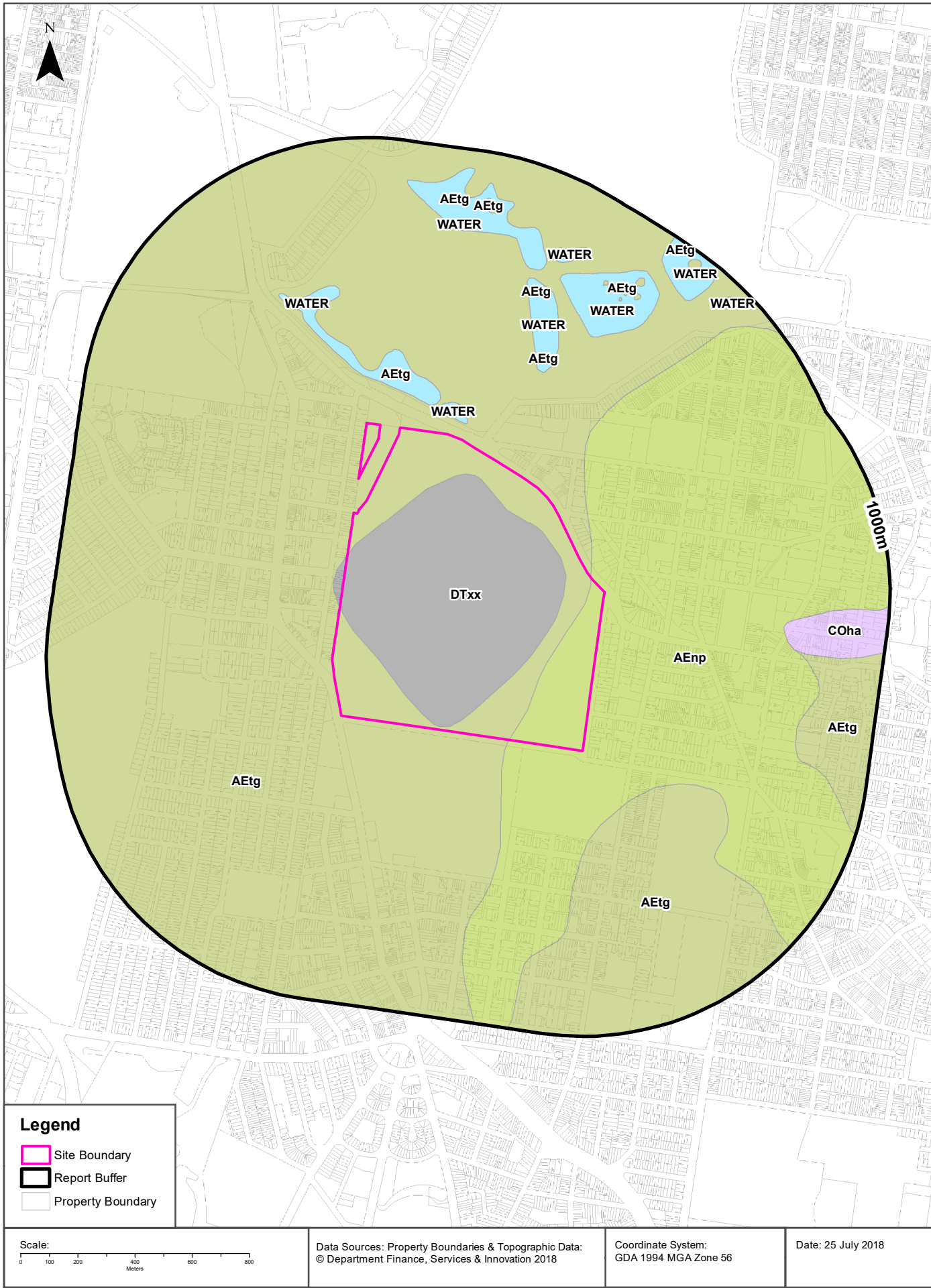
Naturally Occurring Asbestos Potential within the dataset buffer:

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

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

Soil Landscapes

77-97 Alison Road, Randwick, NSW 2031



Soils

77-97 Alison Road, Randwick, NSW 2031

Soil Landscapes

What are the onsite Soil Landscapes?

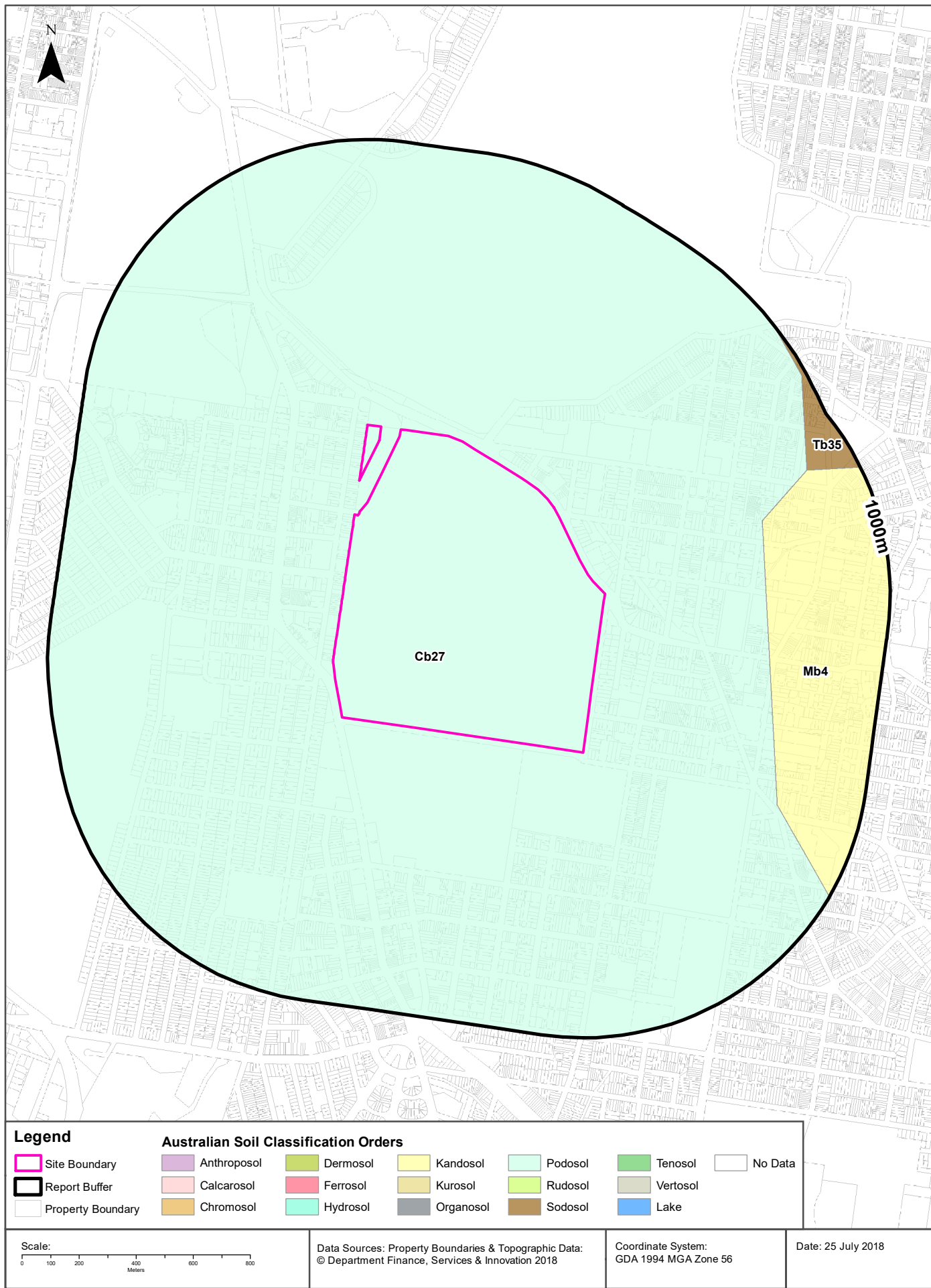
Soil Code	Name	Group	Process	Map Sheet	Scale
AEnp	NEWPORT		AEOLIAN	Sydney	1:100,000
AEtg	TUGGERAH		AEOLIAN	Sydney	1:100,000
DTxx	DISTURBED TERRAIN		DISTURBED TERRAIN	Sydney	1:100,000

What are the Soil Landscapes within the dataset buffer?

Soil Code	Name	Group	Process	Map Sheet	Scale
AEnp	NEWPORT		AEOLIAN	Sydney	1:100,000
AEtg	TUGGERAH		AEOLIAN	Sydney	1:100,000
COha	HAWKESBURY		COLLUVIAL	Sydney	1:100,000
DTxx	DISTURBED TERRAIN		DISTURBED TERRAIN	Sydney	1:100,000
WATER	WATER		WATER	Sydney	1:100,000

Soils Landscapes Data Source : NSW Office of Environment and Heritage

Creative Commons 3.0 © Commonwealth of Australia <http://creativecommons.org/licenses/by/3.0/au/deed.en>



Soils

77-97 Alison Road, Randwick, NSW 2031

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
Cb27	Podosol	Coastal sand plains and dunes, lagoons, and swampy areas: chief soils are leached sands (Uc2.3 and Uc2.2). Associated are dunes of siliceous sands (Uc1.2) and/or calcareous sands (Uc1.l) fringing the coastline; and swampy areas of (Uf6) soils and (Uc1.2) soils with peaty surfaces. Unit Cb27 has similarities with units Cb28 and Ca6.	0m
Mb4	Kandosol	Coastal complex: chief soils are acid yellow leached earths (Gn2.74) and (Gn2.34), hard acidic yellow mottled soils (Dy3.41), and hard acidic red soils (Dr2.21). This unit includes headlands and rugged coastal areas of unit Mb2; ridges and slopes of unit Tb35; low-lying coastal areas of unit Cb27; and some swampy areas.	563m
Tb35	Sodosol	Dissected plateau remnants--flat to undulating ridge tops with moderate to steep side slopes: chief soils are hard acidic yellow and yellow mottled soils (Dy3.41), (Dy2.21), and (Dy2.41) and hard acidic red soils (Dr2.21); many shallow profiles occur and profile thickness varies considerably over short distances. Associated are: (Gn3.54), (Gn3.14), and possibly other (Gn3) soils; (Db1.2) soils on some ridges; (Dy5.81) soils in areas transitional to unit Mb2; soils common to unit Mb2; and eroded lateritic remnants. Small areas of other soils are likely. Flat ferruginous shale or sandstone fragments are common on and/or in and/or below the soils of this unit.	831m

Atlas of Australian Soils Data Source: CSIRO

Creative Commons 4.0 © Commonwealth of Australia <http://creativecommons.org/licenses/by/4.0/au/deed.en>



Acid Sulfate Soils

77-97 Alison Road, Randwick, NSW 2031

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
N/A		

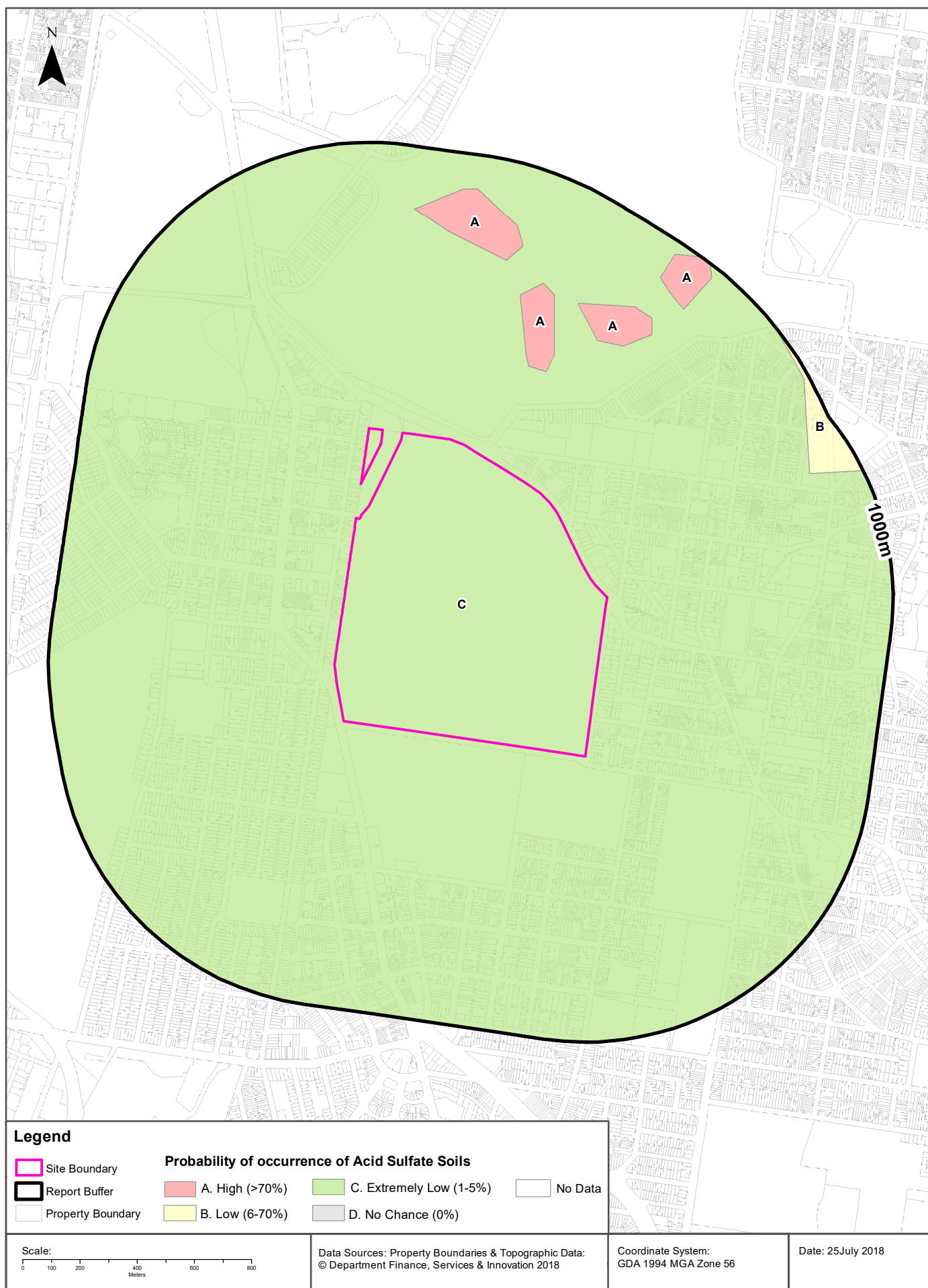
If the on-site Soil Class is 5, what other soil classes exist within 500m?

Soil Class	Description	LEP	Distance	Direction
N/A				

Acid Sulfate Data Source Accessed 07/10/2016: NSW Crown Copyright - Planning and Environment
Creative Commons 3.0 © Commonwealth of Australia <http://creativecommons.org/licenses/by/3.0/au/deed.en>

Atlas of Australian Acid Sulfate Soils

77-97 Alison Road, Randwick, NSW 2031



Acid Sulfate Soils

77-97 Alison Road, Randwick, NSW 2031

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
A	High Probability of occurrence. >70% chance of occurrence.	353m
B	Low Probability of occurrence. 6-70% chance of occurrence.	830m

Atlas of Australian Acid Sulfate Soils Data Source: CSIRO

Creative Commons 3.0 © Commonwealth of Australia <http://creativecommons.org/licenses/by/3.0/au/deed.en>

Dryland Salinity

77-97 Alison Road, Randwick, NSW 2031

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

Creative Commons 3.0 © Commonwealth of Australia <http://creativecommons.org/licenses/by/3.0/au/deed.en>

Mining Subsidence Districts

77-97 Alison Road, Randwick, NSW 2031

Mining Subsidence Districts

Mining Subsidence Districts within the dataset buffer:

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

Mining Subsidence District Data Source: © Land and Property Information (2016)
Creative Commons 3.0 © Commonwealth of Australia <http://creativecommons.org/licenses/by/3.0/au/deed.en>

Environmental Zoning

77-97 Alison Road, Randwick, NSW 2031

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

SEPP Protected Areas Data Source: NSW Department of Planning & Environment
Creative Commons 3.0 © Commonwealth of Australia <http://creativecommons.org/licenses/by/3.0/au/deed.en>

State Environmental Planning Policy Major Developments (2005)

State Environmental Planning Policy Major Developments within the dataset buffer:

Map Id	Feature	Effective Date	Distance	Direction
62610	Fox Studios, Moore Park Showground and SCG	25/05/2005	976m	North

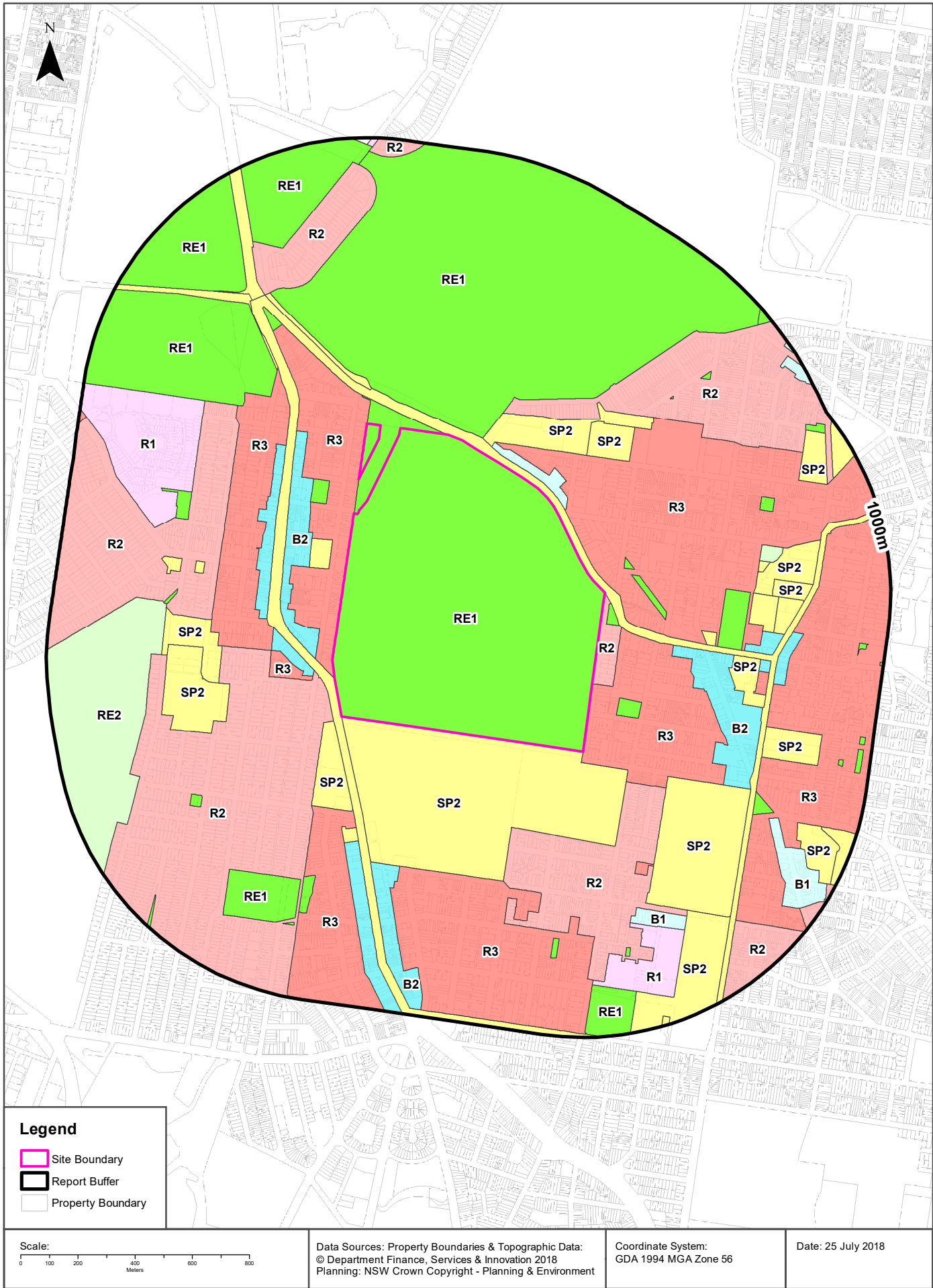
SEPP Major Development Data Source: NSW Department of Planning & Environment
Creative Commons 3.0 © Commonwealth of Australia <http://creativecommons.org/licenses/by/3.0/au/deed.en>

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						

SEPP Strategic Land Use Data Source: NSW Department of Planning & Environment
Creative Commons 3.0 © Commonwealth of Australia <http://creativecommons.org/licenses/by/3.0/au/deed.en>



Local Environmental Plan

77-97 Alison Road, Randwick, NSW 2031

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
RE1	Public Recreation		Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		0m	Onsite
R2	Low Density Residential		Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		0m	East
R3	Medium Density Residential		Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		0m	North West
SP2	Infrastructure	Classified Road	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		0m	South
SP2	Infrastructure	Educational Establishment	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		0m	South
RE1	Public Recreation		Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		20m	East
B1	Neighbourhood Centre		Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		27m	North East
R3	Medium Density Residential		Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		28m	East
R2	Low Density Residential		Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		31m	South West
SP2	Infrastructure	Educational Establishment	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		32m	South West
RE1	Public Recreation		Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		33m	North
SP2	Infrastructure	Educational Establishment	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		34m	North East
B2	Local Centre		Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		59m	West
SP2	Infrastructure	Educational Establishment	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		60m	West
B2	Local Centre		Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		68m	West
R3	Medium Density Residential		Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		74m	West
RE1	Public Recreation		Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		97m	South East
RE1	Public Recreation		Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		102m	North West
RE1	Public Recreation		Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		109m	East
RE1	Public Recreation		Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		113m	East
SP2	Infrastructure	Classified Road	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		120m	North West
R2	Low Density Residential		Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		157m	North East
R2	Low Density Residential		Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		183m	South East
SP2	Infrastructure	Bus Depot	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		202m	North East
R3	Medium Density Residential		Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		216m	West
B2	Local Centre		Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		249m	West
B2	Local Centre		Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		262m	South East

Zone	Description	Purpose	LEP or SEPP	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
SP2	Infrastructure	Health Services Facilities	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		309m	South East
R3	Medium Density Residential		Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		315m	South
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		350m	North West
SP2	Infrastructure	Educational Establishment	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		353m	East
RE1	Public Recreation		Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		366m	North West
SP2	Infrastructure	Road	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		366m	North West
SP2	Infrastructure	Place of Public Worship	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		367m	West
SP2	Infrastructure	Educational Establishment	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		377m	South West
SP2	Infrastructure	Educational Establishment	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		388m	West
RE1	Public Recreation		Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		415m	East
B2	Local Centre		Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		422m	South
R3	Medium Density Residential		Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		427m	South East
R2	Low Density Residential		Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		439m	West
RE1	Public Recreation		Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		456m	North West
SP2	Infrastructure	Educational Establishment	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		463m	East
B2	Local Centre		Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		486m	South
R3	Medium Density Residential		Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		488m	South
SP2	Infrastructure	Telecommunications	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		492m	West
B2	Local Centre		Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		511m	East
SP2	Infrastructure	Cemetery	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		513m	East
SP2	Infrastructure	Educational Establishment	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		520m	East
R2	Low Density Residential		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		535m	North
SP2	Infrastructure	Emergency Services Facility	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		541m	East
RE1	Public Recreation		Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		553m	North East
RE2	Private Recreation		Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		553m	East
R3	Medium Density Residential		Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		562m	East
RE1	Public Recreation		Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		562m	South West
B2	Local Centre		Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		570m	East
R1	General Residential		Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		572m	North West
RE1	Public Recreation		Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		572m	West
SP2	Infrastructure	Place of Public Worship	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		572m	West
B1	Neighbourhood Centre		Randwick Local Environmental Plan 2012	02/04/2015	02/04/2015	26/01/2018	Amendment No 2	575m	South East
SP2	Infrastructure	Classified Road	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		575m	North West

Zone	Description	Purpose	LEP or SEPP	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
SP2	Infrastructure	Public Administration Building	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		585m	East
RE1	Public Recreation		Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		587m	South West
RE2	Private Recreation		Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		596m	South West
SP2	Infrastructure	Community Facility	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		604m	East
RE1	Public Recreation		Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		616m	East
R1	General Residential		Randwick Local Environmental Plan 2012	02/04/2015	02/04/2015	26/01/2018	Amendment No 2	619m	South East
R3	Medium Density Residential		Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		619m	East
RE1	Public Recreation		Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		620m	South East
SP2	Infrastructure	Educational Establishment	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		620m	South East
B2	Local Centre		Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		627m	East
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		635m	North West
RE1	Public Recreation		Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		659m	South
SP2	Infrastructure	Educational Establishment	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		663m	South East
RE1	Public Recreation		Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		679m	North East
RE1	Public Recreation		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		681m	North
B1	Neighbourhood Centre		Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		690m	South East
RE1	Public Recreation		Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		700m	South East
RE1	Public Recreation		Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		738m	South West
SP2	Infrastructure	Educational Establishment	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		785m	East
SP2	Infrastructure	Educational Establishment	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		790m	South East
R2	Low Density Residential		Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		793m	South East
RE1	Public Recreation		Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		815m	South
SP2	Infrastructure	Seniors Housing	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		875m	South East
RE1	Public Recreation		Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		889m	South East
SP2	Infrastructure	Seniors Housing	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		895m	North East
RE1	Public Recreation		Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		901m	South West
RE1	Public Recreation		Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		905m	East
B1	Neighbourhood Centre		Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		929m	North East
R2	Low Density Residential		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		936m	North
RE1	Public Recreation		Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		950m	East
RE1	Public Recreation		Waverley Local Environmental Plan 2012	26/10/2012	26/10/2012	07/07/2017		951m	North East
RE1	Public Recreation		Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		953m	East
SP2	Infrastructure	Childcare Centre	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		965m	South East
R1	General Residential		Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	16/12/2016		969m	North

Zone	Description	Purpose	LEP or SEPP	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
R3	Medium Density Residential		Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		976m	North West
B1	Neighbourhood Centre		Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		980m	North East
RE1	Public Recreation		Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		987m	East
R2	Low Density Residential		Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		995m	South
B2	Local Centre		Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	26/01/2018		996m	South

Local Environment Plan Data Source: NSW Crown Copyright - Planning & Environment
Creative Commons 3.0 © Commonwealth of Australia <http://creativecommons.org/licenses/by/3.0/au/deed.en>

Local Environmental Plan

77-97 Alison Road, Randwick, NSW 2031

Minimum Subdivision Lot Size

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

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

Maximum Height of Building

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

Symbol	Maximum Height of Building	LEP or SEPP	Published Date	Commenced Date	Currency Date	Amendment	Percentage of Site Area
No Data							

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
No Data							

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	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	15/02/2013		100

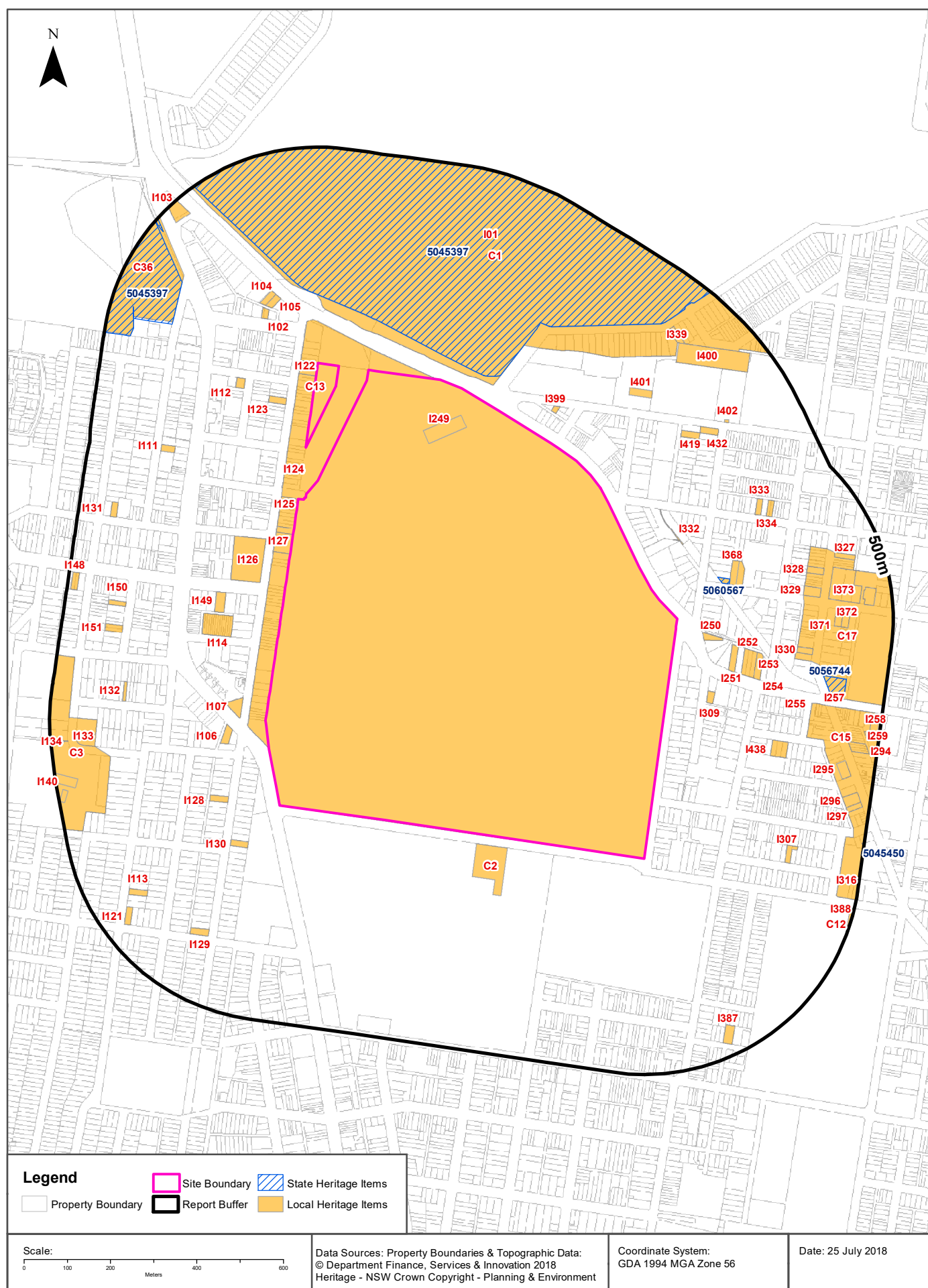
Land Reservation Acquisition

What are the onsite Local Environmental Plan Land Reservation Acquisitions?

Reservation	LEP	Published Date	Commenced Date	Currency Date	Amendment	Comments	Percentage of Site Area
Infrastructure	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	15/02/2013			0.3

Local Environment Plan Data Source: NSW Crown Copyright - Planning & Environment
Creative Commons 3.0 © Commonwealth of Australia <http://creativecommons.org/licenses/by/3.0/au/deed.en>

LS003775 - 77-97 Alison Road, Randwick, NSW 2031



Heritage

77-97 Alison Road, Randwick, NSW 2031

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
5045397	Centennial Park, Moore Park, Queens Park	Randwick, South Sydney and Waverley LGAs, Centennial Park	Randwick	27/03/2000	1384	2257	49m	North
5060567	Electricity Substation No. 349	2S Frances Street Randwick	Randwick	02/05/2008	1792	2231	133m	East
5056744	Randwick Presbyterian Church	162 Alison Road Randwick	Randwick	08/05/2008	1777	2203	353m	East
5045450	Sandgate	128 Belmore Road Randwick	Randwick	02/04/1999	67	261	497m	South East

Heritage Data Source: NSW Crown Copyright - Planning & Environment

Creative Commons 3.0 © Commonwealth of Australia <http://creativecommons.org/licenses/by/3.0/au/deed.en>

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
C13	Racecourse	Conservation Area - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	0m	Onsite
I249	Members, Stand/Official Stand, Royal Randwick Racecourse	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	0m	Onsite
I122	2 storey terraced pair	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	0m	North West
I125	Detached cottage group	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	0m	North West
I127	Victorian mansion	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	0m	North West
C2	Old Tote & Figtree Theatre	Conservation Area - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	22m	South
C1	North Randwick	Conservation Area - General	State	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	33m	North
I124	'Creswell', Victorian terrace house	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	39m	North West
I01	Centennial Park, including Federation monument, Superintendent's residence, park gates, 2 Corinthia*	Item - General	State	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	49m	North

Map Id	Name	Classification	Significance	LEP or Act	Published Date	Commenced Date	Currency Date	Distance	Direction
I107	Doncaster Hotel	Item - General	State	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	59m	West
I126	Kensington Public School buildings	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	60m	West
I123	'Walsworth', Victorian cottage	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	61m	North West
I250	'Shahzada', Victorian house	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	62m	East
I399	Federation cottage	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	65m	North
I106	Masonic Temple	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	79m	South West
I309	'Redlands', Art Deco flats	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	93m	East
I332	Part of Normanhurst boundary wall (adjacent to former tramway reservation)	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	99m	North East
I114	Single storey terrace group	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	108m	West
I130	Bungalow	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	111m	South West
I128	Edwardian house	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	112m	South West
I370	Electricity Substation No 349	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	133m	East
I251	'Carlton', Victorian house	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	133m	East
I149	'Cooma', Edwardian mansion	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	133m	West
I368	Federation arts and crafts 2 storey house	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	145m	East
I369	Federation arts and crafts 2 storey house	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	156m	East
I102	'Parkside', Federation semi-detached pair	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	156m	North West
I112	'Tolle Goes', Federation house	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	161m	North West
I252	'Verona', 'Amphion' and 'Donacis', Boom style houses	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	163m	East
I105	2 storey Federation duplex	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	167m	North West
I104	'The Legers', Federation dwelling	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	181m	North West
I253	'Rothesay', Art Deco residential flats	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	194m	East
I401	Former Tramways Workshop	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	196m	North East

Map Id	Name	Classification	Significance	LEP or Act	Published Date	Commenced Date	Currency Date	Distance	Direction
I419	Spanish Mission flats	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	220m	North East
I254	St Jude's Well, early stone fountain	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	239m	East
I438	Group of Italianate houses	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	256m	East
I432	3 storey 1930s residential flat building	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	263m	North East
C17	St Jude's	Conservation Area - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	282m	East
I330	'Juverna', Art Deco flat buildings	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	285m	East
I255	'Rexmere', Victorian terrace	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	292m	East
I333	'Pepadeniya', Federation bungalow	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	294m	North East
I329	Federation house	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	297m	East
I111	Semi-detached pair	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	302m	North West
I256	'Hillcrest', Victorian terrace	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	303m	East
I334	Semi-detached pair	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	314m	East
I328	Federation house	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	318m	East
I307	Blenheim House and outbuilding	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	323m	South East
I402	Brick chimney stack	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	325m	North East
I400	Former Tramways Repair Shop	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	325m	North East
I132	Edwardian cottage	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	327m	West
I129	Corner bungalow	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	330m	South West
C15	Randwick Junction	Conservation Area - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	334m	East
C36	Moore Park	Conservation Area - General	Local	Sydney Local Environmental Plan 2012	14/12/2012	14/12/2012	06/05/2016	350m	North West
I257	Randwick Presbyterian Church	Item - General	State	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	353m	East
I373	Group of Federation mansions	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	353m	East
I339	'Monte, Carlo' Edwardian house	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	359m	North East
I150	'Avalon', bungalow	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	359m	West

Map Id	Name	Classification	Significance	LEP or Act	Published Date	Commenced Date	Currency Date	Distance	Direction
I151	Semi-detached pair	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	359m	West
I371	Federation Queen Anne single storey house	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	363m	East
I113	Bungalow	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	363m	South West
C3	Sacred Heart	Conservation Area - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	366m	West
I372	Federation Queen Anne single storey house	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	379m	East
I327	'Woodville', Edwardian house	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	391m	East
I133	Our Lady of the Rosary Church	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	395m	West
I295	Residential/commercial building	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	410m	East
I131	1920s house	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	411m	West
I121	Bungalow	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	414m	South West
I387	'Cotswold', late Victorian cottage	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	428m	South East
I294	3 storey Art Deco commercial building	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	430m	East
I373	Group of Federation mansions	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	432m	East
I296	3 storey commercial building	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	435m	South East
I297	'Koorowi Flats' 3 storey commercial/residential building	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	446m	South East
I140	Sacred Heart Monastery and Chapel	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	449m	West
I316	Semi-detached pair	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	453m	South East
I103	Tay Reserve	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	456m	North West
I134	Our Lady of the Sacred Heart Convent	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	460m	West
I258	'Seabird', Victorian house	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	464m	East
I148	Semi-detached pair	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	476m	West
C12	High Cross	Conservation Area - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	489m	South East
I388	Prince of Wales Hospital group (Main Block, Catherine Hayes Hospital and Superintendent's residence)	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	489m	South East

Map Id	Name	Classification	Significance	LEP or Act	Published Date	Commenced Date	Currency Date	Distance	Direction
I259	'Glanmire', Victorian house	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	494m	East
I299	Commercial building	Item - General	Local	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	494m	South East
I301	'Sandgate'	Item - General	State	Randwick Local Environmental Plan 2012	01/02/2013	15/02/2013	02/04/2015	497m	South East

Heritage Data Source: NSW Crown Copyright - Planning & Environment

Creative Commons 3.0 © Commonwealth of Australia <http://creativecommons.org/licenses/by/3.0/au/deed.en>

