

# Appendix 12 – Preliminary Environmental Site Assessment



# PRELIMINARY ENVIRONMENTAL SITE ASSESSMENT

261 & 277-281 Pennant Hills Road14-30 Shirley Street2, 6 & 10 Janell CrescentCARLINGFORD NSW 2118

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#### **Executive Summary**

Environmental Consulting Services Pty Ltd (ECS) was engaged to undertake an environmental assessment of the property known as 261 & 277-281 Pennant Hills Road, 14-30 Shirley Street, 2, 6 & 10 Janell Crescent in Carlingford (the Site). The purpose of this assessment was to evaluate the potential for contamination resulting from past Site activities and to draw conclusions regarding the suitability of the Site for residential redevelopment.

The objective of the environmental assessment was to evaluate the potential for contamination resulting from past Site activities. The scope of work undertaken to meet this objective included the review of selected background, excavation of shallow test pits at 36 locations and the preparation of composite samples of the surface material.

This history of the Site indicates past use for primarily residential purposes. The majority of residential buildings on the Site were recently demolished leaving the Site vacant with the exception of a several residential dwellings that front Pennant Hills Road.

A Clean-up Notice was issued for the Site by the EPA in February 2019 relating to the placement of waste materials on Site, including asbestos waste. The EPA has confirmed that the Clean-up Notice was complied with and the asbestos waste was removed from the Site and disposed of at a lawful facility.

The subsurface conditions generally consisted of disturbed natural silty clays to a depth of 0.3m although disturbed natural clay extended to 0.7m depth at one location. The underlying natural soils consisted of topsoil in some locations over stiff silty clays.

The methodical sampling conducted during this investigation incorporated the preparation of composite samples. Concentrations of contaminants in all composite samples are below the Site Assessment Criteria.

To further evaluate the results of analysis of the composite samples for a potential hot spot in each designated section of the Site, the results of analysis were considered using one quarter of the Site Assessment Criteria. This approach concluded that concentrations of contaminants in all composite samples remained below one quarter of the SAC with the exception of benzo(a)pyrene in composite sample A6 which encountered a concentration of 1.3mg/kg exceeding a quarter of the SAC of 1mg/kg.

The elevated concentration of benzo(a)pyrene could represent a localised hotspot, however, when considering the total section represented by sample A6, the concentration is not considered to represent significant contamination. Additionally, the proposed high-density residential development is likely to include excavation of surface soils for basement carpark.

The inspection indicated the presence of fragments of ACM on the Site surface. Laboratory analysis of a cement sheeting fragment collected from the Site confirmed the presence of asbestos. The density of potential ACM fragments observed across the Site is not anticipated to be above the SAC of 0.04% for residential properties with minimal access to soil. However, the NEPM guidelines also specifies a criterion of 'no visible asbestos for surface soil'. Therefore, to comply with guidelines, fragments of ACM should be removed from the Site surface.

The Site is considered suitable for the proposed high-density residential development after the implementation of asbestos management measures.

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#### 1.0 INTRODUCTION

Environmental Consulting Services Pty Ltd (ECS) was engaged to undertake an environmental assessment of the property known as 261 & 277-281 Pennant Hills Road, 14-30 Shirley Street, 2, 6 & 10 Janell Crescent in Carlingford (the Site). The purpose of this assessment was to evaluate the potential for contamination resulting from past Site activities and to draw conclusions regarding the suitability of the Site for residential redevelopment.

ECS understands the Site will be marketed for sale with the possibility of redevelopment for high-density residential land use.

This assessment has been conducted with consideration of the Planning Guidelines, New South Wales Environment Protection Authority (NSW EPA) guidelines and the Australian Standard for site assessment including:

- Sampling Design Guidelines (NSW EPA 1995)
- Guidelines for Consultants Reporting on Contaminated Sites (NSW EPA, 2020);
- Managing Land Contamination Planning Guidelines SEPP 55 Remediation of Land; and
- National Environment Protection Measure (NEPM) for the Assessment of the Site Contamination (NEPM2013).

Site inspections, soil sampling, gas sampling and laboratory analyses were performed as part of this study. Best professional judgement was used to interpret and extrapolate between sampling points, however even under ideal circumstances actual conditions may vary from those inferred to exist. The actual interface between materials and variation of soil quality may be more abrupt or gradual than the report indicates.

This report has been prepared to evaluate the potential for contamination, if any, on the Site. ECS is not aware of any previous investigations that have been conducted at this Site. However, ECS is aware that the removal of waste has been undertaken and a clearance issues.

#### 1.1 Scope of Work

The objective of the environmental assessment was to evaluate the potential for contamination resulting from past Site activities. The scope of work undertaken to meet this objective included the following:

- The review of selected background information including historical air photographs and relevant published information;
- The excavation of shallow test pits at 36 locations in a methodical grid pattern across the Site;
- The collection of surface soil samples from each test pit;
- The preparation of composite samples of the surface material;
- The excavation of a test pit into a stockpile of material on the at the eastern corner of Site and the collection of a soil sample to characterise this stockpiled material;
- The laboratory analysis of the composite surface soil samples and also the sample from the stockpile; and
- The preparation of an investigation report.

#### 2.0 SITE INFORMATION

#### 2.1 Site Identification

The Site is located in a residential area which predominantly consists of multi-storey highdensity residential developments.

The location of the Site is presented in Figure 2.1 - Site Location Plan (Six Maps) with the Site identification details summarised in Table 2.1 - Site Identification.

Figure 2.1 – Site Location Plan



#### Table 2.1 – Site Identification

Attribute	Detail
	261 & 277-281 Pennant Hills Road, Carlingford, NSW 2118
Site Address	14-30 Shirley Street, Carlingford, NSW 2118
	2, 6 & 10 Janell Crescent, Carlingford, NSW 2118
	Lot 1 in DP 1219291
Lat & Deposited Plan	Lot 61 & 62 in DP 819136
Lot & Deposited Plan	Lot 2, 3 & 4 in DP 9614
	Lot 22 in DP 21386
Current Land Use	Residential and vacant land
Proposed Land Use	Residential (assumed to be high density)
Local Government Authority	City of Parramatta
Current Zoning	High Density Residential (R4) and Public Recreation (RE1)
Site Area (m²)	~28 300
Geographical Location	Latitude: -33.780442352
(approximate centre)	Longitude: 151.050785155

#### 2.2 Land Zoning

The Land Zoning Map within the Hills Local Environmental Plan 2012 (LEP 2012) prepared by the City of Parramatta shows majority of the Site is zoned as High Density Residential (R4), however, the north-western corner of the Site and a portion in the centre of the Site is zoned as Public Recreation (RE1).

#### 2.3 Site Location and Regional Setting

The Site is located in a residential area which is characterised by multi-storey, high-density residential developments although there are some older free-standing houses in the vicinity of the Site.

The Site is an irregular shape that approximates a triangle with an approximate area of 28,300m<sup>2</sup>. The majority of the Site is vacant cleared land, however there are seven residential buildings on Site along the south-eastern boundary fronting Pennant Hills Road.

The Site is bounded by Pennant Hills Road to the south east and Shirley Street to the west. Developments on the neighbouring land include:

- Residential developments to the south east across Pennant Hills Road;
- A church and residential developments to the west;
- Residential developments to the north across Shirley Street; and
- Commercial developments (shops) to the north east.

The Site is outlined in red and surrounding properties are shown on Figure 2.2 – Site Layout.

#### 2.4 Topography

The natural ground level at the Site slopes downwards towards the south west. The elevation at the north east corner of the Site is approximately 125m AHD (Australian Height Datum) and at the southern corner approximately 100m AHD. However, there is a stockpile of soil near the northeast corner of the Site.

There has been some stormwater mitigation measured established on the Site including a low berm and drainage pathway along the western boundary. Topsoil appears to have been removed from the central area of the Site.

### Figure 2.2 – Site Layout



#### 3.0 GEOLOGY AND HYDROLOGY

#### 3.1 Regional Geology

Regional geology of the area is shown on the Sydney 1:100 000 Geological Map Sheet (Sheet 9130 1<sup>st</sup> Edition 1983). The majority of the Site is underlain by Ashfield Shale of the Wianamatta Group which is described as black to dark-grey shale and laminate. However, a small portion of the Site along the south-eastern boundary to Pennant Hills Road is underlain by the Bringelly Shales of the Wianamatta Group which are described as shale, carbonaceous claystone, laminite and fine to medium-grained lithic sandstone.

#### 3.2 Acid Sulfate Soil (ASS) Risk Planning

The LEP 2012 does not include an Acid Sulfate Soils (ASS) risk map for this area however the Prospect/Parramatta River ASS Risk Map indicates the Site is in an area of no know occurrences of ASS. There is a low probability for ASS at the Site.

#### 3.3 Hydrology

The nearest surface water body to the Site is the Hunts Creek located approximately 950m to the north-west of the Site. The Hunts Creek is a tributary of Lake Parramatta.

The Australian Groundwater Explorer data base shows that there is a register bore located approximately 820m to the north of the Site and a cluster of three groundwater bores located 530m to the north of the Site. The cluster of bores is assumed to be at a service station site and used for groundwater quality monitoring.

An extract from the Australian Groundwater Explorer is presented in Figure 3.1 – Bore Locations. Registered bores are represented by grey dots on this figure.



#### Figure 3.1 – Bore Locations

#### 4.0 DATA QUALITY OBJECTIVES

The Data Quality Objective (DQO) process is a systematic, seven-step process that defines the criteria an investigation should satisfy including: the type, quantity and quality of data required to support decisions relating to the investigation. DQOs for this investigation have been developed based on the seven-step approach in accordance with the NSW DEC Guidelines for the NSW Site Auditor Scheme (3<sup>rd</sup> Edition), 2017. The DQOs incorporate field quality control and laboratory analysis, methods and information on laboratory quality control data and validate the field and analytical data for this investigation. The DQOs are presented in detail in the following sections.

#### Step 1 - State the Problem

The assessment for potential contamination should be undertaken in general accordance with the NSW EPA Guidelines for Consultants Reporting on Contaminated Sites 2020. This

requires a review of historical Site usage to evaluate the potential for the former uses to result in contamination and then, where there is the potential for impact, an intrusive investigation should be undertaken, and appropriate management strategies implemented.

The investigation needs to evaluate for contamination resulting from past activities that may preclude future development and use of the Site.

#### Step 2 - Identify the Decisions

The assessment for contamination is based on the known historic uses of the land. The decisions associated with this assessment include:

- Would historic land uses result in contamination that may preclude the proposed residential development and land use;
- Is the Site suitable for the proposed residential land use?

#### Step 3 - Identify Inputs to the Decision

The inputs required to make the identified decisions include:

- Data regarding the regional and local conditions;
- Historical records and air photographs;
- Site inspection; and
- Methodical soil sampling.

#### Step 4 - Define the Study Boundary

The boundaries for this assessment have been identified as follows:

• Spatial boundaries – the Site area.

#### Step 5 - Develop a Decision Rule

The decision rules for this investigation are:

• If the Site history and sampling activities indicate Site contamination, then further assessment or management will be required.

#### Step 6 - Specify Limits on Decision Errors

The acceptable limits on decision errors to be applied in this assessment and the manner of addressing possible decision errors are limited to the Site setting and sample analysis results. The incorrect consideration of background information and analytical results has the potential to conclude that the Site is contaminated when it is not or alternatively, conclude the Site is not contaminated when it actually is. To provide more certainty to the conclusion regarding the contamination status of the Site, both the background information and the analytical results will be jointly evaluated.

The continuity and understanding of past Site activities provides the basis for the Site sampling plan. Where there is uncertainty or indications of the potential for contamination, sampling needs to be undertaken.

The sampling at the Site needs to address the findings of the background data review and needs to include sufficient sampling locations and depths, utilise appropriate field sampling

methodologies, review suitable data quality indicators (DQIs) and quality assessment procedures and incorporate appropriate data evaluation procedures such as the use of 95 percent upper confidence limit (95% UCL) calculations.

#### Step 7 - Optimise the Design for Obtaining Data

The data sources for this assessment are historic records that have been maintained and that are readily available and soil samples that are from methodical sampling locations established in the preliminary sampling plan.

The sampling plan prepared for this investigation considered the Site setting but was established prior to the review of the Site history. A methodical sampling pattern incorporating the collection of composite samples was established as the preliminary sampling plan to evaluate near surface soil conditions.

The density of sampling considered the NSW EPA (1995) Sampling Design Guidelines and the sampling depth intervals set to assess surface soil. Near surface soils were considered the primary indicators for significant impact.

#### 5.0 HISTORY REVIEW

To evaluate the development history of the Site selected accessible information was reviewed and a Lotsearch report was undertaken acquiring historical aerial photographs and historical business records. As the Site is comprised of several lots, the Lotsearch report focused on the lot that accounts for the largest portion of the Site described as Lot 1 in DP 1219291.

#### 5.1 Regional History

Following European settlement, Carlingford was a farming area which predominately involved the establishment of orchards. In the years after World War II, the rapid expansion of Sydney saw the farms and orchards of the Carlingford area gradually subdivided into suburban lots. In the 1990's, the government policy of urban consolidation has seen the development of high-density units and apartment blocks around railway station which is approximately 500m to the west of the Site.

#### 5.2 Aerial Photographs

Aerial photographs dating back to 1943 were reviewed to evaluate development on the Site. Table 5.1 summarises the features observed on the historic aerial photographs. Copies of the aerial photographs are included in Appendix 1.

Table	5.1	– Aerial	Photographs
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Date	Site Feature	Surrounding Area
1930	The majority of the Site is vacant with the	The surrounding area it appears to be open
	exception of three residential premises. There is one large house in the north-western corner of the Site and two houses on the Site with frontage to Pennant Hills Road. There is also a driveway that crosses the Site leading to a large house to the north.	space with some housing and potentially a localised shopping centre to the north of the Site. There appears to be orchards to the south-east of the Site and crop farming to the north-east. There are residential properties along Pennant Hills Road to the east of the Site. There appears to be large buildings to the north-west of the Site which are
	-	potentially a chicken farm.
1943	There are more residential properties on the Site with frontage to Pennant Hills Road. There is a residential dwelling on the south- western corner of the Site, and it appears the property is used for small-scale market farming with orchards and two shed-type structures on the property. The central portion of the Site remains mostly vacant except for the driveway that enters the Site from Pennant Hills Road and running north across the Site. This driveway is assumed to be the present Janell Crescent.	There appears to have been more residential development in the surrounding area, however, the predominate land use remains to be agricultural.
1951	The layout of property on the south-western corner of the Site has been altered with more sheds haveing been constructed and the orchards removed. More houses have been erected along Pennant Hills Road.	The surrounding land use remains relatively unchanged from the 1943 aerial photograph.
1956	More residential dwellings have been erected along Pennant Hills Road. The residential dwelling in the north-western corner of the Site appears to have been demolished and two smaller dwellings erected.	There has been more residential development on the land surrounding the Site. The Carlingford Bowling Club has been constructed to the south of the Site.
1961	Additional houses have built built around the perimeter of the Site and Janell Crescent has been reconstructed entering the Site from Pennant Hills Road.	The surrounding area has undergone significant residential development which appears to be mostly low-density residential dwellings. There is open land to the south- east of the Site.
1965	Additional houses have been erected on the centre of the Site at the end of Janell Crescent.	It appears an area north of the Site is undergoing residential development.
1970	The Site remains relatively unchanged from the 1965 aerial photograph.	There appears to be commercial properties to the north of the Site.
1978	The Site remains relatively unchanged from the 1970 aerial photograph.	There has been further commercial development to the east and north of the Site.
1982	The Site remains relatively unchanged from the 1978 aerial photograph.	The surrounding land use remains relatively unchanged from the 1978 aerial photograph.
1986	The Site remains relatively unchanged from the 1982 aerial photograph.	The surrounding land use remains relatively unchanged from the 1982 aerial photograph.
1991	The Site remains relatively unchanged from the 1986 aerial photograph.	There appears to have been residential redevelopment to the south-east of the Site across Pennant Hills Road with medium-density blocks of apartments.
1994	The Site remains relatively unchanged from the 1991 aerial photograph.	There appears to have been residential redevelopment to the north of the Site with medium-density blocks of apartments.
2000	The Site remains relatively unchanged from the 1994 aerial photograph.	There has been further medium-density residential development to the north of the Site.
2009	The Site remains relatively unchanged from the 2000 aerial photograph.	There appears to have been residential redevelopment to the west and north of the Site across Shirley Street with medium- density blocks of apartments.

2015	Two residential dwellings along the north- eastern end of Shirley Street have been demolished and the land has been left vacant.	The surrounding land has undergone further medium and high-density redevelopment and commercial redevelopment has been undertaken to the north-east of the Site.
2020	The residential dwellings on the Site have been demolished, vegetation has been cleared and the Site is mostly vacant with the exception of a cluster of residential properties along Pennant Hills Road. Janell Crescent has also been demolished and an unsealed access road entering the Site from Pennant Hills Road has taken its place. It appears a development has begun in the northern corner of the Site with the establishment of foundations which are still present on the Site today.	The surrounding land has undergone further medium and high-density redevelopment transforming the land use of the surrounding area being predominately medium and high- density residential.

#### 5.3 Historical Business Records

A review of the historical business records for Lot 1 in DP 1219291 indicating ownership of the land between 1950 and 1991 is presented in Table 5.2 – Historical Business Records. A copy of the records for the Site is included in Appendix 1.

The historical business records reveal two locations have been used for commercial and retail activities. These properties are represented by locations 1 and 2 shown on Figure 5.1 - Historical Business Locations.

Table 5.2 – Historical Business Records

Location ID	Date of Acquisition	Registered Business & Activities	Premise
1	1982	Carlingford Florist – Florists (Retail)	249 Pennant Hills Road, Carlingford
	1961	McConnell's Towing Service – Motor Towing	279 Pennant Hills Road, Carlingford
2	1965	McConnell's Towing Service – Motor Towing	279 Pennant Hills Road, Carlingford



Figure 5.1 – Historical Business Locations

#### 5.4 History Summary

The aerial photographs reveal the Site has historically been used primarily for residential purposes. From 1965, the Site was completely developed with residential properties and it remained this way until 2015 when two homes were demolished. The removal of most of the buildings on Site occurred between 2015 and 2020 and potential redevelopment in the northern corner of the Site commenced.

The historical records reveal two locations on the Site were used for commercial/retail purposes, however, at the time of ownership, only residential properties were present on the Site at these locations so it is concluded these were the registered addresses for small/domestic based businesses that are unlikely to result in significant land contamination.

#### 5.5 NSW EPA Records

The Lotsearch report included a review of the NSW Environment Protection Authority (EPA) databases was conducted including the following:

- Records maintained in relation to contaminated land under Section 58 of the CLM Act 1997;
- Records of sites notified to the EPA in accordance with the Guidelines on the Duty to Report Contamination under Section 60 of the CLM Act 1997 (2015); and
- Licensed activities under the Protection of the Environment Operations Act (1997).

This review indicated the presence of one Site in Carlingford regulated under the Contaminated Land Management Act 1997. Details of the contaminated property are included in Table 5.3 – Notified Sites.

#### Table 5.3 – Notified Sites

Address	Facility		Management Class	Status	Direction & Distance
797 Pennant Hills Road, Carlingford	Caltex S Station	Service	Regulations under the CLM Act not required	Current EPA List	~400 m north

The Site, known as Lot 1 in DP1219291, was subject to a Clean-up Notice by NSW EPA under the *Protection of the Environment Operations Act 1997.* The Clean-up Notice was issued in February 2019 under the findings that a pollution incident occurred on the Site in relation to the disposal of waste materials on Site, including asbestos waste.

On 4<sup>th</sup> November 2020 the EPA confirmed that the Clean-up Notice was complied with and asbestos waste was removed from the Site and disposed of at a lawful facility. A copy of documents in relation to the Clean-up Notice are included in Appendix 2.

#### 6.0 CONCEPTUAL SITE MODEL

The potential for Site contamination is reflective of past use of the land. The document entitled Managing Land Contamination: Planning Guidelines State Environmental Planning Policy No. 55 – Remediation of Land (Department of Urban Affairs and Planning & Environment Protection Authority 1998) presents a list of activities that are considered likely to result in site contamination. This list forms a reasonably good screening tool to evaluate some past uses that are likely to potentially contaminate land. However, this list is not considered to be comprehensive and it is recognized that site specific activities also need to be evaluated.

The history indicates that the Site has been predominantly developed for residential purposes which is generally not considered to result in significant contamination and is not included on this list.

Early land use may have included some agricultural activities including an orchard and recently the Site has received some waste material. The EPA had indicated waste material on Site to be contaminated with asbestos and issued a Clean Up Notice. The clean up through the removal of waste material was completed to the satisfaction of the EPA.

The potential Areas of Environmental Concern (AEC) and Contaminants of Potential Concern (CoPC) relevant to the Site are summarised on Table 6.1 – Contaminants of Concern. Included in this table is an evaluation of the likelihood based on the Site history.

#### Table 6.1 – Contaminants of Concern

Source/AEC	CoPC	Impacted Medium	Likelihood	
Hazardous Building Material – Hazardous building materials may be present as a result of former building and demolition activities. These materials may also be present in the remaining buildings/structures on site.	Asbestos and lead	Soil	Moderate	
<u>Use of pesticides</u> – Pesticides may have been used beneath the buildings and/or around the site.	Heavy metals and OCP	Soil	Low	
	Heavy metals, TRH/BTEX, PAHs, OCP and Asbestos	Soil	Low	
Importation of waste material to the <u>Site</u> – The Site has been issued a Clean Up Notice by the EPA regarding asbestos contaminated waste material on the Site.	Asbestos	Soil	Low	

Notes: TRH – Total Recoverable Hydrocarbons BTEX – Benzene, toluene, ethylbenzene and xylene PAH – Polycyclic Aromatic Hydrocarbons

OCP – Organochlorine Pesticides

Heavy Metals - Arsenic, Cadmium, Chromium, Lead, Nickel, Copper, Mercury, Zinc

Based on the significant demolition that has historically occurred on the Site and the recent importation of waste material to the Site, some preliminary soil sampling was undertaken.

#### 7.0 SITE ASSESSMENT PLAN

Four potential areas of environmental concern have been identified associated with potential Site usage. To evaluate for contamination and for the presence of fill/quality of the following scope of work was undertaken:

- Inspection of the Site to confirm the presence of fill on the Site surface and to assess stockpiles on the Site;
- Excavation of 36 shallow test pit in a methodical grid pattern across the Site;
- The preparation of 9 composite samples of the surface soil/fill material each consisting of 4 adjoining discrete and samples;
- The collection of a soil sample from a stockpile at the northern end of the Site;
- The collection of a sample of the imported recycled material used to establish the access road entering the Site from Shirley Street; and
- The analysis of all soil samples for common contaminants.

The rationale for environmental sampling locations was based on the probability that surface impact may have resulted from farming, demolition activities and filling the Site. The sampling density was established based on the *Sampling Design Guidelines* (NSW EPA 1995).

#### 7.1 Site Inspection

At the time of the inspection the majority of the Site was vacant with the exception of the residential properties with frontage to Pennant Hills Road. The surface soils across the Site appear to mostly consist of disturbed natural clays sourced from the Site. The Site is mostly cleared of vegetation, however, weeds and grasses are established in south-western and north-western ends of the Site. Remnants of demolition waste are evident across the surface of the Site. Some household rubbish was noted near the southern boundary of the Site.

The Site inspection did identify isolated fragments of potential Asbestos Containing Material (ACM) on the fill material at the central portion of the Site and at the north-western corner of the Site.

#### 7.2 Assessment Method

The sampling plan prepared for this investigation considered the Site history and the Site setting. A methodical sampling pattern was established to evaluate near surface soil conditions. The density of sampling considered the NSW EPA Sampling Design Guidelines. The number of sampling locations is marginally below the density listed in the Sampling Design Guidelines due to access limitations associated with the remaining residential properties. However, area that were not samples are currently used for residential purposes and not considered likely to be significantly contaminated.

To characterise the surface soils and fill material across the Site and also the underlying natural soil, 36 shallow test pits were excavated by an excavator. Soils samples were collected from each test pit targeting the observed surface fill material or the surface natural soil where no fill was present.

The Site was divided into 11 sections each having similar areas. Two of these sections were occupied by the dwelling along Pennant Hills Road and were excluded from the sampling activities. The remaining 9 sections were sampled with four samples collected from each section.

The soil samples were collected in groups of four from each section of the Site and mixed in equal proportions to form composite samples. Each composite sample was then transferred into a laboratory prepared sample jar. All sample locations were recorded in the field and composite samples were logged onto a chain of custody.

Sample locations were numbered 1 to 36 and composite samples numbered A1 to A9. In addition, one duplicate sample was prepared and labelled D. The locations of the test pits and the areas that comprised four composite samples are presented on Figure 7.1 – Sample Location Plan. The subsurface conditions encountered at each location are summarised in Table 7.1 – Test Pit Descriptions and the samples are described in Table 7.2 – Sample Schedule.

### Figure 7.1 – Sample Location Plan

Test Pit	Depth (m)	Description
Numbers		
1	0-0.3	Silty Clay – Orange brown
2	0-0.3	Silty Clay – Red brown
3	0-0.3	Silty Clay – Red brown
4	0-0.3	Silty Clay – Red brown
	0-0.1	Fill – Pale brown disturbed natural some gravel and concrete
5	0.1-0.3	Topsoil – Dark brown/black
	0.3-0.5	Silty Clay – Red brown
	0-0.1	Fill – Pale brown disturbed natural some ash, brick and ceramic pipe
6	0.1-0.2	Topsoil – Dark brown/black
0.2-0.4		Silty Clay – Red brown
	0-0.3	Fill – Yellow brown/red brown/grey disturbed natural clay (most likely ex-situ deep clay)
7	0.3-0.5	Topsoil – Dark brown/black
	0.5-0.6	Silty Clay – Red brown
8	0-0.2	Fill – Dark brown disturbed natural topsoil some glass, brick, ceramic
0	0.2-0.4	Silty Clay – Red brown
	0-0.2	Fill – Grey disturbed natural clay (most likely ex-situ deep clay)
9	0.2-0.4	Topsoil – Dark brown/black
	0.4-0.5	Silty Clay – Brown
10	0-0.15	Fill – Red brown/grey disturbed natural clay (most likely ex-situ deep clay)

Test Pit Numbers	Depth (m)	Description
	0.15-0.5	Topsoil – Dark brown/black
	0.5-0.6	Silty Clay – Red brown
	0-0.2	Fill – Grey brown disturbed natural clay some tile, glass and brick with shale across
11		surface
11	0.2-0.4	Topsoil – Dark brown/black
	0.4-0.5	Silty Clay – Brown
10	0-0.2	Fill – Grey brown disturbed natural clay (most likely ex-situ deep clay) some concrete
12	0.2-0.4	Topsoil – Dark brown/black
	0.4-0.5	Silty Clay – Brown
13	0-0.3	Fill – Grey brown disturbed natural clay (most likely ex-situ deep clay) some concrete Topsoil – Dark brown/black
13	0.3-0.8	Silty Clay – Brown
	0.0-0.9	Fill – Grey brown disturbed natural clay some ceramic pipe and concrete (potential
14	0-0.1	ACM fragment observed adjacent to TP14)
14	0.1-0.3	Silty Clay – Brown
	0-0.1	Fill – Grey brown disturbed natural clay some ash and ceramic
15	0.1-0.3	Silty Clay – Brown
		Fill – Grey brown disturbed natural clay some brick with weathered shale fragments
16	0-0.05	across surface
	0.05-0.2	Silty Clay – Red brown
		Fill – Grey brown disturbed natural clay some brick with weathered shale fragments
17	0-0.05	across surface
	0.05-0.2	Silty Clay – Red brown
	0.0.1	Fill – Pale grey brown disturbed natural clay some gravel with weathered shale
18	0-0.1	fragments across surface
	0.1-0.3	Silty Clay – Red brown
19	0-0.05	Fill – Grey brown disturbed natural clay
19	0.05-0.2	Silty Clay – Red brown
	0-0.1	Fill – Grey brown disturbed natural clay some ceramic with weathered shale fragments
20		across surface (potential ACM fragment observed adjacent to TP20)
	0.1-0.3	Silty Clay – Red brown
	0-0.4	Fill – Brown disturbed natural clay some plastic, tile, and brick
21	0.4-0.6	Topsoil – Dark brown/black
	0.6-0.7	Silty Clay – Brown
22	0-0.2	Fill – Grey brown disturbed natural clay some sandstone
22	0.2-0.5	Topsoil – Dark brown/black Silty Clay – Red brown
	0.4-0.5	Fill – Brown disturbed natural clay, trace yellow sand
23	0.2-0.3	Silty Clay – Red brown
	0.2-0.3	Fill – Pale grey brown disturbed natural clay some timber, weathered slate, and gravel
24	0.3-0.4	Silty Clay – Red brown
	0-0.2	Fill – Pale grey brown disturbed natural clay some gravel
25	0.2-0.4	Silty Clay – Red brown
	0-0.05	Fill – Grey brown disturbed natural clay some gravel, plastic, and sandstone
26	0.05-0.15	Topsoil – Dark brown/black
-	0.15-0.25	Silty Clay – Red brown
07	0-0.1	Fill – Grey brown disturbed natural clay some gravel, brick, and ceramic pipe
27	0.1-0.3	Silty Clay – Red brown
	0-0.05	Fill – Grey brown disturbed natural clay some gravel and brick
28	0.05-0.15	Topsoil – Dark brown/black
	0.15-0.3	Silty Clay – Red brown
20	0-0.2	Fill – Grey brown disturbed natural clay some concrete
29	0.2-0.4	Silty Clay – Red brown
30	0-0.1	Fill – Grey brown disturbed natural clay some vermicular
50	0.1-0.2	Silty Clay – Red brown
31	0-0.7	Fill – Grey brown disturbed natural clay some concrete
01	0.7-0.8	Silty Clay – Yellow brown
	0-0.1	Fill – Grey brown disturbed natural clay (potential ACM pipe observed adjacent to
32		TP32)
	0.1-0.2	Topsoil – Dark brown/black
33	0.2-0.4 0-0.2	Silty Clay – Red brown Silty Clay – Orange brown with some with weathered shale fragments across surface

Test Pit Numbers	Depth (m)	Description
34	0-0.4	Fill – Grey brown disturbed natural clay some shale fragments
54	0.4-0.5	Claystone – Grey/red brown becoming highly weathered shale
35	0-0.6	Fill – Grey brown disturbed natural clay some shale fragments
	0.6-0.8	Silty Clay – Red brown
36	0-0.3	Fill – Grey brown disturbed natural clay some shale fragments
30	0.3-0.4	Silty Clay – Red brown

### Table 7.2 – Sample Schedule

Composite Sample Number	Medium	Sample Locations	Sample Interval (m)	Material
		1	0-0.3	Silty Clay – Orange brown
A1	Soil	2	0-0.3	Silty Clay – Red brown
AI	301	3	0-0.3	Silty Clay – Red brown
		4	0-0.3	Silty Clay – Red brown
		5	0-0.1	Fill – Pale brown disturbed natural clay
		6	0-0.1	Fill – Pale brown disturbed natural clay
A2	Soil	7	0-0.3	Fill – Yellow brown/red brown/grey disturbed natural clay
		8	0-0.2	Fill – Dark brown disturbed natural topsoil
		9	0-0.2	Fill – Grey disturbed natural clay
A3	Soil	10	0-0.15	Fill – Red brown/grey disturbed natural clay
AS	301	11	0-0.2	Fill – Grey brown disturbed natural clay
		12	0-0.2	Fill – Grey brown disturbed natural clay
		13	0-0.3	Fill – Grey brown disturbed natural clay
A4	Soil	14	0-0.1	Fill – Grey brown disturbed natural clay
A4	301	15	0-0.1	Fill – Grey brown disturbed natural clay
		16	0-0.05	Fill – Grey brown disturbed natural clay
		17	0-0.05	Fill – Grey brown disturbed natural clay
A5	Soil	18	0-0.1	Fill – Pale grey brown disturbed natural clay
AJ		19	0-0.05	Fill – Grey brown disturbed natural clay
		20	0-0.1	Fill – Grey brown disturbed natural clay
	Soil	21	0-0.4	Fill – Brown disturbed natural clay
		22	0-0.2	Fill – Grey brown disturbed natural clay
A6		23	0-0.2	Fill – Brown disturbed natural clay, trace yellow sand
		24	0-0.3	Fill – Pale grey brown disturbed natural clay
		25	0-0.2	Fill – Pale grey brown disturbed natural clay
A7	Soil	26	0-0.05	Fill – Grey brown disturbed natural clay
AI .		27	0-0.1	Fill – Grey brown disturbed natural clay
		28	0-0.05	Fill – Grey brown disturbed natural clay
		29	0-0.2	Fill – Grey brown disturbed natural clay
A8	Soil	30	0-0.1	Fill – Grey brown disturbed natural clay
70	501	31	0-0.7	Fill – Grey brown disturbed natural clay
		32	0-0.1	Fill – Grey brown disturbed natural clay
		33	0-0.2	Silty Clay – Orange brown
A9	Soil	34	0-0.4	Fill – Grey brown disturbed natural clay
A9	001	35	0-0.6	Fill – Grey brown disturbed natural clay
		36	0-0.3	Fill – Grey brown disturbed natural clay
		29	0-0.2	Fill – Grey brown disturbed natural clay
D Duplicate A8	Soil	30	0-0.1	Fill – Grey brown disturbed natural clay
	3011	31	0-0.7	Fill – Grey brown disturbed natural clay
		32	0-0.1	Fill – Grey brown disturbed natural clay
SP	Soil	Stockpile in A9	0-2.0	Fill – Pale grey brown/red brown disturbed natural clay
AR	Soil	Access Road	0-0.1	Fill – Pale grey brown silty clay some brick, tiles, and ceramic pipe (recycled material)
A4B	Material	TP14	-	Potential ACM

#### 7.3 Quality Plan

The quality assurance / quality control (QA/QC) procedures adopted during this assessment included: field decontamination protocols; sample labelling storage and handing methodologies.

Field decontamination involved rinsing of sampling equipment with potable water. All samples were labelled in the field with the sample location recorded. One duplicate sample was collected. The duplicate sample was assigned sample identification D and was collected from the same locations as A8.

The analytical laboratory also conducted a QA/QC program. This program included; the analysis of one blank sample and one spiked sample with every batch of samples tested; and the repeat analysis of the approximately 10% of the samples. The results of this QA/QC program are within the data quality objectives.

#### 8.0 ASSESSMENT GUIDELINES

The NSW Environment Protection Authority (EPA) has issued a number of guidelines relevant to the concentration of contaminants in soil. These are used in conjunction with the National Environmental Protection Council (NEPC) - National environment protection (assessment of site contamination) measure 2013.

The Site Assessment Criteria that have been used to evaluate surface soils are based on the National Environment Protection Measure (NEPM) for the Assessment of Site Contamination (NEPM 2013).

These Site Criteria are not derived as acceptance criteria for contamination at a site, but as levels above which specific consideration of risk, based on the site use and potential exposure, is required. If a risk is determined as present, then remediation and/or management must be undertaken.

The Site Criteria within the NEPM are based on potential impact to human health and are intentionally conservative. The health investigation levels (HIL) have been derived for four (4) generic land use settings;

- HIL 'A' Residential with garden/ accessible soil (home grown produce <10% fruit and vegetable intake (no poultry). This category includes children's day care centres, preschools and primary schools.
- HIL 'B' Residential with minimal opportunities for soil access includes dwellings with fully and permanently paved yard space such as high rise buildings and flats.
- HIL 'C' Public open space such as parks, playgrounds, playing fields (e.g. ovals) secondary schools and footpaths. It does not include undeveloped public open space (such as urban bushland and reserves).
- HIL 'D' Commercial/industrial such as shops, offices, factories and industrial sites.

Health Screening Levels (HSLs) for various petroleum hydrocarbon compounds have also been developed. The HSLs also relate to the land use (consistent with the HILs) and are dependent on soil type and depth.

The land use at this Site following sale is proposed to be residential with minimal for soil access based on the setting of the surrounding area so HILs that will be used for this assessment are HIL B levels. Consistent with the HILs, HSLs for residential land use (HSL A & B) with clayey

soils have been adopted for the relevant SAC. These criteria are summarised on Table 8.1 – Site Assessment Criteria.

