

Phase I Preliminary Site Investigation

Lindfield Community Hub, Lindfield NSW

Prepared for: Ku-ring-gai Council



ADE
CONSULTING
GROUP

Prepared for:

Ku-ring-gai Council

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Envirotech Australia Pty Ltd.

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ABBREVIATIONS

ADE	A.D. Envirotech Australia Pty Ltd
AST	Above Ground Storage Tank
BGL	Below Ground Level
BTEX	Benzene, toluene, ethyl-benzene, xylene
COC	Chain of Custody
DEC	Department of Environment and Conservation
DSI	Detailed Site Investigation
DQO	Data Quality Objectives
GILs	Groundwater Investigation Levels
HILs	Health Investigation Levels
HSLs	Health Screening Levels
LPI	Land Property Information
LTO	Land Titles Office
NATA	National Association of Testing Authorities
NEPC	National Environmental Protection Council
NEPM	National Environmental Protection Measure
NSW EPA	New South Wales Environmental Protection Authority
OEH	Office of Environment and Heritage
OPPs	Organophosphorous Pesticides
OCPs	Organochlorine Pesticides
PAHs	Polycyclic Aromatic Hydrocarbons
PSI	Preliminary Site Investigation
QA/QC	Quality Assurance/Quality Control
RPD	Relative Percent Difference
SCID	Stored Chemical Information Database
SH&EWMS	Safety Health and Environmental Works Method Statement
TPH	Total Petroleum Hydrocarbons
TRH	Total Recoverable Hydrocarbons

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1 INTRODUCTION

1.1 General Information

A. D. Envirotech Australia Pty Ltd (ADE) was engaged by Ku-ring-gai Council to undertake a Phase I Preliminary Site Investigation (PSI) to assess the potential for contamination at the proposed site of the Lindfield Community Hub (hereafter referred to as the 'Site'). The Site is located west of the Pacific Highway within Lindfield town centre and is bound by Bent Street to the north, Woodford Lane to the east, Beaconsfield Parade to the south and residential properties to the west. This PSI will support a Development Application for the construction of the Lindfield Community Hub (refer to Section 1.2 for more detail).

The Site is comprised of the following Lots within Deposited Plans in the Local Government Area of Ku-ring-gai, Parish of Gordon, County of Cumberland:

- Lot A DP 445535 (known as 1 Woodford Lane);
- Lot 9 DP 1090427 (known as 2 Bent St);
- Lot 10 DP 3498 (known as 4 Bent St);
- Lot 3 DP 667420 (known as 6 Bent St);
- Lot 1 DP 724823 (known as 8 Bent St)
- Lot 1 DP 980108 (known as 10 Bent St)
- Lot 5 DP 666521 (known as 12 Bent St);
- Lot 1 DP 929131 (known as 1B Beaconsfield Parade);
- Lot 1-16 DP 1099330 (known as 19 Drovers Way); and
- The road reserves of Lot 41 DP 4388 (Drovers Way) and Woodford Lane.

A Site inspection was undertaken on the 3rd of June 2016 and comprised of a visual assessment of the Site. Details of the field inspection are given in this report, together with comments on the significance of the findings of the investigation. This report was completed in accordance with the *Guidelines for Consultants Reporting on Contaminated Sites*, NSW EPA, September 2000.

1.2 Proposed Development

The proposed future development of the Site will include a new mixed use precinct with community buildings, boutique shops, cafes/restaurants and a below ground supermarket. The redevelopment will create new streets, residential apartments, a large central park, a library, child care centre and community centre with commuter parking.

1.3 Objectives

The objectives of the investigation were to:

- Identify past and present potentially contaminating activities;
- Identify potential sources of contamination and types of contaminants;
- Discuss the Site condition;
- Provide a preliminary assessment of Site contamination for the suitability of the proposed development; and
- Assess the need for further investigations.

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1.4 Scope of Work

The scope of work required to achieve the objectives of the investigation involved the following:

- Completion of a Safety, Health & Environment Work Method Statement (SH&EWMS);
- Desktop site review of:
 - Land title records;
 - Section 149 certificates;
 - WorkCover NSW;
 - NSW Environment and Heritage;
 - EPA contaminated lands register for notations; and
 - Dial Before You Dig service search.
- Review of past and current activities on the site;
- Review of past and current activities on neighbouring sites and identification of any potential on-site/off-site sources of contamination;
- Review of past aerial photographs of the site and its surrounds to identify the locations of any previous buildings and/or other infrastructure associated with activities that could be on-site/off-site sources of contamination;
- Review of local geology and hydrogeology (including groundwater bore search);
- Site inspection by an experienced environmental consultant; and
- Preparation of a Phase I PSI report outlining:
 - Detailed information on the results of the desktop review and site inspection;
 - Conclusions regarding the potential for contamination at the site;
 - Conclusions regarding the sites suitability for the proposed development; and
 - Recommendations for a Phase II Detailed Site Investigation (DSI), should it be warranted.

1.5 Legislative Requirements

The legislative framework for the report is based on guidelines that have been issued and/or endorsed by the NSW Environmental Protection Agency (EPA) formerly the Office of Environment and Heritage (OEH) under the following Acts/Regulations:

- *Protection of the Environment Operations Act 1997*; and
- *Contaminated Land Management Act 1997*.

The relevant guidelines issued under the provisions of the aforementioned Acts/Regulations include:

- *Guidelines for the NSW Site Auditor Scheme*, NSW DEC 2006.
- *Guidelines for Consultants Reporting on Contaminated Sites*, NSW EPA, 2000.
- *National Environmental Protection Measure (Assessment of Site Contamination)*, 1999, as amended 2013.
- Australian Standard AS 4482.1 *Guide to the sampling and investigation of potentially contaminated soil. Part 1: Non-volatile and semi-volatile compounds*.
- Australian Standard AS 4482.2 *Guide to the sampling and investigation of potentially contaminated soil. Part 2: Volatile substances*.
- *Sampling Design Guidelines* - NSW EPA, 1995.
- *Waste Classification Guidelines Part 1: Classifying Waste*, EPA, 2014.
- *Guidelines for the Assessment and Management of Groundwater Contamination*, NSW DEC, 2007.

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1.6 Whole Report

No one section, or part of a section, of this report should be taken as giving an overall idea of this report. Each section must be read in conjunction with the whole of this report, including its appendices and attachments.

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2 SITE IDENTIFICATION

2.1 Site Location

The Site is located west of the Pacific Highway within Lindfield town centre and is bound by Bent Street to the north, Woodford Lane to the east, Beaconsfield Parade to the south and residential properties to the west as is shown in **Figure 1** below.

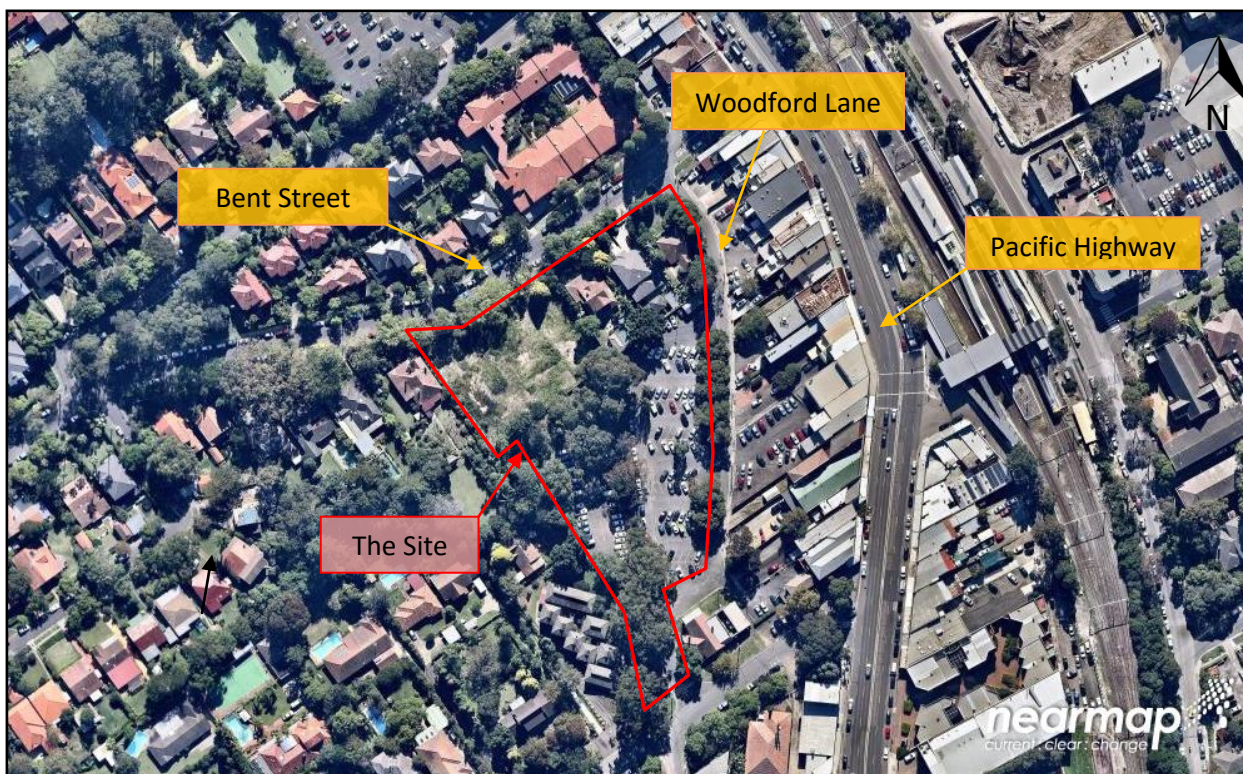


Figure 1. Aerial photograph of the Site (photograph from NearMaps; accessed on 27.05.2016).

Bearings provided in this report are approximate only. For ease of representing locations in the report, the site is considered to be off Woodford Lane, having a nominal north-south direction assumed. All references to points of the compass within the report are based on these approximate bearings.

2.2 Site Inspection and Description

An Environmental Consultant from ADE carried out a site inspection on the 3rd of June 2016 in order to make a visual assessment of the Site and provide information on potential site contamination issues, some of which are as follows:

- Surrounding land uses and potential contamination sources;
- Presence of hazardous or dangerous goods storage;
- Presence of Underground or Aboveground Storage Tanks, Generators or associated fuel transfers systems i.e. fuel lines;
- Condition of current structures, stockpiles, vegetation and soil;
- Proximity to water bodies/courses; and
- Visible and/or olfactory evidence of contamination.

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ADE has been advised by the client that the Site is used predominantly as a commuter car park (approximately 50% of the Site) as well as park land/vegetation medians (approximately 10% of the Site) and the remaining area comprising of low density residential plots (approximately 40% of the Site).

The Site is an irregular shape and is approximately 13,000 m² and at the time of the Site inspection was still in active operation/occupied with the exception of three (3) demolished residential properties within the northern section of the Site. The Site is bound by Bent Street to the north and Beaconsfield Parade to the south, which are both connected by Woodford Lane which is bound along the eastern boundary of the Site. As such, there are multiple access points to the Site via Woodford Lane.

For the purpose of this inspection the Site was divided into two distinct sections:

1. The first section is the northern section, which is comprised of low density residential properties (both demolished and intact); and
2. The second section is the southern section, which is comprised of two sealed asphalt covered (2) at-grade commuter car parks and park land/vegetation medians.

Northern Section

At the time of the inspection, the northern section was occupied by three (3) low density residential properties, which appeared to be occupied. Access to the internal areas of the residential properties was not granted at the time of inspection. Two (2) of the residential buildings appears to have been established circa the 1940/1960's, comprised of both brick and wooden formations. The remaining property appears to have been built more recently and is comprised of brick formation and tiled roofing. The occupied residential properties were secured by brick walls and/or wooden fences.

To the west of the northern section were three (3) vacant plots which appear to have been recently demolished and formed into one (1) plot. A combination of a wire metal fence, bricked walls and wooden fences (constituting neighbouring property boundaries) were located around the entire area of the demolished plots. As such, access to this area of the northern section could not be achieved. The vacant plot was covered predominantly in grasses with some areas demonstrating exposed soil/fill material. Although access to the area could not be achieved, a visual assessment was carried out from beyond the fence. Exposed soil was noted with minor erosional features observed. Fragments of building debris were also observed i.e. broken red brick and concrete. Small patches of brown discolouring within the grasses was noted, however the remaining grasses and shrubs appeared in healthy condition with no evidence of phytotoxicity.

Southern Section

The southern section comprised of two (2) sealed asphalt covered car parks and park land/vegetation medians which consisted of grassed areas / exposed soils with mature trees. The vegetation medians were located along Woodford Lane, as a buffer between the two (2) car parks and randomly populated throughout the car parks. A park land area was located within the northern portion of the section and again consisted of grasses and mature trees. Most of the vegetated medians displayed signs of general wear and tear with some brown discolouration of grass or complete exposure of underlying soils. The discolouration and exposure of soils is attributed to Site traffic both pedestrian/vehicular. There is also potential of phytotoxicity as a result of the use of pesticides and insecticides.

The surface of the two (2) car parks was in poor condition with many cracks, fractures and pot holes observed. There was also evidence of hydrocarbon staining of the car park surface, most likely as a result

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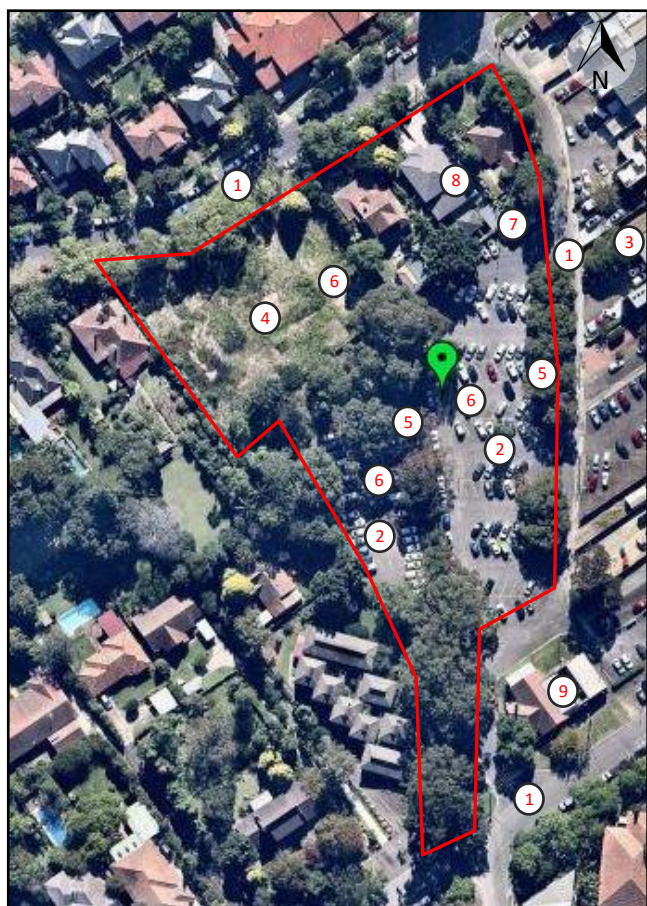
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of leaking motor oil from parked vehicles. Stormwater drains were located on the southern boundary of the car parks which are expected to flow into the local stormwater/sewer system. A single covered car parking garage was observed within the northern portion of the section. The age of build could not be ascertained; however it was observed that the garage was comprised of a brick formation with metal sheeting and wooden frame roof. Dark patches were observed on the floor of the garage, potentially hydrocarbon staining. It should be noted that at the time of the Site inspection the car parks were in operation which hampered visual access of some of the occupied parking bays.

Off Site Observations

A dry cleaning business is located east of the Site on 344 Pacific Highway, Lindfield NSW. The dry cleaning business is located on the hydraulic upgradient from the Site. An electrical substation (Sydney County Council Electric Substation No. 591) was located south of the Site at 1/1A Beaconsfield Parade, Lindfield NSW. It appears that the substation was still in operation.

A number of potential activities/points of interest were observed during the Site inspection; refer to **Figure 2** and Appendix II – Photographs for outline of the location of the observed items, notably:



1. Medium to high volumes of vehicular traffic using the two (2) car parks and adjacent through roads/lanes;
2. Multiple hydrocarbon staining observed throughout the surface of both car parks;
3. Dry cleaning business (off site) was noted as being located upgradient of the Site;
4. Three (3) low density residential properties had been demolished. Access was restricted. Broken fragments of building debris was observed strewn along the surface of the properties;
5. Vegetation medians of various sizes and shapes were observed throughout the car park. Some brown discolouration was noted, potential phytotoxicity related to the use of pesticides/insecticides;
6. Potential use of fill material throughout the Site;
7. Single covered car park was observed within the northern portion of the Site. Hydrocarbon staining was observed on the surface;
8. Three (3) occupied low density residential properties; and
9. Electrical Substation (No. 591) off site.

Figure 2. Aerial photograph of the Site dated 5th May 2016 with Site observation markers (photograph from maps.au.nearmap.com; accessed on 27.05.2016).

No evidence of previous Underground Storage Tanks (USTs) or Aboveground Storage Tanks (ASTs) were observed throughout the Site inspection.

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It was not part of the scope of this assessment to undertake intrusive works within the Site, and of the building fabric. Furthermore, the three (3) residential properties were occupied at the time of Site inspection and could not be accessed. As such, ADE considers the restriction of access within the Site a limitation to the investigation, and that a hazardous materials inspection on the buildings throughout the Site is undertaken (if not already undertaken).

2.3 Surrounding Land Use

At the time of inspection the primary surrounding land-uses were observed as follows:

- *Northern boundary:* North of the Site is Bent Street, which is bound along the entire northern boundary, beyond this is Lindfield Manor retirement village and low density residential properties;
- *Eastern boundary:* East of the Site is Woodford Lane, which is bound along the entire western boundary, beyond this are commercial premises;
- *Southern boundary:* South of the Site is low density residential properties and an Electrical Substation (No. 591); and
- *Western boundary:* West of the Site is low density residential properties.

2.4 Summary of Site Details

Table 1 below provides a summary of details pertaining to the site.

Table 1. Site details and information.

Site Details	
Site Address	Woodford Lane, Lindfield NSW
Title Identification	Lot A DP 445535, Lot 9 DP 1090427, Lot 10 DP 3498, Lot 3 DP 667420, M/Lot 1 DP 724823, Lot 1 DP 980108, Lot 5 DP 666521, Lot 1 DP 929131, Lot 1-16 DP 1099330 and Lot 41 DP 4388.
Current Site Use	Commuter car park and low density residential properties.
Proposed Land Use	Community Hub Building – residential apartments, a large central park, a new library, child care centre and community centre with commuter parking.
Investigation Area	13,000 m ²

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3 PHYSICAL SETTING

3.1 Site Topography and Hydrology

The Site slopes gently in a westerly to west south westerly direction from an elevation of approximately 96 m above Australian Height Datum (m AHD) in the east of the Site to an elevation of approximately 88 m AHD in the west of the Site. Little Blue Gum Creek is located approximately 500 m to the south west of the Site. The Little Blue Gum Creek is a fresh water ecosystem and discharges into the Lane Cove River, which is located approximately 2.1 km south of the Site. Surface water flow and groundwater are expected to follow the slope of the land and flow west towards the Little Blue Gum Creek.

3.2 Local Geology and Soil

The soil in the investigation area is related to the site geology and is classified in the *Soil Landscapes of the Sydney 1:100 000 Sheet* (Chapman and Murphy, 1989) as belonging to the Glenorie Soil Landscape.

These soils are shallow to moderately deep (<100cm) and colours vary from red, brown and yellow. The soils arise from the Wianamatta Group which consists of Ashfield and Bringelly shales. These groups are characterised by Laminite, dark grey siltstone, shale, calcareous claystone and coal. The Wianamatta group overlies Hawkesbury Sandstone but still belongs in the Triassic period aged between 230-205 million years old.

Typical soils found in this landscape include:

- Friable dark brown loam with a porous moderate structure. Surface is friable but may become hard setting when compacted and dry. PH ranges from moderately acidic to slightly acidic 5.0 – 6.0. Shale fragments occur and charcoal is occasionally present whilst roots are common.
- Hard setting brown clay loam with an earthy porous fabric. Colour is commonly brown but may range between dull yellowish brown and reddish brown. PH ranges between strongly acid and moderately acid 4.0 – 6.0. Roots, shale rock and charcoal fragments are all present.
- Whole coloured reddish brown strongly structured clay. Texture is a medium clay but may range from silty to heavy clay. Colours can range from bright reddish brown to dull yellowish brown. The pH ranges from strongly acid to moderately acid 4.0 – 5.5. Shale rock fragments are common, roots are rare and charcoal fragments are absent.
- Mottled gray plastic clay which occurs as a deep sub soil. Colour is usually a pale grey but ranges from light reddish grey to brownish grey. Yellow and red mottles are common. This material is moderately sticky and very plastic when moist. PH ranges from strongly acid to moderately acid 4.0 – 5.0. Shale rock fragments and gravels are common. Roots are rare and charcoal is absent.
- Brownish-grey plastic silty clay which is often saturated occurring as a subsoil. Colour is dark brown often becoming brownish grey with dark brown mottles at depth. This material is moderately sticky and very plastic when moist. The pH ranges from moderately acid to slightly acid 5.0 – 6.5. Rock and charcoal fragments are absent and roots are rare.

Characteristics of this soil are generally low to moderate fertility with high available water capacity and moderate amounts of organic matter and nutrient status. All soil materials are acidic and are potentially aluminium toxic.

The topography of the area is described in Chapman and Murphy (1989) as undulating to rolling low hills on Wianamatta Group shale. Local relief varies from 50-120m. Slope gradients range from 5-20%. Convex narrow ridges and hillcrests grade into moderately inclined side slopes with narrow concave drainage lines. Moderately inclined slopes of 10-15% are the dominant landform elements.

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Fill Material

Whilst the absence of fill material underneath the asphalt car park cannot be discounted due to nature of the Site inspection being non-intrusive, the Site was observed to slope gently to the south, with no obvious areas of fill to raise levels within the site.

3.3 Hyrdrogeology

It was beyond the scope of work to study the groundwater flow direction. However, as previously mentioned in the above section, the local groundwater flow is likely to have a westerly flow towards Little Blue Gum Creek.

A search for registered groundwater wells within a 500 m radius of the Site was undertaken by ADE via the NSW Office of Water (Allwaterdata.water.nsw.gov.au). No registered groundwater wells were identified within 500 m of the Site (refer to Appendix VI – Supporting Documents).

3.4 Acid Sulphate Soils

A review of the Acid Sulphate Soil Risk Maps demonstrated that the site is within an area of “Low Probability” of acid sulphate soils (refer to Appendix III – Acid Sulphate Soils). No further investigation is deemed necessary with regards to acid sulphate soils.

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4 SITE HISTORY

4.1 Historical Land and Title Search

The Site history has been compiled from information gathered from the Land Titles Office (LTO), Land Property Information (LPI) and Council records.

The Site is comprised of the following Lots within Deposited Plans in the Local Government Area of Ku-ring-gai, Parish of Gordon, County of Cumberland:

- Lot A DP 445535 (known as 1 Woodford Lane);
- Lot 9 DP 1090427 (known as 2 Bent St);
- Lot 10 DP 3498 (known as 4 Bent St);
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- Lot 1 DP 724823 (known as 8 Bent St);
- Lot 1 DP 980108 (known as 10 Bent St)
- Lot 5 DP 666521 (known as 12 Bent St);
- Lot 1 DP 929131 (known as 1B Beaconsfield Parade);
- Lot 1-16 DP 1099330 (known as 19 Drovers Way); and
- The road reserves of Lot 41 DP 4388 (Drovers Way) and Woodford Lane.

Table 2. Summary of LTO records for Lot 1 in DP 929131.

Date	Transferred/Leased From	Transferred/Leased To	Transfer No.
VOL 1757 FOL 238			
31.07.1912	Frederick Smythe Willis	Permanent Trustee Company of New South Wales Limited	27816
06.09.1917	Permanent Trustee Company of New South Wales Limited	Annie Gapes of Lindfield, Spinster	A333279
18.09.1929	Annie Gapes	Stella May Kaesenhagen, wife of Frank William Kaesenhagen of Northbridge, Mechanic	B880149
09.07.1964	Unknown	The Council of the Municipality of Ku-ring-gai	J779933

Table 3. Summary of LTO records for Lot 41 in DP 4388.

Date	Transferred/Leased From	Transferred/Leased To	Transfer No.
VOL 680 FOL 198			
05.03.1888	John Mill Hancock and Thomas Todd Forsyth	Frank Smidmore of Sydney, Gentleman	132456
13.10.1904	Frank Smidmore	Rebecca Edwards, wife of James George Edwards, and Amelia Louisa Oswald, wife of Lewis Francis Gillis Oswald, as tenants in common	395036
VOL 1829 FOL 141 & 142			
20.11.1904	Rebecca Edwards and Amelia Louisa Oswald	Arthur Chandler and Georgina Elizabeth Chandler, his wife as tenants in common	477899

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Table 3. Continued...

Date	Transferred/Leased From	Transferred/Leased To	Transfer No.
14.10.1909	Rebecca Edwards and Amelia Louisa Oswald	William Oswald Joseph Knowles	561913
24.05.1910	Rebecca Edwards and Amelia Louisa Oswald	William Oswald Joseph Knowles	564498
25.08.1911	Rebecca Edwards and Amelia Louisa Oswald	Arthur Chandler	621020
25.08.1911	Rebecca Edwards and Amelia Louisa Oswald	Alice Georgina Wynne, wife of George Watken Wynne	621021
VOL 4036 FOL 111			
09.08.1927	Rebecca Edwards and Amelia Louisa Oswald	The Council of the Shire of Ku-ring-gai	B533963
41/4388			
		The Council of the Municipality of Ku-ring-gai	

Table 4. Summary of LTO records for Lot A in DP 445535

Date	Transferred/Leased From	Transferred/Leased To	Transfer No.
VOL 7466 FOL 215			
Please refer to Table 6, below for records held earlier than 1960.			
VOL 7873 FOL 167			
24.03.1960		The Commercial Banking Company of Sydney Limited	H308595
A/445535			
		The Council of the Municipality of Ku-ring-gai	

Table 5. Summary of LTO records for Lot 1-16 in DP 1099330.

Date	Transferred/Leased From	Transferred/Leased To	Transfer No.
VOL 1833 FOL 186 (Lot 1)			
13.04.1911	Mark Marsh of Sydney, Gentleman	Henry James Dale of Lindfield, Shopkeeper	602641
12.07.1923	Henry James Dale	The Commercial Banking Company of Sydney Limited	A966653
21.01.1953		The Ku-ring-gai Municipal Council	F605010
VOL 4499 FOL 245 (Lot 2)			
29.10.1934	Mary Elizabeth Radford of Linfield, Widow	Albert Wilson of Lindfield, Grocer	C291251
19.02.1936	Mary Elizabeth Radford of Linfield, Widow	Albert Wilson of Lindfield, Grocer	C411204
25.08.1939	Mary Elizabeth Radford of Linfield, Widow	Albert Wilson of Lindfield, Grocer	C822145
26.08.1942	Mary Elizabeth Radford of Linfield, Widow	McIlpaths Holdings Limited	D150304
21.01.1953		The Ku-ring-gai Municipal Council	F605010

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Table 5. Continued...

Date	Transferred/Leased From	Transferred/Leased To	Transfer No.
VOL 1770 FOL 142 (Lot 3)			
06.02.1917	Ellen Vinteman	William Oswald Joseph Knowles of Lindfield, Butcher	A2934
13.07.1921	Ellen Vinteman	James William Davies and Andrew George Lennox both of Lindfield, Newsagents	A714314
15.12.1925	Ellen Vinteman	James William Davies of Lindfield, Newsagents	B297850
23.05.1927	Albert Victor Hallow	Albert Victor Dallow of Haberfield, Doctor of Dentistry	B505398
04.10.1928	Albert Victor Hallow	James William Davies of Lindfield, Newsagents	B727392
28.10.1938	Albert Victor Hallow	Elizabeth Kelvert Hay, wife of John David Hay of Lindfield, Decorator	C719369
11.09.1942		Alice Hallow of Haberfield, Widow	D153646
22.12.1947	Alice Hallow	Bernard Edward McCormick of Lindfield, Storekeeper and Dorothy Ray McCormick, his wife as joint tenants	D767319
26.05.1952	Alice Hallow	Apparel Wear Pty. Limited	F659216
21.01.1953		The Ku-ring-gai Municipal Council	F605010
VOL 1693 FOL 8 (Lot 4)			
12.08.1918	Harold Branson Platt Hepworth	Claude Henry Ollie of Lindfield, Estate Agent	A401632
28.02.1921	Harold Branson Platt Hepworth	Australian Bank of Commerce Limited	A668515
19.09.1925	Harold Branson Platt Hepworth	Australian Bank of Commerce Limited	B263740
09.08.1937		Clifford Minter, Solicitor and Thomas Michael Foster, Chartered Account both of Sydney	C560383
14.07.1939	Clifford Minter and Thomas Michael Foster	Isabel Platt of Sydney, Spinster	C792304
20.01.1950		Isabel Bell, wife of Alfred Thomas Jackins Bell, of Melbourne, Victoria	F151966
VOL 6619 FOL 117, 118 & 119 (Lot 4)			
21.01.1953		The Ku-ring-gai Municipal Council	F605010
VOL 1610 FOL 116 (Lots 5-6)			
16.10.1923		James George Edwards of Killara, Medical Student	B4461
02.05.1932		The Commonwealth & State Bank of Australia	C118412
Table 21.01.1953		The Ku-ring-gai Municipal Council	F605010
VOL 4623 FOL 105 (Lot 7-11)			
12.06.1934	Claudia Slade, wife of Percy Newman Slade of Sydney, Property Agent	Henry Edward Schweitzer of Lindfield, Merchant	C250345

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Table 5. Continued...

Date	Transferred/Leased From	Transferred/Leased To	Transfer No.
18.02.1935	Claudia Slade (with consent of the mortgagee)	Samuel Francis Lean of Lindfield, Delicatessen Vendor	C305740
24.04.1939	Claudia Slade (with consent of the mortgagee)	Cyril Raymond Radford of Lindfield, Provision Merchant	C778535
24.04.1939	Claudia Slade (with consent of the mortgagee)	Rowlands Alfred Little of Lindfield, Butcher	C778536
24.04.1939	Claudia Slade (with consent of the mortgagee)	Henry Edward Schweitzer of Lindfield, Merchant	C778537
18.07.1950	Claudia Slade (with consent of the mortgagee)	T. A. Field Pty. Limited	F266725
09.11.1950	Claudia Slade (with consent of the mortgagee)	G and G Stones Pty. Limited	F342399
17.05.1951	Claudia Slade (with consent of the mortgagee)	Matthew Thompson & Co. Limited	F453703
21.01.1953		The Ku-ring-gai Municipal Council	F605010
VOL 4769 FOL 205 (Lot 12)			
30.06.1936	Jemina Engelbert and Frederick Engelbert	Bank of New South Wales	C432063
03.05.1939	Jemina Engelbert and Frederick Engelbert	Bank of New South Wales	C777297
03.03.1942	Jemina Engelbert and Frederick Engelbert	Bank of New South Wales	D111946
02.03.1944	Jemina Engelbert and Frederick Engelbert	Bank of New South Wales	D267088
21.01.1953		The Ku-ring-gai Municipal Council	F605010
VOL 2258 FOL 205 (Lot 13)			
08.05.1918	Robert Dunn of Sydney, Clerk	Frederick James Knight Sinclair of Lindfield, Chemist	A380435
21.01.1953		The Ku-ring-gai Municipal Council	F605010
VOL 2262 FOL 109 (Lot 14)			
21.07.1922	Frederick Robert Dodwell of Lindfield, Esquire	John Harold Whitney of Strathfield, Accountant	A837042
21.01.1953		The Ku-ring-gai Municipal Council	F605010
VOL 5510 FOL 33 (Lots 15-16)			
07.08.1945	Percy Joynson Flecknoe, Arthur Edwin Flecknoe, Florence Joynson Greenwell and Frank Henry Edgar Cliff	Cyril Lancelot Baker of Gladeville, Fruiterer	D371452
28.01.1947	Percy Joynson Flecknoe, Arthur Edwin Flecknoe, Florence Joynson Greenwell and Frank Henry Edgar Cliff	Alfred Ernest Colebrook of Lindfield, Delicatessen Proprietor, and Margery Doreen Colebrook, his wife	D598006
28.01.1947	Percy Joynson Flecknoe, Arthur Edwin Flecknoe, Florence Joynson Greenwell and Frank Henry Edgar Cliff	Jack Baxter Bolt and Leslie Albert Bolt both of Lindfield, Fruiterers	D598008

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Table 5. Continued...

Date	Transferred/Leased From	Transferred/Leased To	Transfer No.
05.07.1948	Percy Joynson Flecknoe, Arthur Edwin Flecknoe, Florence Joynson Greenwell and Frank Henry Edgar Cliff	Henry David Kensell of Lindfield, Shopkeeper and Zara Millie Kensell, his wife	D853215
24.06.1948	Percy Joynson Flecknoe, Arthur Edwin Flecknoe, Florence Joynson Greenwell and Frank Henry Edgar Cliff	Clarence Cyril Rowlands or Lindfield, Fruiterer	D853217
09.12.1949	Percy Joynson Flecknoe, Arthur Edwin Flecknoe, Florence Joynson Greenwell and Frank Henry Edgar Cliff	Woolworths Properties Limited	F113358
VOL 7063 FOL 57			
06.01.1956		The Council of the Municipality of Ku-ring- gai	F605010
VOL 7466 FOL 215			
27.03.1958		The Council of the Municipality of Ku-ring- gai	G733882

The information obtained from the LTO, LPI and Council Records indicates that certain plots of the Site have had multiple owners over the last 120 years, and has primarily been used for light commercial (car park) and low density residential.

It should be noted that the historical land title searches were only undertaken for Lot 1 in DP 929131, Lot 41 of DP 4388, Lot A in DP 445535 and Lots 1-16 of DP 1099330. The remaining residential plots along the northern boundary of the Site, in particular Lot 9 DP 1090427 (known as 2 Bent St), Lot 10 DP 3498 (known as 4 Bent St), Lot 3 DP 667420 (known as 6 Bent St), Lot 1 DP 724823 (known as 8 Bent St), Lot 1 DP 980108 (known as 10 Bent St) and Lot 5 DP 666521 (known as 12 Bent St) have shown to be used primarily for residential land use from ~1943. As such, the information pertaining from the acquired LTO records would provide no meaningful information relating to potential contamination issues at the Site.

4.2 NSW Office of Environment and Heritage

A search of the NSW Office of Environment and Heritage public register of state heritage inventory items identified no heritage items listed by local councils and shires and state government agencies.

4.3 Aerial Photographs Review

A review of aerial photographs was conducted and is summarised in the following **Table 6**. Aerial photographs from the years of 1943, 1961, 1982, 1986, 2009 and 2016 were examined (refer to Appendix I - Aerial Photographs).

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Table 6. Summary of aerial photography.

Date	Type	Subject Site Description	Adjacent Site Description
1943	Black and White	The northern portion of the Site is comprised of low density residential properties. The eastern portion of the Site appears to be comprised of commercial/industrial properties that extend into the southern portion. The western portion of the Site is comprised of residential plot which is mostly covered with grass and trees and extends into the southern portion of the Site. An unnamed access road separates the western and eastern portions of the Site.	The Site is bound on its northern, western and southern boundaries by low density residential properties. To the east are commercial/industrial properties with the rail corridor beyond.
1961	Black and White	Much of the Site appears unchanged with the exception of a car park being established within the eastern portion of the Site that extends into the southern portion.	The Site is bound on its northern, western and southern boundaries by low density residential properties. To the east are commercial/industrial properties with the rail corridor beyond.
1982	Black and White	Much of the Site appears unchanged with the exception of a car park being established within the western portion of the Site that extends into the southern portion.	The Site is bound on its northern, western and southern boundaries by low density residential properties. To the east are commercial/industrial properties with the rail corridor beyond.
1986	Black and White	The Site appears unchanged from the previous photograph.	The surrounding areas appear unchanged from the previous photograph.
2009	Colour	The Site appears unchanged from the previous photograph.	The surrounding areas appear largely unchanged from the previous photograph, with the exception of the northern boundary where a large retirement village has been constructed.
2016	Colour	The Site appears unchanged from the previous photograph, with the exception of three (3) residential properties along the northern boundary having been demolished.	The surrounding areas appear unchanged from the previous photograph.

4.4 Contaminated Land Register Search

A review of the NSW Office of Environment and Heritage (OEH) 'Contaminated Land – Record of Notices' listed by the NSW EPA under the *Contaminated Land Management Act 1997* does not identify notices related to the source site (refer to Appendix VI – Supporting Documents).

A review of the 'List of NSW Contaminated Site Notified to the EPA' does not identify the source Site as being notified as a contaminated Site.

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4.5 Previous Investigation Reports

No previous investigative reports for the Site or surrounding area have been provided by the client.

4.6 Section 149

The Site has multiple planning zones under the Ku-ring-gai Local Environmental Plan (2012), they are as follows:

- R4 High Density Residential;
- RE1 Public Recreation;
- SP2 Infrastructure; and
- B2 Local Centre.

The Planning Certificates under Section 149 of the *Environmental Planning and Assessment Act 1979* (refer to Appendix IV – Section 149 Certificates) provides the state and local environmental planning instruments which affect the Site.

After assessing all the Section 149s pertaining to the Site, the land is not affected by any of the matters contained in Clause 59(2) as amended in the Contaminated Land Management Act 1997 – as listed:

- a) The land is not significantly contaminated land within the meaning of the Act;
- b) The land is not subject to a management order within the meaning of the Act;
- c) The land is not subject to a voluntary management proposal within the meaning of the Act;
- d) The land is not subject to an ongoing maintenance order; and
- e) The land is not subject to a site audit statement within the meaning of the Act.

4.7 Dial Before You Dig

An online search for utilities located within the site was conducted and is summarised in Table 7, below. Asset owners were notified and provided information on their utilities (refer to Appendix V – Dial Before You Dig).

Table 7. Summary of utilities located on or adjacent to the site

Asset Owner	Utility Type	Utility Location
Ausgrid	N/A	No services present within the boundary of the Site.
Jemena	Gas Main Lines	A 32 mm nylon inserted into a 4 inch cast iron main traverses north to south underneath Drovers Way, it is approximately 0.6 m from the boundary of Lot 1 DP 929131 (known as 1B Beaconsfield Parade). A 110 mm nylon inserted into a 6 inch cast iron main traverses north to south underneath Woodford Lane, it is approximately 1.2 m from the boundary of Lot 1-16 DP 1099330 (known as 19 Drovers Way). A 32 mm nylon inserted into a 4 inch cast iron main traverses east to west underneath Beaconsfield Parade, it is approximately 1.8 m from the boundary of Lot 1 DP 929131 (known as 1B Beaconsfield Parade).

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Table 7. Continued...

Asset Owner	Utility Type	Utility Location
Ku-ring-gai Council	Stormwater Drains	A stormwater drain enters Lot 1 DP 724823 (known as 8 Bent St) and traverses in a north to south direction. It then changes direction at a 90° under Drovers Way into Lot 1 DP 1099330 where it then terminates. Within the southern portion of the Site, two separate stormwater drains enter the Site from the western and eastern boundary respectively. They then connect to a stormwater drain under Drovers Lane that traverses south.
Nextgen Group	N/A	No services present within the boundary of the Site.
Optus	N/A	No services present within the boundary of the Site.
Pipe Networks	Telecommunications	Refer to Telstra DBYD
Sydney Water	Sewage Main	A 225 salt glazed ware sewage main enters the southern portion of the Site along the western boundary into Lot 1 DP 929131 (known as 1B Beaconsfield Parade) traversing east to west. It then turns 90° under Drovers Way before traversing south and off the Site.
Telstra	N/A	A 100 mm square earthenware conduit traverses east to west along Bent Street. Cables lead into the following Lot and Deposited Plans: • 2x2 pair lead into Lot 9 DP 1090427; • 2 pair lead into Lot 10 DP 3498; • 2x2 pair into Lot 3 DP 667420 before splitting into Lot 1 DP 724823; and • 10 pair into Lot 5 DP 666251 before 2x2 pair splits into Lot 1 DP 980108. A footway access chamber is located within the southern portion of Lot 1 DP 929131 (known as 1B Beaconsfield Parade). A conduit traverses south to north before changing direction off Site to the east under Drovers Lane.

4.8 Assessment of Historical Information Integrity

The Site history assessment has been obtained from a variety of resources including government records from the NSW land titles office, local council, historical archives, historical aerial photographs, NSW Office of Water and EPA. The veracity of the information from these sources is considered to be moderate to high. The Site history assessment is generally considered to be of high integrity.

4.9 WorkCover

A search of the Stored Chemical Information Database (SCID) and the microfiche records held by WorkCover NSW has not located any records pertaining to Lot 1 in Deposited Plan (DP) 929131, Lot 41 in DP 4388, Lot A in DP 445535 and Lot 1-16 in DP 1099330 (refer to Appendix VI – Supporting Documents).

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A search of the SCID and microfiche records held by WorkCover NSW was not undertaken for the residential plots along the northern boundary of the Site. Given ADE’s understanding of historical land uses on the Site and as well as historical aerial photographs, it is considered unlikely that licensable quantities of dangerous goods have been stored on the site.

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5 POTENTIAL CONTAMINATION TYPES AND RECEPTORS

5.1 Potential Contamination Types

Table 8 below provides details of potential contamination types that were identified during the investigation. These Contaminants of Potential Concern (COPC) were noted for each have the potential to have migrated to or be found on the Site based on the Site history.

For the purposes of this PSI, the following qualitative risk assessment has been applied:

- Low Risk – the activities and related COPC are likely to pose no or a low potential environmental impact. Any impact is likely localised to a specific area of the Site;
- Medium Risk – the activities and related COPC are likely to pose potential for moderate environmental impact. Any impact is likely localised to a specific area of the Site; and
- High Risk – the activities and related COPC could pose a significant environmental impact. There is potential for impacts of the immediate local area of the Site or off-site migration impacting surrounding environmental receptors.

Table 8. Potential Sources, Locations and Types of Contaminants.

Potential Source of contamination	Location	Migration pathway	Potential Risk	Contaminants of Potential Concern
Surrounding land-uses, roads	Northern, western and southern boundaries of the Site	• Downward migration and leaching of contaminants via infiltration of rain water through soil; • Lateral migration via groundwater to surface waters and off-site groundwater; • Overland flow of groundwater to off-site soils and surface waters; and • Volatilisation/dispersion airborne particulates due to wind.	Low	• Heavy Metals; • Poly Aromatic Hydrocarbons (PAHs); • Total Recoverable Hydrocarbons (TRHs); and • Benzene, Toluene, Ethyl Benzene and Xylenes (BTEX).
Parked vehicles (leaking hydrocarbons i.e. motor oil)	Entire Site	• Downward migration and leaching of contaminants via infiltration of rain water through soil; • Lateral migration via groundwater to surface waters and off-site groundwater; • Overland flow of groundwater to off-site soils and surface waters; and • Volatilisation of subsurface contaminants.	Low	• Heavy Metals; • PAHs; • TRHs; and • BTEX.
Dry Cleaning Business	On site migration of contaminants	• Downward migration and leaching of contaminants via infiltration of rain water through soil; • Lateral migration via groundwater to surface waters and off-site groundwater; • Overland flow of groundwater to off-site soils and surface waters; and • Volatilisation of subsurface contaminants.	Low	• Volatile Chlorinated Hydrocarbons (VCHs).

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Table 8. Continued...

Potential Source of contamination	Location	Migration pathway	Potential Risk	Contaminants of Potential Concern
Poor demolition and removal practices	Northern section of the Site where three (3) low density residential properties were demolished	- Downward migration and leaching of contaminants via infiltration of rain water through soil; - Lateral migration via groundwater to surface waters and off-site groundwater; - Overland flow of groundwater to off-site soils and surface waters; and - Volatilisation/dispersion airborne particulates due to wind.	Low	- Heavy Metals; and - Asbestos.
Use of Pesticides/ Insecticides on vegetated medians	All vegetated medians or grassed areas	- Downward migration and leaching of contaminants via infiltration of rain water through soil; - Lateral migration via groundwater to surface waters and off-site groundwater; - Overland flow of groundwater to off-site soils and surface waters; and - Volatilisation of contaminants.	Low	Organochlorine Pesticides (OCPs) and Organophosphorous Pesticides (OPPs); and
Use of Imported Fill Material	Entire Site	- Downward migration and leaching of contaminants via infiltration of rain water through soil; - Lateral migration via groundwater to surface waters and off-site groundwater; - Overland flow of groundwater to off-site soils and surface waters; and - Volatilisation/dispersion airborne particulates due to wind.	Medium	- Heavy Metals; - PAHs; - TRHs; - BTEX; - OCP/OPPs; and - Polychlorinated Biphenyl's (PCBs).
Parked vehicle (leaking hydrocarbons i.e. motor oil)	Single car park garage north eastern portion of northern section	- Downward migration and leaching of contaminants via infiltration of rain water through soil; - Lateral migration via groundwater to surface waters and off-site groundwater; - Overland flow of groundwater to off-site soils and surface waters; and - Volatilisation of subsurface contaminants.	Low	- Heavy Metals; - PAHs; - TRHs; and - BTEX.
Substation	Adjacent to the southern section of the Site	- Downward migration and leaching of contaminants via infiltration of rain water through soil; - Lateral migration via groundwater to surface waters and off-site groundwater; - Overland flow of groundwater to off-site soils and surface waters; and - Volatilisation of subsurface contaminants.	Low	Polychlorinated Biphenyl's (PCBs).

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No specific assessment of groundwater contamination has been undertaken within this investigation. There is no information currently available to ADE regarding the groundwater quality status within the site, including the depth to the standing water level. If groundwater is expected, or encountered during investigative works or during construction (including de-watering of the site), a groundwater assessment is recommended to be undertaken. If groundwater is not expected to be encountered during intrusive works or construction, a risk assessment following investigation of overlying soils should be undertaken to determine if further investigation of groundwater is warranted.

5.2 Potential Transport Mechanism

Primary transport mechanisms for the migration of potential contaminants on to the site or off the site include:

- Downward migration and leaching of contaminants into groundwater via infiltration of rain water into soil;
- Lateral migration via groundwater to surface waters;
- Volatisation of soil/groundwater contaminants and inhalation;
- Surface water runoff and storm water drainage; and
- Airborne particulates due to wind.

5.3 Potential Contamination Receptors

The main potential contamination receptors were considered to include:

- Future construction / utility workers involved in the excavation and construction of the Lindfield Community Hub;
- Neighbouring residents during the excavation and construction of the future development at the Site;
- Future residents and or users of the Site; and
- Local groundwater and Little Blue Gum Creek.

5.4 Conceptual Site Contamination Model

A conceptual site model outlining sources of contamination, pathways and potential receptors is provided in the following Figure 3.

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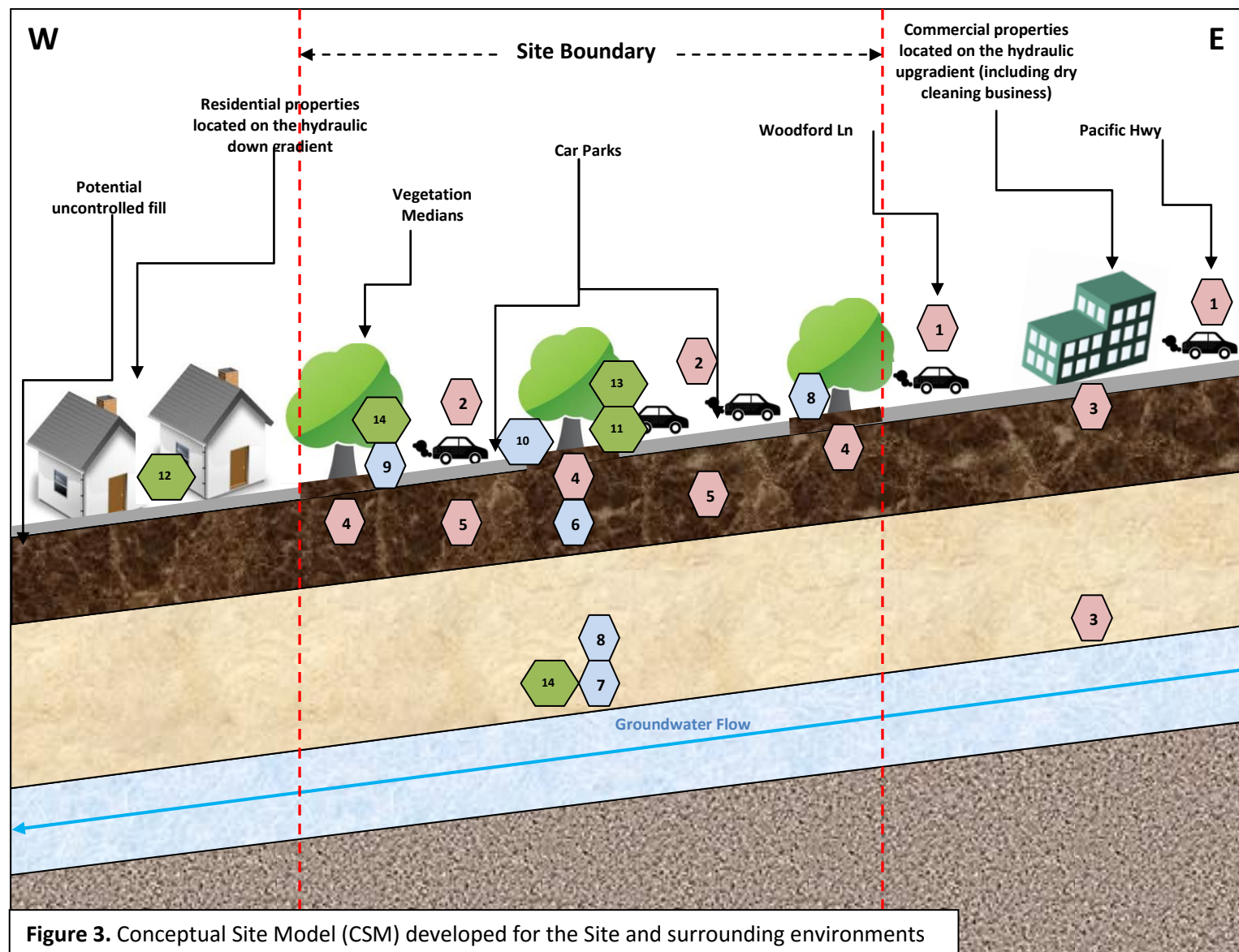
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LEGEND

Sources of COPCs

1. Vehicle emissions associated with surrounding Bent St, Woodford Lane and Pacific Hwy.
2. Vehicle emissions and leaking of motor oil on asphalt car park surface.
3. Downward migration of contaminants i.e. VCHs associated with dry cleaning services
4. Pesticides and Insecticides use on vegetation medians
5. Use of uncontrolled fill beneath the car park.

Primary Transport Mechanisms

6. Downward migration and leaching of contaminants into groundwater via infiltration of rain water into soil.
7. Lateral migration via groundwater to surface waters.
8. Volatilisation of soil/groundwater contaminants and inhalation.
9. Surface water runoff and storm water drainage.
10. Airborne particulates due to wind.

Potential Contamination Receptors

11. Future construction / utility workers involved in the excavation and construction of the Lindfield Community Hub.
12. Neighbouring residents during the excavation and construction of the future development at the Site.
13. Future residents and or users of the Site.
14. Local groundwater and Little Blue Gum Creek.



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6 Discussion

During the course of the Site inspection no indicators either visual or olfactory staining was observed within the vegetation medians, grass parkland area and the demolished residential area within the Site. However visual hydrocarbon staining was observed throughout the surface of the asphalt car park. Potential contamination risk associated with underlying soils/groundwater as a result of hydrocarbon staining of the asphalt car park are Heavy Metals in particular Lead, TRHs, PAHs and BTEXs is considered to be low.

The Site is bound on three of its boundaries (north, east and south) by medium density residential roads Bent Street, Woodford Lane and Beaconsfield Parade as well as approximately 50% of the Site used predominantly as a car park (asphalt surface). Given the related high volume of motor vehicular use over the course of ~60 years, the potential contamination risks associated with underlying soils/groundwater and surrounding vegetation medians/grassed parklands as a result of vehicle emissions are Heavy Metals in particular Lead, TRHs, PAHs and BTEXs is considered to be low.

Access was restricted to the demolished low density residential plots within the northern section of the Site, however fragmented building debris was observed strewn across the surface of the area. Potential contamination risks associated with soils/groundwater as a result of poor demolition practices are Heavy Metals and Asbestos is considered to be low.

Approximately 10% of the Site was covered in vegetation medians and parklands with grass and mature trees. All vegetated median displayed some level of general wear and tear with some brown discolouration of grass or complete exposure of underlying soils. The discolouration and exposure of soils is attributed to Site traffic both pedestrian/vehicular, poor nutrient uptake and high heat/low water. However this may also be associated with the phytotoxicity effects correlated with the potential use of pesticides and/or insecticides.

A dry cleaning business is located east of the Site on 344 Pacific Highway, Lindfield NSW approximately 50 m on the hydraulic upgradient from the Site. Potential contamination risks associated with soils/groundwater as a result of dry cleaning practices are Volatile Chlorinated Hydrocarbons are considered to be low.

A review of historical aerial photographs revealed that the Site has been used as low density residential and commercial properties from the 1940s-1950s. Since then, the Site has been predominantly used a car park and low density residential properties. As such, the potential contamination risk associated with historical contamination related with uncontrolled fill material beneath the car park is considered to be medium.

No evidence of asbestos containing materials, Underground Storage Tanks (USTs) and Aboveground Storage Tanks were observed across the Site during the time of the inspection.

Results from the Stored Chemical Information Database no dangerous goods have were registered to the Site.