Natural Hazards

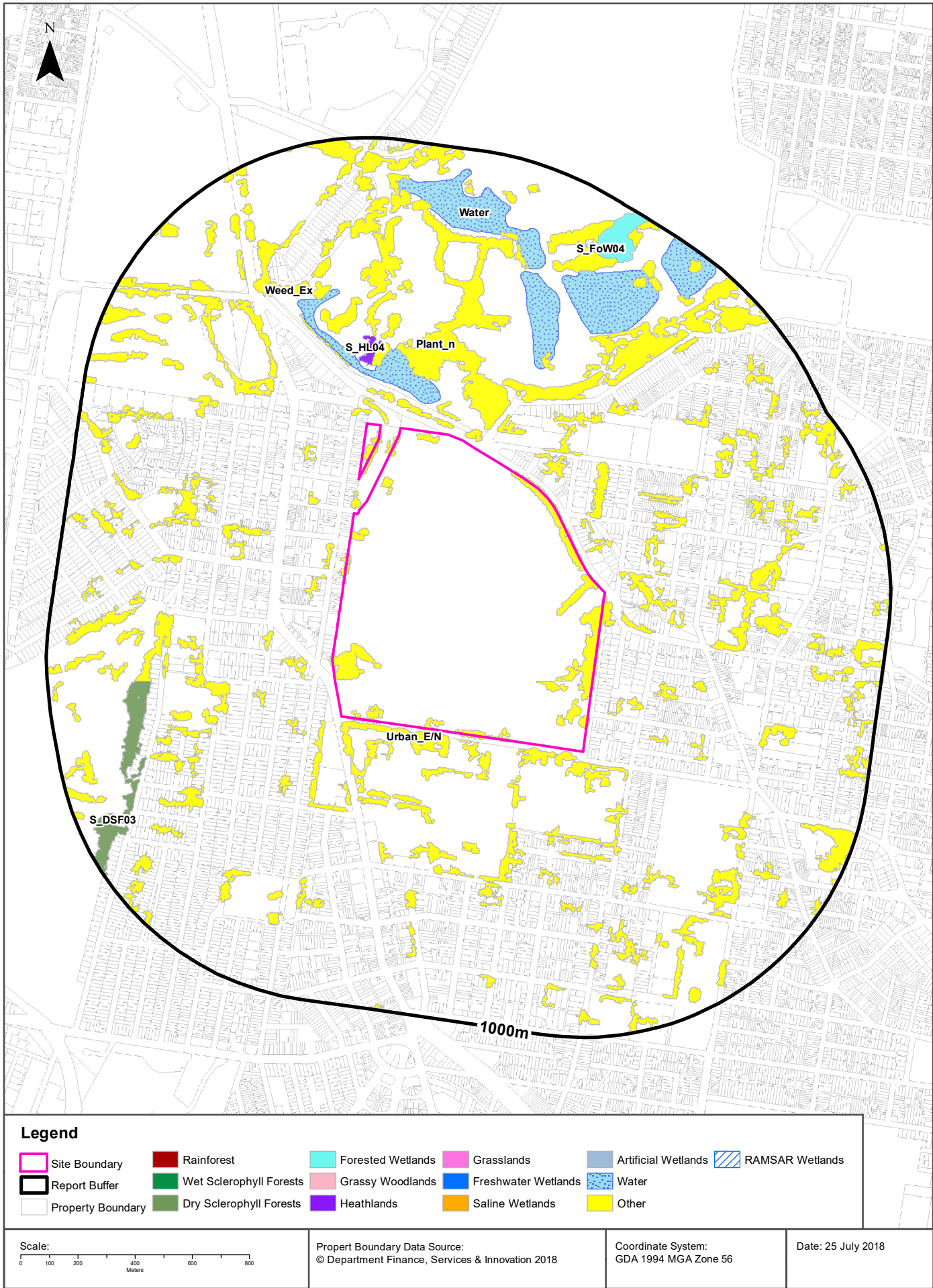
77-97 Alison Road, Randwick, NSW 2031

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		

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



Ecological Constraints

77-97 Alison Road, Randwick, NSW 2031

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
Plant_n	Plant_n: Plantation (native and/or exotic)			00: Not assessed	00: Not assessed	0: Not assessed	Native or Exotic Plantations	55m	North
Water	Water			00: Not assessed	00: Not assessed	0: Not assessed	Water	97m	North
S_HL04	S_HL04: Coastal Sandplain Heath	Eastern Suburbs Banksia Scrub	Eastern Suburbs Banksia Scrub (possible)	15: Grassy natives and exotics	20: Previously cleared 1943	3: High	Banksia spp./A.distyla/L.la evigatum/Acacia spp.	200m	North
Weed_Ex	Weed_Ex: Weeds and Exotics			00: Not assessed	00: Not assessed	0: Not assessed	Exotic Species >90%cover	208m	North West
S_DSF03	S_DSF03: Coastal Sand Apple-Bloodwood Forest			33: Weedy shrubs	13: Weeds	3: High	A.costata/C.gum mifera/stringybark spp./E.botryoides	635m	West
S_FoW04	S_FoW04: Coastal Sand Swamp Mahogany Forest			18: Swampy sedges, shrubs, ferns and herbs	13: Weeds	1: Low	M.quinquenervia	800m	North East

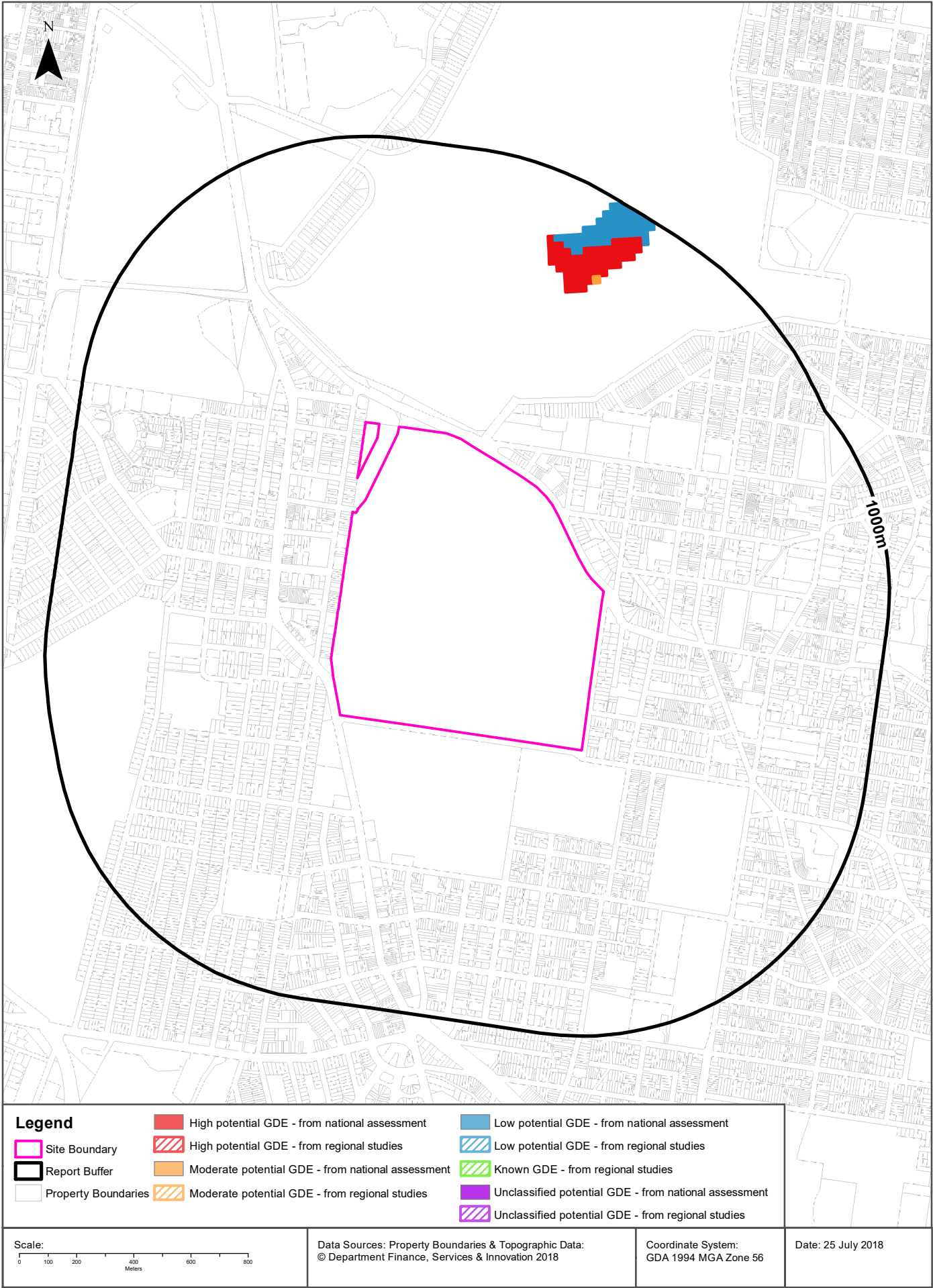
Native Vegetation of the Sydney Metropolitan Area : NSW Office of Environment and Heritage
Creative Commons 3.0 © Commonwealth of Australia <http://creativecommons.org/licenses/by/3.0/au/deed.en>

RAMSAR Wetlands

What RAMSAR Wetland areas exist within the dataset buffer?

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

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



Ecological Constraints

77-97 Alison Road, Randwick, NSW 2031

Groundwater Dependent Ecosystems Atlas

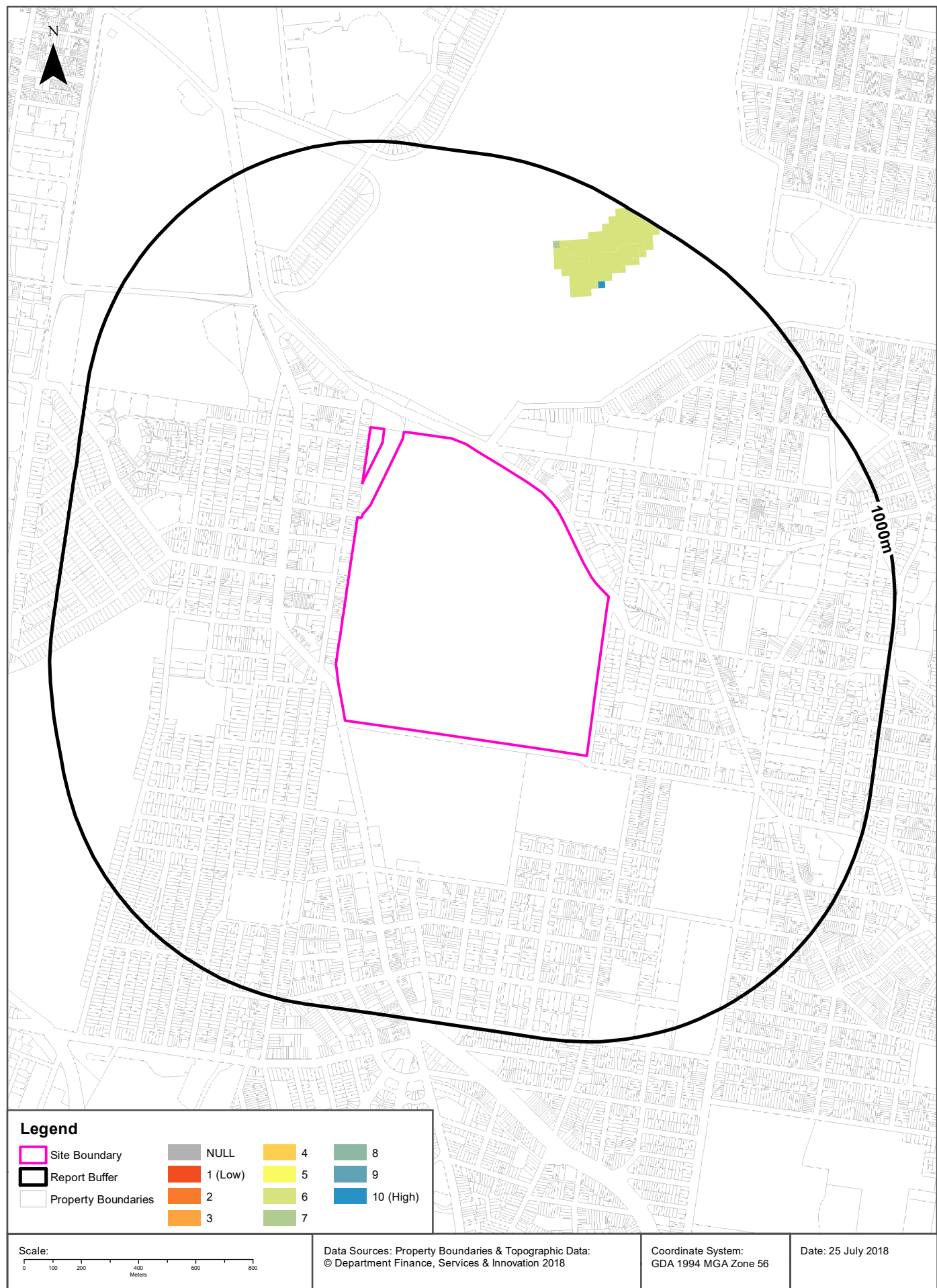
Type	GDE Potential	Geomorphology	Ecosystem Type	Aquifer Geology	Distance
Terrestrial	High potential GDE - from national assessment	Undulating to low hilly country, mainly on shale.	Vegetation	Unconsolidated sedimentary	627m
Terrestrial	Moderate potential GDE - from national assessment	Undulating to low hilly country, mainly on shale.	Vegetation	Unconsolidated sedimentary	705m
Terrestrial	Low potential GDE - from national assessment	Undulating to low hilly country, mainly on shale.	Vegetation	Unconsolidated sedimentary	744m

Groundwater Dependent Ecosystems Atlas Data Source: The Bureau of Meteorology

Creative Commons 3.0 © Commonwealth of Australia <http://creativecommons.org/licenses/by/3.0/au/deed.en>

Ecological Constraints - Inflow Dependent Ecosystems Likelihood

77-97 Alison Road, Randwick, NSW 2031



Ecological Constraints

77-97 Alison Road, Randwick, NSW 2031

Inflow Dependent Ecosystems Likelihood

Type	IDE Likelihood	Geomorphology	Ecosystem Type	Aquifer Geology	Distance
Terrestrial	6	Undulating to low hilly country, mainly on shale.	Vegetation	Unconsolidated sedimentary	627m
Terrestrial	10	Undulating to low hilly country, mainly on shale.	Vegetation	Unconsolidated sedimentary	705m
Terrestrial	7	Undulating to low hilly country, mainly on shale.	Vegetation	Unconsolidated sedimentary	749m

Inflow Dependent Ecosystems Likelihood Data Source: The Bureau of Meteorology
Creative Commons 3.0 © Commonwealth of Australia <http://creativecommons.org/licenses/by/3.0/au/deed.en>

Ecological Constraints

77-97 Alison Road, Randwick, NSW 2031

NSW BioNet Atlas

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

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Animalia	Amphibia	Crinia tinnula	Wallum Froglet	Vulnerable	Not Sensitive	Not Listed	
Animalia	Amphibia	Litoria aurea	Green and Golden Bell Frog	Endangered	Not Sensitive	Vulnerable	
Animalia	Amphibia	Pseudophryne australis	Red-crowned Toadlet	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Actitis hypoleucos	Common Sandpiper	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Anseranas semipalmata	Magpie Goose	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Anthochaera phrygia	Regent Honeyeater	Critically Endangered	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 carneipes	Flesh-footed Shearwater	Vulnerable	Not Sensitive	Not Listed	ROKAMBA;JAMBA
Animalia	Aves	Ardenna grisea	Sooty Shearwater	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	Curllew Sandpiper	Endangered	Not Sensitive	Critically Endangered	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Calidris melanotos	Pectoral Sandpiper	Not Listed	Not Sensitive	Not Listed	ROKAMBA;JAMBA
Animalia	Aves	Calidris ruficollis	Red-necked Stint	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Calidris tenuirostris	Great Knot	Vulnerable	Not Sensitive	Critically Endangered	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	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

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
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	Daphoenositta chrysoptera	Varied Sittella	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Dasyornis brachypterus	Eastern Bristlebird	Endangered	Category 2	Endangered	
Animalia	Aves	Diomedea exulans	Wandering Albatross	Endangered	Not Sensitive	Endangered	JAMBA
Animalia	Aves	Diomedea gibsoni	Gibson's Albatross	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Aves	Egretta sacra	Eastern Reef Egret	Not Listed	Not Sensitive	Not Listed	CAMBA
Animalia	Aves	Epthianura albifrons	White-fronted Chat	Endangered Population, Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Erythroriarchis radiatus	Red Goshawk	Critically Endangered	Category 2	Vulnerable	
Animalia	Aves	Fregata ariel	Lesser Frigatebird	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Gallinago hardwickii	Latham's Snipe	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
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	Ixobrychus flavicollis	Black Bittern	Vulnerable	Not Sensitive	Not Listed	
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	Lophoictinia isura	Square-tailed Kite	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Macronectes giganteus	Southern Giant Petrel	Endangered	Not Sensitive	Endangered	
Animalia	Aves	Macronectes halli	Northern Giant-Petrel	Vulnerable	Not Sensitive	Vulnerable	
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 chrysogaster	Orange-bellied Parrot	Critically Endangered	Category 3	Critically Endangered	
Animalia	Aves	Ninox connivens	Barking Owl	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Ninox strenua	Powerful Owl	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Numenius madagascariensis	Eastern Curlew	Not Listed	Not Sensitive	Critically Endangered	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Numenius minutus	Little Curlew	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Numenius phaeopus	Whimbrel	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
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	Pezoporus wallicus wallicus	Eastern Ground Parrot	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Phaethon lepturus	White-tailed Tropicbird	Not Listed	Not Sensitive	Not Listed	CAMBA;JAMBA
Animalia	Aves	Pluvialis fulva	Pacific Golden Plover	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA;JAMBA
Animalia	Aves	Pluvialis squatarola	Grey Plover	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA;JAMBA
Animalia	Aves	Polytelis swainsonii	Superb Parrot	Vulnerable	Category 3	Vulnerable	
Animalia	Aves	Procelsterna cerulea	Grey Ternlet	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Pterodroma leucoptera leucoptera	Gould's Petrel	Vulnerable	Not Sensitive	Endangered	
Animalia	Aves	Ptilinopus regina	Rose-crowned Fruit-Dove	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Ptilinopus superbus	Superb Fruit-Dove	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Stagonopleura guttata	Diamond Firetail	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Stercorarius longicaudus	Long-tailed Jaeger	Not Listed	Not Sensitive	Not Listed	JAMBA
Animalia	Aves	Stercorarius parasiticus	Arctic Jaeger	Not Listed	Not Sensitive	Not Listed	ROKAMBA;JAMBA
Animalia	Aves	Stercorarius pomarinus	Pomarine Jaeger	Not Listed	Not Sensitive	Not Listed	CAMBA;JAMBA
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	Sula dactylatra	Masked Booby	Vulnerable	Not Sensitive	Not Listed	ROKAMBA;JAMBA
Animalia	Aves	Thalassarche cauta	Shy Albatross	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Aves	Thalassarche chrysostoma	Grey-headed Albatross	Not Listed	Not Sensitive	Endangered	
Animalia	Aves	Thalassarche melanophris	Black-browed Albatross	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Aves	Tringa brevipes	Grey-tailed Tattler	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA;JAMBA
Animalia	Aves	Tringa glareola	Wood Sandpiper	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA;JAMBA
Animalia	Aves	Tringa incana	Wandering Tattler	Not Listed	Not Sensitive	Not Listed	JAMBA
Animalia	Aves	Tringa nebularia	Common Greenshank	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA;JAMBA
Animalia	Aves	Tringa stagnatilis	Marsh Sandpiper	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA;JAMBA
Animalia	Aves	Tryngites subruficollis	Buff-breasted Sandpiper	Not Listed	Not Sensitive	Not Listed	ROKAMBA;JAMBA
Animalia	Aves	Tyto tenebricosa	Sooty Owl	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Xenus cinereus	Terek Sandpiper	Vulnerable	Not Sensitive	Not Listed	ROKAMBA;CAMBA;JAMBA
Animalia	Mammalia	Aepyprymnus rufescens	Rufous Bettong	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Arctocephalus forsteri	New Zealand Fur-seal	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Arctocephalus pusillus doriferus	Australian Fur-seal	Vulnerable	Not Sensitive	Not Listed	

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Animalia	Mammalia	Cercartetus nanus	Eastern Pygmy-possum	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Dasyurus maculatus	Spotted-tailed Quoll	Vulnerable	Not Sensitive	Endangered	
Animalia	Mammalia	Dasyurus viverrinus	Eastern Quoll	Endangered	Not Sensitive	Endangered	
Animalia	Mammalia	Dugong dugon	Dugong	Endangered	Not Sensitive	Not Listed	
Animalia	Mammalia	Eubalaena australis	Southern Right Whale	Endangered	Not Sensitive	Endangered	
Animalia	Mammalia	Falsistrellus tasmaniensis	Eastern False Pipistrelle	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Megaptera novaeangliae	Humpback Whale	Vulnerable	Not Sensitive	Vulnerable	
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	Petaurus norfolcensis	Squirrel Glider	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Pteropus poliocephalus	Grey-headed Flying-fox	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Mammalia	Saccolaimus flaviventris	Yellow-bellied Sheath-tail-bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Reptilia	Chelonia mydas	Green Turtle	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Reptilia	Dermochelys coriacea	Leatherback Turtle	Endangered	Not Sensitive	Endangered	
Plantae	Flora	Acacia bynoeana	Bynoe's Wattle	Endangered	Not Sensitive	Vulnerable	
Plantae	Flora	Acacia gordonii		Endangered	Not Sensitive	Endangered	
Plantae	Flora	Acacia pubescens	Downy Wattle	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Acacia terminalis subsp. terminalis	Sunshine Wattle	Endangered	Not Sensitive	Endangered	
Plantae	Flora	Allocasuarina portuensis	Nielsen Park She-oak	Endangered	Category 3	Endangered	
Plantae	Flora	Amperea xiphoclada var. pedicellata		Presumed Extinct	Not Sensitive	Extinct	
Plantae	Flora	Asterolasia buxifolia		Endangered	Not Sensitive	Not Listed	
Plantae	Flora	Caladenia tessellata	Thick Lip Spider Orchid	Endangered	Category 2	Vulnerable	
Plantae	Flora	Callistemon linearifolius	Netted Bottle Brush	Vulnerable	Category 3	Not Listed	
Plantae	Flora	Dichanthium setosum	Bluegrass	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Diuris arenaria	Sand Doubletail	Endangered	Category 2	Not Listed	
Plantae	Flora	Doryanthes palmeri	Giant Spear Lily	Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Eucalyptus camfieldii	Camfield's Stringybark	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Eucalyptus fracta	Broken Back Ironbark	Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Eucalyptus leucoxylon subsp. pruinosa	Yellow Gum	Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Eucalyptus nicholii	Narrow-leaved Black Peppermint	Vulnerable	Not Sensitive	Vulnerable	

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Plantae	Flora	<i>Eucalyptus pulverulenta</i>	Silver-leafed Gum	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	<i>Eucalyptus scoparia</i>	Wallangarra White Gum	Endangered	Not Sensitive	Vulnerable	
Plantae	Flora	<i>Grammitis stenophylla</i>	Narrow-leaf Finger Fern	Endangered	Category 3	Not Listed	
Plantae	Flora	<i>Grevillea caleyi</i>	Caley's Grevillea	Critically Endangered	Category 3	Critically Endangered	
Plantae	Flora	<i>Hibbertia puberula</i>		Endangered	Not Sensitive	Not Listed	
Plantae	Flora	<i>Macadamia integrifolia</i>	Macadamia Nut	Not Listed	Not Sensitive	Vulnerable	
Plantae	Flora	<i>Macadamia tetraphylla</i>	Rough-shelled Bush Nut	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	<i>Melaleuca biconvexa</i>	Biconvex Paperbark	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	<i>Melaleuca deanei</i>	Deane's Paperbark	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	<i>Persoonia hirsuta</i>	Hairy Geebung	Endangered	Category 3	Endangered	
Plantae	Flora	<i>Persoonia nutans</i>	Nodding Geebung	Endangered	Not Sensitive	Endangered	
Plantae	Flora	<i>Pimelea curviflora</i> subsp. <i>curviflora</i>		Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	<i>Pimelea spicata</i>	Spiked Rice-flower	Endangered	Not Sensitive	Endangered	
Plantae	Flora	<i>Prasophyllum fuscum</i>	Slaty Leek Orchid	Critically Endangered	Category 2	Vulnerable	
Plantae	Flora	<i>Prostanthera marifolia</i>	Seaforth Mintbush	Critically Endangered	Category 3	Critically Endangered	
Plantae	Flora	<i>Pultenaea parviflora</i>		Endangered	Not Sensitive	Vulnerable	
Plantae	Flora	<i>Senecio spathulatus</i>	Coast Groundsel	Endangered	Not Sensitive	Not Listed	
Plantae	Flora	<i>Senna acclinis</i>	Rainforest Cassia	Endangered	Not Sensitive	Not Listed	
Plantae	Flora	<i>Syzygium paniculatum</i>	Magenta Lilly Pilly	Endangered	Not Sensitive	Vulnerable	
Plantae	Flora	<i>Tetratheca glandulosa</i>		Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	<i>Tetratheca juncea</i>	Black-eyed Susan	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	<i>Thesium australe</i>	Austral Toadflax	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	<i>Triplarina imbricata</i>	Creek Triplarina	Endangered	Not Sensitive	Endangered	
Plantae	Flora	<i>Wilsonia backhousei</i>	Narrow-leafed Wilsonia	Vulnerable	Not Sensitive	Not Listed	

Data does not include NSW category 1 sensitive species.

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

Data obtained 25/07/2018

USE OF REPORT – APPLICABLE TERMS

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

1. End User acknowledges and agrees that:
 - (a) the Report is compiled from or using content (**Third Party Content**) which is comprised of:
 - (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);
 - (b) Lotsearch does not take any responsibility for or give any warranty in relation to the accuracy or completeness of any Third Party Content included in the Report;
 - (c) the Third Party Content Suppliers do not constitute an exhaustive set of all repositories or sources of information available in relation to the property which is the subject of the Report (**Property**);
 - (d) Lotsearch has not undertaken any physical inspection of the property;
 - (e) Lotsearch does not warrant that all land uses or features whether past or current are identified in the Report;
 - (f) the Report does not include any information relating to the actual state or condition of the Property;
 - (g) the Report should not be used or taken to indicate or exclude actual fitness or unfitness of a Property for any particular purpose;
 - (h) the Report should not be relied upon for determining saleability or value or making any other decisions in relation to the Property and in particular should not be taken to be a rating or assessment of the desirability or market value of the property or its features; and
 - (i) the End User should undertake its own inspection s of the Property to satisfy itself that there are no defects or failures.
2. The End User may not make the Report or any copies or extracts of the report or any part of it available to any other person. If End User wishes to provide the Report to any other person or make extracts or copies of the Report, it must contact the purchaser of the Report before doing so to ensure the proposed use is consistent with the contract terms between Lotsearch and the purchaser.
3. Neither Lotsearch (nor any of its officers, employees or agents) nor any of its Third Party Content Suppliers will have any liability to End User or any person to whom End User provides the Report and End User must not represent that Lotsearch or any of its Third Party Content Suppliers accepts liability to any such person or make any other representation to any such person on behalf of Lotsearch or any Third Party Content Supplier.
4. End User must not remove any copyright notices, trade marks, digital rights management information, other embedded information, disclaimers or limitations from the Report or authorise any person to do so.
5. End User acknowledges and agrees that Lotsearch and Third Party Content Suppliers retain ownership of all copyright, patent, design right (registered or unregistered), trade marks (registered or unregistered), database right or other data right, moral right or know how or any other intellectual property right in any Report or any other item, information or data included in or provided as part of a Report.
6. To the extent permitted by law and subject to paragraph 7, all implied terms, representations and warranties whether statutory or otherwise relating to the subject matter of these terms other than as expressly set out in these terms are excluded.
7. Subject to paragraph 8, Lotsearch excludes liability to End User for loss or damage of any kind, however caused, due to Lotsearch's negligence, breach of contract, breach of any law, in equity, under indemnities or otherwise, arising out of all acts, omissions and events whenever occurring.
8. Lotsearch acknowledges that if, under applicable State, Territory or Commonwealth law, End User is a consumer certain rights may be conferred on End User which cannot be excluded, restricted or modified. If so, and if that law applies to Lotsearch, then, Lotsearch's liability is limited to the greater of an amount equal to the cost of resupplying the Report and the maximum extent permitted under applicable laws.
9. Subject to paragraph 7, neither Lotsearch nor the End User is liable to the other for any indirect, incidental, consequential, special or exemplary damages arising out of or in relation to these terms.
10. These terms are subject to New South Wales law.

Appendix D

SafeWork NSW Records



SafeWork NSW

21 AUG 2018

Locked Bag 2906, Lisarow NSW 2252

Customer Experience 13 10 50

ABN 81 913 830 179 | www.safework.nsw.gov.au

Our Ref: D18/170909

14 August 2018

Jack Snowden
Douglas Partners
96 Hermitage Road
West Ryde NSW 2114

Dear Mr Snowden

RE SITE: 96 Hermitage Road West Ryde NSW 2114

I refer to your site search request received by SafeWork NSW on 27th July 2018 requesting information on Storage of Hazardous Chemicals for the above site.

Enclosed are copies of the documents that SafeWork NSW holds on record number NDG003022 relating to the storage of Hazardous Chemicals at the above-mentioned premises.

For further information or if you have any questions, please call us on 13 10 50 or email licensing@safework.nsw.gov.au

Yours sincerely

Customer Service Officer
Customer Experience - Operations
SafeWork NSW

INT 866260

WF 168434

ATF

NDG 00 ~~1188~~ = ~~cancelled~~
3022. *current*



SafeWork NSW

Notification of Schedule 11 Hazardous Chemicals

J 26/4/16

Reference Code: XJJ7NT

Your form has been submitted for processing. Please keep a copy for your records. Once processed, you will receive an acknowledgement.



Date and Time: 20 Apr 2016 10:25:17 AM

Submission Reference Number: notification-of-sche-1016

To save or print a copy of your completed form, go to the "File menu and select "Save as" or "Print".

Application Information

Application Information

Notification of Schedule 11 hazardous chemicals

This form is to be used by the person conducting a business or undertaking (PCBU) at a workplace to notify SafeWork NSW when:

1. Hazardous chemicals are used, handled or stored at the workplace in quantities that exceed manifest quantities, as specified in column 5 of table 11.1 of Schedule 11 of the WHS Regulation.
2. There will be a significant change to a current notification record in the risk of using, handling or storing the Schedule 11 hazardous chemicals. A significant change includes: a change to the quantity, location or manner of storage of chemicals, or when the affected chemicals are of a quantity greater than the placard quantity for that chemical or group of chemicals.
3. A new owner and/or PCBU has taken control of a site.
4. Requesting a closure of record or when hazardous chemicals no longer exceed manifest quantities, as specified in column 5 of table 11.1 of Schedule 11 of the WHS Regulation, or cease to be used, handled or stored at the workplace.
5. There is abandonment of an underground tank, partially underground, or fully mounded tank that was used to store flammable gases or flammable liquids.
6. There is a need to change contact details, or emergency contact details.
7. Your notification certificate is lost, stolen, damaged, not received or if there was a printing error.

Privacy Compliance Statement

This information is collected by SafeWork NSW for the purposes of undertaking the evaluation, assessment and processing of a notification of Schedule 11 hazardous chemicals, as required by the WHS Act and WHS Regulation.

This information may also be used by SafeWork NSW for the purposes of confirming applicant details, to establish and maintain an internal and external database and to assist SafeWork NSW and its inspectorate with its work generally. It may also be provided to other state, territory and the Commonwealth regulatory authorities.

Except for the purposes of prosecution and unless such disclosure is otherwise required by law, the information will not be accessed by other third parties in a way that would identify the individual without the consent of that individual.

You may also apply to SafeWork NSW to access and correct any information about yourself that SafeWork NSW holds if that information is inaccurate, incomplete, not relevant or out of date. Applications should be made in writing to:

Privacy Contact Officer,
SafeWork NSW,
Locked Bag 2906,
Lisarow NSW 2252.

ABN (for Australian Businesses only)

81148157288

Type of business or undertaking being conducted *

Racecourse

Activities of the PCBU *

Describe the activities of the business or undertaking that involve using, handling or storing hazardous chemicals.

Maintenance of Thoroughbred Racetrack

Site Address

Address of the business or undertaking where Schedule 11 hazardous chemicals exceeding manifest quantities are to be used, handled or stored.

Street Address (must NOT be PO Box)

☐ Building / Property Name

Royal Randwick Racecourse

Address Line 1 *

Alison Road

Address Line 2

Suburb *

Randwick

State

NSW

Postcode *

2031

Nearest Cross Street

Nearest Cross Street

Anzac Parade

Postal Address

Same as Street Address? *

☐ Yes

☒ No

Address Line 1 *

Locked Bag 3

Address Line 2

Suburb *

Randwick

State *

NSW

Postcode *

2031

Date Abandoned *

19 Feb 2009

Has the abandoned tank been removed? *

☒ Yes

☐ No

Date of Removal *

19 Feb 2009

Abandonment of Tank 2

Tank Identifier *

DG2

Design / Maximum Capacity *

4500

Units *

☒ Litres

☐ Kilograms

Please provide either the UN Number or Previous Contents, *

☐ UN Number *

Note: If you are notifying Diesel or any other Combustible Liquid C1, please enter 00C1 in the UN number field.

UN Number

1203

Previous Contents

Petrol

Date Abandoned *

19 Feb 2009

Has the abandoned tank been removed? *

☒ Yes

☐ No

Date of Removal *

19 Feb 2009

Lodgement Fees

Lodgement Fees

Description

Price

No fee payable

\$0.00

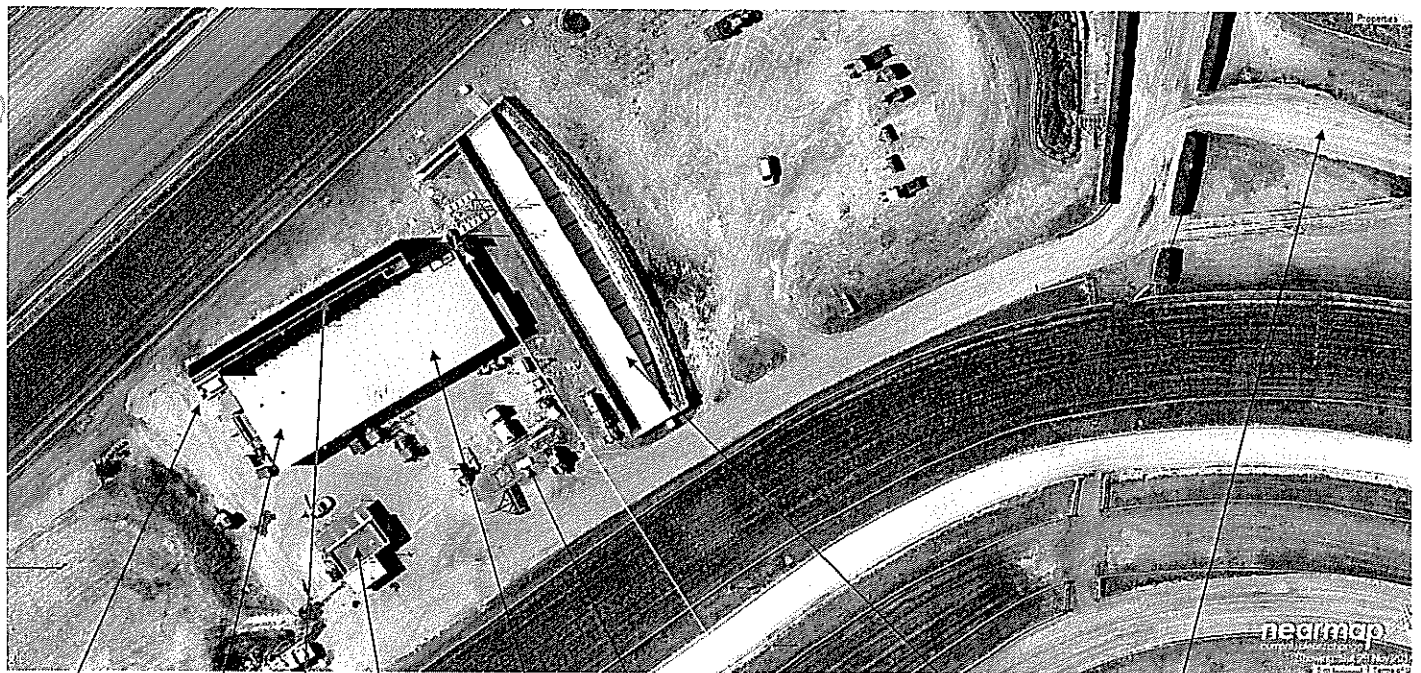
Total Amount Payable (GST exempt)

\$0.00

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100



RANDWICK RACECOURSE INFIELD WORKSHOP PRECINCT



DG 1

Workshops

Site office & amenities

DG 2

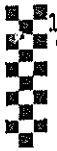
Equipment storage

Infield AV Screen

Electrical switchboard

Open section of
pedestrian tunnel

Internal access road



0297487505.