#### Table 8.1 – Site Assessment Criteria

Heavy Metals         Arsenic         Cadmium         Chromium         Copper         Lead         Mercury         Nickel         Zinc         Total Recoverable Hydrocarbons (TRH)         Naphthalene         TRH C6-C10 (F1)         TRH C10-C16 (F2)         Monocyclic Aromatic Hydrocarbons         Benzene         Toluene         Ethylbenzene         Xylene (Total)         Polycyclic Aromatic Hydrocarbons (PAH)         Benzo(a)pyrene         Total PAH         Organochlorine Pesticides         DDT+DDE+DDD	$ \begin{array}{r} 500 \\ 150 \\ 500 \\ 30 000 \\ 1200 \\ 120 \\ 120 \\ 120 \\ 51 \\ 50^{1} \\ 280^{1} \\ 0.7^{1} \\ 480^{1} \\ \end{array} $
Arsenic       Cadmium         Cadmium       Chromium         Copper       Lead         Mercury       Nickel         Zinc       Total Recoverable Hydrocarbons (TRH)         Naphthalene       TRH C6-C10 (F1)         TRH C10-C16 (F2)       Monocyclic Aromatic Hydrocarbons         Benzene       Toluene         Ethylbenzene       Xylene (Total)         Polycyclic Aromatic Hydrocarbons (PAH)       Benzo(a)pyrene         Total PAH       Organochlorine Pesticides         DDT+DDE+DDD       Image: Comparison of the state in the state	$ \begin{array}{r} 150 \\ 500 \\ 30 000 \\ 1200 \\ 120 \\ 120 \\ 60 000 \\ \hline 5^{1} \\ 50^{1} \\ 280^{1} \\ \hline 0.7^{1} \\ \end{array} $
Chromium Copper Lead Mercury Nickel Zinc Total Recoverable Hydrocarbons (TRH) Naphthalene TRH C6-C10 (F1) TRH C10-C16 (F2) Monocyclic Aromatic Hydrocarbons Benzene Toluene Ethylbenzene Xylene (Total) Polycyclic Aromatic Hydrocarbons (PAH) Benzo(a)pyrene Total PAH Organochlorine Pesticides DDT+DDE+DDD	500 30 000 1200 120 120 60 000 5 <sup>1</sup> 50 <sup>1</sup> 280 <sup>1</sup> 0.7 <sup>1</sup>
Copper       Lead         Lead       Mercury         Mickel       Zinc         Zinc       Total Recoverable Hydrocarbons (TRH)         Naphthalene       TRH C6-C10 (F1)         TRH C6-C10 (F1)       TRH C10-C16 (F2)         Monocyclic Aromatic Hydrocarbons       Benzene         Toluene       Ethylbenzene         Xylene (Total)       Polycyclic Aromatic Hydrocarbons (PAH)         Benzo(a)pyrene       Total PAH         Organochlorine Pesticides       DDT+DDE+DDD	30 000 1200 120 1200 60 000 5 <sup>1</sup> 50 <sup>1</sup> 280 <sup>1</sup> 0.7 <sup>1</sup>
Lead         Mercury         Nickel         Zinc         Total Recoverable Hydrocarbons (TRH)         Naphthalene         TRH C6-C10 (F1)         TRH C10-C16 (F2)         Monocyclic Aromatic Hydrocarbons         Benzene         Toluene         Ethylbenzene         Xylene (Total)         Polycyclic Aromatic Hydrocarbons (PAH)         Benzo(a)pyrene         Total PAH         Organochlorine Pesticides         DDT+DDE+DDD	1200 120 1200 60 000 51 50 <sup>1</sup> 280 <sup>1</sup> 0.7 <sup>1</sup>
Lead         Mercury         Nickel         Zinc         Total Recoverable Hydrocarbons (TRH)         Naphthalene         TRH C6-C10 (F1)         TRH C10-C16 (F2)         Monocyclic Aromatic Hydrocarbons         Benzene         Toluene         Ethylbenzene         Xylene (Total)         Polycyclic Aromatic Hydrocarbons (PAH)         Benzo(a)pyrene         Total PAH         Organochlorine Pesticides         DDT+DDE+DDD	120 1200 60 000 5 <sup>1</sup> 50 <sup>1</sup> 280 <sup>1</sup> 0.7 <sup>1</sup>
Nickel Zinc Total Recoverable Hydrocarbons (TRH) Naphthalene TRH C6-C10 (F1) TRH C10-C16 (F2) Monocyclic Aromatic Hydrocarbons Benzene Toluene Ethylbenzene Xylene (Total) Polycyclic Aromatic Hydrocarbons (PAH) Benzo(a)pyrene Total PAH Organochlorine Pesticides DDT+DDE+DDD	1200 60 000 5 <sup>1</sup> 50 <sup>1</sup> 280 <sup>1</sup> 0.7 <sup>1</sup>
Nickel Zinc Total Recoverable Hydrocarbons (TRH) Naphthalene TRH C6-C10 (F1) TRH C10-C16 (F2) Monocyclic Aromatic Hydrocarbons Benzene Toluene Ethylbenzene Xylene (Total) Polycyclic Aromatic Hydrocarbons (PAH) Benzo(a)pyrene Total PAH Organochlorine Pesticides DDT+DDE+DDD	60 000 5 <sup>1</sup> 50 <sup>1</sup> 280 <sup>1</sup> 0.7 <sup>1</sup>
Total Recoverable Hydrocarbons (TRH)         Naphthalene         TRH C6-C10 (F1)         TRH C10-C16 (F2)         Monocyclic Aromatic Hydrocarbons         Benzene         Toluene         Ethylbenzene         Xylene (Total)         Polycyclic Aromatic Hydrocarbons (PAH)         Benzo(a)pyrene         Total PAH         Organochlorine Pesticides         DDT+DDE+DDD	5 <sup>1</sup> 50 <sup>1</sup> 280 <sup>1</sup> 0.7 <sup>1</sup>
Naphthalene         TRH C6-C10 (F1)         TRH C10-C16 (F2)         Monocyclic Aromatic Hydrocarbons         Benzene         Toluene         Ethylbenzene         Xylene (Total)         Polycyclic Aromatic Hydrocarbons (PAH)         Benzo(a)pyrene         Total PAH         Organochlorine Pesticides         DDT+DDE+DDD	50 <sup>1</sup> 280 <sup>1</sup> 0.7 <sup>1</sup>
Naphthalene         TRH C6-C10 (F1)         TRH C10-C16 (F2)         Monocyclic Aromatic Hydrocarbons         Benzene         Toluene         Ethylbenzene         Xylene (Total)         Polycyclic Aromatic Hydrocarbons (PAH)         Benzo(a)pyrene         Total PAH         Organochlorine Pesticides         DDT+DDE+DDD	50 <sup>1</sup> 280 <sup>1</sup> 0.7 <sup>1</sup>
TRH C6-C10 (F1)         TRH C10-C16 (F2)         Monocyclic Aromatic Hydrocarbons         Benzene         Toluene         Ethylbenzene         Xylene (Total)         Polycyclic Aromatic Hydrocarbons (PAH)         Benzo(a)pyrene         Total PAH         Organochlorine Pesticides         DDT+DDE+DDD	280 <sup>1</sup> 0.7 <sup>1</sup>
TRH C10-C16 (F2)         Monocyclic Aromatic Hydrocarbons         Benzene         Toluene         Ethylbenzene         Xylene (Total)         Polycyclic Aromatic Hydrocarbons (PAH)         Benzo(a)pyrene         Total PAH         Organochlorine Pesticides         DDT+DDE+DDD	0.7 <sup>1</sup>
Benzene Toluene Ethylbenzene Xylene (Total) Polycyclic Aromatic Hydrocarbons (PAH) Benzo(a)pyrene Total PAH Organochlorine Pesticides DDT+DDE+DDD	
Benzene Toluene Ethylbenzene Xylene (Total) Polycyclic Aromatic Hydrocarbons (PAH) Benzo(a)pyrene Total PAH Organochlorine Pesticides DDT+DDE+DDD	
Ethylbenzene Xylene (Total) Polycyclic Aromatic Hydrocarbons (PAH) Benzo(a)pyrene Total PAH Organochlorine Pesticides DDT+DDE+DDD	4801
Xylene (Total)         Polycyclic Aromatic Hydrocarbons (PAH)         Benzo(a)pyrene         Total PAH         Organochlorine Pesticides         DDT+DDE+DDD	480
Xylene (Total)         Polycyclic Aromatic Hydrocarbons (PAH)         Benzo(a)pyrene         Total PAH         Organochlorine Pesticides         DDT+DDE+DDD	NL <sup>1</sup>
Benzo(a)pyrene Total PAH Organochlorine Pesticides DDT+DDE+DDD	110 <sup>1</sup>
Total PAH Organochlorine Pesticides DDT+DDE+DDD	
Organochlorine Pesticides DDT+DDE+DDD	4 <sup>2</sup>
DDT+DDE+DDD	400 <sup>2</sup>
	600
Aldrin and dieldrin	10
Chlordane	90
Endosulfan	400
Endrin	20
Heptachlor	10
HCB	15
Methoxychlor	500
Mirex	20
Toxaphene	30
Asbestos	
Bonded	0.04%

Notes: NL – Not Limiting

1. Health screening levels for clay soils over the depth interval 0-1m.

2. Carcinogenic PAHs based on the 8 carcinogenic PAHs.

#### 9.0 DISCUSSION

#### 9.1 Site Conditions

Soil conditions encountered across the Site consisted of disturbed natural clay conditions with a thickness of 0.3m at most locations with the exception of one test pit (TP31) which encountered a depth of 0.7m. Topsoil was encountered between depths of 0.2-0.8m, however, the topsoil had been stripped in some locations. The natural underlying material consisted of red brown silty clays.

Fragments of potential Abestos Containing Material (ACM) in the form of cement sheeting were observed on the surface of disturbed natural clay in a few locations across the Site (nearby TP14, TP20, TP32). One fragment of cement sheeting was also observed in the stockpile at the northern end of the Site (area A9).

An access road has been constructed entering the Site from Shirley Street. The gravel utilised to establish the road consisted of recycled material including brick, ceramic pipe and tiles.

#### 9.2 Sample Analysis Results

The results of analysis of the soil samples are presented on Table 9.1 – Summary of Results and the laboratory reports are included in Appendix 3.

The results of analysis of the composite soil samples indicated concentrations of CoPC below the Site Assessment Criteria (SAC) and generally below the laboratory level of reporting for hydrocarbon contaminants.

The results of the analysis of soil samples indicate concentrations of heavy metals below SAC and at concentration that are generally expected to be background levels with the following exceptions:

- The lead concentrations in composite samples A2, A5, A6 and A7 of 75mg/kg, 65mg/kg, 100mg/kg and 81mg/kg, respectively. However, concentrations did not exceed SAC.
- The zinc concentrations in composite samples A2, A5, A6, A7, A8 and the sample from the access road AR were 100mg/kg, 130 mg/kg, 93 mg/kg, 180 mg/kg, 83 mg/kg and 240 mg/kg, respectively. However, concentrations did not exceed SAC.

The results of the analysis indicate concentrations of hydrocarbons below the SAC and generally below the laboratory level of reporting with the exception of composite sample A6 which detected benzo(a)pyrene and total PAH concentrations of 1.3mg/kg and 7mg/kg, respectively. However, concentrations did not exceed SAC.

The results of the analysis indicate concentrations of organochlorine pesticides (OCP) below the SAC and generally below the laboratory level of reporting with the exception of composite sample A6 which detected combined aldrin and dieldrin concentrations of 0.73mg/kg. However, concentrations did not exceed SAC.

The preparation of the composite samples included the mixing of four discrete samples. This method of sampling indicates concentrations across the designated sections of the Site. However, to further evaluate for a potential hot spot, the results of analysis were considered using one quarter of the Site Assessment Criteria (to account for the potential dilution of concentrations in discrete sample from preparation of the composite samples).

Results of soil sample analysis were generally below one quarter of the SAC with the exception of benzo(a)pyrene in composite sample A6 having a concentration of 1.3mg/kg exceeding a quarter of the SAC which is 1mg/kg. This concentration could represent a localised hotspot of benzo(a)pyrene, however, representing the whole area of A6, the concentration is not considered to represent significant contamination.

One sample of ACM was collected from the surface of the filled area near TP14 (labelled A4B) and submitted for asbestos analysis which confirmed the presence of chrysotile, amosite and crocidolite asbestos in the fragment.



#### Table 9.1 – Summary of Soil Results

													SA	NC
Sample Number	A1	A2	A3	A4	A5	A6	A7	A8	A9	D	SP	AR	HIL B & HSL A/B	¼ (HIL B & HSL A/B)
Heavy Metals														
Arsenic	13	9.5	8.8	5.9	17	4.7	11	11	11	9.7	13	7.3	500	125
Cadmium	< 0.4	0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	150	37.5
Chromium	39	32	22	17	22	15	43	16	17	14	16	21	500	125
Copper	17	44	10	13	27	16	27	30	29	26	25	22	30 000	7500
Lead	22	75	31	20	65	100	81	35	24	21	24	49	1200	300
Mercury	< 0.1	0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	120	30
Nickel	9.8	9.4	< 5	< 5	9.3	7.5	14	15	7.4	9.3	< 5	11	1200	300
Zinc	25	100	12	18	130	93	180	83	38	49	17	240	60 000	15 000
Total Recoverable	Hydrocarbons	(TRH)								•				
Naphthalene	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	5	1.25
TRH F1	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	50	12.5
TRH F2	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	280	70
Monocyclic Aromat	tic Hydrocarbo	ns		•				•	•		·			
Benzene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.7	0.175
Toluene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	480	120
Ethylbenzene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	NL	NL
Xylene (Total)	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	110	27.5
Polycyclic Aromatic	c Hydrocarbon	s (PAH)		•				•	•		·			
Benzo(a)pyrene	1.2	1.2	1.2	1.2	1.2	1.3	1.2	1.2	1.2	1.2	1.2	1.2	4	1
Total PAH	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	7	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	400	100
Organochlorine Pe	sticides	•		•				•	•		·			
DDT+DDE+DDD	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	600	150
Aldrin & dieldrin	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.73	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	10	2.5
Chlordane	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	90	22.5
Endosulfan	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	400	100
Endrin	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	20	5
Heptachlor	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	10	2.5
НСВ	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	15	3.75
Methoxychlor	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	500	125
Toxaphene	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	30	7.5
Asbestos														
Asbestos	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.04%	0.01%
Notes: All meas	surements in n	ng/kg												

All measurements in

ND: Non-detect



#### 9.3 Data Quality Review

#### Data Quality Objectives

The purpose of establishing data quality objectives is to ensure the field investigations and analyses are undertaken in a way that enables the collection and reporting of reliable data on which to base the site assessment.

The data quality objectives (DQOs) for sampling techniques and laboratory analysis of collected samples defines the acceptable level of error required for this investigation. The data quality objectives will be assessed by reference to DQO indicators as follows:

#### Data Representativeness

Data representativeness expresses the degree which sample data accurately and precisely represents a characteristic of a population or an environmental condition. Representativeness was achieved by collecting samples at pre-determined locations across the Site and by taking an adequate number of samples to achieve the intended objectives. Consistent and repeatable sampling techniques and methods were utilised throughout the sampling, as described.

#### **Completeness**

Completeness is defined as the percentage of measurements made which are judged to be valid measurements. The completeness goal is set at there being sufficient valid data generated during the study. If there is insufficient valid data, as determined by the other data quality objectives, then additional data would be required to be collected.

#### Data Comparability

Data comparability is a qualitative parameter expressing the confidence with which one data set can be compared with another. This is achieved through maintaining a level of consistency in techniques used to collect samples, ensuring analysing laboratories use consistent analysis techniques and reporting methods. Reporting of results was done in consistent units and nomenclatures, and comparability was achieved by ensuring that precision and accuracy objectives were met.

#### **Precision**

Precision measures the reproducibility of measurements under a given set of conditions. The precision of the laboratory data and sampling techniques is assessed by calculating the Relative Percent Difference (RPD) of duplicate samples. The criteria used for the assessment of RPDs is based on guidelines given in AS4482.1 (1997) and laboratory criteria. If duplicate results are not within the acceptable RPDs, investigation into the cause is initiated. If a cause cannot be determined the validity of the data is questioned.

The proposed acceptable range for Relative Percent Difference (RPD) for duplicate samples have been set as follows:

%RPD Range result >10 times PQL then maximum RPD 50% result >5 times PQL then maximum RPD 75% result >2 times PQL then maximum RPD 100% result <2 times PQL then acceptable difference 2.5 times. RPD is calculated as the absolute value of the difference between the initial and repeat result divided by the average value expressed as a percentage. The overall success is based on assessment of the data set as a whole and not on individual acceptance or exceedance within the data set.

A summary of the duplicate samples with the calculated RPDs is presented in the Table 9.2.

Sample Number	PQL	A8	D	RPD	Comment			
Total Recoverable Hydr	Total Recoverable Hydrocarbons							
Naphthalene	1	< 0.5	< 0.5	-	Accept			
TRH C6-C10 (F1)	20	< 20	< 20	-	Accept			
TRH C10-C16 (F2)	50	< 50	< 50	-	Accept			
Monocyclic Aromatic Hy	/drocarbons							
Benzene	0.1	< 0.1	< 0.1	-	Accept			
Toluene	0.1	< 0.1	< 0.1	-	Accept			
Ethylbenzene	0.1	< 0.1	< 0.1	-	Accept			
Xylene (total)	0.3	< 0.3	< 0.3	-	Accept			
Heavy Metals								
Arsenic	2	11	9.7	12.6	Accept			
Cadmium	0.4	< 0.4	< 0.4	-	Accept			
Chromium	5	16	14	13.3	Accept			
Copper	5	30	26	14.3	Accept			
Lead	5	35	21	50				
Mercury	0.1	< 0.1	< 0.1	-	Accept			
Nickel	5	15	9.3	46.9				
Zinc	5	83	49	51.5				
Polycyclic Aromatic Hyc	Irocarbons							
Benzo(a)pyrene	0.5	1.2	1.2	-	Accept			
Total PAH	0.5	< 0.5	< 0.5	-	Accept			
Organochlorine Pesticio	les							
DDT+DDE+DDD	0.05	< 0.05	< 0.05	-	Accept			
Aldrin and dieldrin	0.05	< 0.05	< 0.05	-	Accept			
Chlordane	0.1	< 0.1	< 0.1	-	Accept			
Endosulfan	0.05	< 0.05	< 0.05	-	Accept			
Endrin	0.05	< 0.05	< 0.05	-	Accept			
Heptachlor	0.05	< 0.05	< 0.05	-	Accept			
HCB	0.05	< 0.05	< 0.05	-	Accept			
Methoxychlor	0.2	< 0.2	< 0.2	-	Accept			
Toxaphene	0.1	< 0.1	< 0.1	-	Accept			

#### Table 9.2 – Relative Percent Differences

The analytical laboratory QA/QC program included the analysis of one blank sample and one spiked sample with every batch of samples tested, and the repeat analysis of approximately 10% of the samples. Laboratory Quality Assurance and Quality Control procedures are provided in the Final Certificate of Analysis.

- A copy of chain of custody (COC) forms are provided with the laboratory results. These forms detail the sample logs such as sample identification, matrix, depths, dates of sampling, container type, and analysis requests;
- A sample receipt notice (SRN) is issued upon delivery of samples, and Sample Integrity and Validated Time of Sample Receipt (VTSR) Holding Times are verified;
- Analytical methods are detailed in the Final Certificate of Analysis;
- NATA accreditation is held for each method and sample matrix type reported, unless otherwise specified, NATA accredited in-house laboratory methods are referenced from NEPC, ASTM, and modified USEPA / APHA documents; and
- Inter-laboratory profic trial performance.

Performance of intra-laboratory spikes and duplicates are specific to each report, details of which are provided in the Final Certificate of Analysis (FCA). Details referring to instrument detection limits, method detection limits (MDL), and estimated quantitative limits (EQL) are also provided in the FCA.

The data is considered to be comparable. Consistent techniques were used to collect samples; the laboratory used consistent techniques and reporting methods. Reporting of results was done in consistent units and nomenclatures, and comparability was achieved by ensuring that precision and accuracy objectives were met.

#### 10.0 CONCLUSION

This investigation has reviewed the history of the Site which indicates historical use for primarily residential purposes. Majority of residential buildings on the Site have recently been demolished leaving the Site vacant with the exception of a few residential dwellings with frontage to Pennant Hills Road which are still existing today.

A Clean-up Notice was issued for the Site by the EPA in February 2019 in relation to the placement of waste materials on Site, including asbestos waste. The EPA has confirmed that the Clean-up Notice was complied with and the asbestos waste has been removed from the Site and disposed of at a lawful facility.

To evaluate for impacts at the Site, an inspection was undertaken and methodical sampling conducted which included the collection of composite samples. Soil sampling has been undertaken based on NSW EPA (1995) Sampling Design guidelines for site characterisation.

The subsurface conditions generally consisted of disturbed natural silty clays to a depth of 0.3m although disturbed natural clay extended to 0.7m depth at one location. The underlying natural soils consisted of topsoil in some locations over stiff silty clays.

Concentrations of contaminants in all composite samples are below the Site Assessment Criteria.

To further evaluate the composite samples for a potential hot spot in each designated section of the Site, the results of analysis were considered using one quarter of the Site Assessment Criteria. This approach concluded that concentrations of contaminants in composite samples remained below one quarter of the SAC with the exception of benzo(a)pyrene in composite sample A6 which encountered a concentration of 1.3mg/kg exceeding a quarter of the SAC of 1mg/kg.

The elevated concentration of benzo(a)pyrene could represent a localised hotspot, however, when considering the total section represented by sample A6, the concentration is not considered to represent significant contamination. Additionally, the proposed high-density residential development is likely to include excavation of surface soils for basement carpark.

The impact of benzo(a)pyrene at this section of the Site should be considered during the future development. Any material removed during excavation should be kept separate to underlying natural soils and classified in accordance with the Waste Guidelines Part 1: Classifying Waste (2014) (Waste Guidelines).

The inspection indicated the presence of fragments of ACM on the Site surface. Laboratory analysis of a cement sheeting fragment collected from the Site confirmed the presence of asbestos. The density of potential ACM fragments observed across the Site is not anticipated to be above the SAC of 0.04% for residential properties with minimal access to soil. However,

the NEPM guidelines also specifies a criterion of 'no visible asbestos for surface soil'. Therefore, to comply with guidelines, fragments of ACM should be removed from the Site surface.

The Site is considered suitable for the proposed high-density residential development after the implementation of asbestos management measures.

# **APPENDIX 1**



# Date: 16 Nov 2020 16:19:12 Reference: LS016069 EP Address: 277-281 Pennant Hills Road, Carlingford, NSW 2118

Disclaimer:

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

# **Dataset Listing**

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

Dataset Name	Custodian	Supply Date	Currency Date	Update Frequency	Dataset Buffer (m)	No. Features Onsite	No. Features within 100m	No. Features within Buffer
Cadastre Boundaries	NSW Department of Finance, Services & Innovation	31/03/2020	31/03/2020	Quarterly	-	-	-	-
Topographic Data	NSW Department of Finance, Services & Innovation	25/06/2019	25/06/2019	As required	-	-	-	-
List of NSW contaminated sites notified to EPA	Environment Protection Authority	22/10/2020	22/10/2020	Monthly	1000	0	0	1
Contaminated Land Records of Notice	Environment Protection Authority	04/11/2020	04/11/2020	Monthly	1000	0	0	0
Former Gasworks	Environment Protection Authority	10/11/2020	11/10/2017	Monthly	1000	0	0	0
National Waste Management Facilities Database	Geoscience Australia	12/11/2020	07/03/2017	Quarterly	1000	0	0	0
National Liquid Fuel Facilities	Geoscience Australia	12/11/2020	13/07/2012	Quarterly	1000	0	0	3
EPA PFAS Investigation Program	Environment Protection Authority	12/11/2020	07/05/2020	Monthly	2000	0	0	0
Defence PFAS Investigation & Management Program - Investigation Sites	Department of Defence	14/10/2020	14/10/2020	Monthly	2000	0	0	0
Defence PFAS Investigation & Management Program - Management Sites	Department of Defence	14/10/2020	14/10/2020	Monthly	2000	0	0	0
Airservices Australia National PFAS Management Program	Airservices Australia	10/11/2020	10/11/2020	Monthly	2000	0	0	0
Defence 3 Year Regional Contamination Investigation Program	Department of Defence	16/11/2020	16/11/2020	Monthly	2000	0	0	1
EPA Other Sites with Contamination Issues	Environment Protection Authority	04/02/2020	13/12/2018	Annually	1000	0	0	0
Licensed Activities under the POEO Act 1997	Environment Protection Authority	10/11/2020	10/11/2020	Monthly	1000	0	0	2
Delicensed POEO Activities still regulated by the EPA	Environment Protection Authority	10/11/2020	10/11/2020	Monthly	1000	0	0	0
Former POEO Licensed Activities now revoked or surrendered	Environment Protection Authority	10/11/2020	10/11/2020	Monthly	1000	0	0	3
UBD Business Directories (Premise & Intersection Matches)	Hardie Grant			Not required	150	3	158	317
UBD Business Directories (Road & Area Matches)	Hardie Grant			Not required	150	-	128	130
UBD Business Directory Dry Cleaners & Motor Garages/Service Stations (Premise & Intersection Matches)	Hardie Grant			Not required	500	0	27	122
UBD Business Directory Dry Cleaners & Motor Garages/Service Stations (Road & Area Matches)	Hardie Grant			Not required	500	-	117	118
Points of Interest	NSW Department of Finance, Services & Innovation	30/03/2020	30/03/2020	Quarterly	1000	0	4	50
Tanks (Areas)	NSW Department of Customer Service - Spatial Services	30/03/2020	30/03/2020	Quarterly	1000	0	0	1
Tanks (Points)	NSW Department of Customer Service - Spatial Services	30/03/2020	30/03/2020	Quarterly	1000	0	0	3
Major Easements	NSW Department of Finance, Services & Innovation	30/03/2020	30/03/2020	Quarterly	1000	2	7	34
State Forest	Forestry Corporation of NSW	18/01/2018	18/01/2018	As required	1000	0	0	0
NSW National Parks and Wildlife Service Reserves	NSW Office of Environment & Heritage	21/01/2020	30/09/2019	•	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
Temporary Water Restriction (Botany Sands Groundwater Source) Order 2018	NSW Department of Planning, Industry and Environment	26/10/2020	21/02/2018	•	1000	0	0	0

Dataset Name	Custodian	Supply Date	Currency Date	Update Frequency	Dataset Buffer (m)	No. Features Onsite	No. Features within 100m	No. Features within Buffer
Groundwater Boreholes	NSW Dept. of Primary Industries - Water NSW; Commonwealth of Australia (Bureau of Meteorology)	24/07/2018	23/07/2018	Annually	2000	0	0	9
Geological Units 1:100,000	NSW Department of Planning, Industry and Environment	20/08/2014		None planned	1000	2	-	3
Geological Structures 1:100,000	NSW Department of Planning, Industry and Environment	20/08/2014		None planned	1000	0	-	1
Naturally Occurring Asbestos Potential	NSW Dept. of Industry, Resources & Energy	04/12/2015	24/09/2015	Unknown	1000	0	0	0
Atlas of Australian Soils	Australian Bureau of Agriculture and Resource Economics and Sciences (ABARES)	19/05/2017	17/02/2011	As required	1000	1	1	1
Soil Landscapes of Central and Eastern NSW	NSW Department of Planning, Industry and Environment	14/10/2020	27/07/2020	Annually	1000	1	-	4
Environmental Planning Instrument Acid Sulfate Soils	NSW Department of Planning, Industry and Environment	29/10/2020	03/07/2020	Monthly	500	0	-	-
Atlas of Australian Acid Sulfate Soils	CSIRO	19/01/2017	21/02/2013	As required	1000	1	1	1
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 Department of Planning, Industry and Environment	12/05/2017	01/01/2002	None planned	1000	1	1	2
Mining Subsidence Districts	NSW Department of Customer Service - Subsidence Advisory NSW	30/03/2020	30/03/2020	Quarterly	1000	0	0	0
Current Mining Titles	NSW Department of Industry	04/11/2020	04/11/2020	Monthly	1000	0	0	0
Mining Title Applications	NSW Department of Industry	04/11/2020	04/11/2020	Monthly	1000	0	0	0
Historic Mining Titles	NSW Department of Industry	04/11/2020	04/11/2020	Monthly	1000	12	12	12
Environmental Planning Instrument SEPP State Significant Precincts	NSW Department of Planning, Industry and Environment	29/10/2020	07/12/2018	Monthly	1000	0	0	0
Environmental Planning Instrument Land Zoning	NSW Department of Planning, Industry and Environment	29/10/2020	23/10/2020	Monthly	1000	2	15	92
Commonwealth Heritage List	Australian Government Department of the Agriculture, Water and the Environment	18/08/2020	20/11/2019	Quarterly	1000	0	0	0
National Heritage List	Australian Government Department of the Agriculture, Water and the Environment	18/08/2020	20/11/2019	Quarterly	1000	0	0	0
State Heritage Register - Curtilages	NSW Department of Planning, Industry and Environment	12/11/2020	02/07/2020	Quarterly	1000	0	0	1
Environmental Planning Instrument Heritage	NSW Department of Planning, Industry and Environment	29/10/2020	23/10/2020	Monthly	1000	0	4	26
Bush Fire Prone Land	NSW Rural Fire Service	09/11/2020	02/11/2020	Weekly	1000	0	0	2
Native Vegetation of the Sydney Metropolitan Area	NSW Office of Environment & Heritage	01/03/2017	16/12/2016	As required	1000	1	2	6
Ramsar Wetlands of Australia	Department of the Agriculture, Water and 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	2
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	10/11/2020	10/11/2020	Weekly	10000	-	-	-

### Site Diagram

277-281 Pennant Hills Road, Carlingford, NSW 2118





## **Contaminated Land**

277-281 Pennant Hills Road, Carlingford, NSW 2118





# **Contaminated Land**

277-281 Pennant Hills Road, Carlingford, NSW 2118

### 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
256	Caltex Service Station	797 Pennant Hills Road	Carlingford	Service Station	Regulation under CLM Act not required	Current EPA List	Premise Match	395m	North

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

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

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

277-281 Pennant Hills Road, Carlingford, NSW 2118

#### **Contaminated Land: Records of Notice**

Record of Notices within the dataset buffer:

Map Id	Name	Address	Suburb	Notices	Area No	Location Confidence	Distance	Direction
N/A	No records in buffer							

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

#### **Former Gasworks**

#### Former Gasworks within the dataset buffer:

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

Former Gasworks Data Source: Environment Protection Authority

© State of New South Wales through the Environment Protection Authority

### Waste Management & Liquid Fuel Facilities





# **Waste Management & Liquid Fuel Facilities**

277-281 Pennant Hills Road, Carlingford, NSW 2118

#### 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	Dist (m)	Direction
N/A	No records in buffer										

Waste Management Facilities Data Source: Geoscience Australia

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#### **National Liquid Fuel Facilities**

#### National Liquid Fuel Facilties within the dataset buffer:

Map Id	Owner	Name	Address	Suburb	Class	Operational Status	Operator	Revision Date	Loc Conf	Dist (m)	Direction
3567	Shell	Coles Express Carlingford	790 Pennant Hills Road	Carlingford	Petrol Station	Operational		25/07/2011	Premise Match	106m	North East
3527	Caltex	Caltex Carlingford	797 Pennant Hills Road	Carlingford	Petrol Station	Operational		25/07/2011	Premise Match	395m	North
3565	Shell	Coles Express Carlingford West	288 Pennant Hills Road	Carlingford	Petrol Station	Operational		25/07/2011	Premise Match	665m	South West

National Liquid Fuel Facilities Data Source: Geoscience Australia

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# **PFAS Investigation & Management Programs**

277-281 Pennant Hills Road, Carlingford, NSW 2118

#### **EPA PFAS Investigation Program**

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

ld	Site	Address	Loc Conf	Dist	Dir
N/A	No records in buffer				

EPA PFAS Investigation Program: Environment Protection Authority © State of New South Wales through the Environment Protection Authority

### **Defence PFAS Investigation Program**

Sites being investigated by the Department of Defence for PFAS contamination within the dataset buffer:

Map ID	Base Name	Address	Loc Conf	Dist	Dir
N/A	No records in buffer				

Defence PFAS Investigation Program Data Custodian: Department of Defence, Australian Government

#### **Defence PFAS Management Program**

Sites being managed by the Department of Defence for PFAS contamination within the dataset buffer:

Map ID	Base Name	Address	Loc Conf	Dist	Dir
N/A	No records in buffer				

Defence PFAS Management Program Data Custodian: Department of Defence, Australian Government

#### Airservices Australia National PFAS Management Program

Sites being investigated or managed by Airservices Australia for PFAS contamination within the dataset buffer:

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

Airservices Australia National PFAS Management Program Data Custodian: Airservices Australia

# **Defence 3 Year Regional Contamination Investigation Program** 277-281 Pennant Hills Road, Carlingford, NSW 2118





# **Defence Sites**

277-281 Pennant Hills Road, Carlingford, NSW 2118

#### **Defence 3 Year Regional Contamination Investigation Program**

Sites which have been assessed as part of the Defence 3 Year Regional Contamination Investigation Program within the dataset buffer:

Property ID	Base Name	Address	Known Contamination	Loc Conf	Dist	Dir
375	Timor Barracks - Dundas	Dundas, New South Wales	NO	Premise Match	1967m	South

Defence 3 Year Regional Contamination Investigation Program, Data Custodian: Department of Defence, Australian Government

# **EPA Other Sites with Contamination Issues**

277-281 Pennant Hills Road, Carlingford, NSW 2118

#### **EPA Other Sites with Contamination Issues**

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

- · James Hardie asbestos manufacturing and waste disposal sites
- Radiological investigation sites in Hunter's Hill
- Pasminco Lead Abatement Strategy Area

Sites within the dataset buffer:

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

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

#### **Current EPA Licensed Activities**





# **EPA Activities**

277-281 Pennant Hills Road, Carlingford, NSW 2118

#### Licensed Activities under the POEO Act 1997

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

EPL	Organisation	Name	Address	Suburb	Activity	Loc Conf	Distance	Direction
12208	SYDNEY TRAINS		SYDNEY TRAINS, HAYMARKET, NSW 1238		Railway systems activities	Network of Features	221m	South West
21347	CPB CONTRACTORS PTY LIMITED		PACKAGE 4, PARRAMATTA, NSW 2123		Railway infrastructure construction (>=50,000T & track to be constructed>10k m & <30km)	Network of Features	233m	South West

POEO Licence Data Source: Environment Protection Authority

© State of New South Wales through the Environment Protection Authority

#### **Delicensed & Former Licensed EPA Activities**





# **EPA Activities**

277-281 Pennant Hills Road, Carlingford, NSW 2118

#### **Delicensed Activities still regulated by the EPA**

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

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

Delicensed Activities Data Source: Environment Protection Authority

© State of New South Wales through the Environment Protection Authority

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

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

Licence No	Organisation	Location	Status	Issued Date	Activity	Loc Conf	Distance	Direction
4653	LUHRMANN ENVIRONMENT MANAGEMENT PTY LTD	WATERWAYS THROUGHOUT NSW	Surrendered	06/09/2000	Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	590m	-
4838	Robert Orchard	Various Waterways throughout New South Wales - SYDNEY NSW 2000	Surrendered	07/09/2000	Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	590m	-
6630	SYDNEY WEED & PEST MANAGEMENT PTY LTD	WATERWAYS THROUGHOUT NSW - PROSPECT, NSW, 2148	Surrendered	09/11/2000	Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	590m	-

Former Licensed Activities Data Source: Environment Protection Authority

© State of New South Wales through the Environment Protection Authority

# **Historical Business Directories**





# **Historical Business Directories**

277-281 Pennant Hills Road, Carlingford, NSW 2118

#### **Business Directory Records 1950-1991 Premise or Road Intersection Matches**

Universal Business Directory records from years 1991, 1986, 1982, 1978, 1975, 1970, 1965, 1961 & 1950, mapped to a premise or road intersection within the dataset buffer:

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
1	FLORISTS - RETAIL. (F4125)	Carlingford Florist, 249 Pennant Hills Rd., Carlingford. 2118.	31417	1982	Premise Match	0m	On-site
2	Motor Towing Services	McConnell's Towing Service, 279 Pennant Hills Rd., Carlingford	127108	1965	Premise Match	0m	On-site
	MOTOR TOWING SERVICES	McConnell's Towing Service, 279 Pennant Hills Rd., Carlingford	352151	1961	Premise Match	0m	On-site
3	TAXATION CONSULTANTS.	I.T.P. People, 285 Pennant Hills Rd., Carlingford. 2118	92279	1986	Premise Match	0m	North East
	DENTISTS.	Jones, F. B, 285 Pennant Hills Rd., Carlingford. 2118	22801	1986	Premise Match	0m	North East
	CAKE SHOPS &/OR PASTRYCOOKS.	Pavlova Pantry, 285A Pennant Hills Rd., Carlingford. 2118	11867	1986	Premise Match	0m	North East
	WINE &/OR SPIRIT MERCHANTS RETAIL.	Post Office Cellars, 285 Pennant Hills Rd., Carlingford. 2067	99504	1986	Premise Match	0m	North East
	WINE &/OR SPIRIT MERCHANTS RETAIL. (W5960)	Carlingford Bottle Shoppe, 285 Pennant Hills Rd., Carlingford. 2118.	84618	1982	Premise Match	0m	North East
	DENTISTS. (D1800)	Jones, F. B., 285 Pennant Hills Rd., Carlingford. 2118.	20402	1982	Premise Match	0m	North East
	CAKE SHOPS &/OR PASTRYCOOKS. (C0465)	Pavlova Pantry, 285A Pennant Hills Rd., Carlingford. 2118.	12764	1982	Premise Match	0m	North East
	WINE &/OR SPIRIT MERCHANTS RETAIL. (W5960)	Post Office Cellars, 285 Pennant Hills Rd., Carlingford. 2118.	84909	1982	Premise Match	0m	North East
	ACCOUNTANTS & AUDITORS. (A0360)	Sellen, Wesley F. & Co, 285 Pennant Hills Rd., Carlingford. 2118.	864	1982	Premise Match	0m	North East
	DELICATESSENS.	Carlingford Fruit Market, 285d Pennant Hills Rd., Carlingford. 2118	17325	1978	Premise Match	0m	North East
	FRUITERERS &/OR GREENGROCERS.	Carlingford Fruit Market. 285d Pennant Hills Rd., Carlingford. 2118	30336	1978	Premise Match	0m	North East
	ANIMAL &/OR BIRD DEALERS.	Carlingford Pet Shop, 285e Pennant Hills Rd., Carlingford. 2118	2458	1978	Premise Match	0m	North East
	ANIMAL &/OR BIRD FOOD SUPPLIES.	Carlingford Pet Shop. 285e Pennant Hills Rd., Carlingford. 2118	2529	1978	Premise Match	0m	North East
	BEAUTY SALONS &/OR LADIES HAIRDRESSERS.	Court Hair Fashions, 285c Pennant Hills Rd., Carlingford. 2118	4882	1978	Premise Match	0m	North East
	WINE &/OR SPIRIT MERCHANTS- RETAIL.	Moraschi, D., 285e Pennant Hills Rd., Carlingford. 2118	74787	1978	Premise Match	0m	North East
	MIXED BUSINESSES.	Moraschi. D., 285e Pennant Hills Rd., Carlingford. 2118	46921	1978	Premise Match	0m	North East
	BUILDERS &/OR BUILDING CONTRACTORS.	Mornington Homes Pty. Ltd., 285 Pennant Hills Rd., Carlingford. 2118	7833	1978	Premise Match	0m	North East
	CAKE SHOPS &/OR PASTRYCOOKS.	Pop-In Cake Box, The, 285a Pennant Hills Rd., Carlingford. 2118	10925	1978	Premise Match	0m	North East
	DENTISTS.	Tait, J. R., 285 Pennant Hills Rd., Carlingford. 2118	18534	1978	Premise Match	0m	North East
	FRUITERERS &/OR GREENGROCERS.	Carlingford Fruit Market, 285d Pennant Hills Rd., Carlingford. 2118.	35044	1975	Premise Match	Om	North East
	ANIMAL &/OR BIRD FOOD SUPPLIES.	Carlingford Pet Shop, 285e Pennant Hills Rd., Carlingford. 2118	2373	1975	Premise Match	0m	North East

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
3	BEAUTY SALONS &/OR LADIES HAIRDRESSERS.	Collette Beauty Salon, 285c Pennant Hills Rd., Carlingford. 2118	5092	1975	Premise Match	0m	North East
	MIXED BUSINESSES.	Moraschi, D., 285e Pennant Hills Rd., Carlingford. 2118	55313	1975	Premise Match	0m	North East
	BUILDERS &/OR BUILDING CONTRACTORS.	Mornington Homes Pty. Ltd., 285 Pennant Hills Rd., Carlingford. 2118	8592	1975	Premise Match	Om	North East
	SOLICITORS.	Parker, A. R., 285 Pennant Hills Rd., Carlingford. 2118	78617	1975	Premise Match	0m	North East
	CAKE SHOPS &/OR PASTRYCOOKS.	Pop-In Cake Box. The. 285a Pennant Hills Rd., Carlingford. 2118	12733	1975	Premise Match	0m	North East
	DENTISTS.	Tait, J. R., 285 Pennant Hills Rd., Carlingford. 2118	21415	1975	Premise Match	0m	North East
	REAL ESTATE AGENTS/VALUERS(R205)	Bruce. Leslie Real Estate., 285 Pennant Hills Rd., CARLINGFORD	355050		Premise Match	0m	North East
	FRUITERERS/GREENGROCER S (F640)	Pennant Hills Rd., Mobbs Hill, Carlingford	306791	1970	Premise Match	Om	North East
	ANIMAL & BIRD FOOD SUPPLIES (A375)	Carlingford Pet Shop, 285e Pennant Hills Rd, Carlingford	261493	1970	Premise Match	0m	North East
	BEAUTY SALONS &/OR LADIES' HAIRDRESSERS (B260)	Collette Beauty Salon., 285c Pennant Hills Rd., Mobbs Hill, Carlingford	265712	1970	Premise Match	0m	North East
	WINE/SPIRIT MERCHANTS- RETAIL	Moraschi, D., 285a Pennant Hills Rds., Mobbs Hill, Carlingford	374566	1970	Premise Match	0m	North East
	SOLICITORS (S413)	Parker; A. R., 285 Pennant Hills Rd., Carlingford	362898	1970	Premise Match	0m	North East
	CAKE SHOPS & PASTRYCOOKS (C045)	Pop-In Cake Box (The)., 285a Pennant Hills Rd., Mobbs Hill., Carlingford	276815	1970	Premise Match	0m	North East
	DENTISTS (D140)	Tait, J. R., 285 Pennant Hills Rd., Carlingford	289068	1970	Premise Match	0m	North East
	Fruiterers & Greengrocers	Carlingford Fruit Market, 285d Pennant Hills Rd., Mobbs Hill, Carlingford	90990	1965	Premise Match	0m	North East
	Butchers - Retail	Carlingford Meat Market., 285c Pennant Hills Rd., Mobbs Hill, Carlingford	58013	1965	Premise Match	0m	North East
	Cake Shops & Pastrycooks	Mobbs Hill Cakes & Pies., 285a Pennant Hills Rd., Mobbs Hill, Carlingford	61424	1965	Premise Match	0m	North East
	Chemists - Pharmaceutical	Mobbs Hill Pharmacy, 285b Pennant Hills Rd., Mobbs Hills, Carlingford	65359	1965	Premise Match	0m	North East
	Mixed Businesses	Moraschi Lorenzo, 285e Pennant Hills Rd., Mobbs Hill, Carlingford	118122	1965	Premise Match	0m	North East
	Wine/Spirit Merchants - Retail	Moraschi, Lorenzo., 285E Pennant Hills Rd., Mobbs Hill, Carlingford	157336	1965	Premise Match	0m	North East
4	CHEMISTS- PHARMACEUTICAL.	Carlingford Pharmacy, 289C Pennant Hills Rd., Carlingford. 2118	14046	1986	Premise Match	20m	North East
	DRY CLEANERS & PRESSERS.	Galaxy Dry Cleaners, 289B Pennant Hills Rd., Carlingford. 2118	25315	1986	Premise Match	20m	North East
	FRUITERERS &/OR GREENGROCERS.	Northern Districts Fruit Market, The, 291 Pennant Hills Rd., Carlingford. 2118	36220	1986	Premise Match	20m	North East
	CHEMISTS - PHARMACEUTICAL.(C4110)	Carlingford Pharmacy, 289C Pennant Hills Rd., Carlingford. 2118.	14847	1982	Premise Match	20m	North East
	DRY CLEANERS & PRESSERS.(D8500)	Galaxy Dry Cleaners, 289B Pennant Hills Rd., Carlingford. 2118.	23846	1982	Premise Match	20m	North East
	FRUITERERS &/OR GREENGROCERS. (F6775)	Northern Districts Fruit Market, The, 291 Pennant Hills Rd., Carlingford. 2118	33793	1982	Premise Match	20m	North East
	CHEMISTS- PHARMACEUTICAL.	Carlingford Pharmacy, 289c Pennant Hills Rd., Carlingford. 2118	13038	1978	Premise Match	20m	North East
	DRY CLEANERS, PRESSERS &/OR DYERS	Galaxy Dry Cleaners, 289b Pennant Hills Rd., Carlingford. 2118	20785	1978	Premise Match	20m	North East
	FRUITERERS &/OR GREENGROCERS.	Northern Districts Fruit Market. The, 291 Pennant Hills Rd., Carlingford. 2118	30690	1978	Premise Match	20m	North East

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
4	MILK, FRUIT JUICE BARS &/OR CONFECTIONERS.	Astronaut Milk Bar., 289 Pennant Hills Rd., Carlingford. 2118	53208	1975	Premise Match	20m	North East
	CHEMISTS- PHARMACEUTICAL	Carlingford Pharmacy, 289c Pennant Hills Rd., Carlingford 2118	15072	1975	Premise Match	20m	North East
	FRUITERERS &/OR GREENGROCERS.	Northern Districts Fruit Market, The, 291 Pennant Hills Rd., Carlingford. 2118.	35627	1975	Premise Match	20m	North East
	MILK, FRUIT JUICE BARS/CONFECTIONERS	Astronaut Milk Bar., 289 Pennant Hills Rd., Mobbs Hill, Carlingford	330339	1970	Premise Match	20m	North East
	CHEMISTS- PHARMACEUTICAL	Carlingford Pharmacy., 289c Pennant Hills Rd., Carlingford	280166	1970	Premise Match	20m	North East
	DRY CLEANERS,PRESSERS/DYER S (D710)	Galaxy Dry Cleaners., 289b Pennant Hills Rd., Carlingford	292308	1970	Premise Match	20m	North East
	FRUITERERS/GREENGROCER S (F640)	Northern Districts Fruit Market (The)., 291 Pennant HillsRd., Carlingford	307650	1970	Premise Match	20m	North East
	Butchers - Retail	Mobb Hill (Davies) Butchery, 289 Pennant Hills Rd. Mobbs Hill, Carlingford	58880	1965	Premise Match	20m	North East
5	MEDICAL PRACTITIONERS.	McKinnon, G., 348 Pennant Hills Rd., Carlingford. 2118	56305	1986	Premise Match	22m	South East
	MEDICAL PRACTITIONERS. (M2020)	McKinnon, G., 348 Pennant Hills Rd., Carlingford. 2118.	49257	1982	Premise Match	22m	South East
	MEDICAL PRACTITIONERS.	McKinnon. G., 348 Pennant Hills Rd., Carlingford. 2118	43664	1978	Premise Match	22m	South East
	MEDICAL PRACTITIONERS (M216)	McKinnon, Elaine., 348 Pennant Hills Rd., Carlingford	327652	1970	Premise Match	22m	South East
	MEDICAL PRACTITIONERS (M216)	McKinnon, Graeme., 348 Pennant Hills Rd., Carlingford	327653	1970	Premise Match	22m	South East
	MEDICAL PRACTITIONERS (M216)	McKinnon, Ian., 348 Pennant Hills Rd., Carlingford	327654	1970	Premise Match	22m	South East
	Medical Practitioners	McKinnon, Elaine, 348 Pennant Hills Rd., Carlingford	112096	1965	Premise Match	22m	South East
	Medical Practitioners	McKinnon, Ian, 348 Pennant Hills Rd., Carlingford	112097	1965	Premise Match	22m	South East
6	ANTIQUE DEALERS.	Five Corners, 295b Pennant Hills Rd., Carlingford. 2118	2569	1975	Premise Match	52m	North East
	ANTIQUE DEALERS (A400)	Five Corners, 295b Pennant Hills Rd, Carlingford	261733	1970	Premise Match	52m	North East
	INTERIOR DECORATORS (1620)	Five Corners., 295b Pennant Hills Rd., Carlingford	320557	1970	Premise Match	52m	North East
	HEATING SYSTEMS (H406)	Pennant Space Heating., 295a Pennant Hills Rd., Carlingford	316196	1970	Premise Match	52m	North East
	OIL HEATING-DOMESTIC &/OR INDUSTRIAL (O 125)	Pennant Space Heating., 295a Pennant Hills Rd., Carlingford	345017	1970	Premise Match	52m	North East
	PAINT, VARNISH, OILS/COLOUR MERCHANTS (P074)	Pipal, A. R. & H., 295 Pennant Hills Rd., Carlingford	346332	1970	Premise Match	52m	North East
	PAINT, VARNISH, OILS/COLOUR MERCHANTS (P074)	Piper, H. & R. L., 295 Pennant Hills Rd., Mobbs Hill	346333	1970	Premise Match	52m	North East
	HARDWARE DEALERS/IRONMONGERS (H230)	Piper, H. & R. L., 295 Pennant Hills Rd., Mobbs Hill., CARLINGFORD	315257	1970	Premise Match	52m	North East
	Hardware Dealers &/or Ironmongers	Moraschi L. & D. (The.), 295 Pennant Hills Rd. Carlingford	99120	1965	Premise Match	52m	North East
	Paint, Varnish, Oils/Colour Merchants	Moraschi, L. & D., 293 Pennant Hills Rd., Mobbs Hill, Carlingford	130966	1965	Premise Match	52m	North East
7	CLUBS &/OR SPORTING BODIES.	Carlingford Bowling Club, Pennant Hills Rd., Carlingford. 2118	18905	1986	Premise Match	55m	South
	CLUBS &/OR SPORTING BODIES.(C5730)	Carlingford Bowling Club, Pennant Hills Rd., Carlingford. 2118.	17235	1982	Premise Match	55m	South
	CLUBS & SPORTING BODIES (C487)	Carlingford Bowling Club., Pennant Hills Rd., Carlingford	284094	1970	Premise Match	55m	South
	Clubs & Sporting Bodies	Carlingford Bowling Club, Pennant Hills Rd., Carlingford	68801	1965	Premise Match	55m	South
	CLUBS & SPORTS BODIES	Carlingford Bowling Club, Cox Park, Carlingford	291403	1961	Premise Match	55m	South

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8	Fruit Vegetable &/or Produce Merchants &/or W/salers	Carlingford Produce., Railway Station, Carlingford, 2118	46619	1991	Premise Match	56m	West
	FRUIT, VEGETABLE, &/OR PRODUCE MERCHANTS &/OR W/SALERS.	Carlingford Produce, Railway Station, Carlingford. 2118	35582	1986	Premise Match	56m	West
	TRACTOR MFRS. &/OR IMPS. &/OR DISTS.	Carlingford Tractors, Railway Station, Carlingford. 2118	94726	1986	Premise Match	56m	West
	PRODUCE MERCHANTS- WHOLESALE. (P8960)	Carlingford Produce, Railway Station, Carlingford. 2118.	67030	1982	Premise Match	56m	West
	TRACTOR IMPS. &/OR MFRS. &/OR DISTS. (T6450)	Carlingford Tractors, Railway Station, Carlingford. 2118.	81350	1982	Premise Match	56m	West
	MERCHANTS-GENERAL.	Producers Co-op. Ltd., Railway Goods Yd., Carlingford. 2118	45344	1978	Premise Match	56m	West
	MILLERS-GRISTERS.	Producers Co-op. Ltd., Railway Goods Yd., Carlingford. 2118	46268	1978	Premise Match	56m	West
	PRODUCE MERCHANTS- GRAIN &/OR SEED-RETAIL.	Producers Co-op. Ltd., Railway Goods Yd., Carlingford. 2118	59924	1978	Premise Match	56m	West
	MERCHANTS-GENERAL	Producers Co-op. Ltd., Railway Goods Yd., Carlingford. 2118	52650	1975	Premise Match	56m	West
	MILLERS-GRISTERS.	Producers Co-op. Ltd., Railway Goods Yd., Carlingford. 2118	54004	1975	Premise Match	56m	West
	PRODUCE MERCHANTS., GRAIN &/OR SEED., RETAIL	Producers Co-op. Ltd., Railway Goods Yd., Carlingford. 2118	70390	1975	Premise Match	56m	West
	PRODUCE MERCHANTS- GRAIN & SEED-RETAIL (P854)	Producers Co-op. Ltd., Railway Goods Yard., Carlingford	353055	1970	Premise Match	56m	West
	MERCHANTS-GENERAL (M240)	Producers Co-operative Ltd., Railway Goods Yard., Carlingford	329600	1970	Premise Match	56m	West
	MILLERS/GRISTERS (M360)	Producers Co-operative Ltd., Railway Goods Yard., Carlingford	331411	1970	Premise Match	56m	West
	STOCK FOODS MANUFACTURERS &/OR DISTRIBUTORS	Producers Co-op, Ltd., Railway Goods Yard, Carlingford	149005	1965	Premise Match	56m	West
	Produce Merchants - Grain & Seed - Retail	Producers Co-op. Ltd., Railway Goods Yard, Carlingford	136832	1965	Premise Match	56m	West
	Merchants - General	Producers Co-operative Ltd., Railway Goods Yard, Carlingford	114155	1965	Premise Match	56m	West
	Millers/Gristers	Producers Co-operative Ltd., Railway Goods Yard, Carlingford	115968	1965	Premise Match	56m	West
	PRODUCE MERCHANTS- GRAIN & SEED-RETAIL	Producers Co-op. Ltd., Railway Goods Yard, Carlingford	362825	1961	Premise Match	56m	West
	STOCK FOODS MANUFACTURERS &/OR DISTRIBUTORS	Producers Co-op. Ltd., Railway Goods Yard, Carlingford	254054	1961	Premise Match	56m	West
	MERCHANTS—GENERAL	Producers Co-operative Ltd., Railway Goods Yard, Carlingford	337937	1961	Premise Match	56m	West
	MILLERS/GRISTERS	Producers Co-operative Ltd., Railway Goods Yard, Carlingford	339800	1961	Premise Match	56m	West
	MILLERS & GRISTERS	Producers Co-operative Ltd. (Grain), Railway Goods Yard, Carlingford	78345	1950	Premise Match	56m	West
	PRODUCE MERCHANTS- GRAIN & SEED-RETAIL	Producers Co-operative Ltd., Railway Goods Yard, Carlingford	95670	1950	Premise Match	56m	West
9	POULTRY FARMERS	Clarke, J. G., 10 Post Office St., Carlingford	93932	1950	Premise Match	57m	North
10	Auto Electricians	Pugh, G.H., 2 Post Office St., Carlingford 2118	35002	1991	Premise Match	68m	North East
	MOTOR ELECTRICIANS.	Pugh, G. H., 2 Post Office St., Carlingford. 2118	62993	1986	Premise Match	68m	North East
	MOTOR ELECTRICIANS, (M6580)	Pugh, G. H., 2 Post Office St., Carlingford. 2118.	55571	1982	Premise Match	68m	North East
	MOTOR ELECTRICIANS	Pugh. G. H., 2 Post Office St., Carlingford, 2118	49054	1978	Premise Match	68m	North East
	MOTOR BUS SERVICES.	Northern Districts Bus Lines Pty. Ltd., 2 Post Office Rd., Carlingford. 2118	56893	1975	Premise Match	68m	North East
11	RESTAURANTS.	Black Stump, The, Orchard Shopping Village, Carlingford. 2118	81134	1986	Premise Match	81m	North East
	ACCOUNTANTS & AUDITORS.	Bullock, David M., Suite 5 Orchard Shopping Village, Carlingford. 2118	233	1986	Premise Match	81m	North East

ap Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
11	GROCERS-RETAIL.	Franklins, Carlingford, Orchard Shopping Village, Carlingford. 2118	40753	1986	Premise Match	81m	North East
	RESTAURANTS.	Happy Dragon Restaurant, 12 Orchard Shopping Village, Carlingford. 2118	81768	1986	Premise Match	81m	North East
	HAIRDRESSERS-LADIES &/OR BEAUTY SALONS.	Jochen Zalm, 11 Orchard Shopping Village, Carlingford. 2118	42478	1986	Premise Match	81m	North East
	DRESS FABRIC RETAILERS.	Knitwit, 1 Orchard Shopping Village, Carlingford. 2118	25054	1986	Premise Match	81m	North East
	BUTCHERS-RETAIL.	Mr. Meat, 16 Orchard Shopping Village, Carlingford. 2118	10328	1986	Premise Match	81m	North East
	RESTAURANTS.	Schroeders, 5 Orchard Shopping Village, Carlingford. 2118	82807	1986	Premise Match	81m	North East
	RESTAURANTS.	SeaWife Seafood, 9 Orchard Shopping Village, Carlingford. 2118	82813	1986	Premise Match	81m	North East
	TRAVEL AGENCIES &/OR BOOKING OFFICES.	Victors International Travel, 17 Orchard Shopping Village, Carlingford. 2067	95761	1986	Premise Match	81m	North East
	CARPET &/OR FLOOR COVERING RETAILERS &/OR SPECIALISTS.(C1830)	Carlingford Floor Coverings, 3 Orchard Shopping Village, Carlingford. 2118.	13401	1982	Premise Match	81m	North East
	TRAVEL AGENCIES &/OR BOOKING OFFICES. (T7425)	Cosmopolitan Travel, 17 Orchard Village, Carlingford. 2118.	81822	1982	Premise Match	81m	North East
	RESTAURANTS. (R5180)	Fortuna Restaurant, 12 Orchard Shopping Village, Carlingford. 2118.	70853	1982	Premise Match	81m	North East
	GROCERS - RETAIL. (G7850)	Franklins, Orchard Shopping Village, Carlingford. 2118.	37668	1982	Premise Match	81m	North East
	DRESS SHOPS & ACCESSORIES.(D7450)	Jades of Carlingford, 2 Orchard Shopping Village, Carlingford. 2118.	22955	1982	Premise Match	81m	North East
	DRESS FABRIC RETAILERS. (D7150)	Knitwit, 1 Orchard Shopping Village, Carlingford. 2118.	22370	1982	Premise Match	81m	North East
	BUTCHERS - RETAIL. (B8040)	Mr. Meat, 16 Orchard Shopping Village, Carlingford. 2118.	11276	1982	Premise Match	81m	North East
	FASTENER MFRS. &/OR DISTS.(F0530)	New System Fasteners (N. S. W.) Pty. Ltd., Shop 14, Orchard Shopping Centre, Pennant Hills Rd., Carlingford. 2118	30076	1982	Premise Match	81m	North East
	FLORISTS - RETAIL. (F4125)	Orchard Village Florist, 7 Orchard Shopping Village, Carlingford.2118.	31550	1982	Premise Match	81m	North East
	BEAUTY SALONS &/OR LADIES HAIRDRESSERS. (B2000)	Top Trim, 11 Orchard Shopping Village, Carlingford. 2118.	6661	1982	Premise Match	81m	North East
	OPTIMETRISTS-REGISTERED.	Burgoyne R F, 54 Village Centre Carlingford 2118	54967	1978	Premise Match	81m	North East
	CAKE SHOPS &/OR PASTRYCOOKS.	McIntosh, R. & B.V. Pty. Ltd., 13 Village Centre, Carlingford. 2118	10869	1978	Premise Match	81m	North East
	HAIRDRESSERS (GENT.'S) (H070)	Blundell, A., 281 Church (Marsden) St., Mobbs Hill, CrIngfrd	313647	1970	Premise Match	81m	North East
	LAWN MOWER SALES/SERVICE (L310)	Breen Mart Service Station., 382 Pennant Hills Rd., Carlingford	322756	1970	Premise Match	81m	North East
	MOTOR GARAGES & ENGINEERS(M6S6)	Breen Mart Service Station., 382 Pennant Hills Rd., CARLINGFORD	337427	1970	Premise Match	81m	North East
	MOTOR ENGINE RECONDITIONERS(M624)	Breen, Mart Service Station., 382 Pennant Hills Rd., Carlingford	336997	1970	Premise Match	81m	North East
	MOTOR CYLINDER REBORES (M608)	Breen, Mart Service Station., 382 Pennant Hills Rd., CrIngfrd.	336654	1970	Premise Match	81m	North East
	BOOT & SHOE REPAIRERS	Horton, GF., 283 Church (Marsden) St., Mobbs Hill, Carlingford.	268923	1970	Premise Match	81m	North East
	Motor Garages & Engineers	Breen Mart Service Station, 382 Pennant Hills Rd. Carlingford	122388	1965	Premise Match	81m	North East
	Lawn Mower Sales/Service	Breen Mart Service Station, 382 Pennant Hills Rd., Carlingford	107305	1965	Premise Match	81m	North East
	Motor Engine Reconditioners	Breen, Mart Service Station, 382 Pennant Hills Rd., Carlingford	121866	1965	Premise Match	81m	North East
	Motor Cylinder Rebores	Breen, Mart Service Station, 382 Pennant Hills Rd., Carlingford.	121449	1965	Premise Match	81m	North East
	Engineers - Agricultural	Edney, A. & Son., 380 Pennant Hills Rd., Carlingford	80628	1965	Premise Match	81m	North East

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11	Agricultural Machinery Repairs	Edney, D. W. & Son., 380 Pennant Hills Rd., Carlingford	45520	1965	Premise Match	81m	North East
	Profile Cutting Specialists	Edney, D. W. & Son., 380 Pennant Hills Rd., Carlingford	136984	1965	Premise Match	81m	North East
	Welders - Electric &/or Oxy	Edney, D. W. & Sons., 380 Pennant Hills Rd., Carlingford	156439	1965	Premise Match	81m	North East
	Blacksmiths	Edney, V. W. & Son., 380 Pennant Hills Rd., Carlingford	51638	1965	Premise Match	81m	North East
	Musical Instrument Repairers/Reconditioners	McDarmont, D. & M., 277 Marsden Rd., Carlingford	127874	1965	Premise Match	81m	North East
	MOTOR GARAGES & ENGINEERS	Brookers Garage Rear 277 Marsden Rd. CARLINGFORD	346743	1961	Premise Match	81m	North East
	MOTOR GARAGES & ENGINEERS	Brookers Garage, Rear 277 Marsden Rd. CARLINGFORD	346744	1961	Premise Match	81m	North East
	ENGINEERS- GENERAL/MFRG./ MECHANICAL	Dundas Engineering Co., 277 Marsden Rd., Carlingford	306399	1961	Premise Match	81m	North East
	VALVES/COCKS, Etc. MFRS.	Dundas Engineering Co., 277 Marsden Rd., Carlingford	260760	1961	Premise Match	81m	North East
	ENGINEERS-AGRICULTURAL	Edney, A. & Son, 380 Pennant Hills Rd., Carlingford	304635	1961	Premise Match	81m	North East
	BUILDERS & CONTRACTORS	McDarmont, D. & M., 277 Marsden Rd., Carlingford	276520	1961	Premise Match	81m	North East
12	Property Management	United Realty Co. Pty. Ltd, 788 Pennant Hills Rd., Carlingford. 2118	59726	1991	Premise Match	104m	North
	Real Estate Agents	United Realty Co. Pty. Ltd., 788 Pennant Hills Rd., Carlingford. 2118	97179	1991	Premise Match	104m	North
	MOTOR CYCLE ACCESSORIES &/OR SPARE PARTS DEALERS.	Carlingford Motor Cycles, 788 Pennant Hills Rd., Carlingford. 2118	62627	1986	Premise Match	104m	North
	MOTOR-CYCLE SALES &/OR SERVICE.	Carlingford Motor Cycles, 788 Pennant Hills Rd., Carlingford. 2118	62695	1986	Premise Match	104m	North
	PROPERTY MANAGEMENT.	United Realty Co. Pty, Ltd., 788 Pennant Hills Rd., Carlingford. 2118	78015	1986	Premise Match	104m	North
	REAL ESTATE AGENTS	United Realty Co. Pty. Ltd., 788 Pennant Hills Rd., Carlingford. 2118	80296	1986	Premise Match	104m	North
	MOTOR CYCLE SALES &/ORSERVICE. (M6380)	Carlingford Motor Cycles, 788 Pennant Hills Rd., Carlingford. 2118	55321	1982	Premise Match	104m	North
	MOTOR CYCLE ACCESSORIES&/OR SPARE PARTS DEALERS.(M6260)	Carlingford Motor Cycles, 788 Pennant Hills Rd., Carlingford. 2118.	55274	1982	Premise Match	104m	North
	PROPERTY MANAGEMENT. (P9060)	United Realty Co. Pty. Ltd., 788 Pennant Hills Rd., Carlingford. 2118.	67636	1982	Premise Match	104m	North
	REAL ESTATE AGENTS. (R2555)	United Realty Co. Pty. Ltd., 788 Pennant Hills Rd., Carlingford. 2118.	69819	1982	Premise Match	104m	North
	REAL ESTATE AGENTS &/OR VALUERS.	United Realty Co. Pty. Ltd, 788 Pennant Hills Rd, Carlingford. 2118	62340	1978	Premise Match	104m	North
	TRAVEL AGENCIES &/OR BOOKING OFFICES.	United Realty Travel Centre Pty. Ltd, 788 Pennant Hills Rd, Carlingford. 2118	72510	1978	Premise Match	104m	North
	REAL ESTATE AGENTS &/OR VALUERS.	United Realty Co., 788 Pennant Hills Rd., Carlingford. 2118	73066	1975	Premise Match	104m	North
	REAL ESTATE AGENTS/VALUERS(R205)	United Realty Co., 788 Pennant Hills Rd., CARLINGFORD	356144	1970	Premise Match	104m	North
	Real Estate Agents/Valuers	Carlingford Estate Agency., 788 Pennant Hills Rd. Carlingford	139071	1965	Premise Match	104m	North
13	Motor Garages & Service Stations	Sundeck Service Station, 792 Pennant Hills Rd., Carlingford 2118	53930	1991	Premise Match	106m	North East
	Motor Steering Specialists	Sundeck Service Station, 792 Pennant Hills Rd., Carlingford 2118	55185	1991	Premise Match	106m	North East
	MOTOR PANEL BEATERS &/OR SPRAY PAINTERS.	Rizzardo Bros. Co. Pty. Ltd., 1 Post Office Rd., Carlingford. 2118	66693	1986	Premise Match	106m	North East
	MOTOR GARAGES & SERVICE STATIONS.	Sundeck Service Station, 792 Pennant Hills Rd., Carlingford. 2118	65525	1986	Premise Match	106m	North East
	MOTOR STEERING SPECIALISTS.	Sundeck Service Station, 792 Pennant Hills Rd., Carlingford. 2118	67822	1986	Premise Match	106m	North East

d	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
13	MOTOR TUNING SPECIALISTS.	Sundeck Service Station, 792 Pennant Hills Rd., Carlingford. 2118	68486	1986	Premise Match	106m	North East
	WELDERS - ELECTRIC &/OR OXY.	Sundeck Service Station, 792 Pennant Hills Rd., Carlingford. 2118	98740	1986	Premise Match	106m	North East
	MOTOR TRIMMERS. (M8260)	Lett, J., 1 Post Office Rd., Carlingford. 2118.	59805	1982	Premise Match	106m	North East
	UPHOLSTERERS. (U0450)	Lett, J., 1 Post Office Rd., Carlingford. 2118.	82869	1982	Premise Match	106m	North East
	MOTOR PANEL BEATERS &/OR SPRAY PAINTERS. (M7360)	Rizzardo Bros Co. Pty. Ltd., 1 Post Office Rd., Carlingford. 2118	58649	1982	Premise Match	106m	North East
	BLACKSMITHS. (B2800)	Rizzardo Bros. Co. Pty. Ltd., 1 Post Office Rd., Carlingford. 2118.	6935	1982	Premise Match	106m	North East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	Sundeck Service Station, 792 Pennant Hills Rd., Carlingford. 2118.	57642	1982	Premise Match	106m	North East
	MOTOR STEERING SPECIALISTS.(M8100)	Sundeck Service Station, 792 Pennant Hills Rd., Carlingford. 2118.	59560	1982	Premise Match	106m	North East
	MOTOR TUNING SPECIALISTS.(M8350)	Sundeck Service Station, 792 Pennant Hills Rd., Carlingford. 2118.	59920	1982	Premise Match	106m	North East
	WELDERS - ELECTRIC &/OR OXY.(W3160)	Sundeck Service Station, 792 Pennant Hills Rd., Carlingford. 2118.	84261	1982	Premise Match	106m	North East
	MOTOR TRIMMERS.	Lett, J, 1 Post Office Rd, Carlingford 2118	53278	1978	Premise Match	106m	North East
	UPHOLSTERERS.	Lett, J., 1 Post Office Rd., Carlingford. 2118	73114	1978	Premise Match	106m	North East
	BLACKSMITHS.	Rizzardo Bros. Co. Pty. Ltd., 1 Post Office Rd., Carlingford. 2118	5944	1978	Premise Match	106m	North East
	MOTOR PAINTERS.	Rizzardo Bros. Co. Pty. Ltd., 1 Post Office Rd., Carlingford. 2118	51633	1978	Premise Match	106m	North East
	MOTOR PANEL BEATERS	Rizzardo Bros. Co. Pty. Ltd., 1 Post Office Rd., Carlingford. 2118	52308	1978	Premise Match	106m	North East
	MOTOR STEERING SPECIALISTS.	Sundeck Service Station, 792 Pennant Hills Rd, Carlingford 2118	53082	1978	Premise Match	106m	North East
	MOTOR CARBURETTOR &/OR TUNING SPECIALISTS.	Sundeck Service Station, 792 Pennant Hills Rd., Carlingford. 2118	48681	1978	Premise Match	106m	North East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Sundeck Service Station, 792 Pennant Hills Rd., Carlingford. 2118	50891	1978	Premise Match	106m	North East
	WELDERS-ELECTRIC &/OR OXY.	Sundeck Service Station, 792 Pennant Hills Rd., Carlingford. 2118	74350	1978	Premise Match	106m	North East
	MOTOR TRIMMERS.	Lett, J., 1 Post Office Rd., Carlingford. 2118	62810	1975	Premise Match	106m	North East
	UPHOLSTERERS.	Lett, J., 1 Post Office Rd., Carlingford. 2118	85779	1975	Premise Match	106m	North East
	MOTOR ELECTRICIANS.	Pugh, G., Rear 792 Pennant Hills Rd., Carlingford. 2118.	58026	1975	Premise Match	106m	North East
	MOTOR CHASSIS STRAIGHTENERS &/OR REPAIRERS &/OR SPECIALISTS.	Rijiardo Bros. Co. Pty. Ltd., 1 Post Office Rd., Carlingford. 2118.	57654	1975	Premise Match	106m	North East
	AGRICULTURAL MACHINERY REPAIRS.	Rizzardo Bros. Co. Pty. Ltd., 1 Post Office Rd., Carlingford. 2118	1425	1975	Premise Match	106m	North East
	BLACKSMITHS.	Rizzardo Bros. Co. Pty. Ltd., 1 Post Office Rd., Carlingford. 2118	6363	1975	Premise Match	106m	North East
	MOTOR BODY BUILDERS.	Rizzardo Bros. Co. Pty. Ltd., 1 Post Office Rd., Carlingford. 2118	56576	1975	Premise Match	106m	North East
	MOTOR PAINTERS.	Rizzardo Bros. Co. Pty. Ltd., 1 Post Office Rd., Carlingford. 2118	60382	1975	Premise Match	106m	North East
	MOTOR PANEL BEATERS.	Rizzardo Bros. Co. Pty. Ltd., 1 Post Office Rd., Carlingford. 2118	61074	1975	Premise Match	106m	North East
	WELDERS., Electric &/OR OXY.	Rizzardo Bros. Co. Pty. Ltd., 1 Post Office Rd., Carlingford. 2118	87060	1975	Premise Match	106m	North East
	WELDERS., Electric &/OR OXY.	Sundeck Service Station, 792 Pennant Hills Rd., Carlingford. 2118	87100	1975	Premise Match	106m	North East
	MOTOR GARAGES &/OR ENGINEERS.	Sundeck Service Station., 792 Pennant Hills Rd., Carlingford. 2118	59592	1975	Premise Match	106m	North East