Upon review the available information presented within the body of this report, it is the opinion of ADE that there is the potential for contaminants of concern to pose a risk to the proposed future developers and users of the Site and that further investigation into the nature and extent of contamination (if present) is required.

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7 CONCLUSIONS AND RECOMMENDATIONS

Areas that may be impacted by potential contamination were identified on the basis of the available Site information and during the Site inspection. Based on the data and evidence collected, the potential for contamination to be present within the Site is considered Low to Medium.

The information collected during the historical assessment and Site inspection indicate that the Site is generally suitable for the intended redevelopment as the Lindfield Community Hub subject to the following being addressed:

- A detailed Phase II Detailed Site Investigation (DSI) is required to determine that the Site is suitable for the proposed development. The works should comprise of the following:
 - An intrusive subsurface investigation throughout the Site to target the fill materials and determine the lateral and vertical extent (if any) of potential contaminants of concern (i.e. Heavy metals, TPHs, PAHs, BTEX, PCBs, OCPs/OPPs and Asbestos), as identified within the Conceptual Site Model (refer to section 5.4);
 - The Phase II DSI should target soils throughout the Site in a systematic/judgemental manner so as to target soils underlying; the asphalt car parks, demolished/current low density residential properties, within the vegetated/grassed median areas and single car park garage;
 - Due to the presence of the dry cleaning business on the hydraulic upgradient of the Site, assessment of soils/groundwater for VCHs should be undertaken. Given the volatile nature of VCHs, soil assessment alone is not suitable to characterise the presence of the contaminant. As such, a groundwater well should be installed adjacent to the dry cleaning business with subsequent groundwater sampling undertaken; and
 - Prior to the demolition, ADE recommends a Hazardous Materials Survey be undertaken within the Site, on all remaining onsite structures and fabric (if not already undertaken).

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8 LIMITATIONS

This report has been prepared for use by the client who has commissioned the works in accordance with the project brief only and has been based on information provided by the client. The advice herein relates only to this project and all results, conclusions and recommendations made should be reviewed by a competent and experienced person with experience in environmental investigations, before being used for any other purpose. A.D. Envirotech Australia Pty Ltd (ADE) accepts no liability for use or interpretation by any person or body other than the client who commissioned the works. This report should not be reproduced or amended in any way without prior approval by the client or ADE and should not be relied upon by any other party, who should make their own independent enquiries.

Furthermore, soils, rock and aquifer conditions are often variable, resulting in non-homogenous contaminant distributions across a Site. Boundaries between zones of variable contamination are often indistinct and have been interpreted based on available information and the application of professional judgement. The accuracy with which the subsurface conditions have been characterised depends on the frequency and methods of sampling and the uniformity of subsurface conditions and is therefore limited by the scope of works undertaken.

This report does not provide a complete assessment of the environmental status of the Site and it is limited to the scope defined herein. Should information become available regarding conditions at the Site including previously unknown sources of contamination, ADE reserves the right to review the report in the context of the additional information.

Access to the interior of the house, stand alone garage and associated ancillary buildings could not be gained during the Site inspection, should any suspect materials or the storage of chemicals be uncovered, the information should be provided to ADE for review of the available information.

ADE's professional opinions are based upon its professional judgement, experience, training and results from analytical data. In some cases further testing and analysis may be required, thus producing different results and/or opinions. ADE has limited investigation to the scope agreed upon with its client.

ADE has used a degree of care and skill ordinarily exercised in similar investigations by reputable member of the Environmental Industry within Australia. No other warranty, expressed or implied, is made or intended.

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9 REFERENCES

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25. *WHS Act 2011.*
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Appendix I – Aerial Photographs



Aerial Photograph 1. Aerial photograph of the Site dated August 1943 with approximate Site boundary. Sourced from the SixMap, accessed on the 27.05.2016.



Aerial Photograph 2. Aerial photograph of the Site dated 1961 with approximate Site boundary. Sourced from the Department of Finance and Services records, accessed on the 27.05.2016.

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Aerial Photograph 3. Aerial photograph of the Site dated 1982 with approximate Site boundary. Sourced from the Department of Finance and Services records, accessed on the 27.05.2016.



Aerial Photograph 4. Aerial photograph of the Site dated 1986 with approximate Site boundary. Sourced from the Department of Finance and Services records, accessed on the 27.05.2016.

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Aerial Photograph 5. Aerial photograph of the Site dated 2009 with approximate Site boundary. Sourced from Nearmap, accessed 27.05.2016.



Aerial Photograph 6. Aerial photograph of the Site dated 5th May 2016 with approximate Site boundary. Sourced from Nearmap, accessed 27.05.2016.

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Appendix II – Photographs

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Photograph 1 – Northern section of the Site from Bent Street (facing west). Former low density residential properties have been demolished.



Photograph 2 – Note the brown discolouration of the grasses and exposed soil. Fragments of building debris can also be observed.



Photograph 3 – Residential property within the northern section which appears occupied.



Photograph 4 – Corner of Bent St and Woodford Ln. Medium density road infrastructure. Sloping to the south west.



Photograph 5 – Dry cleaning business located on Pacific Hwy. Located east of the Site and on the hydraulic upgradient.



Photograph 6 – Woodford Ln bound to the entire eastern boundary of the Site. Also acts as a rear access for many of the commercial properties.

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Photograph 7 – Electrical substation located between Woodford Ln and Beaconsfield Parade (south east of the Site).



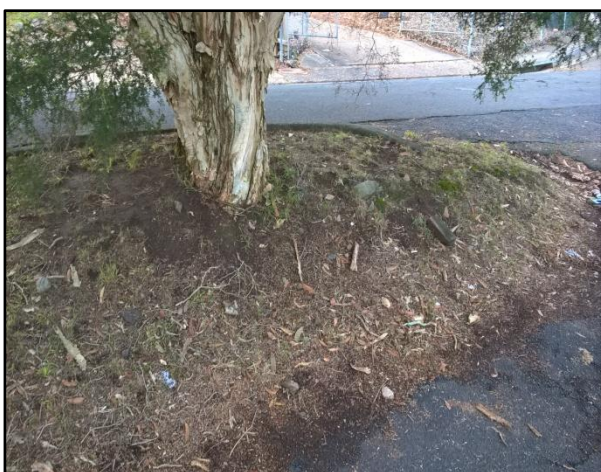
Photograph 8 – View of the southern section of the Site from Beaconsfield Parade (facing north). Commuter car park, asphalt surface.



Photograph 9 – Typical representation of the car park surface, cracks/fractures, hydrocarbon staining and litter.



Photograph 10 – Close up of the car park surface fractures and hydrocarbon staining.



Photograph 11 – One of multiple vegetation medians throughout the Site. Note the general wear/tear and brown discolouration.



Photograph 12 – Single car covered garage within the NE portion of the southern section.

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Appendix III – Acid Sulphates Soils

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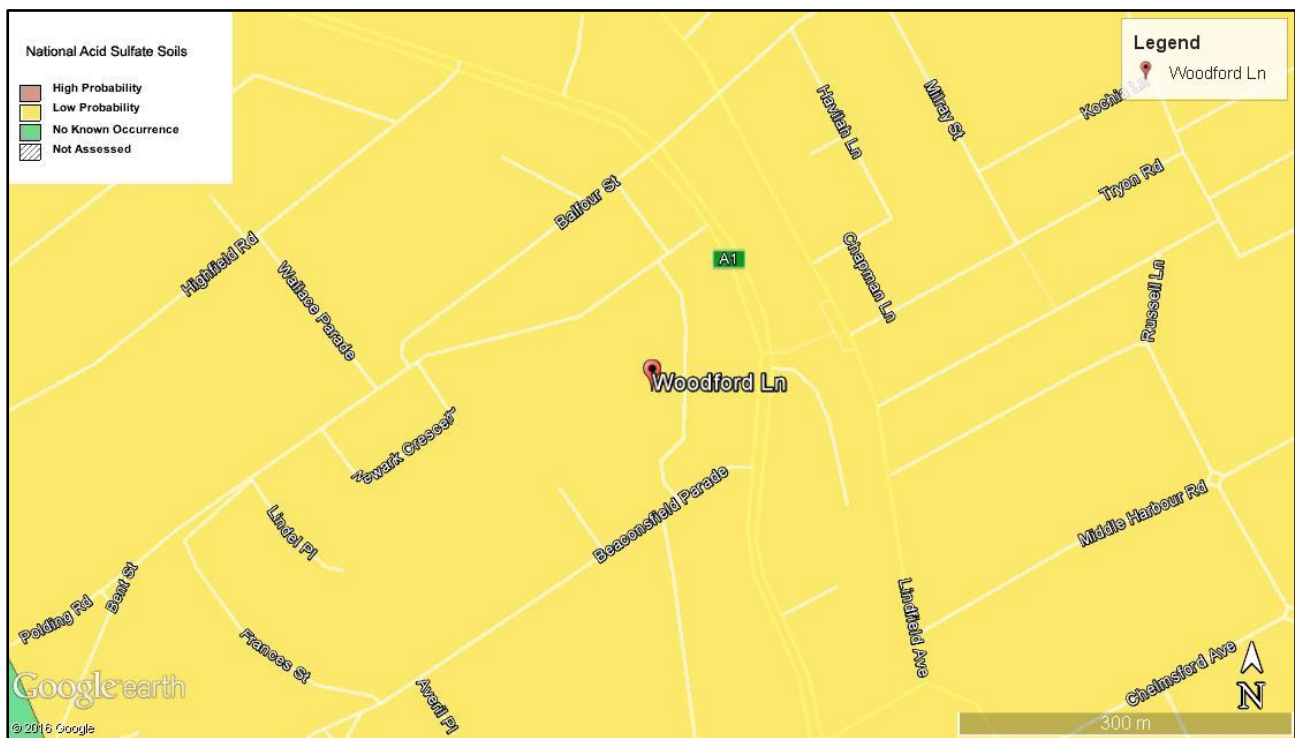


Figure 4. Map showing probability of acid sulphate soils in at the Site (map adapted from Google Earth, ASRIS-Acid Sulphate Soil Map accessed 27.05.16).

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Appendix IV – Section 149 Certificates

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PLANNING CERTIFICATE

UNDER SECTION 149 OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

818 Pacific Highway, Gordon NSW 2072
Locked Bag 1056, Pyrmont NSW 2073
T 02 9424 0000 F 02 9424 0001
DX 8703 Gordon TTY 02 9424 0875
E kmc@kmc.nsw.gov.au
W www.kmc.nsw.gov.au
ABN 86 408 856 411



PROPERTY DETAILS

Address: Drovers Way LINDFIELD NSW 2070

Lot Description: Lots 41 & 42 DP 4388

CERTIFICATE DETAILS

Certificate No: PC3702/12

Certificate Date: 26/11/2012

Certificate Type: Section 149(2)

Receipt No: 352142

APPLICANT'S DETAILS

REF: 0

Yannick Hammond
4/10-11 Millennium Ct
SILVERWATER RD NSW 2128

BACKGROUND INFORMATION

This certificate provides information on how a property (such as land, a house, a commercial building, etc.) may be used and the limits on its development. The certificate contains information Council is aware of through its records and environmental plans with data supplied by the State Government. The details contained in this certificate are limited to that required by Section 149 of the Environmental Planning and Assessment Act.

1. WHICH ENVIRONMENTAL PLAN RESTRICTS THE USE OF THIS PROPERTY?

(Including planning proposals and draft local environmental plans exhibited prior to 1 July 2009 pursuant to section 66(1) b of the E. P. & A. Act).

Ku-ring-gai Planning Scheme Ordinance as prescribed in Government Gazette No.108 of 1 October 1971.

Draft Local Environmental Plan No.191 – Preservation of Trees.

Draft Local Environmental Plan No.195.

Draft Local Environmental Plan No.192 and Draft Development Control Plan No.46 – Exempt and Complying Development.

Draft Ku-ring-gai Local Environmental Plan (Local Centres) 2012

Planning Proposal to amend the Ku-ring-gai Planning Scheme Ordinance to incorporate provisions for biodiversity, riparian land and heritage conservation areas.

2. WHAT IS THE ZONING OF THIS PROPERTY and the relevant environmental plan?

(Zoning is a way of classifying land and limits the range of uses or activities that may be permitted on that land or property).

Part zoned Special Uses 5(a) (Parking) and part shown unzoned

under the provisions of the Ku-ring-gai Planning Scheme Ordinance as prescribed in Government Gazette No.108 of 1 October 1971.

3. WHAT DOES NOT REQUIRE DEVELOPMENT CONSENT under the above environmental plan(s)?

For that part zoned Special Uses 5(a) (Parking) - Exempt Development as described in Schedule 1 of Development Control Plan No.46 – Exempt and Complying Development and Clause 24 of the Ku-ring-gai Planning Scheme Ordinance.

For that part shown unzoned - Exempt Development as described in Schedule 1 of Development Control Plan No 46.

4. WHAT DOES REQUIRE DEVELOPMENT CONSENT under the above environmental plan(s)?

For that part zoned Special Uses 5(a) (Parking) - Demolition of a building or work (being demolition that is not exempt development). Development (other than exempt development) for the purpose of: utility installations other than generating works or gas holders; special events; parking.

For that part shown unzoned - This land is not zoned nor subject to any Ku-ring-gai environmental plans, uses or activities which require development consent are as per those contained in the planning instruments listed in Question 7 below.

5. WHAT IS PROHIBITED by the above environmental plan(s)?

For that part zoned Special Uses 5(a) (Parking) - Any development other than permitted by 3 or 4 above.

For that part shown unzoned - This land is not zoned nor subject to any Ku-ring-gai environmental plans, uses or activities which require development consent are as per those contained in the planning instruments listed in Question 7 below.

6. DO THE DIMENSIONS OF THE LAND PERMIT THE ERECTION OF A DWELLING HOUSE ON THIS PROPERTY?

For that part zoned Special Uses 5(a) (Parking) - Not applicable. Dwelling houses are not permitted within this zone.

For that part shown unzoned - This land is not zoned and is not subject to the provisions of the Ku-ring-gai environmental plans that regulate minimum dimension sizes for the erection of a dwelling house.

7. WHAT OTHER PLANNING INSTRUMENTS AFFECT THIS PROPERTY?

(State and deemed state environmental plans are prepared by the State Government and cover issues as varied as rivers, residential development, employment, etc. If you have any further enquiries please contact the Department of Planning, Tel: 02 9228 6333 or email information@planning.nsw.gov.au..

Draft State Environmental Planning Policy (Competition)

Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005

State Environmental Planning Policy No.1 - Development Standards.

State Environmental Planning Policy No.4 - Development without Consent and Miscellaneous Exempt and Complying Development.

State Environmental Planning Policy No.6 - Number of storeys in a building.

State Environmental Planning Policy No.19 - Bushland in Urban Areas.

State Environmental Planning Policy No.21 - Caravan Parks

State Environmental Planning Policy No.32 - Urban Consolidation (Redevelopment of Urban Land).

State Environmental Planning Policy No.33 - Hazardous & Offensive Development.

State Environmental Planning Policy No.44 - Koala Habitat Protection.

State Environmental Planning Policy No.55 - Remediation of Land.

State Environmental Planning Policy No.60 - Exempt and Complying Development.

State Environmental Planning Policy No.62 - Sustainable Aquaculture.

State Environmental Planning Policy No.64 - Advertising and Signage.

State Environmental Planning Policy No.65 - Design Quality of Residential Flat Development.

State Environmental Planning Policy No.70 - Affordable Housing(Revised Schemes).

State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004.

State Environmental Planning Policy (Major Development) 2005.

State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007.

State Environmental Planning Policy (Temporary Structures) 2007.

State Environmental Planning Policy (Infrastructure) 2007.

State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

State Environmental Planning Policy (Affordable Rental Housing) 2009.

State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004.

8. WHICH DEVELOPMENT CONTROL PLANS APPLY TO THE PROPERTY?

(A development control plan adds further detail to local environmental plans and may address issues such as building height, car parking etc. Copies of the Plans are available from Council).

Development Control Plan No.28 - Advertising Signs
Development Control Plan No.31 - Access
Development Control Plan No.40 - Construction and Demolition Waste Management
Development Control Plan No.42 - Regulation of Brothels
Development Control Plan No.43 - Car Parking for Development in Ku-ring-gai Council Area
Development Control Plan No.46 - Exempt and Complying Development
Development Control Plan No.47 - Water Management
Development Control Plan No.56 - Notification
Development Control Plan No.57 - Child Care Centres

9. WHICH DEVELOPMENT CONTRIBUTION PLANS APPLY IF THIS PROPERTY IS DEVELOPED?

(A Development Contribution Plan – commonly known as a Section 94 Plan outlines the financial costs Council charges if a property is developed and Council believes the development will require additional services or facilities such as parks, roads etc. Copies of the Plans are available from Council).

Ku-ring-gai Contributions Plan 2010.

10. IS THE PROPERTY IDENTIFIED AS A HERITAGE ITEM by Council or State Government? (and if so, what is the status, e.g. local environmental plan, Heritage Act etc.)

No.

***SPECIAL NOTE:** Your attention is drawn to Clause 61E of the Ku-ring-gai Planning Scheme Ordinance which states that Council shall not grant consent to an application to carry out development on land in the vicinity of a heritage item unless it has made an assessment of the effect the carrying out of that development will have on the heritage significance of the item and its setting.*

11. IS THE PROPERTY IN A CONSERVATION AREA?

No.

***SPECIAL NOTE:** A conservation area is a place of historic and aesthetic value to the community. It contains a number of elements of significance, such as a historic subdivision layout, a pattern of building "footprints" within each street block, buildings of historic and architectural importance, road alignments, trees, gutters and kerb edges which all combine to create a sense of place that is worth keeping. Council's Heritage Conservation Planner can provide you with more information on this matter.*

12. DOES THE PROPERTY INCLUDE OR COMPRISE CRITICAL HABITAT?

No.

13. IS THE PROPERTY AFFECTED BY A ROAD WIDENING OR ROAD REALIGNMENT under the Roads Act, any environmental planning instrument or any Council resolution?

No.

14. IS THE PROPERTY RESERVED FOR ACQUISITION BY A PUBLIC AUTHORITY UNDER ANY ENVIRONMENTAL PLAN OR PROPOSED ENVIRONMENTAL PLAN?

No.

15. IS THE PROPERTY PART OF ANY APPLICATION DECLARED TO BE "STATE SIGNIFICANT DEVELOPMENT"?

(Development is judged to be "State significant" if the Minister for Planning declares it to be so based on substantial cost of development, significant numbers of employees or other criteria. If you have any further enquiries please contact the Department of Planning, Tel: 02 9228 6333 or email information@planning.nsw.gov.au.)

No.

16. IS THE PROPERTY AFFECTED BY SECTION 38 OR 39 OF THE COASTAL PROTECTION ACT?

No.

17. IS THE PROPERTY WITHIN A "PROCLAIMED MINE SUBSIDENCE DISTRICT"?

No.

**18. IS THE PROPERTY AFFECTED BY ONE OF THE MATTERS
PRESCRIBED BY SECTION 59(2) OF THE CONTAMINATED LAND
MANAGEMENT ACT 1997?**

No.

SPECIAL NOTE: If you have any concerns about land contamination beyond the information described in this certificate, you should contact the NSW Office of Environment & Heritage. Tel: 131 555 or email info@environment.nsw.gov.au.

19. IS THE PROPERTY BUSH FIRE PRONE LAND?

No.

**20. IS THE PROPERTY, LAND TO WHICH A PROPERTY VEGETATION
PLAN UNDER THE *NATIVE VEGETATION ACT 2003* APPLIES?**

No.

**21. IS THE PROPERTY, LAND SUBJECT TO AN ORDER UNDER THE
TREE (DISPUTES BETWEEN NEIGHBOURS) ACT 2006?**

The land is not known to be subject to such order.

**22. IS THE PROPERTY SUBJECT TO DIRECTIONS UNDER PART 3A
MAJOR INFRASTRUCTURE AND OTHER PROJECTS of the
Environmental Planning & Assessment Act 1979 No.203?**

No.

**23. IS THE PROPERTY SUBJECT TO A CURRENT SITE
COMPATIBILITY CERTIFICATE AND CONDITIONS FOR SENIORS
HOUSING under the provisions of State Environmental Planning Policy
(Housing for Seniors or People with a Disability) 2004?**

No.

- 24. IS THE PROPERTY SUBJECT TO A VALID SITE COMPATIBILITY CERTIFICATE FOR INFRASTRUCTURE issued under clause 19 of State Environmental Planning Policy (Infrastructure) 2007?**

No.

- 25. IS THE PROPERTY SUBJECT TO A VALID SITE COMPATIBILITY CERTIFICATE AND CONDITIONS FOR AFFORDABLE RENTAL HOUSING issued under clause 37 of State Environmental Planning Policy (Affordable Rental Housing) 2009?**

No.

- 26. IS THE PROPERTY SUBJECT TO AN EXEMPTION UNDER SECTION 23 OR AUTHORISATION UNDER SECTION 24 OF THE NATIONAL BUILDING AND JOBS PLAN (*STATE INFRASTRUCTURE DELIVERY*) ACT 2009?**

No.

- 27. IS THE PROPERTY, LAND THAT IS BIODIVERSITY CERTIFIED LAND WITHIN THE MEANING OF PART 7AA OF THE THREATENED SPECIES CONSERVATION ACT 1995?**

No.

Special Note: For further information about the Biodiversity Certified Land contact the NSW Office of Environment & Heritage. Tel:131 555 or email info@environment.nsw.gov.au.

- 28. IS THE PROPERTY, LAND TO WHICH A BIOBANKING AGREEMENT UNDER PART 7A OF THE THREATENED SPECIES CONSERVATION ACT 1995 RELATES?**

No.

Special Note: For further information about the Biobanking agreement contact the Biobanking Team at NSW Office of Environment & Heritage. Tel:131 555 or email biobanking@environment.nsw.gov.au.

29. IS THE PROPERTY, LAND ON WHICH COMPLYING DEVELOPMENT MAY BE CARRIED OUT UNDER EACH OF THE CODES FOR COMPLYING DEVELOPMENT IN STATE ENVIRONMENTAL PLANNING POLICY (EXEMPT AND COMPLYING DEVELOPMENT CODES) 2008 AND, IF COMPLYING DEVELOPMENT MAY NOT BE CARRIED OUT ON THAT LAND BECAUSE OF ONE OR MORE OF THE REQUIREMENTS UNDER CLAUSES 1.17A(c) AND (d) AND 1.19 OF THAT POLICY, WHY IT MAY NOT BE CARRIED OUT ON THAT LAND?

General Housing Code

Complying development under the General Housing Code **may** be carried out on the land.

Housing Alterations Code

Complying development under the Housing Internal Alteration Code **may** be carried out on the land.

General Development Code

Complying development under the General Development Code **may** be carried out on the land.

General Commercial and Industrial Code

Complying development under the General Commercial and Industrial Code **may** be carried out on the land.

Subdivision Code

Complying development under the Subdivision Code **may** be carried out on the land.

Demolition Code

Complying development under the Demolition Code **may** be carried out on the land.

SPECIAL NOTE: The above question relates to whether or not the land falls within an exclusion area under Clauses 1.17A(c) and (d) 1.19 of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. It is your responsibility to ensure that you comply with any other general requirements of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. Failure to comply with these provisions may mean that a Complying Development Certificate issued under the provisions of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 is invalid.

30. DO ANY ADOPTED COUNCIL POLICIES OR RESOLUTIONS OR ANY POLICIES ADOPTED BY A PUBLIC AUTHORITY REQUIRED TO BE REFERRED TO IN A PLANNING CERTIFICATE RESTRICT THE DEVELOPMENT OF THE PROPERTY DUE TO THE LIKELIHOOD OF LANDSLIP, BUSHFIRES, TIDAL INUNDATION, SUBSIDENCE, CONTAMINATION, ACID SULPHATE SOILS OR ANY OTHER RISK (OTHER THAN FLOODING)?

YES. "Development Control Plan No.38 – Residential Design Manual" contains details regarding bushfire risk. For further information on the requirements of DCP No.38 please contact Council's Development & Regulations, Tel. 9424-0000.

Note: A review of Council's readily available records has been conducted to identify previous land uses that may have caused land contamination. This review did not reveal any reason for contamination of this property. However, prior to urban settlement, sizeable areas of Ku-ring-gai were covered by agricultural and horticultural activities. These uses are listed in the Managing Land Contamination Planning Guidelines as activities that may cause contamination. If you are concerned about possible contamination of the site you should make your own investigations regarding the condition of this property.

31. DO ANY ADOPTED COUNCIL POLICIES OR RESOLUTIONS OR ANY POLICIES ADOPTED BY A PUBLIC AUTHORITY REQUIRED TO BE REFERRED TO IN A PLANNING CERTIFICATE EFFECT THE DEVELOPMENT OF THE PROPERTY DUE TO FLOOD RELATED DEVELOPMENT CONTROLS INFORMATION?

Yes. Development Control Plan No.47 - Water Management.

32. OTHER INFORMATION RELATING TO DEVELOPMENT OF THE SITE.

A Tree Preservation Order applies to all land in the Ku-ring-gai Local Government Area. The Order aims to conserve Ku-ring-gai's tree canopy. The Order prohibits the ring barking, cutting down, lopping, pruning, removing, injuring or wilful destruction of any tree with a height greater than 5 metres or a canopy spread greater than 4 metres, unless the owner has the written consent of Council. A penalty can be imposed if the requirements of the Order are not complied with. For more information on the Tree Preservation Order please contact Council's Customer Service on 9424-0000.

33. DO YOU NEED TO REFER TO ANY OTHER DOCUMENTS?

Yes. The Environmental Planning and Assessment Act 1997 commenced operation on 1 July 1998. As a consequence of this Act the information contained in this certificate needs to be read in conjunction with the provisions of the Environmental Planning and Assessment (Amendment) Regulation 1998, Environmental Planning and Assessment (Further Amendment) Regulation 1998 and Environmental Planning and Assessment (Savings and Transitional) Regulation 1998. Your solicitor will have a copy of this legislation or it may be obtained from the Government Information Office.

John McKee
General Manager,

Per

A handwritten signature in black ink, appearing to be 'J. McKee', is written over a horizontal line.

PLANNING CERTIFICATE

UNDER SECTION 149 OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

818 Pacific Highway, Gordon NSW 2072
Locked Bag 1056, Pymble NSW 2073
T 02 9424 0000 F 02 9424 0001
DX 8703 Gordon TTY 02 9424 0875
E kmc@kmc.nsw.gov.au
W www.kmc.nsw.gov.au
ABN 86 408 856 411



PROPERTY DETAILS

Address: 19 Drovers Way LINDFIELD NSW 2070

Lot Description: Lots 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 & 16 DP
1099330

CERTIFICATE DETAILS

Certificate No: PC3699/12

Certificate Date: 26/11/2012

Certificate Type: Section 149(2)

Receipt No: 352142

APPLICANT'S DETAILS

REF: Ku-ring-gai Council

Yannick Hammond
4/10-11 Millennium Ct
SILVERWATER RD NSW 2128

BACKGROUND INFORMATION

This certificate provides information on how a property (such as land, a house, a commercial building, etc.) may be used and the limits on its development. The certificate contains information Council is aware of through its records and environmental plans with data supplied by the State Government. The details contained in this certificate are limited to that required by Section 149 of the Environmental Planning and Assessment Act.

1. WHICH ENVIRONMENTAL PLAN RESTRICTS THE USE OF THIS PROPERTY?

(Including planning proposals and draft local environmental plans exhibited prior to 1 July 2009 pursuant to section 66(1) b of the E. P. & A. Act).

Ku-ring-gai Planning Scheme Ordinance as prescribed in Government Gazette No.108 of 1 October 1971.

Draft Local Environmental Plan No.191 – Preservation of Trees.

Draft Local Environmental Plan No.195.

Draft Local Environmental Plan No.192 and Draft Development Control Plan No.46 – Exempt and Complying Development.

Draft Ku-ring-gai Local Environmental Plan (Local Centres) 2012

Planning Proposal to amend the Ku-ring-gai Planning Scheme Ordinance to incorporate provisions for biodiversity, riparian land and heritage conservation areas.

2. WHAT IS THE ZONING OF THIS PROPERTY and the relevant environmental plan?

(Zoning is a way of classifying land and limits the range of uses or activities that may be permitted on that land or property).

Special Uses 5(a) (Parking)

under the provisions of the Ku-ring-gai Planning Scheme Ordinance as prescribed in Government Gazette No.108 of 1 October 1971.

3. WHAT DOES NOT REQUIRE DEVELOPMENT CONSENT under the above environmental plan(s)?

Exempt Development as described in Schedule 1 of Development Control Plan No.46 – Exempt and Complying Development and Clause 24 of the Ku-ring-gai Planning Scheme Ordinance.

4. WHAT DOES REQUIRE DEVELOPMENT CONSENT under the above environmental plan(s)?

Demolition of a building or work (being demolition that is not exempt development).
Development (other than exempt development) for the purpose of: utility installations other than generating works or gas holders; special events; parking.

5. WHAT IS PROHIBITED by the above environmental plan(s)?

Any development other than that permitted by 3 or 4 above.

6. DO THE DIMENSIONS OF THE LAND PERMIT THE ERECTION OF A DWELLING HOUSE ON THIS PROPERTY?

Not applicable. Dwelling houses are not permitted within this zone.

7. WHAT OTHER PLANNING INSTRUMENTS AFFECT THIS PROPERTY?

(State and deemed state environmental plans are prepared by the State Government and cover issues as varied as rivers, residential development, employment, etc. If you have any further enquiries please contact the Department of Planning, Tel: 02 9228 6333 or email information@planning.nsw.gov.au..

Draft State Environmental Planning Policy (Competition)

Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005

State Environmental Planning Policy No.1 - Development Standards.

State Environmental Planning Policy No.4 - Development without Consent and Miscellaneous Exempt and Complying Development.

State Environmental Planning Policy No.6 - Number of storeys in a building.

State Environmental Planning Policy No.19 - Bushland in Urban Areas.

State Environmental Planning Policy No.21 - Caravan Parks

State Environmental Planning Policy No.32 - Urban Consolidation (Redevelopment of Urban Land).

State Environmental Planning Policy No.33 - Hazardous & Offensive Development.

State Environmental Planning Policy No.44 - Koala Habitat Protection.

State Environmental Planning Policy No.55 - Remediation of Land.

State Environmental Planning Policy No.60 - Exempt and Complying Development.

State Environmental Planning Policy No.62 - Sustainable Aquaculture.

State Environmental Planning Policy No.64 - Advertising and Signage.

State Environmental Planning Policy No.65 - Design Quality of Residential Flat Development.

State Environmental Planning Policy No.70 - Affordable Housing(Revised Schemes).

State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004.

State Environmental Planning Policy (Major Development) 2005.

State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007.

State Environmental Planning Policy (Temporary Structures) 2007.

State Environmental Planning Policy (Infrastructure) 2007.

State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

State Environmental Planning Policy (Affordable Rental Housing) 2009.

State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004.

8. WHICH DEVELOPMENT CONTROL PLANS APPLY TO THE PROPERTY?

(A development control plan adds further detail to local environmental plans and may address issues such as building height, car parking etc. Copies of the Plans are available from Council).

Development Control Plan No.28 - Advertising Signs
Development Control Plan No.31 - Access
Development Control Plan No.40 - Construction and Demolition Waste Management
Development Control Plan No.42 - Regulation of Brothels
Development Control Plan No.43 - Car Parking for Development in Ku-ring-gai Council Area
Development Control Plan No.46 - Exempt and Complying Development
Development Control Plan No.47 - Water Management
Development Control Plan No.56 - Notification
Development Control Plan No.57 - Child Care Centres

9. WHICH DEVELOPMENT CONTRIBUTION PLANS APPLY IF THIS PROPERTY IS DEVELOPED?

(A Development Contribution Plan – commonly known as a Section 94 Plan outlines the financial costs Council charges if a property is developed and Council believes the development will require additional services or facilities such as parks, roads etc. Copies of the Plans are available from Council).

Ku-ring-gai Contributions Plan 2010.

10. IS THE PROPERTY IDENTIFIED AS A HERITAGE ITEM by Council or State Government? (and if so, what is the status, e.g. local environmental plan, Heritage Act etc.)

No.

***SPECIAL NOTE:** Your attention is drawn to Clause 61E of the Ku-ring-gai Planning Scheme Ordinance which states that Council shall not grant consent to an application to carry out development on land in the vicinity of a heritage item unless it has made an assessment of the effect the carrying out of that development will have on the heritage significance of the item and its setting.*

11. IS THE PROPERTY IN A CONSERVATION AREA?

No.

***SPECIAL NOTE:** A conservation area is a place of historic and aesthetic value to the community. It contains a number of elements of significance, such as a historic subdivision layout, a pattern of building "footprints" within each street block, buildings of historic and architectural importance, road alignments, trees, gutters and kerb edges which all combine to create a sense of place that is worth keeping. Council's Heritage Conservation Planner can provide you with more information on this matter.*

12. DOES THE PROPERTY INCLUDE OR COMPRISE CRITICAL HABITAT?

No.

13. IS THE PROPERTY AFFECTED BY A ROAD WIDENING OR ROAD REALIGNMENT under the Roads Act, any environmental planning instrument or any Council resolution?

No.

14. IS THE PROPERTY RESERVED FOR ACQUISITION BY A PUBLIC AUTHORITY UNDER ANY ENVIRONMENTAL PLAN OR PROPOSED ENVIRONMENTAL PLAN?

No.

15. IS THE PROPERTY PART OF ANY APPLICATION DECLARED TO BE "STATE SIGNIFICANT DEVELOPMENT"?

(Development is judged to be "State significant" if the Minister for Planning declares it to be so based on substantial cost of development, significant numbers of employees or other criteria. If you have any further enquiries please contact the Department of Planning, Tel: 02 9228 6333 or email information@planning.nsw.gov.au.)

No.

16. IS THE PROPERTY AFFECTED BY SECTION 38 OR 39 OF THE COASTAL PROTECTION ACT?

No.

17. IS THE PROPERTY WITHIN A "PROCLAIMED MINE SUBSIDENCE DISTRICT"?

No.

**18. IS THE PROPERTY AFFECTED BY ONE OF THE MATTERS
PRESCRIBED BY SECTION 59(2) OF THE CONTAMINATED LAND
MANAGEMENT ACT 1997?**

No.

SPECIAL NOTE: If you have any concerns about land contamination beyond the information described in this certificate, you should contact the NSW Office of Environment & Heritage. Tel:131 555 or email info@environment.nsw.gov.au.

19. IS THE PROPERTY BUSH FIRE PRONE LAND?

No.

**20. IS THE PROPERTY, LAND TO WHICH A PROPERTY VEGETATION
PLAN UNDER THE *NATIVE VEGETATION ACT 2003* APPLIES?**

No.

**21. IS THE PROPERTY, LAND SUBJECT TO AN ORDER UNDER THE
TREE (DISPUTES BETWEEN NEIGHBOURS) ACT 2006?**

The land is not known to be subject to such order.

**22. IS THE PROPERTY SUBJECT TO DIRECTIONS UNDER PART 3A
MAJOR INFRASTRUCTURE AND OTHER PROJECTS of the
Environmental Planning & Assessment Act 1979 No.203?**

No.

**23. IS THE PROPERTY SUBJECT TO A CURRENT SITE
COMPATIBILITY CERTIFICATE AND CONDITIONS FOR SENIORS
HOUSING under the provisions of State Environmental Planning Policy
(Housing for Seniors or People with a Disability) 2004?**

No.

- 24. IS THE PROPERTY SUBJECT TO A VALID SITE COMPATIBILITY CERTIFICATE FOR INFRASTRUCTURE issued under clause 19 of State Environmental Planning Policy (Infrastructure) 2007?**

No.

- 25. IS THE PROPERTY SUBJECT TO A VALID SITE COMPATIBILITY CERTIFICATE AND CONDITIONS FOR AFFORDABLE RENTAL HOUSING issued under clause 37 of State Environmental Planning Policy (Affordable Rental Housing) 2009?**

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- 26. IS THE PROPERTY SUBJECT TO AN EXEMPTION UNDER SECTION 23 OR AUTHORISATION UNDER SECTION 24 OF THE NATIONAL BUILDING AND JOBS PLAN (*STATE INFRASTRUCTURE DELIVERY*) ACT 2009?**

No.

- 27. IS THE PROPERTY, LAND THAT IS BIODIVERSITY CERTIFIED LAND WITHIN THE MEANING OF PART 7AA OF THE THREATENED SPECIES CONSERVATION ACT 1995?**

No.

Special Note: For further information about the Biodiversity Certified Land contact the NSW Office of Environment & Heritage. Tel:131 555 or email info@environment.nsw.gov.au.

- 28. IS THE PROPERTY, LAND TO WHICH A BIOBANKING AGREEMENT UNDER PART 7A OF THE THREATENED SPECIES CONSERVATION ACT 1995 RELATES?**

No.

Special Note: For further information about the Biobanking agreement contact the Biobanking Team at NSW Office of Environment & Heritage. Tel:131 555 or email biobanking@environment.nsw.gov.au.

29. **IS THE PROPERTY, LAND ON WHICH COMPLYING DEVELOPMENT MAY BE CARRIED OUT UNDER EACH OF THE CODES FOR COMPLYING DEVELOPMENT IN STATE ENVIRONMENTAL PLANNING POLICY (EXEMPT AND COMPLYING DEVELOPMENT CODES) 2008 AND, IF COMPLYING DEVELOPMENT MAY NOT BE CARRIED OUT ON THAT LAND BECAUSE OF ONE OR MORE OF THE REQUIREMENTS UNDER CLAUSES 1.17A(c) AND (d) AND 1.19 OF THAT POLICY, WHY IT MAY NOT BE CARRIED OUT ON THAT LAND?**

General Housing Code

Complying development under the General Housing Code **may** be carried out on the land.

Housing Alterations Code

Complying development under the Housing Internal Alteration Code **may** be carried out on the land.

General Development Code

Complying development under the General Development Code **may** be carried out on the land.

General Commercial and Industrial Code

Complying development under the General Commercial and Industrial Code **may** be carried out on the land.

Subdivision Code

Complying development under the Subdivision Code **may** be carried out on the land.

Demolition Code

Complying development under the Demolition Code **may** be carried out on the land.

SPECIAL NOTE: The above question relates to whether or not the land falls within an exclusion area under Clauses 1.17A(c) and (d) 1.19 of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. It is your responsibility to ensure that you comply with any other general requirements of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. Failure to comply with these provisions may mean that a Complying Development Certificate issued under the provisions of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 is invalid.

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YES. "Development Control Plan No.38 – Residential Design Manual" contains details regarding bushfire risk. For further information on the requirements of DCP No.38 please contact Council's Development & Regulations, Tel. 9424-0000.

Note: A review of Council's readily available records has been conducted to identify previous land uses that may have caused land contamination. This review did not reveal any reason for contamination of this property. However, prior to urban settlement, sizeable areas of Ku-ring-gai were covered by agricultural and horticultural activities. These uses are listed in the Managing Land Contamination Planning Guidelines as activities that may cause contamination. If you are concerned about possible contamination of the site you should make your own investigations regarding the condition of this property.

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Yes. Development Control Plan No.47 - Water Management.

32. OTHER INFORMATION RELATING TO DEVELOPMENT OF THE SITE.

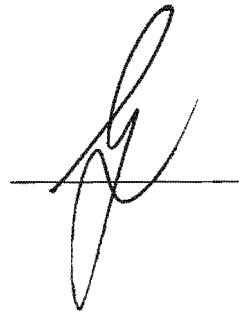
A Tree Preservation Order applies to all land in the Ku-ring-gai Local Government Area. The Order aims to conserve Ku-ring-gai's tree canopy. The Order prohibits the ring barking, cutting down, lopping, pruning, removing, injuring or wilful destruction of any tree with a height greater than 5 metres or a canopy spread greater than 4 metres, unless the owner has the written consent of Council. A penalty can be imposed if the requirements of the Order are not complied with. For more information on the Tree Preservation Order please contact Council's Customer Service on 9424-0000.

33. DO YOU NEED TO REFER TO ANY OTHER DOCUMENTS?

Yes. The Environmental Planning and Assessment Act 1997 commenced operation on 1 July 1998. As a consequence of this Act the information contained in this certificate needs to be read in conjunction with the provisions of the Environmental Planning and Assessment (Amendment) Regulation 1998, Environmental Planning and Assessment (Further Amendment) Regulation 1998 and Environmental Planning and Assessment (Savings and Transitional) Regulation 1998. Your solicitor will have a copy of this legislation or it may be obtained from the Government Information Office.

John McKee
General Manager,

Per

A handwritten signature in black ink, appearing to be 'J. McKee', is written over a horizontal line.

PLANNING CERTIFICATE

UNDER SECTION 149 OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

818 Pacific Highway, Gordon NSW 2072
Locked Bag 1056, Pymble NSW 2073
T 02 9424 0000 F 02 9424 0001
DX 8703 Gordon TTY 02 9424 0875
E kmc@kmc.nsw.gov.au
W www.kmc.nsw.gov.au
ABN 86 408 856 411



PROPERTY DETAILS

Address: 1 Woodford Lane LINDFIELD NSW 2070

Lot Description: Lot A DP 445535

CERTIFICATE DETAILS

Certificate No: PC3701/12

Certificate Date: 26/11/2012

Certificate Type: Section 149(2)

Receipt No: 352142

APPLICANT'S DETAILS

REF: Brixmond Pty Ltd

Yannick Hammond
4/10-11 Millennium Ct
SILVERWATER RD NSW 2128

BACKGROUND INFORMATION

This certificate provides information on how a property (such as land, a house, a commercial building, etc.) may be used and the limits on its development. The certificate contains information Council is aware of through its records and environmental plans with data supplied by the State Government. The details contained in this certificate are limited to that required by Section 149 of the Environmental Planning and Assessment Act.

1. WHICH ENVIRONMENTAL PLAN RESTRICTS THE USE OF THIS PROPERTY?

(Including planning proposals and draft local environmental plans exhibited prior to 1 July 2009 pursuant to section 66(1) b of the E. P. & A. Act).

Ku-ring-gai Planning Scheme Ordinance as prescribed in Government Gazette No.108 of 1 October 1971.

Draft Local Environmental Plan No.191 – Preservation of Trees.

Draft Local Environmental Plan No.195.

Draft Local Environmental Plan No.192 and Draft Development Control Plan No.46 – Exempt and Complying Development.

Draft Ku-ring-gai Local Environmental Plan (Local Centres) 2012

Planning Proposal to amend the Ku-ring-gai Planning Scheme Ordinance to incorporate provisions for biodiversity, riparian land and heritage conservation areas.

2. WHAT IS THE ZONING OF THIS PROPERTY and the relevant environmental plan?

(Zoning is a way of classifying land and limits the range of uses or activities that may be permitted on that land or property).

Special Uses 5(a) (Parking)

under the provisions of the Ku-ring-gai Planning Scheme Ordinance as prescribed in Government Gazette No.108 of 1 October 1971.

3. WHAT DOES NOT REQUIRE DEVELOPMENT CONSENT under the above environmental plan(s)?

Exempt Development as described in Schedule 1 of Development Control Plan No.46 – Exempt and Complying Development and Clause 24 of the Ku-ring-gai Planning Scheme Ordinance.

4. WHAT DOES REQUIRE DEVELOPMENT CONSENT under the above environmental plan(s)?

Demolition of a building or work (being demolition that is not exempt development).
Development (other than exempt development) for the purpose of: utility installations other than generating works or gas holders; special events; parking.

5. WHAT IS PROHIBITED by the above environmental plan(s)?

Any development other than that permitted by 3 or 4 above.

6. DO THE DIMENSIONS OF THE LAND PERMIT THE ERECTION OF A DWELLING HOUSE ON THIS PROPERTY?

Not applicable. Dwelling houses are not permitted within this zone.

7. WHAT OTHER PLANNING INSTRUMENTS AFFECT THIS PROPERTY?

(State and deemed state environmental plans are prepared by the State Government and cover issues as varied as rivers, residential development, employment, etc. If you have any further enquiries please contact the Department of Planning, Tel: 02 9228 6333 or email information@planning.nsw.gov.au..

Draft State Environmental Planning Policy (Competition)

Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005

State Environmental Planning Policy No.1 - Development Standards.

State Environmental Planning Policy No.4 - Development without Consent and Miscellaneous Exempt and Complying Development.

State Environmental Planning Policy No.6 - Number of storeys in a building.

State Environmental Planning Policy No.19 - Bushland in Urban Areas.

State Environmental Planning Policy No.21 - Caravan Parks.

State Environmental Planning Policy No.22 - Shops and Commercial Premises.

State Environmental Planning Policy No.32 - Urban Consolidation (Redevelopment of Urban Land).

State Environmental Planning Policy No.33 - Hazardous & Offensive Development.

State Environmental Planning Policy No.44 - Koala Habitat Protection.

State Environmental Planning Policy No.55 - Remediation of Land.

State Environmental Planning Policy No.60 - Exempt and Complying Development.

State Environmental Planning Policy No.62 - Sustainable Aquaculture.

State Environmental Planning Policy No.64 - Advertising and Signage.

State Environmental Planning Policy No.65 - Design Quality of Residential Flat Development.

State Environmental Planning Policy No.70 - Affordable Housing (Revised Schemes).

State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004.

State Environmental Planning Policy (Major Development) 2005.

State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007.

State Environmental Planning Policy (Temporary Structures) 2007.

State Environmental Planning Policy (Infrastructure) 2007.

State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

State Environmental Planning Policy (Affordable Rental Housing) 2009.

State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004.

8. WHICH DEVELOPMENT CONTROL PLANS APPLY TO THE PROPERTY?

(A development control plan adds further detail to local environmental plans and may address issues such as building height, car parking etc. Copies of the Plans are available from Council).

- Development Control Plan No.14 - Development in Business Zones
 - Development Control Plan No.28 - Advertising Signs
 - Development Control Plan No.31 - Access
 - Development Control Plan No.40 - Construction and Demolition Waste Management
 - Development Control Plan No.42 - Regulation of Brothels
 - Development Control Plan No.43 - Car Parking for Development in Ku-ring-gai Council Area
 - Development Control Plan No.46 - Exempt and Complying Development
 - Development Control Plan No.47 - Water Management
 - Development Control Plan No.56 - Notification
 - Development Control Plan No.57 - Child Care Centres
-

9. WHICH DEVELOPMENT CONTRIBUTION PLANS APPLY IF THIS PROPERTY IS DEVELOPED?

(A Development Contribution Plan – commonly known as a Section 94 Plan outlines the financial costs Council charges if a property is developed and Council believes the development will require additional services or facilities such as parks, roads etc. Copies of the Plans are available from Council).

Ku-ring-gai Contributions Plan 2010.

10. IS THE PROPERTY IDENTIFIED AS A HERITAGE ITEM by Council or State Government? (and if so, what is the status, e.g. local environmental plan, Heritage Act etc.)

No.

SPECIAL NOTE: Your attention is drawn to Clause 61E of the Ku-ring-gai Planning Scheme Ordinance which states that Council shall not grant consent to an application to carry out development on land in the vicinity of a heritage item unless it has made an assessment of the effect the carrying out of that development will have on the heritage significance of the item and its setting.

11. IS THE PROPERTY IN A CONSERVATION AREA?

No.

SPECIAL NOTE: A conservation area is a place of historic and aesthetic value to the community. It contains a number of elements of significance, such as a historic subdivision layout, a pattern of building "footprints" within each street block, buildings of historic and architectural importance, road alignments, trees, gutters and kerb edges which all combine to create a sense of place that is worth keeping. Council's Heritage Conservation Planner can provide you with more information on this matter.

12. DOES THE PROPERTY INCLUDE OR COMPRISE CRITICAL HABITAT?

No.

13. IS THE PROPERTY AFFECTED BY A ROAD WIDENING OR ROAD REALIGNMENT under the Roads Act, any environmental planning instrument or any Council resolution?

No.

14. IS THE PROPERTY RESERVED FOR ACQUISITION BY A PUBLIC AUTHORITY UNDER ANY ENVIRONMENTAL PLAN OR PROPOSED ENVIRONMENTAL PLAN?

No.

15. IS THE PROPERTY PART OF ANY APPLICATION DECLARED TO BE "STATE SIGNIFICANT DEVELOPMENT"?

(Development is judged to be "State significant" if the Minister for Planning declares it to be so based on substantial cost of development, significant numbers of employees or other criteria. If you have any further enquiries please contact the Department of Planning, Tel: 02 9228 6333 or email information@planning.nsw.gov.au..

No.

16. IS THE PROPERTY AFFECTED BY SECTION 38 OR 39 OF THE COASTAL PROTECTION ACT?

No.

17. IS THE PROPERTY WITHIN A "PROCLAIMED MINE SUBSIDENCE DISTRICT"?

No.

18. IS THE PROPERTY AFFECTED BY ONE OF THE MATTERS PRESCRIBED BY SECTION 59(2) OF THE CONTAMINATED LAND MANAGEMENT ACT 1997?

No.

SPECIAL NOTE: If you have any concerns about land contamination beyond the information described in this certificate, you should contact the NSW Office of Environment & Heritage. Tel: 131 555 or email info@environment.nsw.gov.au.

19. IS THE PROPERTY BUSH FIRE PRONE LAND?

No.

20. IS THE PROPERTY, LAND TO WHICH A PROPERTY VEGETATION PLAN UNDER THE *NATIVE VEGETATION ACT 2003* APPLIES?

No.

21. IS THE PROPERTY, LAND SUBJECT TO AN ORDER UNDER THE *TREE (DISPUTES BETWEEN NEIGHBOURS) ACT 2006*?

The land is not known to be subject to such order.

22. IS THE PROPERTY SUBJECT TO DIRECTIONS UNDER PART 3A MAJOR INFRASTRUCTURE AND OTHER PROJECTS of the Environmental Planning & Assessment Act 1979 No.203?

No.

23. IS THE PROPERTY SUBJECT TO A CURRENT SITE COMPATIBILITY CERTIFICATE AND CONDITIONS FOR SENIORS HOUSING under the provisions of State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004?

No.

- 24. IS THE PROPERTY SUBJECT TO A VALID SITE COMPATIBILITY CERTIFICATE FOR INFRASTRUCTURE issued under clause 19 of State Environmental Planning Policy (Infrastructure) 2007?**

No.

- 25. IS THE PROPERTY SUBJECT TO A VALID SITE COMPATIBILITY CERTIFICATE AND CONDITIONS FOR AFFORDABLE RENTAL HOUSING issued under clause 37 of State Environmental Planning Policy (Affordable Rental Housing) 2009?**

No.

- 26. IS THE PROPERTY SUBJECT TO AN EXEMPTION UNDER SECTION 23 OR AUTHORISATION UNDER SECTION 24 OF THE NATIONAL BUILDING AND JOBS PLAN (*STATE INFRASTRUCTURE DELIVERY*) ACT 2009?**

No.

- 27. IS THE PROPERTY, LAND THAT IS BIODIVERSITY CERTIFIED LAND WITHIN THE MEANING OF PART 7AA OF THE THREATENED SPECIES CONSERVATION ACT 1995?**

No.

Special Note: For further information about the Biodiversity Certified Land contact the NSW Office of Environment & Heritage. Tel:131 555 or email info@environment.nsw.gov.au.

- 28. IS THE PROPERTY, LAND TO WHICH A BIOBANKING AGREEMENT UNDER PART 7A OF THE THREATENED SPECIES CONSERVATION ACT 1995 RELATES?**

No.

Special Note: For further information about the Biobanking agreement contact the Biobanking Team at NSW Office of Environment & Heritage. Tel:131 555 or email biobanking@environment.nsw.gov.au.

29. **IS THE PROPERTY, LAND ON WHICH COMPLYING DEVELOPMENT MAY BE CARRIED OUT UNDER EACH OF THE CODES FOR COMPLYING DEVELOPMENT IN STATE ENVIRONMENTAL PLANNING POLICY (EXEMPT AND COMPLYING DEVELOPMENT CODES) 2008 AND, IF COMPLYING DEVELOPMENT MAY NOT BE CARRIED OUT ON THAT LAND BECAUSE OF ONE OR MORE OF THE REQUIREMENTS UNDER CLAUSES 1.17A(c) AND (d) AND 1.19 OF THAT POLICY, WHY IT MAY NOT BE CARRIED OUT ON THAT LAND?**

General Housing Code

Complying development under the General Housing Code **may** be carried out on the land.

Housing Alterations Code

Complying development under the Housing Internal Alteration Code **may** be carried out on the land.

General Development Code

Complying development under the General Development Code **may** be carried out on the land.

General Commercial and Industrial Code

Complying development under the General Commercial and Industrial Code **may** be carried out on the land.

Subdivision Code

Complying development under the Subdivision Code **may** be carried out on the land.

Demolition Code

Complying development under the Demolition Code **may** be carried out on the land.

***SPECIAL NOTE:** The above question relates to whether or not the land falls within an exclusion area under Clauses 1.17A(c) and (d) 1.19 of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. It is your responsibility to ensure that you comply with any other general requirements of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. Failure to comply with these provisions may mean that a Complying Development Certificate issued under the provisions of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 is invalid.*

30. DO ANY ADOPTED COUNCIL POLICIES OR RESOLUTIONS OR ANY POLICIES ADOPTED BY A PUBLIC AUTHORITY REQUIRED TO BE REFERRED TO IN A PLANNING CERTIFICATE RESTRICT THE DEVELOPMENT OF THE PROPERTY DUE TO THE LIKELIHOOD OF LANDSLIP, BUSHFIRES, TIDAL INUNDATION, SUBSIDENCE, CONTAMINATION, ACID SULPHATE SOILS OR ANY OTHER RISK (OTHER THAN FLOODING)?

YES. "Development Control Plan No.38 – Residential Design Manual" contains details regarding bushfire risk. For further information on the requirements of DCP No.38 please contact Council's Development & Regulations, Tel. 9424-0000.