BASSETT DEMOLITIONS

Steve Bassett

- HOUSES • FACTORIES
- ALL EMERGENCY WORK



WORKCOVER LIC. 200532DE2

P.O. Box 133,
Flemington Markets, 2129

PHONE: 9748 7899
FAX: 9748 7505
MOBILE: 0418 227 741
ABN: 82 002 112 932

All we leave is a memory!

To: Ben (Daracon)

DATE: 19/2/09

RE: Underground Fuel Tanks (Randwick Racecourse)

The underground fuel tanks that were removed from Randwick Racecourse by Bassett Demolitions were empty at the time. They were removed and brought back to our yard and degassed and then taken for scrap metal at sell and Parker (Blacktown).

Regards

Steve Bassett

Fax 9748 2170

NOTIFICATION

OF DANGEROUS GOODS ON PREMISES FORM

EXPLANATORY NOTES AND FORM CHECKLIST

This form is used to notify WorkCover of dangerous goods stored on premises. This form is to be completed in conjunction with the Guide – Notification of Dangerous Goods on Premises. Notification is a requirement of the Occupational Health and Safety Regulation 2001.

Persons who wish to handle explosives or security sensitive dangerous substances need to obtain a licence under the Explosives Regulation. See the WorkCover website www.workcover.nsw.gov.au or call 13 10 50 for information about explosives licensing.

LODGMET INSTRUCTIONS

1. You must complete all sections of this form.
2. You may lodge your application with Australia Post or with Workcover NSW
3. You must sign and date this application by completing the declarations on the last page
4. Payment of the prescribed fee must accompany this form.

APPLICATION CHECKLIST

Please tick the appropriate box to ensure that your application is complete and secure prior to submission to Australia Post or WorkCover

Applicant Use Only

- Application Form (this form) Completed and Signed
- Site Sketch
- Photocopy from street directory or map showing locality
- Non-refundable fee \$100

<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input type="checkbox"/>

PRIVACY COMPLIANCE STATEMENT

This information is collected by WorkCover New South Wales ("WorkCover") for the purposes of undertaking an evaluation, assessment and processing a notification of dangerous goods on premises as required by the *Occupational Health and Safety Act 2001* and the *Occupational Health and Safety Regulation 2001*.

This information may also be used by WorkCover for the purposes of confirming applicant details in the event replacement acknowledgements are applied for, and may also be used to establish and maintain a database and to assist the WorkCover inspectorate with their work generally. Information is also made available to local councils and emergency services assist with emergency response and planning.

Except for the purposes of prosecution and unless such disclosure is otherwise required by law, the information will not be accessed by any third parties in a way that would identify the individual without the consent of that individual.

You may also apply to WorkCover to access and correct any information WorkCover holds if that information is inaccurate, incomplete, not relevant or out of date. Applications should be made in writing to:

Privacy Contact Officer, WorkCover NSW Head Office, Locked Bag 2906, Lisarow NSW 2252


Identifier	Type of storage location or process	Class	Maximum Storage Capacity (L, kg, M ³)
1	Depot - Storage tank Underground.	3	12,000 L

Identifier	Type of storage location or process	Class	Maximum Storage Capacity (L, kg, M ³)
1	Depot - Storage tank Underground.	3	12,000 L


UN Number	Proper Shipping Name	Class	PG (I, II, III)	Product or Common Name	HazChem Symbol	Typical Qty	Unit eg L, kg, M³
203	Petrol	3	I	Diesel fuel.		6000	L

left
phone
msc


Identifier	Type of storage location or process	Class	Maximum Storage Capacity (L, kg, M ³)
2.	Depot - Underground storage tank	3	4500 L

UN Number	Proper Shipping Name	Hazard Class	PG (I, II, III)	Product or Common Name	HazChem Symbol	Typical Qty	Unit eg L, kg, M³
203	Petrol	3	I	Diesel fuel		2000	L

Identifier	Type of storage location or process	Class	Maximum Storage Capacity (L, kg, M ³)
LPA1	Depot - Cage Paddock stand	2.1	1000 kg 500 kg

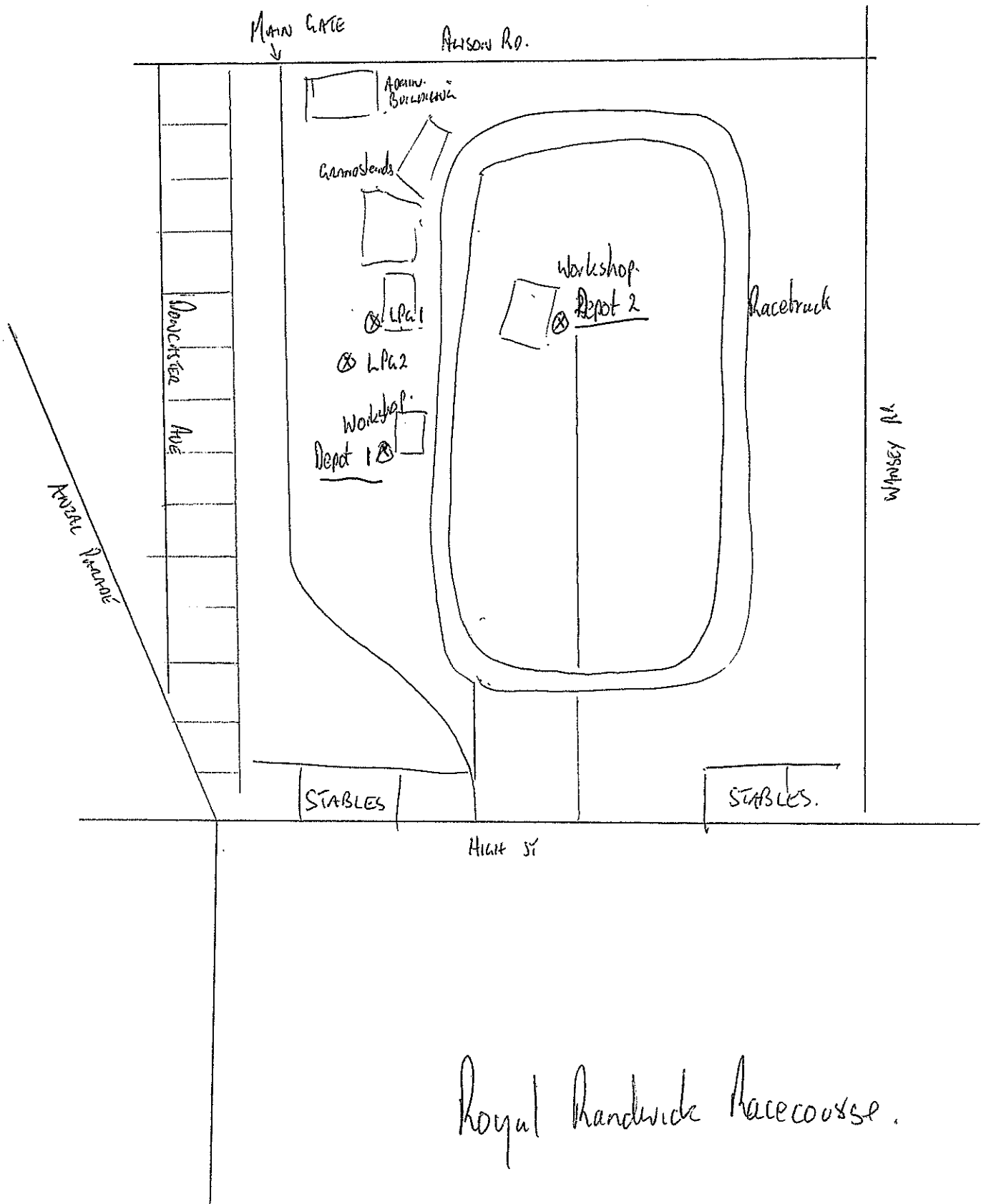
UN Number	Proper Shipping Name	Class	PG (I, II, III)	Product or Common Name	HazChem Symbol	Typical Qty	Unit eg L, kg, M ³
1075	Petroleum Gas	2.1	1	Gas		500	kg.

Identifier	Type of storage location or process	Class	Maximum Storage Capacity (L, kg, M ³)
LPA 2.	Open air - While in use	2.1	700 kg

UN Number	Proper Shipping Name	Class	PG (I, II, III)	Product or Common Name	HazChem Symbol	Typical Qty	Unit eg L, kg, M ³
1075	Petroleum Gas	2.1	1	Gas.		300	kg

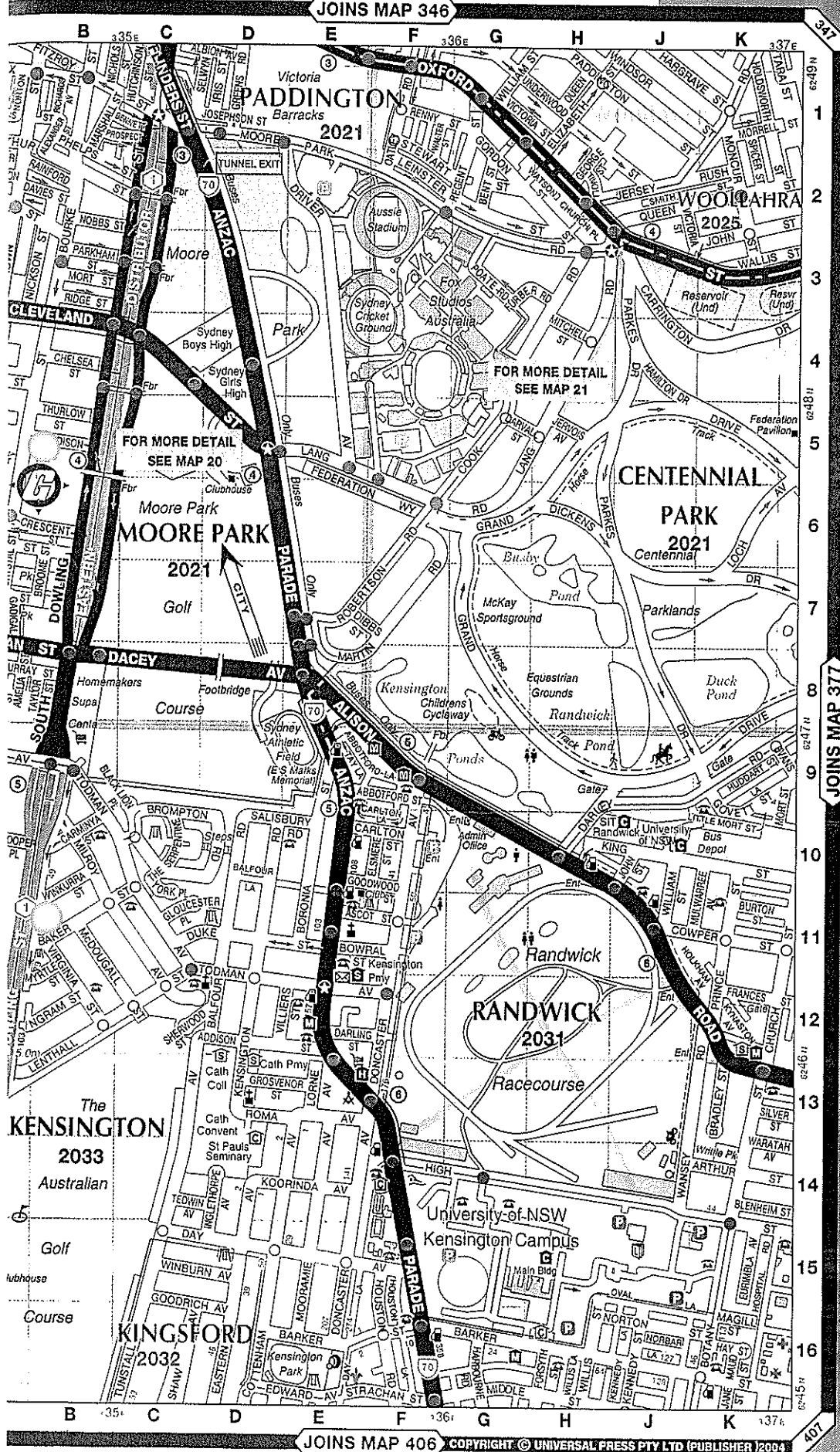
Identifier	Type of storage location or process	Class	Maximum Storage Capacity (L, kg, M ³)

UN Number	Proper Shipping Name	Class	PG (I, II, III)	Product or Common Name	HazChem Symbol	Typical Qty	Unit eg L, kg, M ³



Royal Handwick Racecourse.

JOINS MAP 346



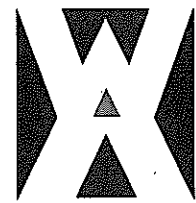
JOINS MAP 406

COPYRIGHT © UNIVERSAL PRESS PTY LTD (PUBLISHER) 2004

3 DEC 1993

DANGEROUS
GOODS

WORKCOVER AUTHORITY



LICENCE TO KEEP DANGEROUS GOODS

Existing licence, issue 8C.25 c Dated u 6/77 (Dangerous Goods Act 1975)

Application for new licence, amendment or transfer

EXPIRY : 3.1.95

1. Name of applicant		ACN
AUSTRALIAN JOCKEY CLUB		
2. Site to be licensed		
No	Street	
	ALISON RD (RANDWICK RACECOURSE)	
Suburb/Town		Postcode
RANDWICK		2031
3. Previous licence number (if known) 35 0030220		
4. Nature of site RACECOURSE		
5. Emergency contact on site:		
Phone	Name	
663 8521	ROD WILLIAMSON - WORKING HOURS	
018 440651	DUTY WATCHMAN AFTER HOURS	
6. Site staffing:	Hours per day	Days per week
	NINE	FIVE
7. Major supplier of dangerous goods SHORE PETROLEUM		
8. If new site or significant modification		
Plan stamped by:	Accredited consultant's name:	Date stamped
9. Number of dangerous goods depots at site ONE		
10. Trading name or occupier's name		
AUSTRALIAN JOCKEY CLUB		
11. Postal address of applicant		Suburb/Town
RANDWICK RACECOURSE - ALISON RD		RANDWICK
		Postcode
		2031
12. Contact for licence enquiries:		
Phone	Fax	Name
663 8521	662 2482	ROD WILLIAMSON
I certify that the details contained in this application (or the accompanying computer disk) are true and correct		
13. Signature of applicant		Date
		2/12/93

Please complete attached site sketch, depot listing and check sheet (if required) and return to WorkCover Authority in envelope provided.

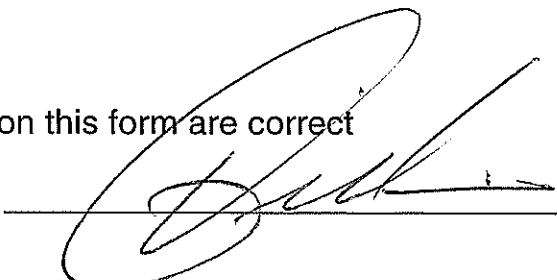
Form DG1

25 JUL 1994 641

**Checklist for keeping licence application for
class 6.1 (poisons) or class 8 (corrosives).**

Please answer ALL questions by stating YES, NO or NOT APPLICABLE (N/A) in the box provided.

A separate checklist is required for each individual depot to be licensed; if more than one checklist is completed state the depot number to which the checklist applies:

- | | |
|--|----------------------------------|
| 1. Storage area clearly identified with appropriate diamond sign (250 x 250 mm), sign is visible from all approaches | <input type="text" value="NO"/> |
| 2. The storage area is 5 m or more away from: | |
| <input type="radio"/> (a) other classes of dangerous goods | <input type="text" value="YES"/> |
| (b) easily combustible materials include flammable liquids, waste paper, rags, hay, sawdust, dry grass, shrubs and overhanging tree branches | <input type="text" value="NO"/> |
| (c) anything that could cause harmful reactions with the poisons (such as acids) or with the corrosives (such as incompatible corrosives, oxidisers) | <input type="text" value="NO"/> |
| (d) foodstuffs (applies to class 6.1 only) | <input type="text" value="N/A"/> |
| 3. Spillage containment provided for liquids, | |
| <input type="radio"/> in packages, 25% of total quantity, or in tanks, 100% of largest or single tank | <input type="text" value="NO"/> |
| 4. At least one fire extinguisher Type 2A60B(E) (9 kg dry chemical) is | |
| (a) easily accessible in or near the storage | <input type="text" value="YES"/> |
| (b) serviced every 6 months | <input type="text" value="YES"/> |
| 5. All packages containing 500 mL or grams or more are at least marked with the appropriate diamond sign and the correct technical name | <input type="text" value="NO"/> |
| 6. I certify that the details on this form are correct | |
| Signature of applicant  | <u>2 11/2 193</u>
Date |

AMPOL PETROLEUM LIMITED

A.G.L. CENTRE,
111 PACIFIC HIGHWAY,
NORTH SYDNEY. 2060

BOX 4090, G.P.O., SYDNEY, 2001
TELEPHONE: 929-6222
CABLES: AMPOLCO

Date 24-8-77.....

JB/sj

AN 3022

The Superintendent,
Dangerous Goods Branch,
Explosives Department,
P.O. Box 846,
DARLINGHURST, N.S.W. 2010

Dear Sir,

(removing)
We wish to advise that we will be (installing)
11,900.....(litre) (gallon) underground storage tank (s)
at the following location :-

RANDWICK RACE COURSE
ALISON ROAD
RANDWICK

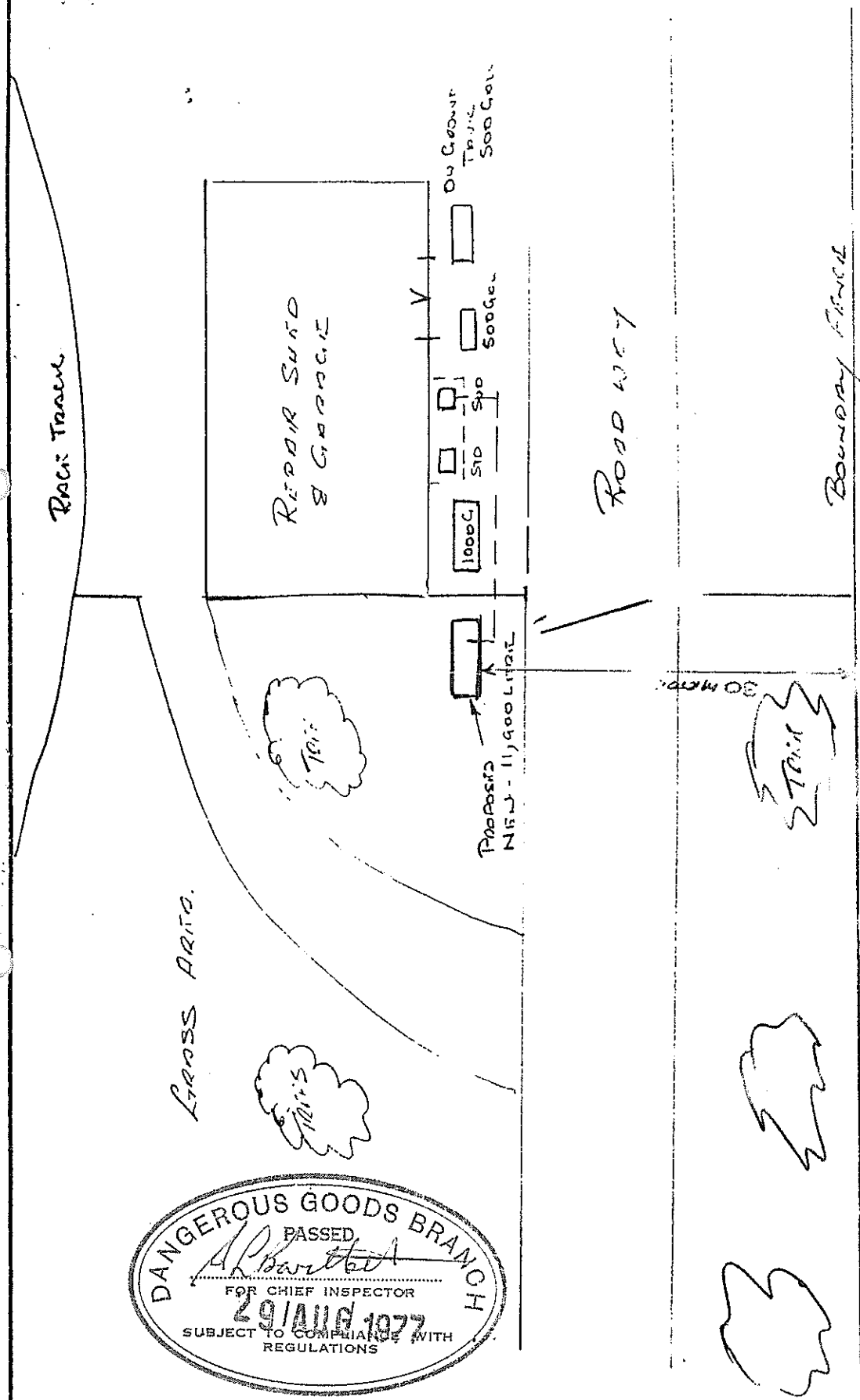
Yours faithfully,

J. BAIKIE
WORKS SUPERVISOR, N.S.W.

Contractor:

BONANZA INST
31 SHANNON ST
GORENBRER

SUBJECT: RANDOLPH RACE COURSE NEW 11,900 LTR.



LOCATION OF PROPOSED 11,900 LTR. TRACK
AT RANDOLPH RACE COURSE

FOR THE KEEPING OF
INFLAMMABLE LIQUID AND/OR DANGEROUS GOODS.

Particulars of construction of depots and maximum quantities of inflammable liquid and/or dangerous goods to be kept at any one time.

[illegible]

Date) _____ 14/10/77
 Receipt No. 460

Date 7/12/2012

CERTIFICATE OF INSPECTION

I, Carl William E. Mathison being an Inspector under the Inflammable Liquid Act, 1915, do hereby certify that the premises or store described above does comply with the requirements of that Act and regulations with regard to its situation and construction for the keeping of inflammable liquid and/or dangerous goods in quantity and nature specified.

Signature of Inspector C. J. M. [illegible]

Appendix E

Historical Title Deeds



ABN: 36 092 724 251
Ph: 02 9099 7400
(Ph: 0412 199 304)

Level 14, 135 King Street, Sydney
Sydney 2000
GPO Box 4103 Sydney NSW 2001
DX 967 Sydney

Summary of Owners Report

LRS NSW (Formerly LPI)

Sydney

Address: - 77 to 97 Alison Road, Randwick

Description: - Lot 2009 D.P. 1169042

<u>Date of Acquisition and term held</u>	<u>Registered Proprietor(s) & Occupations where available</u>	<u>Reference to Title at Acquisition and sale</u>
01.06.1915 (1915 to 1917)	Henry Cary Dangar (Esquire) Adrian Knox (Barrister at Law) Edmund Fosbery (Member of the Legislative Council)	Vol 2579 Fol 66
09.11.1917 (1917 to 1971)	Adrian Knox (Barrister at Law) Edmund Fosbery (Member of the Legislative Council)	Vol 2579 Fol 66
09.11.1917 (1917 to 1932)	Adrian Knox (Barrister at Law) Samuel Hordern (Esquire) Richard Halifax Dangar (Esquire)	Vol 2579 Fol 66
11.08.1932 (1932 to 1932)	Samuel Hordern (Esquire) Richard Halifax Dangar (Esquire)	Vol 2579 Fol 66
11.08.1932 (1932 to 1941)	Samuel Hordern (Esquire) Richard Halifax Dangar (Esquire) Thomas Lloyd Forster Rutledge (Grazier)	Vol 2579 Fol 66
13.03.1941 (1941 to 1941)	Samuel Hordern (Esquire) Thomas Lloyd Forster Rutledge (Grazier)	Vol 2579 Fol 66
13.03.1941 (1941 to 1955)	Samuel Hordern (Esquire) Thomas Lloyd Forster Rutledge (Grazier) George Main (Grazier)	Vol 2579 Fol 66
04.07.1955 (1955 to 1963)	Samuel Hordern (Esquire) Thomas Lloyd Forster Rutledge (Grazier)	Vol 2579 Fol 66
04.07.1955 (1955 to 1963)	Thomas Lloyd Forster Rutledge (Grazier) William McCulloch Gollan (Member of the Legislative Assembly) Maurice Victorian Point (Grazier)	Vol 2579 Fol 66
26.08.1963 (1963 to 1980)	William McCulloch Gollan (Member of the Legislative Assembly) Maurice Victorian Point (Grazier)	Vol 2579 Fol 66
13.10.1980 (1980 to 1983)	Sidney George White Robert William Askin Laurie John Ferguson	Vol 2579 Fol 66
21.06.1983 (1983 to 2006)	Laurie John Ferguson Tristan Antico Leslie Frederick Bridge	Vol 2579 Fol 66 Now 1/130234
07.03.2006 (2006 to 2009)	Leslie Frederick Bridge Ken Arthur Murray Paul Francis Patrick Whelan	1/130234
21.05.2009 (2009 to 2013)	Ken Arthur Murray Paul Francis Patrick Whelan	1/130234 Now 2009/1169042
27.08.2013 (2013 to date)	# Randwick Racecourse Trust	2009/1169042

Denotes Current Registered Proprietor

Email: mark.groll@infotrack.com.au



ABN: 36 092 724 251
Ph: 02 9099 7400
(Ph: 0412 199 304)

Level 14, 135 King Street, Sydney
Sydney 2000
GPO Box 4103 Sydney NSW 2001
DX 967 Sydney

Leases: -

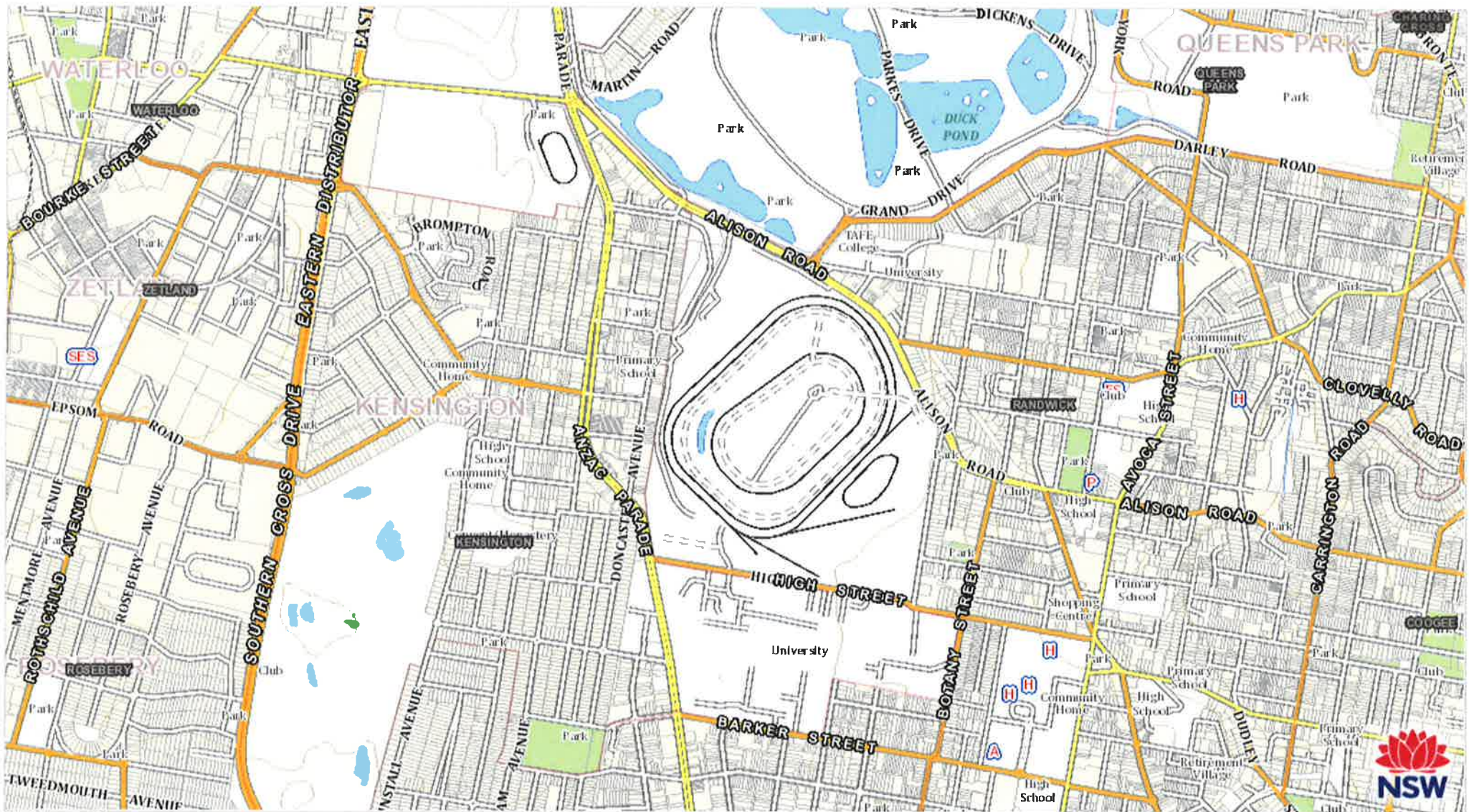
- During the course of our search we came across various Leases to the Chairman of the Australian Jockey Club that have since expired, these have not been investigated
- 12.08.1982 (T15486) Sub-Lease to The Sydney County Council of Substation premises No.2919 (First Floor Level) together with rights of way and easements for electricity purposes. Now surrendered
- 21.03.1991 (J469606) Sub-Lease to The Sydney County Council of Substation premises No.6787 together with a right of way and easement for electricity purposes. Now surrendered
- 09.07.1992 (Z404960) Sub-Lease to The Sydney County Council of Substation premises No.6787 together with a right of way and easement for electricity purposes. Now surrendered
- 06.04.2009 (AE596578) Lease to Australian Jockey Club Limited, expires 20.01.2107
 - (AJ107513) Lessee now Australian Turf Club Limited
 - (AJ38052) Lease of Lease AE596578 to Trainers Association Limited of premises known as suite 3, ground floor ATC Administration Building, Royal Randwick Racecourse, Alison Road, Randwick. Expires 01.06.2016 with option to renew of 3 years

Easements: -

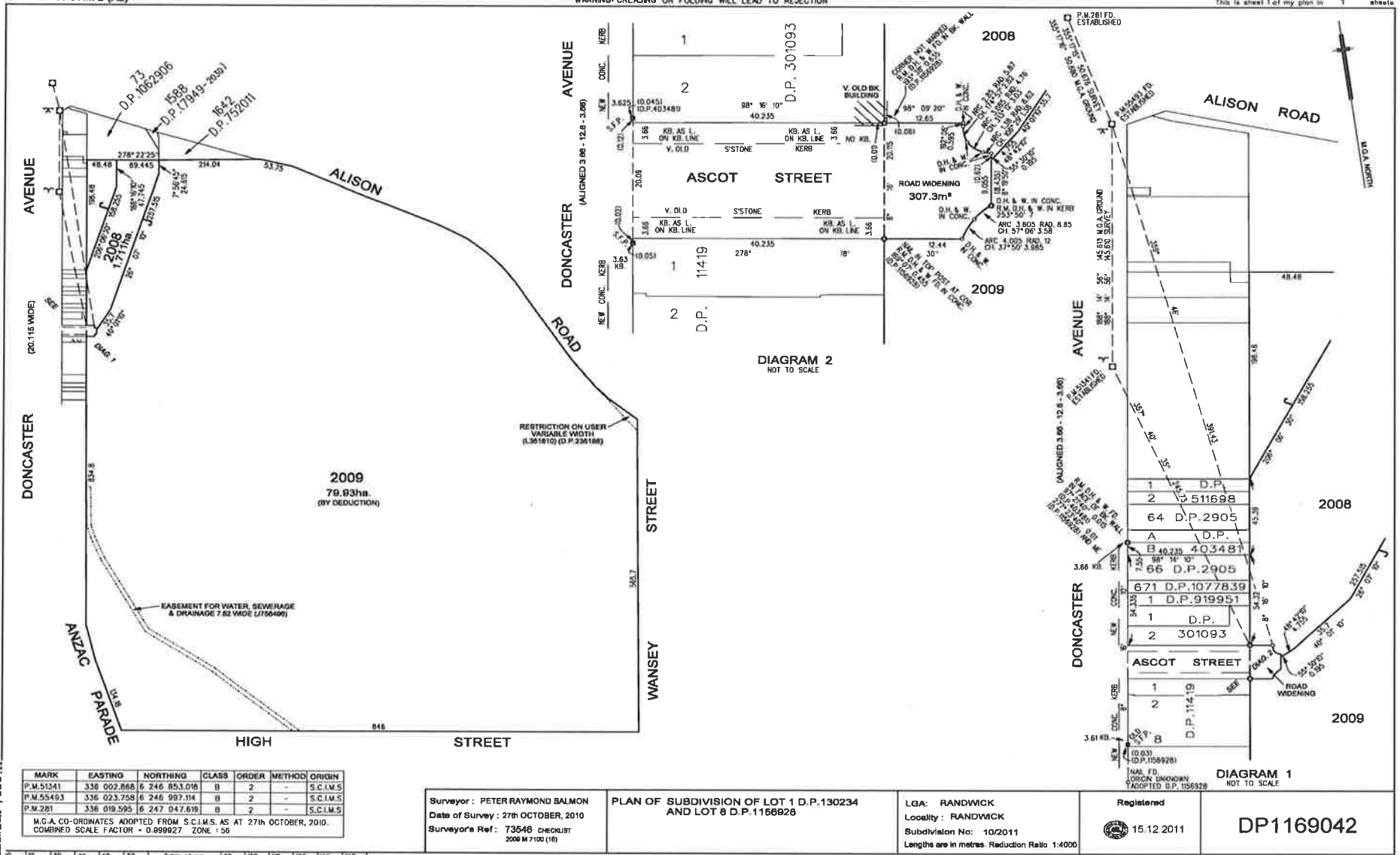
- 26.10.1964 (J758496) Easement for water sewerage & drainage 7.62 metres wide

Yours Sincerely,
Matthew Hillerman
(Checked by Mark Groll)
31 July 2018

C

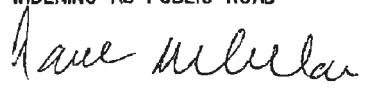


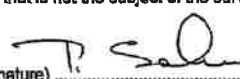



Disclaimer: This report has been generated by various sources and is provided for information purposes only. Spatial Services does not warrant or represent that the information is free from errors or omission, or that it is exhaustive. Spatial Services gives no warranty in relation to the information, especially material supplied by third parties. Spatial Services accepts no liability for loss, damage, or costs that you may incur relating to any use or reliance upon the information in this report.