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
13	MOTOR STEERING SPECIALISTS.	Sundeck Service Station., 792 Pennant Hills Rd., Carlingford. 2118	62623	1975	Premise Match	106m	North East
	MOTOR CARBURETTOR &/OR TUNING SPECIALISTS	Sundeck Service Station., 792 Pennant Hills Rd., Carlingford. 2118.	57640	1975	Premise Match	106m	North East
	AGRICULTURAL MACHINERY REPAIRS (A226)	Rizzardo Bros Co. Pty. Ltd., 1 Post Office Rd., Carlingford, 2118	260642	1970	Premise Match	106m	North East
	BLACKSMITHS (B382)	Rizzardo Bros Co. Pty. Ltd., 1 Post Office Rd., Carlingford, 2118	267122	1970	Premise Match	106m	North East
	MOTOR PAINTERS (M672)	Rizzardo Bros. Co. Pty. Ltd., 1 Post Office Rd., Carlingford 2118	339600	1970	Premise Match	106m	North East
	MOTOR CHASSIS STRAIGHTENERS &/OR REPAIRERS/SPECIALISTS (M574)	Rizzardo Bros. Co. Pty. Ltd., 1 Post Office Rd., Carlingford, 211 8	336488	1970	Premise Match	106m	North East
	MOTOR PANEL BEATERS (M680)	Rizzardo Bros. Co. Pty. Ltd., 1 Post Office Rd., Carlingford, 2118	340373	1970	Premise Match	106m	North East
	MOTOR BODY BUILDERS (M488)	Rizzardo Bros. Co. Pty. Ltd., 1 Post Office Rd., Carlingford2118	335218	1970	Premise Match	106m	North East
	WELDERS-ELECTRIC &/OR OXY	Rizzardo Bros.Co. Pty. Ltd., 1 Post Office Rd., Carlingford, 2118	373932	1970	Premise Match	106m	North East
	MOTOR GARAGES & ENGINEERS(M6S6)	Sundeck Service Station., 792 Pennant Hills Rd., CARLINGFORD	338681	1970	Premise Match	106m	North East
	MOTOR STEERING SPECIALISTS (M736)	Sundeck Service Station., 792 Pennant Hills Rd., Carlingford	342359	1970	Premise Match	106m	North East
	WELDERS-ELECTRIC &/OR OXY	Sundek Service Station, 792 Pennant Hills Rd., Carlingford	373995	1970	Premise Match	106m	North East
	Motor Garages & Engineers	Sundeck Service Station, 792 Pennant Hills Rd. Carlingford	122393	1965	Premise Match	106m	North East
	Motor Steering Specialists	Sundeck Service Station, 792 Pennant Hills Rd., Carlingford	126949	1965	Premise Match	106m	North East
	Welders - Electric &/or Oxy	Sundek Service Station., 792 Pennant Hills Rd., Carlingford	156838	1965	Premise Match	106m	North East
14	SECONDHAND DEALERS	Box, Robt. G. H., Cnr. Post Office Lane and Pennant Hills Rd., Carlingford	101084	1950	Road Intersection	121m	North East
	ANTIQUE DEALERS	Cranleigh Gallery, Cnr. Post Office Lane and Pennant Hills Rd., Carlingford	1828	1950	Road Intersection	121m	North East
	BOOT & SHOE REPAIRERS	Meehan, J. H., Cnr. Post Office Lane and Pennant Hills Rd., Carlingford	10447	1950	Road Intersection	121m	North East
15	Tool Mfrs &/or Dists	Rogers Tools Sales Pty Ltd, 845 Pennant Hills Rd Carlingford 2118	64513	1991	Premise Match	125m	North East
	Tool Mfrs &/or Dists	ROGERS TOOLS SALES PTY LTD, Cnr Pennant Hills Rd & Keeler St Carlingford 2118	64512	1991	Premise Match	125m	North East
	TOOL DEALERS-RETAIL.	Rogers Tool & Equipment Co, 845 Pennant Hills Rd, Carlingford.2118	71175	1978	Premise Match	125m	North East
	MACHINE TOOL MFRS. &/OR IMPS. &/OR DISTS.	Rogers Tool & Equipment Co., 845 Pennant Hills Rd., Carlingford. 2118	40713	1978	Premise Match	125m	North East
16	Property Management	Glenhaven Real Estate, 843 Pennant Hills Rd Carlingford 2118	59613	1991	Premise Match	127m	North East
	Auctioneers Real Estate	Glenhaven Real Estate, 843 Pennant Hills Rd., Carlingford 2118	34703	1991	Premise Match	127m	North East
	AUCTIONEERS REAL ESTATE	Eke, Kevin Real Estate, 843 Pennant Hills Rd, Carlingford. 2118	4399	1986	Premise Match	127m	North East
	VALUERS - REAL ESTATE.	Eke, Kevin Real Estate, 843 Pennant Hills Rd. Carlingford. 2118	96848	1986	Premise Match	127m	North East
	PROPERTY MANAGEMENT.	Eke, Kevin Real Estate, 843 Pennant Hills Rd., Carlingford. 2118	77537	1986	Premise Match	127m	North East
	REAL ESTATE AGENTS.	Eke, Kevin Real Estate, 843 Pennant Hills Rd., Carlingford. 2118	79391	1986	Premise Match	127m	North East
	DENTAL LABORATORIES &/OR TECHNICIANS. (D1700)	Rutherford, A. B., 843 Pennant Hills Rd., Carlingford. 2118.	19887	1982	Premise Match	127m	North East
	DENTAL LABORATORIES &/OR TECHNICIANS.	Rutherford, A. B., 843 Pennant Hills Rd., Carlingford. 2118	17820	1978	Premise Match	127m	North East
	DENTAL LABORATORIES &/OR TECHNICIANS	Rutherford, A. B., 843 Pennant Hills Rd., Carlingford. 2118	20672	1975	Premise Match	127m	North East

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
17	MEDICAL PRACTITIONERS. (M2020)	Sanderson, E. J., 9 Lloyds Ave., Carlingford. 2118.	50134	1982	Premise Match	129m	South West
	MEDICAL PRACTITIONERS. (M2020)	Swan, C. R., 9 Lloyds Ave., Carlingford. 2118.	50500	1982	Premise Match	129m	South West
	MEDICAL PRACTITIONERS.	Sanderson. E. J., 9 Lloyds Ave., Carlingford. 2151	44152	1978	Premise Match	129m	South West
	MEDICAL PRACTITIONERS.	Swan, C. R., 9 Lloyds Ave., Carlingford. 2151	44423	1978	Premise Match	129m	South West
	MEDICAL PRACTITIONERS.	Sanderson, E. J., 9 Lloyds Ave., Carlingford. 2151.	51468	1975	Premise Match	129m	South West
	MEDICAL PRACTITIONERS.	Swan. C. R., 9 Lloyds Ave., Carlingford. 2151	51677	1975	Premise Match	129m	South West
	MEDICAL PRACTITIONERS (M216)	Sanderson, E. J., 9 Lloyds Ave., Carlingford	328141	1970	Premise Match	129m	South West
	MEDICAL PRACTITIONERS (M216)	Swan, C. Russell., 9 Lloyds Ave., Carlingford	328359	1970	Premise Match	129m	South West
18	RESTAURANTS.	Bronze Lion, 841 Pennant Hills Rd., Carlingford. 2118	81176	1986	Premise Match	131m	North East
	RESTAURANTS. (R5180)	Bronze Lion, 841 Pennant Hills Rd., Carlingford. 2118.	70530	1982	Premise Match	131m	North East
	RESTAURANTS.	Golden Sampan, 841 Pennant Hills Rd, Carlingford. 2118	63010	1978	Premise Match	131m	North East
	RESTAURANTS.	Golden Sampan., 841 Pennant Hills Rd., Carlingford. 2118	73779	1975	Premise Match	131m	North East
	RESTAURANTS (R320)	Golden Sampan, 841 Pennant Hills Rd., Carlingford	357012	1970	Premise Match	131m	North East
19	Builders &/or Building Contractors	Kinchin, E., 7 Thallon St. Carlingford 2118	36856	1991	Premise Match	132m	West
	BUILDERS &/OR BUILDING CONTRACTORS.	Kinchin, E., 7 Thallon St., Carlingford. 2118	8154	1986	Premise Match	132m	West
	BUILDERS &/OR BUILDING CONTRACTORS. (B6920)	Kinchin, E., 7 Thallon St., Carlingford. 2118.	9316	1982	Premise Match	132m	West
	BUILDERS &/OR BUILDING CONTRACTORS.	Kinchin. E., 7 Thallon St., Carlingford. 2118	7774	1978	Premise Match	132m	West
	BUILDERS &/OR BUILDING CONTRACTORS (M.M.B.A.)	Kinchin. E., 7 Thallon St., Carlingford. 2118	8853	1975	Premise Match	132m	West
	BUILDERS & CONTRACTORS- (M.M.B.A.) (B796)	Kinchin, E., 7 Thallon St., Carlingford	270691	1970	Premise Match	132m	West
20	Property Management	Carlingford Real Estate, 13/835 Pennant Hills Rd Carlingford 2118	59575	1991	Premise Match	135m	North East
	Computer Software	Mine Map, 13/835 Pennant Hills Rd., Carlingford 2118	40344	1991	Premise Match	135m	North East
	Printers General	Pickwick Printing, 835 Pennant Hills Rd., Carlingford. 2118	58840	1991	Premise Match	135m	North East
	Interior Decorators	World Wide Wallpapers Pty. Ltd., 835 Pennant Hills Rd., Carlingford. 2118	49701	1991	Premise Match	135m	North East
	DENTISTS.	Bisnieks, A. L., 835 Pennant Hills Rd., Carlingford. 2118	22315	1986	Premise Match	135m	North East
	DENTISTS.	Bisnieks, R. S., 835 Pennant Hills Rd., Carlingford. 2118	22316	1986	Premise Match	135m	North East
	PROPERTY MANAGEMENT.	Carlingford Real Estate, 13/835 Pennant Hills Rd., Carlingford. 2118	77471	1986	Premise Match	135m	North East
	REAL ESTATE AGENTS.	Carlingford Real Estate, 13/835 Pennant Hills Rd., Carlingford. 2118	79233	1986	Premise Match	135m	North East
	DOG & CAT CLIPPING &/OR GROOMING PARLOURS.	Regal Dog Boutique, 835 Pennant Hills Rd, Carlingford. 2118	24541	1986	Premise Match	135m	North East
	ELECTRICAL CONTRACTORS- LICENSED.	Sandy Wightman & Co. Pty. Ltd., 835 Pennant Hills Rd., Carlingford. 2118	27197	1986	Premise Match	135m	North East
	CHIROPRACTORS.	Wade-Ferrell, T., 835 Pennant Hills Rd., Carlingford. 2118	15297	1986	Premise Match	135m	North East
	WALLPAPER MERCHANTS.	World Wide Wallpapers Pty. Ltd. 835 Pennant Hills Rd. Carlingford. 2067	98175	1986	Premise Match	135m	North East
	INTERIOR DECORATORS.	World Wide Wallpapers Pty. Ltd., 835 Pennant Hills Rd., Carlingford. 2118	49206	1986	Premise Match	135m	North East
	DENTISTS. (D1800)	Bismeks, A. L., 835 Pennant Hills Rd., Carlingford. 2118.	20003	1982	Premise Match	135m	North East

ld	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
20	DENTISTS. (D1800)	Bisnieks. R. S., 835 Pennant Hills Rd., Carlingford. 2118.	20004	1982	Premise Match	135m	North East
	BUILDERS &/OR BUILDING CONTRACTORS. (B6920)	Glenvill Homes Pty. Ltd., 835 Pennant Hills Rd., Carlingford. 2118.	9264	1982	Premise Match	135m	North East
	PROPERTY DEVELOPERS. (P9052)	Glenvill Homes Pty. Ltd., 835 Pennant Hills Rd., Carlingford. 2118.	67103	1982	Premise Match	135m	North East
	BEAUTY SALONS &/OR LADIES HAIRDRESSERS. (B2000)	Kays Swirls & Curls, 835 Pennant Hills Rd., Carlingford. 2118.	6012	1982	Premise Match	135m	North East
	REAL ESTATE AGENTS. (R2555)	Northwest Real Estate Pty. Ltd., 835 Pennant Hills Rd., Carlingford. 2118.	69468	1982	Premise Match	135m	North East
	DOG CLIPPING &/OR GROOMING PARLOURS. (D5200)	Regal Dog Boutique, 835 Pennant Hills Rd., Carlingford. 2118.	21892	1982	Premise Match	135m	North East
	ELECTRICAL CONTRACTORS -LICENSED. (E3360)	Sandy Wightman & Co. Pty. Ltd., 835 Pennant Hills Rd., Carlingford2118.	25539	1982	Premise Match	135m	North East
	WALLPAPER MERCHANTS. (W0600)	World Wide Wallpapers Pty. Ltd., 835 Pennant Hills Rd., Carlingford. 2118.	83727	1982	Premise Match	135m	North East
	DENTISTS.	Bisnieks, R. S. & A. L., 835 Pennant Hills Rd., Carlingford. 2118	17917	1978	Premise Match	135m	North East
	BEAUTY SALONS &/OR LADIES HAIRDRESSERS.	Dannys Coiffure, 835 Pennant Hills Rd., Carlingford. 2118	4895	1978	Premise Match	135m	North East
	INSURANCE ASSESSORS &/OR ADJUSTERS.	Denyer, A.F. & Co., 835 Pennant Hills Rd., Carlingford. 2118	37876	1978	Premise Match	135m	North East
	TRACTOR IMPS. &/OR MFRS. &/OR DISTS.	Same Tractors, 835 Pennant Hills Rd, Carlingford. 2118	71885	1978	Premise Match	135m	North East
	ELECTRICAL CONTRACTORS- LICENSED.	Sandy Wightman & Co. Pty. Ltd., 835 Pennant Hills Rd., Carlingford. 2118	22488	1978	Premise Match	135m	North East
	DENTISTS.	Bisnieks, R. S. & A. L., 835 Pennant Hills Rd., Carlingford. 2118	20774	1975	Premise Match	135m	North East
	BEAUTY SALONS &/OR LADIES HAIRDRESSERS.	Danny's Coiffure, 835 Pennant Hills Rd., Carlingford. 2118	5131	1975	Premise Match	135m	North East
	BOOKBINDERS.	E.R. Printing & Binding Service, 835 Pennant Hills Rd., Carlingford.	7151	1975	Premise Match	135m	North East
	PRINTERS-LETTERPRESS.	E.R. Printing & Binding Service., 835 Pennant Hills Rd., Carlingford. 2118	69412	1975	Premise Match	135m	North East
	DRAUGHTSMEN.	Geralcom Pty. Ltd., 835 Pennant Hills Rd., Carlingford. 2118	22696	1975	Premise Match	135m	North East
	BUSINESS AGENTS &/OR BROKERS.	North West Real Estate Pty. Ltd., 835 Pennant Hills Rd., Carlingford. 2118	9847	1975	Premise Match	135m	North East
	REAL ESTATE AGENTS &/OR VALUERS.	North West Real Estate Pty. Ltd., 835 Pennant Hills Rd., Carlingford. 2118	72753	1975	Premise Match	135m	North East
	SOLICITORS.	Noyce, M. J., 835 Pennant Hills Rd., Carlingford. 2118	78593	1975	Premise Match	135m	North East
	CONCRETE PRODUCTS MFRS. &/OR DISTS.	Rascrete Industries Pty. Ltd., 835 Pennant HillS Rd., Carlingford. 2118	18554	1975	Premise Match	135m	North East
	ENGINEERS-DESIGNING	Rescrete Engineering Pty. Ltd., 835 Pennant Hills Rd., Carlingford. 2118	28029	1975	Premise Match	135m	North East
	AGRICULTURAL MACHINERY MFRS. &/OR DISTS.	Same Australian Liason Office. 839 Pennant Hills Rd., Carlingford. 2118	1401	1975	Premise Match	135m	North East
	TRACTOR IMPS. &/OR MFRS. &/OR DISTS.	Same Tractors, 835 Pennant Hills Rd., Carlingford. 2118	84605	1975	Premise Match	135m	North East
	RAZOR & RAZOR BLADE MFRS. &/OR DISTS.	Sheffield Razor Co., 835 Pennant Hills Rd., Carlingford. 2118	71888	1975	Premise Match	135m	North East
	SURVEYORS-LAND.	Turnbridge, G. R., Jones & Pike., 835 Pennant Hills Rd., Carlingford. 2118	81434	1975	Premise Match	135m	North East
	LANDSCAPE GARDENERS.	Urban Landscapes., 839 Pennant Hills Rd., Carlingford. 2118	46842	1975	Premise Match	135m	North East
	ELECTRICAL CONTRACTORS- LICENSED.	Wightman, Sandy & Co. Pty. Ltd., 835 Pennant Hills Rd, Carlingford. 2118	25963	1975	Premise Match	135m	North East
21	Real Estate Agents	Shipway, Peter., 833 Pennant Hills Rd., Carlingford. 2118	60747	1991	Premise Match	148m	North East
	INSURANCE BROKERS.	Casey Insurance Brokers Pty. Ltd., 833 Pennant Hills Rd., Carlingford. 2118	48726	1986	Premise Match	148m	North East
	PROPERTY MANAGEMENT.	Shipway, Peter, 833 Pennant Hills Rd., Carlingford. 2118	77958	1986	Premise Match	148m	North East

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
21	REAL ESTATE AGENTS.	Shipway, Peter, 833 Pennant Hills Rd., Carlingford. 2118	80177	1986	Premise Match	148m	North East
	INSURANCE BROKERS. (14250)	Casey Insurance Brokers Pty. Ltd., 833 Pennant Hills Rd., Carlingford. 2118.	42565	1982	Premise Match	148m	North East
	REAL ESTATE AGENTS. (R2555)	Jones-Douglas Pty. Ltd., 833 Pennant Hills Rd., Carlingford. 2118	69247	1982	Premise Match	148m	North East
	AUCTIONEERS-GENERAL. (A8310)	North West Real Estate Pty. Ltd., 833 Pennant Hills Rd., Carlingford. 2118.	3822	1982	Premise Match	148m	North East
	BUSINESS AGENTS &/OR BROKERS. (B7920)	North West Real Estate Pty. Ltd., 833 Pennant Hills Rd., Carlingford. 2118.	10348	1982	Premise Match	148m	North East
	STONE MASONS	C. & C. Stonecraft Pty. Ltd., 833 Pennant Hills Rd., Carlingford. 2118	68673	1978	Premise Match	148m	North East
	BUSINESS AGENTS &/OR BROKERS.	North West Real Estate Pty. Ltd., 833 Pennant Hills Rd., Carlingford. 2118	8740	1978	Premise Match	148m	North East
	REAL ESTATE AGENTS &/OR VALUERS.	North West Real Estate Pty. Ltd., 833 Pennant Hills Rd., Carlingford. 2118	62057	1978	Premise Match	148m	North East
	STONE MASONS.	C. & C. Stonemasons Stonecraft., 833 Pennant Hills Rd., Carlingford. 2118.	81214	1975	Premise Match	148m	North East
	REAL ESTATE AGENTS &/OR VALUERS.	Hickin Real Estate., 833 Pennant Hills Rd., Carlingford. 2118	72435	1975	Premise Match	148m	North East
	STONE MASONS (S769)	Classic & Contemporary Stonecraft, 833 Pennant Hills Rd., Carlingford, 2118	366157	1970	Premise Match	148m	North East
	LANDSCAPE GARDENERS (L200)	Classic & Contemporary Stonecraft., 833 Pennant Hills Rd., Carlingford, 2118	322451	1970	Premise Match	148m	North East

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#### Business Directory Records 1950-1991 Road or Area Matches

Universal Business Directory records from years 1991, 1986, 1982, 1978, 1975, 1970, 1965, 1961 & 1950, mapped to a road or an area, within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found, or the road has been renumbered since the directory was published:

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
22	Motor Garages & Service Stations	Carlingford Service Centre, Pennant Hills Rd., Carlingford 2118	97424	1991	Road Match	0m
	MOTELS.	Beecroft West Motel, Pennant Hills Rd., Carlingford. 2118	60544	1986	Road Match	0m
	MOTOR GARAGES & SERVICE STATIONS.	Carlingford Service Centre, Pennant Hills Rd., Carlingford. 2118	64434	1986	Road Match	0m
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	Carlingford Service Centre, Pennant Hills Rd., Carlingford. 2118.	56487	1982	Road Match	0m
	TOOL DEALERS - RETAIL. (T5350)	Rogers Tools Sales Pty, Ltd., Pennant Hills Rd., Carlingford 2118.	80601	1982	Road Match	0m
	MOTOR ACCESSORIES DEALERS.(M4690)	Rogers Tools Sales Pty. Ltd., Pennant Hills Rd., Carlingford. 2118.	53941	1982	Road Match	0m
	BURGLAR ALARM SYSTEMS MFRS. &/OR DISTS. &/OR INSTALLERS	Carlingford Car Radios Pennant Hills Rd., Carlingford. 2118	8540	1978	Road Match	0m
	MOTOR CAR RADIO SPECIALISTS.	Carlingford Car Radios. Pennant Hills Rd., Carlingford. 2118	48094	1978	Road Match	0m
	MOTOR GARAGES &/OR ENGINEERS.	Ampol Service Station., Pennant Hills Rd., Carlingford. 2118	58360	1975	Road Match	Om
	MOTOR SERVICE STATIONS - PETROL, OIL	BP Pioneer Service Station., 189 Pennant Hills Rd., Carlingford. 2118	61536	1975	Road Match	0m
	MOTOR CAR RADIO SPECIALISTS.	Carfingford Car Radios., Pennant Hills Rd., Carlingford. 2118	56943	1975	Road Match	0m
	HOMES &/OR INSTITUTIONS.	Carlingford Boys Home., Pennant Hills Rd., Carlingford. 2118	42297	1975	Road Match	0m
	BURGLAR ALARM SYSTEMS MFRS. &/OR DISTS. &/OR INSTALLERS.	Carlingford Car Radios, Pennant Hills Rd., Carlingford. 2118	9627	1975	Road Match	Om
	HOMES &/OR INSTITUTIONS.	Carlingford Girls Home., Pennant Hills Rd., Carlingford. 2118	42298	1975	Road Match	0m
	DRY CLEANERS, PRESSERS &/OR DYERS.	Galaxy Dry Cleaners, 189b Pennant Hills Rd., Carlingford. 2118	24047	1975	Road Match	0m
	HOMES &/OR INSTITUTIONS.	Yallambia ladies Home., Pennant Hills Rd., Carlingford. 2118	42403	1975	Road Match	0m
	MOTOR BODY BUILDERS (M488)	Angel, A. R. & Sons Pty. Ltd., Pennant Hills Rd., Carlingford	335141	1970	Road Match	Om
	MOTOR PANEL BEATERS (M680)	Angel, A. R. & Sons Pty. Ltd., Pennant Hills Rd., Carlingford	339801	1970	Road Match	0m
	LAWN MOWER SALES/SERVICE (L310)	Carlingford Service Station., Pennant Hills Rd., Carlingford	322760	1970	Road Match	Om
	MOTOR GARAGES & ENGINEERS(M6S6)	Carlingford Service Station., Pennant Hills Rd., Carlingford	337529	1970	Road Match	0m
	TOY DEALERS-RETAIL	Pipal H.& A., Pennant Hills Rd., Carlingford	370202	1970	Road Match	0m
	GIFT SHOPS (G180)	Pipal, H. & A., Pennant Hills Rd., Carlingford	310955	1970	Road Match	Om
	MOTOR CARBURETTOR/TUNING SPECIALISTS (M564)	Sundeck Service Station., Pennant Hills Rd., Carlingford	336466	1970	Road Match	0m
	HOMES & INSTITUTIONS (H490)	Yallambia Ladies Home., Pennant Hills Rd., Carlingford	316664	1970	Road Match	0m
	Motor Body Builders	Angel, A. R. & Sons Pty. Ltd., Pennant Hills Rd., Carlingford	119931	1965	Road Match	0m
	Motor Panel Beaters	Angel, A. R. & Sons Pty. Ltd., Pennant Hills Rd., Carlingford	124392	1965	Road Match	0m

ld	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
22	Motor Spare Parts Dealers - Retail	Breen, M., Pennant Hills Rd., Carlingford	126356	1965	Road Match	0m
	Real Estate Agents/Valuers	Carlingford Estate Agency (Carberry),, 788 (305) Pennant Hills Rd, Mobbs Hill	139432	1965	Road Match	0m
	Lawn Mower Sales/Service	Carlingford Service Station, Pennant Hills Rd., Carlingford	107310	1965	Road Match	0m
	Tyre Dealers, Retreaders & Vulcanizers	Carlingford Service Station, Pennant Hills Rd., Carlingford	154671	1965	Road Match	0m
	Motor Garages & Engineers	Carlingford Service, Station, Pennant Hills Rd. Carlingford	122389	1965	Road Match	0m
	Engineers General &/or Mfrg. &/or Mechanical	Edney, D. W. & Son, 380 Pennant Hills Rd., Carlingford	82328	1965	Road Match	0m
	Motor Garages & Engineers	Gilmore, G. H., Pennant Hills Rd. Carlingford	122390	1965	Road Match	0m
	Motor Garages & Engineers	Golden Fleece Carlingford, Pennant Hills Rd. Carlingford	122391	1965	Road Match	0m
	Motor Accessories - Dealers	Grandview Garage (I. Baker, Propr.), Pennant Hills Rd., Carlingford	119461	1965	Road Match	0m
	Motor Service Stations - Petrol, Oil, Etc.	Hart's Garage, Pennant Hills Rd. Carlingford	125566	1965	Road Match	0m
	Motor Service Stations - Petrol, Oil, Etc.	Korl Inn Service Station, Pennant Hills Rd. Carlingford	125567	1965	Road Match	0m
	Gift Shops	Pipal, H. & A., Pennant Hills Rd., Carlingford	95028	1965	Road Match	0m
	TOY DEALERS RETAIL	Pipal, H. & A., Pennant Hills Rd., Carlingford	153055	1965	Road Match	0m
	Motor Carburettor/Tuning Specialists	Sundeck Service Station, Pennant Hills Rd., Carlingford	121284	1965	Road Match	0m
	BUTCHERS-RETAIL	Aitchison, R. W., Pennant Hills Rd., Carlingford	279812	1961	Road Match	0m
	MOTOR BODY BUILDERS	Angel, A. R., Pennant Hills Rd., Carlingford	344084	1961	Road Match	0m
	MOTOR PANEL BEATERS	Angel, A. R., Pennant Hills Rd., Carlingford	349328	1961	Road Match	0m
	MOTOR GARAGES & ENGINEERS	Baker, I., Pennant Hills Rd. CARLINGFORD	346581	1961	Road Match	0m
	HAIRDRESSERS (GENT.'S) /TOBACCONISTS	Blundell, A., Pennant Hills Rd., Carlingford	321828	1961	Road Match	0m
	MOTOR ACCESSORIES/DEALERS	Breen, M., Pennant Hills Rd., Carlingford	343424	1961	Road Match	0m
	MOTOR SPARE PARTS DEALERS—RETAIL	Breen, M., Pennant Hills Rd., Carlingford	351409	1961	Road Match	0m
	MOTOR SERVICE STATIONS—PETROL, OIL, Etc.	Carlingford Service Station, Pennant Hills Rd. CARLINGFORD	350446	1961	Road Match	0m
	MOTOR GARAGES & ENGINEERS	Carlingford Service, Station, Pennant Hills Rd. CARLINGFORD	346820	1961	Road Match	0m
	CLUBS & SPORTS BODIES	Carlingford Sports Club, Pennant Hills Rd., Carlingford	291404	1961	Road Match	0m
	COACH & HORSE-DRAWN VEHICLE BUILDERS	Edney, D. W., Pennant Hills Rd., Carlingford	291858	1961	Road Match	0m
	MOTOR GARAGES & ENGINEERS	Gilmore, G. H., Pennant Hills Rd. CARLINGFORD	347230	1961	Road Match	0m
	MOTOR ACCESSORIES/DEALERS	Grandview Garage (I. Baker, Propr.), Pennant Hills Rd., Carlingford	343568	1961	Road Match	0m
	MOTOR SERVICE STATIONS—PETROL, OIL, Etc.	Hart's Garage, Pennant Hills Rd. Carlingford	350679	1961	Road Match	0m
	MOTOR SERVICE STATIONS—PETROL, OIL, Etc.	Jones, V., Pennant Hills Rd. CARLINGFORD	350737	1961	Road Match	0m
	MIXED BUSINESS	Kitching, A. P., Pennant Hills Rd., Carlingford	341466	1961	Road Match	0m
	MOTOR SERVICE STATIONS—PETROL, OIL, Etc.	Korl Inn Service Station, Pennant Hills Rd. CARLINGFORD	350764	1961	Road Match	Om
	MIXED BUSINESS	Pontifex, R. J. & E. L., Pennant Hills Rd., Carlingford	342124	1961	Road Match	0m
	BABY & CHILDREN'S WEAR- RETAIL	Pontifex, R. J. and E. L., Pennant Hills Rd., Carlingford	270623	1961	Road Match	0m
	DRAPERS-RETAIL	Pontifex, R. J. and E. L., Pennant Hills Rd., Carlingford	298088	1961	Road Match	0m

ap Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
22	MIXED BUSINESS	Ralston, A. C., Pennant Hills Rd., Carlingford	342176	1961	Road Match	0m
	CHEMISTS-PHARMACEUTICAL	Rockliff, P., Pennant Hills Rd., Mobbs Hill, Carlingford	288053	1961	Road Match	0m
	MILK, FRUIT JUICE BARS/CONFECTIONERS	Shields, B. S., Pennant Hills Rd., Mobbs Hill, Carlingford	339618	1961	Road Match	0m
	MOTOR CARBURETTOR/TUNING SPECIALISTS	Sundeck Service Station, Pennant Hills Rd., Carlingford	345630	1961	Road Match	0m
	MOTOR SERVICE STATIONS—PETROL, OIL, Etc.	Sundeck Service Station, Pennant Hills Rd., CARLINGFORD	351135	1961	Road Match	0m
	MOTOR WHEEL REPAIRERS/SPECIALISTS	Sundeck Service Station, Pennant Hills Rd., Carlingford	352457	1961	Road Match	0m
	BUTCHERS-RETAIL	Aitchison, R. W., Pennant Hills Rd., Carlingford	13043	1950	Road Match	0m
	NURSERYMEN	Allen, L. C., Pennant Hills Rd., Carlingford	88966	1950	Road Match	0m
	NURSERYMEN	Anderson and Co. Ltd., Pennant Hills Rd., Carlingford	88975	1950	Road Match	0m
	MOTOR BODY BUILDERS	Angel, A. R., Pennant Hills Rd., Carlingford	82007	1950	Road Match	0m
	MOTOR GARAGES &/OR ENGINEERS	Angel, A. R., Pennant Hills Rd., Carlingford	83378	1950	Road Match	0m
	MOTOR PANEL BEATERS	Angel, A. R., Pennant Hills Rd., Carlingford	85135	1950	Road Match	0m
	WELDERS-ELECTRIC &/OR OXY	Angel, A. R., Pennant Hills Rd., Carlingford	112626	1950	Road Match	0m
	HAIRDRESSERS (GENT.'S) &/OR TOBACCONISTS	Arkins, Norm, Pennant Hills Rd., Carlingford	59142	1950	Road Match	0m
	BUTCHERS-RETAIL	Atchison, R. W., Pennant Hills Rd., Carlingford	13072	1950	Road Match	0m
	HAIRDRESSERS (GENT.'S) &/OR TOBACCONISTS	Blundell, A., Pennant Hills Rd., Carlingford	59205	1950	Road Match	0m
	POULTRY FARMERS	Boland, E., "Ambleside", Pennant Hills Rd., Carlingford	93879	1950	Road Match	0m
	MOTOR ACCESSORIES- DEALER	Breem, M., Pennant Hills Rd., Carlingford	81506	1950	Road Match	0m
	MOTOR GARAGES &/OR ENGINEERS	Breem, M., Pennant Hills Rd., Carlingford	83492	1950	Road Match	Om
	MOTOR SERVICE STATIONS- PETROL, Etc.	Breen, M., Pennant Hills Rd., Carlingford	85816	1950	Road Match	0m
	POULTRY FARMERS	Brownlow, C., Pennant Hills Rd., Carlingford	93900	1950	Road Match	0m
	MATTRESS COVER MANUFACTURERS	C.G.R. and Daphne Liddle, "Belvedere," Pennant Hills Rd., Carlingford	72184	1950	Road Match	0m
	FURNITURE-LOUNGE & CUSHION COVERINGS	C.G.R. and Daphne Liddle, Belvedere., Pennant Hills Rd., Carlingford	53736	1950	Road Match	0m
	REAL ESTATE AGENTS	Carlingford Real Estate, Pennant Hills Rd., Carlingford	98052	1950	Road Match	0m
	STOCK & STATION AGENTS	Carlingford Real Estate, Pennant Hills Rd., Carlingford	105529	1950	Road Match	0m
	CLUBS & SPORTS BODIES	Carlingford Sports Club, Pennant Hills Rd., Carlingford	25292	1950	Road Match	0m
	MOTOR PAINTERS	Carty, N., Pennant Hills Rd., Carlingford	84745	1950	Road Match	0m
	BLACKSMITHS	Edney, D. W., Pennant Hills Rd., Carlingford	8311	1950	Road Match	0m
	COACH & HORSE DRAWN VEHICLE BUILDERS	Edney, D. W., Pennant Hills Rd., Carlingford	25473	1950	Road Match	0m
	GROCERS-RETAIL	Garner, W. T. and A., Pennant Hills Rd., Carlingford	57440	1950	Road Match	0m
	MOTOR CAR & TRUCK DEALERS-USED	Gay, W. E. and Son, Pennant Hills Rd., Carlingford	82376	1950	Road Match	0m
	MOTOR ELECTRICIANS	Gay, W. E. and Son, Pennant Hills Rd., Carlingford	83121	1950	Road Match	0m
	MOTOR GARAGES &/OR ENGINEERS	Gilmour, G. H., Pennant Hills Rd., Carlingford	83803	1950	Road Match	0m
	MOTOR SERVICE STATIONS- PETROL, Etc.	Gilmour, G. H., Pennant Hills Rd., Carlingford	85994	1950	Road Match	0m

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
22	MOTOR ACCESSORIES- DEALER	Grandview Garage (I. Baker, Propr.), Pennant Hills Rd., Carlingford	81616	1950	Road Match	0m
	MOTOR GARAGES &/OR ENGINEERS	Grandview Garage (I. Baker, Propr.), Pennant Hills Rd., Carlingford	83819	1950	Road Match	0m
	MARINE DIVERS	Harris, J. R., Pennant Hills Rd., Carlingford	72027	1950	Road Match	0m
	MOTOR ACCESSORIES- DEALER	Hart's Garage, Pennant Hills Rd., Carlingford	81627	1950	Road Match	0m
	MOTOR SERVICE STATIONS- PETROL, Etc.	Hart's Garage., Pennant Hills Rd., Carlingford	86044	1950	Road Match	0m
	MOTOR PAINTERS	Hewitt, P. H., Pennant Hills Rd., Carlingford	84848	1950	Road Match	0m
	DELICATESSENS & SMALLGOODS DEALERS	Inglis, C. S., Pennant Hills Rd., Carlingford	30674	1950	Road Match	0m
	GROCERS-RETAIL	Inglis, C. S., Pennant Hills Rd., Carlingford	57849	1950	Road Match	0m
	MOTOR SERVICE STATIONS- PETROL, Etc.	Jones, V., Pennant Hills Rd., Carlingford	86094	1950	Road Match	0m
	DELICATESSENS & SMALLGOODS DEALERS	Kitching, A. P., Pennant Hills Rd., Carlingford	30744	1950	Road Match	0m
	KITCHENWARE RETAILERS	Kitching, A. P., Pennant Hills Rd., Carlingford	67022	1950	Road Match	0m
	MIXED BUSINESSES & GENERAL STORES	Kitching, A. P., Pennant Hills Rd., Carlingford	80342	1950	Road Match	0m
	MOTOR SERVICE STATIONS- PETROL, Etc.	Korl-Inn Service Station (N. Carty), Pennant Hills Rd., Carlingford	86118	1950	Road Match	0m
	POULTRY FARMERS	Lees, R. J., Pennant Hills Rd., Carlingford	94130	1950	Road Match	0m
	POULTRY FARMERS	Mullins, F. B., Pennant Hills Rd., Carlingford	94193	1950	Road Match	0m
	BABY & CHILDREN'S WEAR- RETAIL	Pontifex, R. J. and E. L., Pennant Hills Rd., Carlingford	4758	1950	Road Match	0m
	DRAPERS-RETAIL	Pontifex, R. J. and E. L., Pennant Hills Rd., Carlingford	33920	1950	Road Match	0m
	MILK VENDORS	Redman, O. H. P., Pennant Hills Rd., Carlingford	77902	1950	Road Match	0m
	NURSERYMEN	Rosen, L. P. and Sons, Pennant Hills Rd., Carlingford	89271	1950	Road Match	0m
	MIXED BUSINESSES & GENERAL STORES	Shields, S. G., Pennant Hills Rd., Carlingford	80979	1950	Road Match	0m
	GROCERS-RETAIL	Sim, D. M., Pennant Hills Rd., Carlingford	55674	1950	Road Match	0m
	PHOTOGRAPERS- COMMERCIAL	Westella Studios, Pennant Hills Rd., Carlingford	91696	1950	Road Match	0m
	PHOTOGRAPHERS-PORTRAIT	Westella Studios, Pennant Hills Rd., Carlingford	92038	1950	Road Match	0m
23	BEAUTY SALONS &/OR LADIES HAIRDRESSERS.	Robyn Cherie Salon, 115 Evans Rd., Dundas. 2117	5867	1975	Road Match	28m
	BEAUTY SALONS &/OR LADIES' HAIRDRESSERS (B260)	Robyn Cherie Salon., 115 Evans Rd., Dundas	266558	1970	Road Match	28m
24	SCHOOLS - KINDERGARTEN, DAY.NURSERY. (S1470)	Carlingford West Kindergarten, Lloyds Ave., Carlingford. 2118.	73403	1982	Road Match	31m
	LIBRARIES-PUBLIC.	Carlingford Public Library, Lloyds Ave., Carlingford. 2118	40212	1978	Road Match	31m
	LIBRARIES-PUBLIC.	Carlingford Public Library, Lloyds Ave., Carlingford. 2118	40211	1978	Road Match	31m
	LIBRARIES-PUBLIC.	Carlingford Public library., Lloyds Ave., Carlingford. 2118	47467	1975	Road Match	31m
25	HOMES & INSTITUTIONS (H490)	Dalmar Children's Home., Church St., Carlingford	316532	1970	Road Match	56m
	LANDSCAPE GARDENERS (L200)	Sunset Landscapes., Marsden Rd., Carlingford	322479	1970	Road Match	56m
	HOMES & INSTITUTIONS	Dalmar Children's Home, Church St., Carlingford	324455	1961	Road Match	56m
26	Engineers General &/or Mfrg. &/or Mechanical	Rutherford, J. N. Pty. Ltd., Post Office St., Carlingford	82842	1965	Road Match	85m
	POULTRY FARMERS	Mack, C., Post Office St., Carlingford	94147	1950	Road Match	85m