Note: A review of Council's readily available records has been conducted to identify previous land uses that may have caused land contamination. This review did not reveal any reason for contamination of this property. However, prior to urban settlement, sizeable areas of Ku-ring-gai were covered by agricultural and horticultural activities. These uses are listed in the Managing Land Contamination Planning Guidelines as activities that may cause contamination. If you are concerned about possible contamination of the site you should make your own investigations regarding the condition of this property.

31. DO ANY ADOPTED COUNCIL POLICIES OR RESOLUTIONS OR ANY POLICIES ADOPTED BY A PUBLIC AUTHORITY REQUIRED TO BE REFERRED TO IN A PLANNING CERTIFICATE EFFECT THE DEVELOPMENT OF THE PROPERTY DUE TO FLOOD RELATED DEVELOPMENT CONTROLS INFORMATION?

Yes. Development Control Plan No.47 - Water Management.

32. OTHER INFORMATION RELATING TO DEVELOPMENT OF THE SITE.

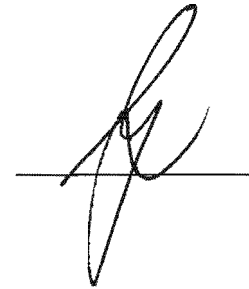
A Tree Preservation Order applies to all land in the Ku-ring-gai Local Government Area. The Order aims to conserve Ku-ring-gai's tree canopy. The Order prohibits the ring barking, cutting down, lopping, pruning, removing, injuring or wilful destruction of any tree with a height greater than 5 metres or a canopy spread greater than 4 metres, unless the owner has the written consent of Council. A penalty can be imposed if the requirements of the Order are not complied with. For more information on the Tree Preservation Order please contact Council's Customer Service on 9424-0000.

33. DO YOU NEED TO REFER TO ANY OTHER DOCUMENTS?

Yes. The Environmental Planning and Assessment Act 1997 commenced operation on 1 July 1998. As a consequence of this Act the information contained in this certificate needs to be read in conjunction with the provisions of the Environmental Planning and Assessment (Amendment) Regulation 1998, Environmental Planning and Assessment (Further Amendment) Regulation 1998 and Environmental Planning and Assessment (Savings and Transitional) Regulation 1998. Your solicitor will have a copy of this legislation or it may be obtained from the Government Information Office.

John McKee
General Manager,

Per

A handwritten signature in black ink, appearing to be 'J. McKee', is written over a horizontal line.

PLANNING CERTIFICATE

UNDER SECTION 149 OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

818 Pacific Highway, Gordon NSW 2072
Locked Bag 1056, Pymble NSW 2073
T 02 9424 0000 F 02 9424 0001
DX 8703 Gordon TTY 02 9424 0875
E kmc@kmc.nsw.gov.au
W www.kmc.nsw.gov.au
ABN 86 408 856 411



PROPERTY DETAILS

Address: 1B Beaconsfield Parade LINDFIELD NSW 2070

Lot Description: Part Lot 1 DP 929131

CERTIFICATE DETAILS

Certificate No: PC3700/12

Certificate Date: 26/11/2012

Certificate Type: Section 149(2)

Receipt No: 352142

APPLICANT'S DETAILS

REF: Ku-ring-gai Council

Yannick Hammond
4/10-11 Millennium Ct
SILVERWATER RD NSW 2128

BACKGROUND INFORMATION

This certificate provides information on how a property (such as land, a house, a commercial building, etc.) may be used and the limits on its development. The certificate contains information Council is aware of through its records and environmental plans with data supplied by the State Government. The details contained in this certificate are limited to that required by Section 149 of the Environmental Planning and Assessment Act.

1. WHICH ENVIRONMENTAL PLAN RESTRICTS THE USE OF THIS PROPERTY?

(Including planning proposals and draft local environmental plans exhibited prior to 1 July 2009 pursuant to section 66(1) b of the E. P. & A. Act).

Ku-ring-gai Planning Scheme Ordinance as prescribed in Government Gazette No.108 of 1 October 1971.

Draft Local Environmental Plan No.191 – Preservation of Trees.

Draft Local Environmental Plan No.195.

Draft Local Environmental Plan No.192 and Draft Development Control Plan No.46 – Exempt and Complying Development.

Draft Ku-ring-gai Local Environmental Plan (Local Centres) 2012

Planning Proposal to amend the Ku-ring-gai Planning Scheme Ordinance to incorporate provisions for biodiversity, riparian land and heritage conservation areas.

2. WHAT IS THE ZONING OF THIS PROPERTY and the relevant environmental plan?

(Zoning is a way of classifying land and limits the range of uses or activities that may be permitted on that land or property).

Special Uses 5(a) (Parking)

under the provisions of the Ku-ring-gai Planning Scheme Ordinance as prescribed in Government Gazette No.108 of 1 October 1971.

3. WHAT DOES NOT REQUIRE DEVELOPMENT CONSENT under the above environmental plan(s)?

Exempt Development as described in Schedule 1 of Development Control Plan No.46 – Exempt and Complying Development and Clause 24 of the Ku-ring-gai Planning Scheme Ordinance.

4. WHAT DOES REQUIRE DEVELOPMENT CONSENT under the above environmental plan(s)?

Demolition of a building or work (being demolition that is not exempt development).
Development (other than exempt development) for the purpose of: utility installations other than generating works or gas holders; special events; parking.

5. WHAT IS PROHIBITED by the above environmental plan(s)?

Any development other than that permitted by 3 or 4 above.

6. DO THE DIMENSIONS OF THE LAND PERMIT THE ERECTION OF A DWELLING HOUSE ON THIS PROPERTY?

Not applicable. Dwelling houses are not permitted within this zone.

7. WHAT OTHER PLANNING INSTRUMENTS AFFECT THIS PROPERTY?

(State and deemed state environmental plans are prepared by the State Government and cover issues as varied as rivers, residential development, employment, etc. If you have any further enquiries please contact the Department of Planning, Tel: 02 9228 6333 or email information@planning.nsw.gov.au.)

Draft State Environmental Planning Policy (Competition)

Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005

State Environmental Planning Policy No.1 - Development Standards.

State Environmental Planning Policy No.4 - Development without Consent and Miscellaneous Exempt and Complying Development.

State Environmental Planning Policy No.6 - Number of storeys in a building.

State Environmental Planning Policy No.19 - Bushland in Urban Areas.

State Environmental Planning Policy No.21 - Caravan Parks

State Environmental Planning Policy No.32 - Urban Consolidation (Redevelopment of Urban Land).

State Environmental Planning Policy No.33 - Hazardous & Offensive Development.

State Environmental Planning Policy No.44 - Koala Habitat Protection.

State Environmental Planning Policy No.55 - Remediation of Land.

State Environmental Planning Policy No.60 - Exempt and Complying Development.

State Environmental Planning Policy No.62 - Sustainable Aquaculture.

State Environmental Planning Policy No.64 - Advertising and Signage.

State Environmental Planning Policy No.65 - Design Quality of Residential Flat Development.

State Environmental Planning Policy No.70 - Affordable Housing (Revised Schemes).

State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004.

State Environmental Planning Policy (Major Development) 2005.

State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007.

State Environmental Planning Policy (Temporary Structures) 2007.

State Environmental Planning Policy (Infrastructure) 2007.

State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

State Environmental Planning Policy (Affordable Rental Housing) 2009.

State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004.

8. WHICH DEVELOPMENT CONTROL PLANS APPLY TO THE PROPERTY?

(A development control plan adds further detail to local environmental plans and may address issues such as building height, car parking etc. Copies of the Plans are available from Council).

Development Control Plan No.28 - Advertising Signs
Development Control Plan No.31 - Access
Development Control Plan No.40 - Construction and Demolition Waste Management
Development Control Plan No.42 - Regulation of Brothels
Development Control Plan No.43 - Car Parking for Development in Ku-ring-gai Council Area
Development Control Plan No.46 - Exempt and Complying Development
Development Control Plan No.47 - Water Management
Development Control Plan No.56 - Notification
Development Control Plan No.57 - Child Care Centres

9. WHICH DEVELOPMENT CONTRIBUTION PLANS APPLY IF THIS PROPERTY IS DEVELOPED?

(A Development Contribution Plan – commonly known as a Section 94 Plan outlines the financial costs Council charges if a property is developed and Council believes the development will require additional services or facilities such as parks, roads etc. Copies of the Plans are available from Council).

Ku-ring-gai Contributions Plan 2010.

10. IS THE PROPERTY IDENTIFIED AS A HERITAGE ITEM by Council or State Government? (and if so, what is the status, e.g. local environmental plan, Heritage Act etc.)

No.

***SPECIAL NOTE:** Your attention is drawn to Clause 61E of the Ku-ring-gai Planning Scheme Ordinance which states that Council shall not grant consent to an application to carry out development on land in the vicinity of a heritage item unless it has made an assessment of the effect the carrying out of that development will have on the heritage significance of the item and its setting.*

11. IS THE PROPERTY IN A CONSERVATION AREA?

No.

***SPECIAL NOTE:** A conservation area is a place of historic and aesthetic value to the community. It contains a number of elements of significance, such as a historic subdivision layout, a pattern of building "footprints" within each street block, buildings of historic and architectural importance, road alignments, trees, gutters and kerb edges which all combine to create a sense of place that is worth keeping. Council's Heritage Conservation Planner can provide you with more information on this matter.*

12. DOES THE PROPERTY INCLUDE OR COMPRISE CRITICAL HABITAT?

No.

13. IS THE PROPERTY AFFECTED BY A ROAD WIDENING OR ROAD REALIGNMENT under the Roads Act, any environmental planning instrument or any Council resolution?

No.

14. IS THE PROPERTY RESERVED FOR ACQUISITION BY A PUBLIC AUTHORITY UNDER ANY ENVIRONMENTAL PLAN OR PROPOSED ENVIRONMENTAL PLAN?

No.

15. IS THE PROPERTY PART OF ANY APPLICATION DECLARED TO BE "STATE SIGNIFICANT DEVELOPMENT"?

(Development is judged to be "State significant" if the Minister for Planning declares it to be so based on substantial cost of development, significant numbers of employees or other criteria. If you have any further enquiries please contact the Department of Planning, Tel: 02 9228 6333 or email information@planning.nsw.gov.au..

No.

16. IS THE PROPERTY AFFECTED BY SECTION 38 OR 39 OF THE COASTAL PROTECTION ACT?

No.

17. IS THE PROPERTY WITHIN A "PROCLAIMED MINE SUBSIDENCE DISTRICT"?

No.

18. IS THE PROPERTY AFFECTED BY ONE OF THE MATTERS PRESCRIBED BY SECTION 59(2) OF THE CONTAMINATED LAND MANAGEMENT ACT 1997?

No.

SPECIAL NOTE: If you have any concerns about land contamination beyond the information described in this certificate, you should contact the NSW Office of Environment & Heritage. Tel: 131 555 or email info@environment.nsw.gov.au.

19. IS THE PROPERTY BUSH FIRE PRONE LAND?

No.

20. IS THE PROPERTY, LAND TO WHICH A PROPERTY VEGETATION PLAN UNDER THE *NATIVE VEGETATION ACT 2003* APPLIES?

No.

21. IS THE PROPERTY, LAND SUBJECT TO AN ORDER UNDER THE *TREE (DISPUTES BETWEEN NEIGHBOURS) ACT 2006*?

The land is not known to be subject to such order.

22. IS THE PROPERTY SUBJECT TO DIRECTIONS UNDER PART 3A MAJOR INFRASTRUCTURE AND OTHER PROJECTS of the Environmental Planning & Assessment Act 1979 No.203?

No.

23. IS THE PROPERTY SUBJECT TO A CURRENT SITE COMPATIBILITY CERTIFICATE AND CONDITIONS FOR SENIORS HOUSING under the provisions of State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004?

No.

- 24. IS THE PROPERTY SUBJECT TO A VALID SITE COMPATIBILITY CERTIFICATE FOR INFRASTRUCTURE issued under clause 19 of State Environmental Planning Policy (Infrastructure) 2007?**

No.

- 25. IS THE PROPERTY SUBJECT TO A VALID SITE COMPATIBILITY CERTIFICATE AND CONDITIONS FOR AFFORDABLE RENTAL HOUSING issued under clause 37 of State Environmental Planning Policy (Affordable Rental Housing) 2009?**

No.

- 26. IS THE PROPERTY SUBJECT TO AN EXEMPTION UNDER SECTION 23 OR AUTHORISATION UNDER SECTION 24 OF THE NATIONAL BUILDING AND JOBS PLAN (*STATE INFRASTRUCTURE DELIVERY*) ACT 2009?**

No.

- 27. IS THE PROPERTY, LAND THAT IS BIODIVERSITY CERTIFIED LAND WITHIN THE MEANING OF PART 7AA OF THE THREATENED SPECIES CONSERVATION ACT 1995?**

No.

Special Note: For further information about the Biodiversity Certified Land contact the NSW Office of Environment & Heritage. Tel:131 555 or email info@environment.nsw.gov.au.

- 28. IS THE PROPERTY, LAND TO WHICH A BIOBANKING AGREEMENT UNDER PART 7A OF THE THREATENED SPECIES CONSERVATION ACT 1995 RELATES?**

No.

Special Note: For further information about the Biobanking agreement contact the Biobanking Team at NSW Office of Environment & Heritage. Tel:131 555 or email biobanking@environment.nsw.gov.au.

29. IS THE PROPERTY, LAND ON WHICH COMPLYING DEVELOPMENT MAY BE CARRIED OUT UNDER EACH OF THE CODES FOR COMPLYING DEVELOPMENT IN *STATE ENVIRONMENTAL PLANNING POLICY (EXEMPT AND COMPLYING DEVELOPMENT CODES) 2008* AND, IF COMPLYING DEVELOPMENT MAY NOT BE CARRIED OUT ON THAT LAND BECAUSE OF ONE OR MORE OF THE REQUIREMENTS UNDER CLAUSES 1.17A(c) AND (d) AND 1.19 OF THAT POLICY, WHY IT MAY NOT BE CARRIED OUT ON THAT LAND?

General Housing Code

Complying development under the General Housing Code **may** be carried out on the land.

Housing Alterations Code

Complying development under the Housing Internal Alteration Code **may** be carried out on the land.

General Development Code

Complying development under the General Development Code **may** be carried out on the land.

General Commercial and Industrial Code

Complying development under the General Commercial and Industrial Code **may** be carried out on the land.

Subdivision Code

Complying development under the Subdivision Code **may** be carried out on the land.

Demolition Code

Complying development under the Demolition Code **may** be carried out on the land.

SPECIAL NOTE: The above question relates to whether or not the land falls within an exclusion area under Clauses 1.17A(c) and (d) 1.19 of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. It is your responsibility to ensure that you comply with any other general requirements of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. Failure to comply with these provisions may mean that a Complying Development Certificate issued under the provisions of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 is invalid.

30. DO ANY ADOPTED COUNCIL POLICIES OR RESOLUTIONS OR ANY POLICIES ADOPTED BY A PUBLIC AUTHORITY REQUIRED TO BE REFERRED TO IN A PLANNING CERTIFICATE RESTRICT THE DEVELOPMENT OF THE PROPERTY DUE TO THE LIKELIHOOD OF LANDSLIP, BUSHFIRES, TIDAL INUNDATION, SUBSIDENCE, CONTAMINATION, ACID SULPHATE SOILS OR ANY OTHER RISK (OTHER THAN FLOODING)?

YES. "Development Control Plan No.38 – Residential Design Manual" contains details regarding bushfire risk. For further information on the requirements of DCP No.38 please contact Council's Development & Regulations, Tel. 9424-0000.

Note: A review of Council's readily available records has been conducted to identify previous land uses that may have caused land contamination. This review did not reveal any reason for contamination of this property. However, prior to urban settlement, sizeable areas of Ku-ring-gai were covered by agricultural and horticultural activities. These uses are listed in the Managing Land Contamination Planning Guidelines as activities that may cause contamination. If you are concerned about possible contamination of the site you should make your own investigations regarding the condition of this property.

31. DO ANY ADOPTED COUNCIL POLICIES OR RESOLUTIONS OR ANY POLICIES ADOPTED BY A PUBLIC AUTHORITY REQUIRED TO BE REFERRED TO IN A PLANNING CERTIFICATE EFFECT THE DEVELOPMENT OF THE PROPERTY DUE TO FLOOD RELATED DEVELOPMENT CONTROLS INFORMATION?

Yes. Development Control Plan No.47 - Water Management.

32. OTHER INFORMATION RELATING TO DEVELOPMENT OF THE SITE.

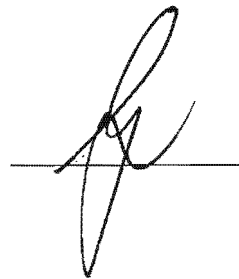
A Tree Preservation Order applies to all land in the Ku-ring-gai Local Government Area. The Order aims to conserve Ku-ring-gai's tree canopy. The Order prohibits the ring barking, cutting down, lopping, pruning, removing, injuring or wilful destruction of any tree with a height greater than 5 metres or a canopy spread greater than 4 metres, unless the owner has the written consent of Council. A penalty can be imposed if the requirements of the Order are not complied with. For more information on the Tree Preservation Order please contact Council's Customer Service on 9424-0000.

33. DO YOU NEED TO REFER TO ANY OTHER DOCUMENTS?

Yes. The Environmental Planning and Assessment Act 1997 commenced operation on 1 July 1998. As a consequence of this Act the information contained in this certificate needs to be read in conjunction with the provisions of the Environmental Planning and Assessment (Amendment) Regulation 1998, Environmental Planning and Assessment (Further Amendment) Regulation 1998 and Environmental Planning and Assessment (Savings and Transitional) Regulation 1998. Your solicitor will have a copy of this legislation or it may be obtained from the Government Information Office.

John McKee
General Manager,

Per

A handwritten signature in black ink, appearing to be 'J. McKee', is written over a horizontal line.

PLANNING CERTIFICATE

UNDER SECTION 149 OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

818 Pacific Highway, Gordon NSW 2072
Locked Bag 1006, Gordon NSW 2072
T 02 9424 0000 F 02 9424 0001
DX 8703 Gordon TTY 02 9424 0875
E kmc@kmc.nsw.gov.au
W www.kmc.nsw.gov.au
ABN 86 408 856 411



PROPERTY DETAILS

Address: 1B Beaconsfield Parade LINDFIELD NSW 2070

Lot Description: Lot 41 DP 4388, Part Lot 1 DP 929131, Lot 42 DP 4388

CERTIFICATE DETAILS

Certificate No: PC1723/15

Certificate Date: 10/09/2015

Certificate Type: Section 149(2)

Journal Id: 117944

APPLICANT'S DETAILS

REF: Lindfield Community Hub



Ku-ring-gai Council
Locked Bag 1006
GORDON NSW 2072

BACKGROUND INFORMATION

This certificate provides information on how a property (such as land, a house, a commercial building, etc.) may be used and the limits on its development. The certificate contains information Council is aware of through its records and environmental plans with data supplied by the State Government. The details contained in this certificate are limited to that required by Section 149 of the Environmental Planning and Assessment Act.

1. WHICH ENVIRONMENTAL PLAN RESTRICTS THE USE OF THIS PROPERTY?

(Including planning proposals and draft local environmental plans exhibited prior to 1 July 2009 pursuant to section 66(1) b of the E. P. & A. Act).

Ku-ring-gai Local Environmental Plan (Local Centres) 2012 as published on the NSW Legislation Website on 25 January 2013.

2. WHAT IS THE ZONING OF THIS PROPERTY and the relevant environmental plan?

(Zoning is a way of classifying land and limits the range of uses or activities that may be permitted on that land or property).

B2 Local Centres

under the provisions of Ku-ring-gai Local Environmental Plan (Local Centres) 2012 as published on the NSW Legislation Website on 25 January 2013.

3. WHAT DOES NOT REQUIRE DEVELOPMENT CONSENT under the above environmental plan(s)?

Home occupations.

Note: Please refer to the provisions for Exempt and Complying Development as described in Part 3 of Ku-ring-gai Local Environmental Plan (Local Centres) 2012.

4. WHAT DOES REQUIRE DEVELOPMENT CONSENT under the above environmental plan(s)?

Boarding houses; Child care centres; Commercial premises; Community facilities; Educational establishments; Entertainment facilities; Function centres; Group homes (permanent); Hostels; Information and education facilities; Light industries; Medical centres; Passenger transport facilities; Recreation facilities (indoor); Registered clubs; Respite day care centres; Restricted premises; Roads; Seniors housing; Service stations; Shop top housing; Tourist and visitor accommodation; Water reticulation systems; Any other development not specified in item 3 or 5

5. WHAT IS PROHIBITED under the above environmental plan(s)?

Agriculture; Air transport facilities; Airstrips; Animal boarding or training establishments; Biosolids treatment facilities; Boat building and repair facilities; Boat launching ramps; Boat sheds; Camping grounds; Caravan parks; Cemeteries; Charter and tourism boating facilities; Correctional centres; Crematoria; Depots; Eco-tourist facilities; Exhibition homes; Exhibition villages; Extractive industries; Farm buildings; Forestry; Freight transport facilities; Heavy industrial storage establishments; Helipads; Highway service centres; Industrial retail outlets; Industrial training facilities; Industries; Jetties; Marinas; Mooring pens; Moorings; Mortuaries; Open cut mining; Recreation facilities (major); Recreation

facilities (outdoor); Research stations; Residential accommodation; Rural industries; Sewage treatment plants; Storage premises; Transport depots; Truck depots; Vehicle body repair workshops; Warehouse or distribution centres; Waste or resource management facilities; Water recreation structures; Water recycling facilities; Water supply systems; Wharf or boating facilities; Wholesale supplies

6. **DO THE DIMENSIONS OF THE LAND PERMIT THE ERECTION OF A DWELLING HOUSE ON THIS PROPERTY** under the above environmental plan(s)?

Not applicable. Dwelling houses are not permitted within this zone.

7. **WHAT IS THE PROPOSED ZONING OF THIS PROPERTY** and the relevant proposed environmental plan?

(Zoning is a way of classifying land and limits the range of uses or activities that may be permitted on that land or property).

There are no zoning changes under any proposed environmental plans applying to this land.

8. **WHAT DOES NOT REQUIRE DEVELOPMENT CONSENT** under the above proposed environmental plan(s)?

Not applicable.

9. **WHAT DOES REQUIRE DEVELOPMENT CONSENT** under the above proposed environmental plan(s)?

Not applicable.

10. **WHAT IS PROHIBITED** by the above proposed environmental plan(s)?

Not applicable.

11. **DO THE DIMENSIONS OF THE LAND PERMIT THE ERECTION OF A DWELLING HOUSE ON THIS PROPERTY** by the above proposed environmental plan(s)?

Not applicable.

12. WHAT OTHER PLANNING INSTRUMENTS AFFECT THIS PROPERTY?

(State and deemed state environmental plans are prepared by the State Government and cover issues as varied as rivers, residential development, employment, etc. If you have any further enquiries please contact the Department of Planning, Tel: 02 9228 6333 or email information@planning.nsw.gov.au..

Draft State Environmental Planning Policy (Competition)

Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005

State Environmental Planning Policy No.6 - Number of storeys in a building.

State Environmental Planning Policy No.19 - Bushland in Urban Areas.

State Environmental Planning Policy No.21 - Caravan Parks.

State Environmental Planning Policy No.22 - Shops and Commercial Premises.

State Environmental Planning Policy No.32 - Urban Consolidation (Redevelopment of Urban Land).

State Environmental Planning Policy No.33 - Hazardous & Offensive Development.

State Environmental Planning Policy No.44 - Koala Habitat Protection.

State Environmental Planning Policy No.55 - Remediation of Land.

State Environmental Planning Policy No.62 - Sustainable Aquaculture.

State Environmental Planning Policy No.64 - Advertising and Signage.

State Environmental Planning Policy No.65 - Design Quality of Residential Flat Development.

State Environmental Planning Policy No.70 - Affordable Housing (Revised Schemes).

State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004.

State Environmental Planning Policy (Major Development) 2005.

State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007.

State Environmental Planning Policy (Temporary Structures) 2007.

State Environmental Planning Policy (Infrastructure) 2007.

State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

State Environmental Planning Policy (Affordable Rental Housing) 2009.

State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004.

13. WHICH DEVELOPMENT CONTROL PLANS APPLY TO THE PROPERTY?

(A development control plan adds further detail to local environmental plans and may address issues such as building height, car parking etc. Copies of the Plans are available from Council).

Ku-ring-gai Local Centres Development Control Plan

14. WHICH DEVELOPMENT CONTRIBUTION PLANS APPLY IF THIS PROPERTY IS DEVELOPED?

(A Development Contribution Plan – commonly known as a Section 94 Plan outlines the financial costs Council charges if a property is developed and Council believes the development will require additional services or facilities such as parks, roads etc. Copies of the Plans are available from Council).

Ku-ring-gai Contributions Plan 2010.

15. IS THE PROPERTY IDENTIFIED AS A HERITAGE ITEM by Council or State Government? (and if so, what is the status, e.g. local environmental plan, Heritage Act etc.)

No.

SPECIAL NOTE: Your attention is drawn to Clause 5.10(5) of the Ku-ring-gai Local Environmental Plan (Local Centres) 2012 which states that the consent authority may, before granting consent to any development: (a) on land on which a heritage item is located, or (b) on land that is within a heritage conservation area, or (c) on land that is within the vicinity of land referred to in paragraph (a) or (b), require a heritage management document to be prepared that assesses the extent to which the carrying out of the proposed development would affect the heritage significance of the heritage item or heritage conservation area concerned.

16. IS THE PROPERTY IN A CONSERVATION AREA?

No.

SPECIAL NOTE: A conservation area is a place of historic and aesthetic value to the community. It contains a number of elements of significance, such as a historic subdivision layout, a pattern of building "footprints" within each street block, buildings of historic and architectural importance, road alignments, trees, gutters and kerb edges which all combine to create a sense of place that is worth keeping. Council's Heritage Conservation Planner can provide you with more information on this matter.

17. DOES THE PROPERTY INCLUDE OR COMPRISE CRITICAL HABITAT?

No.

18. IS THE PROPERTY AFFECTED BY A ROAD WIDENING OR ROAD REALIGNMENT under the Roads Act, any environmental planning instrument or any Council resolution?

No.

19. IS THE PROPERTY RESERVED FOR ACQUISITION BY A PUBLIC AUTHORITY UNDER ANY ENVIRONMENTAL PLAN OR PROPOSED ENVIRONMENTAL PLAN?

No.

20. IS THE PROPERTY PART OF ANY APPLICATION DECLARED TO BE "STATE SIGNIFICANT DEVELOPMENT"?

(Development is judged to be "State significant" if the Minister for Planning declares it to be so based on substantial cost of development, significant numbers of employees or other criteria. If you have any further enquiries please contact the Department of Planning, Tel: 02 9228 6333 or email information@planning.nsw.gov.au.)

No.

21. IS THE PROPERTY AFFECTED BY SECTION 38 OR 39 OF THE COASTAL PROTECTION ACT?

No.

22. IS THE PROPERTY WITHIN A “PROCLAIMED MINE SUBSIDENCE DISTRICT”?

No.

23. IS THE PROPERTY AFFECTED BY ONE OF THE MATTERS PRESCRIBED BY SECTION 59(2) OF THE CONTAMINATED LAND MANAGEMENT ACT 1997?

No.

SPECIAL NOTE: If you have any concerns about land contamination beyond the information described in this certificate, you should contact the NSW Office of Environment & Heritage. Tel: 131 555 or email info@environment.nsw.gov.au.

24. IS THE PROPERTY BUSH FIRE PRONE LAND?

No.

25. IS THE PROPERTY, LAND TO WHICH A PROPERTY VEGETATION PLAN UNDER THE *NATIVE VEGETATION ACT 2003* APPLIES?

No.

26. IS THE PROPERTY, LAND SUBJECT TO AN ORDER UNDER THE *TREE (DISPUTES BETWEEN NEIGHBOURS) ACT 2006*?

The land is not known to be subject to such order.

27. IS THE PROPERTY SUBJECT TO DIRECTIONS UNDER PART 3A MAJOR INFRASTRUCTURE AND OTHER PROJECTS of the Environmental Planning & Assessment Act 1979 No.203?

No.

28. **IS THE PROPERTY SUBJECT TO A CURRENT SITE COMPATIBILITY CERTIFICATE AND CONDITIONS FOR SENIORS HOUSING under the provisions of State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004?**

No.

29. **IS THE PROPERTY SUBJECT TO A VALID SITE COMPATIBILITY CERTIFICATE FOR INFRASTRUCTURE issued under clause 19 of State Environmental Planning Policy (Infrastructure) 2007?**

No.

30. **IS THE PROPERTY SUBJECT TO A VALID SITE COMPATIBILITY CERTIFICATE AND CONDITIONS FOR AFFORDABLE RENTAL HOUSING issued under clause 37 of State Environmental Planning Policy (Affordable Rental Housing) 2009?**

No.

31. **IS THE PROPERTY SUBJECT TO AN EXEMPTION UNDER SECTION 23 OR AUTHORISATION UNDER SECTION 24 OF THE NATION BUILDING AND JOBS PLAN (*STATE INFRASTRUCTURE DELIVERY*) ACT 2009?**

No.

32. **IS THE PROPERTY, LAND THAT IS BIODIVERSITY CERTIFIED LAND WITHIN THE MEANING OF PART 7AA OF THE THREATENED SPECIES CONSERVATION ACT 1995?**

No.

Special Note: For further information about the Biodiversity Certified Land contact the NSW Office of Environment & Heritage. Tel:131 555 or email info@environment.nsw.gov.au.

33. **IS THE PROPERTY, LAND TO WHICH A BIOBANKING AGREEMENT UNDER PART 7A OF THE THREATENED SPECIES CONSERVATION ACT 1995 RELATES?**

No.

Special Note: For further information about the Biobanking agreement contact the Biobanking Team at NSW Office of Environment & Heritage. Tel:131 555 or email biobanking@environment.nsw.gov.au.

34. **MAY COMPLYING DEVELOPMENT BE CARRIED OUT UNDER EACH OF THE CODES FOR COMPLYING DEVELOPMENT IN *STATE ENVIRONMENTAL PLANNING POLICY (EXEMPT AND COMPLYING DEVELOPMENT CODES) 2008* ON THE LAND AND IF COMPLYING DEVELOPMENT MAY NOT BE CARRIED OUT ON THAT LAND, BECAUSE OF ONE OR MORE OF THE REQUIREMENTS UNDER CLAUSES 1.17A(1)(c) TO (e), (2), (3) AND (4), 1.18(1)(c3) AND 1.19 OF THAT POLICY, WHY IT MAY NOT BE CARRIED OUT ON THAT LAND?**

General Housing Code

Complying development under the General Housing Code **may** be carried out on the land.

Housing Alterations Code

Complying development under the Housing Internal Alteration Code **may** be carried out on the land.

General Development Code

Complying development under the General Development Code **may** be carried out on the land.

Commercial and Industrial Alterations Code

Complying development under the Commercial and Industrial Alterations Code **may** be carried out on the land.

Commercial and Industrial (New Buildings and Additions) Code

Complying development under the Commercial and Industrial (New Buildings and Additions) Code **may** be carried out on the land.

Subdivision Code

Complying development under the Subdivision Code **may** be carried out on the land.

Demolition Code

Complying development under the Demolition Code **may** be carried out on the land.

Fire Safety Code

Complying development under the Fire Safety Code **may** be carried out on the land.

SPECIAL NOTE: The above question relates to whether or not the land falls within an exclusion area under Clauses 1.17A(1)(c) to (e), (2), (3) and (4), 1.18(1)(c3) and 1.19 of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. It is your responsibility to ensure that you comply with any other general requirements of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. Failure to comply with these provisions may mean that a Complying Development Certificate issued under the provisions of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 is invalid.

- 35. DO ANY ADOPTED COUNCIL POLICIES OR RESOLUTIONS OR ANY POLICIES ADOPTED BY A PUBLIC AUTHORITY AND NOTIFIED TO THE COUNCIL FOR THE EXPRESS PURPOSE OF ITS ADOPTION BY THAT AUTHORITY BEING REFERRED TO IN PLANNING CERTIFICATES ISSUED BY THE COUNCIL RESTRICT THE DEVELOPMENT OF THE PROPERTY DUE TO THE LIKELIHOOD OF LANDSLIP, BUSHFIRE, TIDAL INUNDATION, SUBSIDENCE, CONTAMINATION, ACID SULPHATE SOILS OR ANY OTHER RISK (OTHER THAN FLOODING)?**

No.

Note: A review of Council's readily available records has been conducted to identify previous land uses that may have caused land contamination. This review did not reveal any reason for contamination of this property. However, prior to urban settlement, sizeable areas of Ku-ring-gai were covered by agricultural and horticultural activities. These uses are listed in the Managing Land Contamination Planning Guidelines as activities that may cause contamination. If you are concerned about possible contamination of the site you should make your own investigations regarding the condition of this property.

- 36. DO ANY ADOPTED COUNCIL POLICIES OR RESOLUTIONS OR ANY POLICIES ADOPTED BY A PUBLIC AUTHORITY REQUIRED TO BE REFERRED TO IN A PLANNING CERTIFICATE EFFECT THE DEVELOPMENT OF THE PROPERTY DUE TO FLOOD RELATED DEVELOPMENT CONTROLS INFORMATION?**

No.

- 37. OTHER INFORMATION RELATING TO DEVELOPMENT OF THE SITE.**

This land may contain threatened species, populations and ecological communities listed under the Threatened Species Conservation Act 1995 (NSW) and or the Environment Protection Biodiversity Conservation Act 1999 (Commonwealth). For more information contact NSW Department of Environment & Heritage, Tel: 131 555.

38. DO YOU NEED TO REFER TO ANY OTHER DOCUMENTS?

Yes. The Environmental Planning and Assessment Amendment Act 1997 No.152 commenced operation on 1 July 1998. As a consequence of this Act the information contained in this certificate needs to be read in conjunction with the provisions of the Environmental Planning and Assessment (Amendment) Regulation 1998, Environmental Planning and Assessment (Further Amendment) Regulation 1998 and Environmental Planning and Assessment (Savings and Transitional) Regulation 1998. Your solicitor will have a copy of this legislation or it may be obtained from the Government Information Office.

John McKee
General Manager,

Per

A handwritten signature in black ink, appearing to be 'J. McKee', is written over a horizontal line.

PLANNING CERTIFICATE

UNDER SECTION 149 OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

818 Pacific Highway, Gordon NSW 2072
Locked Bag 1006, Gordon NSW 2072
T 02 9424 0000 F 02 9424 0001
DX 8703 Gordon TTY 02 9424 0875
E kmp@kmg.nsw.gov.au
W www.kmg.nsw.gov.au
ABN 86 408 856 411



PROPERTY DETAILS

Address: 2 Bent Street LINDFIELD NSW 2070

Lot Description: Lot 9 DP 1090427

CERTIFICATE DETAILS

Certificate No: PC1729/15

Certificate Date: 10/09/2015

Certificate Type: Section 149(2)

Journal Id: 117944

APPLICANT'S DETAILS

REF: Lindfield Community Hub



Ku-ring-gai Council
818 Pacific Highway
GORDON NSW 2072

BACKGROUND INFORMATION

This certificate provides information on how a property (such as land, a house, a commercial building, etc.) may be used and the limits on its development. The certificate contains information Council is aware of through its records and environmental plans with data supplied by the State Government. The details contained in this certificate are limited to that required by Section 149 of the Environmental Planning and Assessment Act.

1. WHICH ENVIRONMENTAL PLAN RESTRICTS THE USE OF THIS PROPERTY?

(Including planning proposals and draft local environmental plans exhibited prior to 1 July 2009 pursuant to section 66(1) b of the E. P. & A. Act).

Ku-ring-gai Local Environmental Plan (Local Centres) 2012 as published on the NSW Legislation Website on 25 January 2013.

2. WHAT IS THE ZONING OF THIS PROPERTY and the relevant environmental plan?

(Zoning is a way of classifying land and limits the range of uses or activities that may be permitted on that land or property).

RE1 Public Recreation

under the provisions of Ku-ring-gai Local Environmental Plan (Local Centres) 2012 as published on the NSW Legislation Website on 25 January 2013.

3. WHAT DOES NOT REQUIRE DEVELOPMENT CONSENT under the above environmental plan(s)?

Environmental facilities; Environmental protection works; Roads.

Note: Please refer to the provisions for Exempt and Complying Development as described in Part 3 of Ku-ring-gai Local Environmental Plan (Local Centres) 2012.

4. WHAT DOES REQUIRE DEVELOPMENT CONSENT under the above environmental plan(s)?

Animal boarding or training establishments; Bee keeping; Camping grounds; Car parks; Caravan parks; Child care centres; Community facilities; Emergency services facilities; Flood mitigation works; Food and drink premises; Forestry; Information and education facilities; Kiosks; Markets; Plant nurseries; Recreation areas; Recreation facilities (indoor); Recreation facilities (major); Recreation facilities (outdoor); Registered clubs; Roadside stalls; Signage; Water recycling facilities; Water supply systems

5. WHAT IS PROHIBITED under the above environmental plan(s)?

Any development not specified in item 3 or 4.

6. **DO THE DIMENSIONS OF THE LAND PERMIT THE ERECTION OF A DWELLING HOUSE ON THIS PROPERTY** under the above environmental plan(s)?

Not applicable. Dwelling houses are not permitted within this zone.

7. **WHAT IS THE PROPOSED ZONING OF THIS PROPERTY** and the relevant proposed environmental plan?

(Zoning is a way of classifying land and limits the range of uses or activities that may be permitted on that land or property).

There are no zoning changes under any proposed environmental plans applying to this land.

8. **WHAT DOES NOT REQUIRE DEVELOPMENT CONSENT** under the above proposed environmental plan(s)?

Not applicable.

9. **WHAT DOES REQUIRE DEVELOPMENT CONSENT** under the above proposed environmental plan(s)?

Not applicable.

10. **WHAT IS PROHIBITED** by the above proposed environmental plan(s)?

Not applicable.

11. **DO THE DIMENSIONS OF THE LAND PERMIT THE ERECTION OF A DWELLING HOUSE ON THIS PROPERTY** by the above proposed environmental plan(s)?

Not applicable.

12. WHAT OTHER PLANNING INSTRUMENTS AFFECT THIS PROPERTY?

(State and deemed state environmental plans are prepared by the State Government and cover issues as varied as rivers, residential development, employment, etc. If you have any further enquiries please contact the Department of Planning, Tel: 02 9228 6333 or email information@planning.nsw.gov.au.)

Draft State Environmental Planning Policy (Competition)

Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005

State Environmental Planning Policy No.6 - Number of storeys in a building.

State Environmental Planning Policy No.19 - Bushland in Urban Areas.

State Environmental Planning Policy No.21 - Caravan Parks

State Environmental Planning Policy No.32 - Urban Consolidation (Redevelopment of Urban Land).

State Environmental Planning Policy No.33 - Hazardous & Offensive Development.

State Environmental Planning Policy No.44 - Koala Habitat Protection.

State Environmental Planning Policy No.55 - Remediation of Land.

State Environmental Planning Policy No.62 - Sustainable Aquaculture.

State Environmental Planning Policy No.64 - Advertising and Signage.

State Environmental Planning Policy No.65 - Design Quality of Residential Flat Development.

State Environmental Planning Policy No.70 - Affordable Housing(Revised Schemes).

State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004.

State Environmental Planning Policy (Major Development) 2005.

State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007.

State Environmental Planning Policy (Temporary Structures) 2007.

State Environmental Planning Policy (Infrastructure) 2007.

State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

State Environmental Planning Policy (Affordable Rental Housing) 2009.

State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004.

13. WHICH DEVELOPMENT CONTROL PLANS APPLY TO THE PROPERTY?

(A development control plan adds further detail to local environmental plans and may address issues such as building height, car parking etc. Copies of the Plans are available from Council).

Ku-ring-gai Local Centres Development Control Plan

14. WHICH DEVELOPMENT CONTRIBUTION PLANS APPLY IF THIS PROPERTY IS DEVELOPED?

(A Development Contribution Plan – commonly known as a Section 94 Plan outlines the financial costs Council charges if a property is developed and Council believes the development will require additional services or facilities such as parks, roads etc. Copies of the Plans are available from Council).

Ku-ring-gai Contributions Plan 2010.

15. IS THE PROPERTY IDENTIFIED AS A HERITAGE ITEM by Council or State Government? (and if so, what is the status, e.g. local environmental plan, Heritage Act etc.)

No.

SPECIAL NOTE: Your attention is drawn to Clause 5.10(5) of the Ku-ring-gai Local Environmental Plan (Local Centres) 2012 which states that the consent authority may, before granting consent to any development: (a) on land on which a heritage item is located, or (b) on land that is within a heritage conservation area, or (c) on land that is within the vicinity of land referred to in paragraph (a) or (b), require a heritage management document to be prepared that assesses the extent to which the carrying out of the proposed development would affect the heritage significance of the heritage item or heritage conservation area concerned.

16. IS THE PROPERTY IN A CONSERVATION AREA?

No.

SPECIAL NOTE: A conservation area is a place of historic and aesthetic value to the community. It contains a number of elements of significance, such as a historic subdivision layout, a pattern of building "footprints" within each street block, buildings of historic and architectural importance, road alignments, trees, gutters and kerb edges which all combine to create a sense of place that is worth keeping. Council's Heritage Conservation Planner can provide you with more information on this matter.

17. DOES THE PROPERTY INCLUDE OR COMPRISE CRITICAL HABITAT?

No.

18. IS THE PROPERTY AFFECTED BY A ROAD WIDENING OR ROAD REALIGNMENT under the Roads Act, any environmental planning instrument or any Council resolution?

No.

19. IS THE PROPERTY RESERVED FOR ACQUISITION BY A PUBLIC AUTHORITY UNDER ANY ENVIRONMENTAL PLAN OR PROPOSED ENVIRONMENTAL PLAN?

YES. The land or part of the land is identified as Local Open Space on the Ku-ring-gai Local Environmental Plan (Local Centres) 2012 - Land Reservation Acquisition Map. Please refer to clause 5.1 of Ku-ring-gai Local Environmental Plan (Local Centres) 2012 for the relevant acquisition authority.

20. IS THE PROPERTY PART OF ANY APPLICATION DECLARED TO BE “STATE SIGNIFICANT DEVELOPMENT”?

(Development is judged to be “State significant” if the Minister for Planning declares it to be so based on substantial cost of development, significant numbers of employees or other criteria. If you have any further enquiries please contact the Department of Planning. Tel: 02 9228 6333 or email information@planning.nsw.gov.au..

No.

21. IS THE PROPERTY AFFECTED BY SECTION 38 OR 39 OF THE COASTAL PROTECTION ACT?

No.

22. IS THE PROPERTY WITHIN A “PROCLAIMED MINE SUBSIDENCE DISTRICT”?

No.

23. IS THE PROPERTY AFFECTED BY ONE OF THE MATTERS PRESCRIBED BY SECTION 59(2) OF THE CONTAMINATED LAND MANAGEMENT ACT 1997?

No.

SPECIAL NOTE: If you have any concerns about land contamination beyond the information described in this certificate, you should contact the NSW Office of Environment & Heritage. Tel.131 555 or email info@environment.nsw.gov.au.

24. IS THE PROPERTY BUSH FIRE PRONE LAND?

No.

25. IS THE PROPERTY, LAND TO WHICH A PROPERTY VEGETATION PLAN UNDER THE *NATIVE VEGETATION ACT 2003* APPLIES?

No.

26. IS THE PROPERTY, LAND SUBJECT TO AN ORDER UNDER THE *TREE (DISPUTES BETWEEN NEIGHBOURS) ACT 2006*?

The land is not known to be subject to such order.

27. **IS THE PROPERTY SUBJECT TO DIRECTIONS UNDER PART 3A MAJOR INFRASTRUCTURE AND OTHER PROJECTS of the Environmental Planning & Assessment Act 1979 No.203?**

No.

28. **IS THE PROPERTY SUBJECT TO A CURRENT SITE COMPATIBILITY CERTIFICATE AND CONDITIONS FOR SENIORS HOUSING under the provisions of State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004?**

No.

29. **IS THE PROPERTY SUBJECT TO A VALID SITE COMPATIBILITY CERTIFICATE FOR INFRASTRUCTURE issued under clause 19 of State Environmental Planning Policy (Infrastructure) 2007?**

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No.

31. **IS THE PROPERTY SUBJECT TO AN EXEMPTION UNDER SECTION 23 OR AUTHORISATION UNDER SECTION 24 OF THE NATION BUILDING AND JOBS PLAN (*STATE INFRASTRUCTURE DELIVERY*) ACT 2009?**

No.

32. **IS THE PROPERTY, LAND THAT IS BIODIVERSITY CERTIFIED LAND WITHIN THE MEANING OF PART 7AA OF THE THREATENED SPECIES CONSERVATION ACT 1995?**

No.

Special Note: For further information about the Biodiversity Certified Land contact the NSW Office of Environment & Heritage. Tel:131 555 or email info@environment.nsw.gov.au

33. IS THE PROPERTY, LAND TO WHICH A BIOBANKING AGREEMENT UNDER PART 7A OF THE THREATENED SPECIES CONSERVATION ACT 1995 RELATES?

No.

Special Note: For further information about the Biobanking agreement contact the Biobanking Team at NSW Office of Environment & Heritage. Tel:131 555 or email biobanking@environment.nsw.gov.au.

34. MAY COMPLYING DEVELOPMENT BE CARRIED OUT UNDER EACH OF THE CODES FOR COMPLYING DEVELOPMENT IN STATE ENVIRONMENTAL PLANNING POLICY (EXEMPT AND COMPLYING DEVELOPMENT CODES) 2008 ON THE LAND AND IF COMPLYING DEVELOPMENT MAY NOT BE CARRIED OUT ON THAT LAND, BECAUSE OF ONE OR MORE OF THE REQUIREMENTS UNDER CLAUSES 1.17A(1)(c) TO (e), (2), (3) AND (4), 1.18(1)(c3) AND 1.19 OF THAT POLICY, WHY IT MAY NOT BE CARRIED OUT ON THAT LAND?

General Housing Code

Complying development under the General Housing Code **may not** be carried out on the land. The land is affected by the following general exemptions and/or land based exclusions:

- ☐ The land is land that is reserved for a public purpose in an environmental planning instrument.

Housing Alterations Code

Complying development under the Housing Internal Alteration Code **may** be carried out on the land.

General Development Code

Complying development under the General Development Code **may** be carried out on the land.

Commercial and Industrial Alterations Code

Complying development under the Commercial and Industrial Alterations Code **may** be carried out on the land.

Commercial and Industrial (New Buildings and Additions) Code

Complying development under the Commercial and Industrial (New Buildings and Additions) Code **may not** be carried out on the land. The land is affected by the following general exemptions and/or land based exclusions:

- ☐ The land is land that is reserved for a public purpose in an environmental planning instrument.

Subdivision Code

Complying development under the Subdivision Code **may** be carried out on the land.

Demolition Code

Complying development under the Demolition Code **may** be carried out on the land.

Fire Safety Code

Complying development under the Fire Safety Code **may** be carried out on the land.

SPECIAL NOTE: *The above question relates to whether or not the land falls within an exclusion area under Clauses 1.17A(1)(c) to (e), (2), (3) and (4), 1.18(1)(c3) and 1.19 of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. It is your responsibility to ensure that you comply with any other general requirements of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. Failure to comply with these provisions may mean that a Complying Development Certificate issued under the provisions of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 is invalid.*

- 35. DO ANY ADOPTED COUNCIL POLICIES OR RESOLUTIONS OR ANY POLICIES ADOPTED BY A PUBLIC AUTHORITY AND NOTIFIED TO THE COUNCIL FOR THE EXPRESS PURPOSE OF ITS ADOPTION BY THAT AUTHORITY BEING REFERRED TO IN PLANNING CERTIFICATES ISSUED BY THE COUNCIL RESTRICT THE DEVELOPMENT OF THE PROPERTY DUE TO THE LIKELIHOOD OF LANDSLIP, BUSHFIRE, TIDAL INUNDATION, SUBSIDENCE, CONTAMINATION, ACID SULPHATE SOILS OR ANY OTHER RISK (OTHER THAN FLOODING)?**

No.

Note: A review of Council's readily available records has been conducted to identify previous land uses that may have caused land contamination. This review did not reveal any reason for contamination of this property. However, prior to urban settlement, sizeable areas of Ku-ring-gai were covered by agricultural and horticultural activities. These uses are listed in the Managing Land Contamination Planning Guidelines as activities that may cause contamination. If you are concerned about possible contamination of the site you should make your own investigations regarding the condition of this property.

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No.

- 37. OTHER INFORMATION RELATING TO DEVELOPMENT OF THE SITE.**

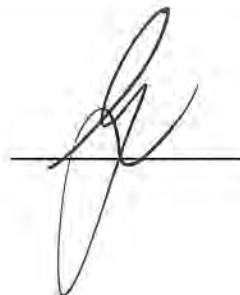
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38. DO YOU NEED TO REFER TO ANY OTHER DOCUMENTS?

Yes. The Environmental Planning and Assessment Amendment Act 1997 No.152 commenced operation on 1 July 1998. As a consequence of this Act the information contained in this certificate needs to be read in conjunction with the provisions of the Environmental Planning and Assessment (Amendment) Regulation 1998, Environmental Planning and Assessment (Further Amendment) Regulation 1998 and Environmental Planning and Assessment (Savings and Transitional) Regulation 1998. Your solicitor will have a copy of this legislation or it may be obtained from the Government Information Office.

John McKee
General Manager,

Per

A handwritten signature in black ink, appearing to be 'J. McKee', is written over a horizontal line.

PLANNING CERTIFICATE

UNDER SECTION 149 OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

818 Pacific Highway, Gordon NSW 2072
Locked Bag 1006, Gordon NSW 2072
T 02 9424 0000 F 02 9424 0001
DX 8703 Gordon TTY 02 9424 0875
E kmc@kmc.nsw.gov.au
W www.kmc.nsw.gov.au
ABN 86 408 856 411



PROPERTY DETAILS

Address: 4 Bent Street LINDFIELD NSW 2070

Lot Description: Lot 10 DP 3498

CERTIFICATE DETAILS

Certificate No: PC1728/15

Certificate Date: 10/09/2015

Certificate Type: Section 149(2)

Journal Id: 117944

APPLICANT'S DETAILS

REF: Lindfield Community Hub



Ku-ring-gai Council
818 Pacific Highway
GORDON NSW 2072

BACKGROUND INFORMATION

This certificate provides information on how a property (such as land, a house, a commercial building, etc.) may be used and the limits on its development. The certificate contains information Council is aware of through its records and environmental plans with data supplied by the State Government. The details contained in this certificate are limited to that required by Section 149 of the Environmental Planning and Assessment Act.

1. WHICH ENVIRONMENTAL PLAN RESTRICTS THE USE OF THIS PROPERTY?

(Including planning proposals and draft local environmental plans exhibited prior to 1 July 2009 pursuant to section 66(1) b of the E. P. & A. Act).

Ku-ring-gai Local Environmental Plan (Local Centres) 2012 as published on the NSW Legislation Website on 25 January 2013.

2. WHAT IS THE ZONING OF THIS PROPERTY and the relevant environmental plan?

(Zoning is a way of classifying land and limits the range of uses or activities that may be permitted on that land or property).

RE1 Public Recreation

under the provisions of Ku-ring-gai Local Environmental Plan (Local Centres) 2012 as published on the NSW Legislation Website on 25 January 2013.

3. WHAT DOES NOT REQUIRE DEVELOPMENT CONSENT under the above environmental plan(s)?

Environmental facilities; Environmental protection works; Roads.

Note: Please refer to the provisions for Exempt and Complying Development as described in Part 3 of Ku-ring-gai Local Environmental Plan (Local Centres) 2012.

4. WHAT DOES REQUIRE DEVELOPMENT CONSENT under the above environmental plan(s)?

Animal boarding or training establishments; Bee keeping; Camping grounds; Car parks; Caravan parks; Child care centres; Community facilities; Emergency services facilities; Flood mitigation works; Food and drink premises; Forestry; Information and education facilities; Kiosks; Markets; Plant nurseries; Recreation areas; Recreation facilities (indoor); Recreation facilities (major); Recreation facilities (outdoor); Registered clubs; Roadside stalls; Signage; Water recycling facilities; Water supply systems

5. WHAT IS PROHIBITED under the above environmental plan(s)?

Any development not specified in item 3 or 4.

6. **DO THE DIMENSIONS OF THE LAND PERMIT THE ERECTION OF A DWELLING HOUSE ON THIS PROPERTY** under the above environmental plan(s)?

Not applicable. Dwelling houses are not permitted within this zone.

7. **WHAT IS THE PROPOSED ZONING OF THIS PROPERTY** and the relevant proposed environmental plan?

(Zoning is a way of classifying land and limits the range of uses or activities that may be permitted on that land or property).

There are no zoning changes under any proposed environmental plans applying to this land.

8. **WHAT DOES NOT REQUIRE DEVELOPMENT CONSENT** under the above proposed environmental plan(s)?

Not applicable.

9. **WHAT DOES REQUIRE DEVELOPMENT CONSENT** under the above proposed environmental plan(s)?

Not applicable.

10. **WHAT IS PROHIBITED** by the above proposed environmental plan(s)?

Not applicable.

11. **DO THE DIMENSIONS OF THE LAND PERMIT THE ERECTION OF A DWELLING HOUSE ON THIS PROPERTY** by the above proposed environmental plan(s)?

Not applicable.