PLAN FORM 6






WARNING: Creasing or folding will lead to rejection

DEPOSITED PLAN ADMINISTRATION SHEET Sheet 1 of 2 sheet(s)	
<p>SIGNATURES, SEALS and STATEMENTS of intention to dedicate public roads, to create public reserves, drainage reserves, easements, restrictions on the use of land or positive covenants.</p> <p>IT IS INTENDED TO DEDICATE THE AREA SHOWN AS ROAD WIDENING AS PUBLIC ROAD</p> <div style="text-align: center; margin-top: 20px;">  PAUL FRANCIS PATRICK WHELAN </div> <div style="text-align: center; margin-top: 20px;">  KEN ARTHUR MURRAY </div> <div style="text-align: center; margin-top: 50px;"> <p>Use PLAN FORM 6A for additional certificates, signatures, seals and statements</p> </div>	<div style="text-align: center; font-size: 24px; font-weight: bold; margin-bottom: 20px;">DP1169042</div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p>Registered:  15.12.2011</p> <p>Title System: TORRENS</p> <p>Purpose: SUBDIVISION</p> </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p>PLAN OF SUBDIVISION OF LOT 1 D.P.130234 AND LOT 8 D.P.1156928</p> </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p>LGA: RANDWICK</p> <p>Locality: RANDWICK</p> <p>Parish: ALEXANDRIA</p> <p>County: CUMBERLAND</p> </div> <div style="border: 1px solid black; padding: 5px;"> <p style="text-align: center;">Surveying Regulations, 2006</p> <p>I, <u>PETER RAYMOND SALMON</u> of <u>RYGATE & COMPANY PTY. LTD. SYDNEY</u> a surveyor registered under the Surveying Act, 2002, certify that the survey represented in this plan is accurate, has been made in accordance with the Surveying Regulation, 2006 and was completed on <u>27th OCTOBER, 2010</u></p> <p>The survey relates to <u>THE ROAD WIDENING</u></p> <p>(specify the land actually surveyed or specify any land shown in the plan that is not the subject of the survey)</p> <div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;">  (Signature) </div> <div style="text-align: right;"> Dated: <u>27/10/2010</u> Surveyor registered under the Surveying Act, 2002 </div> </div> <p>Datum Line: <u>"X" - "Y"</u></p> <p>Type: <u>Urban / Rural</u></p> </div>
<p style="text-align: center;">Crown Lands NSW/Western Lands Office Approval</p> <p>I, in approving this plan certify (Authorised Officer) that all necessary approvals in regard to the allocation of the land shown hereon have been given.</p> <p>Signature:</p> <p>Date:</p> <p>File Number:</p> <p>Office:</p>	<p style="text-align: center;">Subdivision Certificate</p> <p>I certify that the provisions s.106J of the Environmental Planning and Assessment Act, 1979 have been satisfied in relation to:</p> <p>the proposed <u>subdivision</u> set out herein * (insert 'subdivision' or 'new road')</p> <div style="text-align: center; margin-top: 20px;">  *Authorised Person/General Manager/Accredited Certifier </div> <p>Consent Authority: <u>Randwick Council</u></p> <p>Date of Endorsement: <u>30/8/2011</u></p> <p>Accreditation No.</p> <p>Subdivision Certificate No. <u>1012011</u></p> <p>File No. <u>541012011</u></p> <p>*Delete whichever is inapplicable.</p>
<p style="text-align: center;">Plans used in preparation of survey/compilation</p> <p>D.P.403481, D.P.11419, D.P.973397, D.P.301093 D.P.919951, D.P.1077839, D.P.130234, D.P.2905, D.P.1156928 (UNREGISTERED)</p> <p style="text-align: center; font-size: small;">(if insufficient space use Plan Form 6A annexure sheet)</p>	
<p>SURVEYOR'S REFERENCE: 73546 CHECKLIST 2009 M 7100 (16)</p>	

* OFFICE USE ONLY

PLAN FORM 6A (Annexure Sheet)

WARNING: Creasing or folding will lead to rejection

DEPOSITED PLAN ADMINISTRATION SHEET		Sheet 2 of 2 sheet(s)
PLAN OF SUBDIVISION OF LOT 1 D.P.130234 AND LOT 8 D.P.1156928	* DP1169042	
	Registered:  15.12.2011 *	
Subdivision Certificate No: 10/2011		Date of Endorsement: 30/8/2011
<p>EXECUTED BY AUSTRALIAN JOCKEY CLUB LIMITED IN (ABN 80 130 406 852) IN ACCORDANCE WITH SECTION 127(1) OF THE CORPORATIONS ACT 2001 (CWLTH) BY AUTHORITY OF ITS DIRECTORS:</p> <p> Signature of director JOHN CORNISH. Name of Director (BLOCK LETTERS)</p> <p>EXECUTED BY ANSON CITY DEVELOPMENTS 1 (AUSTRALIA) PTY LIMITED (ABN 96 101 638 591) IN ACCORDANCE WITH SECTION 127(1) OF THE CORPORATIONS ACT 2001 (CWLTH) BY AUTHORITY OF ITS DIRECTORS:</p> <p> Signature of director PAK WAI NGOR Name of director (BLOCK LETTERS)</p> <p> Signature of director/company secretary* * delete whichever is not applicable DARREN PEARCE NAME OF DIRECTOR/COMPANY SECRETARY* (BLOCK LETTERS) * delete whichever is not applicable</p> <p> Signature of director/company secretary* * delete whichever is not applicable WEI MIN HU NAME OF DIRECTOR/COMPANY SECRETARY* * delete whichever is not applicable</p>		
SURVEYOR'S REFERENCE: 73546 CHECKLIST 2009 M 7100 (16)		

* OFFICE USE ONLY

Form: 04RP
Licence: 04-03-355
Licensee: Mallesons Stephen Jaques

**APPLICATION TO RECO
NEW REGISTERED PROPRI**



AC117117Y

New South Wales
Section 46C Real Property Act 1900
Section 12(4) Trustee Act 1925

PRIVACY NOTE: Section 31B of the Real Property Act 1900 (RP Act) authorises the Registrar General to collect the information required by this form for the establishment and maintenance of the Real Property Act Register. Section 96B RP Act requires that the Register is made available to any for search upon payment of a fee, if any.

STAMP DUTY

Office of State Revenue use only
15-02-2006 000321377-001
SECTION 54(3)
DUTY \$ *****10.00

now 1/130234 now being 1647/752011

(A) **LAND**

Torrens Title
Volume 2579 Folio 66, Volume 4673 Folio 38, Folio Identifier 1588/752011

(B) **REGISTERED
DEALING**

Number Torrens Title

(C) **LODGED BY**

Delivery Box	Name, Address or DX and Telephone	CODE
41J	Mallesons Stephen Jaques DX 113 Sydney T +61 2 9296 2000 LLPN: 123008U Reference (optional): CCH:02 5115 1667	AP

(D) **APPLICANT**

AUSTRALIAN JOCKEY CLUB

(E) **PRESENT REG'D
PROPRIETOR**

LAURIE JOHN FERGUSON, TRISTAN ANTICO and LESLIE FREDERICK BRIDGE

(F) **NEW REG'D
PROPRIETOR**

**LESLIE FREDERICK BRIDGE, KEN ARTHUR MURRAY and PAUL FRANCIS PATRICK
WHELAN**

(G) **APPLICATION UNDER SECTION 46C REAL PROPERTY ACT 1900**

In regard to the land specified above, the applicant requests the Registrar General to record the new registered proprietor on the folio of the Register, the land having vested in the new registered proprietor pursuant to —

(H) Australian Jockey Club Act 1873 and New South Wales Government Gazettes No. 174 page 10288 dated 31 October 2003 and No. 34 page 812 dated 18 March 2005

(G) **APPLICATION UNDER SECTION 12(4) TRUSTEE ACT 1925**

In regard to the land specified above, the applicant requests the Registrar General to record the new registered proprietor on the folio of the Register, consequent on—

(I) **SEE ANNEXURE**

DATE 13 / 2 / 2006
dd mm yyyy

Certified correct for the purposes of the Real Property Act 1900.

(J)

C. Hilton
Solicitor for Transferee
Colleen Hilton

Solicitor for Transferee

A

Annexure A to Application to Record New Registered Proprietor

Parties:

AUSTRALIAN JOCKEY CLUB; LAURIE JOHN FERGUSON, TRISTAN ANTICO; and LESLIE FREDERICK BRIDGE; LESLIE FREDERICK BRIDGE, KEN ARTHUR MURRAY, PAUL FRANCIS PATRICK WHELAN

Dated: 13 February 2006

The vesting in:

- 1 Leslie Frederick Bridge (continuing trustee);**
- 2 Ken Arthur Murray in place of Laurie John Ferguson (deceased) pursuant to the Australian Jockey Club Act 1873 and published in New South Wales Government Gazette No. 174, page 10288 dated 31 October 2003; and**
- 3 Paul Francis Patrick Whelan in place of Tristan Antico (deceased) pursuant to the Australian Jockey Club Act 1873 and published in New South Wales Government Gazette No. 34, page 812 dated 18 March 2005.**

10288

OFFICIAL NOTICES

31 October 2003

OFFICIAL NOTICES

Appointments

AUSTRALIAN JOCKEY CLUB ACT 1873

Appointment of Member to the Randwick Racecourse Trust

PURSUANT to the preamble to the Australian Jockey Club Act 1873, Her Excellency the Governor, with the advice of the Executive Council, has approved the appointment of Mr Ken Arthur MURRAY as a Member of the Randwick Racecourse Trust until his death, resignation, ceasing to reside in New South Wales, or becoming incapable of holding office.

GRANT McBRIDE, M.P.,
Minister for Gaming and Racing

CRIMES (ADMINISTRATION OF SENTENCES) ACT 1999

Appointment of Member *Serious Offenders Review Council*

HER Excellency the Governor, with the advice of the Executive Council, pursuant to the provisions of the *Crimes (Administration of Sentences) Act 1999*, has approved the appointment of Lincoln Crowley as a community member of the Serious Offenders Review Council on and from 3 November 2003 to 2 November 2006.

JOHN HATZISTERGOS,
Minister for Justice
Minister Assisting the Premier on Citizenship

EDUCATION ACT 1990

Notification of an Appointment to the Board of Studies

I, ANDREW JOHN REFSHAUGE, Deputy Premier, Minister for Education and Training and Minister for Aboriginal Affairs, in pursuance of Schedule 1, Clause 8 of the Education Act 1990, appoint Mr Larry Tyler GRUMLEY as a Member of the Board of Studies, being a nominee provided under section 100 (3) (e), for a term commencing on and from 1 September 2003 until 31 August 2006.

ANDREW REFSHAUGE, M.P.,
Deputy Premier
Minister for Education and Training
Minister for Aboriginal Affairs

RURAL FIRES ACT 1997

Appointment of Members Bush Fire Coordinating Committee

I, TONY KELLY, M.L.C., Minister for Emergency Services, in pursuance of section 47 (1) (b) and (g) of the Rural Fires Act 1997, appoint the following persons as Members of the Bush Fire Coordinating Committee:

John Burton ANDERSON, AFSM, and
Christopher Stephen ANDERSON, AFSM
for the remainder of the five-year period expiring on 1 March 2008.

TONY KELLY, M.L.C.,
Minister for Emergency Services

FIRE SERVICES JOINT STANDING COMMITTEE ACT 1998

Appointment of Member Fire Services Joint Standing Committee

I, TONY KELLY, MLC, Minister for Emergency Services, in pursuance of section 4 (2) (c) of the Fire Services Joint Standing Committee Act 1998, appoint the following person as a Member of the Fire Services Joint Standing Committee:

Gary John MEERS
for the remainder of the three-year period expiring on 5 July 2006.

TONY KELLY, M.L.C.,
Minister for Emergency Services



OFFICIAL NOTICES

18 March 2005

OFFICIAL NOTICES

Appointments

AUSTRALIAN JOCKEY CLUB ACT 1873

Appointment of Member Randwick Racecourse Trust

PURSUANT to the preamble to the Australian Jockey Club Act 1873, on 9 March 2005, Her Excellency the Governor, with the advice of the Executive Council, has approved the appointment of the Honourable Paul Francis Patrick WHELAN as a Member of the Randwick Racecourse Trust until his death, resignation, ceasing to reside in New South Wales, or becoming incapable of holding office.

GRANT McBRIDE, M.P.,
Minister for Gaming and Racing

CRIMES (ADMINISTRATION OF SENTENCES) ACT 1999

Serious Offenders Review Council Reappointment of Acting Deputy Chairperson

HER Excellency the Governor, on the advice of the Executive Council and pursuant to the provisions of the Crimes (Administration of Sentences) Act 1999, has approved the reappointment of Mr Charles Alexander VANDERVORD as Acting Deputy Chairperson of the Serious Offenders Review Council on and from 1 March 2005 up to and including 31 August 2005.

JOHN HATZISTERGOS, M.L.C.,
Minister for Justice,
Minister for Fair Trading,
Minister Assisting the Premier on Citizenship
and Minister Assisting the Minister for Commerce

INSTITUTE OF SPORT ACT 1995

Appointment of Board Members to the NSW Institute of Sport Department of Tourism, Sport and Recreation

It is hereby notified that:

- in pursuance of Part 3(6)(1)(2)(a)(b) of the Institute of Sport Act 1995, the persons named in the Schedule hereto be appointed by the Minister to the NSW Institute of Sport Board for a period commencing on 10 March 2005 and terminating on 9 March 2009, and
- in pursuance to Clause 6(3) to the said Act Mr Phil COLES, A.M., be appointed as Chairperson and Mr Alan JONES, A.O., as Deputy Chairperson of the NSW Institute of Sport Board.

SCHEDULE

Donna RITCHIE, Peter NEWELL, O.A.M., Bill GILLOOLY, A.M., Elizabeth DARLISON, Alan JONES, A.O., Elizabeth ELLIS, Phil COLES, A.M. and Bob ADBY.

NOXIOUS WEEDS ACT 1993

Appointment of Member to Noxious Weeds Advisory Committee

I, Ian Macdonald MLC, NSW Minister for Primary Industries, pursuant to section 58 of the Noxious Weeds Act 1993, appoint Elwyn Swane, nominee of the Nursery and Garden Industry NSW and ACT, to the Noxious Weeds Advisory Committee for a term commencing on the date hereof and expiring on 31 December 2006.

Dated this fourth day of February 2005.

IAN MACDONALD, M.L.C.,
NSW Minister for Primary Industries

POULTRY MEAT INDUSTRY ACT 1986

Poultry Meat Industry Committee

Filling of vacancies in the office of members

I, IAN MACDONALD MLC, NSW Minister for Primary Industries, pursuant to section 4(3)(c) and Schedule 1(6)2 of the Poultry Meat Industry Act 1986, hereby appoint the following persons as members of the Poultry Meat Industry Committee commencing on the dates set out below and expiring on 30 April 2005:

- Brian McKelvey: 13 September 2004
- Andrew Stevenson: 27 October 2004
- Joe Vella: 15 September 2004
- Chris Freney: 4 November 2004
- Gary Ekert: 30 November 2004

Dated this twenty first day of February 2005.

STATE SPORTS CENTRE TRUST ACT 1984

Appointment of Members to the State Sports Centre Trust Department of Tourism, Sport and Recreation

It is hereby notified that:

- in pursuance of section 5(1) of the State Sports Centre Trust Act 1984, the persons named in the Schedule hereto be appointed to the State Sports Centre Trust for a period commencing on the date of the Governor's signature (9 March 2005), and terminating on 7 March 2009, and
- in pursuance to Clause 8(2) of Schedule 1 to the said Act, Mr Alan WHELPTON be appointed as Chairperson of the State Sports Centre Trust.

SCHEDULE

Bob ADBY, Helen BROWNLEE, Liz ELLIS, Craig GALLAGHER, Lorraine LANDON, Wayne PRIOR, Ian STEPHENSON, Pam TYRE and Alan WHELPTON.

NEW SOUTH WALES GOVERNMENT GAZETTE No. 34



New South Wales Consolidated Acts

[\[Index\]](#) [\[Table\]](#) [\[Search\]](#) [\[Search this Act\]](#) [\[Notes\]](#) [\[Noteup\]](#) [\[Previous\]](#) [\[Next\]](#) [\[Download\]](#) [\[History\]](#)
[\[Help\]](#)

AUSTRALIAN JOCKEY CLUB ACT 1873 - SECT 9

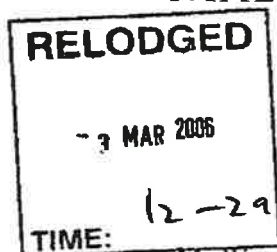
Lands and other property to be vested in chairman

9 Lands and other property to be vested in chairman

All lands tenements and hereditaments real and personal and all personal chattels and effects which are now vested in or held by any person or persons whomsoever in trust for or for the benefit of the club or the members thereof shall immediately upon the passing of this Act become and be vested in and be held by the chairman and his successors in such office in trust for the club and in the like manner as if such chairman and his respective successors in such office were in law a corporation sole and as if the personalty were real estate and all lands tenements and hereditaments real and personal and all personal chattels and effects which may hereafter be contracted for or be acquired by or belong to the club or the members thereof collectively may be conveyed assigned and assured to and shall therefrom become vested in the chairman and his successors in such office in trust for the club and in the like manner as if such chairman and his respective successors in such office were in law a corporation sole and as if the personalty were real estate.

[\[Index\]](#) [\[Table\]](#) [\[Search\]](#) [\[Search this Act\]](#) [\[Notes\]](#) [\[Noteup\]](#) [\[Previous\]](#) [\[Next\]](#) [\[Download\]](#) [\[History\]](#)
[\[Help\]](#)

MALLESONS STEPHEN JAQUES



AC 117117

Mr Warwick Watkins
Registrar General
Department of Lands
Legal Services
1 Prince Albert Road
Queens Square
Sydney NSW 2000

2 March 2006

Dear Sir

**Dealing Number: AC117117 - Application to Record New Registered Proprietor by
Australian Jockey Club ("club")
Royal Randwick Racecourse
Your ref AC117117 TW:LEG 9:LS**

We refer to your letter of 27 February 2006 in which you state the abovementioned application "seeks to vest lands in two new trustees of the *club*".

The two new trustees are trustees of the *land*, not the club. As stated in the relevant Government Gazettes which record the appointment of the new trustees, the trustees have been appointed by the Governor of New South Wales pursuant to the "preamble to the Australian Jockey Club Act 1873" ("Act") to be trustees of the land.

Section 3 of the Act gives the trustees authority to grant a lease to the club for the use of the land as a racecourse.

Accordingly, the trustees need to be distinguished from the club in that they hold the land and the club is the tenant of the land.

As noted by you in your letter, section 9 of the Act provides that any lands and other property held for the benefit of the *club* are to be held by the chairman of the club. As the trustees are trustees of the *land* and not the club, section 9 is not relevant to the abovementioned application.

MALLESONS STEPHEN JAQUES

Department of Lands

2 March 2006

Yours sincerely



Colleen Hilton

Solicitor

Direct line +61 2 9296 2184

Email colleen.hilton@mallesons.com

David Rohr

Partner

AJC to Ferguson, Feb 13
- 10:20:00

Department of Lands

Land Administration & Management
Property & Spatial Information



Mallesons Stephen Jaques
LPI BOX 41J

Your Ref: CCH:02: 5115 1667
Our Ref: AC117117 TW:LEG 9:LS

Legal Services

1 Prince Albert Rd.
Queens Square
SYDNEY NSW 2000
GPO Box 15
SYDNEY NSW 2001
DX 17 SYDNEY

T(61 2) 9228 6726/6656
F(61 2)9221 4309

www.lands.nsw.gov.au

27 February 2006

Dear Sirs

**Re: AC117117 – Application to Record New Registered Proprietor
by Australian Jockey Club**

I note that application AC117117 seeks to vest lands in two new trustees of the club.

However, section 9 of the Australian Jockey Club Act 1873 states that lands and other property are to be vested in the chairman.

Please advise.

Yours faithfully
Warwick Watkins
Registrar General



MALLESONS STEPHEN JAQUES

The Registrar
Department of Lands
Land & Property Information
Service
Queens Square
Sydney NSW 2000

13 February 2006

Dear Sir

**Australian Jockey Club
Royal Randwick Racecourse, Alison Road, Randwick**

We act for the Australian Jockey Club.

We enclose:

- 1 Application to record new registered proprietor;
- 2 Notice of Sale form;
- 3 Certificates of title Volume 2579 Folio 66, Volume 4673 Folio 38 and Folio Identifier 1588/752011; and
- 4 Copies of the relevant pages from the New South Wales Government Gazette No 174 dated 31 October 2003 and No. 34 dated 18 March 2005.

As two of the registered proprietors are now deceased, the Governor of New South Wales has approved the appointment of Ken Arthur Murray and Paul Francis Patrick Whelan as members of the Randwick Racecourse Trust as stated in the attached copy Government Gazettes. Accordingly, we have been instructed by the Australian Jockey Club to register the names of the new members on the titles to the racecourse.

We have been advised by Mr Frank Marzic (Tel: 9995 0486) of the NSW Office of Racing, Department of Gaming and Racing that the appointment of the new members was made pursuant to the Australian Jockey Club Act 1873 and that a deed of appointment was not required for the appointment of the new members.

Level 60 Governor Phillip Tower 1 Farrer Place Sydney NSW 2000 Australia
DX 113 Sydney ABN 22 041 424 954 syd@mallesons.com www.mallesons.com

T +61 2 9296 2000
F +61 2 9296 3999

MALLESONS STEPHEN JAQUES

Department of Lands

13 February 2006

Yours faithfully

Colleen Hilton
Solicitor
Direct line +61 2 9296 2184
Email colleen.hilton@mallesons.com

David Rohr
Partner

Encl 3

Form: 04RP
Licence: 04-03-355
Licensee: Mallesons Stephen Jaques

**APPLICATION TO RECORD
NEW REGISTERED PROPRIETOR**



AE639538L

New South Wales
Section 46C Real Property Act 1900
Section 12(4) Trustee Act 1925

PRIVACY NOTE: Section 31B of the Real Property Act 1900 (RP Act) authorises the Registrar General to collect the information required by this form for the establishment and maintenance of the Real Property Act Register. Section 96B RP Act requires that the Register is made available to any for search upon payment of a fee, if any.

STAMP DUTY

Office of State Revenue use only

NEW SOUTH WALES DUTY

12-05-2009

0005405376-000

SECTION 54(3)

DUTY

\$ *****50.00

(A) **LAND**

Torrens Title

1/130234, 1642/752011 and 1588/752011

**RECORDED
(B) REGISTERED
DEALING**

(C) **LODGED BY
15 MAY 2009**

TIME: 12:30

Number

Torrens Title

Delivery
Box

Name, Address or DX and Telephone

Mallesons Stephen Jaques DX 113 Sydney T +61 2 9296 2000

CODE

41J

LLPN: 1230084

Reference (optional): Jennie Tenner 02-5500-7957

AP

(D) **APPLICANT**

AUSTRALIAN JOCKEY CLUB

(E) **PRESENT REG'D
PROPRIETOR**

LESLIE FREDERICK BRIDGE, PAUL FRANCIS PATRICK WHELAN AND KEN ARTHUR MURRAY

(F) **NEW REG'D
PROPRIETOR**

PAUL FRANCIS PATRICK WHELAN AND KEN ARTHUR MURRAY

(G) **APPLICATION UNDER SECTION 46C REAL PROPERTY ACT 1900**

In regard to the land specified above, the applicant requests the Registrar General to record the new registered proprietor on the folio of the Register, the land having vested in the new registered proprietor pursuant to —

(H)

Australian Jockey Club Act 1873 and the Deed of Retirement of Trustee registered Book 4566 No 128

(G) **APPLICATION UNDER SECTION 12(4) TRUSTEE ACT 1925**

In regard to the land specified above, the applicant requests the Registrar General to record the new registered proprietor on the folio of the Register, consequent on—

(I)

the date of the Deed of Retirement of Trustee

DATE

28 / 04 / 2009

dd mm yyyy

Certified correct for the purposes of the Real Property Act 1900.

(J)

Solicitor for Transferee
Frank Zipfinger

film with

DEED OF RETIREMENT OF TRUSTEE

This DEED is made on the 17 day of APRIL 2009 by:

Leslie Frederick Bridge of Royal Randwick Racecourse, Alison Road, Randwick NSW 2031
("Retiring Trustee");

and

Paul Francis Patrick Whelan and Ken Arthur Murray both of Royal Randwick Racecourse,
Alison Road, Randwick NSW 2031 ("Remaining Trustees").

and

The Honourable Kevin Greene, Minister for Gaming and Racing of Governor Macquarie
Tower, Level 36, 1 Farrer Place, Sydney NSW 2000 (the "Minister")

Recitals

- A. The Retiring Trustee is the trustee of the trust referred to in the preamble to the *Australian Jockey Club Act 1873* (the "Trust").
- B. The Retiring Trustee wants to retire as trustee of the Trust.

Operative Provisions

This Deed witnesses as follows:

1 Retirement of Trustee

By this deed the Retiring Trustee retires as trustee of the Trust.

2 Consent

The Continuing Trustees and the Minister consent to the retirement of the Retiring Trustee.

3 Commencement

This deed shall take effect as from its execution by all parties.

Executed as a deed:

SIGNED, SEALED AND)
DELIVERED by LESLIE JAMES)
BRIDGE as attorney for LESLIE)
FREDERICK BRIDGE under)
power of attorney registered book)
4552 no. 218 in the presence of:)

.....)
Signature of witness)

ASTRID MARICA BRIDGE)
Name of witness (block letters))

.....)
By executing this deed the attorney)
states that the attorney has received)
no notice of revocation of the power)
of attorney)

SIGNED, SEALED AND
DELIVERED by LESLEY LENA
BRIDGE as attorney for LESLIE
FREDERICK BRIDGE under
power of attorney registered book
4552 no. 218 in the presence of:

Lesley Bridge
Signature of witness

ASTRID MONICA BRIDGE
Name of witness (block letters)

Lesley Bridge

By executing this deed the attorney
states that the attorney has received
no notice of revocation of the power
of attorney

SIGNED, SEALED AND
DELIVERED by PAUL FRANCIS
PATRICK WHELAN in the
presence of:

Graham Walpole
Signature of witness

Graham Walpole
Name of witness (block letters)

Paul Whelan

Signature of Paul Francis Patrick Whelan

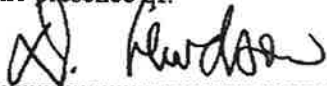
SIGNED, SEALED AND
DELIVERED by KEN ARTHUR
MURRAY in the presence of:

William S. C. FEGG
Signature of witness

WILLIAM S. C. FEGG
Name of witness (block letters)

Ken Arthur Murray
Signature of Ken Arthur Murray


SIGNED, SEALED AND
DELIVERED by THE
HONOURABLE KEVIN GREENE
in the presence of:



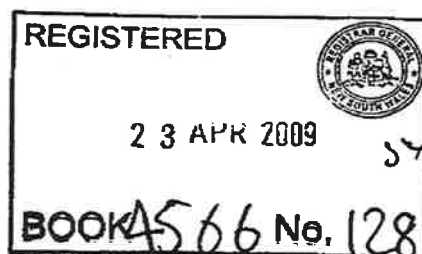
Signature of witness

D.R. CREWSON

Name of witness (block letters)



Signature of The Honourable Kevin Greene



Form: 04RP
Release: 4.1

**APPLICATION TO RECORD
NEW REGISTERED PROPRIETOR**
New South Wales
Section 46C Real Property Act 1900
Section 12(4) Trustee Act 1925



AH953327W

PRIVACY NOTE: Section 31B of the Real Property Act 1900 (RP Act) authorises the Registrar General to collect the information required by this form for the establishment and maintenance of the Real Property Act Register. Section 96B RP Act requires that the Register is made available to any person for search upon payment of a fee, if any.

STAMP DUTY

Office of State Revenue use only 3	NEW SOUTH WALES DUTY 16-08-2013 0007233259-001 SECTION 308-ORIGINAL NO DUTY PAYABLE
--	--

(A) TORRENS TITLE	1642/752011, 1588/752011, 2009/1169042		
(B) REGISTERED DEALING	Number	Torrens Title	
(C) LODGED BY	Document Collection Box 8094	Name, Address or DX, Telephone, and Customer Account Number if any NSW Trade & Investment Level 7, 323 Castlereagh Street Haymarket NSW 2001 CA: 132834 H Reference: Randwick Racecourse	CODE RP
(D) APPLICANT	Randwick Racecourse Trust		
(E) PRESENT REG'D PROPRIETOR	Paul Francis Patrick Whelan and Ken Arthur Murray		
(F) NEW REG'D PROPRIETOR	Randwick Racecourse Trust		

(G) **APPLICATION UNDER SECTION 46C REAL PROPERTY ACT 1900**

In regard to the above land, the applicant requests the Registrar General to record the new registered proprietor on the above folio of the Register, the land having vested in the new registered proprietor pursuant to—

(H) Australian Jockey and Sydney Turf Clubs Merger Act 2010 Schedule 2 Part 2 Clause 5

(G) **APPLICATION UNDER SECTION 12(4) TRUSTEE ACT 1925**

NOT APPLICABLE

In regard to the above, the applicant requests the Registrar General to record the new registered proprietor on the folio of the Register consequent on—

(I)

DATE 29 July 2013

Certified correct for the purposes of the Real Property Act 1900 and executed on behalf of the company named below by the authorised person(s) whose signature(s) appear(s) below pursuant to the authority specified.

Company: Randwick Racecourse Trust
Authority: Section 50 Interpretation Act 1987

Signature of authorised person:

Name of authorised person: DAVID BRUCE ARMSTRONG
Office held: CHAIRPERSON OF TRUSTEES

Signature of authorised person:

Name of authorised person: PAUL WHELAN
Office held: TRUSTEE

(K) This section is to be completed where a notice of sale is required and the relevant data has been forwarded through eNOS. The applicant certifies that the eNOS data relevant to this dealing has been submitted and stored under eNOS ID No. Full name: Signature:

* s117 RP Act requires that you must have known the signatory for more than 12 months or have sighted identifying documentation.
ALL HANDWRITING MUST BE IN BLOCK CAPITALS Page 1 of 1 1303

CT's Produced by 6876 20/8/13

EV107204



LAND
REGISTRY
SERVICES

Historical Title



NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE

23/7/2018 3:27PM

FOLIO: 1/130234

First Title(s): VOL 1525 FOL 146

Prior Title(s): VOL 2579 FOL 66

Recorded	Number	Type of Instrument	C.T. Issue
20/6/1995	DP130234	DEPOSITED PLAN	FOLIO CREATED CT NOT ISSUED
22/6/1995		AMENDMENT: VOL FOL INDEX	
28/8/1997		AMENDMENT: LOCAL GOVT AREA	
3/8/1999	6057508	DEPARTMENTAL DEALING	
23/10/2002	DP1045661	DEPOSITED PLAN	
7/3/2006	AC117117	APPLICATION	EDITION 1
2/4/2007	DP1110270	DEPOSITED PLAN	
6/4/2009	AE596577	SURRENDER OF LEASE	
6/4/2009	AE596578	LEASE	EDITION 2
24/4/2009	AE632070	SUB-LEASE	EDITION 3
21/5/2009	AE639538	APPLICATION	EDITION 4
4/9/2009	AE706881	REJECTED - TRANSFER INCLUDING COVENANT	
13/4/2010	DP1150063	DEPOSITED PLAN	
27/7/2010	AF652917	SUB-LEASE	EDITION 5
15/12/2011	AG473570	SURRENDER OF LEASE	
15/12/2011	DP1169042	DEPOSITED PLAN	FOLIO CANCELLED RESIDUE REMAINS

*** END OF SEARCH ***

randwick

PRINTED ON 23/7/2018

InfoTrack an approved NSW Information Broker hereby certifies that the information contained in this document has been provided electronically by the Registrar General in accordance with Section 96B(2) of the Real Property Act 1900.

Copyright © Office of the Registrar-General 2018

Received: 23/07/2018 15:27:29



LAND
REGISTRY
SERVICES

Historical Title



NEW SOUTH WALES LAND REGISTRY SERVICES - HISTORICAL SEARCH

SEARCH DATE

23/7/2018 3:27PM

FOLIO: 2009/1169042

First Title(s): VOL 1 FOL 46

Prior Title(s): 1/130234

Recorded	Number	Type of Instrument	C.T. Issue
15/12/2011	DP1169042	DEPOSITED PLAN	FOLIO CREATED EDITION 1
9/5/2012	AG971515	CAVEAT	
9/5/2012	AG971801	CAVEAT	
10/5/2012	AG976014	CAVEAT	
27/8/2013	AH953327	APPLICATION TO RECORD A NEW REGISTERED PROPRIETOR	EDITION 2
10/10/2013	AI51138	WITHDRAWN - TRANSFER GRANTING EASEMENT ETC OVER OWN LAND	
30/1/2015	AJ107513	APPLICATION TO RECORD A NEW REGISTERED PROPRIETOR	
30/1/2015	AJ38052	SUB-LEASE	EDITION 3
24/2/2015	DP1203628	DEPOSITED PLAN	
12/5/2015	AJ474618	REQUEST	EDITION 4

*** END OF SEARCH ***

randwick

PRINTED ON 23/7/2018

InfoTrack an approved NSW Information Broker hereby certifies that the information contained in this document has been provided electronically by the Registrar General in accordance with Section 96B(2) of the Real Property Act 1900.

Copyright © Office of the Registrar-General 2018

Received: 23/07/2018 15:27:29



FOLIO: 2009/1169042

SEARCH DATE	TIME	EDITION NO	DATE
23/7/2018	3:27 PM	4	12/5/2015

LAND

LOT 2009 IN DEPOSITED PLAN 1169042
AT RANDWICK
LOCAL GOVERNMENT AREA RANDWICK
PARISH OF ALEXANDRIA COUNTY OF CUMBERLAND
TITLE DIAGRAM DP1169042

FIRST SCHEDULE

RANDWICK RACECOURSE TRUST

(RP AH953327)

SECOND SCHEDULE (11 NOTIFICATIONS)

- 1 LAND EXCLUDES MINERALS AND IS SUBJECT TO RESERVATIONS AND CONDITIONS IN FAVOUR OF THE CROWN - SEE CROWN GRANT(S)
- 2 J758496 EASEMENT FOR WATER SEWERAGE AND DRAINAGE 7.62 METRE(S) WIDE AFFECTING THE PART SHOWN SO BURDENED IN THE TITLE DIAGRAM
- 3 DP644957 EASEMENT TO DRAIN WATER 4 METRE(S) WIDE APPURTENANT TO THE LAND ABOVE DESCRIBED
- 4 DP644957 EASEMENT TO FLOOD LIMITED BY STRATA 4 METRES(S) WIDE APPURTENANT TO THE LAND ABOVE DESCRIBED
- 5 L361810 RESTRICTION AS TO USER (S.27E(6) MAIN ROADS ACT, 1924) - (LOT5 IN DP236188)
- 6 AE596578 LEASE TO AUSTRALIAN JOCKEY CLUB LIMITED EXPIRES: 20/1/2107.
AG473570 SURRENDERED AS TO THE PART SHOWN HATCHED IN PLAN WITH AG473570
AJ107513 APPLICATION AFFECTING LEASE AE596578 LESSEE NOW AUSTRALIAN TURF CLUB LIMITED
AJ38052 LEASE OF LEASE AE596578 TO NEW SOUTH WALES TRAINERS ASSOCIATION LIMITED OF PREMISES KNOWN AS SUITE 3, GROUND FLOOR ATC ADMINISTRATION BUILDING, ROYAL RANDWICK RACECOURSE, ALISON ROAD, RANDWICK. EXPIRES: 1/6/2016. OPTION OF RENEWAL: 3 YEARS.
- 7 DP1150063 RIGHT OF CARRIAGEWAY VARIABLE WIDTH APPURTENANT TO THE LAND ABOVE DESCRIBED
- 8 DP1150063 EASEMENT FOR SERVICES VARIABLE WIDTH APPURTENANT TO THE LAND ABOVE DESCRIBED
- * 9 AG971515 CAVEAT BY AUSGRID
- * 10 AG971801 CAVEAT BY AUSGRID
- * 11 AG976014 CAVEAT BY AUSGRID

END OF PAGE 1 - CONTINUED OVER

randwick

PRINTED ON 23/7/2018

NEW SOUTH WALES LAND REGISTRY SERVICES - TITLE SEARCH

FOLIO: 2009/1169042

PAGE 2

NOTATIONS

DP1045661 NOTE: PLAN OF PROPOSED EASEMENTS

DP1110270 NOTE: PLAN OF PROPOSED EASEMENT FOR ELECTRICITY AND OTHER
PURPOSES

DP1203628 NOTE: PROPOSED LEASE AND PROPOSED EASEMENT

UNREGISTERED DEALINGS: NIL

*** END OF SEARCH ***

randwick

PRINTED ON 23/7/2018

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

Appendix F

Groundwater Field Sheets

Explanatory Notes

Borehole Logs (BH501 to BH509)

BOREHOLE LOG

CLIENT: Mostyn Copper Group Pty Ltd
PROJECT: Proposed Winx Stand
LOCATION: Leger Lawn, Royal Randwick Racecourse,
 43 Alison Road, Randwick

SURFACE LEVEL: 31.5 AHD
EASTING: 336156
NORTHING: 6246622
DIP/AZIMUTH: 90°/--

BORE No: BH501
PROJECT No: 86781.01
DATE: 20/5/2019
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
31 30 29 28 27 26 25 24 23 22	0.25	FILL - brown and grey silty sand fill with trace gravel, rootlets and organic matter, humid		E	0.1 0.2		PID>1ppm			
		FILL - apparently medium dense yellow and brown fine to medium grained sand fill with trace gravel, brick and tile, humid		E	0.5 0.6		PID>1ppm			
	1			E	1.0 1.1		PID>1ppm	1		
	1.6			E	1.5 1.6		PID>1ppm			
	2	SAND - apparently medium dense light grey fine to medium grained sand, humid		E	2.0 2.1		PID>1ppm	2		
	2.5	Bore discontinued at 2.5m - target depth reached								
	3							3		
	4							4		
	5							5		
	6							6		
	7							7		
	8							8		
	9							9		

RIG: Bobcat

DRILLER: GM

LOGGED: TG

CASING: Uncased

TYPE OF BORING: Solid Flight Auger

WATER OBSERVATIONS: No Free Groundwater Observed

REMARKS: BD1/20190520 at 1.0 m

SAMPLING & IN SITU TESTING LEGEND


A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	>	Water seep	S	Standard penetration test
E	Environmental sample	≡	Water level	V	Shear vane (kPa)

BOREHOLE LOG

CLIENT: Mostyn Copper Group Pty Ltd
PROJECT: Proposed Winx Stand
LOCATION: Leger Lawn, Royal Randwick Racecourse,
 43 Alison Road, Randwick

SURFACE LEVEL: 31.4 AHD
EASTING: 336172
NORTHING: 6246607
DIP/AZIMUTH: 90°/--

BORE No: BH502
PROJECT No: 86781.01
DATE: 20/5/2019
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
31 30 29 28 27 26 25 24 23 22	0.3	FILL - brown and grey silty sand fill with trace gravel, rootlets and organic matter, humid		E	0.1 0.2		PID>1 ppm			
		FILL - brown and grey sand fill with trace gravel and organic matter, humid		E	0.5 0.6		PID>1 ppm			
	0.8	FILL - apparently medium dense yellow sand fill with trace brown sand and gravel, humid		E	1.0 1.1		PID>1 ppm	1		
	1.6	FILL - apparently medium dense brown and yellow sand fill with trace glass, brick and ceramic fragments, humid		E	1.5 1.6		PID>1 ppm			
	2.0			E	2.0 2.1		PID>1 ppm	2		
	2.4	SAND - apparently medium dense light grey fine to medium grained sand, humid		E	2.5 2.6		PID>1 ppm			
	3.0			E	3.0 3.1		PID>1 ppm	3		
	3.1	Bore discontinued at 3.1m - target depth reached								
	4							4		
	5							5		
	6							6		
	7							7		
	8							8		
	9							9		