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
	ROLLERSKATING RINKS. (R6320)	Big Roller, The, Keeler St., Carlingford. 2118.	72292	1982	Road Match	108m
	BUILDERS & CONTRACTORS- (M.M.B.A.)	Gallard, G. C 84 Keeler St. CARLINGFORD	277111	1961	Road Match	108m

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# **Dry Cleaners, Motor Garages & Service Stations**





### **Historical Business Directories**

277-281 Pennant Hills Road, Carlingford, NSW 2118

#### Dry Cleaners, Motor Garages & Service Stations 1948-1993 Premise or Road Intersection Matches

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

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

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
1	DRY CLEANERS & PRESSERS.	Galaxy Dry Cleaners, 289B Pennant Hills Rd., Carlingford. 2118	53089	1988	Premise Match	20m	North East
	DRY CLEANERS & PRESSERS.	Galaxy Dry Cleaners, 289B Pennant Hills Rd., Carlingford. 2118	25315	1986	Premise Match	20m	North East
	DRY CLEANERS & PRESSERS.	Galaxy Dry Cleaners, 289B Pennant Hills Rd., Carlingford. 2118	34533	1985	Premise Match	20m	North East
	DRY CLEANERS & PRESSERS.	Galaxy Dry Cleaners, 289B Pennant Hills Rd., Carlingford. 2118	21981	1984	Premise Match	20m	North East
	DRY CLEANERS & PRESSERS.	Galaxy Dry Cleaners, 289B Pennant Hills Rd., Carlingford 2118	8570	1983	Premise Match	20m	North East
	DRY CLEANERS & PRESSERS.(D8500)	Galaxy Dry Cleaners, 289B Pennant Hills Rd., Carlingford. 2118.	23846	1982	Premise Match	20m	North East
	DRY CLEANERS & PRESSERS.	Galaxy Dry Cleaners., 289B Pennant Hills Rd., Carlingford. 2118	63329	1981	Premise Match	20m	North East
	DRY CLEANERS, PRESSERS &/OR DYERS.	Galaxy Dry Cleaners., 289B Pennant Hills Rd., Carlingford. 2118	46759	1980	Premise Match	20m	North East
	DRY CLEANERS, PRESSERS &/OR DYERS.	Galaxy Dry Cleaners., 289B Pennant Hills Rd., Carlingford. 2118.	35357	1979	Premise Match	20m	North East
	DRY CLEANERS, PRESSERS &/OR DYERS	Galaxy Dry Cleaners, 289b Pennant Hills Rd., Carlingford. 2118	20785	1978	Premise Match	20m	North East
	DRY CLEANERS, PRESSERS &/OR DYERS.	Galaxy Dry Cleaners., 289B Pennant Hills Rd Carlingford	2903	1972	Premise Match	20m	North East
	DRY CLEANERS, PRESSERS &/OR DYERS	Galaxy Dry Cleaners., 289B Pennant Hills Rd Carlingford	51055	1971	Premise Match	20m	North East
	DRY CLEANERS,PRESSERS /DYERS (D710)	Galaxy Dry Cleaners., 289b Pennant Hills Rd., Carlingford	292308	1970	Premise Match	20m	North East
2	DRY CLEANERS, PRESSERS & DYERS	Presswell Dry Cleaners., Cnr Pennant Hills Rd & Church St., Carlingford	158	1958	Road Intersection	54m	North East
3	MOTOR GARAGES &/OR ENGINEERS.	Breen Mart Service Station, 382 Pennant Hills Rd., Carlingford	65559	1971	Premise Match	81m	North East
	MOTOR GARAGES & ENGINEERS(M6S6)	Breen Mart Service Station., 382 Pennant Hills Rd., CARLINGFORD	337427	1970	Premise Match	81m	North East
	MOTOR GARAGES & ENGINEERS.	Breen Mart Service Station., 382 Pennant Hills Rd Carlingford	41867	1969	Premise Match	81m	North East
	MOTOR GARAGES & ENGINEERS	Breen Mart Service Station., 382 Pennant Hills Rd Carlingford	21217	1968	Premise Match	81m	North East
	MOTOR GARAGES & ENGINEERS.	Breen Mart Service Station., 382 Pennant Hills Rd Carlingford	6869	1967	Premise Match	81m	North East
	MOTOR GARAGES & ENGINEERS.	Breen Mart Service Station., 382 Pennant Hills Rd Carlingford	55828	1966	Premise Match	81m	North East

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
3	Motor Garages & Engineers	Breen Mart Service Station, 382 Pennant Hills Rd. Carlingford	122388	1965	Premise Match	81m	North East
	MOTOR GARAGES & ENGINEERS	Breen Mart Service Station., 382 Pennant Hills Rd Carlingford	43588	1964	Premise Match	81m	North East
	MOTOR GARAGES & ENGINEERS.	Brookers Garage Rear., 277 Marsden Rd Carlingford	29105	1962	Premise Match	81m	North East
	MOTOR GARAGES & ENGINEERS	Brookers Garage Rear 277 Marsden Rd. CARLINGFORD	346743	1961	Premise Match	81m	North East
	MOTOR GARAGES & ENGINEERS	Brookers Garage, Rear 277 Marsden Rd. CARLINGFORD	346744	1961	Premise Match	81m	North East
	MOTOR GARAGES & ENGINEERS	Breen Mart., 382 Pennant Hills Rd Carlingford	13810	1959	Premise Match	81m	North East
	MOTOR GARAGE/ENGINEERS.	Breen Mart., 382 Pennant Hills Rd Carlingford	704	1958	Premise Match	81m	North East
4	MOTOR GARAGES & SERVICE STATIONS.	Sundeck Service Station, 792 Pennant Hills Rd., Carlingford. 2118	25480	1993	Premise Match	106m	North East
	Motor Garages & Service Stations	Sundeck Service Station, 792 Pennant Hills Rd., Carlingford 2118	53930	1991	Premise Match	106m	North East
	MOTOR GARAGES & SERVICE STATIONS.	Sundeck Service Station, 792 Pennant Hills Rd., Carlingford. 2118	18296	1990	Premise Match	106m	North East
	MOTOR GARAGE & SERVICE STATIONS.	Sundeck Service Station, 792 Pennant Hills Rd., Carlingford. 2118	5620	1989	Premise Match	106m	North East
	MOTOR GARAGES & SERVICE STATIONS.	Sundeck Service Station, 792 Pennant Hills Rd., Carlingford. 2118	60020	1988	Premise Match	106m	North East
	MOTOR GARAGES & SERVICE STATIONS.	Sundeck Service Station, 792 Pennant Hills Rd., Carlingford. 2118	65525	1986	Premise Match	106m	North East
	MOTOR GARAGES & SERVICE STATIONS.	Sundeck Service Station, 792 Pennant Hills Rd., Carlingford. 2118	45645	1985	Premise Match	106m	North East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Sundeck Service Station, 792 Pennant Hills Rd., Carlingford. 2118	34202	1984	Premise Match	106m	North East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Sundeck Service Station., 792 Pennant Hills Rd., Carlingford 2118	21652	1983	Premise Match	106m	North East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	Sundeck Service Station, 792 Pennant Hills Rd., Carlingford. 2118.	57642	1982	Premise Match	106m	North East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Sundeck Service Station., 792 Pennant Hills Rd., Carlingford 2118	8231	1981	Premise Match	106m	North East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Sundeck Service Station., 792 Pennant Hills Rd., Carlingford. 2118	58913	1980	Premise Match	106m	North East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Sundeck Service Station., 792 Pennant Hills Rd., Carlingford. 2118.	46411	1979	Premise Match	106m	North East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Sundeck Service Station, 792 Pennant Hills Rd., Carlingford. 2118	50891	1978	Premise Match	106m	North East
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Sundeck Sevice Station., 792 Pennant Hills Rd., Carlingford 2118	34964	1976	Premise Match	106m	North East
	MOTOR GARAGES &/OR ENGINEERS.	Sundeck Service Station., 792 Pennant Hills Rd., Carlingford. 2118	59592	1975	Premise Match	106m	North East
	MOTOR GARAGES &/OR ENGINEERS.	Sundeck Service Station., 792 Pennant Hills Rd Carlingford	7789	1972	Premise Match	106m	North East
	MOTOR GARAGES &/OR ENGINEERS.	Sundeck Service Station, 792 Pennant Hills Rd., Carlingford	65563	1971	Premise Match	106m	North East
	MOTOR GARAGES & ENGINEERS(M6S6)	Sundeck Service Station., 792 Pennant Hills Rd., CARLINGFORD	338681	1970	Premise Match	106m	North East

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
4	MOTOR GARAGES & ENGINEERS.	Sundeck Service Station., 792 Pennant Hills Rd Carlingford	41873	1969	Premise Match	106m	North East
	MOTOR GARAGES & ENGINEERS	Sundeck Service Station., 792 Pennant Hills Rd Carlingford	21223	1968	Premise Match	106m	North East
	MOTOR GARAGES & ENGINEERS.	Sundeck Service Station., 792 Pennant Hills Rd Carlingford	6875	1967	Premise Match	106m	North East
	MOTOR GARAGES & ENGINEERS.	Sundeck Service Station., 792 Pennant Hills Rd Carlingford	55833	1966	Premise Match	106m	North East
	Motor Garages & Engineers	Sundeck Service Station, 792 Pennant Hills Rd. Carlingford	122393	1965	Premise Match	106m	North East
	MOTOR GARAGES & ENGINEERS	Sundeck Service Station., 792 Pennant Hills Rd Carlingford	43594	1964	Premise Match	106m	North East
5	MOTOR GARAGES & ENGINEERS	Brookers C. T. Garage., 34 Post Office Rd Carlingford	43589	1964	Premise Match	123m	West
6	MOTOR SERVICE STATIONS - PETROL, OIL	BP Carlingford Service Station, 821 Pennant Hills Rd., Carlingford.	61480	1975	Premise Match	177m	North East
	MOTOR GARAGES &/OR ENGINEERS.	BP Carlingford Service Station., 821 Pennant Hills Rd Carlingford	7783	1972	Premise Match	177m	North East
	MOTOR GARAGES &/OR ENGINEERS.	BP Carlingford Service Station, 821 Pennant Hills Rd. Carlingford	65556	1971	Premise Match	177m	North East
	MOTOR GARAGES & ENGINEERS.	BP Carlingford Service Station., 821 Pennant Hills Rd Carlingford	41866	1969	Premise Match	177m	North East
7	MOTOR GARAGES &/OR ENGINEERS.	Grandview Garage., 784 Pennant Hills Rd Carlingford	7786	1972	Premise Match	200m	North
	MOTOR GARAGES &/OR ENGINEERS.	Grandview Garage, 784 Pennant Hills Rd., Carlingford	65560	1971	Premise Match	200m	North
	MOTOR GARAGES & ENGINEERS(M6S6)	Grandview Garage., 784 Pennant Hills Rd., CARLINGFORD	337927	1970	Premise Match	200m	North
	MOTOR GARAGES & ENGINEERS.	Grandview Garage., 784 Pennant Hills Rd Carlingford	41870	1969	Premise Match	200m	North
	MOTOR GARAGES & ENGINEERS	Grandview Garage., 784 Pennant Hills Rd Carlingford	21220	1968	Premise Match	200m	North
	MOTOR GARAGES & ENGINEERS.	Grandview Garage., 784 Pennant Hills Rd Carlingford	6873	1967	Premise Match	200m	North
	MOTOR GARAGES & ENGINEERS.	Baker I., 784 Pennant Hills Rd Carlingford	55827	1966	Premise Match	200m	North
	MOTOR GARAGES & ENGINEERS.	Grand View Garage., 784 Pennant Hills Rd., Carlingford	55832	1966	Premise Match	200m	North
	Motor Garages & Engineers	Baker, I., 784 Pennant Hills Rd. Carlingford	122387	1965	Premise Match	200m	North
	Motor Garages & Engineers	Grand View Garage, 784 Pennant Hills Rd. Carlingford	122392	1965	Premise Match	200m	North
	MOTOR GARAGES & ENGINEERS	Baker I., 784 Pennant Hills Rd Carlingford	43587	1964	Premise Match	200m	North
	MOTOR GARAGES & ENGINEERS	Grand View Garage., 784 Pennant Hills Rd Carlingford	43593	1964	Premise Match	200m	North
	MOTOR GARAGES & ENGINEERS.	Baker I., 784 Pennant Hills Rd Carlingford	29103	1962	Premise Match	200m	North
	MOTOR GARAGES & ENGINEERS.	Grand View Garage., 784 Pennant Hills Rd Carlingford	29108	1962	Premise Match	200m	North
	MOTOR GARAGES & ENGINEERS	Grand View Garage, 784 Pennant Hills Rd., CARLINGFORD	347268	1961	Premise Match	200m	North
	MOTOR GARAGES & ENGINEERS	Grandview Garage., 784 Pennant Hills Rd Carlingford	13812	1959	Premise Match	200m	North
	MOTOR GARAGE/ENGINEERS.	Grandview Garage., 784 Pennant Hills Rd Carlingford	4198	1958	Premise Match	200m	North
8	MOTOR GARAGES & SERVICE STATIONS.	Ampol Carlingford Service Station, 326 Pennant Hills Rd., Carlingford. 2118	18457	1993	Premise Match	214m	South West
	Motor Garages & Service Stations	Ampol Carlingford Service Station, 326 Pennant Hills Rd., Carlingford 2118	97739	1991	Premise Match	214m	South West
	MOTOR GARAGES & SERVICE STATIONS.	Ampol Carlingford Service Station, 326 Pennant Hills Rd., Carlingford. 2118	5822	1990	Premise Match	214m	South West
	MOTOR GARAGE & SERVICE STATIONS.	Ampol Carlingford Service Station, 326 Pennant Hills Rd., Carlingford. 2118	64309	1989	Premise Match	214m	South West

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
8	MOTOR GARAGES & SERVICE STATIONS.	Ampol Carlingford Service Station, 326 Pennant Hills Rd., Carlingford. 2118	53416	1988	Premise Match	214m	South West
	MOTOR GARAGES & SERVICE STATIONS.	Total Carlingford Service Station, 326 Pennant Hills Rd., Carlingford. 2118	65594	1986	Premise Match	214m	South West
	MOTOR GARAGES & SERVICE STATIONS.	Total Carlingford Service Station., 326 Pennant Hills Rd., Carlingford. 2118	45711	1985	Premise Match	214m	South West
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Total Carlingford Service Station, 326 Pennant Hills Rd., Carlingford. 2118	34271	1984	Premise Match	214m	South West
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Total Carlingford Service Station., 326 Pennant Hills Rd., Carlingford 2118	21714	1983	Premise Match	214m	South West
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	Total Carlingford Service Station, 326 Pennant Hills Rd., Carlingford. 2118.	57711	1982	Premise Match	214m	South West
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	South Parade Service Centre (Total)., 326 Pennant Hills Rd., Carlingford 2118	8190	1981	Premise Match	214m	South West
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Total Carlingford Service Station., 326 Pennant Hills Rd., Carlingford. 2118	58982	1980	Premise Match	214m	South West
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Total Service Station., 326 Pennant Hills Rd., Carlingford. 2118.	46518	1979	Premise Match	214m	South West
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Total Service Station, 326 Pennant Hills Rd., Carlingford. 2118	51002	1978	Premise Match	214m	South West
9	DRY CLEANERS & PRESSERS.(D8500)	Carville, 72 Carlingford Court, Carlingford. 2118.	23783	1982	Premise Match	238m	North
	DRY CLEANERS, PRESSERS &/OR DYERS.	Carville., Carlingford Court., Carlingford. 2118	46704	1980	Premise Match	238m	North
10	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Total Garage., 320 Pennant Hills Rd., Carlingford 2118	35046	1976	Premise Match	291m	South West
	MOTOR GARAGES &/OR ENGINEERS.	Total Garage., 320 Pennant Hills Rd., Carlingford. 2118	59658	1975	Premise Match	291m	South West
	MOTOR GARAGES &/OR ENGINEERS.	Total Garage., 320 Pennant Hills Rd Carlingford	7791	1972	Premise Match	291m	South West
	MOTOR GARAGES &/OR ENGINEERS.	Total Garage, 320 Pennant Hills Rd., Carlingford	65565	1971	Premise Match	291m	South West
	MOTOR GARAGES & ENGINEERS(M6S6)	Total Garage., 320 Pennant Hills Rd., CARLINGFORD	338742	1970	Premise Match	291m	South West
11	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Caltex Caringford Service Station., 245A Pennant Hills Rd., Carlingford 2118	51579	1980	Premise Match	375m	South West
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Caltex Service Station., 245A Pennant Hills Rd., Carlingford. 2118.	41182	1979	Premise Match	375m	South West
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Caltex Service Station. 245a Pennant Hills Rd., Carlingford. 2118	49711	1978	Premise Match	375m	South West
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Caltex Service Station., 245A Pennant Hills Rd., Carlingford 2118	29625	1976	Premise Match	375m	South West
	MOTOR GARAGES &/OR ENGINEERS.	Caltex Service Station., 245a Pennant Hills Rd., Carlingford. 2118	58600	1975	Premise Match	375m	South West
12	MOTOR GARAGES & SERVICE STATIONS.	Caltex Carlingford Service Station, 797 Pennant Hills Rd., Carlingford. 2118	18748	1993	Premise Match	395m	North

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Property Boundary or Road Intersection	Direction
12	Motor Garages & Service Stations	Caltex Carlingford Service Station, 797 Pennant Hills Rd., Carlingford 2118	97590	1991	Premise Match	395m	North
	MOTOR GARAGES & SERVICE STATIONS.	Caltex Carlingford Service Station, 797 Pennant Hills Rd., Carlingford. 2118	11284	1990	Premise Match	395m	North
	MOTOR GARAGE & SERVICE STATIONS.	Caltex Carlingford Service Station, 797 Pennant Hills Rd., Carlingford. 2118	64723	1989	Premise Match	395m	North
	MOTOR GARAGES & SERVICE STATIONS.	Caltex Carlingford Service Station, 797 Pennant Hills Rd., Carlingford. 2118	53847	1988	Premise Match	395m	North
	MOTOR GARAGES & SERVICE STATIONS.	Golden Fleece Carlingford Service Station, 797 Pennant Hills Rd., Carlingford. 2118	64755	1986	Premise Match	395m	North
	MOTOR GARAGES & SERVICE STATIONS.	Golden Fleece Carlingford Service Station, 797 Pennant Hills Rd., Carlingford. 2118	39761	1985	Premise Match	395m	North
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Golden Fleece Carlingford Service Station, 797 Pennant Hills Rd., Carlingford. 2118	28337	1984	Premise Match	395m	North
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Golden Fleece Carlingford Service Station., 797 Pennant Hills Rd., Carlingford. 2118	14759	1983	Premise Match	395m	North
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	Golden Fleece Carlingford Service Station, 797 Pennant Hills Rd., Carlingford. 2118.	56820	1982	Premise Match	395m	North
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Golden Fleece Carlingford Service Station., 797 Pennant Hills Rd., Carlingford. 2118	3377	1981	Premise Match	395m	North
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Golden Fleece Carlingford Service Station., 797 Pennant Hills Rd., Carlingford. 2118	58110	1980	Premise Match	395m	North
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Golden Fleece Service Station., 797 Pennant Hills Rd., Carlingford. 2118.	41595	1979	Premise Match	395m	North
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Golden Fleece Service Station, 797 Pennant Hills Rd., Carlingford. 2118	50134	1978	Premise Match	395m	North
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Hudsons Golden Fleece Service Station., 797 Pennant Hills Rd., Carlingford 2118	30269	1976	Premise Match	395m	North
	MOTOR GARAGES &/OR ENGINEERS.	Hudson's Golden Fleece Service Station., 797 Pennant Hills Rd., Carlingford. 2118	59060	1975	Premise Match	395m	North
	MOTOR GARAGES &/OR ENGINEERS.	Hudsons Golden Fleece Service Station., 797 Pennant Hills Rd Carlingford	7787	1972	Premise Match	395m	North
	MOTOR GARAGES &/OR ENGINEERS.	Hudsons Golden Fleece Service Station, 797 Pennant Hills Rd. Carlingford	65561	1971	Premise Match	395m	North
	MOTOR GARAGES & ENGINEERS(M6S6)	Hudsons Golden Fleece Service Station., 797 Pennant Hills Rd., CARLINGFORD	338026	1970	Premise Match	395m	North
	MOTOR GARAGES & ENGINEERS.	Hudsons Golden Fleece Service Station., 797 Pennant Hills Rd Carlingford	41871	1969	Premise Match	395m	North
	MOTOR GARAGES & ENGINEERS	Hudsons Golden Fleece Service Station., 797 Pennant Hills Rd Carlingford	21221	1968	Premise Match	395m	North
	MOTOR GARAGES & ENGINEERS.	Golden Fleece Carlingford., 797 Pennant Hills Rd Carlingford	6872	1967	Premise Match	395m	North

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

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

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

/lap Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
13	MOTOR GARAGES & SERVICE STATIONS.	Carlingford Service Centre, Pennant Hills Rd., Carlingford. 2118	18847	1993	Road Match	0m
	Motor Garages & Service Stations	Carlingford Service Centre, Pennant Hills Rd., Carlingford 2118	97424	1991	Road Match	0m
	MOTOR GARAGES & SERVICE STATIONS.	Carlingford Service Centre, Pennant Hills Rd., Carlingford. 2118	11408	1990	Road Match	Om
	MOTOR GARAGE & SERVICE STATIONS.	Carlingford Service Centre, Pennant Hills Rd., Carlingford. 2118	64849	1989	Road Match	0m
	MOTOR GARAGES & SERVICE STATIONS.	Carlingford Service Centre, Pennant Hills Rd., Carlingford. 2118	53968	1988	Road Match	Om
	MOTOR GARAGES & SERVICE STATIONS.	Carlingford Service Centre, Pennant Hills Rd., Carlingford. 2118	64434	1986	Road Match	0m
	MOTOR GARAGES & SERVICE STATIONS.	Carlingford Service Centre, Pennant Hills Rd., Carlingford. 2118	39425	1985	Road Match	0m
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Carlingford Service Centre, Pennant Hills Rd., Carlingford. 2118	28018	1984	Road Match	Om
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Carlingford Service Centre., Pennant Hills Rd., Carlingford 2118	14432	1983	Road Match	Om
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS. (M6860)	Carlingford Service Centre, Pennant Hills Rd., Carlingford. 2118.	56487	1982	Road Match	0m
	MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Ampol Service Station., Pennant Hills Rd., Carlingford 2118	25005	1976	Road Match	Om
	MOTOR GARAGES &/OR ENGINEERS.	Ampol Service Station., Pennant Hills Rd., Carlingford. 2118	58360	1975	Road Match	0m
	MOTOR SERVICE STATIONS - PETROL, OIL	BP Pioneer Service Station., 189 Pennant Hills Rd., Carlingford. 2118	61536	1975	Road Match	0m
	DRY CLEANERS, PRESSERS &/OR DYERS.	Galaxy Dry Cleaners, 189b Pennant Hills Rd., Carlingford. 2118	24047	1975	Road Match	Om
	MOTOR GARAGES & ENGINEERS(M6S6)	Carlingford Service Station., Pennant Hills Rd., Carlingford	337529	1970	Road Match	Om
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Breen H., Pennant Hills Rd Carlingford	47629	1969	Road Match	0m
	MOTOR GARAGES & ENGINEERS.	Carlingford Service Station., Pennant Hills Rd Carlingford	41868	1969	Road Match	0m
	MOTOR GARAGES & ENGINEERS.	Gilmore G. H., Pennant Hills Rd Carlingford	41869	1969	Road Match	0m
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Hart's Garage., Pennant Hills Rd Carlingford	47630	1969	Road Match	Om
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Korl-Inn Service Station., Pennant Hills Rd Carlingford	47631	1969	Road Match	0m
	MOTOR GARAGES & ENGINEERS	Carlingford Service Station., Pennant Hills Rd Carlingford	21218	1968	Road Match	0m
	MOTOR GARAGES & ENGINEERS	Gilmore G. H., Pennant Hills Rd Carlingford	21219	1968	Road Match	0m
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Hart's Garage., Pennant Hills Rd., CarlingFord	31064	1968	Road Match	0m

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
13	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Korl Inn Service Station., Pennant Hills Rd., CarlingFord	31065	1968	Road Match	Om
	MOTOR GARAGES & ENGINEERS.	Carlingford Service Station., Pennant Hills Rd Carlingford	6870	1967	Road Match	0m
	MOTOR GARAGES & ENGINEERS.	Gilmore G. H., Pennant Hills Rd Carlingford	6871	1967	Road Match	0m
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Breen H., Pennant Hills Rd Carlingford	1117	1966	Road Match	0m
	MOTOR GARAGES & ENGINEERS.	Carlingford Service Station., Pennant Hills Rd., Carlingford	55829	1966	Road Match	0m
	MOTOR GARAGES & ENGINEERS.	Gilmore G. H., Pennant Hills Rd Carlingford	55830	1966	Road Match	0m
	MOTOR GARAGES & ENGINEERS.	Golden Fleece Carlingford., Pennant Hills Rd Carlingford	55831	1966	Road Match	0m
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Hart's Garage., Pennant Hills Rd Carlingford	1118	1966	Road Match	0m
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Korl Inn Service Station., Pennant Hills Rd Carlingford	1119	1966	Road Match	0m
	Motor Garages & Engineers	Carlingford Service, Station, Pennant Hills Rd. Carlingford	122389	1965	Road Match	0m
	Motor Garages & Engineers	Gilmore, G. H., Pennant Hills Rd. Carlingford	122390	1965	Road Match	0m
	Motor Garages & Engineers	Golden Fleece Carlingford, Pennant Hills Rd. Carlingford	122391	1965	Road Match	0m
	Motor Service Stations - Petrol, Oil, Etc.	Hart's Garage, Pennant Hills Rd. Carlingford	125566	1965	Road Match	0m
	Motor Service Stations - Petrol, Oil, Etc.	Korl Inn Service Station, Pennant Hills Rd. Carlingford	125567	1965	Road Match	0m
	MOTOR GARAGES & ENGINEERS	Carlingford Service Station., Pennant Hills Rd Carlingford	43590	1964	Road Match	0m
	MOTOR GARAGES & ENGINEERS	Gil More G. H., Pennant Hills Rd Carlingford	43591	1964	Road Match	0m
	MOTOR GARAGES & ENGINEERS	Golden Fleece Carlingford., Pennant Hills Rd Carlingford	43592	1964	Road Match	0m
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Hart's Garage., Pennant Hills Rd. Carlingford	51902	1964	Road Match	0m
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Korl Inn Service Station., Pennant Hills Rd, Carlingford	51903	1964	Road Match	0m
	MOTOR GARAGES & ENGINEERS.	Breen M. J. Service Station., Pennant Hills Rd Carlingford	29104	1962	Road Match	0m
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Breen M. J. Service Station., Pennant Hills Rd Carlingford	38017	1962	Road Match	0m
	MOTOR GARAGES & ENGINEERS.	Carlingford Service Station., Pennant Hills Rd Carlingford	29106	1962	Road Match	0m
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Carlingford Service Station., Pennant Hills Rd Carlingford	38018	1962	Road Match	0m
	MOTOR GARAGES & ENGINEERS.	Gilmore G. H., Pennant Hills Rd Carlingford	29107	1962	Road Match	Om
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Hart's Garage., Pennant Hills Rd Carlingford	38019	1962	Road Match	0m
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Korl Inn Service Station., Pennant Hills Rd Carlingford	38020	1962	Road Match	0m
	MOTOR SERVICE STATIONS-PETROL, OIL, ETC.	Sundeck Service Station., Pennant Hills Rd Carlingford	38021	1962	Road Match	Om
	MOTOR GARAGES & ENGINEERS	Baker, I., Pennant Hills Rd. CARLINGFORD	346581	1961	Road Match	0m
	MOTOR SERVICE STATIONS—PETROL, OIL, Etc.	Carlingford Service Station, Pennant Hills Rd. CARLINGFORD	350446	1961	Road Match	0m
Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
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13	MOTOR GARAGES & ENGINEERS	Carlingford Service, Station, Pennant Hills Rd. CARLINGFORD	346820	1961	Road Match	0m
	MOTOR GARAGES & ENGINEERS	Gilmore, G. H., Pennant Hills Rd. CARLINGFORD	347230	1961	Road Match	0m
	MOTOR SERVICE STATIONS—PETROL, OIL, Etc.	Hart's Garage, Pennant Hills Rd. Carlingford	350679	1961	Road Match	0m
	MOTOR SERVICE STATIONS—PETROL, OIL, Etc.	Jones, V., Pennant Hills Rd. CARLINGFORD	350737	1961	Road Match	0m
	MOTOR SERVICE STATIONS—PETROL, OIL, Etc.	Korl Inn Service Station, Pennant Hills Rd. CARLINGFORD	350764	1961	Road Match	0m
	MOTOR SERVICE STATIONS—PETROL, OIL, Etc.	Sundeck Service Station, Pennant Hills Rd., CARLINGFORD	351135	1961	Road Match	0m
	MOTOR GARAGES & ENGINEERS	Baker., I., Pennant Hills Rd Carlingford	13809	1959	Road Match	0m
	MOTOR GARAGES & ENGINEERS	Gilmore G. H., Pennant Hills Rd Carlingford	13811	1959	Road Match	0m
	MOTOR SERVICE STATIONS-PETROL,. OIL, ETC.	Hart's Garage., Pennant Hills Rd Carlingford	24063	1959	Road Match	0m
	MOTOR SERVICE STATIONS-PETROL,. OIL, ETC.	Jones V., Pennant Hills Rd Carlingford	24064	1959	Road Match	0m
	MOTOR SERVICE STATIONS-PETROL,. OIL, ETC.	Korl Inn Service Station., Pennant Hills Rd Carlingford	24065	1959	Road Match	0m
	MOTOR GARAGE/ENGINEERS.	Baker I., Pennant Hills Rd Carlingford	585	1958	Road Match	0m
	MOTOR GARAGE/ENGINEERS.	Gilmore G. H., Pennant Hills Rd Carlingford	4168	1958	Road Match	0m
	MOTOR SERVICE STATIONS-PETROL, ETC.	Hart's Garage., Pennant Hills Rd Carlingford	9577	1958	Road Match	0m
	MOTOR SERVICE STATIONS-PETROL, ETC.	Jones V., Pennant Hills Rd Carlingford	9612	1958	Road Match	0m
	MOTOR SERVICE STATIONS-PETROL, ETC.	Korl-Inn Service Station (N. Carty)., Pennant Hills Rd Carlingford	9630	1958	Road Match	0m
	MOTOR GARAGE/ENGINEERS.	Townsend H. L., Pennant Hills Rd., Mobbs Hill., Carlingford.	9171	1958	Road Match	0m
	MOTOR GARAGES &/OR ENGINEERS.	Angel A. R., Pennant Hills Rd Carlingford	57160	1956	Road Match	0m
	MOTOR GARAGES &/OR ENGINEERS.	Baker I., Pennant Hills Rd Carlingford	57210	1956	Road Match	0m
	MOTOR GARAGES &/OR ENGINEERS.	Breen M., Pennant Hills Rd Carlingford	57317	1956	Road Match	0m
	MOTOR GARAGES &/OR ENGINEERS.	Gilmore G. H., Pennant Hills Rd Carlingford	57706	1956	Road Match	0m
	MOTOR GARAGES &/OR ENGINEERS.	Grandview Garage., Pennant Hills Rd Carlingford	57730	1956	Road Match	0m
	MOTOR SERVICE STATIONS-PETROL, ETC.	Hart's Garage., Pennant Hills Rd Carlingford	61942	1956	Road Match	0m
	MOTOR SERVICE STATIONS-PETROL, ETC.	Jones V., Pennant Hills Rd Carlingford	61970	1956	Road Match	0m
	MOTOR SERVICE STATIONS-PETROL, ETC.	Korl-Inn Service Station (N. Carty)., Pennant Hills Rd., Carlingford	61986	1956	Road Match	0m
	MOTOR GARAGES &/OR ENGINEERS.	Townsend, H. L., Pennant Hills Rd., Mobbs Hill., Carlingford	61589	1956	Road Match	0m
	MOTOR GARAGES &/OR ENGINEERS.	Angel A. R., Pennant Hills Rd Carlingford	44731	1954	Road Match	0m
	MOTOR GARAGES &/OR ENGINEERS.	Baker I., Pennant Hills Rd Carlingford	44773	1954	Road Match	0m
	MOTOR GARAGES &/OR ENGINEERS.	Breen M., Pennant Hills Rd., Carlingford	48947	1954	Road Match	0m
	MOTOR GARAGES &/OR ENGINEERS.	Gilmore G. H., Pennant Hills Rd Carlingford	49317	1954	Road Match	0m

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
13	MOTOR GARAGES &/OR ENGINEERS.	Grandview Garage., Pennant Hills Rd Carlingford	49337	1954	Road Match	0m
	MOTOR SERVICE STATIONS-PETROL, ETC.	Hart's Garage., Pennant Hills Rd Carlingford	54498	1954	Road Match	0m
	MOTOR SERVICE STATIONS-PETROL, ETC.	Jones V., Pennant Hills Rd Carlingford	54527	1954	Road Match	0m
	MOTOR SERVICE STATIONS-PETROL, ETC.	Korl-Inn Service Station (N. Carty)., Pennant Hills Rd Carlingford	54538	1954	Road Match	0m
	MOTOR GARAGES &/OR ENGINEERS.	Townsend, H. L., Pennant Hills Rd., Mobbs Hill., Carlingford	54221	1954	Road Match	0m
	MOTOR GARAGES &/OR ENGINEERS.	Angel A. R., Pennant Hills Rd., Carlingford	36526	1953	Road Match	0m
	MOTOR GARAGES &/OR ENGINEERS.	Baker I., Pennant Hills Rd Carlingford	36564	1953	Road Match	0m
	MOTOR GARAGES &/OR ENGINEERS.	Breem M., Pennant Hills Rd Carlingford	36660	1953	Road Match	0m
	MOTOR GARAGES &/OR ENGINEERS.	Gilmour G. H., Pennant Hills Rd Carlingford	40046	1953	Road Match	0m
	MOTOR GARAGES &/OR ENGINEERS.	Grandview Garage., Pennant Hills Rd Carlingford	40063	1953	Road Match	0m
	MOTOR SERVICE STATIONS-PETROL, ETC.	Hart's Garage., Pennant Hills Rd Carlingford	44086	1953	Road Match	0m
	MOTOR SERVICE STATIONS-PETROL, ETC.	Jones V., Pennant Hills Rd Carlingford	44107	1953	Road Match	Om
	MOTOR SERVICE STATIONS-PETROL, ETC.	Korl-Inn Service Station (N. Carty), Pennant Hills Rd., Carlingford	44116	1953	Road Match	Om
	MOTOR GARAGES &/OR ENGINEERS.	Angel A. R., Pennant Hills Rd Carlingford	27448	1952	Road Match	0m
	MOTOR GARAGES &/OR ENGINEERS.	Breem M., Pennant Hills Rd Carlingford	27560	1952	Road Match	Om
	MOTOR SERVICE STATIONS-PETROL, ETC.	Breen M., Pennant Hills Rd Carlingford	35786	1952	Road Match	0m
	MOTOR GARAGES &/OR ENGINEERS.	Gilmour G. H., Pennant Hills Rd Carlingford	31686	1952	Road Match	Om
	MOTOR GARAGES &/OR ENGINEERS.	Grandview Garage (I. Baker Propr.)., Pennant Hills Rd Carlingford	31700	1952	Road Match	0m
	MOTOR SERVICE STATIONS-PETROL, ETC.	Hart's Garage., Pennant Hills Rd Carlingford	35859	1952	Road Match	0m
	MOTOR SERVICE STATIONS-PETROL, ETC.	Jones V., Pennant Hills Rd Carlingford	35882	1952	Road Match	0m
	MOTOR SERVICE STATIONS-PETROL, ETC.	Korl-Inn Service Station (N. Carty)., Pennant Hills Rd., Carlingford	35891	1952	Road Match	0m
	MOTOR GARAGES &/OR ENGINEERS	Angel, A. R., Pennant Hills Rd., Carlingford	83378	1950	Road Match	0m
	MOTOR GARAGES &/OR ENGINEERS	Breem, M., Pennant Hills Rd., Carlingford	83492	1950	Road Match	0m
	MOTOR SERVICE STATIONS-PETROL, Etc.	Breen, M., Pennant Hills Rd., Carlingford	85816	1950	Road Match	0m
	MOTOR GARAGES &/OR ENGINEERS	Gilmour, G. H., Pennant Hills Rd., Carlingford	83803	1950	Road Match	Om
	MOTOR SERVICE STATIONS-PETROL, Etc.	Gilmour, G. H., Pennant Hills Rd., Carlingford	85994	1950	Road Match	Om
	MOTOR GARAGES &/OR ENGINEERS	Grandview Garage (I. Baker, Propr.), Pennant Hills Rd., Carlingford	83819	1950	Road Match	Om
	MOTOR SERVICE STATIONS-PETROL, Etc.	Hart's Garage., Pennant Hills Rd., Carlingford	86044	1950	Road Match	Om
	MOTOR SERVICE STATIONS-PETROL, Etc.	Jones, V., Pennant Hills Rd., Carlingford	86094	1950	Road Match	Om
	MOTOR SERVICE STATIONS-PETROL, Etc.	Korl-Inn Service Station (N. Carty), Pennant Hills Rd., Carlingford	86118	1950	Road Match	0m
	MOTOR GARAGES &/OR ENGINEERS.	Angel A. R., Pennant Hills Rd Carlingford	17711	1948-49	Road Match	0m
	MOTOR GARAGES &/OR ENGINEERS.	Carty, N., Pennant Hills Rd., Carlingford	17869	1948-49	Road Match	0m
	MOTOR GARAGES &/OR ENGINEERS.	Gay W. E. And Son., Pennant Hills Rd Carlingford	22370	1948-49	Road Match	Om

Map Id	Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
13	MOTOR SERVICE STATIONS-PETROL, ETC.	Hart's Garage., Pennant Hills Rd Carlingford	23312	1948-49	Road Match	0m
	MOTOR SERVICE STATIONS-PETROL, ETC.	Jones V., Pennant Hills Rd Carlingford	23348	1948-49	Road Match	0m
14	MOTOR SERVICE STATIONS - PETROL, OIL	Mobil Service Center., Carlingford Rd., Epping. 2121	88360	1975	Road Match	198m

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Aerial Imagery 2020 277-281 Pennant Hills Road, Carlingford, NSW 2118





Aerial Imagery 2015 277-281 Pennant Hills Road, Carlingford, NSW 2118





Aerial Imagery 2009 277-281 Pennant Hills Road, Carlingford, NSW 2118





Aerial Imagery 2000 277-281 Pennant Hills Road, Carlingford, NSW 2118









Aerial Imagery 1991 277-281 Pennant Hills Road, Carlingford, NSW 2118









Aerial Imagery 1982 277-281 Pennant Hills Road, Carlingford, NSW 2118









Aerial Imagery 1970 277-281 Pennant Hills Road, Carlingford, NSW 2118





















Aerial Imagery 1943 277-281 Pennant Hills Road, Carlingford, NSW 2118









#### **Topographic Map 2015**





#### **Historical Map 1975**





#### Historical Map c.1936





#### Historical Map c.1917





## **Topographic Features**





# **Topographic Features**

277-281 Pennant Hills Road, Carlingford, NSW 2118

### **Points of Interest**

What Points of Interest exist within the dataset buffer?