12. WHAT OTHER PLANNING INSTRUMENTS AFFECT THIS PROPERTY?

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State Environmental Planning Policy No.21 - Caravan Parks
State Environmental Planning Policy No.32 - Urban Consolidation (Redevelopment of Urban Land).
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State Environmental Planning Policy No.44 - Koala Habitat Protection.
State Environmental Planning Policy No.55 - Remediation of Land.
State Environmental Planning Policy No.62 - Sustainable Aquaculture.
State Environmental Planning Policy No.64 - Advertising and Signage.
State Environmental Planning Policy No.65 - Design Quality of Residential Flat Development.
State Environmental Planning Policy No.70 - Affordable Housing(Revised Schemes).
State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004.
State Environmental Planning Policy (Major Development) 2005.
State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007.
State Environmental Planning Policy (Temporary Structures) 2007.
State Environmental Planning Policy (Infrastructure) 2007.
State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.
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13. WHICH DEVELOPMENT CONTROL PLANS APPLY TO THE PROPERTY?

(A development control plan adds further detail to local environmental plans and may address issues such as building height, car parking etc. Copies of the Plans are available from Council).

Ku-ring-gai Local Centres Development Control Plan

14. WHICH DEVELOPMENT CONTRIBUTION PLANS APPLY IF THIS PROPERTY IS DEVELOPED?

(A Development Contribution Plan – commonly known as a Section 94 Plan outlines the financial costs Council charges if a property is developed and Council believes the development will require additional services or facilities such as parks, roads etc. Copies of the Plans are available from Council).

Ku-ring-gai Contributions Plan 2010.

15. IS THE PROPERTY IDENTIFIED AS A HERITAGE ITEM by Council or State Government? (and if so, what is the status, e.g. local environmental plan, Heritage Act etc.)

No.

SPECIAL NOTE: Your attention is drawn to Clause 5.10(5) of the Ku-ring-gai Local Environmental Plan (Local Centres) 2012 which states that the consent authority may, before granting consent to any development: (a) on land on which a heritage item is located, or (b) on land that is within a heritage conservation area, or (c) on land that is within the vicinity of land referred to in paragraph (a) or (b), require a heritage management document to be prepared that assesses the extent to which the carrying out of the proposed development would affect the heritage significance of the heritage item or heritage conservation area concerned.

16. IS THE PROPERTY IN A CONSERVATION AREA?

No.

SPECIAL NOTE: A conservation area is a place of historic and aesthetic value to the community. It contains a number of elements of significance, such as a historic subdivision layout, a pattern of building "footprints" within each street block, buildings of historic and architectural importance, road alignments, trees, gutters and kerb edges which all combine to create a sense of place that is worth keeping. Council's Heritage Conservation Planner can provide you with more information on this matter.

17. DOES THE PROPERTY INCLUDE OR COMPRISE CRITICAL HABITAT?

No.

18. IS THE PROPERTY AFFECTED BY A ROAD WIDENING OR ROAD REALIGNMENT under the Roads Act, any environmental planning instrument or any Council resolution?

No.

19. IS THE PROPERTY RESERVED FOR ACQUISITION BY A PUBLIC AUTHORITY UNDER ANY ENVIRONMENTAL PLAN OR PROPOSED ENVIRONMENTAL PLAN?

YES. The land or part of the land is identified as Local Open Space on the Ku-ring-gai Local Environmental Plan (Local Centres) 2012 - Land Reservation Acquisition Map. Please refer to clause 5.1 of Ku-ring-gai Local Environmental Plan (Local Centres) 2012 for the relevant acquisition authority.

20. IS THE PROPERTY PART OF ANY APPLICATION DECLARED TO BE “STATE SIGNIFICANT DEVELOPMENT”?

(Development is judged to be “State significant” if the Minister for Planning declares it to be so based on substantial cost of development, significant numbers of employees or other criteria. If you have any further enquiries please contact the Department of Planning. Tel: 02 9228 6333 or email information@planning.nsw.gov.au.)

No.

21. IS THE PROPERTY AFFECTED BY SECTION 38 OR 39 OF THE COASTAL PROTECTION ACT?

No.

22. IS THE PROPERTY WITHIN A “PROCLAIMED MINE SUBSIDENCE DISTRICT”?

No.

23. IS THE PROPERTY AFFECTED BY ONE OF THE MATTERS PRESCRIBED BY SECTION 59(2) OF THE CONTAMINATED LAND MANAGEMENT ACT 1997?

No.

SPECIAL NOTE: If you have any concerns about land contamination beyond the information described in this certificate, you should contact the NSW Office of Environment & Heritage. Tel: 131 555 or email info@environment.nsw.gov.au.

24. IS THE PROPERTY BUSH FIRE PRONE LAND?

No.

25. IS THE PROPERTY, LAND TO WHICH A PROPERTY VEGETATION PLAN UNDER THE *NATIVE VEGETATION ACT 2003* APPLIES?

No.

26. IS THE PROPERTY, LAND SUBJECT TO AN ORDER UNDER THE *TREE (DISPUTES BETWEEN NEIGHBOURS) ACT 2006*?

The land is not known to be subject to such order.

27. **IS THE PROPERTY SUBJECT TO DIRECTIONS UNDER PART 3A MAJOR INFRASTRUCTURE AND OTHER PROJECTS of the Environmental Planning & Assessment Act 1979 No.203?**

No.

28. **IS THE PROPERTY SUBJECT TO A CURRENT SITE COMPATIBILITY CERTIFICATE AND CONDITIONS FOR SENIORS HOUSING under the provisions of State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004?**

No.

29. **IS THE PROPERTY SUBJECT TO A VALID SITE COMPATIBILITY CERTIFICATE FOR INFRASTRUCTURE issued under clause 19 of State Environmental Planning Policy (Infrastructure) 2007?**

No.

30. **IS THE PROPERTY SUBJECT TO A VALID SITE COMPATIBILITY CERTIFICATE AND CONDITIONS FOR AFFORDABLE RENTAL HOUSING issued under clause 37 of State Environmental Planning Policy (Affordable Rental Housing) 2009?**

No.

31. **IS THE PROPERTY SUBJECT TO AN EXEMPTION UNDER SECTION 23 OR AUTHORISATION UNDER SECTION 24 OF THE NATION BUILDING AND JOBS PLAN (*STATE INFRASTRUCTURE DELIVERY ACT 2009*)?**

No.

32. **IS THE PROPERTY, LAND THAT IS BIODIVERSITY CERTIFIED LAND WITHIN THE MEANING OF PART 7AA OF THE THREATENED SPECIES CONSERVATION ACT 1995?**

No.

Special Note: For further information about the Biodiversity Certified Land contact the NSW Office of Environment & Heritage. Tel:131 555 or email info@environment.nsw.gov.au.

33. IS THE PROPERTY, LAND TO WHICH A BIOBANKING AGREEMENT UNDER PART 7A OF THE THREATENED SPECIES CONSERVATION ACT 1995 RELATES?

No.

Special Note: For further information about the Biobanking agreement contact the Biobanking Team at NSW Office of Environment & Heritage. Tel: 131 555 or email biobanking@environment.nsw.gov.au.

34. MAY COMPLYING DEVELOPMENT BE CARRIED OUT UNDER EACH OF THE CODES FOR COMPLYING DEVELOPMENT IN *STATE ENVIRONMENTAL PLANNING POLICY (EXEMPT AND COMPLYING DEVELOPMENT CODES) 2008* ON THE LAND AND IF COMPLYING DEVELOPMENT MAY NOT BE CARRIED OUT ON THAT LAND, BECAUSE OF ONE OR MORE OF THE REQUIREMENTS UNDER CLAUSES 1.17A(1)(c) TO (e), (2), (3) AND (4), 1.18(1)(c3) AND 1.19 OF THAT POLICY, WHY IT MAY NOT BE CARRIED OUT ON THAT LAND?

General Housing Code

Complying development under the General Housing Code **may not** be carried out on the land. The land is affected by the following general exemptions and/or land based exclusions:

- ☐ The land is land that is reserved for a public purpose in an environmental planning instrument.

Housing Alterations Code

Complying development under the Housing Internal Alteration Code **may** be carried out on the land.

General Development Code

Complying development under the General Development Code **may** be carried out on the land.

Commercial and Industrial Alterations Code

Complying development under the Commercial and Industrial Alterations Code **may** be carried out on the land.

Commercial and Industrial (New Buildings and Additions) Code

Complying development under the Commercial and Industrial (New Buildings and Additions) Code **may not** be carried out on the land. The land is affected by the following general exemptions and/or land based exclusions:

- ☐ The land is land that is reserved for a public purpose in an environmental planning instrument.

Subdivision Code

Complying development under the Subdivision Code **may** be carried out on the land.

Demolition Code

Complying development under the Demolition Code **may** be carried out on the land.

Fire Safety Code

Complying development under the Fire Safety Code **may** be carried out on the land.

SPECIAL NOTE: *The above question relates to whether or not the land falls within an exclusion area under Clauses 1.17A(1)(c) to (e), (2), (3) and (4), 1.18(1)(c3) and 1.19 of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. It is your responsibility to ensure that you comply with any other general requirements of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. Failure to comply with these provisions may mean that a Complying Development Certificate issued under the provisions of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 is invalid.*

- 35. DO ANY ADOPTED COUNCIL POLICIES OR RESOLUTIONS OR ANY POLICIES ADOPTED BY A PUBLIC AUTHORITY AND NOTIFIED TO THE COUNCIL FOR THE EXPRESS PURPOSE OF ITS ADOPTION BY THAT AUTHORITY BEING REFERRED TO IN PLANNING CERTIFICATES ISSUED BY THE COUNCIL RESTRICT THE DEVELOPMENT OF THE PROPERTY DUE TO THE LIKELIHOOD OF LANDSLIP, BUSHFIRE, TIDAL INUNDATION, SUBSIDENCE, CONTAMINATION, ACID SULPHATE SOILS OR ANY OTHER RISK (OTHER THAN FLOODING)?**

No.

Note: A review of Council's readily available records has been conducted to identify previous land uses that may have caused land contamination. This review did not reveal any reason for contamination of this property. However, prior to urban settlement, sizeable areas of Ku-ring-gai were covered by agricultural and horticultural activities. These uses are listed in the Managing Land Contamination Planning Guidelines as activities that may cause contamination. If you are concerned about possible contamination of the site you should make your own investigations regarding the condition of this property.

- 36. DO ANY ADOPTED COUNCIL POLICIES OR RESOLUTIONS OR ANY POLICIES ADOPTED BY A PUBLIC AUTHORITY REQUIRED TO BE REFERRED TO IN A PLANNING CERTIFICATE EFFECT THE DEVELOPMENT OF THE PROPERTY DUE TO FLOOD RELATED DEVELOPMENT CONTROLS INFORMATION?**

No.

- 37. OTHER INFORMATION RELATING TO DEVELOPMENT OF THE SITE.**

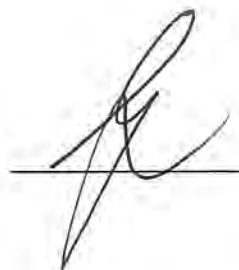
This land may contain threatened species, populations and ecological communities listed under the Threatened Species Conservation Act 1995 (NSW) and or the Environment Protection Biodiversity Conservation Act 1999 (Commonwealth). For more information contact NSW Department of Environment & Heritage, Tel: 131 555.

38. DO YOU NEED TO REFER TO ANY OTHER DOCUMENTS?

Yes. The Environmental Planning and Assessment Amendment Act 1997 No.152 commenced operation on 1 July 1998. As a consequence of this Act the information contained in this certificate needs to be read in conjunction with the provisions of the Environmental Planning and Assessment (Amendment) Regulation 1998, Environmental Planning and Assessment (Further Amendment) Regulation 1998 and Environmental Planning and Assessment (Savings and Transitional) Regulation 1998. Your solicitor will have a copy of this legislation or it may be obtained from the Government Information Office.

John McKee
General Manager,

Per

A handwritten signature in black ink, appearing to be 'J. McKee', written over a horizontal line.

PLANNING CERTIFICATE

818 Pacific Highway, Gordon NSW 2072
Locked Bag 1006, Gordon NSW 2072
T 02 9424 0000 F 02 9424 0001
DX 8703 Gordon TTY 02 9424 0875
E kmc@kmc.nsw.gov.au
W www.kmc.nsw.gov.au
ABN 86 408 856 411



UNDER SECTION 149 OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

PROPERTY DETAILS

Address: 6 Bent Street LINDFIELD NSW 2070

Lot Description: Lot 3 DP 667420

CERTIFICATE DETAILS

Certificate No: PC1727/15

Certificate Date: 10/09/2015

Certificate Type: Section 149(2)

Journal Id: 117944

APPLICANT'S DETAILS

REF: Lindfield Community Hub



Ku-ring-gai Council
818 Pacific Highway
GORDON NSW 2072

BACKGROUND INFORMATION

This certificate provides information on how a property (such as land, a house, a commercial building, etc.) may be used and the limits on its development. The certificate contains information Council is aware of through its records and environmental plans with data supplied by the State Government. The details contained in this certificate are limited to that required by Section 149 of the Environmental Planning and Assessment Act.

1. WHICH ENVIRONMENTAL PLAN RESTRICTS THE USE OF THIS PROPERTY?

(Including planning proposals and draft local environmental plans exhibited prior to 1 July 2009 pursuant to section 66(1) b of the E. P. & A. Act).

Ku-ring-gai Local Environmental Plan (Local Centres) 2012 as published on the NSW Legislation Website on 25 January 2013.

2. WHAT IS THE ZONING OF THIS PROPERTY and the relevant environmental plan?

(Zoning is a way of classifying land and limits the range of uses or activities that may be permitted on that land or property).

RE1 Public Recreation

under the provisions of Ku-ring-gai Local Environmental Plan (Local Centres) 2012 as published on the NSW Legislation Website on 25 January 2013.

3. WHAT DOES NOT REQUIRE DEVELOPMENT CONSENT under the above environmental plan(s)?

Environmental facilities; Environmental protection works; Roads.

Note: Please refer to the provisions for Exempt and Complying Development as described in Part 3 of Ku-ring-gai Local Environmental Plan (Local Centres) 2012.

4. WHAT DOES REQUIRE DEVELOPMENT CONSENT under the above environmental plan(s)?

Animal boarding or training establishments; Bee keeping; Camping grounds; Car parks; Caravan parks; Child care centres; Community facilities; Emergency services facilities; Flood mitigation works; Food and drink premises; Forestry; Information and education facilities; Kiosks; Markets; Plant nurseries; Recreation areas; Recreation facilities (indoor); Recreation facilities (major); Recreation facilities (outdoor); Registered clubs; Roadside stalls; Signage; Water recycling facilities; Water supply systems

5. WHAT IS PROHIBITED under the above environmental plan(s)?

Any development not specified in item 3 or 4.

6. **DO THE DIMENSIONS OF THE LAND PERMIT THE ERECTION OF A DWELLING HOUSE ON THIS PROPERTY** under the above environmental plan(s)?

Not applicable. Dwelling houses are not permitted within this zone.

7. **WHAT IS THE PROPOSED ZONING OF THIS PROPERTY** and the relevant proposed environmental plan?

(Zoning is a way of classifying land and limits the range of uses or activities that may be permitted on that land or property).

There are no zoning changes under any proposed environmental plans applying to this land.

8. **WHAT DOES NOT REQUIRE DEVELOPMENT CONSENT** under the above proposed environmental plan(s)?

Not applicable.

9. **WHAT DOES REQUIRE DEVELOPMENT CONSENT** under the above proposed environmental plan(s)?

Not applicable.

10. **WHAT IS PROHIBITED** by the above proposed environmental plan(s)?

Not applicable.

11. **DO THE DIMENSIONS OF THE LAND PERMIT THE ERECTION OF A DWELLING HOUSE ON THIS PROPERTY** by the above proposed environmental plan(s)?

Not applicable.

12. WHAT OTHER PLANNING INSTRUMENTS AFFECT THIS PROPERTY?

(State and deemed state environmental plans are prepared by the State Government and cover issues as varied as rivers, residential development, employment, etc. If you have any further enquiries please contact the Department of Planning, Tel: 02 9228 6333 or email information@planning.nsw.gov.au.)

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13. WHICH DEVELOPMENT CONTROL PLANS APPLY TO THE PROPERTY?

(A development control plan adds further detail to local environmental plans and may address issues such as building height, car parking etc. Copies of the Plans are available from Council).

Ku-ring-gai Local Centres Development Control Plan

14. WHICH DEVELOPMENT CONTRIBUTION PLANS APPLY IF THIS PROPERTY IS DEVELOPED?

(A Development Contribution Plan – commonly known as a Section 94 Plan outlines the financial costs Council charges if a property is developed and Council believes the development will require additional services or facilities such as parks, roads etc. Copies of the Plans are available from Council).

Ku-ring-gai Contributions Plan 2010.

15. IS THE PROPERTY IDENTIFIED AS A HERITAGE ITEM by Council or State Government? (and if so, what is the status, e.g. local environmental plan, Heritage Act etc.)

No.

SPECIAL NOTE: Your attention is drawn to Clause 5.10(5) of the Ku-ring-gai Local Environmental Plan (Local Centres) 2012 which states that the consent authority may, before granting consent to any development: (a) on land on which a heritage item is located, or (b) on land that is within a heritage conservation area, or (c) on land that is within the vicinity of land referred to in paragraph (a) or (b), require a heritage management document to be prepared that assesses the extent to which the carrying out of the proposed development would affect the heritage significance of the heritage item or heritage conservation area concerned.

16. IS THE PROPERTY IN A CONSERVATION AREA?

No.

SPECIAL NOTE: A conservation area is a place of historic and aesthetic value to the community. It contains a number of elements of significance, such as a historic subdivision layout, a pattern of building "footprints" within each street block, buildings of historic and architectural importance, road alignments, trees, gutters and kerb edges which all combine to create a sense of place that is worth keeping. Council's Heritage Conservation Planner can provide you with more information on this matter.

17. DOES THE PROPERTY INCLUDE OR COMPRISE CRITICAL HABITAT?

No.

18. IS THE PROPERTY AFFECTED BY A ROAD WIDENING OR ROAD REALIGNMENT under the Roads Act, any environmental planning instrument or any Council resolution?

No.

19. IS THE PROPERTY RESERVED FOR ACQUISITION BY A PUBLIC AUTHORITY UNDER ANY ENVIRONMENTAL PLAN OR PROPOSED ENVIRONMENTAL PLAN?

YES. The land or part of the land is identified as Local Open Space on the Ku-ring-gai Local Environmental Plan (Local Centres) 2012 - Land Reservation Acquisition Map. Please refer to clause 5.1 of Ku-ring-gai Local Environmental Plan (Local Centres) 2012 for the relevant acquisition authority.

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22. IS THE PROPERTY WITHIN A “PROCLAIMED MINE SUBSIDENCE DISTRICT”?

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23. IS THE PROPERTY AFFECTED BY ONE OF THE MATTERS PRESCRIBED BY SECTION 59(2) OF THE CONTAMINATED LAND MANAGEMENT ACT 1997?

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Complying development under the Housing Internal Alteration Code **may** be carried out on the land.

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Demolition Code

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SPECIAL NOTE: *The above question relates to whether or not the land falls within an exclusion area under Clauses 1.17A(1)(c) to (e), (2), (3) and (4), 1.18(1)(c3) and 1.19 of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. It is your responsibility to ensure that you comply with any other general requirements of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. Failure to comply with these provisions may mean that a Complying Development Certificate issued under the provisions of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 is invalid.*

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No.

Note: A review of Council's readily available records has been conducted to identify previous land uses that may have caused land contamination. This review did not reveal any reason for contamination of this property. However, prior to urban settlement, sizeable areas of Ku-ring-gai were covered by agricultural and horticultural activities. These uses are listed in the Managing Land Contamination Planning Guidelines as activities that may cause contamination. If you are concerned about possible contamination of the site you should make your own investigations regarding the condition of this property.

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No.

- 37. OTHER INFORMATION RELATING TO DEVELOPMENT OF THE SITE.**

This land may contain threatened species, populations and ecological communities listed under the Threatened Species Conservation Act 1995 (NSW) and or the Environment Protection Biodiversity Conservation Act 1999 (Commonwealth). For more information contact NSW Department of Environment & Heritage, Tel: 131 555.

38. DO YOU NEED TO REFER TO ANY OTHER DOCUMENTS?

Yes. The Environmental Planning and Assessment Amendment Act 1997 No.152 commenced operation on 1 July 1998. As a consequence of this Act the information contained in this certificate needs to be read in conjunction with the provisions of the Environmental Planning and Assessment (Amendment) Regulation 1998, Environmental Planning and Assessment (Further Amendment) Regulation 1998 and Environmental Planning and Assessment (Savings and Transitional) Regulation 1998. Your solicitor will have a copy of this legislation or it may be obtained from the Government Information Office.

John McKee
General Manager,

Per

A handwritten signature in black ink, appearing to be 'J. McKee', is written over a horizontal line.

PLANNING CERTIFICATE

UNDER SECTION 149 OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

818 Pacific Highway, Gordon NSW 2072
Locked Bag 1006, Gordon NSW 2072
T 02 9424 0000 F 02 9424 0001
DX 8703 Gordon TTY 02 9424 0875
E kmg@kmg.nsw.gov.au
W www.kmg.nsw.gov.au
ABN 86 408 856 411



PROPERTY DETAILS

Address: 8 Bent Street LINDFIELD NSW 2070

Lot Description: Lot 1 DP 724823

CERTIFICATE DETAILS

Certificate No: PC1726/15

Certificate Date: 10/09/2015

Certificate Type: Section 149(2)

Journal Id: 117944

APPLICANT'S DETAILS

REF: Lindfield Community Hub



Ku-ring-gai Council
Locked Bag 1006
GORDON NSW 2072

BACKGROUND INFORMATION

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1. WHICH ENVIRONMENTAL PLAN RESTRICTS THE USE OF THIS PROPERTY?

(Including planning proposals and draft local environmental plans exhibited prior to 1 July 2009 pursuant to section 66(1) b of the E. P. & A. Act).

Ku-ring-gai Local Environmental Plan (Local Centres) 2012 as published on the NSW Legislation Website on 25 January 2013.

2. WHAT IS THE ZONING OF THIS PROPERTY and the relevant environmental plan?

(Zoning is a way of classifying land and limits the range of uses or activities that may be permitted on that land or property).

RE1 Public Recreation

under the provisions of Ku-ring-gai Local Environmental Plan (Local Centres) 2012 as published on the NSW Legislation Website on 25 January 2013.

3. WHAT DOES NOT REQUIRE DEVELOPMENT CONSENT under the above environmental plan(s)?

Environmental facilities; Environmental protection works; Roads.

Note: Please refer to the provisions for Exempt and Complying Development as described in Part 3 of Ku-ring-gai Local Environmental Plan (Local Centres) 2012.

4. WHAT DOES REQUIRE DEVELOPMENT CONSENT under the above environmental plan(s)?

Animal boarding or training establishments; Bee keeping; Camping grounds; Car parks; Caravan parks; Child care centres; Community facilities; Emergency services facilities; Flood mitigation works; Food and drink premises; Forestry; Information and education facilities; Kiosks; Markets; Plant nurseries; Recreation areas; Recreation facilities (indoor); Recreation facilities (major); Recreation facilities (outdoor); Registered clubs; Roadside stalls; Signage; Water recycling facilities; Water supply systems

5. WHAT IS PROHIBITED under the above environmental plan(s)?

Any development not specified in item 3 or 4.

6. **DO THE DIMENSIONS OF THE LAND PERMIT THE ERECTION OF A DWELLING HOUSE ON THIS PROPERTY** under the above environmental plan(s)?

Not applicable. Dwelling houses are not permitted within this zone.

7. **WHAT IS THE PROPOSED ZONING OF THIS PROPERTY** and the relevant proposed environmental plan?

(Zoning is a way of classifying land and limits the range of uses or activities that may be permitted on that land or property).

There are no zoning changes under any proposed environmental plans applying to this land.

8. **WHAT DOES NOT REQUIRE DEVELOPMENT CONSENT** under the above proposed environmental plan(s)?

Not applicable.

9. **WHAT DOES REQUIRE DEVELOPMENT CONSENT** under the above proposed environmental plan(s)?

Not applicable.

10. **WHAT IS PROHIBITED** by the above proposed environmental plan(s)?

Not applicable.

11. **DO THE DIMENSIONS OF THE LAND PERMIT THE ERECTION OF A DWELLING HOUSE ON THIS PROPERTY** by the above proposed environmental plan(s)?

Not applicable.

12. WHAT OTHER PLANNING INSTRUMENTS AFFECT THIS PROPERTY?

(State and deemed state environmental plans are prepared by the State Government and cover issues as varied as rivers, residential development, employment, etc. If you have any further enquiries please contact the Department of Planning, Tel: 02 9228 6333 or email information@planning.nsw.gov.au.)

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15. IS THE PROPERTY IDENTIFIED AS A HERITAGE ITEM by Council or State Government? (and if so, what is the status, e.g. local environmental plan, Heritage Act etc.)

No.

SPECIAL NOTE: Your attention is drawn to Clause 5.10(5) of the Ku-ring-gai Local Environmental Plan (Local Centres) 2012 which states that the consent authority may, before granting consent to any development: (a) on land on which a heritage item is located, or (b) on land that is within a heritage conservation area, or (c) on land that is within the vicinity of land referred to in paragraph (a) or (b), require a heritage management document to be prepared that assesses the extent to which the carrying out of the proposed development would affect the heritage significance of the heritage item or heritage conservation area concerned.

16. IS THE PROPERTY IN A CONSERVATION AREA?

No.

SPECIAL NOTE: A conservation area is a place of historic and aesthetic value to the community. It contains a number of elements of significance, such as a historic subdivision layout, a pattern of building "footprints" within each street block, buildings of historic and architectural importance, road alignments, trees, gutters and kerb edges which all combine to create a sense of place that is worth keeping. Council's Heritage Conservation Planner can provide you with more information on this matter.

17. DOES THE PROPERTY INCLUDE OR COMPRISE CRITICAL HABITAT?

No.

18. IS THE PROPERTY AFFECTED BY A ROAD WIDENING OR ROAD REALIGNMENT under the Roads Act, any environmental planning instrument or any Council resolution?

No.

19. IS THE PROPERTY RESERVED FOR ACQUISITION BY A PUBLIC AUTHORITY UNDER ANY ENVIRONMENTAL PLAN OR PROPOSED ENVIRONMENTAL PLAN?

YES. The land or part of the land is identified as Local Open Space on the Ku-ring-gai Local Environmental Plan (Local Centres) 2012 - Land Reservation Acquisition Map. Please refer to clause 5.1 of Ku-ring-gai Local Environmental Plan (Local Centres) 2012 for the relevant acquisition authority.

20. IS THE PROPERTY PART OF ANY APPLICATION DECLARED TO BE “STATE SIGNIFICANT DEVELOPMENT”?

(Development is judged to be “State significant” if the Minister for Planning declares it to be so based on substantial cost of development, significant numbers of employees or other criteria. If you have any further enquiries please contact the Department of Planning. Tel: 02 9228 6333 or email information@planning.nsw.gov.au..

No.

21. IS THE PROPERTY AFFECTED BY SECTION 38 OR 39 OF THE COASTAL PROTECTION ACT?

No.

22. IS THE PROPERTY WITHIN A “PROCLAIMED MINE SUBSIDENCE DISTRICT”?

No.

23. IS THE PROPERTY AFFECTED BY ONE OF THE MATTERS PRESCRIBED BY SECTION 59(2) OF THE CONTAMINATED LAND MANAGEMENT ACT 1997?

No.

SPECIAL NOTE: If you have any concerns about land contamination beyond the information described in this certificate, you should contact the NSW Office of Environment & Heritage. Tel. 131 555 or email info@environment.nsw.gov.au

24. IS THE PROPERTY BUSH FIRE PRONE LAND?

No.

25. IS THE PROPERTY, LAND TO WHICH A PROPERTY VEGETATION PLAN UNDER THE *NATIVE VEGETATION ACT 2003* APPLIES?

No.

26. IS THE PROPERTY, LAND SUBJECT TO AN ORDER UNDER THE *TREE (DISPUTES BETWEEN NEIGHBOURS) ACT 2006*?

The land is not known to be subject to such order.

27. **IS THE PROPERTY SUBJECT TO DIRECTIONS UNDER PART 3A MAJOR INFRASTRUCTURE AND OTHER PROJECTS of the Environmental Planning & Assessment Act 1979 No.203?**

No.

28. **IS THE PROPERTY SUBJECT TO A CURRENT SITE COMPATIBILITY CERTIFICATE AND CONDITIONS FOR SENIORS HOUSING under the provisions of State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004?**

No.

29. **IS THE PROPERTY SUBJECT TO A VALID SITE COMPATIBILITY CERTIFICATE FOR INFRASTRUCTURE issued under clause 19 of State Environmental Planning Policy (Infrastructure) 2007?**

No.

30. **IS THE PROPERTY SUBJECT TO A VALID SITE COMPATIBILITY CERTIFICATE AND CONDITIONS FOR AFFORDABLE RENTAL HOUSING issued under clause 37 of State Environmental Planning Policy (Affordable Rental Housing) 2009?**

No.

31. **IS THE PROPERTY SUBJECT TO AN EXEMPTION UNDER SECTION 23 OR AUTHORISATION UNDER SECTION 24 OF THE NATION BUILDING AND JOBS PLAN (*STATE INFRASTRUCTURE DELIVERY*) ACT 2009?**

No.

32. **IS THE PROPERTY, LAND THAT IS BIODIVERSITY CERTIFIED LAND WITHIN THE MEANING OF PART 7AA OF THE THREATENED SPECIES CONSERVATION ACT 1995?**

No.

Special Note: For further information about the Biodiversity Certified Land contact the NSW Office of Environment & Heritage. Tel:131 555 or email info@environment.nsw.gov.au.

33. IS THE PROPERTY, LAND TO WHICH A BIOBANKING AGREEMENT UNDER PART 7A OF THE THREATENED SPECIES CONSERVATION ACT 1995 RELATES?

No.

Special Note: For further information about the Biobanking agreement contact the Biobanking Team at NSW Office of Environment & Heritage, Tel: 131 555 or email biobanking@environment.nsw.gov.au.

34. MAY COMPLYING DEVELOPMENT BE CARRIED OUT UNDER EACH OF THE CODES FOR COMPLYING DEVELOPMENT IN *STATE ENVIRONMENTAL PLANNING POLICY (EXEMPT AND COMPLYING DEVELOPMENT CODES) 2008* ON THE LAND AND IF COMPLYING DEVELOPMENT MAY NOT BE CARRIED OUT ON THAT LAND, BECAUSE OF ONE OR MORE OF THE REQUIREMENTS UNDER CLAUSES 1.17A(1)(c) TO (e), (2), (3) AND (4), 1.18(1)(c3) AND 1.19 OF THAT POLICY, WHY IT MAY NOT BE CARRIED OUT ON THAT LAND?

General Housing Code

Complying development under the General Housing Code **may not** be carried out on the land. The land is affected by the following general exemptions and/or land based exclusions:

- ☐ The land is land that is reserved for a public purpose in an environmental planning instrument.

Housing Alterations Code

Complying development under the Housing Internal Alteration Code **may** be carried out on the land.

General Development Code

Complying development under the General Development Code **may** be carried out on the land.

Commercial and Industrial Alterations Code

Complying development under the Commercial and Industrial Alterations Code **may** be carried out on the land.

- 35. DO ANY ADOPTED COUNCIL POLICIES OR RESOLUTIONS OR ANY POLICIES ADOPTED BY A PUBLIC AUTHORITY AND NOTIFIED TO THE COUNCIL FOR THE EXPRESS PURPOSE OF ITS ADOPTION BY THAT AUTHORITY BEING REFERRED TO IN PLANNING CERTIFICATES ISSUED BY THE COUNCIL RESTRICT THE DEVELOPMENT OF THE PROPERTY DUE TO THE LIKELIHOOD OF LANDSLIP, BUSHFIRE, TIDAL INUNDATION, SUBSIDENCE, CONTAMINATION, ACID SULPHATE SOILS OR ANY OTHER RISK (OTHER THAN FLOODING)?**

No.

Note: A review of Council's readily available records has been conducted to identify previous land uses that may have caused land contamination. This review did not reveal any reason for contamination of this property. However, prior to urban settlement, sizeable areas of Ku-ring-gai were covered by agricultural and horticultural activities. These uses are listed in the Managing Land Contamination Planning Guidelines as activities that may cause contamination. If you are concerned about possible contamination of the site you should make your own investigations regarding the condition of this property.

- 36. DO ANY ADOPTED COUNCIL POLICIES OR RESOLUTIONS OR ANY POLICIES ADOPTED BY A PUBLIC AUTHORITY REQUIRED TO BE REFERRED TO IN A PLANNING CERTIFICATE EFFECT THE DEVELOPMENT OF THE PROPERTY DUE TO FLOOD RELATED DEVELOPMENT CONTROLS INFORMATION?**

No.

- 37. OTHER INFORMATION RELATING TO DEVELOPMENT OF THE SITE.**

This land may contain threatened species, populations and ecological communities listed under the Threatened Species Conservation Act 1995 (NSW) and or the Environment Protection Biodiversity Conservation Act 1999 (Commonwealth). For more information contact NSW Department of Environment & Heritage, Tel: 131 555.

Commercial and Industrial (New Buildings and Additions) Code

Complying development under the Commercial and Industrial (New Buildings and Additions) Code **may not** be carried out on the land. The land is affected by the following general exemptions and/or land based exclusions:

- ☐ The land is land that is reserved for a public purpose in an environmental planning instrument.

Subdivision Code

Complying development under the Subdivision Code **may** be carried out on the land.

Demolition Code

Complying development under the Demolition Code **may** be carried out on the land.

Fire Safety Code

Complying development under the Fire Safety Code **may** be carried out on the land.

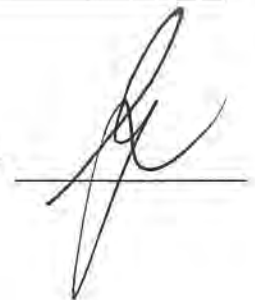
SPECIAL NOTE: *The above question relates to whether or not the land falls within an exclusion area under Clauses 1.17A(1)(c) to (e), (2), (3) and (4), 1.18(1)(c3) and 1.19 of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. It is your responsibility to ensure that you comply with any other general requirements of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. Failure to comply with these provisions may mean that a Complying Development Certificate issued under the provisions of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 is invalid.*

38. DO YOU NEED TO REFER TO ANY OTHER DOCUMENTS?

Yes. The Environmental Planning and Assessment Amendment Act 1997 No.152 commenced operation on 1 July 1998. As a consequence of this Act the information contained in this certificate needs to be read in conjunction with the provisions of the Environmental Planning and Assessment (Amendment) Regulation 1998, Environmental Planning and Assessment (Further Amendment) Regulation 1998 and Environmental Planning and Assessment (Savings and Transitional) Regulation 1998. Your solicitor will have a copy of this legislation or it may be obtained from the Government Information Office.

John McKee
General Manager,

Per

A handwritten signature in black ink, appearing to be 'J. McKee', is written over a horizontal line.

PLANNING CERTIFICATE

UNDER SECTION 149 OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

818 Pacific Highway, Gordon NSW 2072
Locked Bag 1006, Gordon NSW 2072
T 02 9424 0000 F 02 9424 0001
DX 8703 Gordon TTY 02 9424 0875
E kmc@kmg.nsw.gov.au
W www.kmg.nsw.gov.au
ABN 86 408 856 411



PROPERTY DETAILS

Address: 10 Bent Street LINDFIELD NSW 2070

Lot Description: Lot 1 DP 980108

CERTIFICATE DETAILS

Certificate No: PC1725/15

Certificate Date: 10/09/2015

Certificate Type: Section 149(2)

Journal Id: 117944

APPLICANT'S DETAILS

REF: Lindfield Community Hub



Ku-ring-gai Council
Locked Bag 1006
GORDON NSW 2072

BACKGROUND INFORMATION

This certificate provides information on how a property (such as land, a house, a commercial building, etc.) may be used and the limits on its development. The certificate contains information Council is aware of through its records and environmental plans with data supplied by the State Government. The details contained in this certificate are limited to that required by Section 149 of the Environmental Planning and Assessment Act.

1. WHICH ENVIRONMENTAL PLAN RESTRICTS THE USE OF THIS PROPERTY?

(Including planning proposals and draft local environmental plans exhibited prior to 1 July 2009 pursuant to section 66(1) b of the E. P. & A. Act).

Ku-ring-gai Local Environmental Plan (Local Centres) 2012 as published on the NSW Legislation Website on 25 January 2013.

2. WHAT IS THE ZONING OF THIS PROPERTY and the relevant environmental plan?

(Zoning is a way of classifying land and limits the range of uses or activities that may be permitted on that land or property).

RE1 Public Recreation

under the provisions of Ku-ring-gai Local Environmental Plan (Local Centres) 2012 as published on the NSW Legislation Website on 25 January 2013.

3. WHAT DOES NOT REQUIRE DEVELOPMENT CONSENT under the above environmental plan(s)?

Environmental facilities; Environmental protection works; Roads.

Note: Please refer to the provisions for Exempt and Complying Development as described in Part 3 of Ku-ring-gai Local Environmental Plan (Local Centres) 2012.

4. WHAT DOES REQUIRE DEVELOPMENT CONSENT under the above environmental plan(s)?

Animal boarding or training establishments; Bee keeping; Camping grounds; Car parks; Caravan parks; Child care centres; Community facilities; Emergency services facilities; Flood mitigation works; Food and drink premises; Forestry; Information and education facilities; Kiosks; Markets; Plant nurseries; Recreation areas; Recreation facilities (indoor); Recreation facilities (major); Recreation facilities (outdoor); Registered clubs; Roadside stalls; Signage; Water recycling facilities; Water supply systems

5. WHAT IS PROHIBITED under the above environmental plan(s)?

Any development not specified in item 3 or 4.

6. **DO THE DIMENSIONS OF THE LAND PERMIT THE ERECTION OF A DWELLING HOUSE ON THIS PROPERTY** under the above environmental plan(s)?

Not applicable. Dwelling houses are not permitted within this zone.

7. **WHAT IS THE PROPOSED ZONING OF THIS PROPERTY** and the relevant proposed environmental plan?

(Zoning is a way of classifying land and limits the range of uses or activities that may be permitted on that land or property).

There are no zoning changes under any proposed environmental plans applying to this land.

8. **WHAT DOES NOT REQUIRE DEVELOPMENT CONSENT** under the above proposed environmental plan(s)?

Not applicable.

9. **WHAT DOES REQUIRE DEVELOPMENT CONSENT** under the above proposed environmental plan(s)?

Not applicable.

10. **WHAT IS PROHIBITED** by the above proposed environmental plan(s)?

Not applicable.

11. **DO THE DIMENSIONS OF THE LAND PERMIT THE ERECTION OF A DWELLING HOUSE ON THIS PROPERTY** by the above proposed environmental plan(s)?

Not applicable.

12. WHAT OTHER PLANNING INSTRUMENTS AFFECT THIS PROPERTY?

(State and deemed state environmental plans are prepared by the State Government and cover issues as varied as rivers, residential development, employment, etc. If you have any further enquiries please contact the Department of Planning, Tel: 02 9228 6333 or email information@planning.nsw.gov.au).

Draft State Environmental Planning Policy (Competition)

Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005

State Environmental Planning Policy No.6 - Number of storeys in a building.

State Environmental Planning Policy No.19 - Bushland in Urban Areas.

State Environmental Planning Policy No.21 - Caravan Parks

State Environmental Planning Policy No.32 - Urban Consolidation (Redevelopment of Urban Land).

State Environmental Planning Policy No.33 - Hazardous & Offensive Development.

State Environmental Planning Policy No.44 - Koala Habitat Protection.

State Environmental Planning Policy No.55 - Remediation of Land.

State Environmental Planning Policy No.62 - Sustainable Aquaculture.

State Environmental Planning Policy No.64 - Advertising and Signage.

State Environmental Planning Policy No.65 - Design Quality of Residential Flat Development.

State Environmental Planning Policy No.70 - Affordable Housing(Revised Schemes).

State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004.

State Environmental Planning Policy (Major Development) 2005.

State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007.

State Environmental Planning Policy (Temporary Structures) 2007.

State Environmental Planning Policy (Infrastructure) 2007.

State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

State Environmental Planning Policy (Affordable Rental Housing) 2009.

State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004.

13. WHICH DEVELOPMENT CONTROL PLANS APPLY TO THE PROPERTY?

(A development control plan adds further detail to local environmental plans and may address issues such as building height, car parking etc. Copies of the Plans are available from Council).

Ku-ring-gai Local Centres Development Control Plan

14. WHICH DEVELOPMENT CONTRIBUTION PLANS APPLY IF THIS PROPERTY IS DEVELOPED?

(A Development Contribution Plan – commonly known as a Section 94 Plan outlines the financial costs Council charges if a property is developed and Council believes the development will require additional services or facilities such as parks, roads etc. Copies of the Plans are available from Council).

Ku-ring-gai Contributions Plan 2010.

15. IS THE PROPERTY IDENTIFIED AS A HERITAGE ITEM by Council or State Government? (and if so, what is the status, e.g. local environmental plan, Heritage Act etc.)

No.

SPECIAL NOTE: Your attention is drawn to Clause 5.10(5) of the Ku-ring-gai Local Environmental Plan (Local Centres) 2012 which states that the consent authority may, before granting consent to any development: (a) on land on which a heritage item is located, or (b) on land that is within a heritage conservation area, or (c) on land that is within the vicinity of land referred to in paragraph (a) or (b), require a heritage management document to be prepared that assesses the extent to which the carrying out of the proposed development would affect the heritage significance of the heritage item or heritage conservation area concerned.

16. IS THE PROPERTY IN A CONSERVATION AREA?

No.

SPECIAL NOTE: A conservation area is a place of historic and aesthetic value to the community. It contains a number of elements of significance, such as a historic subdivision layout, a pattern of building "footprints" within each street block, buildings of historic and architectural importance, road alignments, trees, gutters and kerb edges which all combine to create a sense of place that is worth keeping. Council's Heritage Conservation Planner can provide you with more information on this matter.

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No.

18. IS THE PROPERTY AFFECTED BY A ROAD WIDENING OR ROAD REALIGNMENT under the Roads Act, any environmental planning instrument or any Council resolution?

No.

19. IS THE PROPERTY RESERVED FOR ACQUISITION BY A PUBLIC AUTHORITY UNDER ANY ENVIRONMENTAL PLAN OR PROPOSED ENVIRONMENTAL PLAN?

YES. The land or part of the land is identified as Local Open Space on the Ku-ring-gai Local Environmental Plan (Local Centres) 2012 - Land Reservation Acquisition Map. Please refer to clause 5.1 of Ku-ring-gai Local Environmental Plan (Local Centres) 2012 for the relevant acquisition authority.

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No.

21. IS THE PROPERTY AFFECTED BY SECTION 38 OR 39 OF THE COASTAL PROTECTION ACT?

No.

22. IS THE PROPERTY WITHIN A “PROCLAIMED MINE SUBSIDENCE DISTRICT”?

No.

23. IS THE PROPERTY AFFECTED BY ONE OF THE MATTERS PRESCRIBED BY SECTION 59(2) OF THE CONTAMINATED LAND MANAGEMENT ACT 1997?

No.

SPECIAL NOTE: If you have any concerns about land contamination beyond the information described in this certificate, you should contact the NSW Office of Environment & Heritage. Tel: 131 555 or email info@environment.nsw.gov.au.

24. IS THE PROPERTY BUSH FIRE PRONE LAND?

No.

25. IS THE PROPERTY, LAND TO WHICH A PROPERTY VEGETATION PLAN UNDER THE *NATIVE VEGETATION ACT 2003* APPLIES?

No.

26. IS THE PROPERTY, LAND SUBJECT TO AN ORDER UNDER THE *TREE (DISPUTES BETWEEN NEIGHBOURS) ACT 2006*?

The land is not known to be subject to such order.

- 27. IS THE PROPERTY SUBJECT TO DIRECTIONS UNDER PART 3A MAJOR INFRASTRUCTURE AND OTHER PROJECTS of the Environmental Planning & Assessment Act 1979 No.203?**

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- 30. IS THE PROPERTY SUBJECT TO A VALID SITE COMPATIBILITY CERTIFICATE AND CONDITIONS FOR AFFORDABLE RENTAL HOUSING issued under clause 37 of State Environmental Planning Policy (Affordable Rental Housing) 2009?**

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- 32. IS THE PROPERTY, LAND THAT IS BIODIVERSITY CERTIFIED LAND WITHIN THE MEANING OF PART 7AA OF THE THREATENED SPECIES CONSERVATION ACT 1995?**

No.

Special Note: For further information about the Biodiversity Certified Land contact the NSW Office of Environment & Heritage. Tel:131 555 or email info@environment.nsw.gov.au.

33. IS THE PROPERTY, LAND TO WHICH A BIOBANKING AGREEMENT UNDER PART 7A OF THE THREATENED SPECIES CONSERVATION ACT 1995 RELATES?

No.

Special Note: For further information about the Biobanking agreement contact the Biobanking Team at NSW Office of Environment & Heritage. Tel:131 555 or email biobanking@environment.nsw.gov.au.

34. MAY COMPLYING DEVELOPMENT BE CARRIED OUT UNDER EACH OF THE CODES FOR COMPLYING DEVELOPMENT IN STATE ENVIRONMENTAL PLANNING POLICY (EXEMPT AND COMPLYING DEVELOPMENT CODES) 2008 ON THE LAND AND IF COMPLYING DEVELOPMENT MAY NOT BE CARRIED OUT ON THAT LAND, BECAUSE OF ONE OR MORE OF THE REQUIREMENTS UNDER CLAUSES 1.17A(1)(c) TO (e), (2), (3) AND (4), 1.18(1)(c3) AND 1.19 OF THAT POLICY, WHY IT MAY NOT BE CARRIED OUT ON THAT LAND?

General Housing Code

Complying development under the General Housing Code **may not** be carried out on the land. The land is affected by the following general exemptions and/or land based exclusions:

- The land is land that is reserved for a public purpose in an environmental planning instrument.

Housing Alterations Code

Complying development under the Housing Internal Alteration Code **may** be carried out on the land.

General Development Code

Complying development under the General Development Code **may** be carried out on the land.

Commercial and Industrial Alterations Code

Complying development under the Commercial and Industrial Alterations Code **may** be carried out on the land.

Commercial and Industrial (New Buildings and Additions) Code

Complying development under the Commercial and Industrial (New Buildings and Additions) Code **may not** be carried out on the land. The land is affected by the following general exemptions and/or land based exclusions:

- The land is land that is reserved for a public purpose in an environmental planning instrument.

Subdivision Code

Complying development under the Subdivision Code **may** be carried out on the land.

Demolition Code

Complying development under the Demolition Code **may** be carried out on the land.

Fire Safety Code

Complying development under the Fire Safety Code **may** be carried out on the land.

SPECIAL NOTE: *The above question relates to whether or not the land falls within an exclusion area under Clauses 1.17A(1)(c) to (e), (2), (3) and (4), 1.18(1)(c3) and 1.19 of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. It is your responsibility to ensure that you comply with any other general requirements of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. Failure to comply with these provisions may mean that a Complying Development Certificate issued under the provisions of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 is invalid.*

- 35. DO ANY ADOPTED COUNCIL POLICIES OR RESOLUTIONS OR ANY POLICIES ADOPTED BY A PUBLIC AUTHORITY AND NOTIFIED TO THE COUNCIL FOR THE EXPRESS PURPOSE OF ITS ADOPTION BY THAT AUTHORITY BEING REFERRED TO IN PLANNING CERTIFICATES ISSUED BY THE COUNCIL RESTRICT THE DEVELOPMENT OF THE PROPERTY DUE TO THE LIKELIHOOD OF LANDSLIP, BUSHFIRE, TIDAL INUNDATION, SUBSIDENCE, CONTAMINATION, ACID SULPHATE SOILS OR ANY OTHER RISK (OTHER THAN FLOODING)?**

No.

Note: A review of Council's readily available records has been conducted to identify previous land uses that may have caused land contamination. This review did not reveal any reason for contamination of this property. However, prior to urban settlement, sizeable areas of Ku-ring-gai were covered by agricultural and horticultural activities. These uses are listed in the Managing Land Contamination Planning Guidelines as activities that may cause contamination. If you are concerned about possible contamination of the site you should make your own investigations regarding the condition of this property.

- 36. DO ANY ADOPTED COUNCIL POLICIES OR RESOLUTIONS OR ANY POLICIES ADOPTED BY A PUBLIC AUTHORITY REQUIRED TO BE REFERRED TO IN A PLANNING CERTIFICATE EFFECT THE DEVELOPMENT OF THE PROPERTY DUE TO FLOOD RELATED DEVELOPMENT CONTROLS INFORMATION?**

No.

- 37. OTHER INFORMATION RELATING TO DEVELOPMENT OF THE SITE.**

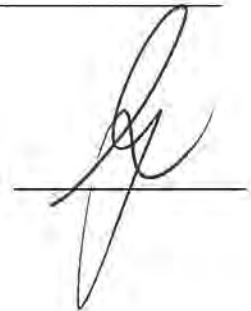
This land may contain threatened species, populations and ecological communities listed under the Threatened Species Conservation Act 1995 (NSW) and or the Environment Protection Biodiversity Conservation Act 1999 (Commonwealth). For more information contact NSW Department of Environment & Heritage, Tel: 131 555.

38. DO YOU NEED TO REFER TO ANY OTHER DOCUMENTS?

Yes. The Environmental Planning and Assessment Amendment Act 1997 No.152 commenced operation on 1 July 1998. As a consequence of this Act the information contained in this certificate needs to be read in conjunction with the provisions of the Environmental Planning and Assessment (Amendment) Regulation 1998, Environmental Planning and Assessment (Further Amendment) Regulation 1998 and Environmental Planning and Assessment (Savings and Transitional) Regulation 1998. Your solicitor will have a copy of this legislation or it may be obtained from the Government Information Office.

John McKee
General Manager,

Per

A handwritten signature in black ink, appearing to be 'J. McKee', is written over a horizontal line.

PLANNING CERTIFICATE

UNDER SECTION 149 OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

818 Pacific Highway, Gordon NSW 2072
Locked Bag 1006, Gordon NSW 2072
T 02 9424 0000 F 02 9424 0001
DX 8703 Gordon TTY 02 9424 0875
E kmc@kmc.nsw.gov.au
W www.kmc.nsw.gov.au
ABN 86 408 856 411



PROPERTY DETAILS

Address: 12 Bent Street LINDFIELD NSW 2070

Lot Description: Lot 5 DP 666521

CERTIFICATE DETAILS

Certificate No: PC1724/15

Certificate Date: 10/09/2015

Certificate Type: Section 149(2)

Journal Id: 117944

APPLICANT'S DETAILS

REF: Lindfield Community Hub



Ku-ring-gai Council
Locked Bag 1006
GORDON NSW 2072

BACKGROUND INFORMATION

This certificate provides information on how a property (such as land, a house, a commercial building, etc.) may be used and the limits on its development. The certificate contains information Council is aware of through its records and environmental plans with data supplied by the State Government. The details contained in this certificate are limited to that required by Section 149 of the Environmental Planning and Assessment Act.

1. WHICH ENVIRONMENTAL PLAN RESTRICTS THE USE OF THIS PROPERTY?

(Including planning proposals and draft local environmental plans exhibited prior to 1 July 2009 pursuant to section 66(1) b of the E. P. & A. Act).

Ku-ring-gai Local Environmental Plan (Local Centres) 2012 as published on the NSW Legislation Website on 25 January 2013.

2. WHAT IS THE ZONING OF THIS PROPERTY and the relevant environmental plan?

(Zoning is a way of classifying land and limits the range of uses or activities that may be permitted on that land or property).

Part R4 High Density Residential, part RE1 Public Recreation and part SP2 Infrastructure (Local Road)

under the provisions of Ku-ring-gai Local Environmental Plan (Local Centres) 2012 as published on the NSW Legislation Website on 25 January 2013.

3. WHAT DOES NOT REQUIRE DEVELOPMENT CONSENT under the above environmental plan(s)?

For that part zoned R4 High Density Residential - Home occupations.

For that part zoned RE1 Public Recreation - Environmental facilities; Environmental protection works; Roads.

For that part zoned SP2 Infrastructure (Local Road) - Nil.

Note: Please refer to the provisions for Exempt and Complying Development as described in Part 3 of Ku-ring-gai Local Environmental Plan (Local Centres) 2012.

4. WHAT DOES REQUIRE DEVELOPMENT CONSENT under the above environmental plan(s)?

For that part zoned R4 High Density Residential - Attached dwellings; Bed and breakfast accommodation; Boarding houses; Building identification signs; Business identification signs; Child care centres; Community facilities; Dwelling houses; Environmental protection works; Exhibition homes; Flood mitigation works; Home-based child care; Home businesses; Home industries; Hostels; Multi dwelling housing; Neighbourhood shops; Places of public worship; Recreation areas; Residential flat buildings; Respite day care centres; Roads; Seniors housing; Shop top housing

For that part zoned RE1 Public Recreation - Animal boarding or training establishments; Bee keeping; Camping grounds; Car parks; Caravan parks; Child care centres; Community facilities; Emergency services facilities; Flood mitigation works; Food and drink premises; Forestry; Information and education facilities; Kiosks; Markets; Plant nurseries; Recreation areas; Recreation facilities (indoor); Recreation facilities (major); Recreation facilities (outdoor); Registered clubs; Roadside stalls; Signage; Water recycling facilities; Water supply systems

For that part zoned SP2 Infrastructure (Local Road) - Environmental protection works; Flood mitigation works; Recreation areas; Roads; Local Road, including any development that is ordinarily incidental or ancillary to development for that purpose

5. WHAT IS PROHIBITED under the above environmental plan(s)?

For that part zoned R4 High Density Residential - Any development not specified in item 3 or 4

For that part zoned RE1 Public Recreation - Any development not specified in item 3 or 4

For that part zoned SP2 Infrastructure (Local Road) - Any development not specified in item 3 or 4.