RIG: Bobcat

DRILLER: GM

LOGGED: TG

CASING: Uncased

TYPE OF BORING: Solid Flight Auger

WATER OBSERVATIONS: No Free Groundwater Observed

REMARKS:

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	>	Water seep	S	Standard penetration test
E	Environmental sample	≡	Water level	V	Shear vane (kPa)

BOREHOLE LOG

CLIENT: Mostyn Copper Group Pty Ltd
PROJECT: Proposed Winx Stand
LOCATION: Leger Lawn, Royal Randwick Racecourse,
 43 Alison Road, Randwick

SURFACE LEVEL: 31.3 AHD
EASTING: 336190
NORTHING: 6246599
DIP/AZIMUTH: 90°/--

BORE No: BH503
PROJECT No: 86781.01
DATE: 20/5/2019
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
31	0.4	FILL - brown and grey silty sand fill with trace gravel, tile, brick, glass, rootlets and organic matter, humid		E	0.1 0.2		PID>1 pmm			
		FILL - apparently medium dense orange/yellow/brown silty sand fill with concrete, brick, glass, crushed sandstone and wood, humid		E	0.5 0.6		PID>1 pmm			
1	1.3	FILL - brown and grey sand with trace gravel and brick fragments, humid		E	1.0 1.1		PID>1 pmm	1		
				E	1.5 1.6		PID>1 pmm			
2	1.9	SAND - apparently medium dense light grey fine to medium grained sand, humid		E	2.0 2.1		PID>1 pmm	2		
				E	2.5 2.6		PID>1 pmm			
3	3.1	Bore discontinued at 3.1m - target depth reached						3		
4								4		
5								5		
6								6		
7								7		
8								8		
9								9		

RIG: Bobcat

DRILLER: GM

LOGGED: TG

CASING: Uncased

TYPE OF BORING: Solid Flight Auger

WATER OBSERVATIONS: No Free Groundwater Observed

REMARKS: BD2/20190520 at 2.5 m

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	>	Water seep	S	Standard penetration test
E	Environmental sample	≡	Water level	V	Shear vane (kPa)

BOREHOLE LOG

CLIENT: Mostyn Copper Group Pty Ltd
PROJECT: Proposed Winx Stand
LOCATION: Leger Lawn, Royal Randwick Racecourse,
 43 Alison Road, Randwick

SURFACE LEVEL: 30.9 AHD
EASTING: 336174
NORTHING: 6246585
DIP/AZIMUTH: 90°/--

BORE No: BH504
PROJECT No: 86781.01
DATE: 20/5/2019
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.3	FILL - brown and grey silty sand fill with trace gravel, rootlets and organic matter, humid		E	0.1 0.2		PID>1 ppm			
		FILL - apparently medium dense brown/yellow/grey fine to medium grained sand fill with trace gravel and ash, humid		E	0.5 0.6		PID>1 ppm			
	1			E	1.0 1.1		PID>1 ppm		1	
	1.3	FILL - brown and grey fine to medium grained sand fill with brick fragments, humid		E	1.5 1.6		PID>1 ppm			
	1.9	SAND - apparently medium dense light grey fine to medium grained sand, humid		E	2.0 2.1		PID>1 ppm		2	
	2.6	SAND - apparently dense dark brown/black aggregated sand (coffee rock), humid		E	2.5 2.6		PID>1 ppm			
	2.9	SAND - yellow fine to medium grained sand, humid								
	3.1	SAND - yellow fine to medium grained sand, humid							3	
		Bore discontinued at 3.1m - target depth reached								
	4								4	
	5								5	
	6								6	
	7								7	
	8								8	
	9								9	

RIG: Bobcat

DRILLER: GM

LOGGED: TG

CASING: Uncased

TYPE OF BORING: Solid Flight Auger

WATER OBSERVATIONS: No Free Groundwater Observed

REMARKS:

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	>	Water seep	S	Standard penetration test
E	Environmental sample	≡	Water level	V	Shear vane (kPa)

BOREHOLE LOG

CLIENT: Mostyn Copper Group Pty Ltd
PROJECT: Proposed Winx Stand
LOCATION: Leger Lawn, Royal Randwick Racecourse,
 43 Alison Road, Randwick

SURFACE LEVEL: 30.6 AHD
EASTING: 336156
NORTHING: 6246594
DIP/AZIMUTH: 90°/--

BORE No: BH505
PROJECT No: 86781.01
DATE: 20/5/2019
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
30 29 28 27 26 25 24 23 22 21	0.3	FILL - brown and grey silty sand fill with trace gravel, rootlets and organic matter, humid		E	0.1 0.2		PID<1 ppm			
		FILL - brown silty sand fill with trace gravel, humid		E	0.5 0.6					
	0.8	FILL - brown and grey gravelly sand fill with trace silt, humid		E	1.0 1.1					
	1.4	SAND - apparently medium dense light grey fine to medium grained sand, humid		E	1.5 1.6					
				E	2.0 2.1					
	2.5	Bore discontinued at 2.5m - target depth reached								

RIG: Bobcat

DRILLER: GM

LOGGED: TG

CASING: Uncased

TYPE OF BORING: Solid Flight Auger

WATER OBSERVATIONS: No Free Groundwater Observed

REMARKS: BD3/20180520 at 1.0 m

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	>	Water seep	S	Standard penetration test
E	Environmental sample	≡	Water level	V	Shear vane (kPa)

BOREHOLE LOG

CLIENT: Mostyn Copper Group Pty Ltd
PROJECT: Proposed Winx Stand
LOCATION: Leger Lawn, Royal Randwick Racecourse,
 43 Alison Road, Randwick

SURFACE LEVEL: 31.1 AHD
EASTING: 336147
NORTHING: 6246609
DIP/AZIMUTH: 90°/--

BORE No: BH506
PROJECT No: 86781.01
DATE: 20/5/2019
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
30	0.3	FILL - brown and grey silty sand fill with trace gravel, rootlets and organic matter, humid		E	0.1 0.2		PID>1 ppm			
		FILL - apparently medium dense brown and yellow fine to medium grained sand fill with trace gravel, brick, tile and ash, humid		E	0.5 0.6					
1				E	1.0 1.1					
1.4		SAND - apparently medium dense light grey fine to medium grained sand, humid		E	1.5 1.6					
2				E	2.0 2.1					
2.5		Bore discontinued at 2.5m - target depth reached								
3										
4										
5										
6										
7										
8										
9										

RIG: Bobcat

DRILLER: GM

LOGGED: TG

CASING: Uncased

TYPE OF BORING: Solid Flight Auger

WATER OBSERVATIONS: No Free Groundwater Observed

REMARKS:

SAMPLING & IN SITU TESTING LEGEND

A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	>	Water seep	S	Standard penetration test
E	Environmental sample	≡	Water level	V	Shear vane (kPa)

BOREHOLE LOG

CLIENT: Mostyn Copper Group Pty Ltd
PROJECT: Proposed Winx Stand
LOCATION: Leger Lawn, Royal Randwick Racecourse,
 43 Alison Road, Randwick

SURFACE LEVEL: 30.6 AHD
EASTING: 336129
NORTHING: 6246595
DIP/AZIMUTH: 90°/--

BORE No: BH507
PROJECT No: 86781.01
DATE: 20/5/2019
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
30 29 28 27 26 25 24 23 22 21	0.3	FILL - brown and grey silty sand fill with trace gravel, rootlets and organic matter, humid		E	0.1 0.2		PID>1 ppm			
		FILL - brown silty sand fill with trace gravel and ash, humid		E	0.5 0.6		PID>1 ppm			
	0.8	FILL - brown fine to medium grained sand fill with brick, wood, gravel and concrete fragments, humid		E	1.0 1.1		PID>1 ppm	1		
	1.4	FILL - brown and grey fine to medim grained sand fill with some angular igneous gravels, humid		E	1.5 1.6		PID>1 ppm			
	2.1	Bore discontinued at 2.1m - refusal on concrete		E	2.0 2.1		PID>1 ppm	2		
	3							3		
	4							4		
	5							5		
	6							6		
	7							7		
	8							8		
	9							9		

RIG: Bobcat

DRILLER: GM

LOGGED: TG

CASING: Uncased

TYPE OF BORING: Solid Flight Auger

WATER OBSERVATIONS: No Free Groundwater Observed

REMARKS: BD5/20190520 at 1.0 m

SAMPLING & IN SITU TESTING LEGEND



A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	>	Water seep	S	Standard penetration test
E	Environmental sample	≡	Water level	V	Shear vane (kPa)

BOREHOLE LOG

CLIENT: Mostyn Copper Group Pty Ltd
PROJECT: Proposed Winx Stand
LOCATION: Leger Lawn, Royal Randwick Racecourse,
 43 Alison Road, Randwick

SURFACE LEVEL: 30.9 AHD
EASTING: 336139
NORTHING: 6246576
DIP/AZIMUTH: 90°/--

BORE No: BH508
PROJECT No: 86781.01
DATE: 20/5/2019
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Well Construction Details	
				Type	Depth	Sample	Results & Comments			
	0.35	FILL - brown and grey silty sand fill with trace gravel, rootlets and organic matter, humid		E	0.1 0.2		PID>1 ppm			
	0.8	FILL - brown silty sand fill with trace gravel and ash, humid		E	0.5 0.6		PID>1 ppm			
	1.3	FILL - brown and grey gravelly sand fill with brick, concrete, crushed sandstone, igneous gravels and trace ash, humid		E	1.0 1.1		PID>1 ppm		1	
	2.3	FILL - apparently medium dense brown and grey fine to medium grained sand with trace gravel, humid		E	1.5 1.6		PID>1 ppm			
	2.3	SAND - apparently medium dense light grey fine to medium grained sand, humid		E	2.0 2.1		PID>1 ppm		2	
	3.0	Bore discontinued at 3.0m - target depth reached		E	2.5 2.6		PID>1 ppm			
	3								3	
	4								4	
	5								5	
	6								6	
	7								7	
	8								8	
	9								9	

RIG: Bobcat

DRILLER: GM

LOGGED: TG

CASING: Uncased

TYPE OF BORING: Solid Flight Auger

WATER OBSERVATIONS: No Free Groundwater Observed

REMARKS:

SAMPLING & IN SITU TESTING LEGEND


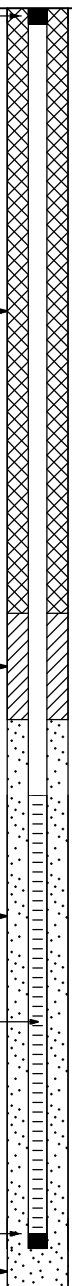



A	Auger sample	G	Gas sample	PID	Photo ionisation detector (ppm)
B	Bulk sample	P	Piston sample	PL(A)	Point load axial test Is(50) (MPa)
BLK	Block sample	U _s	Tube sample (x mm dia.)	PL(D)	Point load diametral test Is(50) (MPa)
C	Core drilling	W	Water sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	>	Water seep	S	Standard penetration test
E	Environmental sample	≡	Water level	V	Shear vane (kPa)

BOREHOLE LOG

CLIENT: Mostyn Copper Group Pty Ltd
PROJECT: Proposed Winx Stand
LOCATION: Leger Lawn, Royal Randwick Racecourse,
 43 Alison Road, Randwick

SURFACE LEVEL: 30.7 AHD
EASTING: 336157
NORTHING: 6246563
DIP/AZIMUTH: 90°/--

BORE No: BH509
PROJECT No: 86781.01
DATE: 20/5/2019
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing			Water	Well Construction Details		
				Type	Depth	Sample		Results & Comments		
30	0.8	FILL - apparently medium dense brown/oraneg/grey silty sand fill with trace brick, gravel, ash, crushed sandstone and ash, humid		E	0.1 0.2		PID>1 ppm		Gatic cover	
				E	0.5 0.6		PID>1 ppm			
1	1.2	FILL - brown sand fill with trace gravel and brick, humid		E	1.0 1.1		PID>1 ppm			
		FILL - brown/grey/orange fine to medium grained sand fill with trace gravel, humid		E	1.5 1.6		PID>1 ppm			
2	1.8	SAND - apparently medium dense light grey fine to medium grained sand, humid		E	2.0 2.1		PID>1 ppm		Grout 0.0-4.0m	
2.4	2.8	SAND - apparently dense dark brown/black aggregated sand (coffee rock), humid		E	2.5 2.6		PID>1 ppm			
3	2.8	SAND - yellow fine to medium grained sand, humid								
				E	3.5 3.6		PID>1 ppm			
4										
5										
6										
7										
8										
8.5										
9										
21										

RIG: Bobcat

DRILLER: GM

LOGGED: TG

CASING: Uncased

TYPE OF BORING: Solid Flight Auger

WATER OBSERVATIONS: Free groundwater observed at 5.5 m whilst drilling

REMARKS: BD4/20190520 at 1.0 m

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	G	Gas sample
B	Bulk sample	P	Piston sample
BLK	Block sample	U	Tube sample (x mm dia.)
C	Core drilling	W	Water sample
D	Disturbed sample	W	Water seep
E	Environmental sample	W	Water level
		PID	Photo ionisation detector (ppm)
		PL(A)	Point load axial test Is(50) (MPa)
		PL(D)	Point load diametral test Is(50) (MPa)
		pp	Pocket penetrometer (kPa)
		S	Standard penetration test
		V	Shear vane (kPa)



Groundwater Field Sheet

Project and Bore Installation Details

Bore / Standpipe ID:	BH509
Project Name:	
Project Number:	86781.01
Site Location:	
Bore GPS Co-ord:	
Installation Date:	20.5.19
GW Level (during drilling):	5.8 m bgl
Well Depth:	8.2 m bgl
Screened Interval:	5.2 m bgl
Contaminants/Comments:	-

Bore Volume = casing volume + filter pack volume

$$= \pi h_1 d_1^2 / 4 + n(\pi h_2 d_1^2 / 4 - \pi h_2 d_2^2 / 4)$$

Where: $\pi = 3.14$

n = porosity (0.3 for most filter pack material)

h_1 = height of water column

d_1 = diameter of annulus

h_2 = length of filter pack

d_2 = diameter of casing

Bore Vol Normally: $7.2 * h$

Bore Development Details

Date/Time:	21.5.19 / 10:30
Purged By:	79
GW Level (pre-purge):	5.59 m bgl
GW Level (post-purge):	5.9 m bgl
PSH observed:	Yes / <input checked="" type="checkbox"/> No (interface / visual). Thickness if observed:
Observed Well Depth:	7.82 m bgl
Estimated Bore Volume:	L
Total Volume Purged:	(target: no drill mud, min 3 well vol. or dry) 200L
Equipment:	Turner

Micropurge and Sampling Details

Date/Time:	27.5.19 / 0900
Sampled By:	79
Weather Conditions:	Dry, clear, cool
GW Level (pre-purge):	5.32 m bgl
GW Level (post sample):	5.41 m bgl
PSH observed:	Yes / <input checked="" type="checkbox"/> No (interface / visual). Thickness if observed:
Observed Well Depth:	7.34 m bgl
Estimated Bore Volume:	15 L
Total Volume Purged:	40 L
Equipment:	Peri Pump - LOPE Tubing

Water Quality Parameters

Time / Volume	Temp (°C)	DO (mg/L)	EC (µS or mS/cm)	pH	Turbidity	Redox (mV)
Stabilisation Criteria (3 readings)	0.1 °C	+/- 0.3 mg/L	+/- 3%	+/- 0.1	+/- 10%	+/- 10 mV
1	18.0	2.22	675	6.29	240	111
2	18.8	0.66	451	6.28	201	113
3	19.1	0.86	446	6.31	152	156
4	19.3	1.14	441	6.33	109	179
6	19.4	1.34	434	6.37	52	195
10	19.8	1.50	246	6.36	27	153
20	19.9	1.53	709	6.38	34	126
30	20.1	1.29	697	6.41	16	122
35	20.2	1.26	692	6.42	15	119
40	20.2	1.25	688	6.42	14	118
Additional Readings Following stabilisation:	DO % Sat	SPC	TDS			

Sample Details

Sampling Depth (rationale):	6.2 m bgl, Middle of water column
Sample Appearance (e.g. colour, siltiness, odour):	Clear, very slight yellow colour. No odour
Sample ID:	BH509
QA/QC Samples:	BOI/20190527
Sampling Containers and filtration:	2x HCl vials, 2x amber glass, 1x HNO3 vial, 1x phenol, 1x phos 45 µm inline filter
Comments / Observations:	

Appendix G

QA/QC Procedures and Results

QA/QC PROCEDURES AND RESULTS

Q1. Data Quality Objectives

The Detailed Site Investigation (DSI) was prepared with reference to the seven step data quality objective (DQO) process which is provided in Appendix B, Schedule B2 of the *National Environment Protection (Assessment of Site Contamination) Measure 1999* as amended 2013 (NEPC, 2013). The DQO process is outlined as follows:

- Stating the Problem;
- Identifying the Decision;
- Identifying Inputs to the Decision;
- Defining the Boundary of the Assessment;
- Developing a Decision Rule;
- Specifying Acceptable Limits on Decision Errors; and
- Optimising the Design for Obtaining Data.

The DQOs have been addressed within the report as shown in Table Q1.

Table Q1: Data Quality Objectives

Data Quality Objective	Report Section where Addressed
State the Problem	S1 Introduction
Identify the Decision	S14 Discussion and Recommendations S15 Conclusion
Identify Inputs to the Decision	S1 Introduction S3 Site Identification and Proposed Development S10 Assessment Criteria S12 Results of Investigation
Define the Boundary of the Assessment	S3 Site Identification and Proposed Development Site Drawing 1 - Appendix A
Develop a Decision Rule	S10 Assessment Criteria
Specify Acceptable Limits on Decision Errors	S9 Field Work and QAQC QA/QC Procedures and Results - Appendix G
Optimise the Design for Obtaining Data	S2 Scope of Works S9.1 Sample Location and Rationale QA/QC Procedures and Results - Appendix G

Q2. FIELD AND LABORATORY QUALITY CONTROL

The field and laboratory QC procedures and results are summarised in the following Table Q2. Reference should be made to the fieldwork and analysis procedures in Section 9 and the laboratory results certificates in Appendix I for further details.

Table Q2: Field and Laboratory QC

Item	Evaluation / Acceptance Criteria	Achievement
Analytical laboratories used	NATA accreditation	yes
Holding times	Various based on type of analysis	yes
Intra-laboratory replicates	5% of primary samples; <50% RPD (>5 x PQL)	yes ¹
Inter-laboratory replicates	5% of primary samples; <50% RPD (10-20 x PQL)	yes ¹
Trip Spikes	1 per sampling event; 60-140% recovery	yes
Trip Blanks	1 per sampling event; <PQL	yes

Note: 1 qualitative assessment of RPD results overall

In summary, the QC data is determined to be of sufficient quality to be considered acceptable for the assessment.

Q3. Data Quality Indicators

The reliability of field procedures and analytical results was assessed against the following data quality indicators (DQIs):

- Completeness – a measure of the amount of usable data from a data collection activity;
- Comparability – the confidence (qualitative) that data may be considered to be equivalent for each sampling and analytical event;
- Representativeness – the confidence (qualitative) of data representativeness of media present on-site;
- Precision – a measure of variability or reproducibility of data; and
- Accuracy – a measure of closeness of the data to the 'true' value.

The DQIs were assessed as outlined in the following Table Q3.

Table Q3: Data Quality Indicators

Data Quality Indicator	Method(s) of Achievement
Completeness	<p>Systematic and selected target locations sampled;</p> <p>Preparation of borehole logs, sample location plan and chain of custody records;</p> <p>Preparation of field groundwater sampling sheets;</p> <p>Laboratory sample receipt information received confirming receipt of samples intact and appropriateness of the chain of custody;</p> <p>Samples analysed for contaminants of potential concern (COPC) identified in the Conceptual Site Model (CSM);</p> <p>Completion of chain of custody (COC) documentation;</p> <p>NATA accredited laboratory results certificates provided by the laboratory;</p> <p>Satisfactory frequency and results for field and laboratory quality control (QC) samples as discussed in Section Q2.</p>
Comparability	<p>Using appropriate techniques for sample recovery, storage and transportation, which were the same for the duration of the project;</p> <p>Experienced sampler(s) used;</p> <p>Use of NATA registered laboratories, with test methods the same or similar between laboratories;</p> <p>Satisfactory results for field and laboratory QC samples.</p>
Representativeness	<p>Target media sampled;</p> <p>Sample numbers recovered and analysed are considered to be representative of the target media and complying with DQOs;</p> <p>Samples were extracted and analysed within holding times;</p> <p>Samples were analysed in accordance with the COC.</p>
Precision	<p>Field staff followed standard operating procedures;</p> <p>Acceptable RPD between original samples and replicates;</p> <p>Satisfactory results for all other field and laboratory QC samples.</p>
Accuracy	<p>Field staff followed standard operating procedures;</p> <p>Satisfactory results for all field and laboratory QC samples.</p>

Based on the above, it is considered that the DQIs have been complied with. As such, it is concluded that the field and laboratory test data obtained are reliable and useable for this assessment.

Appendix H

Tables H1, H2 and H3 (Summary of Laboratory Test Results)

Table H1: Summary of Laboratory Results – Metals, TRH, BTEX, PAH

			Metals								TRH								BTEX				PAH			
			Arsenic	Cadmium	Chromium (III)	Copper	Lead	Mercury (inorganic)	Nickel	Zinc	TRH C6 - C10	TRH >C10-C16	F1 (C6-C10)-BTEX	F2 (>C10-C16 less Naphthalene)	F3 (>C16-C34)	F4 (>C34-C40)	C6 - C9	C10 - C36	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene	Benzo(a)pyrene (BaP)	Benzo(a)pyrene TEQ	Total PAHs
		PQL	4.0	0.4	1.0	1.0	1.0	0.1	1.0	1.0	25.0	50.0	25.0	50.0	100.0	100.0	25	250	0.2	0.5	1.0	1.0	0.1	0.05	0.5	0.05
Sample ID	Depth	Sampled Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
DP, 2010c Investigation Results																										
GW3/0-0.5	0.0 - 0.5m	3/6/2009	<4 300 100	<0.5 100 NC	6 240 410	15 20000 190	17 600 1100	<0.1 400 NC	10 800 140	26 30000 450	- NC NC	- NC NC	- NL 180	- NL 120	- NC 300	- NC 2800	<25 - -	<250 - -	<0.5 NL 50	<0.5 NL 85	<1 NL 70	<3 NL 105	<0.1 NL NC	5 NC 0.7	- 4 NC	55.7 400 NC
GW3/0.8-1.3	0.8 - 1.3m	3/6/2009	<4 300 100	<0.5 100 NC	7 240 410	17 20000 190	220 600 1100	<0.1 400 NC	3 800 140	16 30000 450	- NC NC	- NC NC	- NL 180	- NL 120	- NC 300	- NC 2800	<25 - -	<250 - -	<0.5 NL 50	<0.5 NL 85	<1 NL 70	<3 NL 105	<0.1 NL NC	4.8 NC 0.7	- 4 NC	57.4 400 NC
TP107/0.3-0.5	0.3 - 0.5m	3/9/2009	<4 300 100	<0.5 100 NC	2 240 410	1 20000 190	5 600 1100	<0.1 400 NC	1 800 140	7 30000 450	- NC NC	- NC NC	- NL 180	- NL 120	- NC 300	- NC 2800	<25 - -	<250 - -	<0.5 NL 50	<0.5 NL 85	<1 NL 70	<3 NL 105	<0.1 NL NC	0.3 NC 0.7	- 4 NC	4.5 400 NC
BD2/090309	Duplicate of BH107/0.3-0.5		<4 300 100	<0.5 100 NC	1 240 410	1 20000 190	3 600 1100	<0.05 400 NC	<1 800 140	4 30000 450	- NC NC	- NC NC	- NL 180	- NL 120	- NC 300	- NC 2800	<25 - -	<250 - -	<0.5 NL 50	<0.5 NL 85	<1 NL 70	<3 NL 105	<0.1 NL NC	<0.05 NC 0.7	- 4 NC	<0.05 400 NC
TP107/1.1-1.7	1.1 1.7m	3/9/2009	<4 300 100	<0.5 100 NC	3 240 410	10 20000 190	24 600 1100	<0.1 400 NC	8 800 140	30 30000 450	- NC NC	- NC NC	- NL 180	- NL 120	- NC 300	- NC 2800	<25 - -	<250 - -	<0.5 NL 50	<0.5 NL 85	<1 NL 70	<3 NL 105	<0.1 NL NC	0.4 NC 0.7	- 4 NC	3.3 400 NC
TP109/0-0.3	0 - 0.3m	3/9/2009	<4 300 100	<0.5 100 NC	2 240 410	3 20000 190	16 600 1100	<0.1 400 NC	2 800 140	18 30000 450	- NC NC	- NC NC	- NL 180	- NL 120	- NC 300	- NC 2800	<25 - -	<250 - -	<0.5 NL 50	<0.5 NL 85	<1 NL 70	<3 NL 105	<0.1 NL NC	0.1 NC 0.7	- 4 NC	0.4 400 NC
TP109/1-1.5	1 - 1.5m	3/9/2009	<4 300 100	<0.5 100 NC	4 240 410	61 20000 190	29 600 1100	<0.1 400 NC	3 800 140	41 30000 450	- NC NC	- NC NC	- NL 180	- NL 120	- NC 300	- NC 2800	<25 - -	<250 - -	<0.5 NL 50	<0.5 NL 85	<1 NL 70	<3 NL 105	<0.1 NL NC	9 NC 0.7	- 4 NC	110.8 400 NC
TP109/1.8-2.5	1.8 - 2.5m	3/9/2009	<4 300 100	<0.5 100 NC	2 240 410	2 20000 190	6 600 1100	<0.1 400 NC	1 800 140	10 30000 450	- NC NC	- NC NC	- NL 180	- NL 120	- NC 300	- NC 2800	<25 - -	4600 - -	<0.5 NL 50	<0.5 NL 85	<1 NL 70	<3 NL 105	<0.1 NL NC	0.09 NC 0.7	- 4 NC	0.29 400 NC
DP, 2012 Investigation Results																										
TP211/0.5-0.7	0.5 - 0.7m	1/11/2012	<4 300 100	1.5 100 NC	6 240 410	21 20000 190	490 600 1100	7.3 400 NC	5 800 140	620 30000 450	- NC NC	- NC NC	- NL 180	- NL 120	- NC 300	- NC 2800	<25 - -	<250 - -	<0.5 NL 50	<0.5 NL 85	<1 NL 70	<3 NL 105	<0.1 NL NC	0.11 NC 0.7	- 4 NC	1.7 400 NC
TP211/0.8-1.1	0.8 - 1.1m	1/11/2012	<4 300 100	<0.5 100 NC	<1 240 410	<1 20000 190	3 600 1100	<0.1 400 NC	<1 800 140	2 30000 450	- NC NC	- NC NC	- NL 180	- NL 120	- NC 300	- NC 2800	<25 - -	<250 - -	<0.5 NL 50	<0.5 NL 85	<1 NL 70	<3 NL 105	<0.1 NL NC	<0.05 NC 0.7	- 4 NC	<1.5 400 NC
TP212/0.3-0.5	0.3 - 0.5m	1/11/2012	<4 300 100	<0.5 100 NC	3 240 410	9 20000 190	34 600 1100	0.1 400 NC	9 800 140	38 30000 450	- NC NC	- NC NC	- NL 180	- NL 120	- NC 300	- NC 2800	<25 - -	<250 - -	<0.5 NL 50	<0.5 NL 85	<1 NL 70	<3 NL 105	<0.1 NL NC	1.8 NC 0.7	- 4 NC	17.4 400 NC
TP212/1.1-1.5	1.1 - 1.5m	1/11/2012	<4 300 100	<0.5 100 NC	3 240 410	10 20000 190	56 600 1100	0.1 400 NC	7 800 140	44 30000 450	- NC NC	- NC NC	- NL 180	- NL 120	- NC 300	- NC 2800	<25 - -	<250 - -	<0.5 NL 50	<0.5 NL 85	<1 NL 70	<3 NL 105	<0.1 NL NC	0.62 NC 0.7	- 4 NC	6.7 400 NC
TP213/0-0.2	0.0 - 0.2m	1/11/2012	<4 300 100	<0.5 100 NC	4 240 410	12 20000 190	33 600 1100	<0.1 400 NC	6 800 140	26 30000 450	- NC NC	- NC NC	- NL 180	- NL 120	- NC 300	- NC 2800	<25 - -	<250 - -	<0.5 NL 50	<0.5 NL 85	<1 NL 70	<3 NL 105	<0.1 NL NC	0.1 NC 0.7	- 4 NC	1.6 400 NC
TP213/0.3-0.5	0.3 - 0.5m	1/11/2012	<4 300 100	<0.5 100 NC	4 240 410	8 20000 190	23 600 1100	<0.1 400 NC	4 800 140	17 30000 450	- NC NC	- NC NC	- NL 180	- NL 120	- NC 300	- NC 2800	<25 - -	<250 - -	<0.5 NL 50	<0.5 NL 85	<1 NL 70	<3 NL 105	<0.1 NL NC	0.05 NC 0.7	- 4 NC	<1.5 400 NC
TP220/0.4-0.6	0.4 - 0.6m	1/11/2012	<4 300 100	<0.5 100 NC	<1 240 410	<1 20000 190	3 600 1100	<0.1 400 NC	<1 800 140	4 30000 450	- NC NC	- NC NC	- NL 180	- NL 120	- NC 300	- NC 2800	<25 - -	<250 - -	<0.5 NL 50	<0.5 NL 85	<1 NL 70	<3 NL 105	<0.1 NL NC	<0.05 NC 0.7	- 4 NC	<1.5 400 NC
TP220/1.2-1.5	1.2 - 1.5m	1/11/2012	<4 300 100	<0.5 100 NC	3 240 410	6 20000 190	400 600 1100	<0.1 400 NC	2 800 140	120 30000 450	- NC NC	- NC NC	- NL 180	- NL 120	- NC 300	- NC 2800	<25 - -	<250 - -	<0.5 NL 50	<0.5 NL 85	<1 NL 70	<3 NL 105	<0.1 NL NC	0.11 NC 0.7	- 4 NC	1.8 400 NC
TP221/0-0.2	0.0 - 0.2m	1/11/2012	<4 300 100	<0.5 100 NC	3 240 410	5 20000 190	32 600 1100	<0.1 400 NC	4 800 140	40 30000 450	- NC NC	- NC NC	- NL 180	- NL 120	- NC 300	- NC 2800	<25 - -	<250 - -	<0.5 NL 50	<0.5 NL 85	<1 NL 70	<3 NL 105	<0.1 NL NC	0.5 NC 0.7	- 4 NC	5.2 400 NC
TP221/0.4-0.7	0.0 - 0.7m	1/11/2012	<4 300 100	<0.5 100 NC	6 240 410	6 20000 190	32 600 1100	<0.1 400 NC	3 800 140	45 30000 450	- NC NC	- NC NC	- NL 180	- NL 120	- NC 300	- NC 2800	<25 - -	<250 - -	<0.5 NL 50	<0.5 NL 85	<1 NL 70	<3 NL 105	<0.1 NL NC	1.5 NC 0.7	- 4 NC	18.7 400 NC
TP221/1.3-1.6	1.3 - 1.6m	1/11/2012	5 300 100	<0.5 100 NC	11 240 410	21 20000 190	73 600 1100	<0.1 400 NC	27 800 140	77 30000 450	- NC NC	- NC NC	- NL 180	- NL 120	- NC 300	- NC 2800	<25 - -	<250 - -	<0.5 NL 50	<0.5 NL 85	<1 NL 70	<3 NL 105	<0.1 NL NC	0.18 NC 0.7	- 4 NC	2.4 400 NC
TP222/0.3-0.5	0.3 - 0.5m	1/11/2012	<4 300 100	<0.5 100 NC	2 240 410	2 20000 190	8 600 1100	<0.1 400 NC	1 800 140	10 30000 450	- NC NC	- NC NC	- NL 180	- NL 120	-											

Table H1: Summary of Laboratory Results – Metals, TRH, BTEX, PAH

			Metals								TRH								BTEX				PAH			
			Arsenic	Cadmium	Chromium (III)	Copper	Lead	Mercury (inorganic)	Nickel	Zinc	TRH C6 - C10	TRH >C10-C16	F1 (C6-C10)- BTEX	F2 (>C10-C16 less Naphthalene)	F3 (>C16-C34)	F4 (>C34-C40)	C6 - C9	C10 - C36	Benzene	Toluene	Ethylbenzene	Total Xylenes	Naphthalene	Benzo(a)pyrene (BaP)	Benzo(a)pyrene TEQ	Total PAHs
		PQL	4.0	0.4	1.0	1.0	1.0	0.1	1.0	1.0	25.0	50.0	25.0	50.0	100.0	100.0	25	250	0.2	0.5	1.0	1.0	0.1	0.05	0.5	0.05
Sample ID	Depth	Sampled Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
Curent Investigation																										
BH501/1.0	1 - 1.1m	20/05/2019	5 300 100	<0.4 100 NC	4 240 410	10 20000 190	220 600 1100	0.1 400 NC	2 800 140	140 30000 450	<25 NC NC	<50 NC NC	<25 NL 180	<50 NL 120	<100 NC 300	<100 NC 2800	<100 NC 300	<100 NC	<0.2 NL 50	<0.5 NL 85	<1 NL 70	<1 NL 105	<0.1 NL NC	0.2 NC 0.7	<0.5 4 NC	2.1 400 NC
BD1/20190520	Duplicate of BH501/1.0		5 300 100	<0.4 100 NC	5 240 410	11 20000 190	270 600 1100	0.2 400 NC	2 800 140	140 30000 450	<25 NC NC	<50 NC NC	<25 NL 180	<50 NL 120	100 NC 300	130 NC 2800	100 NC 300	130 NC	<0.2 NL 50	<0.5 NL 85	<1 NL 70	<1 NL 105	<0.1 NL NC	0.3 NC 0.7	<0.5 4 NC	3 400 NC
BH502/0.1	0.1 - 0.2m	20/05/2019	<4 300 100	<0.4 100 NC	8 240 410	11 20000 190	25 600 1100	<0.1 400 NC	7 800 140	62 30000 450	<25 NC NC	<50 NC NC	<25 NL 180	<50 NL 120	<100 NC 300	<100 NC 2800	<100 NC 300	<100 NC	<0.2 NL 50	<0.5 NL 85	<1 NL 70	<1 NL 105	<0.1 NL NC	0.75 NC 0.7	1 4 NC	6.7 400 NC
BH502/2.5	2.5 - 2.6m	20/05/2019	<4 300 100	<0.4 100 NC	<1 240 410	<1 20000 190	2 600 1100	<0.1 400 NC	<1 800 140	2 30000 450	<25 NC NC	<50 NC NC	<25 NL 180	<50 NL 120	<100 NC 300	<100 NC 2800	<100 NC 300	<100 NC	<0.2 NL 50	<0.5 NL 85	<1 NL 70	<1 NL 105	<0.1 NL NC	<0.05 NC 0.7	<0.5 4 NC	<0.05 400 NC
BH503/0.5	0.5 - 0.6m	20/05/2019	<4 300 100	<0.4 100 NC	11 240 410	5 20000 190	25 600 1100	<0.1 400 NC	2 800 140	20 30000 450	<25 NC NC	<50 NC NC	<25 NL 180	<50 NL 120	<100 NC 300	<100 NC 2800	<100 NC 300	<100 NC	<0.2 NL 50	<0.5 NL 85	<1 NL 70	<1 NL 105	<0.1 NL NC	0.2 NC 0.7	<0.5 4 NC	2.5 400 NC
BH504/1.0	1 - 1.1m	20/05/2019	<4 300 100	<0.4 100 NC	3 240 410	4 20000 190	12 600 1100	<0.1 400 NC	2 800 140	17 30000 450	<25 NC NC	<50 NC NC	<25 NL 180	<50 NL 120	<100 NC 300	<100 NC 2800	<100 NC 300	<100 NC	<0.2 NL 50	<0.5 NL 85	<1 NL 70	<1 NL 105	<0.1 NL NC	0.2 NC 0.7	<0.5 4 NC	1.2 400 NC
BH504/2.0	2 - 2.1m	20/05/2019	<4 300 100	<0.4 100 NC	<1 240 410	1 20000 190	2 600 1100	<0.1 400 NC	<1 800 140	9 30000 450	<25 NC NC	<50 NC NC	<25 NL 180	<50 NL 120	<100 NC 300	<100 NC 2800	<100 NC 300	<100 NC	<0.2 NL 50	<0.5 NL 85	<1 NL 70	<1 NL 105	<0.1 NL NC	<0.05 NC 0.7	<0.5 4 NC	<0.05 400 NC
BH505/1.0	1 - 1.1m	20/05/2019	<4 300 100	<0.4 100 NC	4 240 410	17 20000 190	13 600 1100	<0.1 400 NC	28 800 140	20 30000 450	<25 NC NC	<50 NC NC	<25 NL 180	<50 NL 120	<100 NC 300	<100 NC 2800	<100 NC 300	<100 NC	<0.2 NL 50	<0.5 NL 85	<1 NL 70	<1 NL 105	<0.1 NL NC	0.08 NC 0.7	<0.5 4 NC	0.08 400 NC
BH506/1.0	1 - 1.1m	20/05/2019	<4 300 100	<0.4 100 NC	4 240 410	13 20000 190	150 600 1100	0.2 400 NC	3 800 140	71 30000 450	<25 NC NC	<50 NC NC	<25 NL 180	<50 NL 120	<100 NC 300	<100 NC 2800	<100 NC 300	<100 NC	<0.2 NL 50	<0.5 NL 85	<1 NL 70	<1 NL 105	0.3 NL NC	1.6 NC 0.7	2.4 4 NC	23 400 NC
BH507/0.5	0.5 - 0.6m	20/05/2019	<4 300 100	<0.4 100 NC	5 240 410	5 20000 190	12 600 1100	<0.1 400 NC	3 800 140	14 30000 450	<25 NC NC	<50 NC NC	<25 NL 180	<50 NL 120	<100 NC 300	<100 NC 2800	<100 NC 300	<100 NC	<0.2 NL 50	<0.5 NL 85	<1 NL 70	<1 NL 105	<0.1 NL NC	0.2 NC 0.7	<0.5 4 NC	0.95 400 NC
BH508/0.1	0.1 - 0.2m	20/05/2019	<4 300 100	<0.4 100 NC	4 240 410	7 20000 190	12 600 1100	<0.1 400 NC	3 800 140	31 30000 450	<25 NC NC	<50 NC NC	<25 NL 180	<50 NL 120	<100 NC 300	<100 NC 2800	<100 NC 300	<100 NC	<0.2 NL 50	<0.5 NL 85	<1 NL 70	<1 NL 105	<0.1 NL NC	0.08 NC 0.7	<0.5 4 NC	0.2 400 NC
BH508/1.0	1 - 1.1m	20/05/2019	<4 300 100	<0.4 100 NC	6 240 410	33 20000 190	39 600 1100	<0.1 400 NC	6 800 140	52 30000 450	<25 NC NC	<50 NC NC	<25 NL 180	<50 NL 120	240 NC 300	310 NC 2800	240 NC 300	310 NC	<0.2 NL 50	<0.5 NL 85	<1 NL 70	<1 NL 105	<0.1 NL NC	0.89 NC 0.7	1.4 4 NC	14 400 NC
BH509/0.5	0.5 - 0.6m	20/05/2019	<4 300 100	<0.4 100 NC	4 240 410	15 20000 190	15 600 1100	<0.1 400 NC	2 800 140	14 30000 450	<25 NC NC	<50 NC NC	<25 NL 180	<50 NL 120	100 NC 300	210 NC 2800	100 NC 300	210 NC	<0.2 NL 50	<0.5 NL 85	<1 NL 70	<1 NL 105	<0.1 NL NC	0.06 NC 0.7	<0.5 4 NC	0.06 400 NC
BH509/1.0	1 - 1.1m	20/05/2019	<4 300 100	<0.4 100 NC	2 240 410	8 20000 190	4 600 1100	<0.1 400 NC	3 800 140	7 30000 450	<25 NC NC	<50 NC NC	<25 NL 180	<50 NL 120	<100 NC 300	<100 NC 2800	<100 NC 300	<100 NC	<0.2 NL 50	<0.5 NL 85	<1 NL 70	<1 NL 105	<0.1 NL NC	0.08 NC 0.7	<0.5 4 NC	0.85 400 NC
BH509/3.5	3.5 - 3.6m	20/05/2019	<4 300 100	<0.4 100 NC	2 240 410	<1 20000 190	<1 600 1100	<0.1 400 NC	1 800 140	<1 30000 450	<25 NC NC	<50 NC NC	<25 NL 180	<50 NL 120	<100 NC 300	<100 NC 2800	<100 NC 300	<100 NC	<0.2 NL 50	<0.5 NL 85	<1 NL 70	<1 NL 105	<0.1 NL NC	<0.05 NC 0.7	<0.5 4 NC	<0.05 400 NC
BD4/20190520	Duplicate of BH509/1.0		<2 300 100	<0.4 100 NC	<5 240 410	<5 20000 190	<1 600 1100	<0.1 400 NC	<5 800 140	<5 30000 450	<20 NC NC	<50 NC NC	<20 NL 180	<50 NL 120	<100 NC 300	<100 NC 2800	<100 NC 300	<100 NC	<0.1 NL 50	<0.1 NL 85	<0.1 NL 70	<0.3 NL 105	<0.5 NL NC	<0.5 NC 0.7	1.2 4 NC	<0.5 400 NC