Map Id	Feature Type	Label	Distance	Direction
1685737	Place Of Worship	CARLINGFORD UNITING CHURCH	26m	South
1685722	Park	CARLINGFORD MEMORIAL PARK	58m	East
1684919	Community Facility	1ST CARLINGFORD SCOUT HALL	91m	South West
1685746	Sports Court	CRICKET NETS	92m	South West
1685653	Library	CARLINGFORD LIBRARY	108m	South West
1685652	Club	CARLINGFORD BOWLING SPORTS AND RECREATION CLUB	115m	South
1685755	Sports Field	BOWLING GREENS	116m	South
1685665	Shopping Centre	CARLINGFORD VILLAGE SHOPPING CENTRE	129m	North East
1685672	Park	Park	147m	North
1685772	Lookout	ERIC MOBBS MEMORIAL PARK	174m	East
1685745	Park	PLAYGROUND	177m	South West
1685771	Sports Field	COX PARK	227m	South
1685326	Railway Station	CARLINGFORD RAILWAY STATION	257m	South West
1685281	Parking Area	Parking Area	265m	North East
1685753	Historic Site	ST PAUL'S ANGLICAN CHURCH FORMER	305m	East
1685727	Primary School	CARLINGFORD PUBLIC SCHOOL	314m	East
1685339	Park	GALARINGI	315m	South East
1685663	Post Office	CARLINGFORD POST OFFICE	349m	North
1685664	Shopping Centre	CARLINGFORD COURT	383m	North
1685317	Community Medical Centre	CARLINGFORD COMMUNITY HEALTH CENTRE	390m	North East
1685662	Place Of Worship	ANGLICAN CHURCH	446m	North West
1685723	Park	K13 SUBMARINE MEMORIAL PARK	464m	South West
1685661	Place Of Worship	MORMON CHURCH	468m	North
1685720	Monument	K13 MEMORIAL	482m	South West
1685705	Park	EDWIN ROSS RESERVE	488m	North East
1685690	Park	TALINGA PARK	491m	East
1685698	Park	HAROLD WEST RESERVE	506m	North
1685280	Parking Area	Parking Area	508m	North
1685299	Parking Area	Parking Area	508m	North
1685682	Park	Park	592m	North East
1684960	Urban Place	MOBBS HILL	593m	North East

Map Id	Feature Type	Label	Distance	Direction
1685774	Park	HERBERT RUMSEY RESERVE	667m	South West
1685773	Park	FITZGERALD FOREST	673m	South
1685776	High School	JAMES RUSE AGRICULTURAL HIGH SCHOOL	679m	West
1685692	Park	CHARLES FRASER PARK	689m	South East
1685775	Place Of Worship	FAITH BAPTIST CHURCH	697m	South
1685683	Park	SIMPSON RESERVE	775m	East
1685770	Park	Park	804m	North West
1685684	Park	BARAYLY PARK	817m	South East
1685754	Cemetery	CARLINGFORD ANGLICAN CEMETERY	826m	East
1685534	Park	RAPANEA COMMUNITY FOREST	893m	South
1685689	Park	DANDARBONG RESERVE	904m	South East
1685675	Park	CALANGARA PARK	923m	South West
1685702	Park	Park	956m	North West
1685681	Park	Park	975m	North
1685557	Primary School	ST BERNADETTE'S PRIMARY SCHOOL	975m	South
1685725	Retirement Village	HAYFIELD COURT	977m	South West
1685488	Place Of Worship	CATHOLIC CHURCH	988m	South
1685784	Place Of Worship	CHURCH OF CHRIST	992m	South West
1685670	Park	HOMELANDS RESERVE	996m	South West

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# **Topographic Features**

#### 277-281 Pennant Hills Road, Carlingford, NSW 2118

#### 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
14775	Water	Operational	MOBBS HILL RESERVOIRS	13/07/2018	186m	East

## **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
14958	Water	Feature on Previous LPI Tank Area Supply		13/06/2001	220m	East
160474	Water	Operational		13/07/2018	243m	East
160475	Water	Operational		13/07/2018	284m	East

Tanks Data Source:  $\ensuremath{\mathbb{C}}$  Land and Property Information (2015)

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#### **Major Easements**

What Major Easements exist within the dataset buffer?

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

Map Id	Easement Class	Easement Type	Easement Width	Distance	Direction
120115391	Primary	Undefined		0m	Onsite
120107621	Primary	Undefined		0m	Onsite
120115396	Primary	Undefined		0m	West
120119277	Primary	Undefined		0m	East
120115395	Primary	Undefined		29m	East
120119281	Primary	Undefined		35m	East
120107617	Primary	Undefined		82m	East
120111503	Primary	Undefined		155m	West
120111504	Primary	Undefined		190m	South East
120107616	Primary	Undefined		263m	West

Map Id	Easement Class	Easement Type	Easement Width	Distance	Direction
120119276	Primary	Undefined		308m	West
120111508	Primary	Undefined		425m	South East
120111542	Primary	Undefined		432m	West
120117687	Primary	Undefined		434m	South
120121701	Primary	Undefined		439m	South
120115430	Primary	Undefined		465m	North West
120115452	Primary	Undefined		466m	West
120121601	Primary	Undefined		476m	South
120117715	Primary	Undefined		479m	South
120110141	Primary	Undefined		491m	South
120119316	Primary	Undefined		506m	North West
120115600	Primary	Undefined		516m	West
120110324	Primary	Undefined		585m	North East
120115392	Primary	Undefined		594m	South East
120109881	Primary	Undefined		623m	North West
120113768	Primary	Undefined		629m	North West
120107671	Primary	Undefined		683m	North West
120114069	Primary	Undefined		765m	North West
120107670	Primary	Undefined		779m	North West
120117846	Primary	Undefined		815m	South West
120121928	Primary	Undefined		828m	West
120118223	Primary	Undefined		836m	West
120121645	Primary	Undefined		845m	West
165930531	Primary	Right of way	5m	983m	North 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**

277-281 Pennant Hills Road, Carlingford, NSW 2118

#### **State Forest**

What State Forest exist within the dataset buffer?

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

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

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## **National Parks and Wildlife Service Reserves**

What NPWS Reserves exist within the dataset buffer?

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

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

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## **Elevation Contours (m AHD)**





# Hydrogeology & Groundwater

277-281 Pennant Hills Road, Carlingford, NSW 2118

## Hydrogeology

Description of aquifers on-site:

Description	
Porous, extensive aquifers of low to moderate productivity	
Description of aquifers within the dataset buffer:	

Description

Porous, extensive aquifers of low to moderate productivity

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

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

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

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

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

#### **Groundwater Boreholes**





# Hydrogeology & Groundwater

277-281 Pennant Hills Road, Carlingford, NSW 2118

#### **Groundwater Boreholes**

Boreholes within the dataset buffer:

GW No.	Licence No	Work Type	Owner Type	Authorised Purpose	Intended Purpose	Name	Complete Date	Final Depth (m)	Drilled Depth (m)	Salinity (mg/L)	SWL (m bgl)	Yield (L/s)	Elev (AHD)	Dist	Dir
GW112 530	10BL605 355	Bore	Private	Monitoring Bore	Monitoring Bore	Carlingford Court	15/04/2013	5.00	5.00		3.54			424m	North
GW112 529	10BL605 355	Bore	Private	Monitoring Bore	Monitoring Bore	Carlingford Court	15/04/2013	5.00	5.00		4.20			444m	North
GW112 528	10BL605 355	Bore	Private	Monitoring Bore	Monitoring Bore	Carlingford Court	15/04/2013	5.00	5.00		3.69			458m	North
GW102 922	10BL156 680, 10BL600 502, 10BL602 287, 10BL603 542, 10WA10 9587	Bore	Private	Irrigation, Recreation (groundwater ), Test Bore	Recreation (groundwate r)		07/08/2009	173.00	173.00	4000	61.0 0	3.000		621m	North
GW100 667	10BL157 756	Bore	Private	Monitoring Bore	Monitoring Bore		07/10/1996	3.70	3.70	260	1.67			802m	North West
GW100 435	10BL157 898, 10WA10 8396	Bore	Private	Domestic, Stock	Domestic, Stock		16/01/1997	24.00	24.00		7.00	2.500		1317m	North East
GW016 125	10BL007 597	Well	Private	Irrigation	Irrigation			5.40						1369m	North East
GW102 434	10BL158 966, 10WA10 8437	Bore		Domestic, Stock	Domestic, Stock		31/05/1999	146.00	146.00	1600	65.0 0	1.000		1610m	West
GW200 688	20BL170 896	Spear	Private	Domestic	Domestic		09/01/2007	6.00						2000m	South

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

# Hydrogeology & Groundwater

277-281 Pennant Hills Road, Carlingford, NSW 2118

## **Driller's Logs**

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

Groundwater No	Drillers Log	Distance	Direction
GW112530	0.00m-0.30m FILL 0.30m-3.70m CLAYSTONE WITH IRONSTONE, HARD GREY 3.70m-5.00m SHALE HARD DARK BROWN WEATHERED	424m	North
GW112529	0.00m-0.33m FILL 0.33m-0.50m GRAVELLY CLAY STIFF BROWN AND GREY 0.50m-1.10m CLAY MOTTLED, VERY STIFF 1.10m-2.80m SILTSTONE VERY HARD, GREY 2.80m-5.00m CLAYSTONE, HARD GREY,IRONSTONE	444m	North
GW112528	0.00m-0.50m FILL 0.50m-1.60m CLAY, ASH 1.60m-5.00m CLAYSTONE VERY HARD GREY	458m	North
GW102922	0.00m-0.50m TOPSOIL 0.50m-4.70m CLAY BROWN 4.70m-22.00m SHALE GREY 22.00m-32.60m SANDSTONE GREY 32.60m-38.00m SANDSTONE YELLOW 38.00m-42.00m SANDSTONE QUARTZ FRACTURED 42.00m-46.10m SANDSTONE GREY 46.10m-46.30m SANDSTONE GREY 46.30m SANDSTONE GREY 49.00m-51.00m CLAY, SILTSTONE GREY 49.00m-51.00m CLAY, SILTSTONE GREY 51.00m-64.00m SANDSTONE GREY 64.00m-65.50m SILTSTONE 66.50m-70.20m SANDSTONE GREY 70.20m-88.00m SANDSTONE GREY 88.00m-96.00m SANDSTONE GREY 96.00m-105.00m SANDSTONE GREY 105.00m-105.00m SANDSTONE GREY 128.50m-31.00m SANDSTONE GREY 128.50m-31.00m SANDSTONE GREY 128.50m-131.00m SANDSTONE GREY 131.00m-144.00m SANDSTONE GREY 134.00m-141.00m SANDSTONE GREY 152.00m-164.00m SANDSTONE GREY 152.00m SANDSTONE SANDSTONE GREY 152.0	621m	North
GW100667	0.00m-0.30m Topsoil, Clayey 0.30m-0.50m Clay, Dkgrey, firm 0.50m-1.00m Clay, Orange/red, Fe nod; moist 1.00m-1.60m Clay, mottled grey/red, firm-stiff,Wet at 1.6m 1.60m-3.00m Shale, highly weathered, hard 3.00m-3.70m Shale, mottled grey/orange, moderately weath.	802m	North West
GW100435	0.00m-0.50m SOIL 0.50m-5.00m CLAY 5.00m-6.00m SAND 6.00m-12.00m CLAY 12.00m-18.00m GRAVEL 18.00m-24.00m SANDSTONE	1317m	North East
GW102434	0.00m-1.50m SOIL 1.50m-2.10m SANDSTONE FLOATER 2.10m-38.10m SANDSTONE 38.10m-39.00m SHALE 39.00m-41.00m SHALE/SANDSTONE 41.00m-54.00m SANDSTONE/SHALE BANDS 54.00m-116.00m SANDSTONE 116.00m-120.00m SHALE 120.00m-126.00m SANDSTONE 126.00m-133.00m SANDSTONE/QUARTZ/IRONSTONE 133.00m-138.00m SANDSTONE SOFT 138.00m-146.00m SANDSTONE	1610m	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 1:100,000 277-281 Pennant Hills Road, Carlingford, NSW 2118





# Geology

#### 277-281 Pennant Hills Road, Carlingford, NSW 2118

## **Geological Units**

#### What are the Geological Units onsite?

Symbol	Description	Unit Name	Group	Sub Group	Age	Dom Lith	Map Sheet	Dataset
Rwa	Black to dark grey shale and laminate	Ashfield Shale	Wianamatta Group		Triassic		Sydney	1:100,000
Rwb	Shale, carbonaceous claystone, laminate, fine to medium-grained lithic sandstone, rare coal	Bringelly Shale	Wianamatta Group		Triassic		Sydney	1:100,000

#### What are the Geological Units within the dataset buffer?

Symbol	Description	Unit Name	Group	Sub Group	Age	Dom Lith	Map Sheet	Dataset
Rh	Medium to coarse grained quartz sandstone, very minor shale and laminate lenses				Triassic		Sydney	1:100,000
Rwa	Black to dark grey shale and laminate	Ashfield Shale	Wianamatta Group		Triassic		Sydney	1:100,000
Rwb	Shale, carbonaceous claystone, laminate, fine to medium-grained lithic sandstone, rare coal	Bringelly Shale	Wianamatta Group		Triassic		Sydney	1:100,000

#### **Geological Structures**

#### What are the Geological Structures onsite?

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

#### What are the Geological Structures within the dataset buffer?

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

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

 $\ensuremath{\mathbb{C}}$  State of New South Wales through the NSW Department of Industry, Resources & Energy
# **Naturally Occurring Asbestos Potential**

#### 277-281 Pennant Hills Road, Carlingford, NSW 2118

## **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

#### **Atlas of Australian Soils**





## Soils

#### 277-281 Pennant Hills Road, Carlingford, NSW 2118

#### **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
Tb35	Sodosol	Dissected plateau remnantsflat 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.	0m

Atlas of Australian Soils Data Source: CSIRO

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## Soil Landscapes of Central and Eastern NSW





## Soils

277-281 Pennant Hills Road, Carlingford, NSW 2118

#### Soil Landscapes of Central and Eastern NSW

What are the on-site Soil Landscapes?

Soil Code	Name
<u>9130gn</u>	Glenorie

What are the Soil Landscapes within the dataset buffer?

Soil Code	Name
<u>9130gn</u>	Glenorie
<u>9130gy</u>	Gymea
<u>9130lh</u>	Lucas Heights
<u>9130wp</u>	West Pennant Hills

Soil Landscapes of Central and Eastern NSW: NSW Department of Planning, Industry and Environment Creative Commons 4.0 © Commonwealth of Australia http://creativecommons.org/licenses/by/4.0/au/deed.en

#### **Acid Sulfate Soils**





# **Acid Sulfate Soils**

#### 277-281 Pennant Hills Road, Carlingford, NSW 2118

#### **Environmental Planning Instrument - Acid Sulfate Soils**

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

Soil Class	Description	EPI Name
N/A		

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

Soil Class	Description	EPI Name	Distance	Direction
N/A				

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#### **Atlas of Australian Acid Sulfate Soils**





# **Acid Sulfate Soils**

277-281 Pennant Hills Road, Carlingford, NSW 2118

#### **Atlas of Australian Acid Sulfate Soils**

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

Class	Description	Distance
В	Low Probability of occurrence. 6-70% chance of occurrence.	0m

Atlas of Australian Acid Sulfate Soils Data Source: CSIRO

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#### **Dryland Salinity**





# **Dryland Salinity**

277-281 Pennant Hills Road, Carlingford, NSW 2118

#### **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
274	MODERATE	Area of Moderate Salinity Potential	0m	Onsite
769	LOW	Area of Very Low Salinity Potential	494m	West

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

277-281 Pennant Hills Road, Carlingford, NSW 2118

## **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

#### **Mining & Exploration Titles**





## Mining

277-281 Pennant Hills Road, Carlingford, NSW 2118

## **Current Mining & Exploration Titles**

#### Current Mining & Exploration Titles within the dataset buffer:

Title Ref	Holder	Grant Date	Expiry Date	Last Renewed	Operation	Resource	Minerals	Dist (m)	Dir'
N/A	No Records in Buffer								

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

## **Current Mining & Exploration Title Applications**

Current Mining & Exploration Title Applications within the dataset buffer:

Application Ref	Applicant	Application Date	Operation	Resource	Minerals	Dist (m)	Dir'
N/A	No Records in Buffer						

Current Mining & Exploration Title Applications Data Source: © State of New South Wales through NSW Department of Industry

# Mining

#### 277-281 Pennant Hills Road, Carlingford, NSW 2118

## **Historical Mining & Exploration Titles**

Historical Mining & Exploration Titles within the dataset buffer:

Title Ref	Holder	Start Date	End Date	Resource	Minerals	Dist (m)	Dir'
EL0081	CONTINENTAL OIL CO OF AUSTRALIA LIMITED	01 Feb 1967	01 Feb 1968	MINERALS		0m	Onsite
PEL0005	AGL UPSTREAM INVESTMENTS PTY LIMITED	11/11/1993	4/03/2015	PETROLEUM	Petroleum	0m	Onsite
PEL0013	AUSTRALIAN OIL AND GAS CORPORATION LTD			PETROLEUM	Petroleum	0m	Onsite
PEL0102	AUSTRALIAN OIL AND GAS CORPORATION LTD			PETROLEUM	Petroleum	0m	Onsite
PEL0198	JOHN STREVENS (TERRIGAL) NL			PETROLEUM	Petroleum	0m	Onsite
PEL0210	THE AUSTRALIAN GAS LIGHT COMPANY (AGL), NORTH BULLI COLLIERIES PTY LTD			PETROLEUM	Petroleum	0m	Onsite
PEL0260	NORTH BULLI COLLIERIES PTY LTD, AGL PETROLEUM OPERATIONS PTY LTD, THE AUSTRALIAN GAS LIGHT CO.	9/09/1981	8/03/1993	PETROLEUM	Petroleum	0m	Onsite
PEL0463	DART ENERGY (APOLLO) PTY LTD	22/10/2008	6/03/2015	PETROLEUM	Petroleum	0m	Onsite
PEL463	DART ENERGY (APOLLO) PTY LTD			MINERALS		0m	Onsite
PEL5	AGL UPSTREAM INVESTMENTS PTY LIMITED			MINERALS		0m	Onsite
PSPAUTH17	MACQUARIE ENERGY PTY LTD			MINERALS		0m	Onsite
PSPAUTH17	MACQUARIE ENERGY PTY LTD	8/03/2007	7/03/2008	PETROLEUM	Petroleum	0m	Onsite

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

# **State Environmental Planning Policy**

277-281 Pennant Hills Road, Carlingford, NSW 2118

## **State Significant Precincts**

#### What SEPP State Significant Precincts exist within the dataset buffer?

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

State Environment Planning Policy Data Source: NSW Crown Copyright - Planning & Environment Creative Commons 4.0 © Commonwealth of Australia https://creativecommons.org/licenses/by/4.0/

#### **EPI Planning Zones**





# **Environmental Planning Instrument**

277-281 Pennant Hills Road, Carlingford, NSW 2118

# Land Zoning

What EPI Land Zones exist within the dataset buffer?

Zone	Description	Purpose	EPI Name	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
R4	High Density Residential		Parramatta (formerly The Hills) Local Environmental Plan 2012	06/12/2019	06/12/2019	06/12/2019	Amendment No 60	0m	Onsite
RE1	Public Recreation		Parramatta (formerly The Hills) Local Environmental Plan 2012	06/12/2019	06/12/2019	06/12/2019	Amendment No 60	0m	Onsite
SP2	Infrastructure	Classified Road	Parramatta (formerly The Hills) Local Environmental Plan 2012	06/12/2019	06/12/2019	06/12/2019	Amendment No 60	0m	South
B2	Local Centre		Parramatta (formerly The Hills) Local Environmental Plan 2012	Hills) Local Environmental No 60			0m	North East	
SP2	Infrastructure	Classified Road	Parramatta Local Environmental Plan 2011	07/10/2011	07/10/2011	05/06/2020		10m	South
R4	High Density Residential		Parramatta Local Environmental Plan 2011	07/10/2011	07/10/2011	05/06/2020		22m	South East
RE1	Public Recreation		Parramatta Local Environmental Plan 2011	07/10/2011	07/10/2011	05/06/2020		23m	South East
RE1	Public Recreation		Parramatta Local Environmental Plan 2011	07/10/2011	07/10/2011	05/06/2020		29m	East
RE1	Public Recreation		Parramatta (formerly The Hills) Local Environmental Plan 2012	06/12/2019	06/12/2019	06/12/2019	Amendment No 60	29m	West
SP2	Infrastructure	Classified Road	Parramatta (formerly The Hills) Local Environmental Plan 2012	06/12/2019	06/12/2019	06/12/2019	Amendment No 60	32m	South West
SP2	Infrastructure	Railway	Parramatta (formerly The Hills) Local Environmental Plan 2012	06/12/2019	06/12/2019	06/12/2019	Amendment No 60	56m	South West
RE1	Public Recreation		Parramatta (formerly The Hills) Local Environmental Plan 2012	06/12/2019	06/12/2019	06/12/2019	Amendment No 60	65m	South West
SP2	Infrastructure	Classified Road	Parramatta (formerly The Hills) Local Environmental Plan 2012	06/12/2019	06/12/2019	06/12/2019	Amendment No 60	73m	North East
B2	Local Centre		Parramatta Local Environmental Plan 2011	07/10/2011	07/10/2011	05/06/2020		81m	North East
R1	General Residential		Parramatta (formerly The Hills) Local Environmental Plan 2012	06/12/2019	06/12/2019	06/12/2019	Amendment No 60	96m	West
SP2	Infrastructure	Road	Hornsby Local Environmental Plan 2013	29/09/2017	29/09/2017	29/09/2017	Amendment No 8	103m	North East
B2	Local Centre		Parramatta (formerly The Hills) Local Environmental Plan 2012	06/12/2019	06/12/2019	06/12/2019	Amendment No 60	104m	South West
B5	Business Development		Hornsby Local Environmental Plan 2013	27/09/2013	11/10/2013	29/09/2017		117m	North East
RE1	Public Recreation		Parramatta (formerly The Hills) Local Environmental Plan 2012	06/12/2019	06/12/2019	06/12/2019	Amendment No 60	117m	North
RE1	Public Recreation		Parramatta (formerly The Hills) Local Environmental Plan 2012			143m	West		
R2	Low Density Residential		Parramatta Local Environmental Plan 2011	09/02/2018	09/02/2018	05/06/2020	5/06/2020 Amendment No 24		East
R4	High Density Residential		Hornsby Local Environmental Plan 2013	27/09/2013	11/10/2013	29/09/2017		152m	North East

Zone	Description	Purpose	EPI Name	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
R4	High Density Residential		Parramatta Local Environmental Plan 2011	07/10/2011	07/10/2011	05/06/2020		183m	South West
W1	Natural Waterways		Parramatta Local Environmental Plan 2011	07/10/2011	07/10/2011	05/06/2020		194m	South East
R2	Low Density Residential		Parramatta Local Environmental Plan 2011	19/12/2018	19/12/2018	05/06/2020	State Environmental Planning Policy Amendment (Telopea Precinct) 2018	226m	South East
R2	Low Density Residential		Parramatta Local Environmental Plan 2011	07/10/2011	07/10/2011	05/06/2020		228m	East
B2	Local Centre		Hornsby Local Environmental Plan 2013	27/09/2013	11/10/2013	29/09/2017		238m	North
RE1	Public Recreation		Parramatta (formerly The Hills) Local Environmental Plan 2012	06/12/2019	06/12/2019	06/12/2019	Amendment No 60	256m	South West
RE1	Public Recreation		Parramatta (formerly The Hills) Local Environmental Plan 2012	06/12/2019	06/12/2019	06/12/2019	Amendment No 60	263m	West
B1	Neighbourhood Centre		Parramatta Local Environmental Plan 2011	07/10/2011	07/10/2011	05/06/2020		268m	South West
E2	Environmental Conservation		Parramatta Local Environmental Plan 2011	07/10/2011	07/10/2011	05/06/2020		277m	South East
W1	Natural Waterways		Parramatta Local Environmental Plan 2011	07/10/2011	07/10/2011	05/06/2020		287m	South
R2	Low Density Residential		Hornsby Local Environmental Plan 2013	27/09/2013	11/10/2013	29/09/2017		307m	North East
SP2	Infrastructure	Classified Road	Parramatta (formerly The Hills) Local Environmental Plan 2012	06/12/2019	06/12/2019	06/12/2019	Amendment No 60	330m	South West
R2	Low Density Residential		Parramatta (formerly The Hills) Local Environmental Plan 2012	06/12/2019	06/12/2019	06/12/2019	Amendment No 60	357m	West
SP2	Infrastructure	Railway Corridor	Parramatta Local Environmental Plan 2011	07/10/2011	07/10/2011	05/06/2020		372m	South West
RE1	Public Recreation		Parramatta Local Environmental Plan 2011	07/10/2011	07/10/2011	05/06/2020		390m	East
RE1	Public Recreation		Parramatta (formerly The Hills) Local Environmental Plan 2012	06/12/2019	06/12/2019	06/12/2019	Amendment No 60	414m	North
SP1	Special Activities	Place of Public Worship	Parramatta Local Environmental Plan 2011	09/02/2018	09/02/2018	05/06/2020	Amendment No 24	416m	North East
RE1	Public Recreation		Parramatta Local Environmental Plan 2011	07/10/2011	07/10/2011	05/06/2020		418m	South West
RE1	Public Recreation		Parramatta Local Environmental Plan 2011	07/10/2011	07/10/2011	05/06/2020		433m	South West
RE1	Public Recreation		Parramatta Local Environmental Plan 2011	07/10/2011	07/10/2011	05/06/2020		448m	North East
R4	High Density Residential		Parramatta Local Environmental Plan 2011	05/06/2020	05/06/2020	05/06/2020	Amendment No 41	484m	South West
SP2	Infrastructure	Classified Road	Parramatta (formerly The Hills) Local Environmental Plan 2012	06/12/2019	06/12/2019	06/12/2019	Amendment No 60	506m	South West
W1	Natural Waterways		Parramatta Local Environmental Plan 2011	07/10/2011	07/10/2011	05/06/2020		520m	South
RE1	Public Recreation		Parramatta Local Environmental Plan 2011	07/10/2011	07/10/2011	05/06/2020		525m	South
R2	Low Density Residential		Hornsby Local Environmental Plan 2013	27/09/2013	11/10/2013	29/09/2017		556m	North East
RE1	Public Recreation		Hornsby Local Environmental Plan 2013	27/09/2013	11/10/2013	29/09/2017		557m	North East
SP1	Special Activities	Place of Public Worship	Parramatta Local Environmental Plan 2011	07/10/2011	07/10/2011	05/06/2020		564m	South
E2	Environmental Conservation		Parramatta Local Environmental Plan 2011	07/10/2011	07/10/2011	05/06/2020		580m	South
R3	Medium Density Residential		Parramatta (formerly The Hills) Local Environmental Plan 2012	06/12/2019	06/12/2019	06/12/2019	Amendment No 60	586m	South West

Zone	Description	Purpose	EPI Name	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
W1	Natural Waterways		Parramatta Local Environmental Plan 2011	07/10/2011	07/10/2011	05/06/2020		587m	South
E2	Environmental Conservation		Parramatta Local Environmental Plan 2011	07/10/2011	07/10/2011	05/06/2020		588m	South
RE1	Public Recreation		Parramatta Local Environmental Plan 2011	07/10/2011	07/10/2011	05/06/2020		593m	South East
SP2	Infrastructure	Classified Road	Parramatta (formerly The Hills) Local Environmental Plan 2012	06/12/2019	06/12/2019	06/12/2019	Amendment No 60	598m	South West
W1	Natural Waterways		Parramatta Local Environmental Plan 2011	07/10/2011	07/10/2011	05/06/2020		601m	South
E2	Environmental Conservation		Parramatta Local Environmental Plan 2011	07/10/2011	07/10/2011	05/06/2020		637m	South West
R3	Medium Density Residential		Parramatta Local Environmental Plan 2011	25/10/2019	25/10/2019	05/06/2020	Amendment No 36	655m	South West
RE1	Public Recreation		Parramatta Local Environmental Plan 2011	07/10/2011	07/10/2011	05/06/2020		656m	South East
W1	Natural Waterways		Parramatta Local Environmental Plan 2011	07/10/2011	07/10/2011	05/06/2020		658m	South East
E2	Environmental Conservation		Parramatta Local Environmental Plan 2011	07/10/2011	07/10/2011	05/06/2020		672m	South
SP1	Special Activities	Place of Public Worship	Parramatta Local Environmental Plan 2011	07/10/2011	07/10/2011	05/06/2020		672m	South
RE1	Public Recreation		Parramatta Local Environmental Plan 2011	07/10/2011	07/10/2011	05/06/2020		677m	South East
E2	Environmental Conservation		Parramatta Local Environmental Plan 2011	07/10/2011	07/10/2011	05/06/2020		710m	South
RE1	Public Recreation		Parramatta Local Environmental Plan 2011	07/10/2011	07/10/2011	05/06/2020		724m	South East
W1	Natural Waterways		Parramatta Local Environmental Plan 2011	07/10/2011	07/10/2011	05/06/2020		745m	South East
RE1	Public Recreation		Parramatta Local Environmental Plan 2011	07/10/2011	07/10/2011	05/06/2020		746m	East
E2	Environmental Conservation		Parramatta Local Environmental Plan 2011	07/10/2011	07/10/2011	05/06/2020		761m	South
RE1	Public Recreation		Parramatta Local Environmental Plan 2011	07/10/2011	07/10/2011	05/06/2020		761m	South East
RE1	Public Recreation		Parramatta (formerly The Hills) Local Environmental Plan 2012	06/12/2019	06/12/2019	06/12/2019	Amendment No 60	767m	West
SP2	Infrastructure	Cemetery	Parramatta Local Environmental Plan 2011	07/10/2011	07/10/2011	05/06/2020		793m	East
E2	Environmental Conservation		Parramatta Local Environmental Plan 2011	07/10/2011	07/10/2011	05/06/2020		803m	South
R3	Medium Density Residential		Parramatta Local Environmental Plan 2011	19/12/2018	19/12/2018	05/06/2020	State Environmental Planning Policy Amendment (Telopea Precinct) 2018	804m	South
SP2	Infrastructure	Classified Road	Parramatta (formerly The Hills) Local Environmental Plan 2012	06/12/2019	06/12/2019	06/12/2019	Amendment No 60	840m	North
R4	High Density Residential		Parramatta Local Environmental Plan 2011	19/12/2018	19/12/2018	05/06/2020	State Environmental Planning Policy Amendment (Telopea Precinct) 2018	852m	South
RE1	Public Recreation		Parramatta Local Environmental Plan 2011	07/10/2011	07/10/2011	05/06/2020		868m	East
SP2	Infrastructure	Classified Road	Parramatta (formerly The Hills) Local Environmental Plan 2012	06/12/2019	06/12/2019	06/12/2019	Amendment No 60	871m	North
RE1	Public Recreation		Parramatta Local Environmental Plan 2011	07/10/2011	07/10/2011	05/06/2020		883m	South West
RE1	Public Recreation		Parramatta Local Environmental Plan 2011	07/10/2011	07/10/2011	05/06/2020		891m	South