6. DO THE DIMENSIONS OF THE LAND PERMIT THE ERECTION OF A DWELLING HOUSE ON THIS PROPERTY under the above environmental plan(s)?

For that part zoned R4 High Density Residential - There are no provisions in Ku-ring-gai Local Environmental Plan (Local Centres) 2012 that regulate minimum dimension sizes for the erection of a dwelling house on this property.

For that part zoned RE1 Public Recreation - Not applicable. Dwelling houses are not permitted within this zone.

For that part zoned SP2 Infrastructure (Local Road) - Not applicable. Dwelling houses are not permitted within this zone.

7. WHAT IS THE PROPOSED ZONING OF THIS PROPERTY and the relevant proposed environmental plan?

(Zoning is a way of classifying land and limits the range of uses or activities that may be permitted on that land or property).

There are no zoning changes under any proposed environmental plans applying to this land.

8. WHAT DOES NOT REQUIRE DEVELOPMENT CONSENT under the above proposed environmental plan(s)?

Not applicable.

9. WHAT DOES REQUIRE DEVELOPMENT CONSENT under the above proposed environmental plan(s)?

Not applicable.

10. WHAT IS PROHIBITED by the above proposed environmental plan(s)?

Not applicable.

11. DO THE DIMENSIONS OF THE LAND PERMIT THE ERECTION OF A DWELLING HOUSE ON THIS PROPERTY by the above proposed environmental plan(s)?

Not applicable.

12. WHAT OTHER PLANNING INSTRUMENTS AFFECT THIS PROPERTY?

(State and deemed state environmental plans are prepared by the State Government and cover issues as varied as rivers, residential development, employment, etc. If you have any further enquiries please contact the Department of Planning, Tel: 02 9228 6333 or email information@planning.nsw.gov.au.)

Draft State Environmental Planning Policy (Competition)

Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005

State Environmental Planning Policy No.6 - Number of storeys in a building.

State Environmental Planning Policy No.19 - Bushland in Urban Areas.

State Environmental Planning Policy No.21 - Caravan Parks

State Environmental Planning Policy No.32 - Urban Consolidation (Redevelopment of Urban Land).

State Environmental Planning Policy No.33 - Hazardous & Offensive Development.

State Environmental Planning Policy No.44 - Koala Habitat Protection.

State Environmental Planning Policy No.55 - Remediation of Land.

State Environmental Planning Policy No.62 - Sustainable Aquaculture.

State Environmental Planning Policy No.64 - Advertising and Signage.

State Environmental Planning Policy No.65 - Design Quality of Residential Flat Development.

State Environmental Planning Policy No.70 - Affordable Housing(Revised Schemes).

State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004.

State Environmental Planning Policy (Major Development) 2005.

State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007.

State Environmental Planning Policy (Temporary Structures) 2007.

State Environmental Planning Policy (Infrastructure) 2007.

State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

State Environmental Planning Policy (Affordable Rental Housing) 2009.

State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004.

13. WHICH DEVELOPMENT CONTROL PLANS APPLY TO THE PROPERTY?

(A development control plan adds further detail to local environmental plans and may address issues such as building height, car parking etc. Copies of the Plans are available from Council).

Ku-ring-gai Local Centres Development Control Plan

14. WHICH DEVELOPMENT CONTRIBUTION PLANS APPLY IF THIS PROPERTY IS DEVELOPED?

(A Development Contribution Plan – commonly known as a Section 94 Plan outlines the financial costs Council charges if a property is developed and Council believes the development will require additional services or facilities such as parks, roads etc. Copies of the Plans are available from Council).

Ku-ring-gai Contributions Plan 2010.

15. IS THE PROPERTY IDENTIFIED AS A HERITAGE ITEM by Council or State Government? (and if so, what is the status, e.g. local environmental plan, Heritage Act etc.)

No.

***SPECIAL NOTE:** Your attention is drawn to Clause 5.10(5) of the Ku-ring-gai Local Environmental Plan (Local Centres) 2012 which states that the consent authority may, before granting consent to any development: (a) on land on which a heritage item is located, or (b) on land that is within a heritage conservation area, or (c) on land that is within the vicinity of land referred to in paragraph (a) or (b), require a heritage management document to be prepared that assesses the extent to which the carrying out of the proposed development would affect the heritage significance of the heritage item or heritage conservation area concerned.*

16. IS THE PROPERTY IN A CONSERVATION AREA?

No.

***SPECIAL NOTE:** A conservation area is a place of historic and aesthetic value to the community. It contains a number of elements of significance, such as a historic subdivision layout, a pattern of building "footprints" within each street block, buildings of historic and architectural importance, road alignments, trees, gutters and kerb edges which all combine to create a sense of place that is worth keeping. Council's Heritage Conservation Planner can provide you with more information on this matter.*

17. DOES THE PROPERTY INCLUDE OR COMPRISE CRITICAL HABITAT?

No.

18. IS THE PROPERTY AFFECTED BY A ROAD WIDENING OR ROAD REALIGNMENT under the Roads Act, any environmental planning instrument or any Council resolution?

YES. Part of the land is identified as Local Road on the Ku-ring-gai Local Environmental Plan (Local Centres) 2012 - Land Reservation Acquisition Map. Please refer to clause 5.1 of Ku-ring-gai Local Environmental Plan (Local Centres) 2012 for the relevant acquisition authority.

19. IS THE PROPERTY RESERVED FOR ACQUISITION BY A PUBLIC AUTHORITY UNDER ANY ENVIRONMENTAL PLAN OR PROPOSED ENVIRONMENTAL PLAN?

YES.

Part of the land is identified as Local Open Space and part of the land is identified as Local Road on the Ku-ring-gai Local Environmental Plan (Local Centres) 2012 - Land Reservation Acquisition Map.

Please refer to clause 5.1 of Ku-ring-gai Local Environmental Plan (Local Centres) 2012 for the relevant acquisition authority.

20. IS THE PROPERTY PART OF ANY APPLICATION DECLARED TO BE "STATE SIGNIFICANT DEVELOPMENT"?

(Development is judged to be "State significant" if the Minister for Planning declares it to be so based on substantial cost of development, significant numbers of employees or other criteria. If you have any further enquiries please contact the Department of Planning. Tel: 02 9228 6333 or email information@planning.nsw.gov.au..

No.

21. IS THE PROPERTY AFFECTED BY SECTION 38 OR 39 OF THE COASTAL PROTECTION ACT?

No.

22. IS THE PROPERTY WITHIN A "PROCLAIMED MINE SUBSIDENCE DISTRICT"?

No.

23. IS THE PROPERTY AFFECTED BY ONE OF THE MATTERS PRESCRIBED BY SECTION 59(2) OF THE CONTAMINATED LAND MANAGEMENT ACT 1997?

No.

SPECIAL NOTE: If you have any concerns about land contamination beyond the information described in this certificate, you should contact the NSW Office of Environment & Heritage. Tel: 131 555 or email info@environment.nsw.gov.au.

24. IS THE PROPERTY BUSH FIRE PRONE LAND?

No.

25. IS THE PROPERTY, LAND TO WHICH A PROPERTY VEGETATION PLAN UNDER THE *NATIVE VEGETATION ACT 2003* APPLIES?

No.

26. IS THE PROPERTY, LAND SUBJECT TO AN ORDER UNDER THE *TREE (DISPUTES BETWEEN NEIGHBOURS) ACT 2006*?

The land is not known to be subject to such order.

27. IS THE PROPERTY SUBJECT TO DIRECTIONS UNDER PART 3A MAJOR INFRASTRUCTURE AND OTHER PROJECTS of the Environmental Planning & Assessment Act 1979 No.203?

No.

28. IS THE PROPERTY SUBJECT TO A CURRENT SITE COMPATIBILITY CERTIFICATE AND CONDITIONS FOR SENIORS HOUSING under the provisions of State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004?

No.

29. IS THE PROPERTY SUBJECT TO A VALID SITE COMPATIBILITY CERTIFICATE FOR INFRASTRUCTURE issued under clause 19 of State Environmental Planning Policy (Infrastructure) 2007?

No.

- 30. IS THE PROPERTY SUBJECT TO A VALID SITE COMPATIBILITY CERTIFICATE AND CONDITIONS FOR AFFORDABLE RENTAL HOUSING issued under clause 37 of State Environmental Planning Policy (Affordable Rental Housing) 2009?**

No.

- 31. IS THE PROPERTY SUBJECT TO AN EXEMPTION UNDER SECTION 23 OR AUTHORISATION UNDER SECTION 24 OF THE NATION BUILDING AND JOBS PLAN (*STATE INFRASTRUCTURE DELIVERY*) ACT 2009?**

No.

- 32. IS THE PROPERTY, LAND THAT IS BIODIVERSITY CERTIFIED LAND WITHIN THE MEANING OF PART 7AA OF THE THREATENED SPECIES CONSERVATION ACT 1995?**

No.

Special Note: For further information about the Biodiversity Certified Land contact the NSW Office of Environment & Heritage. Tel:131 555 or email info@environment.nsw.gov.au.

- 33. IS THE PROPERTY, LAND TO WHICH A BIOBANKING AGREEMENT UNDER PART 7A OF THE THREATENED SPECIES CONSERVATION ACT 1995 RELATES?**

No.

Special Note: For further information about the Biobanking agreement contact the Biobanking Team at NSW Office of Environment & Heritage. Tel:131 555 or email biobanking@environment.nsw.gov.au.

34. **MAY COMPLYING DEVELOPMENT BE CARRIED OUT UNDER EACH OF THE CODES FOR COMPLYING DEVELOPMENT IN *STATE ENVIRONMENTAL PLANNING POLICY (EXEMPT AND COMPLYING DEVELOPMENT CODES) 2008* ON THE LAND AND IF COMPLYING DEVELOPMENT MAY NOT BE CARRIED OUT ON THAT LAND, BECAUSE OF ONE OR MORE OF THE REQUIREMENTS UNDER CLAUSES 1.17A(1)(c) TO (e), (2), (3) AND (4), 1.18(1)(c3) AND 1.19 OF THAT POLICY, WHY IT MAY NOT BE CARRIED OUT ON THAT LAND?**

General Housing Code

Complying development under the General Housing Code **may not** be carried out on the land. The land is affected by the following general exemptions and/or land based exclusions:

- Part of the land is land that is reserved for a public purpose in an environmental planning instrument. This exclusion applies only to the part of the land that is described and mapped on that instrument.

Housing Alterations Code

Complying development under the Housing Internal Alteration Code **may** be carried out on the land.

General Development Code

Complying development under the General Development Code **may** be carried out on the land.

Commercial and Industrial Alterations Code

Complying development under the Commercial and Industrial Alterations Code **may** be carried out on the land.

Commercial and Industrial (New Buildings and Additions) Code

Complying development under the Commercial and Industrial (New Buildings and Additions) Code **may not** be carried out on the land. The land is affected by the following general exemptions and/or land based exclusions:

- Part of the land is land that is reserved for a public purpose in an environmental planning instrument. This exclusion applies only to the part of the land that is described and mapped on that instrument.

Subdivision Code

Complying development under the Subdivision Code **may** be carried out on the land.

Demolition Code

Complying development under the Demolition Code **may** be carried out on the land.

Fire Safety Code

Complying development under the Fire Safety Code **may** be carried out on the land.

SPECIAL NOTE: *The above question relates to whether or not the land falls within an exclusion area under Clauses 1.17A(1)(c) to (e), (2), (3) and (4), 1.18(1)(c3) and 1.19 of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. It is your responsibility to ensure that you comply with any other general requirements of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. Failure to comply with these provisions may mean that a Complying Development Certificate issued under the provisions of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 is invalid.*

- 35. DO ANY ADOPTED COUNCIL POLICIES OR RESOLUTIONS OR ANY POLICIES ADOPTED BY A PUBLIC AUTHORITY AND NOTIFIED TO THE COUNCIL FOR THE EXPRESS PURPOSE OF ITS ADOPTION BY THAT AUTHORITY BEING REFERRED TO IN PLANNING CERTIFICATES ISSUED BY THE COUNCIL RESTRICT THE DEVELOPMENT OF THE PROPERTY DUE TO THE LIKELIHOOD OF LANDSLIP, BUSHFIRE, TIDAL INUNDATION, SUBSIDENCE, CONTAMINATION, ACID SULPHATE SOILS OR ANY OTHER RISK (OTHER THAN FLOODING)?**

No.

Note: A review of Council's readily available records has been conducted to identify previous land uses that may have caused land contamination. This review did not reveal any reason for contamination of this property. However, prior to urban settlement, sizeable areas of Ku-ring-gai were covered by agricultural and horticultural activities. These uses are listed in the Managing Land Contamination Planning Guidelines as activities that may cause contamination. If you are concerned about possible contamination of the site you should make your own investigations regarding the condition of this property.

36. DO ANY ADOPTED COUNCIL POLICIES OR RESOLUTIONS OR ANY POLICIES ADOPTED BY A PUBLIC AUTHORITY REQUIRED TO BE REFERRED TO IN A PLANNING CERTIFICATE EFFECT THE DEVELOPMENT OF THE PROPERTY DUE TO FLOOD RELATED DEVELOPMENT CONTROLS INFORMATION?

No.

37. OTHER INFORMATION RELATING TO DEVELOPMENT OF THE SITE.

This land may contain threatened species, populations and ecological communities listed under the Threatened Species Conservation Act 1995 (NSW) and or the Environment Protection Biodiversity Conservation Act 1999 (Commonwealth). For more information contact NSW Department of Environment & Heritage, Tel: 131 555.

38. DO YOU NEED TO REFER TO ANY OTHER DOCUMENTS?

Yes. The Environmental Planning and Assessment Amendment Act 1997 No.152 commenced operation on 1 July 1998. As a consequence of this Act the information contained in this certificate needs to be read in conjunction with the provisions of the Environmental Planning and Assessment (Amendment) Regulation 1998, Environmental Planning and Assessment (Further Amendment) Regulation 1998 and Environmental Planning and Assessment (Savings and Transitional) Regulation 1998. Your solicitor will have a copy of this legislation or it may be obtained from the Government Information Office.

John McKee
General Manager,

Per



PLANNING CERTIFICATE

UNDER SECTION 149 OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

818 Pacific Highway, Gordon NSW 2072
Locked Bag 1006, Gordon NSW 2072
T 02 9424 0000 F 02 9424 0001
DX 8703 Gordon TTY 02 9424 0875
E kmg@kmg.nsw.gov.au
W www.kmg.nsw.gov.au
ABN 86 408 856 411



PROPERTY DETAILS

Address: 19 Drovers Way LINDFIELD NSW 2070

Lot Description: Lots 1 - 16 DP 1099330

CERTIFICATE DETAILS

Certificate No: PC1730/15

Certificate Date: 10/09/2015

Certificate Type: Section 149(2)

Journal Id: 117944

APPLICANT'S DETAILS

REF: Lindfield Community Hub



Ku-ring-gai Council
Locked Bag 1006
GORDON NSW 2072

BACKGROUND INFORMATION

This certificate provides information on how a property (such as land, a house, a commercial building, etc.) may be used and the limits on its development. The certificate contains information Council is aware of through its records and environmental plans with data supplied by the State Government. The details contained in this certificate are limited to that required by Section 149 of the Environmental Planning and Assessment Act.

1. WHICH ENVIRONMENTAL PLAN RESTRICTS THE USE OF THIS PROPERTY?

(Including planning proposals and draft local environmental plans exhibited prior to 1 July 2009 pursuant to section 66(1) b of the E. P. & A. Act).

Ku-ring-gai Local Environmental Plan (Local Centres) 2012 as published on the NSW Legislation Website on 25 January 2013.

2. WHAT IS THE ZONING OF THIS PROPERTY and the relevant environmental plan?

(Zoning is a way of classifying land and limits the range of uses or activities that may be permitted on that land or property).

B2 Local Centres

under the provisions of Ku-ring-gai Local Environmental Plan (Local Centres) 2012 as published on the NSW Legislation Website on 25 January 2013.

3. WHAT DOES NOT REQUIRE DEVELOPMENT CONSENT under the above environmental plan(s)?

Home occupations.

Note: Please refer to the provisions for Exempt and Complying Development as described in Part 3 of Ku-ring-gai Local Environmental Plan (Local Centres) 2012.

4. WHAT DOES REQUIRE DEVELOPMENT CONSENT under the above environmental plan(s)?

Boarding houses; Child care centres; Commercial premises; Community facilities; Educational establishments; Entertainment facilities; Function centres; Group homes (permanent); Hostels; Information and education facilities; Light industries; Medical centres; Passenger transport facilities; Recreation facilities (indoor); Registered clubs; Respite day care centres; Restricted premises; Roads; Seniors housing; Service stations; Shop top housing; Tourist and visitor accommodation; Water reticulation systems; Any other development not specified in item 3 or 5

5. WHAT IS PROHIBITED under the above environmental plan(s)?

Agriculture; Air transport facilities; Airstrips; Animal boarding or training establishments; Biosolids treatment facilities; Boat building and repair facilities; Boat launching ramps; Boat sheds; Camping grounds; Caravan parks; Cemeteries; Charter and tourism boating facilities; Correctional centres; Crematoria; Depots; Eco-tourist facilities; Exhibition homes; Exhibition villages; Extractive industries; Farm buildings; Forestry; Freight transport facilities; Heavy industrial storage establishments; Helipads; Highway service centres; Industrial retail outlets; Industrial training facilities; Industries; Jetties; Marinas; Mooring pens; Moorings; Mortuaries; Open cut mining; Recreation facilities (major); Recreation

facilities (outdoor); Research stations; Residential accommodation; Rural industries; Sewage treatment plants; Storage premises; Transport depots; Truck depots; Vehicle body repair workshops; Warehouse or distribution centres; Waste or resource management facilities; Water recreation structures; Water recycling facilities; Water supply systems; Wharf or boating facilities; Wholesale supplies

- 6. DO THE DIMENSIONS OF THE LAND PERMIT THE ERECTION OF A DWELLING HOUSE ON THIS PROPERTY** under the above environmental plan(s)?

Not applicable. Dwelling houses are not permitted within this zone.

- 7. WHAT IS THE PROPOSED ZONING OF THIS PROPERTY** and the relevant proposed environmental plan?

(Zoning is a way of classifying land and limits the range of uses or activities that may be permitted on that land or property).

There are no zoning changes under any proposed environmental plans applying to this land.

- 8. WHAT DOES NOT REQUIRE DEVELOPMENT CONSENT** under the above proposed environmental plan(s)?

Not applicable.

- 9. WHAT DOES REQUIRE DEVELOPMENT CONSENT** under the above proposed environmental plan(s)?

Not applicable.

- 10. WHAT IS PROHIBITED** by the above proposed environmental plan(s)?

Not applicable.

- 11. DO THE DIMENSIONS OF THE LAND PERMIT THE ERECTION OF A DWELLING HOUSE ON THIS PROPERTY** by the above proposed environmental plan(s)?

Not applicable.

12. WHAT OTHER PLANNING INSTRUMENTS AFFECT THIS PROPERTY?

(State and deemed state environmental plans are prepared by the State Government and cover issues as varied as rivers, residential development, employment, etc. If you have any further enquiries please contact the Department of Planning, Tel: 02 9228 6333 or email information@planning.nsw.gov.au.)

Draft State Environmental Planning Policy (Competition)

Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005
State Environmental Planning Policy No.6 - Number of storeys in a building.
State Environmental Planning Policy No.19 - Bushland in Urban Areas.
State Environmental Planning Policy No.21 - Caravan Parks.
State Environmental Planning Policy No.22 - Shops and Commercial Premises.
State Environmental Planning Policy No.32 - Urban Consolidation (Redevelopment of Urban Land).
State Environmental Planning Policy No.33 - Hazardous & Offensive Development.
State Environmental Planning Policy No.44 - Koala Habitat Protection.
State Environmental Planning Policy No.55 - Remediation of Land.
State Environmental Planning Policy No.62 - Sustainable Aquaculture.
State Environmental Planning Policy No.64 - Advertising and Signage.
State Environmental Planning Policy No.65 - Design Quality of Residential Flat Development.
State Environmental Planning Policy No.70 - Affordable Housing (Revised Schemes).
State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004.
State Environmental Planning Policy (Major Development) 2005.
State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007.
State Environmental Planning Policy (Temporary Structures) 2007.
State Environmental Planning Policy (Infrastructure) 2007.
State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.
State Environmental Planning Policy (Affordable Rental Housing) 2009.
State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004.

13. WHICH DEVELOPMENT CONTROL PLANS APPLY TO THE PROPERTY?

(A development control plan adds further detail to local environmental plans and may address issues such as building height, car parking etc. Copies of the Plans are available from Council).

Ku-ring-gai Local Centres Development Control Plan

14. WHICH DEVELOPMENT CONTRIBUTION PLANS APPLY IF THIS PROPERTY IS DEVELOPED?

(A Development Contribution Plan – commonly known as a Section 94 Plan outlines the financial costs Council charges if a property is developed and Council believes the development will require additional services or facilities such as parks, roads etc. Copies of the Plans are available from Council).

Ku-ring-gai Contributions Plan 2010.

- 15. IS THE PROPERTY IDENTIFIED AS A HERITAGE ITEM by Council or State Government? (and if so, what is the status, e.g. local environmental plan, Heritage Act etc.)**

No.

SPECIAL NOTE: Your attention is drawn to Clause 5.10(5) of the Ku-ring-gai Local Environmental Plan (Local Centres) 2012 which states that the consent authority may, before granting consent to any development: (a) on land on which a heritage item is located, or (b) on land that is within a heritage conservation area, or (c) on land that is within the vicinity of land referred to in paragraph (a) or (b), require a heritage management document to be prepared that assesses the extent to which the carrying out of the proposed development would affect the heritage significance of the heritage item or heritage conservation area concerned.

- 16. IS THE PROPERTY IN A CONSERVATION AREA?**

No.

SPECIAL NOTE: A conservation area is a place of historic and aesthetic value to the community. It contains a number of elements of significance, such as a historic subdivision layout, a pattern of building "footprints" within each street block, buildings of historic and architectural importance, road alignments, trees, gutters and kerb edges which all combine to create a sense of place that is worth keeping. Council's Heritage Conservation Planner can provide you with more information on this matter.

- 17. DOES THE PROPERTY INCLUDE OR COMPRISE CRITICAL HABITAT?**

No.

- 18. IS THE PROPERTY AFFECTED BY A ROAD WIDENING OR ROAD REALIGNMENT under the Roads Act, any environmental planning instrument or any Council resolution?**

No.

- 19. IS THE PROPERTY RESERVED FOR ACQUISITION BY A PUBLIC AUTHORITY UNDER ANY ENVIRONMENTAL PLAN OR PROPOSED ENVIRONMENTAL PLAN?**

No.

- 20. IS THE PROPERTY PART OF ANY APPLICATION DECLARED TO BE "STATE SIGNIFICANT DEVELOPMENT"?**

(Development is judged to be "State significant" if the Minister for Planning declares it to be so based on substantial cost of development, significant numbers of employees or other criteria. If you have any further enquiries please contact the Department of Planning, Tel: 02 9228 6333 or email information@planning.nsw.gov.au.)

No.

21. IS THE PROPERTY AFFECTED BY SECTION 38 OR 39 OF THE COASTAL PROTECTION ACT?

No.

22. IS THE PROPERTY WITHIN A “PROCLAIMED MINE SUBSIDENCE DISTRICT”?

No.

23. IS THE PROPERTY AFFECTED BY ONE OF THE MATTERS PRESCRIBED BY SECTION 59(2) OF THE CONTAMINATED LAND MANAGEMENT ACT 1997?

No.

SPECIAL NOTE: If you have any concerns about land contamination beyond the information described in this certificate, you should contact the NSW Office of Environment & Heritage. Tel: 131 555 or email info@environment.nsw.gov.au.

24. IS THE PROPERTY BUSH FIRE PRONE LAND?

No.

25. IS THE PROPERTY, LAND TO WHICH A PROPERTY VEGETATION PLAN UNDER THE *NATIVE VEGETATION ACT 2003* APPLIES?

No.

26. IS THE PROPERTY, LAND SUBJECT TO AN ORDER UNDER THE *TREE (DISPUTES BETWEEN NEIGHBOURS) ACT 2006*?

The land is not known to be subject to such order.

27. IS THE PROPERTY SUBJECT TO DIRECTIONS UNDER PART 3A MAJOR INFRASTRUCTURE AND OTHER PROJECTS of the Environmental Planning & Assessment Act 1979 No.203?

No.

28. **IS THE PROPERTY SUBJECT TO A CURRENT SITE COMPATIBILITY CERTIFICATE AND CONDITIONS FOR SENIORS HOUSING under the provisions of State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004?**

No.

29. **IS THE PROPERTY SUBJECT TO A VALID SITE COMPATIBILITY CERTIFICATE FOR INFRASTRUCTURE issued under clause 19 of State Environmental Planning Policy (Infrastructure) 2007?**

No.

30. **IS THE PROPERTY SUBJECT TO A VALID SITE COMPATIBILITY CERTIFICATE AND CONDITIONS FOR AFFORDABLE RENTAL HOUSING issued under clause 37 of State Environmental Planning Policy (Affordable Rental Housing) 2009?**

No.

31. **IS THE PROPERTY SUBJECT TO AN EXEMPTION UNDER SECTION 23 OR AUTHORISATION UNDER SECTION 24 OF THE NATIONAL BUILDING AND JOBS PLAN (*STATE INFRASTRUCTURE DELIVERY*) ACT 2009?**

No.

32. **IS THE PROPERTY, LAND THAT IS BIODIVERSITY CERTIFIED LAND WITHIN THE MEANING OF PART 7AA OF THE THREATENED SPECIES CONSERVATION ACT 1995?**

No.

Special Note: For further information about the Biodiversity Certified Land contact the NSW Office of Environment & Heritage. Tel:131 555 or email info@environment.nsw.gov.au.

33. **IS THE PROPERTY, LAND TO WHICH A BIOBANKING AGREEMENT UNDER PART 7A OF THE THREATENED SPECIES CONSERVATION ACT 1995 RELATES?**

No.

Special Note: For further information about the Biobanking agreement contact the Biobanking Team at NSW Office of Environment & Heritage. Tel:131 555 or email biobanking@environment.nsw.gov.au.

34. **MAY COMPLYING DEVELOPMENT BE CARRIED OUT UNDER EACH OF THE CODES FOR COMPLYING DEVELOPMENT IN *STATE ENVIRONMENTAL PLANNING POLICY (EXEMPT AND COMPLYING DEVELOPMENT CODES) 2008* ON THE LAND AND IF COMPLYING DEVELOPMENT MAY NOT BE CARRIED OUT ON THAT LAND, BECAUSE OF ONE OR MORE OF THE REQUIREMENTS UNDER CLAUSES 1.17A(1)(c) TO (e), (2), (3) AND (4), 1.18(1)(c3) AND 1.19 OF THAT POLICY, WHY IT MAY NOT BE CARRIED OUT ON THAT LAND?**

General Housing Code

Complying development under the General Housing Code **may** be carried out on the land.

Housing Alterations Code

Complying development under the Housing Internal Alteration Code **may** be carried out on the land.

General Development Code

Complying development under the General Development Code **may** be carried out on the land.

Commercial and Industrial Alterations Code

Complying development under the Commercial and Industrial Alterations Code **may** be carried out on the land.

Commercial and Industrial (New Buildings and Additions) Code

Complying development under the Commercial and Industrial (New Buildings and Additions) Code **may** be carried out on the land.

Subdivision Code

Complying development under the Subdivision Code **may** be carried out on the land.

Demolition Code

Complying development under the Demolition Code **may** be carried out on the land.

Fire Safety Code

Complying development under the Fire Safety Code **may** be carried out on the land.

SPECIAL NOTE: The above question relates to whether or not the land falls within an exclusion area under Clauses 1.17A(1)(c) to (e), (2), (3) and (4), 1.18(1)(c3) and 1.19 of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. It is your responsibility to ensure that you comply with any other general requirements of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. Failure to comply with these provisions may mean that a Complying Development Certificate issued under the provisions of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 is invalid.

- 35. DO ANY ADOPTED COUNCIL POLICIES OR RESOLUTIONS OR ANY POLICIES ADOPTED BY A PUBLIC AUTHORITY AND NOTIFIED TO THE COUNCIL FOR THE EXPRESS PURPOSE OF ITS ADOPTION BY THAT AUTHORITY BEING REFERRED TO IN PLANNING CERTIFICATES ISSUED BY THE COUNCIL RESTRICT THE DEVELOPMENT OF THE PROPERTY DUE TO THE LIKELIHOOD OF LANDSLIP, BUSHFIRE, TIDAL INUNDATION, SUBSIDENCE, CONTAMINATION, ACID SULPHATE SOILS OR ANY OTHER RISK (OTHER THAN FLOODING)?**

No.

Note: A review of Council's readily available records has been conducted to identify previous land uses that may have caused land contamination. This review did not reveal any reason for contamination of this property. However, prior to urban settlement, sizeable areas of Ku-ring-gai were covered by agricultural and horticultural activities. These uses are listed in the Managing Land Contamination Planning Guidelines as activities that may cause contamination. If you are concerned about possible contamination of the site you should make your own investigations regarding the condition of this property.

- 36. DO ANY ADOPTED COUNCIL POLICIES OR RESOLUTIONS OR ANY POLICIES ADOPTED BY A PUBLIC AUTHORITY REQUIRED TO BE REFERRED TO IN A PLANNING CERTIFICATE EFFECT THE DEVELOPMENT OF THE PROPERTY DUE TO FLOOD RELATED DEVELOPMENT CONTROLS INFORMATION?**

No.

- 37. OTHER INFORMATION RELATING TO DEVELOPMENT OF THE SITE.**

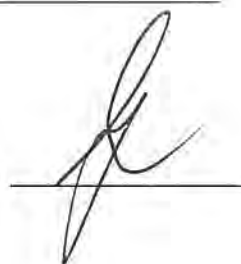
This land may contain threatened species, populations and ecological communities listed under the Threatened Species Conservation Act 1995 (NSW) and or the Environment Protection Biodiversity Conservation Act 1999 (Commonwealth). For more information contact NSW Department of Environment & Heritage, Tel: 131 555.

38. DO YOU NEED TO REFER TO ANY OTHER DOCUMENTS?

Yes. The Environmental Planning and Assessment Amendment Act 1997 No.152 commenced operation on 1 July 1998. As a consequence of this Act the information contained in this certificate needs to be read in conjunction with the provisions of the Environmental Planning and Assessment (Amendment) Regulation 1998, Environmental Planning and Assessment (Further Amendment) Regulation 1998 and Environmental Planning and Assessment (Savings and Transitional) Regulation 1998. Your solicitor will have a copy of this legislation or it may be obtained from the Government Information Office.

John McKee
General Manager,

Per

A handwritten signature in black ink, appearing to be 'J. McKee', is written over a horizontal line.

PLANNING CERTIFICATE

UNDER SECTION 149 OF THE ENVIRONMENTAL PLANNING AND ASSESSMENT ACT, 1979

818 Pacific Highway, Gordon NSW 2072
Locked Bag 1006, Gordon NSW 2072
T 02 9424 0000 F 02 9424 0001
DX 8703 Gordon TTY 02 9424 0875
E kmc@kmc.nsw.gov.au
W www.kmc.nsw.gov.au
ABN 86 408 856 411



PROPERTY DETAILS

Address: 1 Woodford Lane LINDFIELD NSW 2070

Lot Description: Lot A DP 445535

CERTIFICATE DETAILS

Certificate No: PC1742/15

Certificate Date: 10/09/2015

Certificate Type: Section 149(2)

Journal Id: 117944

APPLICANT'S DETAILS

REF: Lindfield Community Hub



Ku-ring-gai Council
Locked Bag 1006
GORDON NSW 2072

BACKGROUND INFORMATION

This certificate provides information on how a property (such as land, a house, a commercial building, etc.) may be used and the limits on its development. The certificate contains information Council is aware of through its records and environmental plans with data supplied by the State Government. The details contained in this certificate are limited to that required by Section 149 of the Environmental Planning and Assessment Act.

1. WHICH ENVIRONMENTAL PLAN RESTRICTS THE USE OF THIS PROPERTY?

(Including planning proposals and draft local environmental plans exhibited prior to 1 July 2009 pursuant to section 66(1) b of the E. P. & A. Act).

Ku-ring-gai Local Environmental Plan (Local Centres) 2012 as published on the NSW Legislation Website on 25 January 2013.

2. WHAT IS THE ZONING OF THIS PROPERTY and the relevant environmental plan?

(Zoning is a way of classifying land and limits the range of uses or activities that may be permitted on that land or property).

RE1 Public Recreation

under the provisions of Ku-ring-gai Local Environmental Plan (Local Centres) 2012 as published on the NSW Legislation Website on 25 January 2013.

3. WHAT DOES NOT REQUIRE DEVELOPMENT CONSENT under the above environmental plan(s)?

Environmental facilities; Environmental protection works; Roads.

Note: Please refer to the provisions for Exempt and Complying Development as described in Part 3 of Ku-ring-gai Local Environmental Plan (Local Centres) 2012.

4. WHAT DOES REQUIRE DEVELOPMENT CONSENT under the above environmental plan(s)?

Animal boarding or training establishments; Bee keeping; Camping grounds; Car parks; Caravan parks; Child care centres; Community facilities; Emergency services facilities; Flood mitigation works; Food and drink premises; Forestry; Information and education facilities; Kiosks; Markets; Plant nurseries; Recreation areas; Recreation facilities (indoor); Recreation facilities (major); Recreation facilities (outdoor); Registered clubs; Roadside stalls; Signage; Water recycling facilities; Water supply systems

5. WHAT IS PROHIBITED under the above environmental plan(s)?

Any development not specified in item 3 or 4.

6. **DO THE DIMENSIONS OF THE LAND PERMIT THE ERECTION OF A DWELLING HOUSE ON THIS PROPERTY** under the above environmental plan(s)?

Not applicable. Dwelling houses are not permitted within this zone.

7. **WHAT IS THE PROPOSED ZONING OF THIS PROPERTY** and the relevant proposed environmental plan?

(Zoning is a way of classifying land and limits the range of uses or activities that may be permitted on that land or property).

There are no zoning changes under any proposed environmental plans applying to this land.

8. **WHAT DOES NOT REQUIRE DEVELOPMENT CONSENT** under the above proposed environmental plan(s)?

Not applicable.

9. **WHAT DOES REQUIRE DEVELOPMENT CONSENT** under the above proposed environmental plan(s)?

Not applicable.

10. **WHAT IS PROHIBITED** by the above proposed environmental plan(s)?

Not applicable.

11. **DO THE DIMENSIONS OF THE LAND PERMIT THE ERECTION OF A DWELLING HOUSE ON THIS PROPERTY** by the above proposed environmental plan(s)?

Not applicable.

12. WHAT OTHER PLANNING INSTRUMENTS AFFECT THIS PROPERTY?

(State and deemed state environmental plans are prepared by the State Government and cover issues as varied as rivers, residential development, employment, etc. If you have any further enquiries please contact the Department of Planning, Tel: 02 9228 6333 or email information@planning.nsw.gov.au).

Draft State Environmental Planning Policy (Competition)

Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005

State Environmental Planning Policy No.6 - Number of storeys in a building.

State Environmental Planning Policy No.19 - Bushland in Urban Areas.

State Environmental Planning Policy No.21 - Caravan Parks

State Environmental Planning Policy No.32 - Urban Consolidation (Redevelopment of Urban Land).

State Environmental Planning Policy No.33 - Hazardous & Offensive Development.

State Environmental Planning Policy No.44 - Koala Habitat Protection.

State Environmental Planning Policy No.55 - Remediation of Land.

State Environmental Planning Policy No.62 - Sustainable Aquaculture.

State Environmental Planning Policy No.64 - Advertising and Signage.

State Environmental Planning Policy No.65 - Design Quality of Residential Flat Development.

State Environmental Planning Policy No.70 - Affordable Housing(Revised Schemes).

State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004.

State Environmental Planning Policy (Major Development) 2005.

State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007.

State Environmental Planning Policy (Temporary Structures) 2007.

State Environmental Planning Policy (Infrastructure) 2007.

State Environmental Planning Policy (Exempt and Complying Development Codes) 2008.

State Environmental Planning Policy (Affordable Rental Housing) 2009.

State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004.

13. WHICH DEVELOPMENT CONTROL PLANS APPLY TO THE PROPERTY?

(A development control plan adds further detail to local environmental plans and may address issues such as building height, car parking etc. Copies of the Plans are available from Council).

Ku-ring-gai Local Centres Development Control Plan

14. WHICH DEVELOPMENT CONTRIBUTION PLANS APPLY IF THIS PROPERTY IS DEVELOPED?

(A Development Contribution Plan – commonly known as a Section 94 Plan outlines the financial costs Council charges if a property is developed and Council believes the development will require additional services or facilities such as parks, roads etc. Copies of the Plans are available from Council).

Ku-ring-gai Contributions Plan 2010.

15. IS THE PROPERTY IDENTIFIED AS A HERITAGE ITEM by Council or State Government? (and if so, what is the status, e.g. local environmental plan, Heritage Act etc.)

No.

SPECIAL NOTE: Your attention is drawn to Clause 5.10(5) of the Ku-ring-gai Local Environmental Plan (Local Centres) 2012 which states that the consent authority may, before granting consent to any development: (a) on land on which a heritage item is located, or (b) on land that is within a heritage conservation area, or (c) on land that is within the vicinity of land referred to in paragraph (a) or (b), require a heritage management document to be prepared that assesses the extent to which the carrying out of the proposed development would affect the heritage significance of the heritage item or heritage conservation area concerned.

16. IS THE PROPERTY IN A CONSERVATION AREA?

No.

SPECIAL NOTE: A conservation area is a place of historic and aesthetic value to the community. It contains a number of elements of significance, such as a historic subdivision layout, a pattern of building "footprints" within each street block, buildings of historic and architectural importance, road alignments, trees, gutters and kerb edges which all combine to create a sense of place that is worth keeping. Council's Heritage Conservation Planner can provide you with more information on this matter.

17. DOES THE PROPERTY INCLUDE OR COMPRISE CRITICAL HABITAT?

No.

18. IS THE PROPERTY AFFECTED BY A ROAD WIDENING OR ROAD REALIGNMENT under the Roads Act, any environmental planning instrument or any Council resolution?

No.

19. IS THE PROPERTY RESERVED FOR ACQUISITION BY A PUBLIC AUTHORITY UNDER ANY ENVIRONMENTAL PLAN OR PROPOSED ENVIRONMENTAL PLAN?

YES. The land or part of the land is identified as Local Open Space on the Ku-ring-gai Local Environmental Plan (Local Centres) 2012 - Land Reservation Acquisition Map. Please refer to clause 5.1 of Ku-ring-gai Local Environmental Plan (Local Centres) 2012 for the relevant acquisition authority.

20. IS THE PROPERTY PART OF ANY APPLICATION DECLARED TO BE “STATE SIGNIFICANT DEVELOPMENT”?

(Development is judged to be “State significant” if the Minister for Planning declares it to be so based on substantial cost of development, significant numbers of employees or other criteria. If you have any further enquiries please contact the Department of Planning. Tel: 02 9228 6333 or email information@planning.nsw.gov.au..

No.

21. IS THE PROPERTY AFFECTED BY SECTION 38 OR 39 OF THE COASTAL PROTECTION ACT?

No.

22. IS THE PROPERTY WITHIN A “PROCLAIMED MINE SUBSIDENCE DISTRICT”?

No.

23. IS THE PROPERTY AFFECTED BY ONE OF THE MATTERS PRESCRIBED BY SECTION 59(2) OF THE CONTAMINATED LAND MANAGEMENT ACT 1997?

No.

SPECIAL NOTE: If you have any concerns about land contamination beyond the information described in this certificate, you should contact the NSW Office of Environment & Heritage. Tel: 131 555 or email info@environment.nsw.gov.au.

24. IS THE PROPERTY BUSH FIRE PRONE LAND?

No.

25. IS THE PROPERTY, LAND TO WHICH A PROPERTY VEGETATION PLAN UNDER THE *NATIVE VEGETATION ACT 2003* APPLIES?

No.

26. IS THE PROPERTY, LAND SUBJECT TO AN ORDER UNDER THE *TREE (DISPUTES BETWEEN NEIGHBOURS) ACT 2006*?

The land is not known to be subject to such order.

27. **IS THE PROPERTY SUBJECT TO DIRECTIONS UNDER PART 3A MAJOR INFRASTRUCTURE AND OTHER PROJECTS of the Environmental Planning & Assessment Act 1979 No.203?**

No.

28. **IS THE PROPERTY SUBJECT TO A CURRENT SITE COMPATIBILITY CERTIFICATE AND CONDITIONS FOR SENIORS HOUSING under the provisions of State Environmental Planning Policy (Housing for Seniors or People with a Disability) 2004?**

No.

29. **IS THE PROPERTY SUBJECT TO A VALID SITE COMPATIBILITY CERTIFICATE FOR INFRASTRUCTURE issued under clause 19 of State Environmental Planning Policy (Infrastructure) 2007?**

No.

30. **IS THE PROPERTY SUBJECT TO A VALID SITE COMPATIBILITY CERTIFICATE AND CONDITIONS FOR AFFORDABLE RENTAL HOUSING issued under clause 37 of State Environmental Planning Policy (Affordable Rental Housing) 2009?**

No.

31. **IS THE PROPERTY SUBJECT TO AN EXEMPTION UNDER SECTION 23 OR AUTHORISATION UNDER SECTION 24 OF THE NATION BUILDING AND JOBS PLAN (*STATE INFRASTRUCTURE DELIVERY*) ACT 2009?**

No.

32. **IS THE PROPERTY, LAND THAT IS BIODIVERSITY CERTIFIED LAND WITHIN THE MEANING OF PART 7AA OF THE THREATENED SPECIES CONSERVATION ACT 1995?**

No.

Special Note: For further information about the Biodiversity Certified Land contact the NSW Office of Environment & Heritage. Tel:131 555 or email info@environment.nsw.gov.au.

33. IS THE PROPERTY, LAND TO WHICH A BIOBANKING AGREEMENT UNDER PART 7A OF THE THREATENED SPECIES CONSERVATION ACT 1995 RELATES?

No.

Special Note: For further information about the Biobanking agreement contact the Biobanking Team at NSW Office of Environment & Heritage. Tel: 131 555 or email biobanking@environment.nsw.gov.au.

34. MAY COMPLYING DEVELOPMENT BE CARRIED OUT UNDER EACH OF THE CODES FOR COMPLYING DEVELOPMENT IN *STATE ENVIRONMENTAL PLANNING POLICY (EXEMPT AND COMPLYING DEVELOPMENT CODES) 2008* ON THE LAND AND IF COMPLYING DEVELOPMENT MAY NOT BE CARRIED OUT ON THAT LAND, BECAUSE OF ONE OR MORE OF THE REQUIREMENTS UNDER CLAUSES 1.17A(1)(c) TO (e), (2), (3) AND (4), 1.18(1)(c3) AND 1.19 OF THAT POLICY, WHY IT MAY NOT BE CARRIED OUT ON THAT LAND?

General Housing Code

Complying development under the General Housing Code **may not** be carried out on the land. The land is affected by the following general exemptions and/or land based exclusions:

- ☐ The land is land that is reserved for a public purpose in an environmental planning instrument.

Housing Alterations Code

Complying development under the Housing Internal Alteration Code **may** be carried out on the land.

General Development Code

Complying development under the General Development Code **may** be carried out on the land.

Commercial and Industrial Alterations Code

Complying development under the Commercial and Industrial Alterations Code **may** be carried out on the land.

Commercial and Industrial (New Buildings and Additions) Code

Complying development under the Commercial and Industrial (New Buildings and Additions) Code **may not** be carried out on the land. The land is affected by the following general exemptions and/or land based exclusions:

- ☐ The land is land that is reserved for a public purpose in an environmental planning instrument.

Subdivision Code

Complying development under the Subdivision Code **may** be carried out on the land.

Demolition Code

Complying development under the Demolition Code **may** be carried out on the land.

Fire Safety Code

Complying development under the Fire Safety Code **may** be carried out on the land.

SPECIAL NOTE: *The above question relates to whether or not the land falls within an exclusion area under Clauses 1.17A(1)(c) to (e), (2), (3) and (4), 1.18(1)(c3) and 1.19 of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. It is your responsibility to ensure that you comply with any other general requirements of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. Failure to comply with these provisions may mean that a Complying Development Certificate issued under the provisions of the State Environmental Planning Policy (Exempt and Complying Development Codes) 2008 is invalid.*

- 35. DO ANY ADOPTED COUNCIL POLICIES OR RESOLUTIONS OR ANY POLICIES ADOPTED BY A PUBLIC AUTHORITY AND NOTIFIED TO THE COUNCIL FOR THE EXPRESS PURPOSE OF ITS ADOPTION BY THAT AUTHORITY BEING REFERRED TO IN PLANNING CERTIFICATES ISSUED BY THE COUNCIL RESTRICT THE DEVELOPMENT OF THE PROPERTY DUE TO THE LIKELIHOOD OF LANDSLIP, BUSHFIRE, TIDAL INUNDATION, SUBSIDENCE, CONTAMINATION, ACID SULPHATE SOILS OR ANY OTHER RISK (OTHER THAN FLOODING)?**

No.

Note: A review of Council's readily available records has been conducted to identify previous land uses that may have caused land contamination. This review did not reveal any reason for contamination of this property. However, prior to urban settlement, sizeable areas of Ku-ring-gai were covered by agricultural and horticultural activities. These uses are listed in the Managing Land Contamination Planning Guidelines as activities that may cause contamination. If you are concerned about possible contamination of the site you should make your own investigations regarding the condition of this property.

- 36. DO ANY ADOPTED COUNCIL POLICIES OR RESOLUTIONS OR ANY POLICIES ADOPTED BY A PUBLIC AUTHORITY REQUIRED TO BE REFERRED TO IN A PLANNING CERTIFICATE EFFECT THE DEVELOPMENT OF THE PROPERTY DUE TO FLOOD RELATED DEVELOPMENT CONTROLS INFORMATION?**

No.

- 37. OTHER INFORMATION RELATING TO DEVELOPMENT OF THE SITE.**

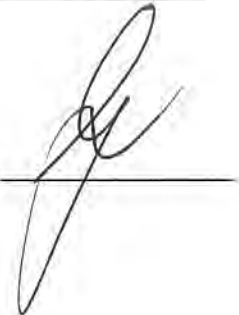
This land may contain threatened species, populations and ecological communities listed under the Threatened Species Conservation Act 1995 (NSW) and or the Environment Protection Biodiversity Conservation Act 1999 (Commonwealth). For more information contact NSW Department of Environment & Heritage, Tel: 131 555.

38. DO YOU NEED TO REFER TO ANY OTHER DOCUMENTS?

Yes. The Environmental Planning and Assessment Amendment Act 1997 No.152 commenced operation on 1 July 1998. As a consequence of this Act the information contained in this certificate needs to be read in conjunction with the provisions of the Environmental Planning and Assessment (Amendment) Regulation 1998, Environmental Planning and Assessment (Further Amendment) Regulation 1998 and Environmental Planning and Assessment (Savings and Transitional) Regulation 1998. Your solicitor will have a copy of this legislation or it may be obtained from the Government Information Office.

John McKee
General Manager,

Per

A handwritten signature in black ink, appearing to be 'J. McKee', is written over a horizontal line.

Appendix V – Dial Before You Dig (DBYD)

New South Wales Office:

A. D. Envirotech Australia Pty Ltd
Unit 6/7 Millennium Court
Silverwater, NSW 2128

Queensland Office:

A. D. Envirotech Australia Pty Ltd
P.O. Box 288
Upper Coomera, QLD 4209

Telephone:

NSW: (02) 8541 7214
QLD: (07) 5519 4610

Internet:

site: www.ADenvirotech.com.au
e-mail info@ADenvirotech.com.au

ABN:

520 934 529 50

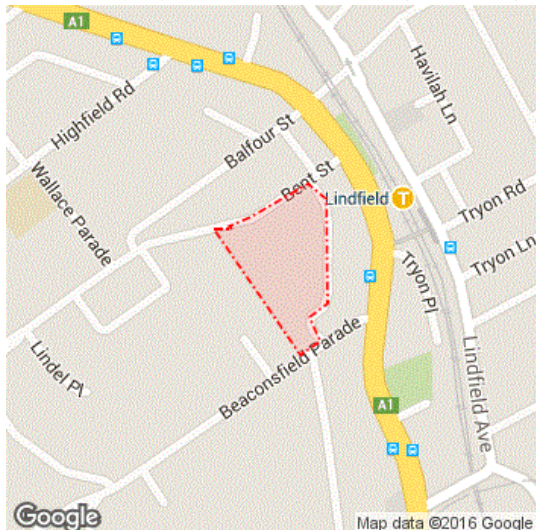
Caller Details

Contact: Mr Kyle McClintock
Company: AD Envirotech
Address: 6-7 Millennium Court
Silverwater NSW 2128

Caller Id: 1444282
Mobile: 0450603252
Email: k.mcclintock@adenvirotech.com.au
Phone: 0450603252
Fax: Not Supplied

Dig Site and Enquiry Details

WARNING: The map below only displays the location of the proposed dig site and does not display any asset owners' pipe or cables. The area highlighted has been used only to identify the participating asset owners, who will send information to you directly.



User Reference: STC-155-10625
Working on Behalf of: Ku-ring-gai Council
Enquiry Date: 26/05/2016
Start Date: 30/05/2016
End Date: 31/05/2016

Address: Woodford Lane
Lindfield NSW 2070
Job Purpose: Excavation
Onsite Activity: Horizontal Boring
Location of Workplace: Both
Location in Road: CarriageWay, Footpath, Nature Strip

- Check that the location of the dig site is correct. If not you must submit a new enquiry.
- Should the scope of works change, or plan validity dates expire, you must submit a new enquiry.
- Do NOT dig without plans. Safe excavation is your responsibility. If you do not understand the plans or how to proceed safely, please contact the relevant asset owners.

Notes/Description of Works:
Not Supplied

Your Responsibilities and Duty of Care

- If plans are not received within 2 working days, contact the asset owners directly & quote their Sequence No.
- ALWAYS perform an onsite inspection for the presence of assets. Should you require an onsite location, contact the asset owners directly. Please remember, plans do not detail the exact location of assets.
- Pothole to establish the exact location of all underground assets using a hand shovel, before using heavy machinery.
- Ensure you adhere to any State legislative requirements regarding Duty of Care and safe digging requirements.
- If you damage an underground asset you MUST advise the asset owner immediately.
- By using this service, you agree to Privacy Policy and the terms and disclaimers set out at www.1100.com.au
- For more information on safe excavation practices, visit www.1100.com.au

Asset Owner Details

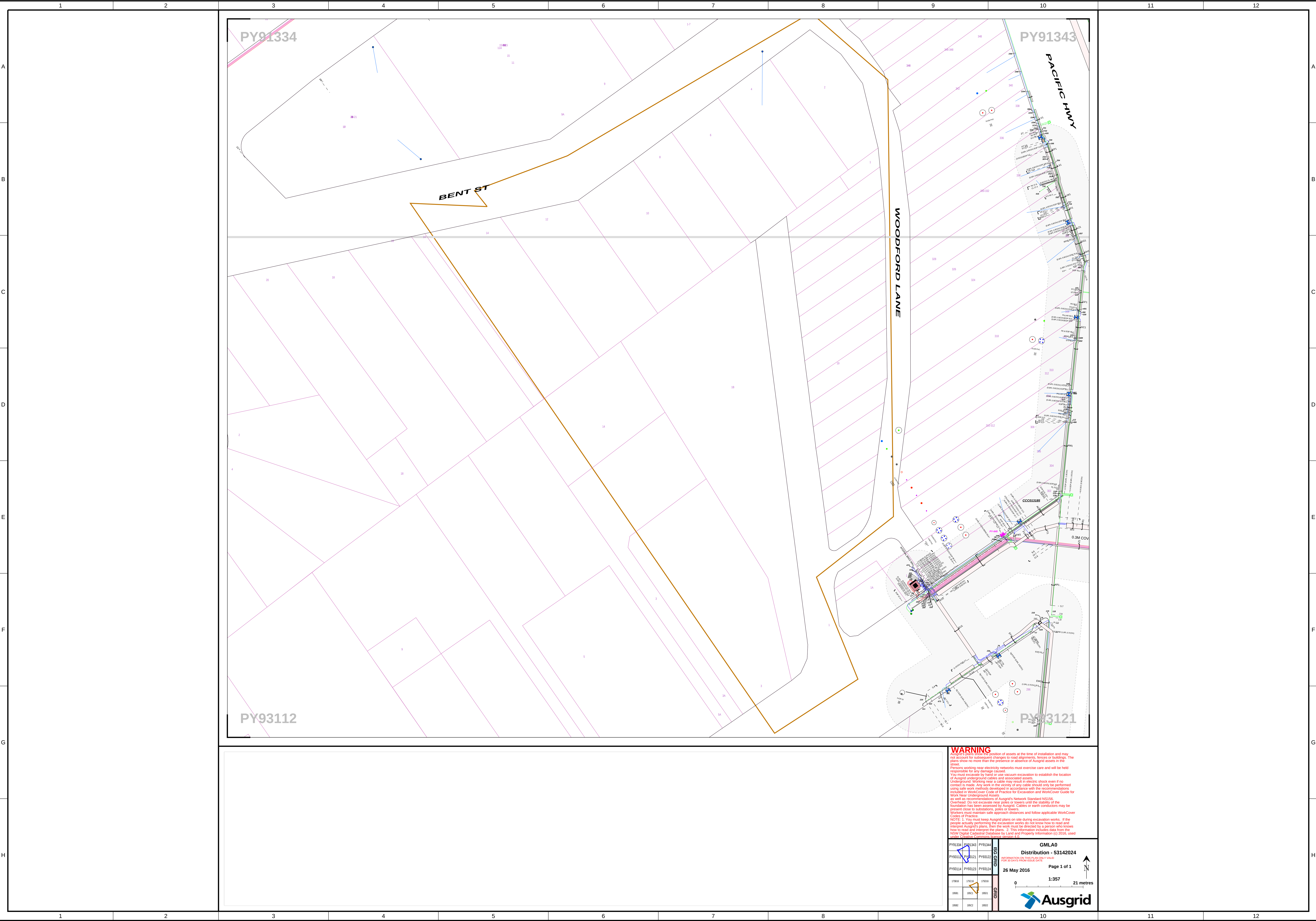
The assets owners listed below have been requested to contact you with information about their asset locations within 2 working days. Additional time should be allowed for information issued by post. It is **your responsibility** to identify the presence of any underground assets in and around your proposed dig site. Please be aware, that not all asset owners are registered with the Dial Before You Dig service, so it is **your responsibility** to identify and contact any asset owners not listed here directly.