HIL / HSL exceedance

EIL / ESL exceedance

ML exceedance

HIL/HSL and EIL/ESL exceedance

ML and HIL/HSL/EIL/ESL exceedance

Indicates that asbestos has been detected by the lab below the PQL, refer to the lab report

Bold = Lab detections

Key:

Lab result

HIL/HSL value

EIL/ESL value

= DC exceedance

NT = Not tested

NL = Non limiting

NC = No criteria

NAD = No asbestos detected

Notes:

a QA/QC replicate of sample listed directly below the primary sample

HIL/HSL HIL C / HSL C - NEPC 2013, Schedule B1

EIL/ESL Urban Residential and Public Open Space - NEPC 2013, Schedule B1

Detailed Site Investigation for Contamination, Proposed Winx Stand
43 Alison Road, Randwick

Page 2 of 9

86781.01.R.001.Rev0
July 2019

Table H2: Summary of Laboratory Results – Phenol, OCP, OPP, PCB, Asbestos (50 g)

			Phenol	OCP								OPP	PCB	Asbestos (50 g)
			Phenol	DDT+DDE+DDD	Aldrin & Dieldrin	Total Chlordane	Total Endosulfan	Endrin	Heptachlor	HCB	Methoxychlor	Chlorpyrifos	Total PCB	Calculated Asbestos (AS)
		PQL	5.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
Sample ID	Depth	Sampled Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	
DP, 2010c Investigation Results														
GW3/0-0.5	0.0 - 0.5m	3/6/2009	<5 140 NC	<0.1 400 NC	<0.1 9 NC	<0.1 80 NC	<0.1 400 NC	<0.1 20 NC	<0.1 9 NC	<0.1 15 NC	<0.1 500 NC	<0.1 300 NC	<0.1 2 NC	NAD
GW3/0.8-1.3	0.8 - 1.3m	3/6/2009	- 140 NC	- 400 NC	- 9 NC	- 80 NC	- 400 NC	- 20 NC	- 9 NC	- 15 NC	- 500 NC	- 300 NC	- 2 NC	NAD
TP107/0.3-0.5	0.3 - 0.5m	3/9/2009	<5 140 NC	<0.1 400 NC	<0.1 9 NC	<0.1 80 NC	<0.1 400 NC	<0.1 20 NC	<0.1 9 NC	<0.1 15 NC	<0.1 500 NC	<0.1 300 NC	<0.1 2 NC	NT
BD2/090309	Duplicate of BH107/0.3-0.5		- 140 NC	- 400 NC	- 9 NC	- 80 NC	- 400 NC	- 20 NC	- 9 NC	- 15 NC	- 500 NC	- 300 NC	- 2 NC	NT
TP107/1.1-1.7	1.1 - 1.7m	3/9/2009	- 140 NC	- 400 NC	- 9 NC	- 80 NC	- 400 NC	- 20 NC	- 9 NC	- 15 NC	- 500 NC	- 300 NC	- 2 NC	NAD
TP109/0-0.3	0 - 0.3m	3/9/2009	- 140 NC	- 400 NC	- 9 NC	- 80 NC	- 400 NC	- 20 NC	- 9 NC	- 15 NC	- 500 NC	- 300 NC	- 2 NC	NAD
TP109/1-1.5	1 - 1.5m	3/9/2009	- 140 NC	- 400 NC	- 9 NC	- 80 NC	- 400 NC	- 20 NC	- 9 NC	- 15 NC	- 500 NC	- 300 NC	- 2 NC	NT
TP109/1.8-2.5	1.8 - 2.5m	3/9/2009	- 140 NC	- 400 NC	- 9 NC	- 80 NC	- 400 NC	- 20 NC	- 9 NC	- 15 NC	- 500 NC	- 300 NC	- 2 NC	NT
DP, 2012 Investigation Results														
TP211/0.5-0.7	0.5 - 0.7m	1/11/2012	<5 140 NC	<0.1 400 NC	<0.1 9 NC	<0.1 80 NC	<0.1 400 NC	<0.1 20 NC	<0.1 9 NC	<0.1 15 NC	<0.1 500 NC	<0.1 300 NC	<0.1 2 NC	NAD
TP211/0.8-1.1	0.8 - 1.1m	1/11/2012	- 140 NC	- 400 NC	- 9 NC	- 80 NC	- 400 NC	- 20 NC	- 9 NC	- 15 NC	- 500 NC	- 300 NC	- 2 NC	NT
TP212/0.3-0.5	0.3 - 0.5m	1/11/2012	<5 140 NC	<0.1 400 NC	<0.1 9 NC	<0.1 80 NC	<0.1 400 NC	<0.1 20 NC	<0.1 9 NC	<0.1 15 NC	<0.1 500 NC	<0.1 300 NC	<0.1 2 NC	NAD
TP212/1.1-1.5	1.1 - 1.5m	1/11/2012	- 140 NC	- 400 NC	- 9 NC	- 80 NC	- 400 NC	- 20 NC	- 9 NC	- 15 NC	- 500 NC	- 300 NC	- 2 NC	NAD
TP213/0-0.2	0.0 - 0.2m	1/11/2012	<5 140 NC	<0.1 400 NC	<0.1 9 NC	<0.1 80 NC	<0.1 400 NC	<0.1 20 NC	<0.1 9 NC	<0.1 15 NC	<0.1 500 NC	<0.1 300 NC	<0.1 2 NC	NT
TP213/0.3-0.5	0.3 - 0.5m	1/11/2012	- 140 NC	- 400 NC	- 9 NC	- 80 NC	- 400 NC	- 20 NC	- 9 NC	- 15 NC	- 500 NC	- 300 NC	- 2 NC	NAD
TP220/0.4-0.6	0.4 - 0.6m	1/11/2012	- 140 NC	- 400 NC	- 9 NC	- 80 NC	- 400 NC	- 20 NC	- 9 NC	- 15 NC	- 500 NC	- 300 NC	- 2 NC	NT
TP220/1.2-1.5	1.2 - 1.5m	1/11/2012	<5 140 NC	<0.1 400 NC	<0.1 9 NC	<0.1 80 NC	<0.1 400 NC	<0.1 20 NC	<0.1 9 NC	<0.1 15 NC	<0.1 500 NC	<0.1 300 NC	<0.1 2 NC	NAD
TP221/0-0.2	0.0 - 0.2m	1/11/2012	- 140 NC	- 400 NC	- 9 NC	- 80 NC	- 400 NC	- 20 NC	- 9 NC	- 15 NC	- 500 NC	- 300 NC	- 2 NC	NT
TP221/0.4-0.7	0.0 - 0.7m	1/11/2012	- 140 NC	- 400 NC	- 9 NC	- 80 NC	- 400 NC	- 20 NC	- 9 NC	- 15 NC	- 500 NC	- 300 NC	- 2 NC	NT
TP221/1.3-1.6	1.3 - 1.6m	1/11/2012	<5 140 NC	<0.1 400 NC	<0.1 9 NC	<0.1 80 NC	<0.1 400 NC	<0.1 20 NC	<0.1 9 NC	<0.1 15 NC	<0.1 500 NC	<0.1 300 NC	<0.1 2 NC	NAD
TP222/0.3-0.5	0.3 - 0.5m	1/11/2012	<5 140 NC	<0.1 400 NC	<0.1 9 NC	<0.1 80 NC	<0.1 400 NC	<0.1 20 NC	<0.1 9 NC	<0.1 15 NC	<0.1 500 NC	<0.1 300 NC	<0.1 2 NC	NAD
TP223/0.6-0.9	0.6 - 0.9m	1/11/2012	- 140 NC	- 400 NC	- 9 NC	- 80 NC	- 400 NC	- 20 NC	- 9 NC	- 15 NC	- 500 NC	- 300 NC	- 2 NC	NT
BD2/110112	Duplicate of TP223/0.6-0.9		- 140 NC	- 400 NC	- 9 NC	- 80 NC	- 400 NC	- 20 NC	- 9 NC	- 15 NC	- 500 NC	- 300 NC	- 2 NC	NT
BD2A/110112	Duplicate of TP223/0.6-0.9		- 140 NC	- 400 NC	- 9 NC	- 80 NC	- 400 NC	- 20 NC	- 9 NC	- 15 NC	- 500 NC	- 300 NC	- 2 NC	NT
TP223/1.5-1.6	1.5 - 1.6m	1/11/2012	- 140 NC	- 400 NC	- 9 NC	- 80 NC	- 400 NC	- 20 NC	- 9 NC	- 15 NC	- 500 NC	- 300 NC	- 2 NC	NT

Table H2: Summary of Laboratory Results – Phenol, OCP, OPP, PCB, Asbestos (50 g)

			Phenol	OCP								OPP	PCB	Asbestos (50 g)
			Phenol	DDT+DDE+DDD	Aldrin & Dieldrin	Total Chlordane	Total Endosulfan	Endrin	Heptachlor	HCB	Methoxychlor	Chlorpyrifos	Total PCB	Calculated Asbestos (AS)
		PQL	5.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
Sample ID	Depth	Sampled Date	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	
TP223/1.8-2.0	1.8 - 2.0m	1/11/2012	<5 140 NC	<0.1 400 NC	<0.1 9 NC	<0.1 80 NC	<0.1 400 NC	<0.1 20 NC	<0.1 9 NC	<0.1 15 NC	<0.1 500 NC	<0.1 300 NC	<0.1 2 NC	NAD
TP223/2.2-2.5	2.2 - 2.5m	1/11/2012	- 140 NC	- 400 NC	- 9 NC	- 80 NC	- 400 NC	- 20 NC	- 9 NC	- 15 NC	- 500 NC	- 300 NC	- 2 NC	NT
BH201/0.8-1.0	0.8 - 1.0m	1/12/2012	<5 140 NC	<0.1 400 NC	<0.1 9 NC	<0.1 80 NC	<0.1 400 NC	<0.1 20 NC	<0.1 9 NC	<0.1 15 NC	<0.1 500 NC	<0.1 300 NC	<0.1 2 NC	NAD
Current Investigation														
BH501/1.0	1 - 1.1m	20/05/2019	<5 140 NC	<0.1 400 NC	<0.1 9 NC	<0.1 80 NC	<0.1 400 NC	<0.1 20 NC	<0.1 9 NC	<0.1 15 NC	<0.1 500 NC	<0.1 300 NC	<0.1 2 NC	NAD
BD1/20190520	Duplicate of BH501/1.0		NT 140 NC	NT 400 NC	NT 9 NC	NT 80 NC	NT 400 NC	NT 20 NC	NT 9 NC	NT 15 NC	NT 500 NC	NT 300 NC	NT 2 NC	NT
BH502/0.1	0.1 - 0.2m	20/05/2019	<5 140 NC	<0.1 400 NC	<0.1 9 NC	<0.1 80 NC	<0.1 400 NC	<0.1 20 NC	<0.1 9 NC	<0.1 15 NC	<0.1 500 NC	<0.1 300 NC	<0.1 2 NC	NT
BH502/2.5	2.5 - 2.6m	20/05/2019	NT 140 NC	NT 400 NC	NT 9 NC	NT 80 NC	NT 400 NC	NT 20 NC	NT 9 NC	NT 15 NC	NT 500 NC	NT 300 NC	NT 2 NC	NT
BH503/0.5	0.5 - 0.6m	20/05/2019	<5 140 NC	<0.1 400 NC	<0.1 9 NC	<0.1 80 NC	<0.1 400 NC	<0.1 20 NC	<0.1 9 NC	<0.1 15 NC	<0.1 500 NC	<0.1 300 NC	<0.1 2 NC	NAD
BH504/1.0	1 - 1.1m	20/05/2019	<5 140 NC	<0.1 400 NC	<0.1 9 NC	<0.1 80 NC	<0.1 400 NC	<0.1 20 NC	<0.1 9 NC	<0.1 15 NC	<0.1 500 NC	<0.1 300 NC	<0.1 2 NC	NT
BH504/2.0	2 - 2.1m	20/05/2019	NT 140 NC	NT 400 NC	NT 9 NC	NT 80 NC	NT 400 NC	NT 20 NC	NT 9 NC	NT 15 NC	NT 500 NC	NT 300 NC	NT 2 NC	NT
BH505/1.0	1 - 1.1m	20/05/2019	<5 140 NC	<0.1 400 NC	<0.1 9 NC	<0.1 80 NC	<0.1 400 NC	<0.1 20 NC	<0.1 9 NC	<0.1 15 NC	<0.1 500 NC	<0.1 300 NC	<0.1 2 NC	NAD
BH506/1.0	1 - 1.1m	20/05/2019	<5 140 NC	<0.1 400 NC	<0.1 9 NC	<0.1 80 NC	<0.1 400 NC	<0.1 20 NC	<0.1 9 NC	<0.1 15 NC	<0.1 500 NC	<0.1 300 NC	<0.1 2 NC	NT
BH507/0.5	0.5 - 0.6m	20/05/2019	<5 140 NC	<0.1 400 NC	<0.1 9 NC	<0.1 80 NC	<0.1 400 NC	<0.1 20 NC	<0.1 9 NC	<0.1 15 NC	<0.1 500 NC	<0.1 300 NC	<0.1 2 NC	NT
BH508/0.1	0.1 - 0.2m	20/05/2019	NT 140 NC	NT 400 NC	NT 9 NC	NT 80 NC	NT 400 NC	NT 20 NC	NT 9 NC	NT 15 NC	NT 500 NC	NT 300 NC	NT 2 NC	NT
BH508/1.0	1 - 1.1m	20/05/2019	<5 140 NC	<0.1 400 NC	<0.1 9 NC	<0.1 80 NC	<0.1 400 NC	<0.1 20 NC	<0.1 9 NC	<0.1 15 NC	<0.1 500 NC	<0.1 300 NC	<0.1 2 NC	NAD
BH509/0.5	0.5 - 0.6m	20/05/2019	NT 140 NC	NT 400 NC	NT 9 NC	NT 80 NC	NT 400 NC	NT 20 NC	NT 9 NC	NT 15 NC	NT 500 NC	NT 300 NC	NT 2 NC	NT
BH509/1.0	1 - 1.1m	20/05/2019	<5 140 NC	<0.1 400 NC	<0.1 9 NC	<0.1 80 NC	<0.1 400 NC	<0.1 20 NC	<0.1 9 NC	<0.1 15 NC	<0.1 500 NC	<0.1 300 NC	<0.1 2 NC	NAD
BH509/3.5	3.5 - 3.6m	20/05/2019	NT 140 NC	NT 400 NC	NT 9 NC	NT 80 NC	NT 400 NC	NT 20 NC	NT 9 NC	NT 15 NC	NT 500 NC	NT 300 NC	NT 2 NC	NT
BD4/20190520	Duplicate of BH509/1.0		NT 140 NC	NT 400 NC	NT 9 NC	NT 80 NC	NT 400 NC	NT 20 NC	NT 9 NC	NT 15 NC	NT 500 NC	NT 300 NC	NT 2 NC	NT

■ HIL / HSL exceedance
 ■ EIL / ESL exceedance
 ■ ML exceedance
 ■ HIL/HSL and EIL/ESL exceedance
 Bold = Lab detections
 Key:

Lab result
HIL/HSL value
EIL/ESL value

■ ML and HIL/HSL/EIL/ESL exceedance
 red = DC exceedance
 NT = Not tested
 NL = Non limiting
 NC = No criteria
 NAD = No asbestos detected

■ Indicates that asbestos has been detected by the lab below the PQL, refer to the lab report

Notes:

a QA/QC replicate of sample listed directly below the primary sample

HIL/HSL HIL C / HSL C - NEPC 2013, Schedule B1
EIL/ESL Urban Residential and Public Open Space - NEPC 2013, Schedule B1

Table A1: Derivation Table

Sample ID	Sample Depth	Soil Type	Soil Texture	Clay Content	CEC	pH
BH501/1.0	1.0m	Sand	Coarse	1.00	9.20	8.30
BD1/20190520	0.0m	Sand	Coarse	1.00	9.20	8.30
BH502/0.1	0.1m	Sand	Coarse	1.00	9.20	8.30
BH502/2.5	2.5m	Sand	Coarse	1.00	9.20	8.30
BH503/0.5	0.5m	Sand	Coarse	1.00	9.20	8.30
BH504/1.0	1.0m	Sand	Coarse	1.00	9.20	8.30
BH504/2.0	2.0m	Sand	Coarse	1.00	9.20	8.30
BH505/1.0	1.0m	Sand	Coarse	1.00	9.20	8.30
BH506/1.0	1.0m	Sand	Coarse	1.00	9.20	8.30
BH507/0.5	0.5m	Sand	Coarse	1.00	9.20	8.30
BH508/0.1	0.1m	Sand	Coarse	1.00	9.20	8.30
BH508/1.0	1.0m	Sand	Coarse	1.00	9.20	8.30
BH509/0.5	0.5m	Sand	Coarse	1.00	9.20	8.30
BH509/1.0	1.0m	Sand	Coarse	1.00	9.20	8.30
BH509/3.5	3.5m	Sand	Coarse	1.00	9.20	8.30
BH501/1.0 - [TRIPLICATE]	0.0m	Sand	Coarse	1.00	9.20	8.30
BH508/1.0 - [TRIPLICATE]	0.0m	Sand	Coarse	1.00	9.20	8.30

Table QA1: Relative Percentage Difference Results – Intra-laboratory Replicates

[illegible]

Table H3 - Summary of Groundwater Laboratory Results

		HM in water - dissolved							TRH										BTEX					PAH					
		Arsenic (Filtered)	Cadmium (Filtered)	Chromium (III+VI) (Filtered)	Copper (Filtered)	Lead (Filtered)	Mercury (Filtered)	Nickel (Filtered)	Zinc (Filtered)	C10-C16	C16-C34	C34-C40	F2-NAPHTHALENE	C6 - C9	C10 - C14	C15 - C28	C29-C36	C6-C10 less BTEX (F1)	C6-C10	Benzene	Ethylbenzene	Toluene	Xylene (m & p)	Xylene (o)	Benzo(a)pyrene TEQ	Benzo(b,j,k)fluoranthene	Anthracene	Naphthalene	Phenanthrene
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	
PQL		0.001	0.0001	0.001	0.001	0.001	0.00005	0.001	0.001	0.05	0.1	0.1	0.05	0.01	0.05	0.1	0.1	0.01	0.01	0.001	0.001	0.001	0.002	0.001	0.005	0.002	0.001	0.001	0.001
NEPM 2013 HSL-C Recreational													NL					NL		NL	NL	NL	NL					NL	
ANZG (2018) / ANZECC (2000), Fresh Water		0.013	0.0002	0.001	0.0014	0.0034	0.00006	0.011	0.008											0.95	0.08	0.18	0.275	0.35	0.0001		0.00001	0.016	0.0006

Sample Name	Sampled Date	Notes																												
DP, 2010c Investigation																														
GW3	3/9/2009		<0.001	<0.0001	<0.001	<0.001	<0.001	<0.0005	<0.001	0.04	-	-	-	-	<0.01	<0.05	<0.1	<0.1	-	-	<0.001	<0.001	<0.001	<0.002	<0.001	-	<0.0002	<0.0001	<0.001	<0.001
BD1/090309	3/9/2009	Duplicate of GW3	<0.001	<0.0001	<0.001	<0.001	<0.001	<0.0005	<0.001	0.043	-	-	-	-	<0.01	<0.05	<0.1	<0.1	-	-	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-	-	-
DP, 2012 Investigation																														
BH201	1/13/2012		<0.001	<0.0001	<0.001	0.002	<0.001	<0.00005	<0.001	0.007	-	-	-	-	<0.01	<0.05	<0.1	<0.1	-	-	<0.001	<0.001	<0.001	<0.002	<0.001		<0.0002	<0.0001	<0.001	<0.001
BD2/13012012	1/13/2012	Duplicate of BH201	<0.001	<0.0001	<0.001	0.004	<0.001	<0.00005	0.002	0.12	-	-	-	-	<0.01	<0.05	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-
Current Investigation																														
BH509	5/27/2019		<0.001	<0.0001	<0.001	0.003	<0.001	<0.00005	0.003	0.003	<0.05	<0.1	<0.1	<0.05	<0.01	<0.05	<0.1	<0.1	<0.01	<0.01	<0.001	<0.001	<0.001	<0.002	<0.001	<0.0001	<0.0002	<0.0001	0.0004	<0.0001
BD1/20190306	5/27/2019	Duplicate of BH509	<0.001	<0.0001	<0.001	0.002	<0.001	<0.00005	0.003	0.002	<0.05	<0.1	<0.1	<0.05	<0.01	<0.05	<0.1	<0.1	<0.01	<0.01	<0.001	<0.001	<0.001	<0.002	<0.001	-	-	-	-	-

Notes:
NL - No Limit
ND - Not Detected
PQL - Practical Quantitation Limit

Exceeds the ANZG GILs for Marine Water

Exceeds the NEPM HSL-D for sand 4-8m bgl

Table H3 - Summary of Groundwater Laboratory Results

			OCP					OPP				VOCs in Water									
All Other PAHs	Total +ve PAH's		DDT	Endrin	g-BHC (Lindane)	Heptachlor	Other OCPs	Other OPPs	Parathion			1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	Isopropylbenzene	n-butylbenzene	n-propylbenzene	p-isopropyltoluene	sec-butylbenzene	Bromodichloromethane	Chloroform	Other VOCs
mg/L	mg/L		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
PQL	PQL	0.001	0.00001	0.00001	0.00001	0.00001	PQL	PQL	0.0002	0.002	0.05	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	PQL
NEPM 2013 HSL-C Recreational																					
ANZG (2018) / ANZECC (2000), Fresh Water			0.000006	0.00001	0.0002	0.00001			0.000004		0.32			0.03						0.37	

Sample Name	Sampled Date	Notes																				
DP, 2010c Investigation																						
GW3	3/9/2009		<PQL	<PQL	<0.0002	<0.0002	<0.0002	<0.0002	<PQL	<PQL	-	<0.002	<0.05	-	-	-	-	-	-	-	-	-
BD1/090309	3/9/2009	Duplicate of GW3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DP, 2012 Investigation																						
BH201	1/13/2012		<PQL	<PQL	<0.0002	<0.0002	<0.0002	<0.0002	<PQL	<PQL	-	<0.002	<0.05	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	<PQL
BD2/13012012	1/13/2012	Duplicate of BH201	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Current Investigation																						
BH509	5/27/2019		<PQL	0.00041	<0.00001	<0.00001	<0.00001	<0.00001	<PQL	<PQL	-	<0.002	<0.05	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<PQL
BD1/20190306	5/27/2019	Duplicate of BH509	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:
NL - No Limit
ND - Not Detected
PQL - Practical Quantitation Limit

	Exceeds the ANZG GILs for Marine Water
	Exceeds the NEPM HSL-D for sand 4-8m bgl

Appendix I

Laboratory Certificates of Analysis

Chain of Custody Documentation

Sample Receipt Advice

CERTIFICATE OF ANALYSIS 218159

Client Details

Client	Douglas Partners Pty Ltd
Attention	Tom Graham
Address	96 Hermitage Rd, West Ryde, NSW, 2114

Sample Details

Your Reference	86781.01, Randwick
Number of Samples	17 SOIL
Date samples received	23/05/2019
Date completed instructions received	23/05/2019

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	30/05/2019
Date of Issue	30/05/2019
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: Matt Tang
 Authorised by Asbestos Approved Signatory: Lucy Zhu

Results Approved By

Giovanni Agosti, Group Technical Manager
 Lucy Zhu, Senior Asbestos Analyst
 Nancy Zhang, Laboratory Manager, Sydney
 Nick Sarlamis, Inorganics Supervisor
 Steven Luong, Organics Supervisor

Authorised By



Nancy Zhang, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil

Our Reference		218159-1	218159-2	218159-3	218159-4	218159-5
Your Reference	UNITS	BH501/1.0	BH502/0.1	BH502/2.5	BH503/0.5	BH504/1.0
Date Sampled		20/05/2019	20/05/2019	20/05/2019	20/05/2019	20/05/2019
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	24/05/2019	24/05/2019	24/05/2019	24/05/2019	24/05/2019
Date analysed	-	25/05/2019	25/05/2019	25/05/2019	25/05/2019	25/05/2019
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	%	93	92	97	78	95

vTRH(C6-C10)/BTEXN in Soil

Our Reference		218159-6	218159-7	218159-8	218159-9	218159-10
Your Reference	UNITS	BH504/2.0	BH505/1.0	BH506/1.0	BH507/0.5	BH508/0.1
Date Sampled		20/05/2019	20/05/2019	20/05/2019	20/05/2019	20/05/2019
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	24/05/2019	24/05/2019	24/05/2019	24/05/2019	24/05/2019
Date analysed	-	25/05/2019	25/05/2019	25/05/2019	25/05/2019	25/05/2019
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	%	92	88	92	96	83

vTRH(C6-C10)/BTEXN in Soil

Our Reference		218159-11	218159-12	218159-13	218159-14	218159-15
Your Reference	UNITS	BH508/1.0	BH509/0.5	BH509/1.0	BH509/3.5	BD1/20190520
Date Sampled		20/05/2019	20/05/2019	20/05/2019	20/05/2019	20/05/2019
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	24/05/2019	24/05/2019	24/05/2019	24/05/2019	24/05/2019
Date analysed	-	25/05/2019	25/05/2019	25/05/2019	25/05/2019	25/05/2019
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	%	93	101	97	91	93

vTRH(C6-C10)/BTEXN in Soil

Our Reference		218159-16	218159-17
Your Reference	UNITS	Trip spike	Trip blank
Date Sampled		20/05/2019	20/05/2019
Type of sample		SOIL	SOIL
Date extracted	-	24/05/2019	24/05/2019
Date analysed	-	25/05/2019	25/05/2019
TRH C ₆ - C ₉	mg/kg	[NA]	<25
TRH C ₆ - C ₁₀	mg/kg	[NA]	<25
vTPH C ₆ - C ₁₀ less BTEX (F1)	mg/kg	[NA]	<25
Benzene	mg/kg	124%	<0.2
Toluene	mg/kg	123%	<0.5
Ethylbenzene	mg/kg	124%	<1
m+p-xylene	mg/kg	122%	<2
o-Xylene	mg/kg	122%	<1
naphthalene	mg/kg	[NA]	<1
Total +ve Xylenes	mg/kg	[NA]	<1
Surrogate aaa-Trifluorotoluene	%	87	98

svTRH (C10-C40) in Soil

Our Reference		218159-1	218159-2	218159-3	218159-4	218159-5
Your Reference	UNITS	BH501/1.0	BH502/0.1	BH502/2.5	BH503/0.5	BH504/1.0
Date Sampled		20/05/2019	20/05/2019	20/05/2019	20/05/2019	20/05/2019
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	24/05/2019	24/05/2019	24/05/2019	24/05/2019	24/05/2019
Date analysed	-	25/05/2019	25/05/2019	25/05/2019	25/05/2019	25/05/2019
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	%	94	95	96	96	95

svTRH (C10-C40) in Soil

Our Reference		218159-6	218159-7	218159-8	218159-9	218159-10
Your Reference	UNITS	BH504/2.0	BH505/1.0	BH506/1.0	BH507/0.5	BH508/0.1
Date Sampled		20/05/2019	20/05/2019	20/05/2019	20/05/2019	20/05/2019
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	24/05/2019	24/05/2019	24/05/2019	24/05/2019	24/05/2019
Date analysed	-	25/05/2019	25/05/2019	25/05/2019	25/05/2019	25/05/2019
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	%	96	96	95	97	129

svTRH (C10-C40) in Soil

Our Reference		218159-11	218159-12	218159-13	218159-14	218159-15
Your Reference	UNITS	BH508/1.0	BH509/0.5	BH509/1.0	BH509/3.5	BD1/20190520
Date Sampled		20/05/2019	20/05/2019	20/05/2019	20/05/2019	20/05/2019
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	24/05/2019	24/05/2019	24/05/2019	24/05/2019	24/05/2019
Date analysed	-	25/05/2019	25/05/2019	25/05/2019	25/05/2019	25/05/2019
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	220	130	<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	240	100	<100	<100	100
TRH >C ₃₄ -C ₄₀	mg/kg	310	210	<100	<100	130
Total +ve TRH (>C ₁₀ -C ₄₀)	mg/kg	540	310	<50	<50	230
Surrogate o-Terphenyl	%	97	95	77	90	91

PAHs in Soil						
Our Reference		218159-1	218159-2	218159-3	218159-4	218159-5
Your Reference	UNITS	BH501/1.0	BH502/0.1	BH502/2.5	BH503/0.5	BH504/1.0
Date Sampled		20/05/2019	20/05/2019	20/05/2019	20/05/2019	20/05/2019
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	24/05/2019	24/05/2019	24/05/2019	24/05/2019	24/05/2019
Date analysed	-	25/05/2019	25/05/2019	25/05/2019	25/05/2019	25/05/2019
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	0.5	<0.1	0.4	0.1
Anthracene	mg/kg	<0.1	0.2	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.4	1.1	<0.1	0.5	0.2
Pyrene	mg/kg	0.4	1	<0.1	0.4	0.2
Benzo(a)anthracene	mg/kg	0.2	0.6	<0.1	0.3	0.1
Chrysene	mg/kg	0.2	0.8	<0.1	0.2	0.2
Benzo(b,j+k)fluoranthene	mg/kg	0.3	1	<0.2	0.4	0.2
Benzo(a)pyrene	mg/kg	0.2	0.75	<0.05	0.2	0.2
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	0.2	<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	0.3	<0.1	0.1	<0.1
Total +ve PAH's	mg/kg	2.1	6.7	<0.05	2.5	1.2
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	1	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	1.0	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	1.1	<0.5	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	101	118	72	101	99

PAHs in Soil						
Our Reference		218159-6	218159-7	218159-8	218159-9	218159-10
Your Reference	UNITS	BH504/2.0	BH505/1.0	BH506/1.0	BH507/0.5	BH508/0.1
Date Sampled		20/05/2019	20/05/2019	20/05/2019	20/05/2019	20/05/2019
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	24/05/2019	24/05/2019	24/05/2019	24/05/2019	24/05/2019
Date analysed	-	25/05/2019	25/05/2019	25/05/2019	25/05/2019	25/05/2019
Naphthalene	mg/kg	<0.1	<0.1	0.3	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	0.4	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	0.3	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	2.8	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	0.6	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	5.1	0.1	0.1
Pyrene	mg/kg	<0.1	<0.1	3.9	0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	2.2	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	1.9	0.2	<0.1
Benzo(b,j,k)fluoranthene	mg/kg	<0.2	<0.2	2.6	0.3	<0.2
Benzo(a)pyrene	mg/kg	<0.05	0.08	1.6	0.2	0.08
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	0.6	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	0.2	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	0.7	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	0.08	23	0.95	0.2
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	2.4	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	2.4	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	2.4	<0.5	<0.5
Surrogate p-Terphenyl-d14	%	91	112	76	77	112

PAHs in Soil						
Our Reference		218159-11	218159-12	218159-13	218159-14	218159-15
Your Reference	UNITS	BH508/1.0	BH509/0.5	BH509/1.0	BH509/3.5	BD1/20190520
Date Sampled		20/05/2019	20/05/2019	20/05/2019	20/05/2019	20/05/2019
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	24/05/2019	24/05/2019	24/05/2019	24/05/2019	24/05/2019
Date analysed	-	25/05/2019	25/05/2019	25/05/2019	25/05/2019	25/05/2019
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	0.4	<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	1.3	<0.1	0.2	<0.1	0.2
Anthracene	mg/kg	0.3	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	3.0	<0.1	0.2	<0.1	0.5
Pyrene	mg/kg	2.8	<0.1	0.2	<0.1	0.5
Benzo(a)anthracene	mg/kg	1.6	<0.1	0.1	<0.1	0.3
Chrysene	mg/kg	1	<0.1	0.1	<0.1	0.4
Benzo(b,j,k)fluoranthene	mg/kg	1	<0.2	<0.2	<0.2	0.6
Benzo(a)pyrene	mg/kg	0.89	0.06	0.08	<0.05	0.3
Indeno(1,2,3-c,d)pyrene	mg/kg	0.5	<0.1	<0.1	<0.1	0.1
Dibenzo(a,h)anthracene	mg/kg	0.2	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	0.6	<0.1	<0.1	<0.1	0.1
Total +ve PAH's	mg/kg	14	0.06	0.85	<0.05	3.0
Benzo(a)pyrene TEQ calc (zero)	mg/kg	1.4	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	1.4	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	1.4	<0.5	<0.5	<0.5	0.5
Surrogate <i>p</i> -Terphenyl-d14	%	85	90	127	91	89

PAHs in Soil			
Our Reference		218159-18	218159-19
Your Reference	UNITS	BH501/1.0 - [TRIPLICATE]	BH508/1.0 - [TRIPLICATE]
Date Sampled		20/05/2019	20/05/2019
Type of sample		SOIL	SOIL
Date extracted	-	24/05/2019	24/05/2019
Date analysed	-	25/05/2019	25/05/2019
Naphthalene	mg/kg	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	0.3
Acenaphthene	mg/kg	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1
Phenanthrene	mg/kg	0.2	0.9
Anthracene	mg/kg	<0.1	0.3
Fluoranthene	mg/kg	0.5	2.2
Pyrene	mg/kg	0.4	2.4
Benzo(a)anthracene	mg/kg	0.2	1.3
Chrysene	mg/kg	0.3	1.5
Benzo(b,j+k)fluoranthene	mg/kg	0.4	2.1
Benzo(a)pyrene	mg/kg	0.3	1.4
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	0.6
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	0.2	0.8
Total +ve PAH's	mg/kg	2.6	14
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	1.8
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	1.9
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	1.9
Surrogate <i>p</i> -Terphenyl-d14	%	95	94