Zone	Description	Purpose	EPI Name	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
SP2	Infrastructure	Classified Road	Parramatta Local Environmental Plan 2011	07/10/2011	07/10/2011	05/06/2020		892m	East
W1	Natural Waterways		Parramatta Local Environmental Plan 2011	07/10/2011	07/10/2011	05/06/2020		892m	South West
RE1	Public Recreation		Parramatta (formerly The Hills) Local Environmental Plan 2012	06/12/2019	06/12/2019	06/12/2019	Amendment No 60	893m	North West
SP2	Infrastructure	Classified Road	Parramatta (formerly The Hills) Local Environmental Plan 2012	06/12/2019	06/12/2019	06/12/2019	Amendment No 60	897m	South West
SP1	Special Activities	Educational Establishment & Place of Worship	Parramatta Local Environmental Plan 2011	20/06/2014	20/06/2014	05/06/2020	Amendment No 8	899m	South
RE1	Public Recreation		Parramatta Local Environmental Plan 2011	07/10/2011	07/10/2011	05/06/2020		902m	South East
RE1	Public Recreation		Parramatta (formerly The Hills) Local Environmental Plan 2012	06/12/2019	06/12/2019	06/12/2019	Amendment No 60	909m	North
W1	Natural Waterways		Parramatta Local Environmental Plan 2011	07/10/2011	07/10/2011	05/06/2020		911m	South East
RE1	Public Recreation		Parramatta Local Environmental Plan 2011	07/10/2011	07/10/2011	05/06/2020		917m	South East
RE1	Public Recreation		Parramatta Local Environmental Plan 2011	07/10/2011	07/10/2011	05/06/2020		932m	South East
SP1	Special Activities	Place of Public Worship	Parramatta Local Environmental Plan 2011	09/02/2018	09/02/2018	05/06/2020	Amendment No 24	938m	North East
RE1	Public Recreation		Parramatta (formerly The Hills) Local Environmental Plan 2012	06/12/2019	06/12/2019	06/12/2019	Amendment No 60	958m	North West
R2	Low Density Residential		Parramatta Local Environmental Plan 2011	05/06/2020	05/06/2020	05/06/2020	Amendment No 41	963m	South West

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#### **Heritage Items**





## Heritage

277-281 Pennant Hills Road, Carlingford, NSW 2118

## **Commonwealth Heritage List**

#### What are the Commonwealth Heritage List Items located within the dataset buffer?

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

Heritage Data Source: Australian Government Department of the Environment and Energy - Heritage Branch Creative Commons 3.0 © Commonwealth of Australia https://creativecommons.org/licenses/by/3.0/au/deed.en

#### **National Heritage List**

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

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

Heritage Data Source: Australian Government Department of the Environment and Energy - Heritage Branch Creative Commons 3.0 © Commonwealth of Australia https://creativecommons.org/licenses/by/3.0/au/deed.en

## **State Heritage Register - Curtilages**

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

Map Id	Name	Address	LGA	Listing Date	Listing No	Plan No	Distance	Direction
5045460	St Paul's Anglican Church (former)	346 Marsden Road Carlingford	Parramatta	02/04/1999	00056	250	285m	East

Heritage Data Source: NSW Crown Copyright - Office of Environment & Heritage Creative Commons 4.0 © Commonwealth of Australia https://creativecommons.org/licenses/by/4.0/

#### **Environmental Planning Instrument - Heritage**

#### What are the EPI Heritage Items located within the dataset buffer?

Map Id	Name	Classification	Significance	EPI Name	Published Date	Commenced Date	Currency Date	Distance	Direction
18	Galaringi Reserve	Item - General	Local	Parramatta Local Environmental Plan 2011	07/10/2011	07/10/2011	21/02/2020	23m	South East
126	Carlingford Memorial Park	Item - General	Local	Parramatta Local Environmental Plan 2011	07/10/2011	07/10/2011	21/02/2020	29m	East
19	Bushland	Item - General	Local	Parramatta Local Environmental Plan 2011	07/10/2011	07/10/2011	21/02/2020	55m	South

Map Id	Name	Classification	Significance	EPI Name	Published Date	Commenced Date	Currency Date	Distance	Direction
146	Carlingford Stock Feeds	Item - General	Local	Parramatta (formerly The Hills) Local Environmental Plan 2012	06/12/2019	06/12/2019	06/12/2019	56m	South West
125	Eric Mobbs Memorial	Item - General	Local	Parramatta Local Environmental Plan 2011	07/10/2011	07/10/2011	21/02/2020	137m	East
121	Carlingford Public School (and Macquarie Community College)	Item - General	Local	Parramatta Local Environmental Plan 2011	09/02/2018	09/02/2018	21/02/2020	150m	East
120	Water Tanks and Water Board cottage	Item - General	Local	Parramatta Local Environmental Plan 2011	07/10/2011	07/10/2011	21/02/2020	177m	East
100056	Former St Paul's Anglican Church	Item - General	State	Parramatta Local Environmental Plan 2011	07/10/2011	07/10/2011	21/02/2020	283m	East
129	Alandale	Item - General	Local	Parramatta Local Environmental Plan 2011	07/10/2011	07/10/2011	21/02/2020	373m	East
128	K13 Memorial	Item - General	Local	Parramatta Local Environmental Plan 2011	07/10/2011	07/10/2011	21/02/2020	418m	South West
123	Mobbs Hill Reserve	Item - General	Local	Parramatta Local Environmental Plan 2011	07/10/2011	07/10/2011	21/02/2020	421m	South East
110	Stone fence post (adjacent to fence of No 62)	Item - General	Local	Parramatta Local Environmental Plan 2011	07/10/2011	07/10/2011	21/02/2020	579m	South
112	Stone bridge Fitzgerald Forest	Item - General	Local	Parramatta Local Environmental Plan 2011	07/10/2011	07/10/2011	21/02/2020	579m	South
133	La Mascotte	Item - General	Local	Parramatta Local Environmental Plan 2011	07/10/2011	07/10/2011	21/02/2020	647m	East
111	Remnant bushland	Item - General	Local	Parramatta Local Environmental Plan 2011	07/10/2011	07/10/2011	21/02/2020	667m	South
131	Timber house	Item - General	Local	Parramatta Local Environmental Plan 2011	07/10/2011	07/10/2011	21/02/2020	670m	East
137	Rapanea Community Forest	Item - General	Local	Parramatta Local Environmental Plan 2011	07/10/2011	07/10/2011	21/02/2020	694m	South
141	Havilah Stables	Item - General	Local	Parramatta (formerly The Hills) Local Environmental Plan 2012	06/12/2019	06/12/2019	06/12/2019	720m	North
142	Havilah House	Item - General	Local	Parramatta (formerly The Hills) Local Environmental Plan 2012	06/12/2019	06/12/2019	06/12/2019	720m	North
118	St Paul's Church Cemetery	Item - General	Local	Parramatta Local Environmental Plan 2011	07/10/2011	07/10/2011	21/02/2020	793m	East
122	Grandview	Item - General	Local	Parramatta Local Environmental Plan 2011	07/10/2011	07/10/2011	21/02/2020	813m	South East
116	Dalmar Children's Home & treed accessway	Item - General	Local	Parramatta Local Environmental Plan 2011	07/10/2011	07/10/2011	21/02/2020	854m	South East
145	Former quarry	Item - General	Local	Parramatta Local Environmental Plan 2011	07/10/2011	07/10/2011	21/02/2020	891m	South
116	Dalmar Children's Home & treed accessway	Item - General	Local	Parramatta Local Environmental Plan 2011	07/10/2011	07/10/2011	21/02/2020	923m	East
401	House	Item - General	Local	Hornsby Local Environmental Plan 2013	27/09/2013	11/10/2013	29/09/2017	926m	North East
160	Single storey residence	Item - General	Local	Parramatta Local Environmental Plan 2011	07/10/2011	07/10/2011	21/02/2020	961m	East

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#### **Natural Hazards - Bush Fire Prone Land**





# **Natural Hazards**

277-281 Pennant Hills Road, Carlingford, NSW 2118

## **Bush Fire Prone Land**

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

Bush Fire Prone Land Category	Distance	Direction
Vegetation Buffer	666m	West
Vegetation Category 1	766m	West

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

## **Ecological Constraints - Native Vegetation & RAMSAR Wetlands**





# **Ecological Constraints**

#### 277-281 Pennant Hills Road, Carlingford, NSW 2118

## **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
Weed_Ex	Weed_Ex: Weeds and Exotics			20: Weeds and exotics	20: Previously cleared 1943	3: High	Exotic Species >90%cover	49m	South East
S_WSF01	S_WSF01: Blue Gum High Forest	Blue Gum High Forest	Blue Gum High Forest (possible)	24: Urban and hard surface	24: Urban mixed use	4: Very high	E.salignaE.pilular is/S.glomullifera/ E.paniculata/A.co stata	152m	North East
S_WSF09	S_WSF09: Sydney Turpentine-Ironbark Forest	Sydney Turpentine Ironbark Forest	Turpentine Ironbark Forest (possible)	11: Semi sheltered dry/mesic	13: Weeds	2: Moderate	S.glomulifera/E.p aniculata/E.resinif era		South
S_WSF02	S_WSF02: Coastal Enriched Sandstone Moist Forest			10: Mesic/rainfore st	13: Weeds	2: Moderate	E.pilularis/A.cost ata/C.gummifera E.resinifera	819m	West
S_DSF04	S_DSF04: Coastal Enriched Sandstone Dry Forest			12: Dry xeric shrubs	11: Roads/trails	1: Low	E.pilularis/S.glom uliferaA.costata/E .resinifera	864m	West

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 - Groundwater Dependent Ecosystems Atlas**





# **Ecological Constraints**

277-281 Pennant Hills Road, Carlingford, NSW 2118

## **Groundwater Dependent Ecosystems Atlas**

Туре	GDE Potential	Geomorphology	Ecosystem Type	Aquifer Geology	Distance
Terrestrial	Moderate potential GDE - from national assessment	Deeply dissected sandstone plateaus.	Vegetation	Consolidated sedimentary	785m
Terrestrial	Low potential GDE - from national assessment	Deeply dissected sandstone plateaus.	Vegetation	Consolidated sedimentary	820m

Groundwater Dependent Ecosystems Atlas Data Source: The Bureau of Meteorology

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# Ecological Constraints - Inflow Dependent Ecosystems Likelihood



# **Ecological Constraints**

277-281 Pennant Hills Road, Carlingford, NSW 2118

## Inflow Dependent Ecosystems Likelihood

Туре	IDE Likelihood	Geomorphology	Ecosystem Type	Aquifer Geology	Distance
Terrestrial	6	Deeply dissected sandstone plateaus.	Vegetation	Consolidated sedimentary	785m
Terrestrial	5	Deeply dissected sandstone plateaus.	Vegetation	Consolidated sedimentary	820m
Terrestrial	7	Deeply dissected sandstone plateaus.	Vegetation	Consolidated sedimentary	820m

Inflow Dependent Ecosystems Likelihood Data Source: The Bureau of Meteorology

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# **Ecological Constraints**

277-281 Pennant Hills Road, Carlingford, NSW 2118

#### **NSW BioNet Atlas**

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

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Animalia	Amphibia	Heleioporus australiacus	Giant Burrowing Frog	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Amphibia	Litoria aurea	Green and Golden Bell Frog	Endangered	Not Sensitive	Vulnerable	
Animalia	Amphibia	Pseudophryne australis	Red-crowned Toadlet	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Actitis hypoleucos	Common Sandpiper	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Anthochaera phrygia	Regent Honeyeater	Critically Endangered	Not Sensitive	Critically Endangered	
Animalia	Aves	Apus pacificus	Fork-tailed Swift	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Ardenna carneipes	Flesh-footed Shearwater	Vulnerable	Not Sensitive	Not Listed	ROKAMBA;JAMBA
Animalia	Aves	Ardenna tenuirostris	Short-tailed Shearwater	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Arenaria interpres	Ruddy Turnstone	Not Listed	Not Sensitive	Not Listed	Rokamba;camba; Jamba
Animalia	Aves	Artamus cyanopterus cyanopterus	Dusky Woodswallow	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Botaurus poiciloptilus	Australasian Bittern	Endangered	Not Sensitive	Endangered	
Animalia	Aves	Calidris acuminata	Sharp-tailed Sandpiper	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Calidris canutus	Red Knot	Not Listed	Not Sensitive	Endangered	Rokamba;camba; Jamba
Animalia	Aves	Calidris ferruginea	Curlew Sandpiper	Endangered	Not Sensitive	Critically Endangered	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Calidris melanotos	Pectoral Sandpiper	Not Listed	Not Sensitive	Not Listed	Rokamba;Jamba
Animalia	Aves	Calidris ruficollis	Red-necked Stint	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Calidris tenuirostris	Great Knot	Vulnerable	Not Sensitive	Critically Endangered	Rokamba;camba; Jamba
Animalia	Aves	Callocephalon fimbriatum	Gang-gang Cockatoo	Endangered Population, Vulnerable	Category 3	Not Listed	
Animalia	Aves	Callocephalon fimbriatum	Gang-gang Cockatoo	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Calyptorhynchus banksii samueli	Red-tailed Black- Cockatoo (inland subspecies)	Vulnerable	Category 2	Not Listed	
Animalia	Aves	Calyptorhynchus lathami	Glossy Black- Cockatoo	Vulnerable	Category 2	Not Listed	
Animalia	Aves	Carterornis leucotis	White-eared Monarch	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Charadrius leschenaultii	Greater Sand- plover	Vulnerable	Not Sensitive	Vulnerable	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Chlidonias leucopterus	White-winged Black Tern	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Circus assimilis	Spotted Harrier	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Cuculus optatus	Oriental Cuckoo	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	Daphoenositta chrysoptera	Varied Sittella	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Ephippiorhynchus asiaticus	Black-necked Stork	Endangered	Not Sensitive	Not Listed	
Animalia	Aves	Epthianura albifrons	White-fronted Chat	Endangered Population, Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Falco hypoleucos	Grey Falcon	Endangered	Category 2	Not Listed	
Animalia	Aves	Falco subniger	Black Falcon	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Gallinago hardwickii	Latham's Snipe	Not Listed	Not Sensitive	Not Listed	ROKAMBA;JAMBA
Animalia	Aves	Gelochelidon nilotica	Gull-billed Tern	Not Listed	Not Sensitive	Not Listed	CAMBA
Animalia	Aves	Glossopsitta pusilla	Little Lorikeet	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Haliaeetus leucogaster	White-bellied Sea-Eagle	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Hieraaetus morphnoides	Little Eagle	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Hirundapus caudacutus	White-throated Needletail	Not Listed	Not Sensitive	Vulnerable	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Hydroprogne caspia	Caspian Tern	Not Listed	Not Sensitive	Not Listed	JAMBA
Animalia	Aves	Ixobrychus flavicollis	Black Bittern	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Lathamus discolor	Swift Parrot	Endangered	Category 3	Critically Endangered	
Animalia	Aves	Limicola falcinellus	Broad-billed Sandpiper	Vulnerable	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Limosa lapponica	Bar-tailed Godwit	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Limosa limosa	Black-tailed Godwit	Vulnerable	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Lophochroa leadbeateri	Major Mitchell's Cockatoo	Vulnerable	Category 2	Not Listed	
Animalia	Aves	Lophoictinia isura	Square-tailed Kite	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Motacilla flava	Yellow Wagtail	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Neophema pulchella	Turquoise Parrot	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Nettapus coromandelianus	Cotton Pygmy- Goose	Endangered	Not Sensitive	Not Listed	
Animalia	Aves	Ninox connivens	Barking Owl	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Ninox strenua	Powerful Owl	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Numenius madagascariensi s	Eastern Curlew	Not Listed	Not Sensitive	Critically Endangered	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Numenius minutus	Little Curlew	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Numenius phaeopus	Whimbrel	Not Listed	Not Sensitive	Not Listed	Rokamba;camba; Jamba
Animalia	Aves	Pandion cristatus	Eastern Osprey	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Petroica boodang	Scarlet Robin	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Petroica phoenicea	Flame Robin	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Petroica rodinogaster	Pink Robin	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Philomachus pugnax	Ruff	Not Listed	Not Sensitive	Not Listed	ROKAMBA;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

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Animalia	Aves	Polytelis swainsonii	Superb Parrot	Vulnerable	Category 3	Vulnerable	
Animalia	Aves	Pomatostomus temporalis temporalis	Grey-crowned Babbler (eastern subspecies)	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Ptilinopus superbus	Superb Fruit- Dove	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Rhipidura fuliginosa	New Zealand Fantail (Lord Howe Is. subsp.)	Presumed Extinct	Not Sensitive	Extinct	
Animalia	Aves	Rostratula australis	Australian Painted Snipe	Endangered	Not Sensitive	Endangered	
Animalia	Aves	Sterna hirundo	Common Tern	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Sternula albifrons	Little Tern	Endangered	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Stictonetta naevosa	Freckled Duck	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Thalasseus bergii	Crested Tern	Not Listed	Not Sensitive	Not Listed	JAMBA
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 nebularia	Common Greenshank	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Tringa stagnatilis	Marsh Sandpiper	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Tyto Iongimembris	Eastern Grass Owl	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Tyto novaehollandiae	Masked Owl	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Tyto tenebricosa	Sooty Owl	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Xenus cinereus	Terek Sandpiper	Vulnerable	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Gastropoda	Meridolum corneovirens	Cumberland Plain Land Snail	Endangered	Not Sensitive	Not Listed	
Animalia	Gastropoda	Pommerhelix duralensis	Dural Land Snail	Endangered	Not Sensitive	Endangered	
Animalia	Mammalia	Arctocephalus forsteri	New Zealand Fur- seal	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Cercartetus nanus	Eastern Pygmy- possum	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Chalinolobus dwyeri	Large-eared Pied Bat	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Mammalia	Dasyurus maculatus	Spotted-tailed Quoll	Vulnerable	Not Sensitive	Endangered	
Animalia	Mammalia	Falsistrellus tasmaniensis	Eastern False Pipistrelle	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Macrotis lagotis	Bilby	Presumed Extinct	Not Sensitive	Vulnerable	
Animalia	Mammalia	Micronomus norfolkensis	Eastern Coastal Free-tailed Bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Miniopterus australis	Little Bent-winged Bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Miniopterus orianae oceanensis	Large Bent- winged Bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Myotis macropus	Southern Myotis	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Perameles bougainville fasciata	Western Barred Bandicoot (mainland)	Presumed Extinct	Not Sensitive	Extinct	
Animalia	Mammalia	Petauroides volans	Greater Glider	Not Listed	Not Sensitive	Vulnerable	
Animalia	Mammalia	Petaurus australis	Yellow-bellied Glider	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Petaurus norfolcensis	Squirrel Glider	Vulnerable	Not Sensitive	Not Listed	

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Animalia	Mammalia	Phascolarctos cinereus	Koala	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Mammalia	Pseudomys australis	Plains Rat	Presumed Extinct	Not Sensitive	Vulnerable	
Animalia	Mammalia	Pteropus poliocephalus	Grey-headed Flying-fox	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Mammalia	Saccolaimus flaviventris	Yellow-bellied Sheathtail-bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Scoteanax rueppellii	Greater Broad- nosed Bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Reptilia	Aspidites ramsayi	Woma	Vulnerable	Not Sensitive	Not Listed	
Animalia	Reptilia	Caretta caretta	Loggerhead Turtle	Endangered	Not Sensitive	Endangered	
Animalia	Reptilia	Chelonia mydas	Green Turtle	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Reptilia	Pseudonaja modesta	Ringed Brown Snake	Endangered	Not Sensitive	Not Listed	
Animalia	Reptilia	Tiliqua occipitalis	Western Blue- tongued Lizard	Vulnerable	Not Sensitive	Not Listed	
Animalia	Reptilia	Uvidicolus sphyrurus	Border Thick- tailed Gecko	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Acacia bynoeana	Bynoe's Wattle	Endangered	Not Sensitive	Vulnerable	
Plantae	Flora	Acacia clunies- rossiae	Kanangra Wattle	Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Acacia pubescens	Downy Wattle	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Argyrotegium nitidulum	Shining Cudweed	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Callistemon linearifolius	Netted Bottle Brush	Vulnerable	Category 3	Not Listed	
Plantae	Flora	Darwinia biflora		Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Darwinia peduncularis		Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Dillwynia tenuifolia		Endangered Population, Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Dillwynia tenuifolia		Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Epacris purpurascens var. purpurascens		Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Eucalyptus camfieldii	Camfield's Stringybark	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Eucalyptus leucoxylon subsp. pruinosa	Yellow Gum	Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Eucalyptus nicholii	Narrow-leaved Black Peppermint	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Eucalyptus scoparia	Wallangarra White Gum	Endangered	Not Sensitive	Vulnerable	
Plantae	Flora	Galium australe	Tangled Bedstraw	Endangered	Not Sensitive	Not Listed	
Plantae	Flora	Genoplesium baueri	Bauer's Midge Orchid	Endangered	Category 2	Endangered	
Plantae	Flora	Genoplesium plumosum	Tallong Midge Orchid	Critically Endangered	Category 2	Endangered	
Plantae	Flora	Grammitis stenophylla	Narrow-leaf Finger Fern	Endangered	Category 3	Not Listed	
Plantae	Flora	Grevillea beadleana	Beadle's Grevillea	Endangered	Category 3	Endangered	
Plantae	Flora	Grevillea caleyi	Caley's Grevillea	Critically Endangered	Category 3	Critically Endangered	
Plantae	Flora	Grevillea hilliana	White Yiel Yiel	Endangered	Not Sensitive	Not Listed	
Plantae	Flora	Haloragodendron lucasii		Endangered	Not Sensitive	Endangered	
Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
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Plantae	Flora	Hibbertia spanantha	Julian's Hibbertia	Critically Endangered	Category 2	Critically Endangered	
Plantae	Flora	Hibbertia superans		Endangered	Not Sensitive	Not Listed	
Plantae	Flora	Isotoma fluviatilis subsp. fluviatilis		Not Listed	Not Sensitive	Extinct	
Plantae	Flora	Lasiopetalum joyceae		Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Leptospermum deanei		Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Macadamia integrifolia	Macadamia Nut	Not Listed	Not Sensitive	Vulnerable	
Plantae	Flora	Macadamia tetraphylla	Rough-shelled Bush Nut	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Melaleuca biconvexa	Biconvex Paperbark	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Melaleuca deanei	Deane's Paperbark	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Persoonia hirsuta	Hairy Geebung	Endangered	Category 3	Endangered	
Plantae	Flora	Pimelea curviflora var. curviflora		Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Pimelea spicata	Spiked Rice- flower	Endangered	Not Sensitive	Endangered	
Plantae	Flora	Pomaderris prunifolia	Plum-leaf Pomaderris	Endangered Population	Not Sensitive	Not Listed	
Plantae	Flora	Prostanthera marifolia	Seaforth Mintbush	Critically Endangered	Category 3	Critically Endangered	
Plantae	Flora	Pterostylis gibbosa	Illawarra Greenhood	Endangered	Category 2	Endangered	
Plantae	Flora	Pterostylis nigricans	Dark Greenhood	Vulnerable	Category 2	Not Listed	
Plantae	Flora	Pterostylis saxicola	Sydney Plains Greenhood	Endangered	Category 2	Endangered	
Plantae	Flora	Rhizanthella slateri	Eastern Australian Underground Orchid	Vulnerable	Category 2	Endangered	
Plantae	Flora	Rhodamnia rubescens	Scrub Turpentine	Critically Endangered	Not Sensitive	Not Listed	
Plantae	Flora	Senecio behrianus		Presumed Extinct	Not Sensitive	Endangered	
Plantae	Flora	Syzygium paniculatum	Magenta Lilly Pilly	Endangered	Not Sensitive	Vulnerable	
Plantae	Flora	Tetratheca glandulosa		Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Tetratheca juncea	Black-eyed Susan	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Triplarina imbricata	Creek Triplarina	Endangered	Not Sensitive	Endangered	
Plantae	Flora	Wahlenbergia multicaulis	Tadgell's Bluebell	Endangered Population	Not Sensitive	Not Listed	
Plantae	Flora	Wilsonia backhousei	Narrow-leafed Wilsonia	Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Zannichellia palustris		Endangered	Not Sensitive	Not Listed	

Data does not include NSW category 1 sensitive species. NSW BioNet: © State of NSW and Office of Environment and Heritage

### **Location Confidences**

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

LC Code	Location Confidence
Premise match	Georeferenced to the site location / premise or part of site
General area or suburb 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
Feature is a buffered point	Feature is a buffered point
Land adjacent to geocoded site	Land adjacent to Georeferenced Site
Network of features	Georeferenced to a network of features

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

## **APPENDIX 2**



DOC20/905500

Mr Elie Maroun 74 Macquarie St Parramatta NSW 2150 Email: elie.maroun@dyldam.com.au

4 November 2020

Dear Mr Maroun

#### Notice of Clean-Up Action No. 1574115

We refer to the Notice of Clean-Up Action No. 1574115 (**the Clean-Up Notice**) and subsequent variations issued by the Environment Protection Authority (**EPA**) in relation to the unlawful disposal of waste materials, including asbestos waste, to land at 2-10 Janell Crescent, 14-30 Shirley Street and 247-261 and 277-281 Pennant Hills Road, Carlingford NSW 2118 being Lot 1 DP 1219291 (**the Premises**).

We acknowledge the report provided to the EPA on 2 October 2020 confirming that the asbestos waste required to be removed from the Premises was disposed of at a lawful facility.

Based on observations made during EPA inspections and information/ reports provided to the EPA, we are satisfied that the Clean-Up Notice has been complied with. As such, on 30 October 2020 the EPA requested that the Notification of the Clean-Up Notice and its variations be removed from the Land Title.

If you have any questions regarding this matter, please contact Nadine Constantinou on (02) 9995 5654.

Yours sincerely

JACINTA HANEMANN Manager Metro South Operations Regulatory Operations Metro

Phone 131 555 Phone +61 2 9995 5555 (from outside NSW) **TTY** 133 677 **ABN** 43 692 285 758 Locked Bag 5022 Parramatta NSW 2124 Australia 4 Parramatta Square 12 Darcy St, Parramatta NSW 2150 Australia info@epa.nsw.gov.au www.epa.nsw.gov.au



GOLDEN CARLINGFORD PTY LTD & PENNANT HILLS ESTATES 88 PTY LTD & RAINBOW CARLINGFORD ONE PTY LTD ABN 62 928 965 560 59 Consitution Road CONSTITUTION HILL NSW 2145

Attention: The Proper Officer

Notice Number1574115File NumberSF18/108277Date04-Feb-2019

#### Clean-up Notice

#### Why is the EPA writing to you?

The Environment Protection Authority (EPA) reasonably suspects that a pollution incident has occurred or is occurring on land that forms part of 277-281 Pennant Hills Road, CARLINGFORD, NSW, 2118 being Lot 1 DP 1219291 (the Premises). The EPA has issued you with this Clean-up Notice. Further information is set out in the notice below.

#### What are you required to do?

Please read this notice carefully and carry out the clean-up action specified in this notice by the date required. If you have any queries about this matter, please contact Trevor Wilson on 9995 5646.

#### BACKGROUND

- A. The EPA has responsibility for the administration and enforcement of the *Protection of the Environment Operations Act* 1997 (Act).
- B. GOLDEN CARLINGFORD PTY LTD & PENNANT HILLS ESTATES 88 PTY LTD & RAINBOW CARLINGFORD ONE PTY LTD is the owner of the Premises for the purposes of s 91(1)(a) of the Act.



- C. The EPA is the appropriate regulatory authority (ARA) for activities that require an Environment Protection Licence (Licence) under section 48(1) of the POEO Act. Clause 39 of Schedule 1 of the POEO Act provides that the application to land of more than 200 tonnes building and demolition waste within the regulated area received from off site is a scheduled activity requiring a Licence.
- D. On 15 May 2018 the EPA reviewed aerial photography as part of an investigation into alleged illegal waste disposal which included the Premises. EPA officers observed what appeared to be material placed on the land and reasonable suspected that a pollution incident had occurred or was occurring at the Premises being land pollution.
- E. On 18 December 2018 EPA officers went to the Premises and observed materials that appeared to be waste applied to the land potentially causing land pollution.
- F. The EPA officers then inspected the Premises and observed a large area containing many stockpiles of material on the Premises (see area outlined in green on map 1 below). The stockpiles appeared to contain building and demolition residues such as: crushed bricks, tile, concrete, terracotta tile, glazed tile, plastic, glass, metal and fibro pieces suspect to be asbestos (see Map 1 attached to this notice). Nine fibro fragments were collected and submitted for analysis. On 20 December 2018 Laboratory analysis confirmed that 8 fibro pieces were asbestos.
- G. Section 91 of the Act enables the EPA to issue a Clean-up Notice in respect of a pollution incident.
- H. "Asbestos Waste" is defined in Schedule 1 Clause 50 of the POEO Act to mean any waste that contains asbestos for the purposes of Schedule 1 to the Act.
- I. The Dictionary to the Act defines:
  - a. "Pollution incident" as an incident or set of circumstances during or as a consequence of which there is or is likely to be a leak, spill or other escape or deposit of a substance, as a result of which pollution has occurred, is occurring or is likely to occur. It includes an incident or set of circumstances in which a substance has been placed or disposed of on premises, but it does not include an incident or set of circumstances involving only the emission of any noise.
  - b. "Pollution" as including land pollution.
  - c. The POEO Act defines land pollution to mean:

placing in or on, or otherwise introducing into or onto, the land (whether through an act or omission) any matter, whether solid, liquid or gaseous:

(a) that causes or is likely to cause degradation of the land, resulting in actual or potential harm to the health or safety of human beings, animals or other terrestrial life or ecosystems, or actual or potential loss or property damage, that is not trivial, or

(b) that is of a prescribed nature, description or class or that does not comply with any standard prescribed in respect of that matter, but does not include placing in or on, or



otherwise introducing into or onto, land any substance excluded from this definition by the regulations.

- d. Clause 109 of the *Protection of the Environment Operations (General) Regulation 2009* provides that the following matters are prescribed for the purposes of land pollution:
  - (a) hazardous waste,
  - (b) restricted solid waste,
  - (c) more than 10 tonnes of asbestos waste,
  - (d) more than 5 tonnes of waste tyres or more than 500 waste tyres.
- J. The EPA reasonably suspects that a pollution incident is occurring or is likely to occur at the Premises, namely:
  - a. More than 10 tonnes of asbestos waste has been deposited on the Premises which is prescribed as land pollution (i.e. definition of pollution incident), that has caused degradation of the land and potential harm to human health and
  - b. More than 200 tonnes of waste has been deposited on the Premises that has caused degradation of the land and potential harm to human health.
- H. The EPA is directing you to take clean-up action because you are the owner of the Premises.
- I. The Draft Clean-Up Notice was sent to GOLDEN CARLINGFORD PTY LTD & PENNANT HILLS ESTATES 88 PTY LTD & RAINBOW CARLINGFORD ONE PTY LTD for comment on 3 January 2019.
- J. On 16 January 2019, Onder Ulusoy from Dyldam contacted the EPA requesting an extension to the due date from 28 February 2019 to 29 March 2019.

#### DIRECTION TO TAKE CLEAN-UP ACTION

- 1. The EPA directs GOLDEN CARLINGFORD PTY LTD & PENNANT HILLS ESTATES 88 PTY LTD & RAINBOW CARLINGFORD ONE PTY LTD to take the following clean-up action:
  - a. Immediately secure and continue to secure the Premises to prevent unauthorised access.
  - b. Immediately cease and continue to cease the receipt of any waste.
  - c. Immediately cease and continue to cease causing the receipt of any waste.
  - d. Immediately cease and continue to cease causing land application of waste.
  - e. If signage is provided by the EPA, erect the sign at the front of the Premises where it is in an easily visible position from the public road.



- f. If signage is provided by the EPA, maintain the sign in good order to ensure it remains visible and legible from public road.
- g. If signage is provided by the EPA, you must ensure that you, your employees, subcontractors or agents do not remove the signage without prior written approval from the EPA.
- h. By no later than 5pm on 29 March 2019 remove the stockpiled waste material located in the area outlined in green on Map 1 attached to this notice. All asbestos contaminated material must be removed and disposed of at a landfill which can lawfully accept that waste, pursuant to clause 80 of the *Protection of the Environment Operations (Waste) Regulation 2014*. Ensure the asbestos waste is transported by a registered user of Waste Locate.
- i. By no later than 5pm on 29 March 2019 supply copies of the waste disposal dockets and Waste Locate Consignment Number used for the transport of the Waste to Greg Sheehy, Director Waste Compliance, EPA, PO Box A290 SYDNEY SOUTH NSW 1232 or by email to waste.operations@epa.nsw.gov.au
- j. All of the actions set out in paragraphs 1a to 1g above are obligations that continue until you receive written advice from the EPA that the paragraph has been complied with.

#### FEE TO BE PAID

- You are required by law to pay a fee of \$550 for the administrative costs of issuing this notice. An invoice for the fee has been attached to this notice.
- It is an offence not to pay this fee. However you can apply for an extension of time to pay the fee or for the fee to be waived. At the end of this notice there is information about how and when to pay the fee and how to apply for an extension or a waiver of the fee.

Trevor Wilson Unit Head Unit Head (by Delegation)

#### WARNINGS AND INFORMATION ABOUT THIS CLEAN-UP NOTICE

• This notice is issued under section 91 of the Act.



- It is an offence against the Act not to comply with a clean-up notice unless you have a reasonable excuse.
- Details provided in this notice will be available on the Public Register in accordance with section 308 of the Act

#### Penalty for not complying with this notice

• The maximum penalty that a court may impose for a corporation is \$1,000,000 and a further \$120,000 for each day the offence continues. The maximum penalty that a court may impose for an individual is \$250,000 and a further \$60,000 for each day the offence continues.

#### When this notice begins to operate

• This notice operates from the day the notice is given, unless a later date is specified in the notice.

#### Continuing obligation

• Under section 319A of the Act, your obligation to comply with the requirements of this notice continues until the notice is complied with in full, even if the due date for compliance has passed.

#### Cost recovery from the person who caused the incident

• If you comply with this clean-up notice but you are not the person who caused the pollution incident to which the notice relates, you have a right to go to court to recover your costs of complying with the notice from the person who caused the incident.

#### Deadline for paying the fee

• The fee must be paid by **no later than 30 days after the date of this notice**, unless the EPA extends the time to pay the fee, or waives the fee.

#### How to pay the fee

- Possible methods of payment are listed on the last page of the attached invoice/statement.
- Please include the payment slip from the attached invoice/statement with your payment.

#### How to apply for an extension of time to pay/waive the fee

• Any application for an extension of time to pay the fee or for the fee to be waived must be made in writing to the EPA. The application should set out clearly why you think your application should be granted.



#### Other costs

- The Act allows the EPA to recover from you reasonable costs and expenses it incurs in monitoring action taken under this notice, ensuring the notice is complied with and associated matters.
- If you are required to pay these other costs and expenses you will later be sent a separate notice called a "Notice Requiring Payment of Reasonable Costs and Expenses".

#### Variation of this notice

• The requirements of this notice may only be varied or revoked by written notice issued by the EPA.



NCDB NC07 NC04 NC05 NC03 Pernonthingo NC02 NC01

Map 1: suspected asbestos material sampling locations at the Premises on 18 December 2018

## **APPENDIX 3**



Environmental Consulting Services 10 Fort Street Petersham NSW 2049 Iac-MRA



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.