** Asset owners highlighted by asterisks ** require that you visit their offices to collect plans.

Asset owners highlighted with a hash require that you call them to discuss your enquiry or to obtain plans.

Seq. No.	Authority Name	Phone	Status
53142024	Ausgrid	0249510899	NOTIFIED
53142030	Jemena Gas North	1300880906	NOTIFIED
53142021	Ku-ring-gai Council	0294240954	NOTIFIED
53142022	Nextgen, NCC - NSW	1800032532	NOTIFIED
53142028	Optus and/or Uecomm, Nsw	1800505777	NOTIFIED
53142023	PIPE Networks, Nsw	1800201100	NOTIFIED
53142032	Sydney Water	132092	NOTIFIED
53142025	Telstra NSW, Central	1800653935	NOTIFIED

END OF UTILITIES LIST



WARNING
Ausgrid's plans show the position of assets at the time of installation and may not account for subsequent changes to road alignments, fences or buildings. The plans show no more than the presence or absence of Ausgrid assets in the street.
Persons working near electricity networks must exercise care and will be held responsible for any damage caused.
You must excavate by hand to use vacuum excavation to establish the location of Ausgrid underground cables and associated assets.
Underground working near a cable may result in electric shock even if no contact is made. Any work in the vicinity of any cable should only be performed using safe work methods developed in accordance with the recommendations included in WorkCover Code of Practice for Excavation and WorkCover Guide for Work Near Underground Assets.
as well as recommendations of Ausgrid's Network Standard NS156.
Overhead: Do not excavate near poles or towers until the stability of the foundation has been assessed by Ausgrid. Cables or earth conductors may be present close to substations, poles or towers.
Workers must maintain safe approach distances and follow applicable WorkCover Codes of Practice.
NOTE: 1. You must keep Ausgrid signs on site during excavation works. If the people actually performing the excavation works do not know how to read and interpret Ausgrid's plans, then the work must be directed by a person who knows how to read and interpret the plans. 2. This information includes data from the NSW Digital Customer Database by Land and Property Information (c) 2016, used under Creative Commons license version 4.0.

PY91344	PY91343	PY91344
PY91312	PY91321	PY91312
PY91314	PY91323	PY91312
17684	17678	17618
17681	17621	17601
17682	17627	17602

GMLA0

Distribution - 53142024

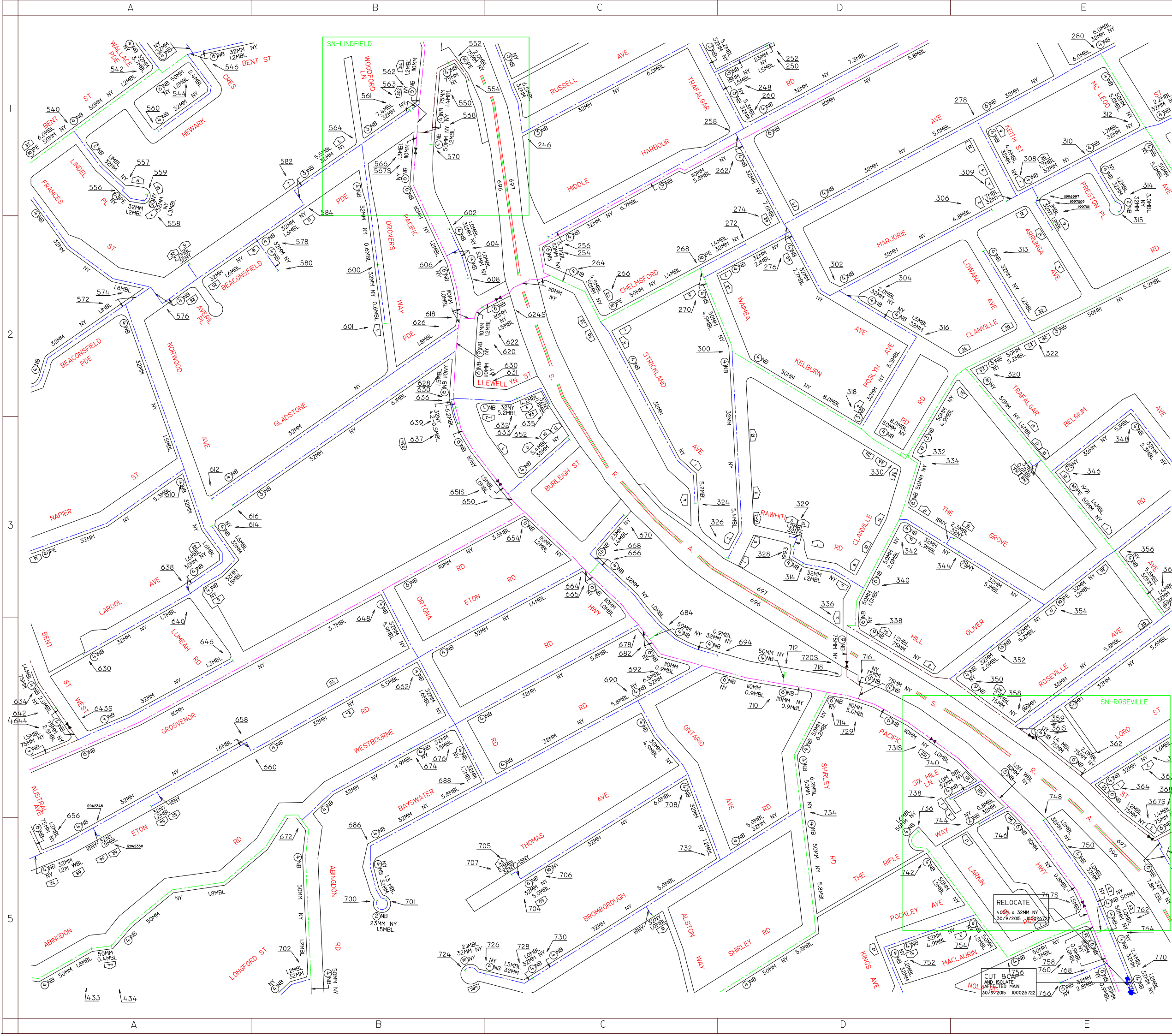
Page 1 of 1

26 May 2016

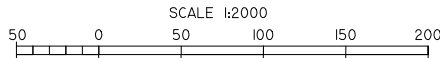
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21 metres

Ausgrid



PYMBLE
9C



THIS MAP UPDATED ON 15/02/2016
THIS PLAN IS DIAGRAMATIC ONLY. DISTANCES
SCALED FROM THIS PLAN MAY NOT BE ACCURATE.

PY8B	PY9A	PY9B
PY8D	PY9C	PY9D
G2B	G3A	G3B

ADJOINING MAPS



NETWORK AREA MUNICIPALITY AREA

Jemena

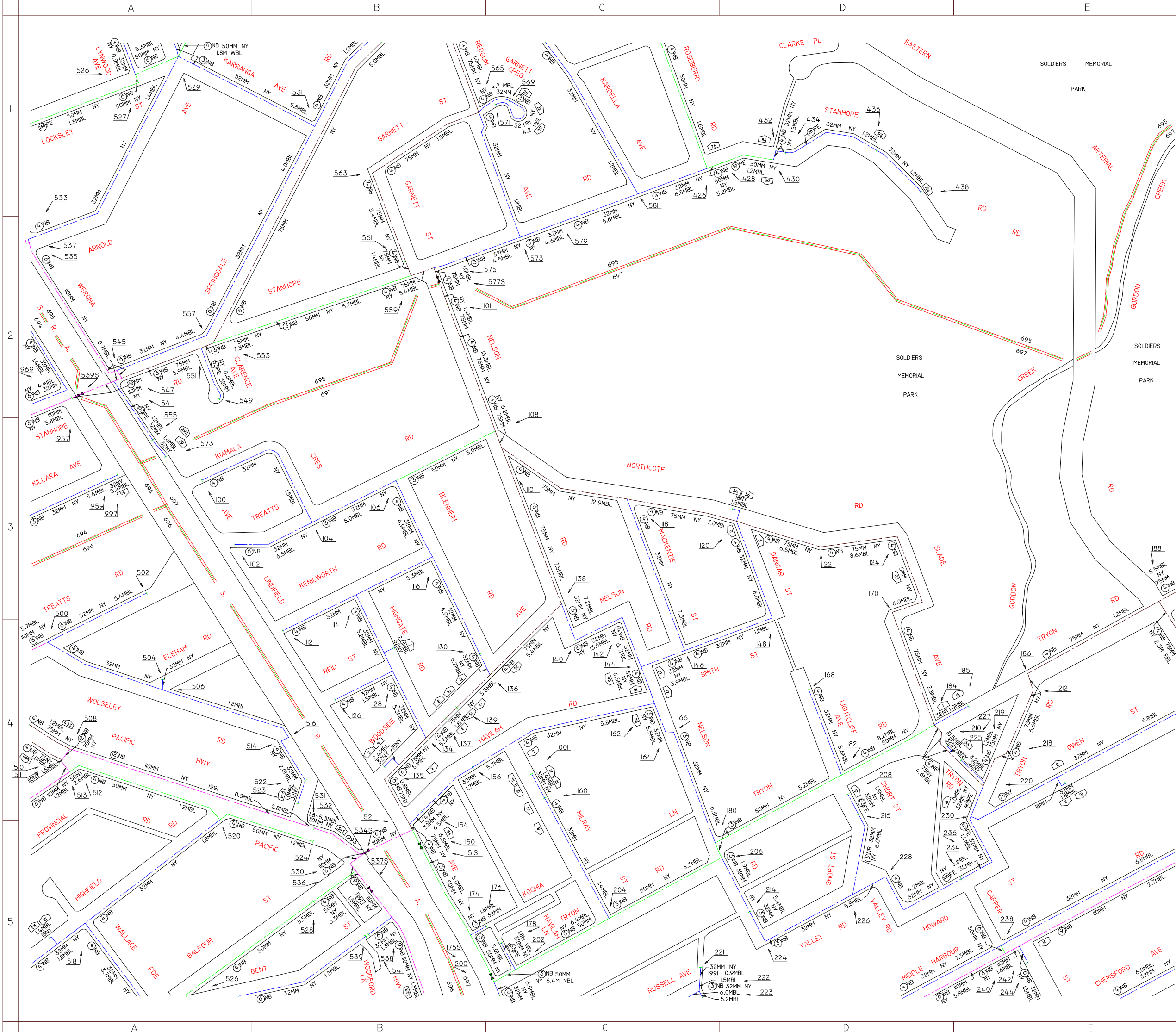
KEY

MAX ALLOWABLE OPERATING PRESSURE

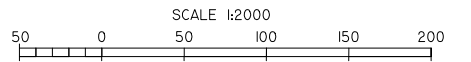
T	TRUNK PIPELINE	7000 kPa
P	PRIMARY MAIN	3500 kPa
S	SECONDARY MAIN	1050 kPa
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100	NETWORK MAIN	100 kPa
30	NETWORK MAIN	30 kPa
7	NETWORK MAIN	7 kPa
2	NETWORK MAIN	2 kPa
PR II-2 3	PROPOSED MAINS	

PR II-2 3	STEEL MAIN PROJECT NUMBER
P	PRESSURE MONITORING STATION
V	VALVE
SPR	SYSTEM PRESSURE REGULATOR
S	SIPHON
123	NETWORK NODE
123S	NETWORK VALVE NODE
6NB	VALVE NUMBER
6NB	6 INCH CAST IRON MAIN
150MM	150MM STEEL MAIN
110MM PE/NY	110MM POLYETHYLENE/NYLON MAIN
6NB 50MM NY	50MM NYLON INSERTED INTO 6NB MAIN CAST IRON MAIN
1.2MBL	DISTANCE IN METRES OF MAIN FROM BOUNDARY LINE
1957	YEAR LAID
+++	MUNICIPALITY BOUNDARY
==	NETWORK BOUNDARY
123	HOUSE NUMBER

PYMBLE 9C



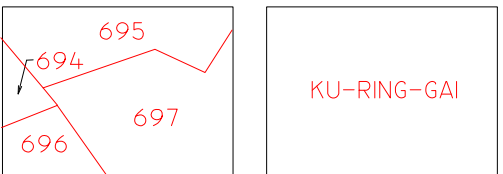
PYMBLE
9A



THIS MAP UPDATED ON 06/03/14
THIS PLAN IS DIAGRAMATIC ONLY. DISTANCES
SCALED FROM THIS PLAN MAY NOT BE ACCURATE.
DATE ALTERED:..... BY:.....

PY5D	PY6C	PY6D
PY8B	PY9A	PY9B
PY8D	PY9C	PY9D

ADJOINING MAPS



NETWORK AREA

MUNICIPALITY AREA

Jemena

KEY

	MAX ALLOWABLE OPERATING PRESSURE
T	TRUNK PIPELINE 7000 kPa
P	PRIMARY MAIN 3500 kPa
S	SECONDARY MAIN 1050 kPa
400	NETWORK MAIN 400 kPa
	NETWORK MAIN 300 kPa
	NETWORK MAIN 210 kPa
100	NETWORK MAIN 100 kPa
30	NETWORK MAIN 30 kPa
	NETWORK MAIN 7 kPa
	NETWORK MAIN 2 kPa
	PROPOSED MAINS

PR II-2 3

STEEL MAIN PROJECT NUMBER

PRESSURE MONITORING STATION

VALVE

SYSTEM PRESSURE REGULATOR

SIPHON

NETWORK NODE
NETWORK VALVE NODE

NETWORK	VALVE	NODE
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1	131	131
1	132	132
1	133	133
1		

6 INCH CAST IRON MAIN

150MM STEEL MAIN

110MM POLYETHYLENE/NYLON MAIN

50MM NYLON INSERTED INTO

6NB MAIN CAST IRON MAIN

DISTANCE IN METRES OF MAIN FROM
 TRANSVERSE LINE

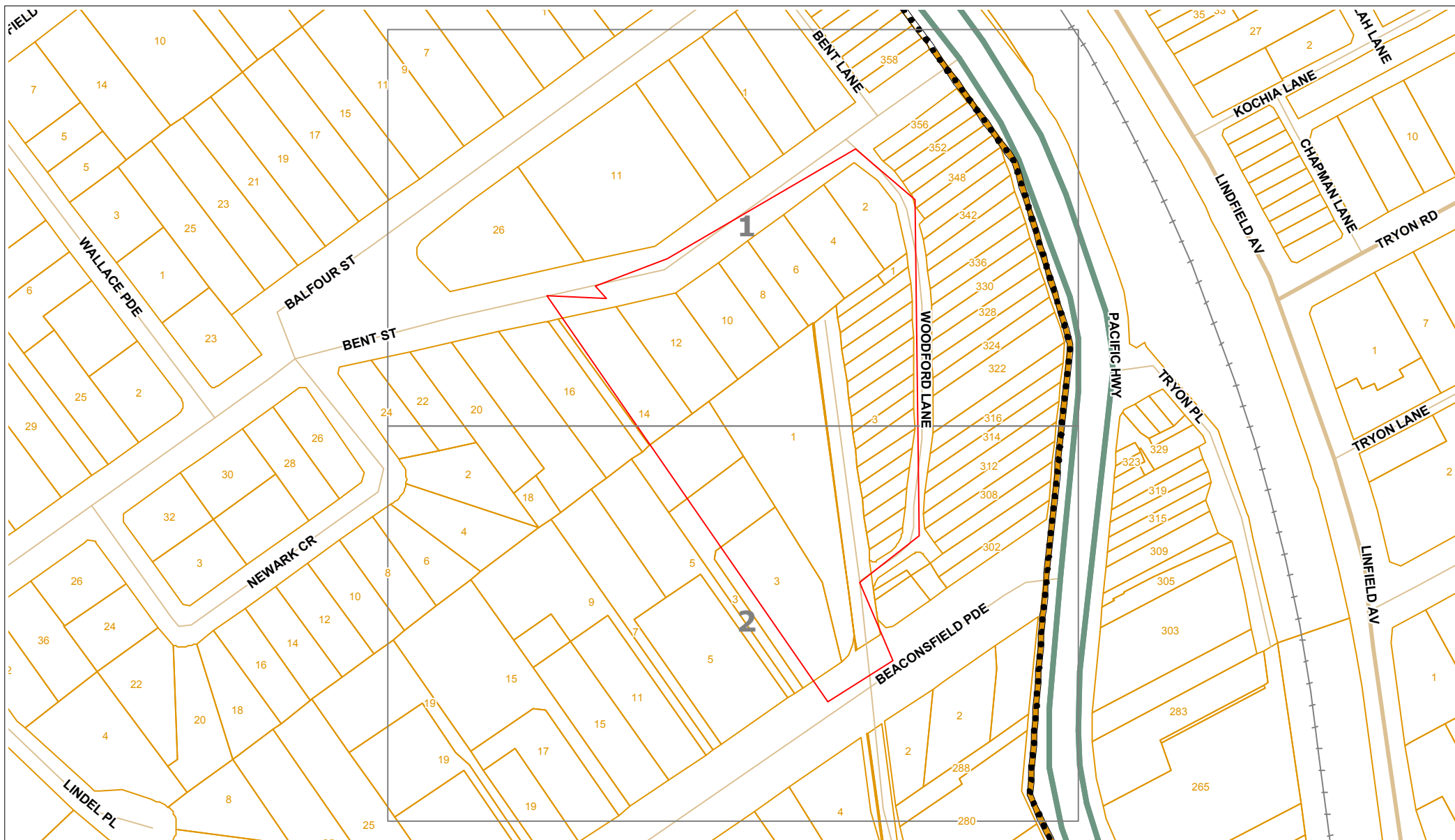
BOUNDARY LINE

YEAR LAID

MUNICIPALITY BOUNDARY
NETWORK BOUNDARY

NETWORK BOUNDARY
HOUSE NUMBER

PYMBLE 9A



Sequence Number: 53142022

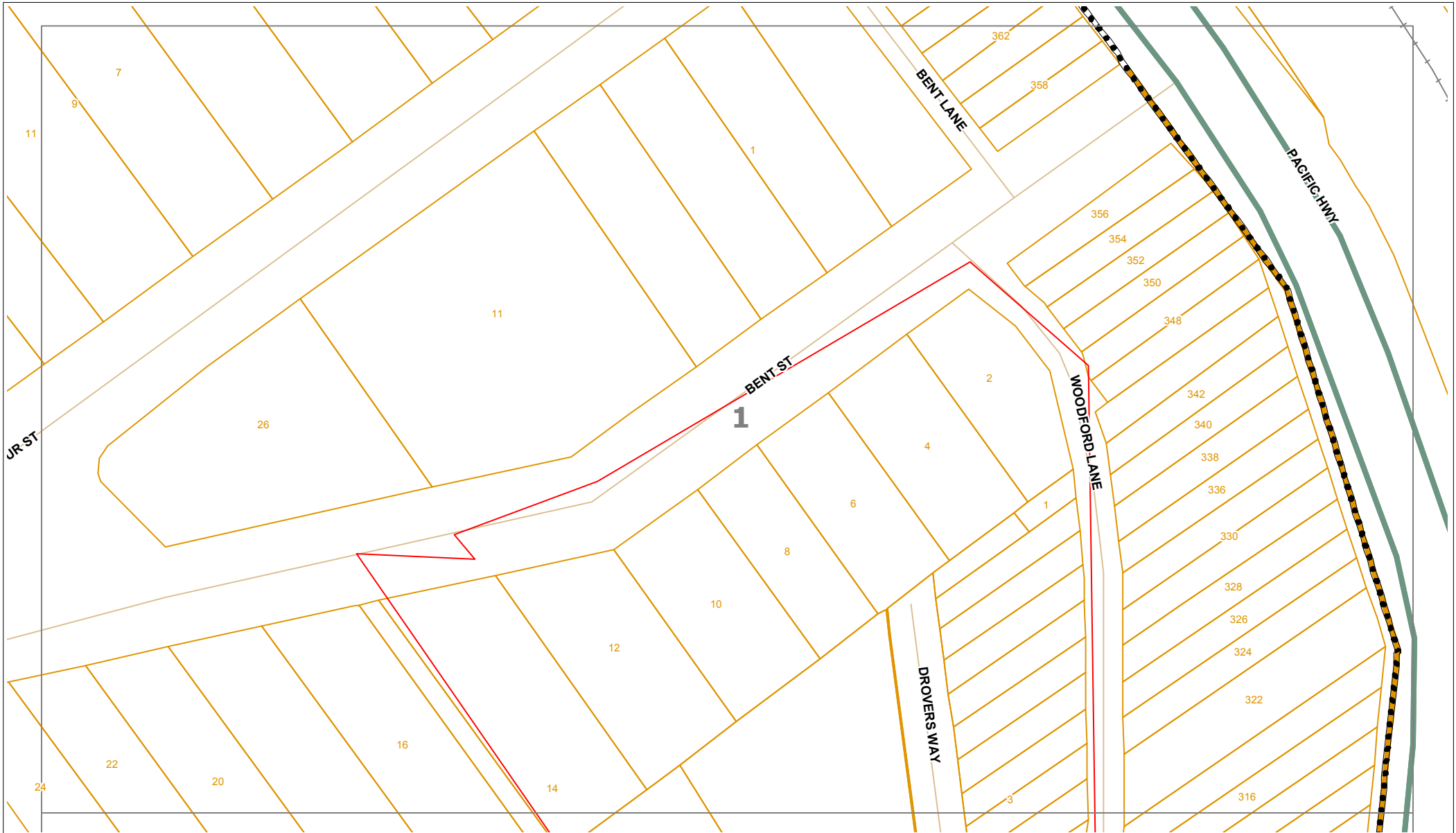
Date: 26/05/2016

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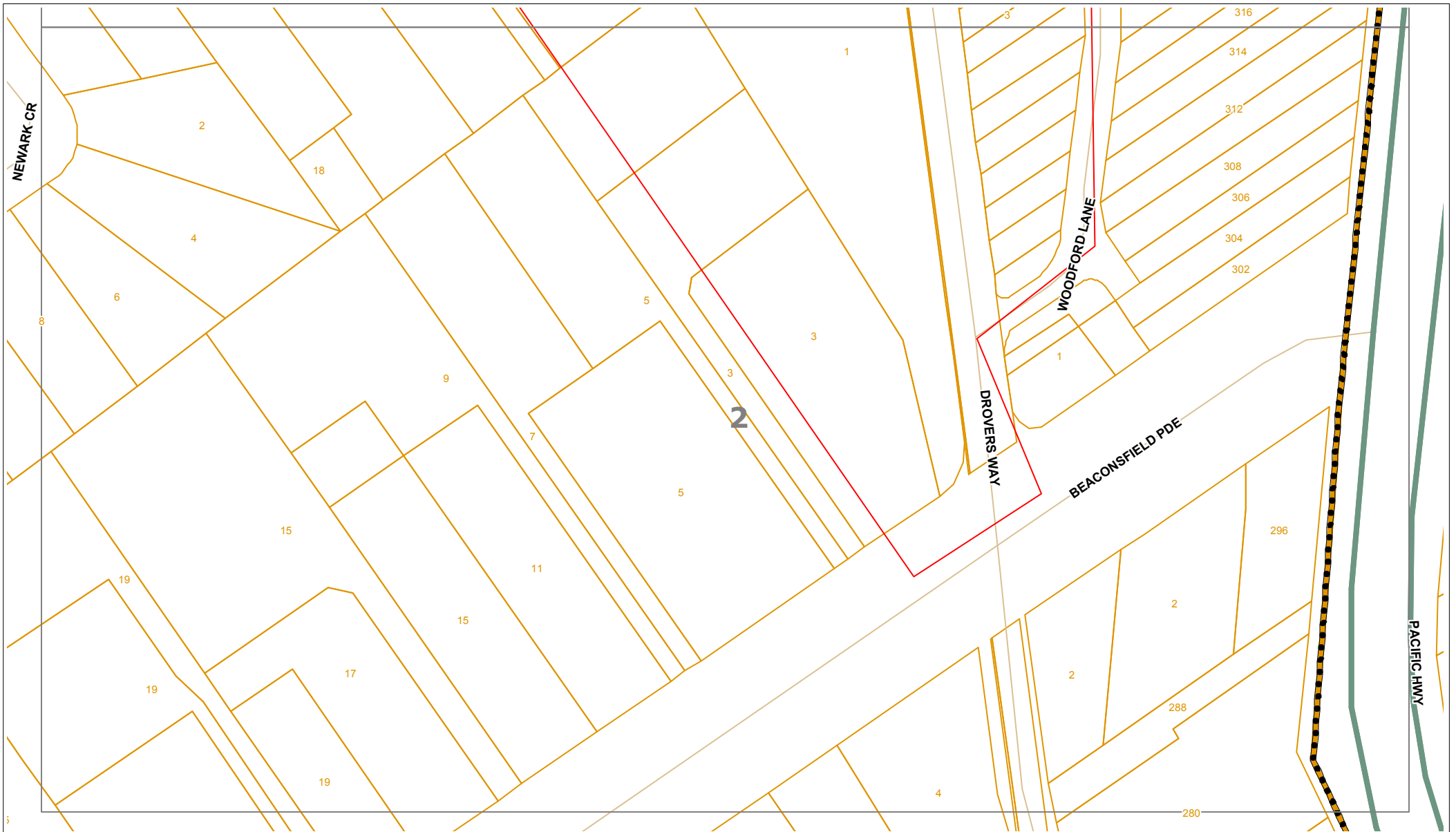


LEGEND

Digsite	Assets
 Point	 Cable
 Line	 3rd Party Duct
 Area	 Marker Post



Sequence Number: 53142022	Date: 26/05/2016	LEGEND <table><tr><th>Digsite</th><th>Assets</th></tr><tr><td> Point</td><td> Cable</td></tr><tr><td> Line</td><td> 3rd Party Duct</td></tr><tr><td> Area</td><td> Marker Post</td></tr></table>	Digsite	Assets	 Point	 Cable	 Line	 3rd Party Duct	 Area	 Marker Post
Digsite	Assets									
 Point	 Cable									
 Line	 3rd Party Duct									
 Area	 Marker Post									
DISCLAIMER: THIS DRAWING SHOULD NOT BE SCALED TO LOCATE CABLES. NO WARRANTY IS GIVEN THAT THE INFORMATION IS ACCURATE OR COMPLETE. IF YOU REQUIRE INFORMATION REGARDING LOCATING THE CABLE PLEASE CALL NEXTGEN. THIS DOCUMENT HAS BEEN PREPARED SOLELY FOR DIAL BEFORE YOU DIG USE. THIS PLAN CONTAINS COMMERCIALLY SENSITIVE INFORMATION AND IS TO BE TREATED ACCORDINGLY. NO SUCH INFORMATION IS TO BE PASSED ONTO OTHER PARTIES WITHOUT WRITTEN CONSENT FROM NEXTGEN PTY LTD. 										



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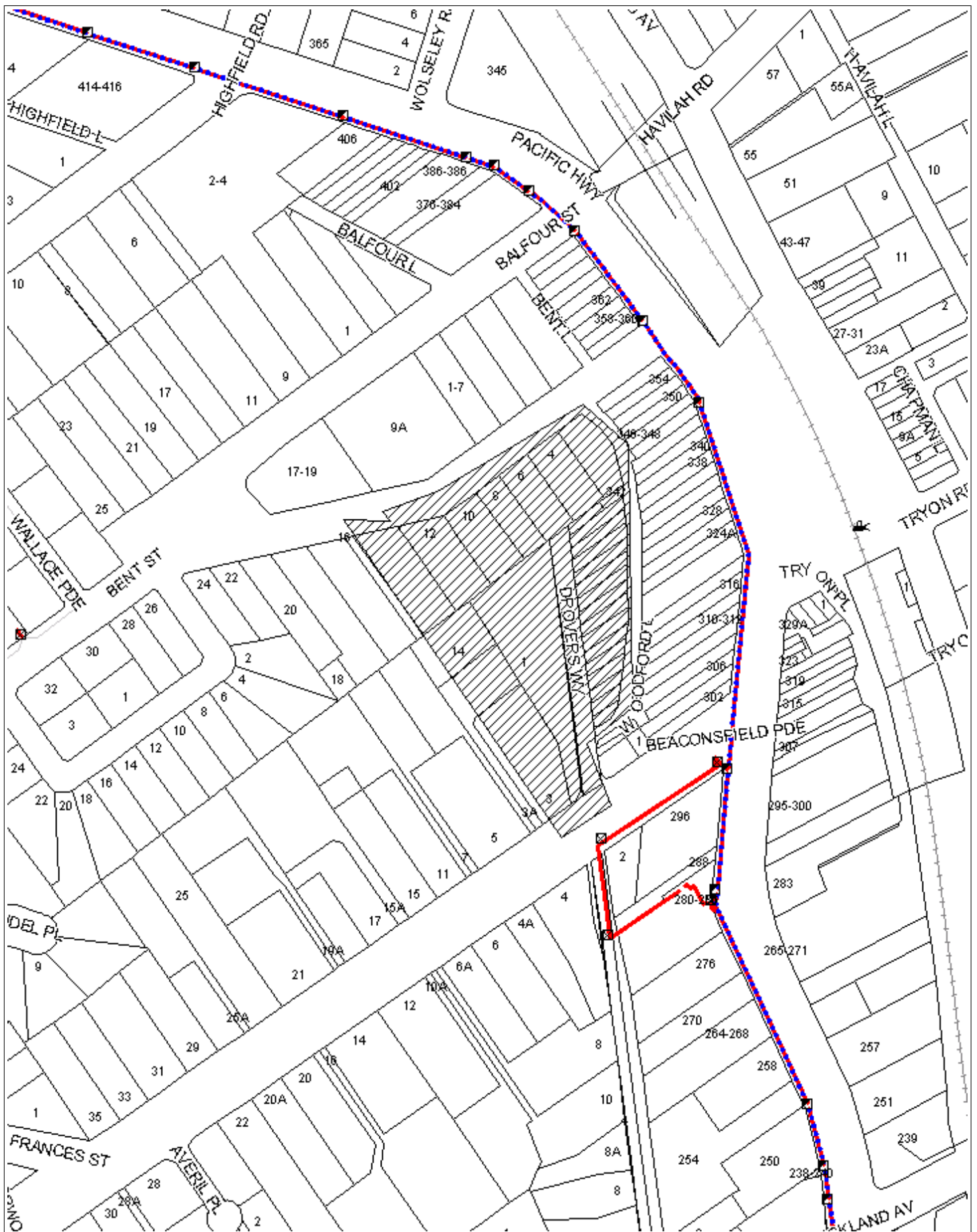
Date: 26/05/2016

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LEGEND

Digsite		Assets	
	Point		Cable
	Line		3rd Party Duct
	Area		Marker Post



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Sequence Number: 53142028

Date Generated: 26/05/2016



For all Optus DBYD plan enquiries –
Email: Fibre.Locations@optus.net.au
For urgent onsite assistance contact 1800 505 777
Optus Limited ACN 052 833 208





Response Cover Letter

Date: 26/05/2016

PIPE Networks
Level 17, 127 Creek St
Brisbane QLD 4000
Phone: +61 732339895
Fax: +61 732339880

To:

Mr Kyle McClintock - Customer ID: 1444282
AD Envirotech - Mr Kyle McClintock
6-7 Millennium Court
Silverwater
NSW
2128

Email: k.mcclintock@adenvirotech.com.au
Phone: 0450603252
Fax: Not Supplied
Mobile: 0450603252

Dear Mr Kyle McClintock

The following is our response to your Dial Before You Dig enquiry.

Assets Affected: PIPE Networks, Telstra

Sequence Number: 53142023

Location: Woodford Lane
Lindfield
NSW
2070

Commencement Date: 30/05/2016

Please read over the attached documents for more information about your enquiry.

DISCLAIMER: No responsibility/liability is taken by PIPE Networks for any inaccuracy, error, omission or action based on the information supplied in this correspondence.

Note: If the works fall in an area that adjacent to PIPE Networks infrastructure, a pre-inspection is required prior to commencement of works. Contact PIPE Networks to arrange an inspection time. **NO WORKS TO COMMENCE PRIOR TO INSPECTION.**



Level 17, PIPE Networks House, 127 Creek Street, Brisbane 4000
PH:(07) 3233 9895 FAX:(07) 3233 9880

Attention: Mr Kyle McClintock
Fax: Not Supplied
DBYD Enquiry Number: 53142023

Date: 26/05/2016

Location: Woodford Lane
Lindfield
NSW
2070

DBYD ENQUIRY RETURN:

PIPE Networks **DOES** own or operate telecommunications network infrastructure within the area detailed above.

The affected network **is contained in the PIPE Networks duct network** and can be found on **PIPE Networks** own network plans.

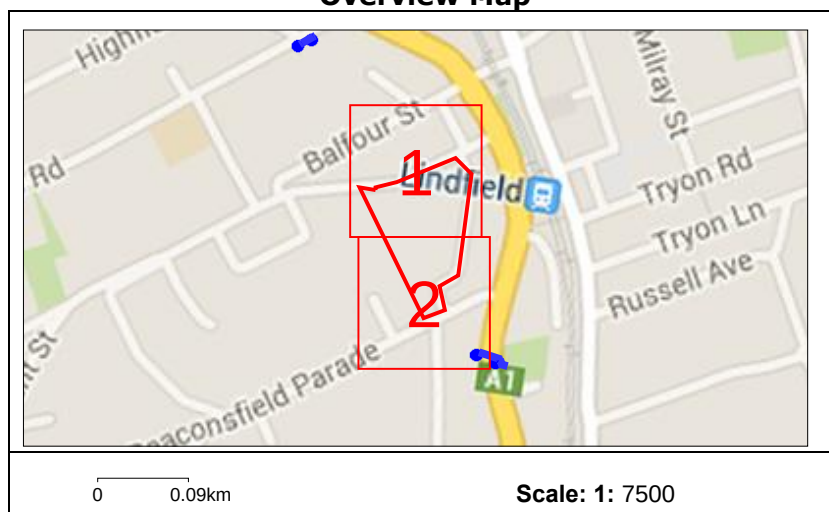
This network is vital to our operations and as such, it is critical that no works commence within the area until a PIPE Networks representative has contacted you.

A PIPE Networks representative will contact you within 24 hours to further discuss your intended works. If you do not hear from PIPE networks within 24hours please call us for assistance.

Due to continued network expansion, this network information can only be considered valid and accurate for 28 days from issue.

PIPE Networks will seek compensation for any damage to its network through negligence or ignorance of your duty of care.

Overview Map



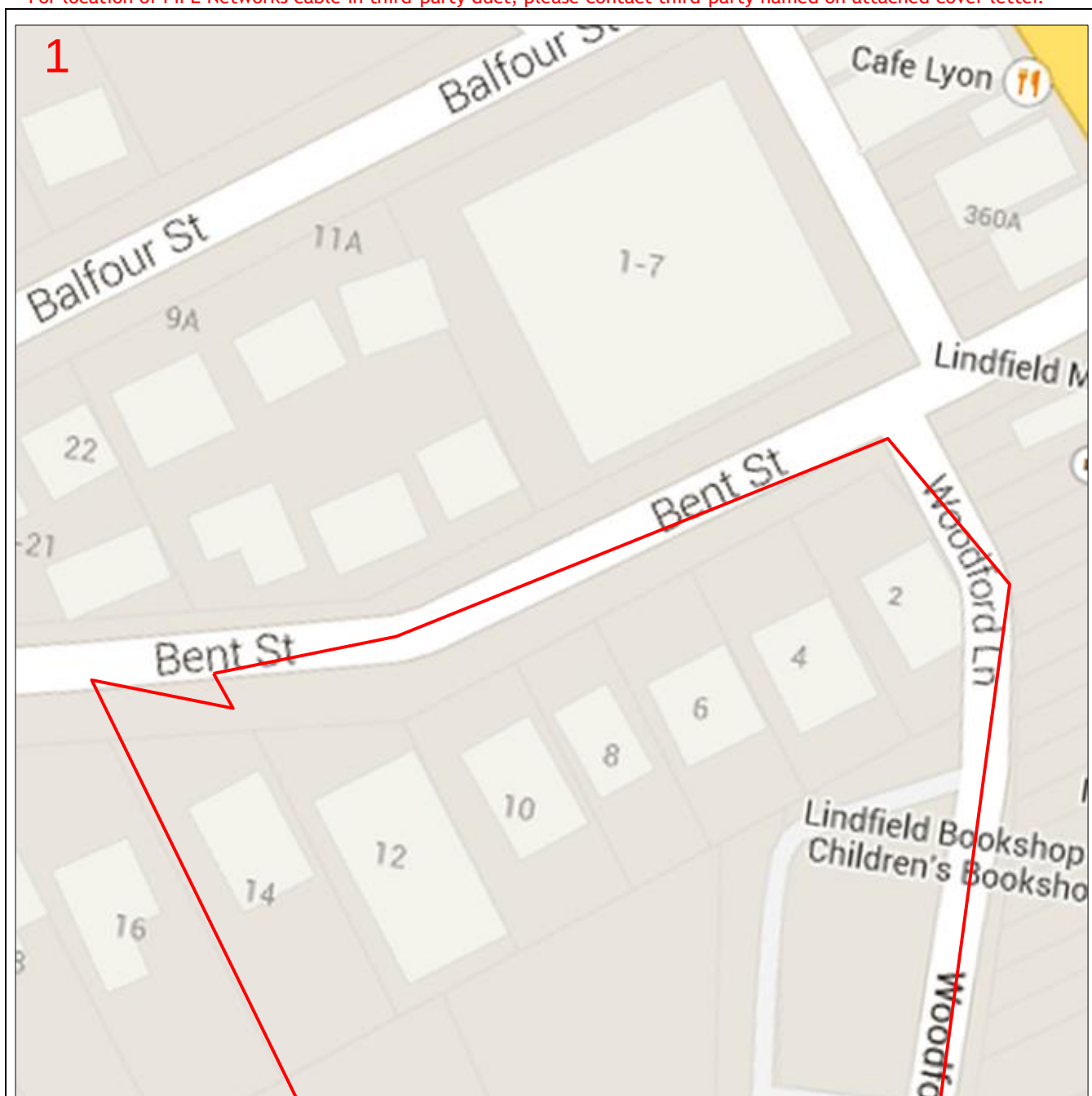
PIPE Networks (for information specific to this job only)
Ph (07) 3233 9895
Email: dbyd@pipenetworks.com

DISCLAIMER: No responsibility/liability is taken by PIPE Networks for any inaccuracy, error, omission or action based on the information supplied in this correspondence.

Note: If the works fall in an area that adjacent to PIPE Networks infrastructure, a pre-inspection is required prior to commencement of works. Contact PIPE Networks to arrange an inspection time. **NO WORKS TO COMMENCE PRIOR TO INSPECTION.**

Only PIPE Networks' duct displayed.

For location of PIPE Networks cable in third-party duct, please contact third-party named on attached cover letter.



Enquiry Number: 53142023

Map Sheet: 1

Scale: 1:750

0 0.008km

LEGEND

DBYD Request Area Asset

Line

Area

Manhole

Duct

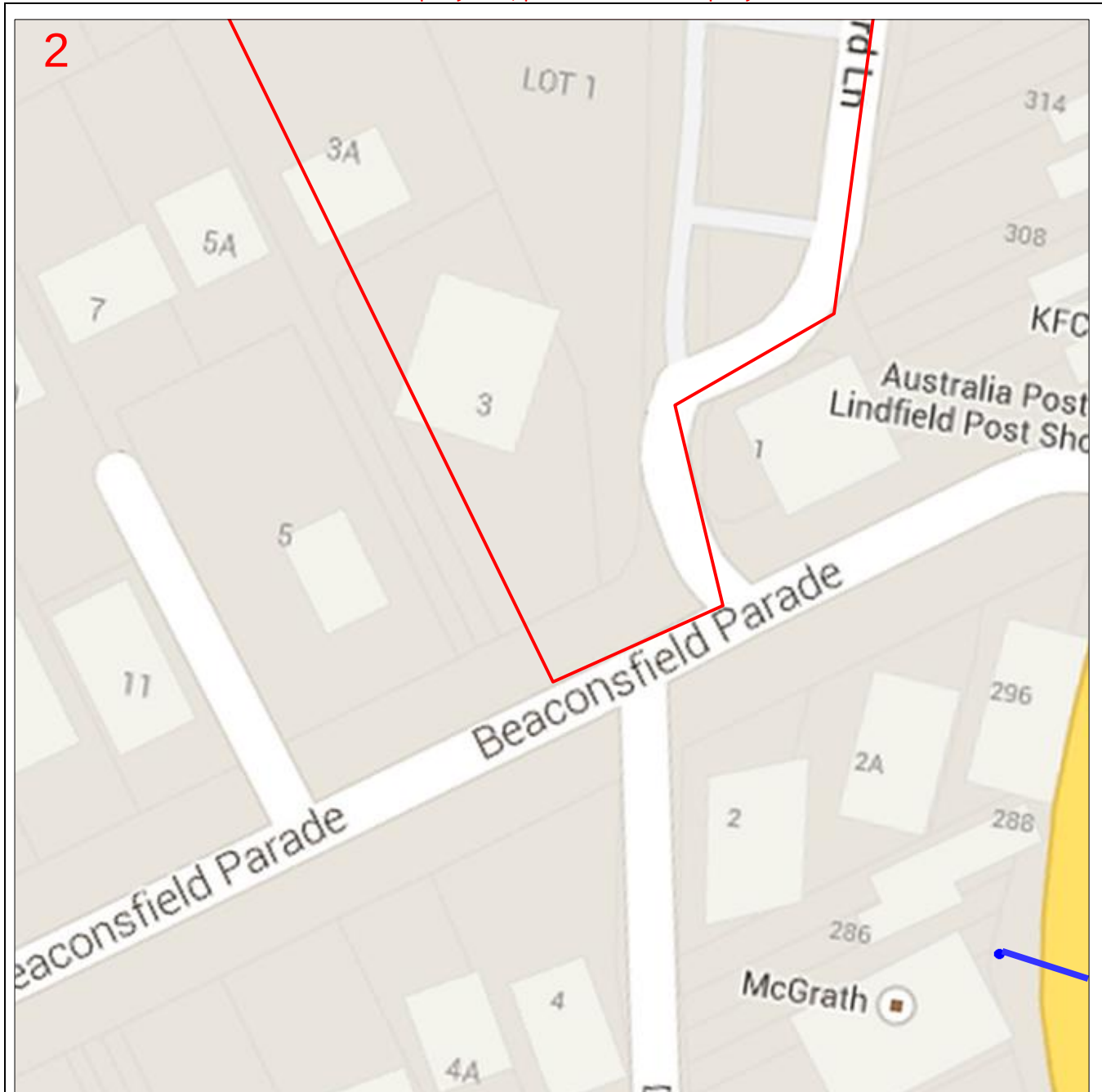


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Note: If the works fall in an area that is adjacent to PIPE Networks infrastructure, a pre-inspection is required prior to commencement of works. Contact PIPE Networks to arrange an inspection time. **NO WORKS TO COMMENCE PRIOR TO INSPECTION.**

Only PIPE Networks' duct displayed.

For location of PIPE Networks cable in third-party duct, please contact third-party named on attached cover letter.



Enquiry Number: 53142023

Map Sheet: 2

Scale: 1:750

0 0.008km

LEGEND

DBYD Request Area Asset

Line

Area

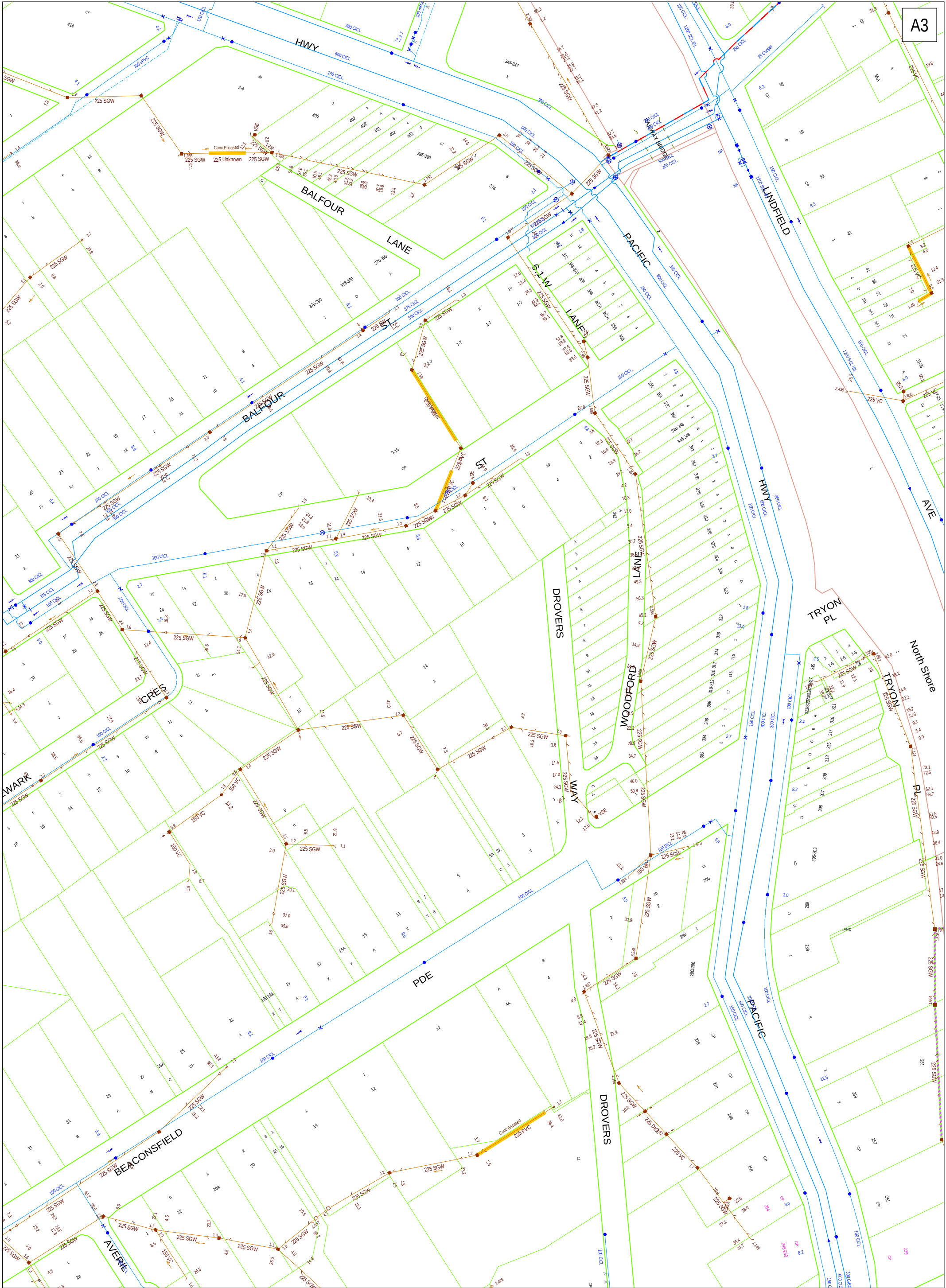
Manhole

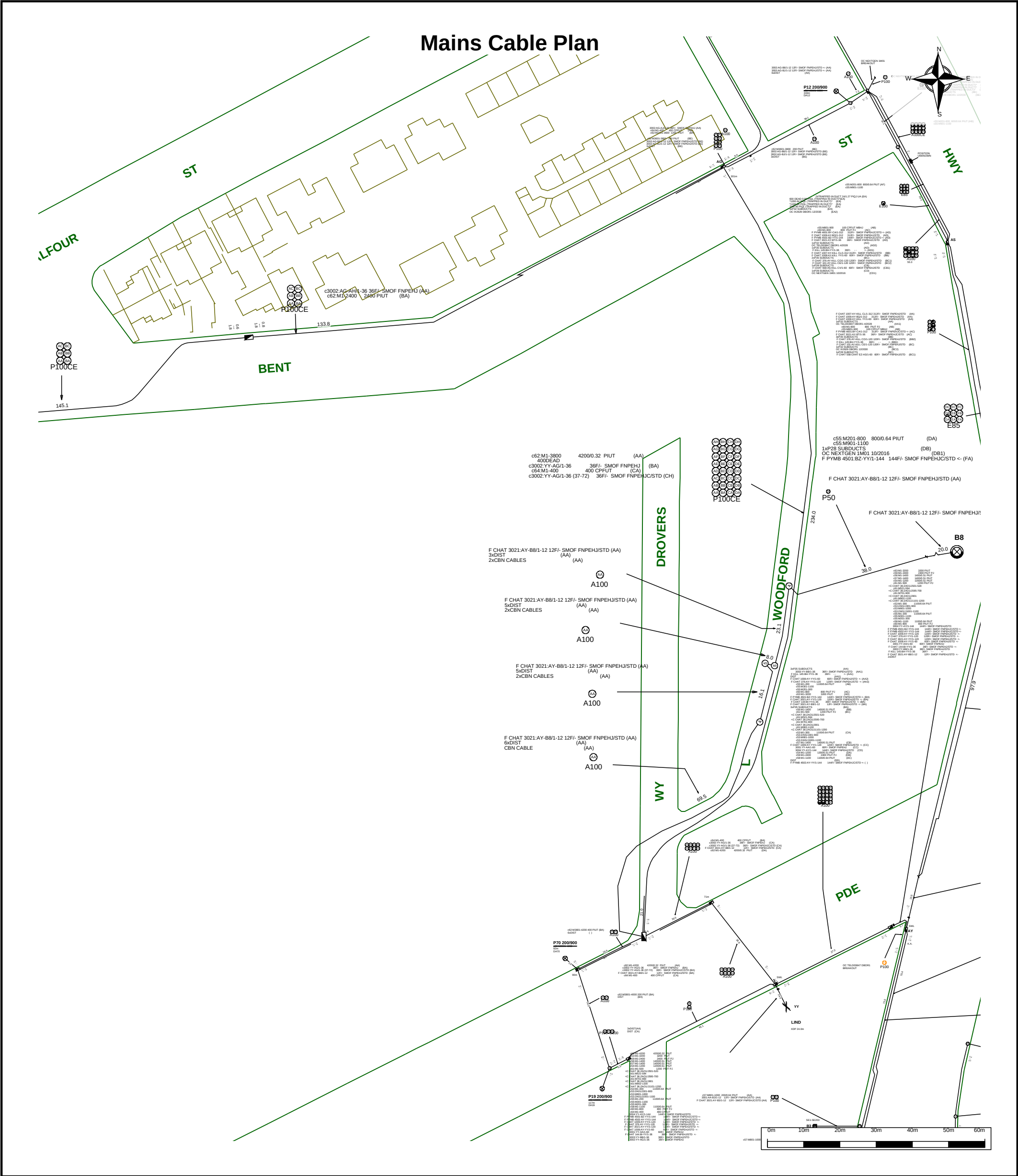
Duct



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Note: If the works fall in an area that is adjacent to PIPE Networks infrastructure, a pre-inspection is required prior to commencement of works. Contact PIPE Networks to arrange an inspection time. **NO WORKS TO COMMENCE PRIOR TO INSPECTION.**





	For all Telstra DBYD plan enquiries - email - Telstra.Plans@team.telstra.com For urgent onsite contact only - ph 1800 653 935 (bus hrs)	Sequence Number: 53142025
	TELSTRA CORPORATION LIMITED A.C.N. 051 775 556	CAUTION: Fibre optic and/ or major network present in plot area. Please read the Duty of Care and contact Telstra Plan Services should you require any assistance.
Generated On 26/05/2016 10:11:18		

WARNING - Due to the nature of Telstra underground plant and the age of some cables and records, it is impossible to ascertain the precise location of all Telstra plant from Telstra's plans. The accuracy and/or completeness of the information supplied can not be guaranteed as property boundaries, depths and other natural landscape features may change over time, and accordingly the plans are indicative only. Telstra does not warrant or hold out that its plans are accurate and accepts no responsibility for any inaccuracy shown on the plans.

It is your responsibility to locate Telstra's underground plant by careful hand pot-holing prior to any excavation in the vicinity and to exercise due care during that excavation.

Please read and understand the information supplied in the duty of care statement attached with the Telstra plans. TELSTRA WILL SEEK COMPENSATION FOR LOSS CAUSED BY DAMAGE TO ITS PLANT.

Telstra plans and information supplied are valid for 60 days from the date of issue. If this timeframe has elapsed, please reapply for plans.

Appendix VI – Supporting Documents

[Home](#) [Contaminated land](#) [Record of notices](#)

Search results

Your search for: Suburb: LINDFIELD

[Search Again](#) [Refine Search](#)

did not find any records in our database.

If a site does not appear on the record it may still be affected by contamination. For example:

- Contamination may be present but the site has not been regulated by the EPA under the Contaminated Land Management Act 1997 or the Environmentally Hazardous Chemicals Act 1985.
- The EPA may be regulating contamination at the site through a licence or notice under the Protection of the Environment Operations Act 1997 (POEO Act).
- Contamination at the site may be being managed under the [planning process](#).

More information about particular sites may be available from:

- The [POEO public register](#)
- The appropriate planning authority: for example, on a planning certificate issued by the local council under [section 149 of the Environmental Planning and Assessment Act](#).