Organochlorine Pesticides in soil						
Our Reference		218159-1	218159-2	218159-4	218159-5	218159-7
Your Reference	UNITS	BH501/1.0	BH502/0.1	BH503/0.5	BH504/1.0	BH505/1.0
Date Sampled		20/05/2019	20/05/2019	20/05/2019	20/05/2019	20/05/2019
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	24/05/2019	24/05/2019	24/05/2019	24/05/2019	24/05/2019
Date analysed	-	25/05/2019	25/05/2019	25/05/2019	25/05/2019	25/05/2019
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	%	101	127	93	95	96

Organochlorine Pesticides in soil					
Our Reference		218159-8	218159-9	218159-11	218159-13
Your Reference	UNITS	BH506/1.0	BH507/0.5	BH508/1.0	BH509/1.0
Date Sampled		20/05/2019	20/05/2019	20/05/2019	20/05/2019
Type of sample		SOIL	SOIL	SOIL	SOIL
Date extracted	-	24/05/2019	24/05/2019	24/05/2019	24/05/2019
Date analysed	-	25/05/2019	25/05/2019	25/05/2019	25/05/2019
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	%	94	99	103	98

Organophosphorus Pesticides

Our Reference		218159-1	218159-2	218159-4	218159-5	218159-7
Your Reference	UNITS	BH501/1.0	BH502/0.1	BH503/0.5	BH504/1.0	BH505/1.0
Date Sampled		20/05/2019	20/05/2019	20/05/2019	20/05/2019	20/05/2019
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	24/05/2019	24/05/2019	24/05/2019	24/05/2019	24/05/2019
Date analysed	-	25/05/2019	25/05/2019	25/05/2019	25/05/2019	25/05/2019
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
Chlorpyrifos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-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	%	101	127	93	95	96

Organophosphorus Pesticides

Our Reference		218159-8	218159-9	218159-11	218159-13
Your Reference	UNITS	BH506/1.0	BH507/0.5	BH508/1.0	BH509/1.0
Date Sampled		20/05/2019	20/05/2019	20/05/2019	20/05/2019
Type of sample		SOIL	SOIL	SOIL	SOIL
Date extracted	-	24/05/2019	24/05/2019	24/05/2019	24/05/2019
Date analysed	-	25/05/2019	25/05/2019	25/05/2019	25/05/2019
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
Chlorpyrifos	mg/kg	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-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	%	94	99	103	98

PCBs in Soil						
Our Reference		218159-1	218159-2	218159-4	218159-5	218159-7
Your Reference	UNITS	BH501/1.0	BH502/0.1	BH503/0.5	BH504/1.0	BH505/1.0
Date Sampled		20/05/2019	20/05/2019	20/05/2019	20/05/2019	20/05/2019
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date extracted	-	24/05/2019	24/05/2019	24/05/2019	24/05/2019	24/05/2019
Date analysed	-	25/05/2019	25/05/2019	25/05/2019	25/05/2019	25/05/2019
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	%	101	127	93	95	96

PCBs in Soil					
Our Reference		218159-8	218159-9	218159-11	218159-13
Your Reference	UNITS	BH506/1.0	BH507/0.5	BH508/1.0	BH509/1.0
Date Sampled		20/05/2019	20/05/2019	20/05/2019	20/05/2019
Type of sample		SOIL	SOIL	SOIL	SOIL
Date extracted	-	24/05/2019	24/05/2019	24/05/2019	24/05/2019
Date analysed	-	25/05/2019	25/05/2019	25/05/2019	25/05/2019
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	%	94	99	103	98

Acid Extractable metals in soil

Our Reference		218159-1	218159-2	218159-3	218159-4	218159-5
Your Reference	UNITS	BH501/1.0	BH502/0.1	BH502/2.5	BH503/0.5	BH504/1.0
Date Sampled		20/05/2019	20/05/2019	20/05/2019	20/05/2019	20/05/2019
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	24/05/2019	24/05/2019	24/05/2019	24/05/2019	24/05/2019
Date analysed	-	24/05/2019	24/05/2019	24/05/2019	24/05/2019	24/05/2019
Arsenic	mg/kg	5	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	4	8	<1	11	3
Copper	mg/kg	10	11	<1	5	4
Lead	mg/kg	220	25	2	25	12
Mercury	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	2	7	<1	2	2
Zinc	mg/kg	140	62	2	20	17

Acid Extractable metals in soil

Our Reference		218159-6	218159-7	218159-8	218159-9	218159-10
Your Reference	UNITS	BH504/2.0	BH505/1.0	BH506/1.0	BH507/0.5	BH508/0.1
Date Sampled		20/05/2019	20/05/2019	20/05/2019	20/05/2019	20/05/2019
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	24/05/2019	24/05/2019	24/05/2019	24/05/2019	24/05/2019
Date analysed	-	24/05/2019	24/05/2019	24/05/2019	24/05/2019	24/05/2019
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	<1	4	4	5	4
Copper	mg/kg	1	17	13	5	7
Lead	mg/kg	2	13	150	12	12
Mercury	mg/kg	<0.1	<0.1	0.2	<0.1	<0.1
Nickel	mg/kg	<1	28	3	3	3
Zinc	mg/kg	9	20	71	14	31

Acid Extractable metals in soil						
Our Reference		218159-11	218159-12	218159-13	218159-14	218159-15
Your Reference	UNITS	BH508/1.0	BH509/0.5	BH509/1.0	BH509/3.5	BD1/20190520
Date Sampled		20/05/2019	20/05/2019	20/05/2019	20/05/2019	20/05/2019
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	24/05/2019	24/05/2019	24/05/2019	24/05/2019	24/05/2019
Date analysed	-	24/05/2019	24/05/2019	24/05/2019	24/05/2019	24/05/2019
Arsenic	mg/kg	<4	<4	<4	<4	5
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	6	4	2	2	5
Copper	mg/kg	33	15	8	<1	11
Lead	mg/kg	39	15	4	<1	270
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	0.2
Nickel	mg/kg	6	2	3	1	2
Zinc	mg/kg	52	14	7	<1	140

Misc Soil - Inorg						
Our Reference		218159-1	218159-2	218159-4	218159-5	218159-7
Your Reference	UNITS	BH501/1.0	BH502/0.1	BH503/0.5	BH504/1.0	BH505/1.0
Date Sampled		20/05/2019	20/05/2019	20/05/2019	20/05/2019	20/05/2019
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	24/05/2019	24/05/2019	24/05/2019	24/05/2019	24/05/2019
Date analysed	-	24/05/2019	24/05/2019	24/05/2019	24/05/2019	24/05/2019
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5	<5

Misc Soil - Inorg					
Our Reference		218159-8	218159-9	218159-11	218159-13
Your Reference	UNITS	BH506/1.0	BH507/0.5	BH508/1.0	BH509/1.0
Date Sampled		20/05/2019	20/05/2019	20/05/2019	20/05/2019
Type of sample		SOIL	SOIL	SOIL	SOIL
Date prepared	-	24/05/2019	24/05/2019	24/05/2019	24/05/2019
Date analysed	-	24/05/2019	24/05/2019	24/05/2019	24/05/2019
Total Phenolics (as Phenol)	mg/kg	<5	<5	<5	<5

Moisture						
Our Reference	UNITS	218159-1	218159-2	218159-3	218159-4	218159-5
Your Reference		BH501/1.0	BH502/0.1	BH502/2.5	BH503/0.5	BH504/1.0
Date Sampled		20/05/2019	20/05/2019	20/05/2019	20/05/2019	20/05/2019
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	24/05/2019	24/05/2019	24/05/2019	24/05/2019	24/05/2019
Date analysed	-	25/05/2019	25/05/2019	25/05/2019	25/05/2019	25/05/2019
Moisture	%	5.5	6.4	5.3	7.6	6.8

Moisture						
Our Reference	UNITS	218159-6	218159-7	218159-8	218159-9	218159-10
Your Reference		BH504/2.0	BH505/1.0	BH506/1.0	BH507/0.5	BH508/0.1
Date Sampled		20/05/2019	20/05/2019	20/05/2019	20/05/2019	20/05/2019
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	24/05/2019	24/05/2019	24/05/2019	24/05/2019	24/05/2019
Date analysed	-	25/05/2019	25/05/2019	25/05/2019	25/05/2019	25/05/2019
Moisture	%	4.0	3.7	5.5	4.1	6.9

Moisture						
Our Reference	UNITS	218159-11	218159-12	218159-13	218159-14	218159-15
Your Reference		BH508/1.0	BH509/0.5	BH509/1.0	BH509/3.5	BD1/20190520
Date Sampled		20/05/2019	20/05/2019	20/05/2019	20/05/2019	20/05/2019
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	24/05/2019	24/05/2019	24/05/2019	24/05/2019	24/05/2019
Date analysed	-	25/05/2019	25/05/2019	25/05/2019	25/05/2019	25/05/2019
Moisture	%	7.6	5.6	5.2	11	11

Asbestos ID - soils						
Our Reference	UNITS	218159-1	218159-2	218159-4	218159-5	218159-7
Your Reference		BH501/1.0	BH502/0.1	BH503/0.5	BH504/1.0	BH505/1.0
Date Sampled		20/05/2019	20/05/2019	20/05/2019	20/05/2019	20/05/2019
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date analysed	-	27/05/2019	27/05/2019	27/05/2019	27/05/2019	27/05/2019
Sample mass tested	g	Approx. 35g	Approx. 35g	Approx. 35g	Approx. 35g	Approx. 35g
Sample Description	-	Brown sandy soil & rocks	Brown sandy soil & rocks	Brown sandy soil & rocks	Brown sandy soil & rocks	Brown sandy 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		218159-8	218159-9	218159-11	218159-13
Your Reference	UNITS	BH506/1.0	BH507/0.5	BH508/1.0	BH509/1.0
Date Sampled		20/05/2019	20/05/2019	20/05/2019	20/05/2019
Type of sample		SOIL	SOIL	SOIL	SOIL
Date analysed	-	27/05/2019	27/05/2019	27/05/2019	27/05/2019
Sample mass tested	g	Approx. 40g	Approx. 10g	Approx. 40g	Approx. 35g
Sample Description	-	Brown sandy soil & rocks	Brown sandy soil & rocks	Brown sandy soil & rocks	Brown sandy 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
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected

Misc Inorg - Soil			
Our Reference		218159-3	218159-14
Your Reference	UNITS	BH502/2.5	BH509/3.5
Date Sampled		20/05/2019	20/05/2019
Type of sample		SOIL	SOIL
Date prepared	-	27/05/2019	27/05/2019
Date analysed	-	27/05/2019	27/05/2019
pH 1:5 soil:water	pH Units	7.9	8.8

CEC			
Our Reference		218159-3	218159-14
Your Reference	UNITS	BH502/2.5	BH509/3.5
Date Sampled		20/05/2019	20/05/2019
Type of sample		SOIL	SOIL
Date prepared	-	28/05/2019	28/05/2019
Date analysed	-	28/05/2019	28/05/2019
Exchangeable Ca	meq/100g	0.2	17
Exchangeable K	meq/100g	<0.1	0.1
Exchangeable Mg	meq/100g	<0.1	0.30
Exchangeable Na	meq/100g	<0.1	<0.1
Cation Exchange Capacity	meq/100g	<1	18

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-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-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Inorg-031	Total Phenolics by segmented flow analyser (in line distillation with colourimetric finish). Solids are extracted in a caustic media prior to analysis.
Metals-009	Determination of exchangeable cations and cation exchange capacity in soils using 1M Ammonium Chloride exchange and ICP-AES analytical finish.
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	<p>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.</p> <p>For soil results:-</p> <ol style="list-style-type: none"> 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. <p>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.</p>
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)-BTX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.
Org-016	<p>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)-BTX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.</p> <p>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.</p>

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	218159-2
Date extracted	-			24/05/2019	1	24/05/2019	24/05/2019		24/05/2019	24/05/2019
Date analysed	-			25/05/2019	1	25/05/2019	25/05/2019		25/05/2019	25/05/2019
TRH C ₆ - C ₉	mg/kg	25	Org-016	<25	1	<25	<25	0	89	90
TRH C ₆ - C ₁₀	mg/kg	25	Org-016	<25	1	<25	<25	0	89	90
Benzene	mg/kg	0.2	Org-016	<0.2	1	<0.2	<0.2	0	79	79
Toluene	mg/kg	0.5	Org-016	<0.5	1	<0.5	<0.5	0	84	85
Ethylbenzene	mg/kg	1	Org-016	<1	1	<1	<1	0	96	96
m+p-xylene	mg/kg	2	Org-016	<2	1	<2	<2	0	94	94
o-Xylene	mg/kg	1	Org-016	<1	1	<1	<1	0	96	97
naphthalene	mg/kg	1	Org-014	<1	1	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	95	1	93	97	4	94	94

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]	11	24/05/2019	24/05/2019		[NT]	[NT]
Date analysed	-			[NT]	11	25/05/2019	25/05/2019		[NT]	[NT]
TRH C ₆ - C ₉	mg/kg	25	Org-016	[NT]	11	<25	<25	0	[NT]	[NT]
TRH C ₆ - C ₁₀	mg/kg	25	Org-016	[NT]	11	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-016	[NT]	11	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-016	[NT]	11	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-016	[NT]	11	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-016	[NT]	11	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-016	[NT]	11	<1	<1	0	[NT]	[NT]
naphthalene	mg/kg	1	Org-014	[NT]	11	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	[NT]	11	93	91	2	[NT]	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	218159-2
Date extracted	-			24/05/2019	1	24/05/2019	24/05/2019		24/05/2019	24/05/2019
Date analysed	-			25/05/2019	1	25/05/2019	25/05/2019		25/05/2019	25/05/2019
TRH C ₁₀ - C ₁₄	mg/kg	50	Org-003	<50	1	<50	<50	0	110	105
TRH C ₁₅ - C ₂₈	mg/kg	100	Org-003	<100	1	<100	<100	0	111	113
TRH C ₂₉ - C ₃₆	mg/kg	100	Org-003	<100	1	<100	<100	0	113	83
TRH >C ₁₀ -C ₁₆	mg/kg	50	Org-003	<50	1	<50	<50	0	110	105
TRH >C ₁₆ -C ₃₄	mg/kg	100	Org-003	<100	1	<100	<100	0	111	113
TRH >C ₃₄ -C ₄₀	mg/kg	100	Org-003	<100	1	<100	<100	0	113	83
Surrogate o-Terphenyl	%		Org-003	94	1	94	97	3	120	122

QUALITY CONTROL: svTRH (C10-C40) in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	11	24/05/2019	24/05/2019		[NT]	[NT]
Date analysed	-			[NT]	11	25/05/2019	25/05/2019		[NT]	[NT]
TRH C ₁₀ - C ₁₄	mg/kg	50	Org-003	[NT]	11	<50	<50	0	[NT]	[NT]
TRH C ₁₅ - C ₂₈	mg/kg	100	Org-003	[NT]	11	<100	<100	0	[NT]	[NT]
TRH C ₂₉ - C ₃₆	mg/kg	100	Org-003	[NT]	11	220	240	9	[NT]	[NT]
TRH >C ₁₀ -C ₁₆	mg/kg	50	Org-003	[NT]	11	<50	<50	0	[NT]	[NT]
TRH >C ₁₆ -C ₃₄	mg/kg	100	Org-003	[NT]	11	240	250	4	[NT]	[NT]
TRH >C ₃₄ -C ₄₀	mg/kg	100	Org-003	[NT]	11	310	330	6	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-003	[NT]	11	97	97	0	[NT]	[NT]

QUALITY CONTROL: PAHs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	218159-2
Date extracted	-			27/05/2019	1	24/05/2019	24/05/2019		24/05/2019	24/05/2019
Date analysed	-			28/05/2019	1	25/05/2019	25/05/2019		25/05/2019	25/05/2019
Naphthalene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	92	90
Acenaphthylene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	94	102
Phenanthrene	mg/kg	0.1	Org-012	<0.1	1	0.1	0.6	143	94	82
Anthracene	mg/kg	0.1	Org-012	<0.1	1	<0.1	0.2	67	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-012	<0.1	1	0.4	1.1	93	98	#
Pyrene	mg/kg	0.1	Org-012	<0.1	1	0.4	0.9	77	90	#
Benzo(a)anthracene	mg/kg	0.1	Org-012	<0.1	1	0.2	0.5	86	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-012	<0.1	1	0.2	0.9	127	91	71
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-012	<0.2	1	0.3	1	108	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-012	<0.05	1	0.2	0.76	117	70	107
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	<0.1	1	0.1	0.2	67	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	<0.1	1	0.1	0.2	67	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-012	103	1	101	90	12	98	99

QUALITY CONTROL: PAHs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	11	24/05/2019	24/05/2019		[NT]	[NT]
Date analysed	-			[NT]	11	25/05/2019	25/05/2019		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-012	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Acenaphthylene	mg/kg	0.1	Org-012	[NT]	11	0.4	0.3	29	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-012	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-012	[NT]	11	0.1	<0.1	0	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-012	[NT]	11	1.3	1.1	17	[NT]	[NT]
Anthracene	mg/kg	0.1	Org-012	[NT]	11	0.3	0.3	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-012	[NT]	11	3.0	3.0	0	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-012	[NT]	11	2.8	2.9	4	[NT]	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-012	[NT]	11	1.6	1.7	6	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-012	[NT]	11	1	3.8	117	[NT]	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-012	[NT]	11	1	5.6	139	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-012	[NT]	11	0.89	3.7	122	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	[NT]	11	0.5	0.6	18	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	[NT]	11	0.2	0.2	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	[NT]	11	0.6	0.7	15	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-012	[NT]	11	85	84	1	[NT]	[NT]

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	218159-2
Date extracted	-			24/05/2019	1	24/05/2019	24/05/2019		24/05/2019	24/05/2019
Date analysed	-			25/05/2019	1	25/05/2019	25/05/2019		25/05/2019	25/05/2019
HCB	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	91	98
gamma-BHC	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	88	109
Heptachlor	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	88	92
delta-BHC	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	106	101
Heptachlor Epoxide	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	105	72
gamma-Chlordane	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	103	114
Dieldrin	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	108	113
Endrin	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	102	96
pp-DDD	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	100	110
Endosulfan II	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	75	103
Methoxychlor	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-005	100	1	101	112	10	98	93

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	11	24/05/2019	24/05/2019		[NT]	[NT]
Date analysed	-			[NT]	11	25/05/2019	25/05/2019		[NT]	[NT]
HCB	mg/kg	0.1	Org-005	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-005	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
gamma-BHC	mg/kg	0.1	Org-005	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-005	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-005	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
delta-BHC	mg/kg	0.1	Org-005	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-005	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-005	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
gamma-Chlordane	mg/kg	0.1	Org-005	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-005	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-005	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-005	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-005	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-005	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-005	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-005	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-005	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-005	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-005	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-005	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-005	[NT]	11	103	110	7	[NT]	[NT]

QUALITY CONTROL: Organophosphorus Pesticides					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	218159-2
Date extracted	-			24/05/2019	1	24/05/2019	24/05/2019		24/05/2019	24/05/2019
Date analysed	-			25/05/2019	1	25/05/2019	25/05/2019		25/05/2019	25/05/2019
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	115	101
Chlorpyrifos-methyl	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	71	75
Dimethoate	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	113	108
Fenitrothion	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	83	73
Malathion	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	80	61
Parathion	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	132	104
Ronnel	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	78	110
Surrogate TCMX	%		Org-008	100	1	101	112	10	98	93

QUALITY CONTROL: Organophosphorus Pesticides					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	11	24/05/2019	24/05/2019		[NT]	[NT]
Date analysed	-			[NT]	11	25/05/2019	25/05/2019		[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-008	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-008	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos	mg/kg	0.1	Org-008	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-008	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-008	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-008	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-008	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-008	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Fenitrothion	mg/kg	0.1	Org-008	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Malathion	mg/kg	0.1	Org-008	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-008	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-008	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-008	[NT]	11	103	110	7	[NT]	[NT]

QUALITY CONTROL: PCBs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	218159-2
Date extracted	-			24/05/2019	1	24/05/2019	24/05/2019		24/05/2019	24/05/2019
Date analysed	-			25/05/2019	1	25/05/2019	25/05/2019		25/05/2019	25/05/2019
Aroclor 1016	mg/kg	0.1	Org-006	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-006	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-006	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-006	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-006	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-006	<0.1	1	<0.1	<0.1	0	98	99
Aroclor 1260	mg/kg	0.1	Org-006	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCLMX	%		Org-006	100	1	101	112	10	98	93

QUALITY CONTROL: PCBs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	11	24/05/2019	24/05/2019		[NT]	[NT]
Date analysed	-			[NT]	11	25/05/2019	25/05/2019		[NT]	[NT]
Aroclor 1016	mg/kg	0.1	Org-006	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-006	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-006	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-006	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-006	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-006	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1260	mg/kg	0.1	Org-006	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCLMX	%		Org-006	[NT]	11	103	110	7	[NT]	[NT]

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	218159-2
Date prepared	-			23/05/2019	1	24/05/2019	24/05/2019		23/05/2019	24/05/2019
Date analysed	-			24/05/2019	1	24/05/2019	24/05/2019		24/05/2019	24/05/2019
Arsenic	mg/kg	4	Metals-020	<4	1	5	<4	22	111	116
Cadmium	mg/kg	0.4	Metals-020	<0.4	1	<0.4	<0.4	0	108	104
Chromium	mg/kg	1	Metals-020	<1	1	4	3	29	109	104
Copper	mg/kg	1	Metals-020	<1	1	10	7	35	106	111
Lead	mg/kg	1	Metals-020	<1	1	220	160	32	108	112
Mercury	mg/kg	0.1	Metals-021	<0.1	1	0.1	0.1	0	93	92
Nickel	mg/kg	1	Metals-020	<1	1	2	2	0	107	105
Zinc	mg/kg	1	Metals-020	<1	1	140	110	24	109	114

QUALITY CONTROL: Acid Extractable metals in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	11	24/05/2019	24/05/2019		[NT]	[NT]
Date analysed	-			[NT]	11	24/05/2019	24/05/2019		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	11	<4	5	22	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	11	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	11	6	5	18	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	11	33	42	24	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	11	39	37	5	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	11	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	11	6	6	0	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	11	52	35	39	[NT]	[NT]

QUALITY CONTROL: Misc Soil - Inorg						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	218159-2
Date prepared	-			24/05/2019	1	24/05/2019	24/05/2019		24/05/2019	24/05/2019
Date analysed	-			24/05/2019	1	24/05/2019	24/05/2019		24/05/2019	24/05/2019
Total Phenolics (as Phenol)	mg/kg	5	Inorg-031	<5	1	<5	<5	0	98	100

QUALITY CONTROL: Misc Inorg - Soil						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	[NT]
Date prepared	-			27/05/2019	[NT]	[NT]	[NT]	[NT]	27/05/2019	[NT]
Date analysed	-			27/05/2019	[NT]	[NT]	[NT]	[NT]	27/05/2019	[NT]
pH 1:5 soil:water	pH Units		Inorg-001	[NT]	[NT]	[NT]	[NT]	[NT]	101	[NT]

QUALITY CONTROL: CEC					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	[NT]
Date prepared	-			28/05/2019	3	28/05/2019	28/05/2019		28/05/2019	[NT]
Date analysed	-			28/05/2019	3	28/05/2019	28/05/2019		28/05/2019	[NT]
Exchangeable Ca	meq/100g	0.1	Metals-009	<0.1	3	0.2	0.2	0	102	[NT]
Exchangeable K	meq/100g	0.1	Metals-009	<0.1	3	<0.1	<0.1	0	101	[NT]
Exchangeable Mg	meq/100g	0.1	Metals-009	<0.1	3	<0.1	<0.1	0	100	[NT]
Exchangeable Na	meq/100g	0.1	Metals-009	<0.1	3	<0.1	<0.1	0	99	[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: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

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: A portion of the supplied sample was sub-sampled for asbestos analysis according to Envirolab procedures. We cannot guarantee that this sub-sample is indicative of the entire sample. Envirolab recommends supplying 40-50g of sample in its own container.


Note: Samples were sub-sampled from jars provided by the client.

PAHs in Soil - # Percent recovery for the matrix spike is not possible to report as the high concentration of analytes in sample 218159-2 has caused interference.

The laboratory RPD acceptance criteria has been exceeded for 218159-1. Therefore a triplicate result has been issued as laboratory sample number s218159-18.

The laboratory RPD acceptance criteria has been exceeded for 218159-11. Therefore a triplicate result has been issued as laboratory sample number s218159-19.

Project No: 86781.01				Suburb: Randwick				To: ELS			
Project Name: Leger Lawn - RRR				Order Number							
Project Manager: Tom Graham				Sampler: Tom Graham				Attn: Aileen Hie			
Emails: Tom.Graham@douglaspartners.com.au				Phone:							
Date Required: Same day <input type="checkbox"/> 24 hours <input type="checkbox"/> 48 hours <input type="checkbox"/> 72 hours <input type="checkbox"/> Standard <input checked="" type="checkbox"/>				Email: ahie@envirolab.com.au							
Prior Storage: <input type="checkbox"/> Esky <input checked="" type="checkbox"/> Fridge <input type="checkbox"/> Shelved Do samples contain 'potential' HBM? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If YES, then handle, transport and store in accordance with FPM HAZID)											

Sample ID	Lab ID	Date Sampled	Sample Type	Container Type	Analytes								Notes/preservation
			S - soil W - water	G - glass P - plastic	Combo 8a	Combo 3	pH, CEC	TRH/BTEX					
BH501/1.0	1	20.5.19	S	G	X								
BH502/0.1	2		S	G	X								
BH502/2.5	3		S	G		X	X						
BH503/0.5	4		S	G	X								
BH504/1.0	5		S	G	X								
BH504/2.0	6		S	G		X							
BH505/1.0	7		S	G	X								
BH506/1.0	8		S	G	X								
BH507/0.5	9		S	G	X								
BH508/0.1	10		S	G		X							
BH508/1.0	11		S	G	X								
BH509/0.5	12		S	G		X							
BH509/1.0	13		S	G	X								
BH509/3.5	14		S	G		X	X						
BD1/20190520	15		S	G		X							
BD4/20190520	-		S	G		X							Interlab Duplicate - Please dispatch to Eurofins MGT
Trip Spike/Blank	16/17		S	G				X					
PQL (S) mg/kg					ANZECC PQLs req'd for all water analytes <input type="checkbox"/>								
PQL = practical quantitation limit. If none given, default to Laboratory Method Detection Limit													
Metals to Analyse: 8HM unless specified here: 8													
Total number of samples in container: 16 Relinquished by: 79 Transported to laboratory by:													
Send Results to: Douglas Partners Pty Ltd				Address				Phone:				Fax:	
Signed: 				Received by: Ming Yenn To				Date & Time: 23/05/19 1620					

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

Job No: 218159

Date Received: 23/05/19

Time Received: 1620

Received by: 117

Temp: Cool/Ambient

Cooling: Ice/Icepack

Security: Intact/Broken/None

SAMPLE RECEIPT ADVICE

Client Details

Client	Douglas Partners Pty Ltd
Attention	Tom Graham

Sample Login Details

Your reference	86781.01, Randwick
Envirolab Reference	218159
Date Sample Received	23/05/2019
Date Instructions Received	23/05/2019
Date Results Expected to be Reported	30/05/2019

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	17 SOIL
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	13.9
Cooling Method	Ice Pack
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Aileen Hie

Phone: 02 9910 6200
Fax: 02 9910 6201
Email: ahie@envirolab.com.au

Jacinta Hurst

Phone: 02 9910 6200
Fax: 02 9910 6201
Email: jhurst@envirolab.com.au

Analysis Underway, details on the following page:

Sample ID	VTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides	PCBs in Soil	Acid Extractable metals in soil	Misc Soil - Inorg	Asbestos ID - soils	Misc Inorg - Soil	CEC
BH501/1.0	✓	✓	✓	✓	✓	✓	✓	✓	✓		
BH502/0.1	✓	✓	✓	✓	✓	✓	✓	✓	✓		
BH502/2.5	✓	✓	✓				✓			✓	✓
BH503/0.5	✓	✓	✓	✓	✓	✓	✓	✓	✓		
BH504/1.0	✓	✓	✓	✓	✓	✓	✓	✓	✓		
BH504/2.0	✓	✓	✓				✓				
BH505/1.0	✓	✓	✓	✓	✓	✓	✓	✓	✓		
BH506/1.0	✓	✓	✓	✓	✓	✓	✓	✓	✓		
BH507/0.5	✓	✓	✓	✓	✓	✓	✓	✓	✓		
BH508/0.1	✓	✓	✓				✓				
BH508/1.0	✓	✓	✓	✓	✓	✓	✓	✓	✓		
BH509/0.5	✓	✓	✓				✓				
BH509/1.0	✓	✓	✓	✓	✓	✓	✓	✓	✓		
BH509/3.5	✓	✓	✓				✓			✓	✓
BD1/20190520	✓	✓	✓				✓				
Trip spike	✓										
Trip blank	✓										

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.

CERTIFICATE OF ANALYSIS 218416

Client Details

Client	Douglas Partners Pty Ltd
Attention	Tom Graham
Address	96 Hermitage Rd, West Ryde, NSW, 2114

Sample Details

Your Reference	<u>86781.01, Randwick</u>
Number of Samples	4 water
Date samples received	28/05/2019
Date completed instructions received	28/05/2019

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	04/06/2019
Date of Issue	04/06/2019
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 *	

Results Approved By

Diego Bigolin, Team Leader, Inorganics
 Giovanni Agosti, Group Technical Manager
 Steven Luong, Organics Supervisor

Authorised By



Nancy Zhang, Laboratory Manager

VOCs in water		
Our Reference		218416-1
Your Reference	UNITS	BH509
Date Sampled		27/05/2019
Type of sample		water
Date extracted	-	30/05/2019
Date analysed	-	31/05/2019
Dichlorodifluoromethane	µg/L	<10
Chloromethane	µg/L	<10
Vinyl Chloride	µg/L	<10
Bromomethane	µg/L	<10
Chloroethane	µg/L	<10
Trichlorofluoromethane	µg/L	<10
1,1-Dichloroethene	µg/L	<1
Trans-1,2-dichloroethene	µg/L	<1
1,1-dichloroethane	µg/L	<1
Cis-1,2-dichloroethene	µg/L	<1
Bromochloromethane	µg/L	<1
Chloroform	µg/L	<1
2,2-dichloropropane	µg/L	<1
1,2-dichloroethane	µg/L	<1
1,1,1-trichloroethane	µg/L	<1
1,1-dichloropropene	µg/L	<1
Cyclohexane	µg/L	<1
Carbon tetrachloride	µg/L	<1
Benzene	µg/L	<1
Dibromomethane	µg/L	<1
1,2-dichloropropane	µg/L	<1
Trichloroethene	µg/L	<1
Bromodichloromethane	µg/L	<1
trans-1,3-dichloropropene	µg/L	<1
cis-1,3-dichloropropene	µg/L	<1
1,1,2-trichloroethane	µg/L	<1
Toluene	µg/L	<1
1,3-dichloropropane	µg/L	<1
Dibromochloromethane	µg/L	<1
1,2-dibromoethane	µg/L	<1
Tetrachloroethene	µg/L	<1
1,1,1,2-tetrachloroethane	µg/L	<1
Chlorobenzene	µg/L	<1
Ethylbenzene	µg/L	<1

VOCs in water		
Our Reference		218416-1
Your Reference	UNITS	BH509
Date Sampled		27/05/2019
Type of sample		water
Bromoform	µg/L	<1
m+p-xylene	µg/L	<2
Styrene	µg/L	<1
1,1,2,2-tetrachloroethane	µg/L	<1
o-xylene	µg/L	<1
1,2,3-trichloropropane	µg/L	<1
Isopropylbenzene	µg/L	<1
Bromobenzene	µg/L	<1
n-propyl benzene	µg/L	<1
2-chlorotoluene	µg/L	<1
4-chlorotoluene	µg/L	<1
1,3,5-trimethyl benzene	µg/L	<1
Tert-butyl benzene	µg/L	<1
1,2,4-trimethyl benzene	µg/L	<1
1,3-dichlorobenzene	µg/L	<1
Sec-butyl benzene	µg/L	<1
1,4-dichlorobenzene	µg/L	<1
4-isopropyl toluene	µg/L	<1
1,2-dichlorobenzene	µg/L	<1
n-butyl benzene	µg/L	<1
1,2-dibromo-3-chloropropane	µg/L	<1
1,2,4-trichlorobenzene	µg/L	<1
Hexachlorobutadiene	µg/L	<1
1,2,3-trichlorobenzene	µg/L	<1
Surrogate Dibromofluoromethane	%	100
Surrogate toluene-d8	%	101
Surrogate 4-BFB	%	104

vTRH(C6-C10)/BTEXN in Water					
Our Reference		218416-1	218416-2	218416-3	218416-4
Your Reference	UNITS	BH509	BD1/20190527	Trip Spike	Trip Blank
Date Sampled		27/05/2019	27/05/2019	27/05/2019	27/05/2019
Type of sample		water	water	water	water
Date extracted	-	30/05/2019	30/05/2019	30/05/2019	30/05/2019
Date analysed	-	31/05/2019	31/05/2019	31/05/2019	31/05/2019
TRH C ₆ - C ₉	µg/L	<10	<10	[NA]	<10
TRH C ₆ - C ₁₀	µg/L	<10	<10	[NA]	<10
TRH C ₆ - C ₁₀ less BTEX (F1)	µg/L	<10	<10	[NA]	<10
Benzene	µg/L	<1	<1	100%	<1
Toluene	µg/L	<1	<1	103%	<1
Ethylbenzene	µg/L	<1	<1	109%	<1
m+p-xylene	µg/L	<2	<2	100%	<2
o-xylene	µg/L	<1	<1	105%	<1
Naphthalene	µg/L	<1	<1	[NA]	<1
Surrogate Dibromofluoromethane	%	100	98	99	100
Surrogate toluene-d8	%	101	99	102	101
Surrogate 4-BFB	%	104	103	105	107

svTRH (C10-C40) in Water			
Our Reference		218416-1	218416-2
Your Reference	UNITS	BH509	BD1/20190527
Date Sampled		27/05/2019	27/05/2019
Type of sample		water	water
Date extracted	-	29/05/2019	29/05/2019
Date analysed	-	30/05/2019	30/05/2019
TRH C ₁₀ - C ₁₄	µg/L	<50	<50
TRH C ₁₅ - C ₂₈	µg/L	<100	<100
TRH C ₂₉ - C ₃₆	µg/L	<100	<100
TRH >C ₁₀ - C ₁₆	µg/L	<50	<50
TRH >C ₁₀ - C ₁₆ less Naphthalene (F2)	µg/L	<50	<50
TRH >C ₁₆ - C ₃₄	µg/L	<100	<100
TRH >C ₃₄ - C ₄₀	µg/L	<100	<100
Surrogate o-Terphenyl	%	84	91

PAHs in Water - Low Level		
Our Reference		218416-1
Your Reference	UNITS	BH509
Date Sampled		27/05/2019
Type of sample		water
Date extracted	-	29/05/2019
Date analysed	-	30/05/2019
Naphthalene	µg/L	0.4
Acenaphthylene	µg/L	<0.1
Acenaphthene	µg/L	<0.1
Fluorene	µg/L	<0.1
Phenanthrene	µg/L	<0.1
Anthracene	µg/L	<0.1
Fluoranthene	µg/L	<0.1
Pyrene	µg/L	<0.1
Benzo(a)anthracene	µg/L	<0.1
Chrysene	µg/L	<0.1
Benzo(b,j+k)fluoranthene	µg/L	<0.2
Benzo(a)pyrene	µg/L	<0.1
Indeno(1,2,3-c,d)pyrene	µg/L	<0.1
Dibenzo(a,h)anthracene	µg/L	<0.1
Benzo(g,h,i)perylene	µg/L	<0.1
Benzo(a)pyrene TEQ	µg/L	<0.5
Total +ve PAH's	µg/L	0.41
Surrogate <i>p</i> -Terphenyl-d14	%	100

OCP in water - low level		
Our Reference		218416-1
Your Reference	UNITS	BH509
Date Sampled		27/05/2019
Type of sample		water
Date extracted	-	30/05/2019
Date analysed	-	30/05/2019
HCB	µg/L	<0.01
alpha-BHC	µg/L	<0.01
gamma-BHC	µg/L	<0.01
beta-BHC	µg/L	<0.01
Heptachlor	µg/L	<0.01
delta-BHC	µg/L	<0.01
Aldrin	µg/L	<0.01
Heptachlor Epoxide	µg/L	<0.01
gamma-Chlordane	µg/L	<0.01
alpha-Chlordane	µg/L	<0.01
Endosulfan I	µg/L	<0.01
pp-DDE	µg/L	<0.01
Dieldrin	µg/L	<0.01
Endrin	µg/L	<0.01
pp-DDD	µg/L	<0.01
Endosulfan II	µg/L	<0.01
DDT	µg/L	<0.006
Endrin Aldehyde	µg/L	<0.01
Endosulfan Sulphate	µg/L	<0.01
Methoxychlor	µg/L	<0.01
Surrogate TCMX	%	94

OP Pesticides in water LL		
Our Reference		218416-1
Your Reference	UNITS	BH509
Date Sampled		27/05/2019
Type of sample		water
Date extracted	-	30/05/2019
Date analysed	-	30/05/2019
Diazinon	µg/L	<0.01
Dimethoate	µg/L	<0.01
Chlorpyrifos-methyl	µg/L	<0.01
Ronnel	µg/L	<0.01
Chlorpyrifos	µg/L	<0.01
Fenitrothion	µg/L	<0.01
Bromophos ethyl	µg/L	<0.01
Ethion	µg/L	<0.01
Surrogate TCMX	%	94

PCBs in Water - Low Level		
Our Reference	UNITS	218416-1
Your Reference		BH509
Date Sampled		27/05/2019
Type of sample		water
Date extracted	-	30/05/2019
Date analysed	-	30/05/2019
Aroclor 1016	µg/L	<0.1
Aroclor 1221	µg/L	<0.1
Aroclor 1232	µg/L	<0.1
Aroclor 1242	µg/L	<0.1
Aroclor 1248	µg/L	<0.1
Aroclor 1254	µg/L	<0.1
Aroclor 1260	µg/L	<0.1
Surrogate TCLMX	%	94

HM in water - dissolved			
Our Reference		218416-1	218416-2
Your Reference	UNITS	BH509	BD1/20190527
Date Sampled		27/05/2019	27/05/2019
Type of sample		water	water
Date prepared	-	29/05/2019	29/05/2019
Date analysed	-	29/05/2019	29/05/2019
Arsenic-Dissolved	µg/L	<1	<1
Cadmium-Dissolved	µg/L	<0.1	<0.1
Chromium-Dissolved	µg/L	<1	<1
Copper-Dissolved	µg/L	3	2
Lead-Dissolved	µg/L	<1	<1
Mercury-Dissolved	µg/L	<0.05	<0.05
Nickel-Dissolved	µg/L	<1	<1
Zinc-Dissolved	µg/L	3	2

Total Phenolics in Water		
Our Reference		218416-1
Your Reference	UNITS	BH509
Date Sampled		27/05/2019
Type of sample		water
Date extracted	-	29/05/2019
Date analysed	-	29/05/2019
Total Phenolics (as Phenol)	mg/L	<0.05

Cations in water Dissolved		
Our Reference		218416-1
Your Reference	UNITS	BH509
Date Sampled		27/05/2019
Type of sample		water
Date digested	-	30/05/2019
Date analysed	-	30/05/2019
Calcium - Dissolved	mg/L	77
Magnesium - Dissolved	mg/L	7.9
Hardness	mgCaCO ₃ /L	220

Method ID	Methodology Summary
Inorg-031	Total Phenolics by segmented flow analyser (in line distillation with colourimetric finish). Solids are extracted in a caustic media prior to analysis.
Metals-020	Determination of various metals by ICP-AES.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Metals-022	Determination of various metals by ICP-MS.
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-005	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.
Org-006	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD.
Org-008	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.
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.
Org-013	Water samples are analysed directly 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)-BTX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.