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Simon Caples

Report Project name Received Date **756354-S** CARLINGFORD Nov 12, 2020

Client Sample ID			A1	A2	A3	A4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No19992	S20-No19993	S20-No19994	S20-No19995
Date Sampled			Nov 12, 2020	Nov 12, 2020	Nov 12, 2020	Nov 12, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fr	actions	-				
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX	·					
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	84	104	93	93
Total Recoverable Hydrocarbons - 2013 NEPM Fr	actions					
Naphthalene <sup>N02</sup>	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) <sup>N04</sup>	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) <sup>N01</sup>	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene <sup>N07</sup>	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5



Client Sample ID			A1	A2	A3	A4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No19992	S20-No19993	S20-No19994	S20-No19995
Date Sampled			Nov 12, 2020	Nov 12, 2020	Nov 12, 2020	Nov 12, 2020
Test/Reference	LOR	Unit		,	,	,
Polycyclic Aromatic Hydrocarbons	LOIN	Onit				
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	117	96	102	99
p-Terphenyl-d14 (surr.)	1	%	116	103	108	103
Organochlorine Pesticides		70				
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Toxaphene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dibutylchlorendate (surr.)	1	%	96	110	113	113
Tetrachloro-m-xylene (surr.)	1	%	93	83	87	84
Heavy Metals						
Arsenic	2	mg/kg	13	9.5	8.8	5.9
Cadmium	0.4	mg/kg	< 0.4	0.4	< 0.4	< 0.4
Chromium	5	mg/kg	39	32	22	17
Copper	5	mg/kg	17	44	10	13
Lead	5	mg/kg	22	75	31	20
Mercury	0.1	mg/kg	< 0.1	0.1	< 0.1	< 0.1
Nickel	5	mg/kg	9.8	9.4	< 5	< 5
Zinc	5	mg/kg	25	100	12	18
			1			1



Client Sample ID			A5	A6	A7	A8
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No19996	S20-No19997	S20-No19998	S20-No19999
Date Sampled			Nov 12, 2020	Nov 12, 2020	Nov 12, 2020	Nov 12, 2020
•		Linit	100 12, 2020	100 12, 2020	100 12, 2020	100 12, 2020
Test/Reference		Unit				
Total Recoverable Hydrocarbons - 1999 NEPM						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	56	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	56	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	93	78	108	107
Total Recoverable Hydrocarbons - 2013 NEPM	Fractions					
Naphthalene <sup>N02</sup>	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) <sup>N04</sup>	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) <sup>N01</sup>	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	0.7	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	1.0	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.3	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	0.7	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	0.6	< 0.5	< 0.5
Benzo(b&j)fluoranthene <sup>N07</sup>	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	0.6	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	0.6	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	1.6	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	1.3	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	1.6	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	7	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	94	84	98	85
p-Terphenyl-d14 (surr.)	1	%	100	71	91	79



Client Sample ID			A5	A6	A7	A8	
Sample Matrix			Soil	Soil	Soil	Soil	
Eurofins Sample No.			S20-No19996	S20-No19997	S20-No19998	S20-No19999	
Date Sampled			Nov 12, 2020	Nov 12, 2020	Nov 12, 2020	Nov 12, 2020	
Test/Reference	LOR	Unit					
Organochlorine Pesticides							
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05	
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05	
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05	
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05	
Aldrin	0.05	mg/kg	< 0.05	0.06	< 0.05	< 0.05	
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05	
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05	
Dieldrin	0.05	mg/kg	< 0.05	0.67	< 0.05	< 0.05	
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05	
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05	
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05	
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05	
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05	
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05	
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05	
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05	
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05	
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05	
Methoxychlor	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2	
Toxaphene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	0.73	< 0.05	< 0.05	
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05	
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.2	0.73	< 0.2	< 0.2	
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2	
Dibutylchlorendate (surr.)	1	%	97	61	95	76	
Tetrachloro-m-xylene (surr.)	1	%	82	74	85	74	
Heavy Metals							
Arsenic	2	mg/kg	17	4.7	11	11	
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4	
Chromium	5	mg/kg	22	15	43	16	
Copper	5	mg/kg	27	16	27	30	
Lead	5	mg/kg	65	100	81	35	
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1	
Nickel	5	mg/kg	9.3	7.5	14	15	
Zinc	5	mg/kg	130	93	180	83	
			ļ				
% Moisture	1	%	10	14	17	13	



Client Sample ID			A9	D	SP	AR
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No20000	S20-No20001	S20-No20002	S20-No20003
·						
Date Sampled			Nov 12, 2020	Nov 12, 2020	Nov 12, 2020	Nov 12, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM						_
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	70
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	66
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	136
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	108	113	122	87
Total Recoverable Hydrocarbons - 2013 NEPM	Fractions					
Naphthalene <sup>N02</sup>	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1) <sup>N04</sup>	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) <sup>N01</sup>	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	120
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	120
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene <sup>N07</sup>	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g.h.i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a.h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	86	95	89	85
p-Terphenyl-d14 (surr.)	1	%	81	97	88	82



Client Sample ID			A9	D	SP	AR
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			S20-No20000	S20-No20001	S20-No20002	S20-No20003
Date Sampled			Nov 12, 2020	Nov 12, 2020	Nov 12, 2020	Nov 12, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Toxaphene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dibutylchlorendate (surr.)	1	%	89	104	107	116
Tetrachloro-m-xylene (surr.)	1	%	76	88	89	91
Heavy Metals						
Arsenic	2	mg/kg	11	9.7	13	7.3
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	17	14	16	21
Copper	5	mg/kg	29	26	25	22
Lead	5	mg/kg	24	21	24	49
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	7.4	9.3	< 5	11
Zinc	5	mg/kg	38	49	17	240
% Moisture	1	%	14	15	21	15



#### 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.

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 Suite B9			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Nov 12, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Sydney	Nov 12, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Nov 12, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Nov 12, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Polycyclic Aromatic Hydrocarbons	Sydney	Nov 12, 2020	14 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Organochlorine Pesticides	Sydney	Nov 12, 2020	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water			
Metals M8	Sydney	Nov 12, 2020	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
% Moisture	Sydney	Nov 12, 2020	14 Days
- Method: LTM-GEN-7080 Moisture			

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	mpany Name: dress:	Environment 10 Fort Stree Petersham NSW 2049	al Consulting et	Services			Re Ph	der N eport none: ix:	#:	756354 02 9518 1161		Received: Due: Priority: Contact Name:	Nov 12, 2020 12:50 Nov 17, 2020 3 Day Simon Caples	) PM
Pro	ject Name:	CARLINGFC	DRD								Eu	rofins Analytical Serv	vices Manager : Alena	a Bounkeua
		Sa	mple Detail			Asbestos - AS4964	Asbestos Absence /Presence	Moisture Set	Eurofins Suite B9					
	ourne Laborato	-		271										
	ey Laboratory					Х	X	Х	Х					
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No	rnal Laboratory Sample ID	Sample Date	Sampling Time	Matrix	LAB ID									
1	A1	Nov 12, 2020		Soil	S20-No19992	Х		х	x					
2	A2	Nov 12, 2020		Soil	S20-No19993	Х		Х	х					
3	A3	Nov 12, 2020		Soil	S20-No19994	Х		Х	х					
4	A4	Nov 12, 2020		Soil	S20-No19995	Х		Х	х					
5	A5	Nov 12, 2020		Soil	S20-No19996	Х		Х	х					
6	A6	Nov 12, 2020		Soil	S20-No19997	Х		Х	х					
7	A7	Nov 12, 2020		Soil	S20-No19998	Х		Х	х					
8	A8	Nov 12, 2020		Soil	S20-No19999	х		Х	х					
9	A9	Nov 12, 2020		Soil	S20-No20000	Х		х	х					
10	D	Nov 12, 2020		Soil	S20-No20001	Х		Х	Х					

🔅 eurofir	Envi	ronment Testing	Australia Melbourne 6 Monterey Road Dandenong South VIC 3 Phone : +61 3 8564 500 NATA # 1261	L 8175 1 0 L F	hone : +	Road /e West -61 2 9	NSW 20			Newcastle 4/52 Industrial Drive Mayfield East NSW 2304 PO Box 60 Wickham 2293 Phone : +61 2 4968 8448	New Zealand Auckland 35 O'Rorke Road Penrose, Auckland 1061 Phone : +64 9 526 45 51 IANZ # 1327	Christchurch 43 Detroit Drive Rolleston, Christchurch 76 Phone : 0800 856 450 IANZ # 1290
BN: 50 005 085 521  web: www.eurofins.com.au email: EnviroSales@eurofins.com  Site # 1254 &    Company Name:  Environmental Consulting Services    Address:  10 Fort Street    Petersham  NSW 2040				N	O R	rder I eport	#:	7 756354 02 9518 1161	Site # 23736	Received: Due: Priority:	Nov 12, 2020 12:50 Nov 17, 2020 3 Day	) PM
Project Name:	NSW 2049 CARLINGFOI	RD			Fa	ax:				Contact Name:	Simon Caples	
				Asbestos - AS	Asbestos Abs	Moisture Set	Eurofins Suite			rofins Analytical Serv		
Sample Detail				AS4964	Asbestos Absence /Presence		B9					
Melbourne Laborato	v - NATA Site #	# 1254 & 14271										
Sydney Laboratory -				X	X	х	Х					
Brisbane Laboratory												
Perth Laboratory - N	ATA Site # 2373	36										
Mayfield Laboratory												
External Laboratory					<u> </u>							
1 SP	Nov 12, 2020	Soil	S20-No20002	Х		Х	Х					
	Nov 12, 2020	Soil	S20-No20003	X		X	X					
12 AR	Nov 12, 2020	Building Materials	S20-No20004		X							



#### Internal Quality Control Review and Glossary

#### General

- Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site 1. Contamination) Measure 1999, as amended May 2013 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.
- 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. Information identified on this report with blue colour, indicates data provided by customer, that may have an impact on the results.
- This report replaces any interim results previously issued. 9.

#### **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

Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
Limit of Reporting.
Addition of the analyte to the sample and reported as percentage recovery.
Relative Percent Difference between two Duplicate pieces of analysis.
Laboratory Control Sample - reported as percent recovery.
Certified Reference Material - reported as percent recovery.
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.
The addition of a like compound to the analyte target and reported as percentage recovery.
A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
United States Environmental Protection Agency
American Public Health Association
Toxicity Characteristic Leaching Procedure
Chain of Custody
Sample Receipt Advice
US Department of Defense Quality Systems Manual Version 5.3
Client Parent - QC was performed on samples pertaining to this report
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.
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 20-130% Phenols & 50-150% PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.3 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.
- 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 5. 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	ing/itg	100	100	1 400	
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	-		0.5	Pass	
Naphthalene	mg/kg mg/kg	< 0.5 < 0.5	0.5	Pass	
Phenanthrene	-		0.5		
	mg/kg	< 0.5		Pass	
Pyrene Method Blank	mg/kg	< 0.5	0.5	Pass	
Method Blank		1	[	1	
Organochlorine Pesticides		- 0.4	0.4	Bass	
Chlordanes - Total	mg/kg	< 0.1	0.1	Pass	
4.4'-DDD	mg/kg	< 0.05	0.05	Pass	
4.4'-DDE	mg/kg	< 0.05	0.05	Pass	
4.4'-DDT	mg/kg	< 0.05	0.05	Pass	
a-BHC	mg/kg	< 0.05	0.05	Pass	
Aldrin	mg/kg	< 0.05	0.05	Pass	
b-BHC	mg/kg	< 0.05	0.05	Pass	
d-BHC	mg/kg	< 0.05	0.05	Pass	
Dieldrin	mg/kg	< 0.05	0.05	Pass	
Endosulfan I	mg/kg	< 0.05	0.05	Pass	
Endosulfan II	mg/kg	< 0.05	0.05	Pass	



Test	Units	Result 1	Acce	eptance imits	Pass Limits	Qualifying Code
Endosulfan sulphate	mg/kg	< 0.05	(	0.05	Pass	
Endrin	mg/kg	< 0.05	(	0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05	(	0.05	Pass	
Endrin ketone	mg/kg	< 0.05	(	0.05	Pass	
g-BHC (Lindane)	mg/kg	< 0.05	(	0.05	Pass	
Heptachlor	mg/kg	< 0.05	(	0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05	(	0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05	(	0.05	Pass	
Methoxychlor	mg/kg	< 0.2		0.2	Pass	
Toxaphene	mg/kg	< 0.1		0.1	Pass	
Method Blank						
Heavy Metals						
Arsenic	mg/kg	< 2		2	Pass	
Cadmium	mg/kg	< 0.4		0.4	Pass	
Chromium	mg/kg	< 5		5	Pass	
Copper	mg/kg	< 5		5	Pass	
Lead	mg/kg	< 5		5	Pass	
Mercury	mg/kg	< 0.1		0.1	Pass	
Nickel	mg/kg	< 5		5	Pass	
Zinc	mg/kg	< 5		5	Pass	
LCS - % Recovery		1				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	_					
TRH C6-C9	%	97	70	0-130	Pass	
TRH C10-C14	%	75	70	0-130	Pass	
LCS - % Recovery		T	I I I			
BTEX						
Benzene	%	98	70	0-130	Pass	
Toluene	%	103	70	0-130	Pass	
Ethylbenzene	%	108	70	0-130	Pass	
m&p-Xylenes	%	108	70	0-130	Pass	
o-Xylene	%	114	70	0-130	Pass	
Xylenes - Total*	%	110	70	0-130	Pass	
LCS - % Recovery		1	Г — Г	I		
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene	%	130	70	0-130	Pass	
TRH C6-C10	%	95	70	0-130	Pass	
TRH >C10-C16	%	73	70	0-130	Pass	
LCS - % Recovery		1				
Polycyclic Aromatic Hydrocarbons	-					
Acenaphthene	%	87	70	0-130	Pass	
Acenaphthylene	%	81		0-130	Pass	
Anthracene	%	93		0-130	Pass	
Benz(a)anthracene	%	81		0-130	Pass	
Benzo(a)pyrene	%	73		0-130	Pass	
Benzo(b&j)fluoranthene	%	74		0-130	Pass	
Benzo(g.h.i)perylene	%	92		0-130	Pass	
Benzo(k)fluoranthene	%	98		0-130	Pass	
Chrysene	%	89		0-130	Pass	
Dibenz(a.h)anthracene	%	78		0-130	Pass	
Fluoranthene	%	81		0-130	Pass	
Fluorene	%	85		0-130	Pass	
Indeno(1.2.3-cd)pyrene	%	78		0-130	Pass	
Naphthalene	%	84		0-130	Pass	
Phenanthrene	%	86	70	0-130	Pass	



Test			Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Pyrene			%	87		70-130	Pass	
LCS - % Recovery								
Organochlorine Pesticides								
Chlordanes - Total			%	77		70-130	Pass	
4.4'-DDD			%	97		70-130	Pass	
4.4'-DDE			%	90		70-130	Pass	
4.4'-DDT			%	82		70-130	Pass	
a-BHC			%	84		70-130	Pass	
Aldrin			%	79		70-130	Pass	
b-BHC			%	93		70-130	Pass	
d-BHC			%	95		70-130	Pass	
Dieldrin			%	82		70-130	Pass	
Endosulfan I			%	86		70-130	Pass	
Endosulfan II			%	100		70-130	Pass	
Endosulfan sulphate			%	97		70-130	Pass	
Endrin			%	85		70-130	Pass	
Endrin aldehyde			%	87		70-130	Pass	
Endrin ketone			%	89		70-130	Pass	
g-BHC (Lindane)			%	95		70-130	Pass	
Heptachlor			%	90		70-130	Pass	
Heptachlor epoxide			%	76		70-130	Pass	
Hexachlorobenzene			%	80		70-130	Pass	
Methoxychlor			%	93		70-130	Pass	
LCS - % Recovery								
Heavy Metals			-					
Arsenic			%	99		80-120	Pass	
Cadmium			%	101		80-120	Pass	
Chromium			%	100		80-120	Pass	
Copper			%	97		80-120	Pass	
Lead			%	105		80-120	Pass	
Mercury			%	96		80-120	Pass	
Nickel			%	99		80-120	Pass	
Zinc			%	99		80-120	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery								
Polycyclic Aromatic Hydrocarbon	S			Result 1				
Acenaphthene	S20-No23149	NCP	%	107		70-130	Pass	
Acenaphthylene	S20-No23149	NCP	%	107		70-130	Pass	
Anthracene	S20-No23149	NCP	%	105		70-130	Pass	
Benz(a)anthracene	S20-No23149	NCP	%	120		70-130	Pass	
Benzo(a)pyrene	S20-No23149	NCP	%	109		70-130	Pass	
Benzo(b&j)fluoranthene	S20-No23149	NCP	%	103		70-130	Pass	
Benzo(g.h.i)perylene	S20-No17897	NCP	%	117		70-130	Pass	
Benzo(k)fluoranthene	S20-No23149	NCP	%	119		70-130	Pass	
Chrysene	S20-No23149	NCP	%	109		70-130	Pass	
Dibenz(a.h)anthracene	S20-No23149	NCP	%	116		70-130	Pass	
Fluoranthene	S20-No17897	NCP	%	105		70-130	Pass	
Fluorene	S20-No23149	NCP	%	108		70-130	Pass	
Indeno(1.2.3-cd)pyrene	S20-No23149	NCP	%	114		70-130	Pass	
Naphthalene	S20-No23149	NCP	%	103		70-130	Pass	
Phenanthrene	S20-No23149	NCP	%	110		70-130	Pass	
Pyrene	S20-No23149	NCP	%	115		70-130	Pass	
				1 10		10100	1 . 400	I
Spike - % Recovery					· ·			



Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Chlordanes - Total	S20-No17897	NCP	%	81			70-130	Pass	
4.4'-DDD	S20-No17897	NCP	%	111			70-130	Pass	
4.4'-DDE	S20-No17897	NCP	%	88			70-130	Pass	
4.4'-DDT	S20-No17897	NCP	%	106			70-130	Pass	
a-BHC	S20-No17897	NCP	%	89			70-130	Pass	
Aldrin	S20-No17897	NCP	%	84			70-130	Pass	
b-BHC	S20-No17897	NCP	%	104			70-130	Pass	
d-BHC	S20-No17897	NCP	%	93			70-130	Pass	
Dieldrin	S20-No17897	NCP	%	96			70-130	Pass	
Endosulfan I	S20-No17897	NCP	%	99			70-130	Pass	
Endosulfan II	S20-No17897	NCP	%	92			70-130	Pass	
Endosulfan sulphate	S20-No17897	NCP	%	72			70-130	Pass	
Endrin	S20-No17897	NCP	%	109			70-130	Pass	
Endrin aldehyde	S20-No16771	NCP	%	87			70-130	Pass	
Endrin ketone	S20-No17897	NCP	%	80			70-130	Pass	
g-BHC (Lindane)	S20-No17897	NCP	%	104			70-130	Pass	
Heptachlor	S20-No17897	NCP	%	109			70-130	Pass	
Heptachlor epoxide	S20-No17897	NCP	%	92			70-130	Pass	
Hexachlorobenzene	S20-No17897	NCP	%	78			70-130	Pass	
Methoxychlor	S20-No12667	NCP	%	85			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S20-No19273	NCP	%	103			75-125	Pass	
Cadmium	S20-No19273	NCP	%	108			75-125	Pass	
Chromium	S20-No15630	NCP	%	122			75-125	Pass	
Copper	S20-No15630	NCP	%	116			75-125	Pass	
Lead	S20-No15630	NCP	%	121			75-125	Pass	
Mercury	S20-No15630	NCP	%	118			75-125	Pass	
Nickel	S20-No15630	NCP	%	123			75-125	Pass	
Zinc	S20-No15630	NCP	%	117			75-125	Pass	
Spike - % Recovery					11				
Total Recoverable Hydrocarbons -	1999 NEPM Fract	ions		Result 1					
TRH C6-C9	S20-No19997	CP	%	72			70-130	Pass	
TRH C10-C14	S20-No19997	CP	%	82			70-130	Pass	
Spike - % Recovery	02011010001	0.	70	02			10100	1 400	
BTEX				Result 1					
Benzene	S20-No19997	CP	%	81			70-130	Pass	
Toluene	S20-No19997	CP	%	78			70-130	Pass	
Ethylbenzene	S20-No19997	CP	%	79			70-130	Pass	
m&p-Xylenes	S20-No19997	CP	%	79			70-130	Pass	
o-Xylene	S20-No19997	CP	%	79			70-130	Pass	
Xylenes - Total*	S20-No19997	CP	%	79			70-130	Pass	
Spike - % Recovery	02011013331		/0	13	<u> </u>		10-100	1 0 3 3	
Total Recoverable Hydrocarbons -	2013 NEPM Erzel	ione		Result 1					
Naphthalene	S20-No19997	CP	%	71			70-130	Pass	
TRH C6-C10	S20-No19997	CP	%	74			70-130	Pass	<u> </u>
TRH >C10-C16	S20-No19997	СР	%	74			70-130	Pass	<u> </u>
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Pass Limits	Qualifying Code
Duplicate		Source					Linnits	Linits	Coue
Daphoate				Result 1	Result 2	RPD			
% Moisture	S20-No19993	СР	%	19	20	2.0	30%	Pass	
Duplicate			/0	13	20	2.0	5070	1 0 3 3	
Total Recoverable Hydrocarbons -	1999 NEPM Erect	ione		Recult 1	Result 2	RPD			
			maller	Result 1			200/	Doco	
TRH C6-C9	S20-No19996	CP	mg/kg	< 20	< 20	<1	30%	Pass	



Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	S20-No19996	СР	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	S20-No19996	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	S20-No19996	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	S20-No19996	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	S20-No19996	СР	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	S20-No19996	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate			1	1					
Total Recoverable Hydrocarbor	ns - 2013 NEPM Fract	ions		Result 1	Result 2	RPD			
Naphthalene	S20-No19996	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	S20-No19996	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate			1						
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S20-No19997	СР	mg/kg	4.7	12	84	30%	Fail	Q15
Cadmium	S20-No19997	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	<u><u>u</u>io</u>
Chromium	S20-No19997	CP	mg/kg	15	45	100	30%	Fail	Q15
Copper	S20-No19997	CP	mg/kg	16	11	35	30%	Fail	Q15
Lead	S20-No19997	CP	mg/kg	100	84	21	30%	Pass	
Mercury	S20-No19997	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S20-No19997	CP	mg/kg	7.5	< 5	58	30%	Fail	Q15
Zinc	S20-No19997	CP	mg/kg	93	62	40	30%	Fail	Q15
Duplicate			i iiig/kg		02		0070	ran	<b>Q</b> 10
Total Recoverable Hydrocarbor	s - 1999 NEPM Fract	ions		Result 1	Result 2	RPD			
TRH C10-C14	S20-No19998	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S20-No19998	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	S20-No19998	CP	mg/kg	< 50	< 50	<1	30%	Pass	
Duplicate	320-11019990		iiig/kg	< 50	< 50		5078	1 455	
Total Recoverable Hydrocarbor	s - 2013 NEPM Eract	ions		Result 1	Result 2	RPD			
TRH >C10-C16	S20-No19998	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	S20-No19998	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	S20-No19998	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate	320-11019998		l ilig/kg	× 100	< 100	<1	30 /8	F 855	
Polycyclic Aromatic Hydrocarb	ons			Result 1	Result 2	RPD			
Acenaphthene	S20-No19998	СР	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	S20-No19998	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S20-No19998	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	S20-No19998 S20-No19998	CP CP	mg/kg	< 0.5	< 0.5	<1	30% 30%	Pass Pass	
Benzo(a)pyrene Benzo(b&j)fluoranthene	S20-No19998	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
		CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene Benzo(k)fluoranthene	S20-No19998	CP	mg/kg	< 0.5	< 0.5	<1	30%		
	S20-No19998	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass Pass	
Chrysene Dibenz(a.h)anthracene	S20-No19998	CP	mg/kg	< 0.5	< 0.5	<1	30%		
	S20-No19998	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass Pass	
Fluoranthene	S20-No19998		mg/kg	< 0.5	< 0.5	<1		1	
Fluorene	S20-No19998	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	S20-No19998	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	S20-No19998	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	S20-No19998	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	S20-No19998	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate						DEE			
Organochlorine Pesticides	000 11 1000	05	"	Result 1	Result 2	RPD		+	
Chlordanes - Total	S20-No19998	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	S20-No19998	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	S20-No19998	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	S20-No19998	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	



Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
a-BHC	S20-No19998	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	S20-No19998	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	S20-No19998	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	S20-No19998	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	S20-No19998	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	S20-No19998	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	S20-No19998	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	S20-No19998	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	S20-No19998	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	S20-No19998	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	S20-No19998	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	S20-No19998	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	S20-No19998	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	S20-No19998	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	S20-No19998	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	S20-No19998	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S20-No19998	CP	mg/kg	11	20	60	30%	Fail	Q15
Cadmium	S20-No19998	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	S20-No19998	CP	mg/kg	43	60	32	30%	Fail	Q15
Copper	S20-No19998	CP	mg/kg	27	38	32	30%	Fail	Q15
Lead	S20-No19998	CP	mg/kg	81	85	5.0	30%	Pass	
Mercury	S20-No19998	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	S20-No19998	CP	mg/kg	14	14	5.0	30%	Pass	
Zinc	S20-No19998	CP	mg/kg	180	150	18	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
Q15	The RPD reported passes Eurofins Environment Testing's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

#### Authorised By

Asim Khan Andrew Sullivan Gabriele Cordero Nibha Vaidya Analytical Services Manager Senior Analyst-Organic (NSW) Senior Analyst-Metal (NSW) Senior Analyst-Asbestos (NSW)

Glenn Jackson General Manager

Final report - this Report replaces any previously assued 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.

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### Certificate of Analysis

## **Environment Testing**

Environmental Consulting Services 10 Fort Street Petersham NSW 2049



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: Report Project Name Received Date Date Reported	Simon Caples 756354-AID CARLINGFORD Nov 12, 2020 Nov 17, 2020
Methodology: Asbestos Fibre	Conducted in accordance with the Australian Standard AS 4964 – 2004: Method for the Qualitative Identification of
Identification	Asbestos in Bulk Samples and in-house Method LTM-ASB-8020 by polarised light microscopy (PLM) and dispersion staining (DS) techniques. NOTE: Positive Trace Analysis results indicate the sample contains detectable respirable fibres.
Unknown Mineral Fibres	Mineral fibres of unknown type, as determined by PLM with DS, may require another analytical technique, such as Electron Microscopy, to confirm unequivocal identity. NOTE: While Actinolite, Anthophyllite and Tremolite asbestos may be detected by PLM with DS, due to variability in the optical properties of these materials, AS4964 requires that these are reported as UMF unless confirmed by an independent technique.
Subsampling Soil Samples	The whole sample submitted is first dried and then passed through a 10mm sieve followed by a 2mm sieve. All fibrous matter greater than 10mm, greater than 2mm as well as the material passing through the 2mm sieve are retained and analysed for the presence of asbestos. If the sub 2mm fraction is greater than approximately 30 to 60g then a sub- sampling routine based on ISO 3082:2009(E) is employed. <i>NOTE: Depending on the nature and size of the soil sample, the sub-2 mm residue material may need to be sub-sampled for trace analysis, in accordance with AS 4964-2004.</i>
Bonded asbestos- containing material (ACM)	The material is first examined and any fibres isolated for identification by PLM and DS. Where required, interfering matrices may be removed by disintegration using a range of heat, chemical or physical treatments, possibly in combination. The resultant material is then further examined in accordance with AS 4964 - 2004. NOTE: Even after disintegration it may be difficult to detect the presence of asbestos in some asbestos-containing bulk materials using PLM and DS. This is due to the low grade or small length or diameter of the asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials. Vinyl/asbestos floor tiles, some asbestos-containing sealants and mastics, asbestos-containing epoxy resins and some ore samples are examples of these types of material, which are difficult to analyse.
Limit of Reporting	The performance limitation of the AS 4964 (2004) method for non-homogeneous samples is around 0.1 g/kg (equivalent to 0.01% (w/w)). Where no asbestos is found by PLM and DS, including Trace Analysis, this is considered to be at the nominal reporting limit of 0.01% (w/w). The NEPM screening level of 0.001% (w/w) is intended as an on-site determination, not a laboratory Limit of Reporting (LOR), per se. Examination of a large sample size (e.g. 500 mL) may improve the likelihood of detecting asbestos, particularly AF, to aid assessment against the NEPM criteria. Gravimetric determinations to this level of accuracy are outside of AS 4964 and hence NATA Accreditation does not cover the performance of this service (non-NATA results shown with an asterisk). NOTE: NATA News March 2014, p.7, states in relation to AS 4964: "This is a qualitative method with a nominal reporting limit of 0.01% " and that currently in Australia "there is no validated method available for the quantification of asbestos". This report is consistent with the analytical procedures and reporting recommendations in the NEPM and the WA DoH.





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.

# Project NameCARLINGFORDProject IDVov 12, 2020Date SampledNov 12, 2020Report756354-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
A1	20-No19992	Nov 12, 2020	Approximate Sample 80g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
A2	20-No19993	Nov 12, 2020	Approximate Sample 64g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
A3	20-No19994	Nov 12, 2020	Approximate Sample 68g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
A4	20-No19995	Nov 12, 2020	Approximate Sample 69g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
A5	20-No19996	Nov 12, 2020	Approximate Sample 72g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
A6	20-No19997	Nov 12, 2020	Approximate Sample 67g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
A7	20-No19998	Nov 12, 2020	Approximate Sample 66g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
A8	20-No19999	Nov 12, 2020	Approximate Sample 69g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.





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.

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
A9	20-No20000	Nov 12, 2020	Approximate Sample 66g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
D	20-No20001	Nov 12, 2020	Approximate Sample 68g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
SP	20-No20002	Nov 12, 2020	Approximate Sample 64g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
AR	20-No20003		Approximate Sample 52g Sample consisted of: Brown coarse-grained clayey soil, brick, cement fragments and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
A4B	20-No20004	Nov 12, 2020	Approximate Sample 24g / 90x50x5mm Sample consisted of: Grey compressed fibre cement fragment	Chrysotile, amosite and crocidolite asbestos detected.



#### **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.

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	<b>Testing Site</b>	Extracted	Holding Time
Asbestos - LTM-ASB-8020	Sydney	Nov 12, 2020	Indefinite
Asbestos - LTM-ASB-8020	Sydney	Nov 12, 2020	Indefinite

•	eurofi				Australia								New Zealand	
	0 005 085 521 web:	Envi	email: EnviroSale		Melbourne 6 Monterey Road Dandenong South VIC 3 Phone : +61 3 8564 5000 NATA # 1261 Site # 1254 & 14271	U 175 1( ) La P		Road e West 61 2 99	: NSW 2 900 840		Perth 2/91 Leach Highway Kewdale WA 6105 Phone : +61 8 9251 9600 NATA # 1261 Site # 23736	Newcastle 4/52 Industrial Drive Mayfield East NSW 2304 PO Box 60 Wickham 2293 Phone : +61 2 4968 8448	Auckland 35 O'Rorke Road Penrose, Auckland 1061 Phone: +64 9 526 45 51 IANZ # 1327	Christchurch 43 Detroit Drive Rolleston, Christchurch 7675 Phone: 0800 856 450 IANZ # 1290
	mpany Name: dress:	Environment 10 Fort Stree Petersham NSW 2049	al Consulting et	Services			Re Ph	der Neport none: 1x:	#:	756354 02 9518 1161		Received: Due: Priority: Contact Name:	Nov 12, 2020 12:50 Nov 17, 2020 3 Day Simon Caples	) PM
Pro	ject Name:	CARLINGFO	DRD								Eu	rofins Analytical Serv	vices Manager : Alen	a Bounkeua
		Sa	mple Detail			Asbestos - AS4964	Asbestos Absence /Presence	Moisture Set	Eurofins Suite B9					
Melb	ourne Laborato	ry - NATA Site	# 1254 & 142	271										
	ney Laboratory					Х	X	Х	X					
	bane Laboratory								<u> </u>					
	h Laboratory - N	ATA Site # 237	/36											
	ield Laboratory													
Exte No	rnal Laboratory Sample ID	Sample Date	Sampling Time	Matrix	LAB ID									
1	A1	Nov 12, 2020		Soil	S20-No19992	х		х	x					
2	A2	Nov 12, 2020		Soil	S20-No19993	Х		X	X					
3	A3	Nov 12, 2020		Soil	S20-No19994	Х		Х	Х					
4	A4	Nov 12, 2020		Soil	S20-No19995	Х		Х	Х					
5	A5	Nov 12, 2020		Soil	S20-No19996	Х		Х	х					
6	A6	Nov 12, 2020		Soil	S20-No19997	Х		Х	Х					
7	A7	Nov 12, 2020		Soil	S20-No19998	Х		Х	х					
8	A8	Nov 12, 2020		Soil	S20-No19999	Х		х	х					
9	A9	Nov 12, 2020		Soil	S20-No20000	Х		Х	x					
10	D	Nov 12, 2020		Soil	S20-No20001	х		х	х					

ABN: 50 005 085 521 web: w	Australia Melbourne 6 Monterey Road Dandenong South VIC 3 Phone : +61 3 8564 5000 NATA # 1261 Site # 1254 & 14271	U 175 1( ) La P	hone : +	Road /e West -61 2 99			Perth 2/91 Leach Highway Kewdale WA 6105 Phone : +61 8 9251 9600 NATA # 1261 Site # 23736	Newcastle 4/52 Industrial Drive Mayfield East NSW 2304 PO Box 60 Wickham 2293 Phone : +61 2 4968 8448	New Zealand Auckland 35 O'Rorke Road Penrose, Auckland 1061 Phone : +64 9 526 45 51 IANZ # 1327	Christchurch 43 Detroit Drive Rolleston, Christchurch 7675 Phone : 0800 856 450 IANZ # 1290		
Company Name: Address:	Environmental ( 10 Fort Street Petersham NSW 2049	Consulting Services			R	rder N eport none: ax:	#:	756354 02 9518 1161		Received: Due: Priority: Contact Name:	Nov 12, 2020 12:50 Nov 17, 2020 3 Day Simon Caples	) PM
Project Name:	CARLINGFORD	)							Ει	rofins Analytical Serv	vices Manager : Alena	a Bounkeua
	Samp	le Detail		Asbestos - AS4964	Asbestos Absence /Presence	Moisture Set	Eurofins Suite B9					
Melbourne Laborator												
Sydney Laboratory - Brisbane Laboratory				X	X	X	X					
Perth Laboratory - NA							$\left  \right $					
Mayfield Laboratory	•••											
External Laboratory												
	Nov 12, 2020	Soil	S20-No20002	Х	-	Х	X					
	Nov 12, 2020	Soil Building Materials	S20-No20003 S20-No20004	X	x	X	X					
Test Counts				12	1	12	12					



#### Internal Quality Control Review and Glossary

#### General

#### 1. QC data may be available on request.

- 2. All soil results are reported on a dry basis, unless otherwise stated.
- 3. Samples were analysed on an 'as received' basis.
- 4. Information identified on this report with blue colour, indicates data provided by customer, that may have an impact on the results.
- 5. 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 Sample Receipt Advice.

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.

#### Units

% w/w: weight for weight	yht basis gran	ns per kilogram
Filter loading:	fibre	s/100 graticule areas
Reported Concentration	n: fibre	s/mL
Flowrate:	L/mi	n
Terms		
Dry	Sample is dried by heating prior to analysis	
LOR	Limit of Reporting	
COC	Chain of Custody	
SRA	Sample Receipt Advice	
ISO	International Standards Organisation	
AS	Australian Standards	
WA DOH	Reference document for the NEPM. Government of Western Australia, G Sites in Western Australia (2009), including supporting document Recom	uidelines for the Assessment, Remediation and Management of Asbestos-Contaminated mended Procedures for Laboratory Analysis of Asbestos in Soil (2011)
NEPM	National Environment Protection (Assessment of Site Contamination) Mea	asure, 2013 (as amended)
ACM	Asbestos Containing Materials. Asbestos contained within a non-asbestos NEPM, ACM is generally restricted to those materials that do not pass a 7	s matrix, typically presented in bonded and/or sound condition. For the purposes of the mm x 7mm sieve.
AF	Asbestos Fines. Asbestos containing materials, including friable, weather equivalent to "non-bonded / friable".	ed and bonded materials, able to pass a 7mm x 7mm sieve. Considered under the NEPM as
FA	Fibrous Asbestos. Asbestos containing materials in a friable and/or sever materials that do not pass a 7mm x 7mm sieve.	ely weathered condition. For the purposes of the NEPM, FA is generally restricted to those
Friable	Asbestos-containing materials of any size that may be broken or crumble outside of the laboratory's remit to assess degree of friability.	d by hand pressure. For the purposes of the NEPM, this includes both AF and FA. It is
Trace Analysis	Analytical procedure used to detect the presence of respirable fibres in th	e matrix.



#### Comments

The samples received were not collected in an approved asbestos bag and was therefore sub-sampled from the 250mL glass jar. Valid subsampling procedures were applied so as to ensure that the sub-samples to be analysed accurately represented the samples received.

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**

CodeDescriptionN/ANot applicable

#### Asbestos Counter/Identifier:

Chamath JHM Annakkage Senior Analyst-Asbestos (NSW)

#### Authorised by:

Laxman Dias

Senior Analyst-Asbestos (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.

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#### Australia

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Christchurch 43 Detroit Drive Rolleston, Christchurch 7675 Phone : 0800 856 450 IANZ # 1290

#### **Sample Receipt Advice**

Company name:	Environmental Consulting Services
Contact name:	Simon Caples
Project name:	CARLINGFORD
Project ID:	Not provided
Turnaround time:	3 Day
Date/Time received	Nov 12, 2020 12:50 PM
Eurofins reference	756354

#### **Sample Information**

- 1 A detailed list of analytes logged into our LIMS, is included in the attached summary table.
- Sample Temperature of a random sample selected from the batch as recorded by Eurofins Sample Receipt : 8.4 degrees Celsius.
- 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.
- Sample containers for volatile analysis received with zero headspace. 1
- X Split sample sent to requested external lab.
- X Some samples have been subcontracted.
- N/A Custody Seals intact (if used).

#### Notes

#### Contact

If you have any questions with respect to these samples, please contact your Analytical Services Manager:

Alena Bounkeua on phone : or by email: AlenaBounkeua@eurofins.com

Results will be delivered electronically via email to Simon Caples - simon@ecsgroup.com.au.



## Chain of Custody

Environmental Consulting Services Pty Ltd						S	on Caples	Ph: 0415 225 474			Fax: 95	18 1787	Er	nail: sim	on@ecsgroup.c	om.au			
Event Nur			Ma	atrix		Anal	ysis											_	
Lab Number	Sample Number	Sample Date	Soil	Water	Other	BTEX	HdT	PAH	Phenol	Ammonia	Cyanide	Metals	TCLP Metals	Asbestos	Acid	20115			
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