See [What's in the record](#) and [What's not in the record](#).

Search TIP

To search for a specific site, search by LGA (local government area) and carefully review all sites listed.

... [more search tips](#)

Figure 5. Screen shot of the NSW Office of Environment and Heritage (OEH) 'Contaminated Land – Record of Notices' listed by the NSW EPA under the *Contaminated Land Management Act 1997* which identifies no notice relating to the Site (screen shot adapted from <https://www.epa.nsw.gov.au/prclmapp/searchregister.aspx>; accessed 27.05.16).

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Silverwater, NSW 2128

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site: www.ADenvirotech.com.au
e-mail info@ADenvirotech.com.au

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520 934 529 50



Our Ref: D12/181997
Your Ref: Yannick Hammond

WorkCover NSW
92-100 Donnison Street, Gosford, NSW 2250
Locked Bag 2906, Lisarow, NSW 2252
T 02 4321 5000 F 02 4325 4145
WorkCover Assistance Service 13 10 50
DX 731 Sydney workcover.nsw.gov.au

28 November 2012

Attention: Yannick Hammond
AD Envirotech Australia Pty Ltd
4/10-11 Millenium Circuit
Silverwater NSW 2128

Dear Ms Hammond,

RE SITE: Woodford Lane Lindfield NSW

I refer to your site search request received by WorkCover NSW on 27 November 2012 requesting information on licences to keep dangerous goods for the above site.

A search of the Stored Chemical Information Database (SCID) and the microfiche records held by WorkCover NSW has not located any records pertaining to the above mentioned premises.

If you have any further queries please contact the Dangerous Goods Licensing Team on (02) 4321 5500.

Yours Sincerely

Brent Jones
Senior Licensing Officer
Dangerous Goods Team

Phase II Detailed Site Investigation

Lindfield Community Hub, Lindfield NSW

Prepared for: Ku-ring-gai Council



ADE
CONSULTING
GROUP

Phase II Detailed Site Investigation

Lindfield Community Hub, Lindfield NSW

Prepared for:

Ku-ring-gai Council

Version	Details	Date
v1 final	Prepared by Kyle McClintock	19 th July 2016

Report No:

STC-155-10625 / DSI1 / v1 final

Date:

19th July 2016

Prepared by:

Kyle McClintock
B.Sc.Env.Sc
Environmental Consultant

Reviewed by:

Justin Eccles
M.Sc.Tech (Env. Sci.)
Environmental Consultant

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Envirotech Australia Pty Ltd.

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ABBREVIATIONS

ACM	Asbestos Containing Material
ADE	A.D. Envirotech Australia Pty Ltd
BGL	Below ground level
BR	Blind Replicate
BTEX	Benzene, Toluene, Ethyl-Benzene, Xylene
COC	Chain of Custody
DEC	Department of Environment and Conservation
DQI	Data Quality Indicators
DQO	Data Quality Objectives
DSI	Detailed Site Investigation
EILs	Ecological Investigation Levels
EPA	NSW Environmental Protection Agency
ESLs	Ecological Screening Levels
EUROFINS	Eurofins Environment Testing Australia Pty Ltd
GILs	Groundwater Investigation Levels
HILs	Health Investigation Levels
HSLs	Health Screening Levels
LPI	Land Property Information
LTO	Land Titles Office
NATA	National Association of Testing Authorities
NEPC	National Environmental Protection Council
NEPM	National Environmental Protection Measure
NSW EPA	New South Wales Environmental Protection Authority
OEH	Office of Environment and Heritage
OPPs	Organophosphorous Pesticides
OCPs	Organochlorine Pesticides
PAHs	Polycyclic Aromatic Hydrocarbons
PCBs	Polychlorinated Biphenyls
PSI	Preliminary Site Investigation
QA/QC	Quality Assurance/Quality Control
RPD	Relative Percent Difference
SCID	Stored Chemical Information Database
SWL	Standing Water Level
SH&EWMS	Safety Health and Environmental Works Method Statement
TPH	Total Petroleum Hydrocarbons
TRH	Total Recoverable Hydrocarbons
UCL	Upper Confidence Limit
VHCs	Volatile Halogenated Compounds

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EXECUTIVE SUMMARY

A.D. Envirotech Australia Pty Ltd (ADE) was commissioned by Ku-ring-gai Council to undertake a Phase II Detailed Site Investigation (DSI) to assess the potential for contamination at the proposed site of the Lindfield Community Hub (hereafter referred to as the 'Site'). The Site is located west of the Pacific Highway within Lindfield town centre and is bound by Bent Street to the north, Woodford Lane to the east, Beaconsfield Parade to the south and residential properties to the west.

The purpose of the investigation was to further assess the Site regarding potential contaminants of concern which were identified during the Phase I – Preliminary Site Investigation undertaken by the ADE (refer to ADE 'Report No. STC-155-10625, Phase I Preliminary Site Investigation (PSI) – Lindfield Community Hub, v1. final - dated 10th June 2016)- ADE PSI (2016). The investigation would include the characterisation of the soil and groundwater conditions throughout the Site, to define the lateral and vertical extent of contamination (if any) and to determine if the Site is suitable for the proposed future land use as the Lindfield Community Hub.

This project was undertaken in general accordance with the scope of works outlined in the ADE PSI (2016) and the NSW Office of Environment and Heritage (OEH) 2011 *Guidelines for Consultants Reporting on Contaminated Sites*.

ADE attended site on the 15th and 16th June 2016, in order to undertake soil sampling from twenty five (25) boreholes/test pits across the site for the following:

- Target the fill materials and determine the lateral and vertical extent (if any) of potential contaminants of concern; and
- One (1) borehole (BH10) was located to target groundwater. However, there was refusal after drilling to 4.0 m BGL with no groundwater was encountered.

A total of forty eight (48) discrete soil samples were collected from twenty five (25) boreholes/test pits located throughout the Site (excluding QA/QC samples). The full analytical program for each sample can be seen in section 7 of this report.

- Twenty five (25) boreholes/test pits were advanced across the Site in predetermined locations;
- Soil samples were generally collected at 0.3 m BGL, 1.0 m BGL and every 0.5 m thereafter to the target depth of investigation (Virgin Excavated Natural Material (VENM) and/or bedrock); and
- A representative amount of each sample was placed in a zip lock plastic bag and screened for Volatile Organic Compounds (VOC's) using a photo-ionisation detector (PID).

The selected samples were tested for a range of analytes including:

- Heavy Metals – As, Cd, Cr, Cu, Pb, Hg, Ni and Zn;
- Total Recoverable Hydrocarbons (TRHs);
- Benzene, Toluene, Ethyl-Benzene, Xylene (BTEX);
- Polycyclic Aromatic Hydrocarbons (PAHs);
- Organochlorine Pesticides (OCPs);
- Organophosphorous Pesticides (OPPs);
- Polychlorinated Biphenyls (PCBs);

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- Asbestos.

During the Site investigations, observations of the condition of the Site were noted, including:

- Asphalt hardstand was encountered at most of the sample locations and was approximately 0.05 m thick;
- Top soil/fill materials were identified throughout the Site, ranging from approximately 0.05 m – 1.1 m BGL;
- VENM was identified underlying the top soil and fill material from approximately 0.4 m – 1.1 m BGL;
- Asbestos containing materials (ACM) were not observed within any of the boreholes/test pits;
- Throughout the Site the maximum PID reading was 2.3 ppm;
- No hydrocarbon staining or malodorous odours were observed within any of the boreholes/test pits; and
- During the course of the investigation, no groundwater was encountered. As per the ADE PSI (2016) recommendations, a groundwater well was to be installed adjacent to the dry cleaning business with subsequent groundwater sampling undertaken. BH10 was advanced to 4.0 m BGL, no groundwater was encountered during the drilling of BH10, as such no groundwater monitoring well was installed.

Based on a review of the available desktop search data, Site observations during the DSI, results of analytical reports and the proposed future development of the Site that will include a new mixed use precinct with community buildings, boutique shops, cafes/restaurants and a below ground supermarket, ADE concludes that:

- The concentrations of chemical contamination detected within fill material and underlying VENM at the Site meet the adopted SAC with regards to HIL/HSLs, Management Limits and do not pose an unacceptable risk to human health;
- The concentrations of chemical contamination detected within overlying topsoil/fill material at the following sampling locations; BH02, BH08, BH10, BH17, BH18 and BH20 within the Site do not meet the adopted SAC, with regards to EIL/ESLs and pose an unacceptable risk to ecological receptors (refer to Appendix III – Sample Maps);
- No asbestos containing materials were observed or detected within fill materials and underlying VENM within any of the boreholes/test pits during the field works;
- Following a review of the results for soils within Site, ADE considers that the client does not have a Duty to Report Contamination to the NSW EPA regarding on-site contamination of soils;
- After consulting the 'Preferred Option 2' designs supplied to ADE by the client, it was observed that the basement depth of the proposed development would be approximately 15 m BGL. ADE considers that due to the depth of the proposed basement car park, groundwater may be encountered during the main civil works to be undertaken as part of the development of the Lindfield Community Hub; and
- At the time of this report a hazardous building material survey report was not available for the remaining low density residential properties within the northern section of the Site or the standalone

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single car garage within the northern portion of the southern section of the Site. It is recommended that prior to any demolition works; a hazardous building material survey is undertaken and consulted before all demolition works as per relevant codes of practice so as not to contaminate the Site.

Contamination Status of the Site

Based on the findings of the DSI, the concentrations of the potential contaminants within the soil samples collected were below the assessment criteria with regards to human health. However, several samples returned concentrations that exceed the ecological assessment criteria and have been highlighted as potential risks to ecological receptors. There also remain uncertainties as to the quality of the groundwater at Site, in particular along the eastern boundary adjacent to the dry cleaning business. Taking this into the consideration, the Site is not suitable for the proposed future land use in its current state.

ADE considers that the Site can be made suitable for the proposed developed, subject to further groundwater assessment and the development of a Remediation Action Plan (RAP) in order to limit risk to ecological receptors from the identified contamination present within the Site.

The following recommendations have been made:

- ADE recommends that a groundwater assessment is undertaken. This would involve the installation of a groundwater monitoring well along the eastern boundary adjacent to the dry cleaning business, southern portion of the adjacent to the electrical substation and subsequent sampling of the newly installed groundwater monitoring wells including sampling of the existing groundwater well on Site (Boreholes 6 – DP 2013 Report) if it can be found;
- ADE recommends that a Site specific RAP should be developed for the Site. The RAP will target contaminated soils at the following sample locations; BH02, BH08, BH10, BH17, BH18 and BH20 (refer to Appendix III – Sample Maps) which have demonstrated exceedances of the SACs with regards to EIL/ESLs;
- The RAP should also address the potential for further soil assessment, with the aim of reducing the hotspot area (refer to Appendix III – Sample Maps);
- The RAP may also extend to groundwater contamination depending on the conclusions of the groundwater assessment; and
- Prior to any demolition works, the hazardous materials building survey of the low density residential properties remaining in the northern section of the Site and the standalone single car garage within the northern portion of the southern section of the Site should be undertaken.

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1. INTRODUCTION

A.D. Envirotech Australia Pty Ltd (ADE) was commissioned by Ku-ring-gai Council to undertake a Phase II Detailed Site Investigation (DSI) to assess the potential for contamination at the proposed site of the Lindfield Community Hub (hereafter referred to as the 'Site'). The Site is located west of the Pacific Highway within Lindfield town centre and is bound by Bent Street to the north, Woodford Lane to the east, Beaconsfield Parade to the south and residential properties to the west.

The purpose of the investigation was to further assess the Site regarding potential contaminants of concern which were identified during the Phase I – Preliminary Site Investigation undertaken by the ADE (refer to ADE 'Report No. STC-155-10625, Phase I Preliminary Site Investigation (PSI) – Lindfield Community Hub, v1. final - dated 10th June 2016)- ADE PSI (2016). The investigation would include the characterisation of the soil and groundwater conditions throughout the Site, to define the lateral and vertical extent of contamination (if any) and to determine if the Site is suitable for the proposed future land use as the Lindfield Community Hub.

This project was undertaken in general accordance with the scope of works outlined in the ADE PSI (2016) and the NSW Office of Environment and Heritage (OEH) 2011 *Guidelines for Consultants Reporting on Contaminated Sites*.

1.1 Proposed Development

The proposed future development of the Site will include a new mixed use precinct with community buildings, boutique shops, cafes/restaurants and a below ground supermarket. The redevelopment will create new streets, residential apartments, a large central park, a library, child care centre and community centre with commuter parking (refer to Appendix IX – Design Plans).

1.2 Background

The Site is an irregular shaped parcel of land and is approximately 13,000 m². The Site is bound by Bent Street to the north and Beaconsfield Parade to the south, which are both connected by Woodford lane which is bound along the eastern boundary of the Site. As such, there are multiple access points to the Site via Woodford Lane (refer to Figure 1). The Site is comprised of the following Lots, legally identified as:

- Lot A DP 445535 (known as 1 Woodford Lane);
- Lot 9 DP 1090427 (known as 2 Bent St);
- Lot 10 DP 3498 (known as 4 Bent St);
- Lot 3 DP 667420 (known as 6 Bent St);
- Lot 1 DP 724823 (known as 8 Bent St)
- Lot 1 DP 980108 (known as 10 Bent St)
- Lot 5 DP 666521(known as 12 Bent St);
- Lot 1 DP 929131 (known as 1B Beaconsfield Parade);
- Lot 1-16 DP 1099330 (known as 19 Drovers Way); and
- The road reserves of Lot 41 DP 4388 (Drovers Way) and Woodford Lane.

At the time of the investigation, the Site was in operation/occupied. The Site was used predominantly as a commuter car park (approximately 50% of the Site) as well as park land/vegetation medians (approximately

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10% of the Site) and the remaining area comprising of low density residential plots (approximately 40% of the Site).

The findings of the ADE PSI (2016) determined that there are areas that may be impacted by potential contamination, based on the available Site information and observations noted during the Site inspection. Based on the data and evidence collected, the potential for contamination to be present within the Site was considered Low to Medium.

This Phase II DSI report should be read in conjunction with the following report:

- ADE Report No. STC-155-10625, Phase I Preliminary Site Investigation (PSI) – Lindfield Community Hub, v1. final - dated 10th June 2016)- ADE PSI (2016).

1.3 Objectives

The objectives of the investigation were to:

- Provide comprehensive information on the issues raised within the ADE PSI (2016) regarding identified Low-Medium potential contamination risks;
- Discuss the Site condition;
- Design a soil investigation program in accordance with the New South Wales Environmental Protection Authority (NSW EPA) *Sampling Design Guidelines* (1995);
- Assess and describe the source, type, extent and level of contamination (if present) by comparing soil/fill materials and groundwater data collected against site assessment criteria (SAC) outlined in the National Environment Protection (Assessment of Site Contamination) Measure 1999, 2013 Amendment (NEPM 2013);
- Determine the human health and environmental risk (if present) from soils and groundwater within the Site;
- Determine if the land is suitable for its proposed future use with regards to the Lindfield Community Hub; and
- Provide an assessment of Site contamination and recommendations for remediation and/or management (if required).

1.4 Scope of Work

The scope of work required to achieve the objectives of the investigation involved the following:

Phase One

- Completion of a Site specific Safety, Health & Environment Work Method Statement (SH&EWMS);
- Desktop review of all available information on the Site including: ADE PSI (2016) and 'Dial Before You Digs'; and
- Review of past and current activities on the Site.

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Phase Two

- Detailed Site inspection by an experienced environmental scientist;
- Completion of twenty five (25) boreholes and test pits using a trailer mounted drill rig with 100 mm solid flight auger;
- Field logging of soil profile and Site observations encountered at each borehole;
- Sampling of material from the soil surface to 4.0 m below ground level (BGL) or Virgin Excavated Natural Material (VENM)/bedrock whichever comes first, at any changes in soil stratigraphy or within any areas of apparent contamination;
- Field screening of collected samples for Volatile Organic Compounds (VOCs) using a Photoionisation Detector (PID); and
- Cold storage of all samples collected.

Phase Three

- Submission to a National Association of Testing Authorities (NATA) laboratory for analysis under chain of custody conditions;
- Laboratory analysis of selected soil samples for Total Recoverable Hydrocarbons (TRHs); Benzene, Toluene, Ethylbenzene, Xylene (BTEX); Polycyclic Aromatic Hydrocarbons (PAHs), Organochlorine Pesticides (OCPs), Organophosphorus Pesticides (OPPs), Heavy Metals (As, Cd, Cr, Cu, Hg, Pb, Ni, Zn), Polychlorinated Biphenyls (PCBs), Volatile Halogenated Compounds (VHCs) and Asbestos; and
- Preparation of a DSI report outlining the investigation methodology, interpretation of the Site data (results), recommendations and conclusions.

1.5 Legislative, Regulation, Guideline and Code of Practice Requirements

The legislative framework for the DSI is based on the guidelines that have been issued by the NSW EPA under the following Acts/Policies:

- Contaminated Land Management Act 1997 (CLM Act); and
- Protection of the Environment Operations Act 1997 (POEO Act).

The relevant guidelines base on the aforementioned are as follows:

- Australian Standard AS 4482.1 Guide to the sampling and investigation of potentially contaminated soil. Part 1: Non-volatile and semi-volatile compound, 2005;
- Australian Standard AS 4482.2 Guide to the sampling and investigation of potentially contaminated soil. Part 2: Volatile substances;
- Department of Environment and Conservation (DEC) Guidelines for the NSW Site Auditor Scheme, NSW, Second Edition (DEC 2006);
- Guidelines on the Duty to Report Contamination (2015) under the Contaminated Land Management Act 1997;
- National Environmental Protection Council (NEPC) National Environmental Protection (Assessment of Site Contamination) Measure 1999, 2013 Amendment (NEPM 2013);
- NSW Office of Environment and Heritage (OEH) Guidelines for Consultants Reporting on Contaminated Sites (OEH 2011);

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- NSW EPA Sampling Design Guidelines, (NSW EPA 1995); and
- NSW EPA Waste Classification Guidelines Part 1: Classifying Waste (NSW EPA 2014).

1.6 Whole Report

No one section or part of a section, of this report should be taken as giving an overall idea of this report. Each section must be read in conjunction with the whole of this report, including its appendices and attachments.

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2. SITE IDENTIFICATION AND PHYSICAL SETTING

2.1. Site Location

The Site is located west of the Pacific Highway within Lindfield town centre and is bound by Bent Street to the north, Woodford Lane to the east, Beaconsfield Parade to the south and residential properties to the west as is shown in **Figure 1** below.



Figure 1. Aerial photograph of the Site (photograph from NearMaps; accessed on 27.05.2016).

Bearings provided in this report are approximate only. For ease of representing locations in the report, the site is considered to be off Woodford Lane, having a nominal north-south direction assumed. All references to points of the compass within the report are based on these approximate bearings.

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2.2. Site Identification and Description

Site identification information is summarised in **Table 1** below.

Table 1 - Summary of Site Identification Details

Site Details	
Site Owner:	Ku-ring-gai Council
Site Address:	Woodford Lane, Lindfield NSW
Title Identification:	Lot A DP 445535, Lot 9 DP 1090427, Lot 10 DP 3498, Lot 3 DP 667420, Lot 1 DP 724823, Lot 1 DP 980108, Lot 5 DP 666521, Lot 1 DP 929131, Lot 1-16 DP 1099330 and Lot 41 DP 4388.
Site/Investigation Area:	Approximately 13,000 m ²
Current Site Use:	Commuter car park and low density residential properties.
Local Government Authority:	Ku-ring-gai Council
Land Use Zoning:	R4 High Density Residential; RE1 Public Recreation; SP2 Infrastructure; and B2 Local Centre.

2.3. Current Land Use

At the time of writing this report, the Site was used predominantly as a commuter car park (approximately 50% of the Site) as well as park land/vegetation medians (approximately 10% of the Site) and the remaining area comprising of low density residential plots (approximately 40% of the Site).

2.4. Surrounding Land Use

At the time of investigative works (refer to Figure 1), the primary surrounding land-uses were observed as follows:

- **Northern boundary:** North of the Site is Bent Street, which is bound along the entire northern boundary, beyond this is Lindfield Manor retirement village and low density residential properties;
- **Eastern boundary:** East of the Site is Woodford Lane, which is bound along the entire western boundary, beyond this are commercial premises (including a dry cleaning business);
- **Southern boundary:** South of the Site is low density residential properties and an Electrical Substation (No. 591); and
- **Western boundary:** West of the Site is low density residential properties.

2.5. Site Observations

The Site is an irregular shape, is approximately 13,000 m² and at the time of the Site inspection was still in active operation/occupied with the exception of three (3) demolished residential properties within the northern section of the Site. The Site is bound by Bent Street to the north and Beaconsfield Parade to the south, which are both connected by Woodford lane which is bound along the eastern boundary of the Site. As such, there are multiple access points to the Site via Woodford Lane.

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For the purpose of this investigation the Site was divided into two distinct sections (refer to **Figure 2**):

1. The first section is the northern section, which is comprised of low density residential properties (both demolished and intact); and
2. The second section is the southern section, which is comprised of two (2) sealed asphalt covered at-grade commuter car parks and park land/vegetation medians.

Northern Section

At the time of the investigation, the northern section was occupied by three (3) low density residential properties, which appeared to be occupied. Access to the internal areas of the residential properties was not granted at the time of investigation. Two (2) of the residential buildings appears to have been established circa the 1940/1960's, comprised of both brick and wooden formations. The remaining property appears to have been built more recently and is comprised of brick formation and tiled roofing. The occupied residential properties were secured by brick walls and/or wooden fences.

To the west of the northern section were three (3) vacant plots which appear to have been recently demolished and formed into one (1) plot. A combination of a wire metal fence, bricked walls and wooden fences (constituting neighbouring property boundaries) were located around the entire area of the demolished plots. A visual assessment was carried out on the area; exposed soil was noted with minor erosional features observed. Fragments of building debris were also observed i.e. broken red brick and concrete. Small patches of brown discolouring within the grasses was noted, however the remaining grasses and shrubs appeared in healthy condition with no evidence of phytotoxicity.

Southern Section

The southern section comprised of two (2) sealed asphalt covered car parks and park land/vegetation medians which consisted of grassed areas / exposed soils with mature trees. The vegetation medians were located along Woodford Lane, as a buffer between the two (2) car parks and randomly populated throughout the car parks. A park land area was located within the northern portion of the section and again consisted of grasses and mature trees. Most of the vegetated medians displayed signs of general wear and tear with some brown discolouration of grass or complete exposure of underlying soils. The discolouration and exposure of soils is attributed to Site traffic both pedestrian/vehicular. There is also potential of phytotoxicity as a result of the use of pesticides and insecticides.

The surface of the two (2) car parks was in poor condition with many cracks, fractures and pot holes observed. There was also evidence of hydrocarbon staining of the car park surface, most likely as a result of leaking motor oil from parked vehicles. Stormwater drains were located on the southern boundary of the car parks which are expected to flow into the local stormwater/sewer system. A single covered car parking garage was observed within the northern portion of the section. The age of build could not be ascertained; however it was observed that the garage was comprised of a brick formation with metal sheeting and wooden frame roof. Dark patches were observed on the floor of the garage, potentially hydrocarbon staining. It should be noted that at the time of the Site inspection the car parks were in operation which limited visual access of some of the occupied parking bays.

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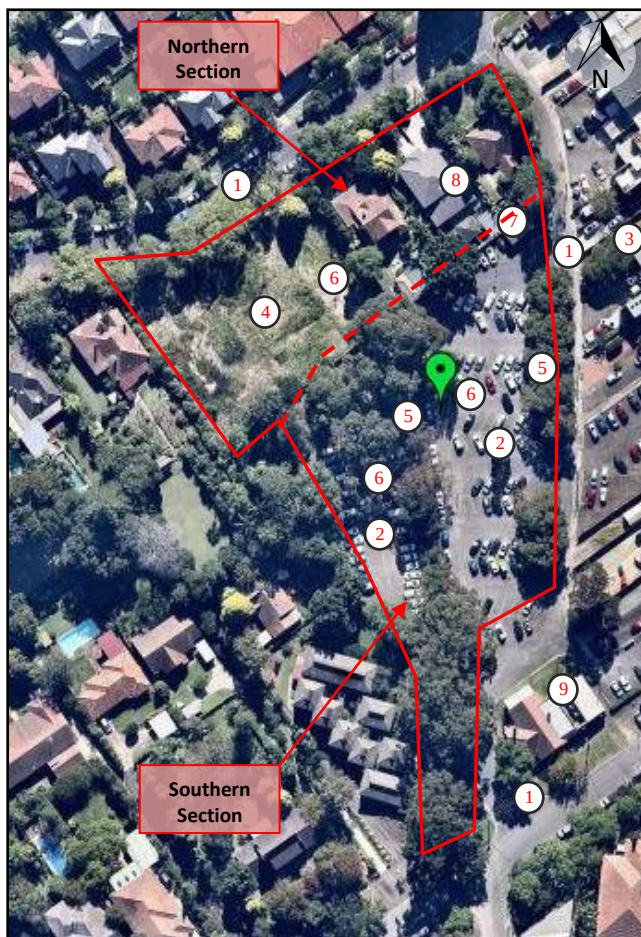
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Off Site Observations

A dry cleaning business is located east of the Site on 344 Pacific Highway, Lindfield NSW. The dry cleaning business is located hydraulically upgradient from the Site. An electrical substation (Sydney County Council Electric Substation No. 591) was located south of the Site at 1/1A Beaconsfield Parade, Lindfield NSW. It appears that the substation was still in operation.

Upon reviewing the previous reports for the Site, a number of potential activities/points of interest were observed during the Site inspection; refer to **Figure 2** which shows a list of the observed items, notably:



1. Medium to high volumes of vehicular traffic using the two (2) car parks and adjacent through roads/lanes;
2. Multiple hydrocarbon staining observed throughout the surface of both car parks;
3. Dry cleaning business (off site) was noted as being located upgradient of the Site;
4. Three (3) low density residential properties had been demolished. Access was restricted. Broken fragments of building debris was observed strewn along the surface of the properties;
5. Vegetation medians of various sizes and shapes were observed throughout the car park. Some brown discolouration was noted, potential phytotoxicity related to the use of pesticides/insecticides;
6. Potential use of fill material throughout the Site;
7. Single covered car park was observed within the northern portion of the Site. Hydrocarbon staining was observed on the surface;
8. Three (3) occupied low density residential properties; and
9. Electrical Substation (No. 591) was noted as being located upgradient of the Site.

Figure 2. Aerial photograph of the Site dated 5th May 2016 with Site observation markers (photograph from maps.au.nearmap.com; accessed on 27.05.2016).

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2.6. Site Topography and Hydrology

As per ADE PSI (2016):

“The Site slopes gently in a westerly to west south westerly direction from an elevation of approximately 96 m above Australian Height Datum (m AHD) in the east of the Site to an elevation of approximately 88 m AHD in the west of the Site. Little Blue Gum Creek is located approximately 500 m to the south west of the Site. The Little Blue Gum Creek is a fresh water ecosystem and discharges into the Lane Cove River, which is located approximately 2.1 km south of the Site. Surface water flow and groundwater are expected to follow the slope of the land and flow west towards the Little Blue Gum Creek.”

2.7. Local Geology and Soil

As per ADE PSI (2016):

“The soil in the investigation area is related to the site geology and is classified in the *Soil Landscapes of the Sydney 1:100 000 Sheet* (Chapman and Murphy, 1989) as belonging to the Glenorie Soil Landscape.

These soils are shallow to moderately deep (<100cm) and colours vary from red, brown and yellow. The soils arise from the Wianamatta Group which consists of Ashfield and Bringelly shales. These groups are characterised by Laminite, dark grey siltstone, shale, calcareous claystone and coal. The Wianamatta group overlies Hawkesbury Sandstone but still belongs in the Triassic period aged between 205-230 million years old.

Typical soils found in this landscape include:

- Friable dark brown loam with a porous moderate structure. Surface is friable but may become hard setting when compacted and dry. pH ranges from moderately acidic to slightly acidic 5.0 – 6.0. Shale fragments occur and charcoal is occasionally present whilst roots are common.
- Hard setting brown clay loam with an earthy porous fabric. Colour is commonly brown but may range between dull yellowish brown and reddish brown. pH ranges between strongly acid and moderately acid 4.0 – 6.0. Roots, shale rock and charcoal fragments are all present.
- Whole coloured reddish brown strongly structured clay. Texture is a medium clay but may range from silty to heavy clay. Colours can range from bright reddish brown to dull yellowish brown. The pH ranges from strongly acid to moderately acid 4.0 – 5.5. Shale rock fragments are common, roots are rare and charcoal fragments are absent.
- Mottled grey plastic clay which occurs as a deep sub soil. Colour is usually a pale grey but ranges from light reddish grey to brownish grey. Yellow and red mottles are common. This material is moderately sticky and very plastic when moist. pH ranges from strongly acid to moderately acid 4.0 – 5.0. Shale rock fragments and gravels are common. Roots are rare and charcoal is absent.
- Brownish-grey plastic silty clay which is often saturated occurring as a subsoil. Colour is dark brown often becoming brownish grey with dark brown mottles at depth. This material is moderately sticky and very plastic when moist. The pH ranges from moderately acid to slightly acid 5.0 – 6.5. Rock and charcoal fragments are absent and roots are rare.

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Characteristics of this soil are generally low to moderate fertility with high available water capacity and moderate amounts of organic matter and nutrient status. All soil materials are acidic and are potentially aluminium toxic.

The topography of the area is described in Chapman and Murphy (1989) as undulating to rolling low hills on Wianamatta Group shale. Local relief varies from 50-120m. Slope gradients range from 5-20%. Convex narrow ridges and hillcrests grade into moderately inclined side slopes with narrow concave drainage lines. Moderately inclined slopes of 10-15% are the dominant landform elements."

2.8. Hydrogeology

As per ADE PSI (2016):

"It was beyond the scope of work to study the groundwater flow direction. However, as previously mentioned in the above section, the local groundwater flow is likely to have a south westerly flow towards Little Blue Gum Creek.

A search for registered groundwater wells within a 500 m radius of the Site was undertaken by ADE via the NSW Office of Water (Allwaterdata.water.nsw.gov.au). No registered groundwater wells were identified within 500 m of the Site."

2.9. Acid Sulphate Soils

As per ADE PSI (2016):

"A review of the Acid Sulphate Soil Risk Maps demonstrated that the site is within an area of "Low Probability" of acid sulphate soils. No further investigation is deemed necessary with regards to acid sulphate soils."

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3. SUMMARY OF PREVIOUS INVESTIGATION REPORTS

The Site has been subject to numerous environmental and geotechnical investigations undertaken by ADE and DP from 2012 to present.

The following reports have been placed in chronological order and demonstrate the initial preliminary environmental and geotechnical assessments through to present day environmental assessments of the Site. ADE was able to review and summarise the following environmental and geotechnical investigations:

ADE Report No. 5574 / PSI / v1.final, Phase I Preliminary Site Investigation (PSI) – Woodford Lane, Lindfield, v1. final - dated 28th November 2012- ADE PSI (2012)

ADE was engaged by Transport for NSW to undertake a Phase I PSI to assess the potential for contamination for the southern section of the Site comprising of the two (2) car park areas (refer to Figure 3). ADE was advised that the proposed development involved the conversion of the Site into a multi storey car park and community facilities.



Figure 3. Aerial photograph of the Site as per ADE PSI (2012).

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ADE concluded the following:

“Based on the data and evidence collected in the course of the site inspection and site history review, the findings of the Phase I PSI (2012) are as follows:

- The site has been predominantly used as a car park since the 1950s and 1960s. Prior to which residential housing and commercial buildings occupied the site.
- The site appeared clean and well maintained at the time of inspection, however building material was observed to be imbedded in the surface of the vegetation strips along the eastern boundary of the site.
- No intrusive works were undertaken to assess the subsurface environment, however fill materials are likely due to previous occupation of residential and commercial buildings on the site.
- The potential contamination types that were identified for the site include: Asbestos Containing Materials, Heavy metals, PAHs, TPHs, OCPs and OPPs.
- A Phase II Detailed Site Contamination Investigation is warranted.
- Should the Phase II DSI reveal the site is not contaminated, the site can be deemed suitable for the proposed development.”

A Phase II DSI was recommended “to determine the type, degree and extent of contamination and possible human health and/or environmental risk.”

Douglas Partners Project No. 73404.00, Report on Preliminary Phase 2 Site Investigation with Limited Sampling for a Multi-Storey Commuter Car Park - Woodford Lane, Lindfield- dated May 2013 – DP (2013)

The Phase II DSI with limited sampling was undertaken on the basis of recommendations contained within the ADE PSI (2012). The overall objectives of the DSI were to assess the suitability of the Site for the proposed land use as multi storey car park and community facilities.

The scope of works involved the drilling of five (5) boreholes (Boreholes 6 – 10) to 8 m BGL across the Site (refer to Figure 4 below), conversion of one borehole to a groundwater monitoring well and collection of soil and groundwater samples for contamination analysis. Chemical testing for soils comprised of Heavy Metals, TRH, PAH, OCP/OPP, PCB, Phenols, Cyanide and Asbestos. Chemical testing for groundwater comprised of Heavy Metals, TRH, PAH, OCP/OPP, Phenols, VOC and Hardness.

Field Observations of soil and groundwater were as follows:

Soil

- **Pavement Materials and Filling** – gravelly asphaltic concrete, base material and sandy and / or clay filling to depths of between 0.2 m and 1.5 m; underlain by,
- **Clay** – stiff to hard clay, to depths of 2.0 m to 4.0 m, underlain by,

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- **Bedrock** – extremely low to low strength shale at depths ranging from 2.0 m to 4.0 m depth and increasing in strength with depth. Boreholes BH6, BH8 and BH10 encountered medium and high strength sandstone at depths of between 3.7 m and 7.0 m bgl.

Groundwater

“No free groundwater was observed whilst augering at any borehole location during the current investigation.

The groundwater level in BH6 was recorded on 8 April 2013 when the well was developed and then again on 10 April 2013 immediately prior to sampling. No free product or separated phase liquids were detected prior to development or sampling.”

The depth to groundwater at Borehole 6 prior to development was 4.32 m BGL.

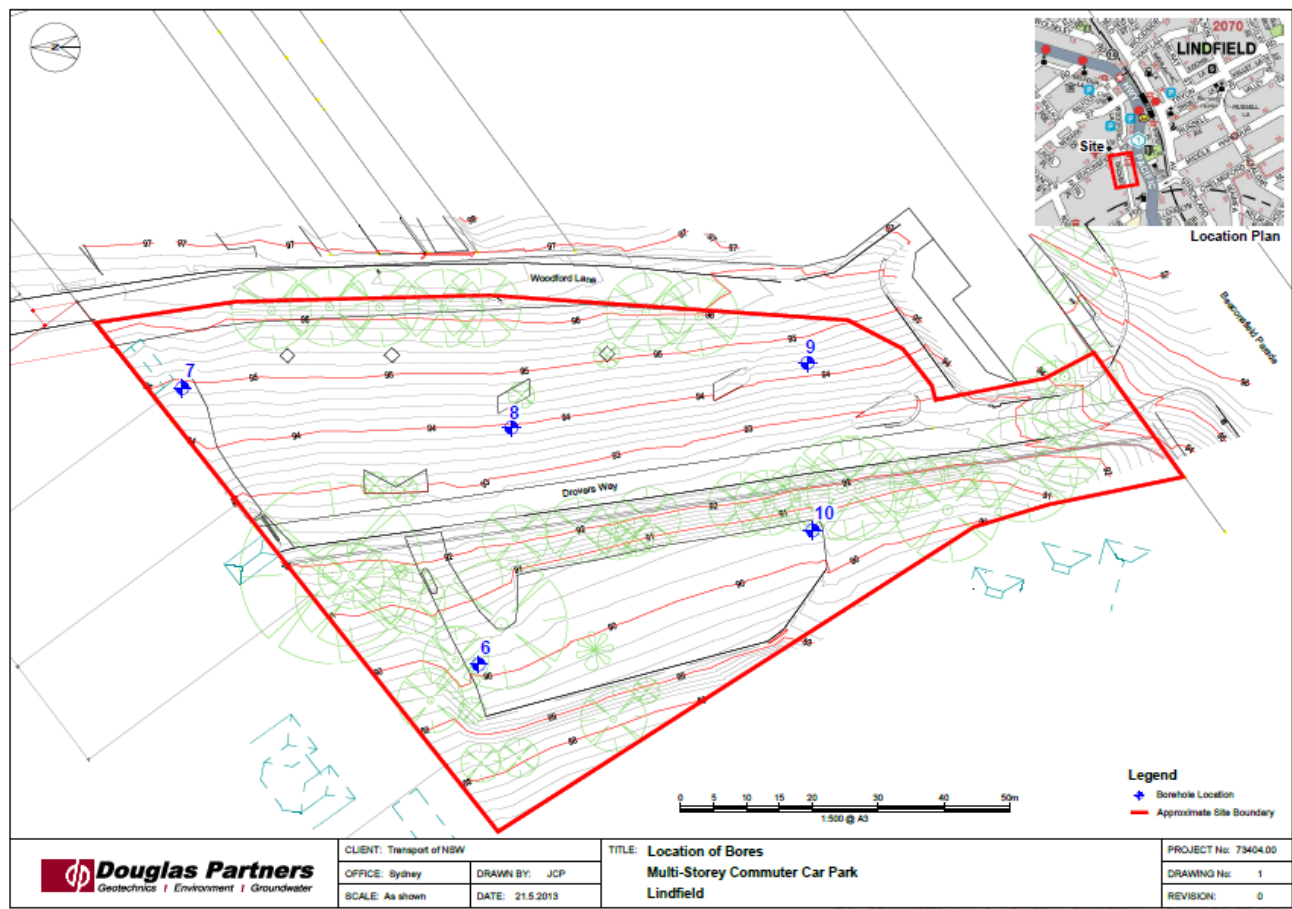


Figure 4. Aerial photograph of the Borehole locations as per DP (2013a).

The DP (2013) report concluded the following:

“The findings of the investigation suggest that the site is suitable for its continued and proposed use as a car park.

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Based on the findings of the investigation a remediation action plan (RAP) will not be required for the proposed development. However, a site construction management plan (CMP) will be required to classify and manage the appropriate disposal / re-use of soils arising from the excavations.

Should dewatering of a basement excavation be required then a Groundwater Management Plan will be required to identify discharge consents required and manage the storage, discharge and / or disposal of groundwater.”

ADE Report No. STC-155-10625, Phase I Preliminary Site Investigation (PSI) – Lindfield Community Hub, v1. final - dated 10th June 2016)- ADE PSI (2016)

ADE completed a Preliminary Site Investigation on the current Site on the 3rd June 2016. The primary objective of the PSI was to investigate the land use history of the Site and surrounding areas in order to identify existing or past practices that have the potential to cause soil or groundwater contamination at the Site and identify areas of the Site that require further investigation or management with respect to the proposed future land use as the Lindfield Community Hub.

Based on a review of surrounding land uses and activities at the Site, potential sensitive human health and environmental receptors that may be affected by any potential soil or groundwater contamination at the Site comprise the following:

- Future construction / utility workers involved in the excavation and construction of the Lindfield Community Hub;
- Neighbouring residents during the excavation and construction of the future development at the Site;
- Future residents and or users of the Site; and
- Local groundwater and Little Blue Gum Creek.

A range of potential contamination sources were initially identified in the Site characterisation and Site history. The following were considered to be potential sources of contamination and considered for further assessment:

- Vehicle emissions associated with surrounding Bent St, Woodford Lane and Pacific Hwy;
- Vehicle emissions and leaking of motor oil on asphalt car park surface;
- Downward migration of contaminants i.e. VHCs associated with dry cleaning services;
- Pesticides and Insecticides use on vegetation medians;
- Downward migration of contaminants i.e. PCBs associated with a electrical substation and
- Use of uncontrolled fill beneath the car park.

Based on the information gathered as part of the PSI, the following recommendations were presented:

- An intrusive subsurface investigation throughout the Site to target the fill materials and determine the lateral and vertical extent (if any) of potential contaminants of concern (i.e. Heavy metals, TRHs, PAHs, BTEX, PCBs, OCPs/OPPs and Asbestos), as identified within the Conceptual Site Model (refer to section 5.4);

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- The Phase II DSI should target soils throughout the Site in a systematic/judgemental manner so as to target soils underlying; the asphalt car parks, demolished/current low density residential properties, within the vegetated/grassed median areas and single car park garage;
- Due to the presence of the dry cleaning business hydraulically upgradient of the Site, assessment of soils/groundwater for VCHs should be undertaken. Given the volatile nature of VCHs, soil assessment alone is not suitable to characterise the presence of the contaminant. As such, a groundwater well should be installed adjacent to the dry cleaning business with subsequent groundwater sampling undertaken; and
- Prior to the demolition, ADE recommends a Hazardous Materials Survey be undertaken within the Site, on all remaining onsite structures and fabric (if not already undertaken).

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4. DATA QUALITY OBJECTIVES

The Phase II Detailed Site Contamination Investigation works were designed using Data Quality Objectives (DQO) as defined by the US EPA and the NSW EPA in the *Guidelines for the NSW DEC Site Auditor Scheme* (2006, 2nd Edition), and AS 4482.1 (2005). The DQO process consists of a seven step planning approach to facilitate the development of qualitative and quantitative statements that specify the quality of the data required to support decision making within the scope of the investigation. This process utilises systematic planning and statistical hypothesis testing to differentiate between two or more clearly defined alternatives.

4.1. Statement of Problem

Objective	Provide advice on the nature and extent of contamination (if any) at the Site and determine the potential risk posed to human health and the environment. Determine whether the Site is suitable for the proposed development.
Contamination Issue	Potential contamination at the Site is associated with the historical and current use of the Site.
Project Team	Ku-ring-gai Council: Rathna Rana ADE Managing Director: Ross Nefodov ADE Project Manager: Kyle McClintock ADE Environmental Scientist: Kyle McClintock and Matthew Toole
Conceptual Model	The Site Conceptual Contamination Model is included in Section 5 of this report.
Resources & Project Timeframes	The ADE project team is listed above. The fieldworks and reporting components of the Phase II Detailed Site Investigation were completed on the 15 th and 16 th June 2016.
Community Concerns	The key community groups include: • Residents in neighbouring areas; • Local businesses and services; and • Utilities providers.
Regulatory Authorities & Local Government	NSW EPA and Ku-ring-gai Council

4.2. Identification of Decision

Principle Study Question	• Are contaminant concentrations of the contaminants of potential concern (COPC) (identified in Section 5 of this report) on the Site in excess of the NSW EPA - endorsed acceptance criteria? • Are contaminant concentrations of the COPC's in excess of the relevant Tier 1 site assessment criteria as outlined in <i>NEPM Schedule B(1) Guideline on the Investigation Levels for Soil and Groundwater (1999), 2013 Amendment</i>? • Have the investigative works been undertaken in accordance with the <i>NSW Office of Environment and Heritage (OEH) Guidelines for Consultants Reporting on Contaminated Sites (OEH 2011)</i> and <i>NSW EPA Sampling Design Guidelines (1995)</i>?
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Action Resolutions	Two alternative actions could result from the resolution of the principle study question: • If the concentrations of any contaminant on the Site exceeds the adopted acceptance criteria, the action may be to remove/remediate/manage the contaminated soil or conduct further investigations (Tier 2 Assessment); and • If the concentrations of any contaminants on the Site do not exceed the acceptance criteria, no action will be taken.
Decision Statement	Define whether or not the 95% Upper Confidence Limit (95% UCL) of the arithmetic average concentrations of the COPC (identified in Section 5 of this report) on the Site exceed the adopted acceptance criteria and require remediation. It is assumed that the Site would be suitable for the proposed use if the soil and groundwater contaminant concentrations meet the adopted guideline values.

4.3. Identification of Inputs to Decision

The main parameter inputs that were required to resolve the decision statement for the investigation were identified to be:

Soil Condition	• Use of field investigation techniques to identify previously undocumented areas of contamination within the Site (i.e. bore holing); • Visual inspection of soil conditions and indicators of soil contamination (i.e. vegetation); and • Collection and analysis of representative soil samples from borehole locations.
Aesthetic Condition	Aesthetic impacts within soil resulting from the concentrations of contaminants (i.e. odour, discolouration, stained materials).
Contaminant Extent	Identification of contaminant types and sources, distribution within the site and the surrounding areas (if applicable).
Toxicity	The toxicity of the contaminants of concern and their respective environmental persistence.
Receptors	Identification of potential receptors (both on and offsite).
Exposure Pathways	The assessment of exposure pathways including conceptual fate and transport modelling of potential contaminants.
Site Criteria	NSW EPA -endorsed acceptance criteria as outlined in Section 8.

4.4. Definition of Study Boundaries

A detailed description of the spatial and temporal boundaries of the problem, characteristics that define the population of interest and any practical considerations for the study:

Geographical Limit	The spatial boundary of the Site is indicated in Figure 1 that is Lot A DP 445535, Lot 9 DP 1090427, Lot 10 DP 3498, Lot 3 DP 667420, Lot 1 DP 724823, Lot 1 DP 980108, Lot 5 DP 666521, Lot 1 DP 929131, Lot 1-16 DP 1099330 and Lot 41 DP 4388 at
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	Lindfield Community Hub, Lindfield NSW.
Investigation Limit	- The limit of the investigation extent was defined by the number of sampling locations. A total of twenty five (25) boreholes were undertaken across the Site with a judgemental/systematic sampling method. - The target for investigation was fill material throughout the Site i.e. from soil surface to a depth of VENM and/or bedrock (whichever comes first). One borehole was extended to 4 m BGL in order to assess groundwater, however the borehole was refused at 4 m BGL due to the shale bedrock (refer to Appendix IV – Boreholes Logs And Soil Stratigraphy) - Soil sampling/testing was undertaken as outlined in the scope of work.
Constraints	- Accessibility; - Services; - Time; and - Costs.
Receptors of Concern	The potential receptors of concern are outlined in Section 5 of this report.

4.5. Development of Decision Rule

Definition of the statistical parameters, relative action levels and specification of the acceptance criteria for QA/QC validation results:

Statistical Parameters	ADE concluded that the 95% UCL of the arithmetic average concentrations of contaminants would be the most appropriate statistical parameter.																
Relative Action Levels	The relative action levels for the decision were the NEPM (2013) Amendment. If the maximum concentrations of the analytes tested are above their acceptance criteria, then the soil will be considered potentially contaminated warranting further investigations and/or management and may be recommended to be disposed of at a NSW EPA approved landfill facility. Alternatively if the 95% UCL of the arithmetic average concentrations of the analytes tested are below their acceptance criteria, then no action will be taken.																
Acceptance Criteria for QA/QC	The assigned criteria for QA/QC samples to ensure the validity of results is outlined below: <table> <tr> <td>• Laboratory duplicate samples</td><td>95%</td></tr> <tr> <td>• Laboratory blank samples</td><td>100%</td></tr> <tr> <td>• Laboratory spike/surrogate recoveries</td><td>95%</td></tr> <tr> <td>• Laboratory control (split) samples</td><td>75%</td></tr> <tr> <td>• Blind replicate samples</td><td>75%</td></tr> <tr> <td>• Rinsate samples</td><td>75%</td></tr> <tr> <td>• Trip blank samples</td><td>95%</td></tr> <tr> <td>• Spike BTEX samples</td><td>75%</td></tr> </table>	• Laboratory duplicate samples	95%	• Laboratory blank samples	100%	• Laboratory spike/surrogate recoveries	95%	• Laboratory control (split) samples	75%	• Blind replicate samples	75%	• Rinsate samples	75%	• Trip blank samples	95%	• Spike BTEX samples	75%
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Subsequent to an overall completeness of 95%, the data collected through the course of the investigation will be considered valid and acceptable.

4.6. Specification of Tolerable Limits on Decision Errors

Defines how the quality of the data collected by the Phase II Detailed Site Investigation is to be assessed. These criteria are summarised below:

Documentation & Data Completeness	• Site conditions properly described; • Sampling locations properly described and located; • Completion of field records, chain of custody documentation, laboratory test certificates from NATA-registered laboratories; • Samples are collected from all areas of potential environmental concern within the subject Site; • Samples are tested for a selection of potential contaminants of concern; and • A minimum of 95% completeness for the overall site investigation.
Data Comparability	• Use of appropriate techniques for the sampling, storage and transportation of samples; • Implementation of NATA certified laboratory using analytical procedures as outlined in NEPM (2013) Amendment; and • Use of secondary NATA certified laboratory for split samples.
Data Representativeness	• Collection of representative samples from each sampling location; • Collection of representative samples from across the Site; and • Use of appropriate techniques for sampling, storage and transportation of samples.
Precision for Sampling and Analysis	• Use of appropriately trained and qualified field personnel; • Use of appropriate laboratory quality analysis assessment (i.e. blind replicates, split samples); • Relative Percent Difference's (RPD's) to be less than 30% for inorganic and 50% for organic analytes; • Acceptable outputs of trip blank and spike samples; and • Acceptable quality of rinsate sample results.
Accuracy for Sampling and Analysis	• Satisfy laboratory QC criteria of 95%; • Trip blanks and rinsate sample results returned with no contamination; • All laboratory duplicate samples within acceptable ranges; and • All control results within acceptable ranges.
Types of Decision Errors	The planning team determined that the two decision errors were: i) Deciding that soil and groundwater on Site is contaminated when it truly is not; and ii) Deciding that soil and groundwater on Site is not contaminated when it truly is. The true state of nature for decision error (i) is that soil is not contaminated. The true state of nature for decision error (ii) is that soil is contaminated.

4.7. Data Collection Design

The organisation of the data collection and analysis design, for optimising the generation of data to satisfy the DQOs and the objective of the investigation has been achieved via the following:

Pre-approved Work Plan	The sampling, analysis and quality plan for the investigation at the Site has been developed to assess the concentrations of contaminants present in fill material at the Site through the implementation of the components outlined within AS 4482.1 (2005) and AS/NZS 5667.1 (1998). ~1.1 m BGL was identified as the maximum depth to VENM and therefore was chosen as the vertical extent of investigation. It should be noted that the investigation was extended to 4 m BGL at BH10 in order to assess groundwater. However, the borehole was refused at 4 m BGL before groundwater was encountered.
Compliance with EPA Guidelines	• Use of appropriate techniques for the sampling, storage and transportation of samples; • Implementation of NATA certified laboratory using analytical procedures as outlined in NEPM 2013 Amendment; and • Use of secondary NATA certified laboratory for split samples.

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5. SITE INVESTIGATION DESIGN AND METHODOLOGY

The following outlines the fieldwork and laboratory testing undertaken for the Site investigation. It will also identify the potential contamination types and receptors for the Site.

5.1. Potential Contamination Types

Table 2 below provides details of potential contamination types that were identified during the investigation. These Contaminants of Potential Concern (COPC) were noted for each have the potential to have migrated to or be found on the Site based on the current Site use and Site history.

For the purposes of this PSI, the following qualitative risk assessment has been applied:

- Low Risk – the activities and related COPC are likely to pose no or a low potential human health / environmental impact. Any impact is likely localised to a specific area of the Site;
- Medium Risk – the activities and related COPC are likely to pose potential for moderate human health / environmental impact. Any impact is likely localised to a specific area of the Site; and
- High Risk – the activities and related COPC could pose a significant human health / environmental impact. There is potential for impacts of the immediate local area of the Site or off-site migration impacting surrounding human and/or environmental receptors.

Table 2 - Potential Sources, Locations and Types of Contaminants.

Potential Source of contamination	Location	Migration pathway	Potential Risk	Contaminants of Potential Concern
Surrounding land-uses, roads	Northern, western and southern boundaries of the Site	• Downward migration and leaching of contaminants via infiltration of rain water through soil; • Lateral migration via groundwater to surface waters and off-site groundwater; • Overland flow of groundwater to off-site soils and surface waters; and • Volatilisation/dispersion airborne particulates due to wind.	Low	• Heavy Metals; • PAHs; • TRHs; and • BTEX.
Parked vehicles (leaking hydrocarbons i.e. motor oil)	Entire Site	• Downward migration and leaching of contaminants via infiltration of rain water through soil; • Lateral migration via groundwater to surface waters and off-site groundwater; • Overland flow of groundwater to off-site soils and surface waters; and • Volatilisation of subsurface contaminants.	Low	• Heavy Metals; • PAHs; • TRHs; and • BTEX.
Dry Cleaning Business	On site migration of contaminants	• Downward migration and leaching of contaminants via infiltration of rain water through soil; • Lateral migration via groundwater to surface waters and off-site groundwater; • Overland flow of groundwater to off-site soils and surface waters; and • Volatilisation of subsurface contaminants.	Low	• VHCs

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Table 2 - Continued...

Potential Source of contamination	Location	Migration pathway	Potential Risk	Contaminants of Potential Concern
Poor demolition and removal practices	Northern section of the Site were three (3) low density residential properties were demolished	- Downward migration and leaching of contaminants via infiltration of rain water through soil; - Lateral migration via groundwater to surface waters and off-site groundwater; - Overland flow of groundwater to off-site soils and surface waters; and - Volatilisation/dispersion airborne particulates due to wind.	Low	- Heavy Metals; and - Asbestos.
Use of Pesticides/ Insecticides on vegetated medians	All vegetated medians or grassed areas	- Downward migration and leaching of contaminants via infiltration of rain water through soil; - Lateral migration via groundwater to surface waters and off-site groundwater; - Overland flow of groundwater to off-site soils and surface waters; and - Volatilisation of contaminants.	Low	OCPs and OPPs.
Use of Imported Fill Material	Entire Site	- Downward migration and leaching of contaminants via infiltration of rain water through soil; - Lateral migration via groundwater to surface waters and off-site groundwater; - Overland flow of groundwater to off-site soils and surface waters; and - Volatilisation/dispersion airborne particulates due to wind.	Medium	- Heavy Metals; - PAHs; - TRHs; - BTEX; - OCP/OPPs; and - PCBs.
Electrical Substation	Adjacent to the southern section of the Site	- Downward migration and leaching of contaminants via infiltration of rain water through soil; - Lateral migration via groundwater to surface waters and off-site groundwater; - Overland flow of groundwater to off-site soils and surface waters; and - Volatilisation of subsurface contaminants.	Low	PCBs.