QUALITY CONTROL: VOCs in water					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	[NT]
Date extracted	-			30/05/2019	1	30/05/2019	31/05/2019		30/05/2019	[NT]
Date analysed	-			31/05/2019	1	31/05/2019	31/05/2019		31/05/2019	[NT]
Dichlorodifluoromethane	µg/L	10	Org-013	<10	1	<10	<10	0	[NT]	[NT]
Chloromethane	µg/L	10	Org-013	<10	1	<10	<10	0	[NT]	[NT]
Vinyl Chloride	µg/L	10	Org-013	<10	1	<10	<10	0	[NT]	[NT]
Bromomethane	µg/L	10	Org-013	<10	1	<10	<10	0	[NT]	[NT]
Chloroethane	µg/L	10	Org-013	<10	1	<10	<10	0	[NT]	[NT]
Trichlorofluoromethane	µg/L	10	Org-013	<10	1	<10	<10	0	[NT]	[NT]
1,1-Dichloroethene	µg/L	1	Org-013	<1	1	<1	<1	0	[NT]	[NT]
Trans-1,2-dichloroethene	µg/L	1	Org-013	<1	1	<1	<1	0	[NT]	[NT]
1,1-dichloroethane	µg/L	1	Org-013	<1	1	<1	<1	0	107	[NT]
Cis-1,2-dichloroethene	µg/L	1	Org-013	<1	1	<1	<1	0	[NT]	[NT]
Bromochloromethane	µg/L	1	Org-013	<1	1	<1	<1	0	[NT]	[NT]
Chloroform	µg/L	1	Org-013	<1	1	<1	<1	0	106	[NT]
2,2-dichloropropane	µg/L	1	Org-013	<1	1	<1	<1	0	[NT]	[NT]
1,2-dichloroethane	µg/L	1	Org-013	<1	1	<1	<1	0	107	[NT]
1,1,1-trichloroethane	µg/L	1	Org-013	<1	1	<1	<1	0	103	[NT]
1,1-dichloropropene	µg/L	1	Org-013	<1	1	<1	<1	0	[NT]	[NT]
Cyclohexane	µg/L	1	Org-013	<1	1	<1	<1	0	[NT]	[NT]
Carbon tetrachloride	µg/L	1	Org-013	<1	1	<1	<1	0	[NT]	[NT]
Benzene	µg/L	1	Org-013	<1	1	<1	<1	0	[NT]	[NT]
Dibromomethane	µg/L	1	Org-013	<1	1	<1	<1	0	[NT]	[NT]
1,2-dichloropropane	µg/L	1	Org-013	<1	1	<1	<1	0	[NT]	[NT]
Trichloroethene	µg/L	1	Org-013	<1	1	<1	<1	0	111	[NT]
Bromodichloromethane	µg/L	1	Org-013	<1	1	<1	<1	0	106	[NT]
trans-1,3-dichloropropene	µg/L	1	Org-013	<1	1	<1	<1	0	[NT]	[NT]
cis-1,3-dichloropropene	µg/L	1	Org-013	<1	1	<1	<1	0	[NT]	[NT]
1,1,2-trichloroethane	µg/L	1	Org-013	<1	1	<1	<1	0	[NT]	[NT]
Toluene	µg/L	1	Org-013	<1	1	<1	<1	0	[NT]	[NT]
1,3-dichloropropane	µg/L	1	Org-013	<1	1	<1	<1	0	[NT]	[NT]
Dibromochloromethane	µg/L	1	Org-013	<1	1	<1	<1	0	102	[NT]
1,2-dibromoethane	µg/L	1	Org-013	<1	1	<1	<1	0	[NT]	[NT]
Tetrachloroethene	µg/L	1	Org-013	<1	1	<1	<1	0	103	[NT]
1,1,1,2-tetrachloroethane	µg/L	1	Org-013	<1	1	<1	<1	0	[NT]	[NT]
Chlorobenzene	µg/L	1	Org-013	<1	1	<1	<1	0	[NT]	[NT]
Ethylbenzene	µg/L	1	Org-013	<1	1	<1	<1	0	[NT]	[NT]
Bromoform	µg/L	1	Org-013	<1	1	<1	<1	0	[NT]	[NT]
m+p-xylene	µg/L	2	Org-013	<2	1	<2	<2	0	[NT]	[NT]
Styrene	µg/L	1	Org-013	<1	1	<1	<1	0	[NT]	[NT]
1,1,2,2-tetrachloroethane	µg/L	1	Org-013	<1	1	<1	<1	0	[NT]	[NT]

QUALITY CONTROL: VOCs in water					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	[NT]
o-xylene	µg/L	1	Org-013	<1	1	<1	<1	0	[NT]	[NT]
1,2,3-trichloropropane	µg/L	1	Org-013	<1	1	<1	<1	0	[NT]	[NT]
Isopropylbenzene	µg/L	1	Org-013	<1	1	<1	<1	0	[NT]	[NT]
Bromobenzene	µg/L	1	Org-013	<1	1	<1	<1	0	[NT]	[NT]
n-propyl benzene	µg/L	1	Org-013	<1	1	<1	<1	0	[NT]	[NT]
2-chlorotoluene	µg/L	1	Org-013	<1	1	<1	<1	0	[NT]	[NT]
4-chlorotoluene	µg/L	1	Org-013	<1	1	<1	<1	0	[NT]	[NT]
1,3,5-trimethyl benzene	µg/L	1	Org-013	<1	1	<1	<1	0	[NT]	[NT]
Tert-butyl benzene	µg/L	1	Org-013	<1	1	<1	<1	0	[NT]	[NT]
1,2,4-trimethyl benzene	µg/L	1	Org-013	<1	1	<1	<1	0	[NT]	[NT]
1,3-dichlorobenzene	µg/L	1	Org-013	<1	1	<1	<1	0	[NT]	[NT]
Sec-butyl benzene	µg/L	1	Org-013	<1	1	<1	<1	0	[NT]	[NT]
1,4-dichlorobenzene	µg/L	1	Org-013	<1	1	<1	<1	0	[NT]	[NT]
4-isopropyl toluene	µg/L	1	Org-013	<1	1	<1	<1	0	[NT]	[NT]
1,2-dichlorobenzene	µg/L	1	Org-013	<1	1	<1	<1	0	[NT]	[NT]
n-butyl benzene	µg/L	1	Org-013	<1	1	<1	<1	0	[NT]	[NT]
1,2-dibromo-3-chloropropane	µg/L	1	Org-013	<1	1	<1	<1	0	[NT]	[NT]
1,2,4-trichlorobenzene	µg/L	1	Org-013	<1	1	<1	<1	0	[NT]	[NT]
Hexachlorobutadiene	µg/L	1	Org-013	<1	1	<1	<1	0	[NT]	[NT]
1,2,3-trichlorobenzene	µg/L	1	Org-013	<1	1	<1	<1	0	[NT]	[NT]
Surrogate Dibromofluoromethane	%		Org-013	100	1	100	93	7	99	[NT]
Surrogate toluene-d8	%		Org-013	101	1	101	101	0	99	[NT]
Surrogate 4-BFB	%		Org-013	105	1	104	104	0	93	[NT]

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Water					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	[NT]
Date extracted	-			30/05/2019	1	30/05/2019	31/05/2019		30/05/2019	[NT]
Date analysed	-			31/05/2019	1	31/05/2019	31/05/2019		31/05/2019	[NT]
TRH C ₆ - C ₉	µg/L	10	Org-016	<10	1	<10	<10	0	102	[NT]
TRH C ₆ - C ₁₀	µg/L	10	Org-016	<10	1	<10	<10	0	102	[NT]
Benzene	µg/L	1	Org-016	<1	1	<1	<1	0	105	[NT]
Toluene	µg/L	1	Org-016	<1	1	<1	<1	0	105	[NT]
Ethylbenzene	µg/L	1	Org-016	<1	1	<1	<1	0	100	[NT]
m+p-xylene	µg/L	2	Org-016	<2	1	<2	<2	0	100	[NT]
o-xylene	µg/L	1	Org-016	<1	1	<1	<1	0	100	[NT]
Naphthalene	µg/L	1	Org-013	<1	1	<1	<1	0	[NT]	[NT]
Surrogate Dibromofluoromethane	%		Org-016	100	1	100	93	7	99	[NT]
Surrogate toluene-d8	%		Org-016	101	1	101	101	0	99	[NT]
Surrogate 4-BFB	%		Org-016	105	1	104	104	0	93	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Water					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			29/05/2019	[NT]	[NT]	[NT]	[NT]	29/05/2019	[NT]
Date analysed	-			29/05/2019	[NT]	[NT]	[NT]	[NT]	29/05/2019	[NT]
TRH C ₁₀ - C ₁₄	µg/L	50	Org-003	<50	[NT]	[NT]	[NT]	[NT]	86	[NT]
TRH C ₁₅ - C ₂₈	µg/L	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	89	[NT]
TRH C ₂₉ - C ₃₆	µg/L	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	94	[NT]
TRH >C ₁₀ - C ₁₆	µg/L	50	Org-003	<50	[NT]	[NT]	[NT]	[NT]	86	[NT]
TRH >C ₁₆ - C ₃₄	µg/L	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	89	[NT]
TRH >C ₃₄ - C ₄₀	µg/L	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	94	[NT]
Surrogate o-Terphenyl	%		Org-003	91	[NT]	[NT]	[NT]	[NT]	102	[NT]

QUALITY CONTROL: PAHs in Water - Low Level					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	[NT]
Date extracted	-			29/05/2019	[NT]	[NT]	[NT]	[NT]	29/05/2019	[NT]
Date analysed	-			30/05/2019	[NT]	[NT]	[NT]	[NT]	30/05/2019	[NT]
Naphthalene	µg/L	0.2	Org-012	<0.2	[NT]	[NT]	[NT]	[NT]	110	[NT]
Acenaphthylene	µg/L	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Acenaphthene	µg/L	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluorene	µg/L	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Phenanthrene	µg/L	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	94	[NT]
Anthracene	µg/L	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluoranthene	µg/L	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	106	[NT]
Pyrene	µg/L	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	104	[NT]
Benzo(a)anthracene	µg/L	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chrysene	µg/L	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	124	[NT]
Benzo(b,j+k)fluoranthene	µg/L	0.2	Org-012	<0.2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(a)pyrene	µg/L	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	90	[NT]
Indeno(1,2,3-c,d)pyrene	µg/L	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dibenzo(a,h)anthracene	µg/L	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(g,h,i)perylene	µg/L	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-012	110	[NT]	[NT]	[NT]	[NT]	104	[NT]

QUALITY CONTROL: OCP in water - low level					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			30/05/2019	[NT]	[NT]	[NT]	[NT]	30/05/2019	[NT]
Date analysed	-			30/05/2019	[NT]	[NT]	[NT]	[NT]	30/05/2019	[NT]
HCB	µg/L	0.01	Org-005	<0.01	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
alpha-BHC	µg/L	0.01	Org-005	<0.01	[NT]	[NT]	[NT]	[NT]	88	[NT]
gamma-BHC	µg/L	0.01	Org-005	<0.01	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
beta-BHC	µg/L	0.01	Org-005	<0.01	[NT]	[NT]	[NT]	[NT]	81	[NT]
Heptachlor	µg/L	0.01	Org-005	<0.01	[NT]	[NT]	[NT]	[NT]	103	[NT]
delta-BHC	µg/L	0.01	Org-005	<0.01	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aldrin	µg/L	0.01	Org-005	<0.01	[NT]	[NT]	[NT]	[NT]	79	[NT]
Heptachlor Epoxide	µg/L	0.01	Org-005	<0.01	[NT]	[NT]	[NT]	[NT]	82	[NT]
gamma-Chlordane	µg/L	0.01	Org-005	<0.01	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
alpha-Chlordane	µg/L	0.01	Org-005	<0.01	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Endosulfan I	µg/L	0.01	Org-005	<0.01	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDE	µg/L	0.01	Org-005	<0.01	[NT]	[NT]	[NT]	[NT]	79	[NT]
Dieldrin	µg/L	0.01	Org-005	<0.01	[NT]	[NT]	[NT]	[NT]	103	[NT]
Endrin	µg/L	0.01	Org-005	<0.01	[NT]	[NT]	[NT]	[NT]	92	[NT]
pp-DDD	µg/L	0.01	Org-005	<0.01	[NT]	[NT]	[NT]	[NT]	82	[NT]
Endosulfan II	µg/L	0.01	Org-005	<0.01	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
DDT	µg/L	0.006	Org-005	<0.006	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Endrin Aldehyde	µg/L	0.01	Org-005	<0.01	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Endosulfan Sulphate	µg/L	0.01	Org-005	<0.01	[NT]	[NT]	[NT]	[NT]	104	[NT]
Methoxychlor	µg/L	0.01	Org-005	<0.01	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate TCMX	%		Org-005	75	[NT]	[NT]	[NT]	[NT]	78	[NT]

QUALITY CONTROL: OP Pesticides in water LL					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			30/05/2019	[NT]	[NT]	[NT]	[NT]	30/05/2019	[NT]
Date analysed	-			30/05/2019	[NT]	[NT]	[NT]	[NT]	30/05/2019	[NT]
Diazinon	µg/L	0.01	Org-008	<0.01	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dimethoate	µg/L	0.01	Org-008	<0.01	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chlorpyrifos-methyl	µg/L	0.01	Org-008	<0.01	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Ronnel	µg/L	0.01	Org-008	<0.01	[NT]	[NT]	[NT]	[NT]	78	[NT]
Chlorpyrifos	µg/L	0.01	Org-008	<0.01	[NT]	[NT]	[NT]	[NT]	73	[NT]
Fenitrothion	µg/L	0.01	Org-008	<0.01	[NT]	[NT]	[NT]	[NT]	80	[NT]
Bromophos ethyl	µg/L	0.01	Org-008	<0.01	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Ethion	µg/L	0.01	Org-008	<0.01	[NT]	[NT]	[NT]	[NT]	88	[NT]
Surrogate TCMX	%		Org-008	75	[NT]	[NT]	[NT]	[NT]	98	[NT]

QUALITY CONTROL: PCBs in Water - Low Level					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			30/05/2019	[NT]	[NT]	[NT]	[NT]	30/05/2019	[NT]
Date analysed	-			30/05/2019	[NT]	[NT]	[NT]	[NT]	30/05/2019	[NT]
Aroclor 1016	µg/L	0.1	Org-006	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1221	µg/L	0.1	Org-006	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1232	µg/L	0.1	Org-006	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1242	µg/L	0.1	Org-006	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1248	µg/L	0.1	Org-006	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1254	µg/L	0.1	Org-006	<0.1	[NT]	[NT]	[NT]	[NT]	122	[NT]
Aroclor 1260	µg/L	0.1	Org-006	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate TCLMX	%		Org-006	75	[NT]	[NT]	[NT]	[NT]	99	[NT]

QUALITY CONTROL: HM in water - dissolved					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	[NT]
Date prepared	-			29/05/2019	1	29/05/2019	29/05/2019		29/05/2019	[NT]
Date analysed	-			29/05/2019	1	29/05/2019	29/05/2019		29/05/2019	[NT]
Arsenic-Dissolved	µg/L	1	Metals-022	<1	1	<1	[NT]		92	[NT]
Cadmium-Dissolved	µg/L	0.1	Metals-022	<0.1	1	<0.1	[NT]		93	[NT]
Chromium-Dissolved	µg/L	1	Metals-022	<1	1	<1	[NT]		93	[NT]
Copper-Dissolved	µg/L	1	Metals-022	<1	1	3	[NT]		91	[NT]
Lead-Dissolved	µg/L	1	Metals-022	<1	1	<1	[NT]		97	[NT]
Mercury-Dissolved	µg/L	0.05	Metals-021	<0.05	1	<0.05	<0.05	0	102	[NT]
Nickel-Dissolved	µg/L	1	Metals-022	<1	1	<1	[NT]		92	[NT]
Zinc-Dissolved	µg/L	1	Metals-022	<1	1	3	[NT]		91	[NT]

QUALITY CONTROL: Total Phenolics in Water						Duplicate		Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			29/05/2019	[NT]	[NT]	[NT]	[NT]	29/05/2019	[NT]
Date analysed	-			29/05/2019	[NT]	[NT]	[NT]	[NT]	29/05/2019	[NT]
Total Phenolics (as Phenol)	mg/L	0.05	Inorg-031	<0.05	[NT]	[NT]	[NT]	[NT]	102	[NT]

QUALITY CONTROL: Cations in water Dissolved						Duplicate		Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date digested	-			30/05/2019	[NT]	[NT]	[NT]	[NT]	30/05/2019	[NT]
Date analysed	-			30/05/2019	[NT]	[NT]	[NT]	[NT]	30/05/2019	[NT]
Calcium - Dissolved	mg/L	0.5	Metals-020	<0.5	[NT]	[NT]	[NT]	[NT]	89	[NT]
Magnesium - Dissolved	mg/L	0.5	Metals-020	<0.5	[NT]	[NT]	[NT]	[NT]	93	[NT]
Hardness	mgCaCO ₃ /L	3		<3	[NT]	[NT]	[NT]	[NT]	[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: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

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.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Rev4/October2016

SAMPLE RECEIPT ADVICE

Client Details

Client	Douglas Partners Pty Ltd
Attention	Tom Graham

Sample Login Details

Your reference	86781.01, Randwick
Envirolab Reference	218416
Date Sample Received	28/05/2019
Date Instructions Received	28/05/2019
Date Results Expected to be Reported	04/06/2019

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	4 water
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	14.1
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	VOCs in water	VTRH(C6-C10)/BTEXN in Water	svTRH (C10-C40) in Water	PAHs in Water - Low Level	OCP in water - low level	OP Pesticides in water LL	PCBs in Water - Low Level	HM in water - dissolved	Total Phenolics in Water	Cations in water Dissolved
BH509	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
BD1/20190527		✓	✓					✓		
Trip Spike		✓								
Trip Blank		✓								

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.

Project No: 86781.01			Suburb: Randwick			To: ELS		
Project Name: Leger Lawn - RRR			Order Number					
Project Manager: Tom Graham			Sampler: Tom Graham			Attn: Aileen Hie		
Emails: Tom.Graham@douglaspartners.com.au			Phone:					
Date Required: Same day <input type="checkbox"/> 24 hours <input type="checkbox"/> 48 hours <input type="checkbox"/> 72 hours <input type="checkbox"/> Standard <input checked="" type="checkbox"/>			Email: ahie@envirolab.com.au					
Prior Storage: <input type="checkbox"/> Eskey <input checked="" type="checkbox"/> Fridge <input type="checkbox"/> Shelved			Do samples contain 'potential' HBM? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (If YES, then handle, transport and store in accordance with FPM HAZID)					

Sample ID	Lab ID	Date Sampled	Sample Type	Container Type	Analytes						Notes/preservation	
			S - soil W - water	G - glass P - plastic	Combo 8a	Combo 3	pH, CEC	TRH/BTEX				
BH501/1.0	1	20.5.19	S	G	X							
BH502/0.1	2	1	S	G	X							
BH502/2.5	3	1	S	G		X	X					
BH503/0.5	4	1	S	G	X							
BH504/1.0	5	1	S	G	X							
BH504/2.0	6	1	S	G		X						
BH505/1.0	7	1	S	G	X							
BH506/1.0	8	1	S	G	X							
BH507/0.5	9	1	S	G	X							
BH508/0.1	10	1	S	G		X						
BH508/1.0	11	1	S	G	X							
BH509/0.5	12	1	S	G		X						
BH509/1.0	13	1	S	G	X							
BH509/3.5	14	1	S	G		X	X					
BD1/20190520	15	1	S	G		X						
BD4/20190520	-	1	S	G		X						Interlab Duplicate - Please dispatch to Eurofins MGT
Trip Spike/Blank	16/17	1	S	G				X				
PQL (S) mg/kg					ANZECC PQLs req'd for all water analytes <input type="checkbox"/>							
PQL = practical quantitation limit. If none given, default to Laboratory Method Detection Limit Metals to Analyse: 8HM unless specified here: * Total number of samples in container: 16 Relinquished by: * Send Results to: Douglas Partners Pty Ltd Address: Phone: Fax: Signed: <i>[Signature]</i> Received by: Ming Yan To Date & Time: 23/05/19 16:20												
Lab Report/Reference No: 2181509 Relinquished by: Lily Nott (ELS) <i>[Signature]</i> 24/5/19 11:54 Signed: <i>[Signature]</i> Date & Time: 24/5/19 3:40PM												

ENVIROLAB
Envirolab Services
12 Ashley St
Chatswood NSW 2067
Ph: (02) 9910 6200
Job No: 218159
Date Received: 23/05/19
Time Received: 16:20
Received by: MH
Temp: Cool/Ambient 13.9
Cooling: Ice/Icepack
Security: Intact/Broken/None

Sample Receipt Advice

Company name: **Douglas Partners (Syd)**
Contact name: **Tom Graham**
Project name: **86781.01**
Project ID: **LEGER LAWN - RRR**
COC number: **Not provided**
Turn around time: **5 Day**
Date/Time received: **May 24, 2019 3:40 PM**
Eurofins | mgt reference: **657813**

Sample information

- ☒ A detailed list of analytes logged into our LIMS, is included in the attached summary table.
- ☒ All samples have been received as described on the above COC.
- ☒ COC has been completed correctly.
- ☒ Attempt to chill was evident.
- ☒ Appropriately preserved sample containers have been used.
- ☒ All samples were received in good condition.
- ☒ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
- ☒ Appropriate sample containers have been used.
- ☐ Split sample sent to requested external lab.
- ☐ Some samples have been subcontracted.
- N/A Custody Seals intact (if used).

Contact notes

If you have any questions with respect to these samples please contact:

Nibha Vaidya on Phone : +61 (2) 9900 8415 or by e.mail: NibhaVaidya@eurofins.com

Results will be delivered electronically via e.mail to Tom Graham - Tom.Graham@douglaspartners.com.au.

Douglas Partners (Syd)
96 Hermitage Road
West Ryde
NSW 2114



NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing
The results of the tests, calibrations and/or
measurements included in this document are traceable
to Australian/national standards.

Attention: Tom Graham

Report 657813-S
Project name 86781.01
Project ID LEGER LAWN - RRR
Received Date May 24, 2019

Client Sample ID			BD4/20190520
Sample Matrix			Soil
Eurofins mgt Sample No.			S19-My41159
Date Sampled			May 20, 2019
Test/Reference	LOR	Unit	
Total Recoverable Hydrocarbons - 1999 NEPM Fractions			
TRH C6-C9	20	mg/kg	< 20
TRH C10-C14	20	mg/kg	< 20
TRH C15-C28	50	mg/kg	< 50
TRH C29-C36	50	mg/kg	< 50
TRH C10-36 (Total)	50	mg/kg	< 50
BTEX			
Benzene	0.1	mg/kg	< 0.1
Toluene	0.1	mg/kg	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2
o-Xylene	0.1	mg/kg	< 0.1
Xylenes - Total	0.3	mg/kg	< 0.3
4-Bromofluorobenzene (surr.)	1	%	88
Total Recoverable Hydrocarbons - 2013 NEPM Fractions			
Naphthalene ^{N02}	0.5	mg/kg	< 0.5
TRH C6-C10	20	mg/kg	< 20
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20
TRH >C10-C16	50	mg/kg	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50
TRH >C16-C34	100	mg/kg	< 100
TRH >C34-C40	100	mg/kg	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100
Polycyclic Aromatic Hydrocarbons			
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2
Acenaphthene	0.5	mg/kg	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5
Anthracene	0.5	mg/kg	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5
Chrysene	0.5	mg/kg	< 0.5

Client Sample ID			BD4/20190520
Sample Matrix			Soil
Eurofins mgt Sample No.			S19-My41159
Date Sampled			May 20, 2019
Test/Reference	LOR	Unit	
Polycyclic Aromatic Hydrocarbons			
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5
Fluorene	0.5	mg/kg	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5
Naphthalene	0.5	mg/kg	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5
Pyrene	0.5	mg/kg	< 0.5
Total PAH*	0.5	mg/kg	< 0.5
2-Fluorobiphenyl (surr.)	1	%	115
p-Terphenyl-d14 (surr.)	1	%	119
Heavy Metals			
Arsenic	2	mg/kg	< 2
Barium	10	mg/kg	< 10
Beryllium	2	mg/kg	< 2
Boron	10	mg/kg	< 10
Cadmium	0.4	mg/kg	< 0.4
Chromium	5	mg/kg	< 5
Cobalt	5	mg/kg	< 5
Copper	5	mg/kg	< 5
Lead	5	mg/kg	< 5
Manganese	5	mg/kg	15
Mercury	0.1	mg/kg	< 0.1
Molybdenum	5	mg/kg	< 5
Nickel	5	mg/kg	< 5
Selenium	2	mg/kg	< 2
Silver	0.2	mg/kg	< 0.2
Tin	10	mg/kg	< 10
Zinc	5	mg/kg	< 5
% Moisture	1	%	4.4

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (regarding both quality and NATA accreditation).

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Eurofins mgt Suite B4			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Sydney	May 30, 2019	14 Day
BTEX - Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices	Sydney	May 30, 2019	14 Day
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Sydney	May 30, 2019	14 Day
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Sydney	May 30, 2019	14 Day
Polycyclic Aromatic Hydrocarbons - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Sydney	May 30, 2019	14 Days
VIC EPA Metals : Metals M17 - Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS	Sydney	May 30, 2019	28 Day
% Moisture - Method: LTM-GEN-7080 Moisture	Sydney	May 27, 2019	14 Day

Company Name: Douglas Partners (Syd)
Address: 96 Hermitage Road
West Ryde
NSW 2114
Project Name: 86781.01
Project ID: LEGER LAWN - RRR

Order No.:
Report #: 657813
Phone: 02 9809 0666
Fax:

Received: May 24, 2019 3:40 PM
Due: May 31, 2019
Priority: 5 Day
Contact Name: Tom Graham

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail						VIC EPA Metals : Metals M17	Moisture Set	Eurofins mgt Suite B4
Melbourne Laboratory - NATA Site # 1254 & 14271								
Sydney Laboratory - NATA Site # 18217						X	X	X
Brisbane Laboratory - NATA Site # 20794								
Perth Laboratory - NATA Site # 23736								
External Laboratory								
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID			
1	BD4/20190520	May 20, 2019		Soil	S19-My41159	X	X	X
Test Counts						1	1	1

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure, April 2011 and are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per kilogram

mg/L: milligrams per litre

ug/L: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100mL: Organisms per 100 millilitres

NTU: Nephelometric Turbidity Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version 5.2 2018
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries: Recoveries must lie between 50-150%-Phenols & PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.2 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " - " in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/kg	< 20			20	Pass	
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
Method Blank							
BTEX							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzo(g,h,i)perylene	mg/kg	< 0.5			0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a,h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Barium	mg/kg	< 10			10	Pass	
Beryllium	mg/kg	< 2			2	Pass	
Boron	mg/kg	< 10			10	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Cobalt	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Manganese	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Molybdenum	mg/kg	< 5			5	Pass	
Nickel	mg/kg	< 5			5	Pass	
Selenium	mg/kg	< 2			2	Pass	
Silver	mg/kg	< 0.2			0.2	Pass	
Tin	mg/kg	< 10			10	Pass	
Zinc	mg/kg	< 5			5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	100			70-130	Pass	
TRH C10-C14	%	98			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	112			70-130	Pass	
Toluene	%	113			70-130	Pass	
Ethylbenzene	%	114			70-130	Pass	
m&p-Xylenes	%	111			70-130	Pass	
o-Xylene	%	111			70-130	Pass	
Xylenes - Total	%	111			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	118			70-130	Pass	
TRH C6-C10	%	101			70-130	Pass	
TRH >C10-C16	%	103			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	109			70-130	Pass	
Acenaphthylene	%	107			70-130	Pass	
Anthracene	%	110			70-130	Pass	
Benz(a)anthracene	%	104			70-130	Pass	
Benzo(a)pyrene	%	105			70-130	Pass	
Benzo(b&j)fluoranthene	%	106			70-130	Pass	
Benzo(g,h,i)perylene	%	99			70-130	Pass	
Benzo(k)fluoranthene	%	110			70-130	Pass	
Chrysene	%	107			70-130	Pass	
Dibenz(a,h)anthracene	%	102			70-130	Pass	
Fluoranthene	%	112			70-130	Pass	
Fluorene	%	109			70-130	Pass	
Indeno(1,2,3-cd)pyrene	%	102			70-130	Pass	
Naphthalene	%	107			70-130	Pass	
Phenanthrene	%	108			70-130	Pass	
Pyrene	%	112			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	111			70-130	Pass	
Barium	%	119			70-130	Pass	
Beryllium	%	93			70-130	Pass	
Boron	%	102			70-130	Pass	
Cadmium	%	108			70-130	Pass	
Chromium	%	114			70-130	Pass	
Cobalt	%	119			70-130	Pass	
Copper	%	112			70-130	Pass	
Lead	%	111			70-130	Pass	
Manganese	%	120			70-130	Pass	
Mercury	%	108			70-130	Pass	

Test			Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Molybdenum			%	109			70-130	Pass	
Nickel			%	113			70-130	Pass	
Selenium			%	117			70-130	Pass	
Silver			%	115			70-130	Pass	
Tin			%	126			70-130	Pass	
Zinc			%	110			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	S19-My44995	NCP	%	104			70-130	Pass	
TRH C10-C14	S19-My41471	NCP	%	81			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S19-My44995	NCP	%	101			70-130	Pass	
Toluene	S19-My44995	NCP	%	104			70-130	Pass	
Ethylbenzene	S19-My44995	NCP	%	103			70-130	Pass	
m&p-Xylenes	S19-My44995	NCP	%	101			70-130	Pass	
o-Xylene	S19-My44995	NCP	%	101			70-130	Pass	
Xylenes - Total	S19-My44995	NCP	%	101			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	S19-My44995	NCP	%	86			70-130	Pass	
TRH C6-C10	S19-My44995	NCP	%	110			70-130	Pass	
TRH >C10-C16	S19-My41471	NCP	%	84			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	S19-My46986	NCP	%	118			70-130	Pass	
Acenaphthylene	S19-My46986	NCP	%	119			70-130	Pass	
Anthracene	S19-My46986	NCP	%	117			70-130	Pass	
Benz(a)anthracene	S19-My46986	NCP	%	122			70-130	Pass	
Benzo(a)pyrene	S19-My46986	NCP	%	114			70-130	Pass	
Benzo(b&i)fluoranthene	S19-My46986	NCP	%	120			70-130	Pass	
Benzo(g,h,i)perylene	S19-My46986	NCP	%	107			70-130	Pass	
Benzo(k)fluoranthene	S19-My46986	NCP	%	118			70-130	Pass	
Chrysene	S19-My46986	NCP	%	119			70-130	Pass	
Dibenz(a,h)anthracene	S19-My46986	NCP	%	111			70-130	Pass	
Fluoranthene	S19-My46986	NCP	%	128			70-130	Pass	
Fluorene	S19-My46986	NCP	%	119			70-130	Pass	
Indeno(1,2,3-cd)pyrene	S19-My46986	NCP	%	110			70-130	Pass	
Naphthalene	S19-My46986	NCP	%	117			70-130	Pass	
Phenanthrene	S19-My46986	NCP	%	117			70-130	Pass	
Pyrene	S19-My46986	NCP	%	123			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S19-My41471	NCP	%	98			70-130	Pass	
Barium	S19-My41471	NCP	%	92			70-130	Pass	
Beryllium	S19-My41471	NCP	%	81			70-130	Pass	
Cadmium	S19-My41471	NCP	%	105			70-130	Pass	
Chromium	S19-My41471	NCP	%	99			70-130	Pass	
Cobalt	S19-My41471	NCP	%	104			70-130	Pass	
Copper	S19-My41471	NCP	%	104			70-130	Pass	
Lead	S19-My41471	NCP	%	100			70-130	Pass	
Manganese	S19-My41471	NCP	%	102			70-130	Pass	
Mercury	S19-My41471	NCP	%	108			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Molybdenum	S19-My41471	NCP	%	105			70-130	Pass	
Nickel	S19-My41471	NCP	%	106			70-130	Pass	
Selenium	S19-My41471	NCP	%	106			70-130	Pass	
Silver	S19-My41471	NCP	%	105			70-130	Pass	
Zinc	S19-My41471	NCP	%	105			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	S19-My41159	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	S19-My41159	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S19-My41159	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	S19-My41159	CP	mg/kg	< 50	< 50	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S19-My41159	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S19-My41159	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S19-My41159	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S19-My41159	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S19-My41159	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total	S19-My41159	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	S19-My41159	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S19-My41159	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	S19-My41159	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S19-My41159	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	S19-My41159	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S19-My41159	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S19-My41159	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S19-My41159	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S19-My41159	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	S19-My41159	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	S19-My41159	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g,h,i)perylene	S19-My41159	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	S19-My41159	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	S19-My41159	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a,h)anthracene	S19-My41159	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S19-My41159	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	S19-My41159	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1,2,3-cd)pyrene	S19-My41159	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S19-My41159	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S19-My41159	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S19-My41159	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S19-My40859	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Barium	S19-My41159	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Boron	S19-My41159	CP	mg/kg	< 10	< 10	<1	30%	Pass	
Cadmium	S19-My45860	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S19-My40859	NCP	mg/kg	7.4	8.9	18	30%	Pass	
Cobalt	S19-My41159	CP	mg/kg	< 5	< 5	<1	30%	Pass	
Copper	S19-My40859	NCP	mg/kg	5.7	5.8	2.0	30%	Pass	

Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Lead	S19-My40859	NCP	mg/kg	14	12	17	30%	Pass
Manganese	S19-My41159	CP	mg/kg	15	14	3.0	30%	Pass
Mercury	S19-My40859	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Molybdenum	S19-My41159	CP	mg/kg	< 5	< 5	<1	30%	Pass
Nickel	S19-My40859	NCP	mg/kg	< 5	< 5	<1	30%	Pass
Silver	S19-My41159	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Zinc	S19-My40859	NCP	mg/kg	8.8	8.4	5.0	30%	Pass
Duplicate								
				Result 1	Result 2	RPD		
% Moisture	S19-My41159	CP	%	4.4	4.6	6.0	30%	Pass

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs

Authorised By

Nibha Vaidya	Analytical Services Manager
Andrew Sullivan	Senior Analyst-Organic (NSW)
Gabriele Cordero	Senior Analyst-Metal (NSW)



Glenn Jackson General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please [click here](#).

Eurofins | mgt shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall Eurofins | mgt be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.