5.2. Potential Transport Mechanism

Primary transport mechanisms for the migration of potential contaminants on to the Site or off the Site include:

- Downward migration and leaching of contaminants into groundwater via infiltration of rain water into soil;
- Lateral migration via groundwater to surface waters;
- Volatilisation of soil/groundwater contaminants and inhalation;
- Surface water runoff and storm water drainage; and
- Airborne particulates due to wind.

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5.3. Potential Contamination Receptors

The main potential contamination receptors were considered to include:

- Future construction / utility workers involved in the excavation and construction of the Lindfield Community Hub;
- Neighbouring residents during the excavation and construction of the future development at the Site;
- Future residents and or users of the Site; and
- Local groundwater and Little Blue Gum Creek.

5.4. Conceptual Site Contamination Model

A conceptual site model outlining sources of contamination, pathways and potential receptors is provided in the following Figure 5.

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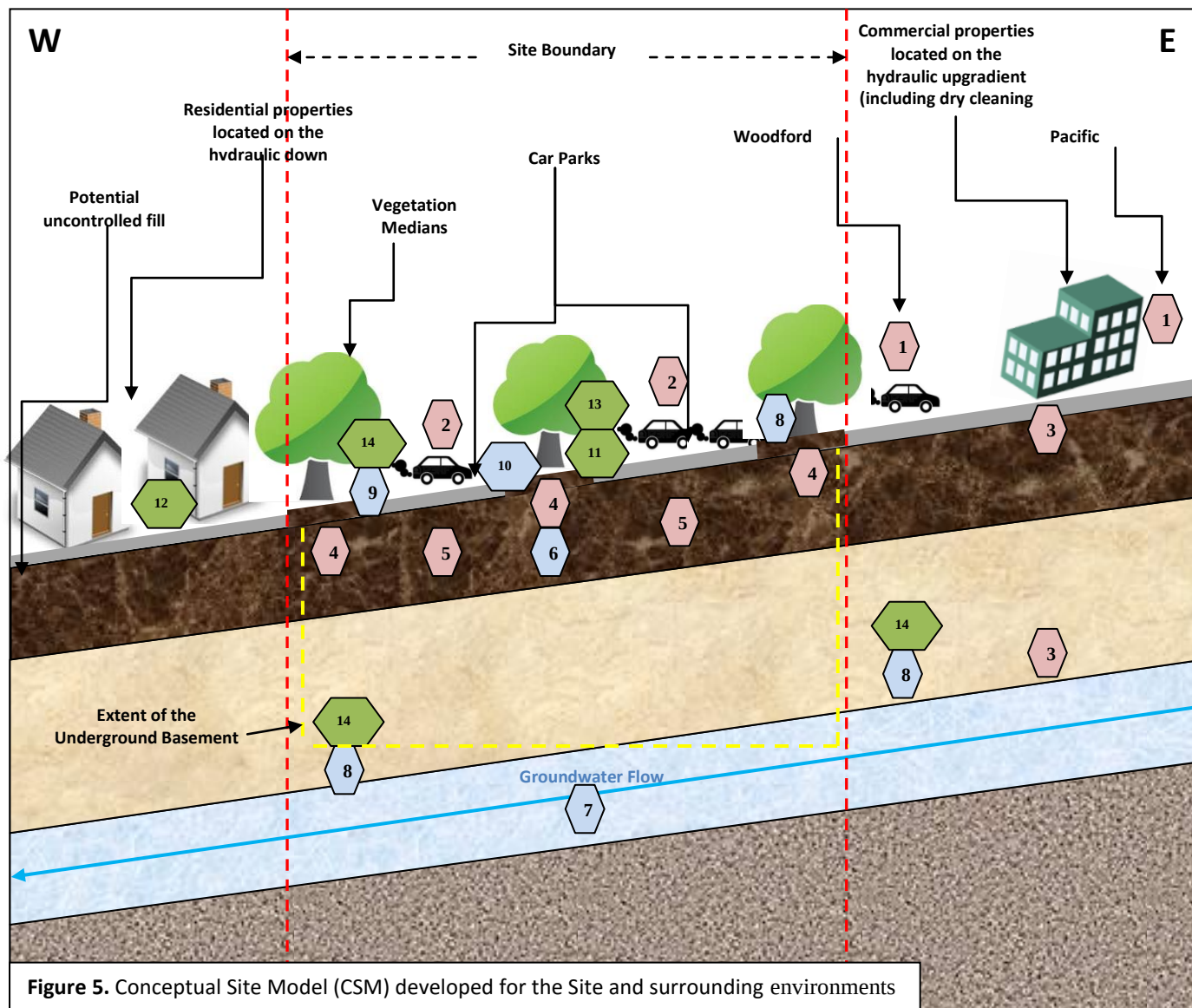
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LEGEND

Sources of COPCs

1. Vehicle emissions associated with surrounding Bent St, Woodford Lane and Pacific Hwy.
2. Vehicle emissions and leaking of motor oil on asphalt car park surface.
3. Downward migration of contaminants i.e. VCHs associated with dry cleaning services
4. Pesticides and Insecticides use on vegetation medians
5. Use of uncontrolled fill beneath the car park.

Primary Transport Mechanisms

6. Downward migration and leaching of contaminants into groundwater via infiltration of rain water into soil.
7. Lateral migration via groundwater to surface waters.
8. Volatilisation of soil/groundwater contaminants and inhalation.
9. Surface water runoff and storm water drainage.
10. Airborne particulates due to wind.

Potential Contamination Receptors

11. Future construction / utility workers involved in the excavation and construction of the Lindfield Community Hub.
12. Neighbouring residents during the excavation and construction of the future development at the Site.
13. Future residents and or users of the Site.
14. Local groundwater and Little Blue Gum Creek.

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6. SITE INVESTIGATION AND METHODOLOGY

6.1. Investigation Design

The objectives of the investigation were to:

- Provide comprehensive information on the issues raised thus far in the ADE PSI (2016);
- Discuss the Site condition;
- Design a soil investigation program in accordance with the New South Wales Environmental Protection Authority (NSW EPA) *Sampling Design Guidelines* (1995);
- Assess and describe the source, type, extent and level of contamination (if present) by comparing soil/fill materials and groundwater data collected against SAC outlined in the NEPM (2013); and
- Determine the human health and environmental risk (if present) from soils/groundwater.

6.2. Pre-work Procedure

Before work commenced a Site specific SH&EWMS was developed for the project, which was presented in a pre-start toolbox talk prior to the commencement of works and was signed onto by ADE staff.

A services and utilities assessment was conducted by ADE. Utilities and services data was obtained from the following owners:

- Ausgrid;
- Jemena Gas;
- Ku-ring-ga Council;
- Nextgen Group;
- Optus;
- Pipe Nextworks;
- Sydney Water; and
- Telstra.

6.3. Field Investigation Procedures

6.3.1. Soil Boreholes

Between the 15th and 16th of June 2016, twenty five (25) boreholes and test pits were advanced across the Site at varying depths, ranging from 0.0 m – 4.0 m BGL (refer to Appendix IV – Borehole Logs and Soil Stratigraphy). Drilling works were undertaken by ADE using a trailer mounted drill rig with 100 mm solid flight auger and hand auguring equipment.

Table 3 - Soil Drilling Works Summary

Sampling Point	Method	Depth Drilled/Excavated (m BGL)
BH01	Hand Excavated	0.5
BH02	Hand Excavated	0.7
BH03	Solid Flight Auger	1.0
BH04	Solid Flight Auger	0.8

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Table 3 – Continued...

Sampling Point	Method	Depth Drilled/Excavated (m BGL)
BH05	Solid Flight Auger	1.7
BH06	Solid Flight Auger	1.0
BH07	Solid Flight Auger	1.0
BH08	Solid Flight Auger	1.0
BH09	Solid Flight Auger	0.5
BH10	Solid Flight Auger	4.0
BH11	Solid Flight Auger	1.0
BH12	Solid Flight Auger	1.5
BH13	Solid Flight Auger	1.0
BH14	Solid Flight Auger	1.8
BH15	Solid Flight Auger	0.7
BH16	Solid Flight Auger	1.0
BH17	Solid Flight Auger	1.0
BH18	Solid Flight Auger	1.0
BH19	Solid Flight Auger	1.0
BH20	Solid Flight Auger	1.0
BH21	Solid Flight Auger	0.6
BH22	Solid Flight Auger	1.0
BH23	Solid Flight Auger	1.0
BH24	Hand Excavated	0.5
BH25	Hand Excavated	0.5

The twenty five (25) boreholes/test pits were completed at varying depths for the following purposes:

- Target the fill materials and determine the lateral and vertical extent (if any) of potential contaminants of concern; and
- One (1) borehole (BH10) was located to target groundwater. However, there was refusal after drilling to 4.0 m BGL with no groundwater encountered.

6.3.2. Investigation of Soil

A total of forty eight (48) discrete soil samples were collected from twenty five (25) boreholes/test pits located throughout the Site (excluding QA/QC samples). The full analytical program for each sample can be seen in section 7 of this report.

- Twenty five (25) boreholes/test pits were advanced across the Site in predetermined locations;
- Soil samples were generally collected at 0.3 m BGL, 1.0 m BGL and every 0.5 m thereafter to the target depth of investigation (VENM and/or bedrock); and
- A representative amount of each sample was placed in a zip lock plastic bag and screened for Volatile Organic Compounds (VOC's) using a photo-ionisation detector (PID).

Field activities were supervised by an experienced environmental consultant who directed sampling operations.

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6.4 Sampling Procedures

Sampling techniques were determined following analysis of access restrictions and/or health and safety requirements.

6.4.1 Soil Testing Program

The Site investigation was designed based on parameters outlined in the ADE PSI (2016).

Decontamination:

ADE's standard decontamination procedures were undertaken before sampling to avoid the possibility of cross-contamination.

The soil sampling equipment and items likely to come into contact with soil samples were thoroughly washed, followed by rinsing with phosphate-free detergent and potable water before the collection of samples. Due care was taken with the disposal of any washings and residues from such cleaning operations.

Documentation:

A field observation log was kept by sampling personnel. Details recorded in the log included:

- Sample number;
- Soil description notes;
- Sampling method;
- Sample identification;
- Sample description; and
- Sample point measurements.

A comprehensive master sample register was maintained. As samples were received, they were given a unique sequential number from the sample register into which details from the labels were entered.

Before packing and dispatch of samples for analysis, a Chain of Custody form was completed. This form recorded details of the individual samples being dispatched and the type of analysis required for each sample (refer to Appendix VIII – Chain of Custody).

Sample Management:

Grab samples were collected directly from the auger using disposable nitrile gloves. Samples were placed into ultraviolet resistant glass jars with Teflon lined lids and well protected by packaging material. Ice packs and/or bags of ice were inserted in the Esky to maintain the samples at approximately 4°C. The original Chain of Custody form was enclosed in the Esky that was then sealed and dispatched to NATA accredited analytical laboratories.

A PID with a 10.6 eV lamp, pre-calibrated with isobutylene gas at 100 ppm was used to screen the headspace gases of the collected samples to assess for the presence of VOCs. PID headspace screening was conducted

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using a resealable zip lock plastic bag, the soil sample was agitated as the PID reading was taken inside the zip lock plastic bag (the bag was appropriately sealed when inserting the PID meter).

Replicate soil samples (Blinds and Splits) were collected by thoroughly mixing a sample in a large zip lock bag, the samples were divided into and placed in sterile glass jars with Teflon lined lids and small zip lock bags. The jars were filled to capacity to ensure minimal headspace was present prior to tightly securing the lid and then placed into a pre-cooled Esky.

Each sample jar was well protected by packaging material. Ice packs were inserted in the Esky to maintain the samples at approximately 4°C. The original Chain of Custody form was enclosed in the Esky that was then sealed and dispatched to NATA accredited analytical laboratories.

Stratigraphical information was obtained along with the samples in order to assess the shallow geological conditions at the Site in accordance with AS 1726-1993 'Australian Standard Geotechnical Site Investigations' (Refer to Appendix IV – Borehole Logs and Soil Stratigraphy).

6.4.2 Laboratory Analysis

All copies of the completed Chain of Custody forms were retained on the Central Filing System and the originals were sent to the analytical laboratories together with the samples.

Soil samples collected during the investigation for chemical characterisation and asbestos analysis were submitted to the following NATA Accredited Laboratories:

- Environmental and OH&S Laboratory; and
- Eurofins | MGT.

For a copy of the Chain of Custody forms submitted to the NATA accredited laboratories; analytical methods used by various external laboratories; and Environmental OH&S Laboratory refer to Appendix VII - Analytical Results and Appendix VIII – Chain of Custody.

6.4.3 Analytical Program

The selected samples were tested for a range of analytes including:

- Heavy Metals ;
- TRHs;
- BTEX;
- PAHs;
- OCP/OPPs;
- PCBs;
- VHCs; and
- Asbestos.

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7. SAMPLING AND ANALYTICAL PROGRAM

The following table outlines the Sampling and Analytical program of soil collected within the Site throughout this phase of the investigation. The suite of analytes for each of the sample types was selected after consideration of the ADE PSI (2016).

Table 4 - Sampling and Analytical Program

Date	Borehole ID	Sample ID	Depth (m BGL)	Sample Type	Analysis
15.06.16	BH01	BH01A	0.2-0.3	Fill	TRH, BTEX, PAHs, Heavy Metals, PCBs, OCPs/OPPs and Asbestos
15.06.16	BH02	BH02A	0.2-0.3	Fill	TRH, BTEX, PAHs, Heavy Metals, PCBs and OCPs/OPPs
15.06.16	BH03	BH03A	0.2-0.3	Fill	TRH, BTEX, PAHs, Heavy Metals, PCBs, OCPs/OPPs and Asbestos
15.06.16	BH04	BH04A	0.2-0.3	Fill	TRH, BTEX, PAHs, Heavy Metals, PCBs, OCPs/OPPs and Asbestos
15.06.16	BH05	BH05A	0.2-0.3	Fill	TRH, BTEX, PAHs, Heavy Metals, PCBs, OCPs/OPPs and Asbestos
15.06.16	BH06	BH06A	0.2-0.3	Fill	TRH, BTEX, PAHs, Heavy Metals, PCBs, OCPs/OPPs and Asbestos
16.06.16	BH07	BH07A	0.2-0.3	Fill	TRH, BTEX, PAHs, Heavy Metals, PCBs and OCPs/OPPs
		BH07C	1.0		TRH, BTEX, PAHs, Heavy Metals, PCBs and OCPs/OPPs
16.06.16	BH08	BH08A	0.2-0.3	Fill	TRH, BTEX, PAHs, Heavy Metals, PCBs, OCPs/OPPs and Asbestos
15.06.16	BH09	BH09A	0.2-0.3	Fill	TRH, BTEX, PAHs, Heavy Metals, PCBs and OCPs/OPPs
15.06.16	BH10	BH10A	0.2-0.3	Fill	TRH, BTEX, PAHs, Heavy Metals, PCBs, OCPs/OPPs and Asbestos
		BH10C	1.0	Fill	TRH, BTEX, PAHs, Heavy Metals, PCBs and OCPs/OPPs
		BH10D	1.5	VENM	VHCs
15.06.16	BH11	BH11A	0.2-0.3	Fill	TRH, BTEX, PAHs, Heavy Metals, PCBs, OCPs/OPPs and Asbestos
		BH11C	1.0	VENM	TRH, BTEX, PAHs, Heavy Metals, PCBs, OCPs/OPPs and Asbestos
15.06.16	BH12	BH12A	0.2-0.3	Fill	TRH, BTEX, PAHs, Heavy Metals, PCBs and OCPs/OPPs
15.06.16	BH14	BH14A	0.2-0.3	Fill	TRH, BTEX, PAHs, Heavy Metals, PCBs, OCPs/OPPs and Asbestos
		BH14D	1.5	VENM	TRH, BTEX, PAHs, Heavy Metals, PCBs, OCPs/OPPs, Cation Exchange Capacity (CEC), pH and Asbestos
15.06.16	BH15	BH15A	0.2-0.3	Fill	TRH, BTEX, PAHs, Heavy Metals, PCBs and OCPs/OPPs

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Table 4 – Continued...

Date	Borehole ID	Sample ID	Depth (m BGL)	Sample Type	Analysis
15.06.16	BH16	BH16A	0.2-0.3	Fill	TRH, BTEX, PAHs, Heavy Metals, PCBs and OCPs/OPPs
15.06.16	BH17	BH17A	0.2-0.3	Fill	TRH, BTEX, PAHs, Heavy Metals, PCBs, OCPs/OPPs and Asbestos
15.06.16	BH18	BH18A	0.2-0.3	Fill	TRH, BTEX, PAHs, Heavy Metals, PCBs, OCPs/OPPs and Asbestos
15.06.16	BH19	BH19A	0.2-0.3	Fill	Asbestos
15.06.16	BH20	BH20A	0.2-0.3	Fill	TRH, BTEX, PAHs, Heavy Metals, PCBs and OCPs/OPPs
		BH20C	1.0	VENM	TRH, BTEX, PAHs, Heavy Metals, PCBs and OCPs/OPPs
15.06.16	BH21	BH21A	0.2-0.3	Fill	TRH, BTEX, PAHs, Heavy Metals, PCBs, OCPs/OPPs and Asbestos
15.06.16	BH22	BH22A	0.2-0.3	Fill	TRH, BTEX, PAHs, Heavy Metals, PCBs and OCPs/OPPs
15.06.16	BH23	BH23A	0.2-0.3	Fill	TRH, BTEX, PAHs, Heavy Metals, PCBs and OCPs/OPPs
16.06.16	BH24	BH24A	0.2-0.3	Fill	TRH, BTEX, PAHs, Heavy Metals, PCBs and OCPs/OPPs
16.06.16	BH25	BH25A	0.2-0.3	Fill	TRH, BTEX, PAHs, Heavy Metals, PCBs, OCPs/OPPs and Asbestos

Table 5 - Sampling and Analytical Program - QA/QC

Date	Sample ID	Location (For sample locations refer to Appendix III – Sample Maps)	Depth (m BGL)	Sample Type	Analysis
15.06.16	BR1	BH07C	1.0	VENM	TRH, BTEX, PAHs, Heavy Metals, PCBs and OCPs/OPPs
15.06.16	SP1	BH07C	1.0	VENM	TRH, BTEX, PAHs, Heavy Metals, PCBs and OCPs/OPPs
15.06.16	10625-Rinsate1	-	-	Water	PAH, TRH, BTEX, Metals
15.06.16	10625VOC-Spike	-	-	Water	BTEX
15.06.16	10625VOC-Blank	-	-	Water	BTEX

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8. ASSESSMENT CRITERIA

The criteria specified in the following publications are to be used for the Site assessment:

- Guidelines for the NSW Site Auditor Scheme, NSW DEC 2006, 2nd Edition; and
- National Environmental Protection Council, National Environment Protection (Assessment of Site Contamination) Measure 1999, 2013 Amendment (NEPM 2013).

The report applies the relevant Investigation levels to identify contaminants and/or areas of contamination that potentially pose a risk to human or environmental health.

8.1 Health Investigation Levels (HILs)

The NEPM (2013) guidelines stipulate four generic land use settings for assessment used in the first stage (Tier 1 or 'screening') of potential risks to human health from a broad range of metals and organic substances. The HILs are applicable for assessing human health risk via all relevant pathways of exposure for the following generic land use settings:

- **HIL A - Residential with garden/accessible soil (home grown produce <10% fruit and vegetable intake, (no poultry), also 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) which should be subject to a site-specific assessment where appropriate.
- HIL D - Commercial/industrial such as shops, offices, factories and industrial sites.

Based on the information provided to ADE outlining the scope of the proposed future land use as new mixed use precinct with community buildings, boutique shops, cafes/restaurants and a below ground supermarket. The redevelopment will create new streets, residential apartments, a large central park, a library, child care centre and community centre with commuter parking.

At the time of writing this report final plans of the proposed development of the Site were not made available, it should be noted that concept plans known as 'Preferred Option 2' were consulted (refer to Appendix IX – Design Plans). However, as the exact locations of each of the proposed features are currently unknown, ADE has adopted a conservative approach and chosen HIL-A throughout the Site as the initial Tier 1 screening criteria.

8.2 Health Screening Levels (HSLs)

HSLs have been developed for selected petroleum compounds and fractions and are applicable to assessing human health risk via the inhalation and direct contact pathways. The HSLs depend on specific soil physicochemical properties, land use scenarios, and the characteristics of building structures. Due to the proposed development of a hardstand cover (concrete) across certain sections of the Site with limited

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physical access to exposed areas of soil and underground basement, ADE has adopted the NEPM (2013) Tier 1 screening criteria for BTEX, Naphthalene, TRH fractions C₆-C₁₀ and C₁₀-C₁₆ for Vapour Intrusion. Further tier 1 HSL screening criteria as per Friebe and Nadebaum's *Health Screening levels for petroleum hydrocarbons in soil and groundwater, Part 2: Application Document, Technical report No. 10* (2011) have also been adopted to include Vapour Risk to Intrusive Maintenance Workers (Shallow Trench 0.0 to <2.0 m), and HSL levels for direct human contact, outlined in Table 10.

8.3 Management Limits

Petroleum hydrocarbon management limits ('management limits') are a set of assessment criteria outlined in NEPM (2013) applicable to petroleum hydrocarbon compounds which aim to avoid or minimise the potential effects of:

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

The Management Limits provide Tier 1 screening levels following evaluation of human health and ecological risks and risks to groundwater resources, and are considered relevant for operating Sites where significant sub-surface leakage of petroleum compounds has occurred and when decommissioning industrial and commercial Sites.

Taking into consideration the Sites long history as commuter car park and commercial land use, the Management Limits have been adopted as a Site assessment criterion.

8.4 Ecological Investigation Levels (EILs)

As per the NEPM (2013) – Ecological investigation levels (EILs) for the protection of terrestrial ecosystems have been derived for common contaminants in soil based on a species sensitivity distribution (SSD) model developed for Australian conditions. EILs have been derived for As, Cu, Cr III, DDT, naphthalene, Ni, Pb and Zn".

Steps to determining the site specific EILs for Ni, Cr III, Cu, Zn and Pb aged contamination (>2 years), as per NEPM Schedule B1

1. Measure or analyse the soil properties relevant to the potential contaminant of concern. Sufficient samples need to be taken for these determinations to obtain representative values for each soil type in which the contaminant occurs.
2. Establish the sample Added Contaminant Limit (ACL) for the appropriate land use and with consideration of the soil-specific pH, clay content or Cation Exchange Capacity (CEC). The ACL for Cu may be determined by pH or CEC and the lower of the determined values should be selected for EIL calculation. Note that the ACL for Pb is taken directly from Table 1(B)4.
3. Calculate the contaminant Ambient Background Concentrations (ABC) in soil for the particular contaminant and location from a suitable reference site measurement or other appropriate method.

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4. Calculate the EIL by summing the ACL and ABC: $EIL = ABC + ACL$

One sample was selected for analysis of physicochemical properties (pH, CEC, % clay) in order to derive the EILs. Results are shown in Table 6 below. The concentration of the sample 10625-BH14D collected at 1.5 m BGL within the natural soil was used as the ABC, as shown in Table 7. Site specific EILs were calculated using the concentrations of physicochemical properties in Table 7 to determine the ACLs in conjunction with appropriate ABC.

Table 6 - Sample results for derivation of EILs.

Sample I.D	CEC (meq/100g)	pH	Clay Content (%)	As	DDT	Naphthalene	Pb	Cu	Ni	Cr III	Zn
BH14D	2	5.2	-*	10	0.3	0.3	27	13	10	32	5

*Clay Content % not calculated. Most conservative values as per NEPM 2013 used instead.

Table 7 - Derivation of EILs using ambient background concentration and added contaminant limit.

Contaminant	ABC	ACL	EIL
As	10	-	100
DDT	0.3	-	180
Naphthalene	0.3	-	170
Pb	27	1100	1110
Cu	13	95	108
Ni	10	30	40
Cr III	32	190	222
Zn	5	155	160

8.5 Ecological Screening Levels (ESLs)

Ecological screening levels (ESLs) are presented based on a review of Canadian guidance for petroleum hydrocarbons in soil and application of the Australian methodology (Schedule B5b) to derive Tier 1 ESLs for BTEX, Benzo(a)pyrene and F1 and F2 (Warne 2010a, 2010b). The Canadian Council of the Ministers of the Environment (CCME) has adopted risk-based TPH standards for human health and ecological aspects for various land uses in the Canada-wide standard for petroleum hydrocarbons (PHC) in soil (CCME 2008) (CWS PHC). The standards established soil values (refer to Table 1B(6) of the NEPM 2013) including ecologically based criteria for sites affected by TPH contamination for coarse- and fine-grained soil types

8.6 Asbestos

The NEPM (2013) provides health screening levels for asbestos contamination in soil, which are based on specific land use exposure scenarios for three forms of asbestos, bonded asbestos containing material (ACM), friable asbestos (FA) and asbestos fines (AF). Health Screening Level (Commercial and Industrial) threshold concentrations have also been adopted in relation to the assessment asbestos contamination in soils.

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For Residential (HIL-A) threshold is 0.01% for bonded asbestos containing materials and 0.001% for friable asbestos. For the purpose of this investigation, ADE adopted an initial screening of 'no visible asbestos containing materials observed' and 'no asbestos fibres detected in samples', based on assessment of soils in accordance with clauses 8.2.3 or 8.2.4 of the AS4964-2004 - Method for the quantitative identification of asbestos in bulk samples.

8.7 Waste Classification

For waste classification purposes, soil materials will be assessed against:

- The NSW EPA publication *Waste Classification Guidelines Part One: Classifying Waste* (November 2014).

Waste classification would take into account all previous '*in situ*' testing results. The waste classification criteria for the contaminants of concern are provided in Table 8 below.

Table 8 - Leachable Concentrations (TCLP) and Specific Contaminant Concentrations (SCC) Values for Classifying Waste by Chemical Assessment

Contaminant	Maximum values for leachable for Leachable Concentration and Specific Contaminant Concentration when Used Together			
	General Solid Waste ¹		Restricted Solid Waste	
	TCLP1 ² (mg/L)	SCC1 (mg/kg)	TCLP2 (mg/L)	SCC2 (mg/kg)
Arsenic	5.02	500	20	2000
Benzene	0.52	18	2	72
Benzo(a)pyrene ³	0.044	10	0.16	23
Cadmium	1.02	100	4	400
Chromium (IV) ⁵	52	1900	20	7600
Ethyl Benzene	306	1080	120	4320
Lead	52	1500	20	6000
Mercury	0.22	50	0.8	200
Nickel	26	1050	8	4200
C6-C9 Petroleum Hydrocarbons	NA ⁷	650	NA ⁷	2600
C10-C36 Petroleum Hydrocarbons	NA ⁷	10000	NA ⁷	40000
Phenol ⁸	14.48	518	57.6	2073
Polychlorinated Biphenyls	NA ⁷	<50	NA ⁷	<50
Polycyclic Aromatic Hydrocarbons (total)	NA ⁷	200	NA ⁷	800
Scheduled Chemicals	NA ⁷	<50	NA ⁷	<50
Toluene	14.48	518	57.6	2073
Xylenes (total)	509	1800	200	7200

Notes:

1. Values are the same for both general solid waste (putrescible) and general solid waste (non-putrescible)
2. See Hazardous Waste Management System: Identification and Listing of Hazardous Waste – Toxicity Characteristics Revisions, Final Rule (USEPA 1990) for TCLP levels
3. There may be a need for the laboratory to concentrate the sample to achieve the TCLP limit value for benzo(a)pyrene with confidence
5. These limits apply to chromium in the +6 oxidation state only
6. Calculated from Australian Drinking Water Guidelines (NHMRC 1994)
7. No TCLP Analysis is required
8. Proposed level for phenol and toluene in Management System: Identification and Listing of Hazardous Waste – Toxicity Characteristics Revisions, Final Rule (USEPA 1990)

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Should any Virgin Excavated Natural Materials (VENM) be required to be removed offsite for beneficial re-use/disposal, it would be assessed against published background concentrations:

- NEPM (1999). *National Environmental Protection (Assessment of Site Contamination) Measure* Schedule B(1) Guidelines on the Investigation Levels for Soil and Groundwater, Background Ranges; and
- ANZECC 1992. Australian and New Zealand Guidelines for the Assessment and Management of Contaminated sites.

The background concentrations for the analytes of concern are provided in Table 9 below.

Table 9 - Published Australian Background Soil Concentrations

Contaminant	ANZECC 1992 (mg/kg)	NEPC 1999 (mg/kg)
Arsenic	0.2-30	1-50
Cadmium	0.04-2	1
Chromium	0.5-110	5-1000
Copper	1-190	2-100
Lead	<2-200	2-200
Mercury	0.001-0.1	0.03
Nickel	2-400	5-500
Zinc	2-180	10-300
PAHs	0.95-5	ND

Organic analytes (TPH, BTEX, OCP/OPPs and PCBs) would be assessed against the laboratory reporting limit. In other words, for organic analytes, VENM analysis results must be within the laboratory PQL (practical quantification limit) to be classified as VENM.

8.8 Aesthetics

NEPM 2013 requires that aesthetic quality of accessible soils be considered even if analytical testing demonstrates that concentrations of contaminants of potential concern (COPCs) are within the SAC.

It should be noted that there are no quantifiable guidelines in determining if soils are appropriately aesthetic, however the NEPM 2013 does indicate that professional judgement with regard to quantity, type and distribution of foreign materials and/or odours in relation to the specific land use should be employed.

The following scenarios (but not limited to) would trigger further aesthetic assessment:

- Hydrocarbon sheen on surface water;
- Anthropogenic soil staining; and
- Odorous soils i.e. petroleum hydrocarbon odours or hydrogen sulphide in soil.

8.9 Statistical Analysis

A contaminant concentration in soil will be deemed acceptable if:

- The maximum concentration of all samples meet the specified acceptance criteria; or
- The 95% UCL average concentration of each contaminant is below the acceptance criteria; and

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- No individual exceedance is greater than 2.5 times the acceptance criteria.

If a location is found to have more than two and half times (2.5x) a contaminant's acceptable limit, then it will be classified as a "hot-spot", requiring further assessment, remediation, removal or management.

If the calculated 95% UCL of the arithmetic average concentration of the contaminant is above their acceptance criteria, then the soil will be considered potentially contaminated, requiring further assessment, remediation, removal or management.

If the 95% UCL of the arithmetic average concentrations is below the acceptance criteria, and no concentrations are at a "hotspot" level (not two and a half times the health based investigation level criteria), no further investigation is required.

8.10 Duty to Report Contamination

In accordance with the *Guidelines on the Duty to Report Contamination (2015) under the Contaminated Land Management Act 1997* (CLM Act) the following provides an assessment of the clients responsibility to notify the NSW EPA of potential/identified contamination.

Any further results derived from the investigation, remediation (if any) and validation (if any) of the Site must be compared to the Guidelines on the Duty to Report Contamination 2015 (CLM Act 1997), and if required, the client must notify the New South Wales Environmental Protection Authority.

8.10.1 On-site soil contamination

For the purposes of section 60(3)(b) of the CLM Act, notification of contamination in, or on, soil on the land is required where:

- The 95 % upper confidence limit on the arithmetic average concentration of a contaminant in or on soil is equal to or above the Health Investigation Level and/or Health Screening Level for that contaminant for the current or approved use of the respective on-site land, as specified in Section 6, Schedule B1 of the *National Environment Protection (Assessment of Site Contamination) Measure 1999* (NEPC 2013)

OR

- The concentration of a contaminant in an individual soil sample is equal to or more than 250% of the Health Investigation Level and/or Health Screening Level for that contaminant for the current or approved use of the respective on-site land, as specified in Section 6, Schedule B1 of the *National Environment Protection (Assessment of Site Contamination) Measure 1999* (NEPC 2013)

AND

- A person has been or foreseeably will be exposed to the contaminant or a by-product of the contaminant.

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Table 10 - Site Assessment Criteria for soil contamination, mg/kg (unless otherwise specified)

Substances	Ecological Investigation Levels (EILs) ⁶	Ecological Screening Levels (ESLs)	Health Investigation Levels (HILs) ¹	Health Screening Levels (HSLs) ³			Management Limits
	EIL – Urban Residential -	Urban Residential (mg/kg)	Residential (A) (mg/kg)	Vapour Intrusion – Residential (A) (mg/kg)	Screening Levels Intrusive Maintenance Worker (Shallow Trench) for Vapour and Direct Contact, 0m to <2m ⁴ (mg/kg)	Direct Contact – Residential (High-Density) (A) (mg/kg)	Residential, parkland and public open space (Fine Soils) (mg/kg)
Arsenic (total)	110	-	100	-	-	-	-
Cadmium	-	-	20	-	-	-	-
Chromium (Total)	222	-	100	-	-	-	-
Copper	108	-	6,000	-	-	-	-
Lead	1100	-	300	-	-	-	-
Mercury (inorganic)	-	-	40	-	-	-	-
Nickel	40	-	400	-	-	-	-
Zinc	160	-	7,400	-	-	-	-
Polycyclic aromatic hydrocarbons (PAHs)	-	-	300	-	-	-	-
Carcinogenic PAHs (as BaP TEQ) ²	-	-	3	-	-	-	-
Phenols	-	-	3,000	-	-	-	-
DDT+DDE+DDD	180	-	240	-	-	-	-
Aldrin and Dieldrin	-	-	6	-	-	-	-
Chlordane	-	-	50	-	-	-	-
Endosulfan	-	-	270	-	-	-	-
Endrin	-	-	10	-	-	-	-
Benzo(a)pyrene	-	0.7	-	-	-	-	-
Heptachlor	-	-	6	-	-	-	-
Methoxychlor	-	-	300	-	-	-	-
Chlorpyrifos	-	-	160	-	-	-	-
PCBs (Total)	-	-	-	-	-	-	-
Trichloroethylene ⁷							
Trichloroethane ⁷							
Tetrachloroethylene ⁷							
Cis-1,2-dichloroethene ⁷							
Vinyl chloride ⁷							
Benzene	-	50		0.7	350	140	-

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Table 10 - Continued...

Substances	Ecological Investigation Levels (EILs) ⁶	Ecological Screening Levels (ESLs)	Health Investigation Levels (HILs) ¹	Health Screening Levels (HSLs) ³			Management Limits
	EIL – Urban Residential -	Urban Residential (mg/kg)	Residential (A) (mg/kg)	Vapour Intrusion – Residential (A) (mg/kg)	Screening Levels Intrusive Maintenance Worker (Shallow Trench) for Vapour and Direct Contact, 0m to <2m ⁴ (mg/kg)	Direct Contact – Residential (High-Density) (B) (mg/kg)	Residential, parkland and public open space (Fine Soils) (mg/kg)
Toluene	-	85	-	480	-	21,000	-
Ethyl Benzene	-	70	-	-	-	5,900	-
Xylene	-	105	-	110	-	17,000	-
Naphthalene	170	-	-	-	-	2,200	-
TRH: C ₆ – C ₁₀ (F1) ⁵	-	180	-	50	-	5,600	800
TRH: C ₁₀ –C ₁₆ (F2)	-	120	-	280	-	4,200	1000
TRH: C ₁₆ – C ₃₄ (F3)	-	300	-	-	-	5,800	3500
TRH: C ₃₄ – C ₄₀ (F4)	-	2800	-	-	-	8,100	10000

Notes to table

1 Human exposure settings based on land use have been established for HILs (see Taylor and Langley 1998). These are:

B. Residential with garden/accessible soil (home grown produce <10% fruit and vegetable intake (no poultry). also includes childcare centres, preschool and primary school (for details on derivation of HILs for human exposure settings based on land use see [Schedule B\(7A\)](#)).

2 Carcinogenic PAHs: HIL is based on the 8 carcinogenic PAHs and their Toxic Equivalency Factor (TEFs) (potency relative to B(a)P). The B(a)P TEQ (Toxic Equivalency Quantity) is calculated by multiplying the concentration of each carcinogenic PAH in the sample by its B(a)P TEF.

3 Health Screening Levels (HSL) for surface soils 0 m to <1 m where applicable.

4 Most conservative criteria adopted outlined for vapour risk and direct contact. Values adopted for 'Clay' where applicable for screening purposes.

5 To obtain F1, subtract the sum of BTEX from the C₆-C₁₀ fraction.

6 Calculated as per the Assessment of Site Contamination, National Environment Protection (Assessment of Site Contamination) Measure (1999), 2013 Amendment.

7 Laboratory detection limit adopted for screening purposes.

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9. SOIL RESULTS AND DISCUSSION

9.1. Field Observations

A summary of Site specific lithology is presented in Table 11 below:

Table 11 - Summary of Site Specific Lithology

Layer	Description	Depth to Base (m BGL)
Surface	Asphalt	0.0 – 0.05
Fill	Dark brown clayey LOAM and brown/grey CLAY with gravels	0.05 – 0.4
Natural	Orange brown CLAY	0.4– 4.0

- Asphalt hardstand was encountered at most of the sample locations and was approximately 0.05 m thick;
- Top soil/fill materials were identified throughout the Site, ranging from approximately 0.05 m – 1.1 m BGL;
- VENM was identified underlying the top soil and fill material from approximately 0.4 m – 1.1 m BGL;
- Asbestos containing materials (ACM) were not observed within any of the boreholes/test pits;
- Throughout the Site the maximum PID reading was 2.3 ppm;
- No hydrocarbon staining or malodorous odours were observed within any of the boreholes/test pits; and
- During the course of the investigation, no groundwater was encountered. As per the ADE PSI (2016) recommendations, a groundwater well was to be installed adjacent to the dry cleaning business with subsequent groundwater sampling undertaken. BH10 was advanced to 4.0 m BGL, no groundwater was encountered during the drilling of BH10, as such no groundwater monitoring well was installed.

Foreign materials were observed upon most of the surfaces throughout the Site and within the fill material at certain boreholes/test pits (refer to Appendix IV – Borehole Logs and Soil Stratigraphy).

9.2. Summary of Soil Results

Laboratory analysis of thirty (30) primary soil samples (excluding QA/QC) collected from twenty four (24) boreholes/test pits from 0.0 – 4.0 m BGL across the Site indicate that the concentrations of the contaminants of potential concern were less than the adopted SAC criteria for Tier 1 screening purposes for residential land use (HIL-A, HSL-A, EIL-A and ESL-A), as outlined in NEPM 2013. With the exception of the following samples:

- Sample 10625-BH02A (0.2-0.3 m BGL) had exceedances of:
 - Chromium (VI) at 170 mg/kg exceeding the HIL-A criteria of 100 mg/kg; and
 - Nickel at 120 mg/kg exceeding the EIL-A criteria of 40 mg/kg.
- Sample 10625-BH08A (0.2-0.3 m BGL) returned a concentration of Zinc at 490 mg/kg exceeding the EIL-A criteria of 160 mg/kg;
- Sample 10625-BH09A (0.2-0.3 m BGL) returned a concentration of Zinc at 200 mg/kg exceeding the EIL-A criteria of 160 mg/kg;

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- Sample 10625-BH10A (0.2-0.3 m BGL) had exceedances of:
 - Copper at 110 mg/kg exceeding the EIL-A criteria of 108 mg/kg;
 - Lead at 490 mg/kg exceeding the HIL-A criteria of 300 mg/kg;
 - Nickel at 56 mg/kg exceeding the EIL-A criteria of 40 mg/kg; and
 - Zinc at 400 mg/kg exceeding the EIL-A criteria of 160 mg/kg.
- Sample 10625-BH14A (0.2-0.3 m BGL) had exceedances of:
 - Copper at 110mg/kg exceeding the EIL-A criteria of 108 mg/kg; and
 - Zinc at 230 mg/kg exceeding the EIL-A criteria of 160 mg/kg.
- Sample 10625-BH15A (0.2-0.3 m BGL) returned a concentration of Nickel at 74 mg/kg exceeding the EIL-A criteria of 40 mg/kg;
- Sample 10625-BH16A (0.2-0.3 m BGL) had exceedances of:
 - Lead at 310 mg/kg exceeding the HIL-A criteria of 300 mg/kg; and
 - Zinc at 200 mg/kg exceeding the EIL-A criteria of 160 mg/kg.
- Sample 10625-BH17A (0.2-0.3 m BGL) returned a concentration of Zinc at 290 mg/kg exceeding the EIL-A criteria of 160 mg/kg;
- Sample 10625-BH18A (0.2-0.3 m BGL) had exceedances of:
 - Copper at 120 mg/kg exceeding the EIL-A criteria of 108 mg/kg;
 - Lead at 500 mg/kg exceeding the HIL-A criteria of 300 mg/kg; and
 - Zinc at 450 mg/kg exceeding the EIL-A criteria of 160 mg/kg.
- Sample 10625-BH20A (0.2-0.3 m BGL) had exceedances of:
 - Lead at 610 mg/kg exceeding the HIL-A criteria of 300 mg/kg; and
 - Zinc at 400 mg/kg exceeding the EIL-A criteria of 160 mg/kg.
- Sample 10625-BH22A (0.2-0.3 m BGL) returned a concentration of Zinc at 200 mg/kg exceeding the EIL-A criteria of 160 mg/kg;
- Sample 10625-BH25A (0.2-0.3 m BGL) returned a concentration of Zinc at 200 mg/kg exceeding the EIL-A criteria of 160 mg/kg;

It should be noted that exceedances of the SAC (EILs) was also detected within the DP (2013) report. Sample number BH7 (0.3-0.5 m BGL) returned a concentration of Zinc at 270 mg/kg exceeding the EIL-A criteria of 160 mg/kg. Sample number BH8 (0.1-0.2 m BGL) returned a concentration of Nickel at 82 mg/kg exceeding the EIL-A criteria of 40 mg/kg. The details of the current and historical analysis results are presented in Appendix II – Results Tables.

From these findings Chromium (VI), Copper, Lead, Nickel, Zinc and TRHs (C₁₆-C₃₄) are considered contaminants of concern for the Site with regards to health and ecological investigation/screening levels. The results have been collated and are provided in Appendix II – Results Tables and are discussed below.

9.3 Discussion of Soil Results

9.3.1 Heavy Metals

Chromium (VI)

Sample 10625-BH02A (0.2-0.3 m BGL) collected by ADE on the 16th of June 2016 was found to contain Chromium (VI) concentrations at 170 mg/kg, 70 mg/kg greater than the SAC (HIL-A) of 100 mg/kg. The concentration of Chromium (VI) is considered only slightly above the SAC (HIL-A) and is less than two and a

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half times (2.5 x) the SAC (HIL-A). The 95% UCL calculation for Chromium (VI) appeared lognormal at the 5% significance level and was recorded at 43.8 mg/kg (refer to Appendix VI for UCL Calculations). The result demonstrates that there is a 95% probability that the average concentration of Chromium (VI) does not exceed the SAC (HIL-A) of 100 mg/kg.

Considering only one sample recorded an exceedance with regard to Chromium (VI) within the Site, was less than 2.5 x the SAC (HIL-A), the 95% UCL arithmetic average (assuming lognormal distribution) concentration was less than the adopted SAC (HIL-A) and the mean value for all samples collected from the Site was less than adopted SAC (HIL-A). The slight elevation of Chromium (VI) is considered insignificant and does not pose a risk to human health (refer to Appendix II – Results Tables).

Copper

Samples BH10A (0.2-0.3 m BGL), BH14A (0.2-0.3 m BGL) and BH18A (0.2-0.3 m BGL) collected by ADE between the 15th and 16th June 2016 were found to contain Copper concentrations above SAC (EIL-A).

The maximum concentration returned was 120 mg/kg, slightly exceeding the adopted SAC (EIL-A) of 108 mg/kg. The 95% UCL calculation for Copper appeared lognormal at the 5% significance level and was recorded at 53.3 mg/kg assuming lognormal distribution (refer to Appendix VI for UCL Calculations). The result demonstrates that there is a 95% probability that the average concentration of Copper does not exceed the SAC (EIL-A) of 108 mg/kg.

The exceedances of Copper within the Site were less than 2.5 x the SAC (EIL-A), the 95% UCL arithmetic average (assuming lognormal distribution) concentration was less than the adopted SAC (EIL-A) and the mean value for all samples collected from the Site was less than adopted SAC (EIL-A). The slight elevations of Copper are considered insignificant and do not pose an ecological risk to the proposed land use (refer to Appendix II – Results Tables).

Lead

Samples BH10A (0.2-0.3 m BGL), BH14A (0.2-0.3 m BGL), BH16A (0.2-0.3 m BGL), BH18A (0.2-0.3 m BGL) and BH20A (0.2-0.3 m BGL) collected by ADE between the 15th and 16th June 2016 were found to contain Lead concentrations above the SAC (HIL-A).

The maximum concentration returned was 610 mg/kg, slightly more than double the adopted SAC (HIL-A) of 300 mg/kg. The 95% UCL calculation for Lead appeared lognormal at the 5% significance level and was recorded at 239.2 mg/kg assuming lognormal distribution (refer to Appendix VI for UCL Calculations). The result demonstrates that there is a 95% probability that the average concentration of Lead does not exceed the SAC (HIL-A) of 300 mg/kg.

The exceedances of Lead within the Site were less than 2.5 x the SAC (HIL-A), the 95% UCL arithmetic average (assuming lognormal distribution) concentration was less than the adopted SAC (HIL-A) and the mean value for all samples collected from the Site was less than adopted SAC (HIL-A). The elevated concentration of Lead is considered insignificant and does not pose a risk to human health (refer to Appendix II – Results Tables).

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Nickel

Samples BH02A (0.2-0.3 m BGL), BH10A (0.2-0.3 m BGL) and BH15A (0.2-0.3 m BGL) collected by ADE between the 15th and 16th June 2016 were found to contain Nickel concentrations above the SAC (EIL-A).

The maximum concentration returned was 120 mg/kg (BH02A 0.2-0.3 m BGL), which was more than 2.5x the adopted SAC (EIL-A) of 40 mg/kg. ADE was unable to calculate the 95% UCL as the data was neither in a normal or lognormal distribution. As such, the median value of Nickel was calculated and reported as 21.8 mg/kg, which was below the SAC (EIL-A).

The exceedances of Nickel within two (2) samples (BH10A and BH15A) were less than 2.5x the SAC (EIL-A) and the mean concentration (21.8 mg/kg) was also less than the adopted SAC (EIL-A). The elevations of Nickel within these samples is considered not to pose an ecological risk to the proposed land use (refer to Appendix II – Results Tables).

The exceedance of Nickel within one (1) sample (BH02A) was greater than 2.5 x the SAC (EIL-A). The elevation of Nickel is considered to pose an ecological risk to the proposed land use and should be treated as a hotspot; refer to Section 9.3 for recommendations.

Zinc

Samples BH08A (0.2-0.3 m BGL), BH09A (0.2-0.3 m BGL), BH10A (0.2-0.3 m BGL), BH14A (0.2-0.3 m BGL), BH16A (0.2-0.3 m BGL), BH17A (0.2-0.3 m BGL), BH18A (0.2-0.3 m BGL), BH20A (0.2-0.3 m BGL) and BH22A (0.2-0.3 m BGL) collected by ADE between the 15th and 16th June 2016 were found to contain Zinc concentrations above the SAC (EIL-A).

The maximum concentration returned was 490 mg/kg (BH08A), which was more than 2.5x the SAC (EIL-A) of 160 mg/kg. ADE was unable to calculate the 95% UCL as the data was neither in a normal or lognormal distribution. As such, the median value of Zinc was calculated and reported as 127.9 mg/kg, which was below the SAC (EIL-A).

The exceedances of Zinc within five (5) samples (BH09A, BH14A, BH16A, BH17A, BH22A and BH25A) were less than 2.5x the SAC (EIL-A) and the mean concentration (127.9 mg/kg) was also less than the adopted SAC (EIL-A). The elevations of Zinc within these samples is considered not to pose an ecological risk to the proposed land use (refer to Appendix II – Results Tables).

The exceedances of Zinc within five (5) samples (BH02A, BH08A, BH10A, BH18A and BH20A) were greater than 2.5 x the SAC (EIL-A). The elevations of Zinc are considered to pose an ecological risk to the proposed land use and should be treated as a hotspot(s); refer to Section 9.3 for recommendations.

9.3.2 TRHs and BTEX

Sample BH17A (0.2-0.3 m BGL) collected by ADE on the 16th of June 2016 was found to contain TRH (C₁₆-C₃₄) concentrations above the SAC for Ecological Screening Levels (Urban residential and public open space). The maximum concentration returned was 910 mg/kg.

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The maximum concentration returned was 910 mg/kg, more than three times greater than the SAC (ESL-A) of 300 mg/kg. ADE was unable to calculate the 95% UCL as the data was neither in a normal or lognormal distribution. As such, the median value of TRH (C₁₆-C₃₄) was calculated and reported as 131 mg/kg, which was below the SAC (ESL-A).

The exceedance of TRH (C₁₆-C₃₄) within one (5) sample (BH17A) was greater than 2.5 x the SAC (ESL-A). The elevations of TRH (C₁₆-C₃₄) are considered to pose an ecological risk to the proposed land use and should be treated as a hotspot, refer to Section 9.3 for recommendations.

9.3.3 VHCs

Samples collected by ADE on the 15th and 16th June 2016 do not indicate any exceedances above the adopted SAC for residential land use (refer to Appendix II – Results Tables).

9.3.4 OCPs and OPPs

Samples collected by ADE on the 15th and 16th June 2016 do not indicate any exceedances above the adopted SAC for residential land use (refer to Appendix II – Results Tables).

9.3.5 PAHs

Samples collected by ADE on the 15th and 16th June 2016 do not indicate any exceedances above the adopted SAC for residential land use (refer to Appendix II – Results Tables).

9.3.6 PCBs

Samples collected by ADE on the 15th and 16th June 2016 do not indicate any exceedances above the adopted SAC for residential land use (refer to Appendix II – Results Tables).

9.4 Recommendation for EIL Exceedances

Final plans of the proposed development of the Site were not made available at the time of writing this report, however conceptual plans for the 'Preferred Option 2' were consulted (refer to Appendix IX – Design Plans). The following recommendations have been based on the Site plans as per 'Preferred Option 2'. It should be noted that the final design plans should be consulted before excavation works commence to verify if hot spotted materials require removal and/or relocating as part of the civil works.

As previously discussed, soil materials at BH02A, BH08A, BH10A, BH17A, BH18A and BH20A have exceeded the SAC for EIL/ESLs. It should be noted that the soils pose no risk to human health and are therefore suitable for reuse where no ecological receptors are present or at risk. The contaminated fill materials (exceeding EIL/ESLs) can be viewed within Appendix III – Sample Maps.

ADE has recommended a conservative approach for the remediation/management of the contaminated soils. The contaminated soil materials should be treated as a hotspot and excavated to the nearest 'clean' sampling point (refer to Appendix III – Sample Maps). The contaminated soils should can then be reused

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onsite (if practicable) at areas where no ecological receptors are present or removed offsite to a licensed landfill facility. In both scenarios, the remediation and management of the contaminated soils should be outlined within a Site specific Remediation Action Plan (RAP). The RAP shall also include an appropriate scope of validation works sufficient to demonstrate that the Site has been successfully remediated.

Further soil assessment may be undertaken, with the aim of reducing the hotspot area. ADE would recommend step out sampling from the initial hotspot location to minimise the quantity of contaminated soil that would require removing, specifically for identified contaminants that exceeded the EIL/ESLs. Only one (1) sample (BH14D) was initially analysed in order to determine the ACLs. ADE would recommend additional collection of samples for the analysis of the physicochemical properties (ph, CEC, % clay), in order to better determine the ACLs throughout the Site.

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10. Groundwater Discussion

Due to the presence of the dry cleaning business hydraulically upgradient of the Site, an assessment of groundwater for contaminants of concern, in particular VHCs was attempted at BH10 (refer to Appendix III – Sample Maps). However, weathered shale was encountered at approximately 4 m BGL at BH10 which limited progress and resulted in refusal at the borehole whilst using a trailer mounted drill rig. No groundwater was observed during the drilling process at BH10.

ADE reviewed the DP (2013) report, which advanced five (5) boreholes (labeled Borehole 6-10) to a depth of 8 m BGL across the southern section (refer to Section 2.5) of the Site, within the two main car parks (refer to Figure 4). Borehole 7 (DP 2013) was located within 5 m of BH10 of this investigation and was advanced to 8 m BGL (refer to Figure 4), no groundwater was observed during the drilling process. Borehole 6 was located along the western boundary of the Site and was hydraulically down gradient from Borehole 7 and BH10. Groundwater was encountered at Borehole 6 and was adequately sampled/analysed, with results demonstrating that all contaminants of potential concern (including VHCs) were below the groundwater investigation levels apart from Copper, Nickel and Zinc. The exceedances of Copper, Nickel and Zinc were not considered to pose a risk to human health and/or ecological receptors. As per the DP (2013) report *“Elevated levels of heavy metals, particularly copper, nickel and zinc are known to be present in the groundwater in urbanised areas. It is considered that the detected heavy metal levels are most probably representative of the regional background levels”*.

The following table provides the Reduced Levels (RLs) in m Australian Height Datum (m AHD). The table demonstrates the heights of the boreholes at ground level, final depth of borehole and depth of the standing water level.

Table 12 - Approximate RLs and Standing Water Levels

Borehole No.	Consultant	Ground Level (m AHD)	Depth of Borehole (m AHD)	Depth to Standing Water Level (m AHD)
Borehole 6	DP	89.7	81.7	85.4
Borehole 7	DP	95	87	-
BH10	ADE	95*	91	-

*BH10 was not surveyed as part of the ADE investigation. However, considering the relatively similar locality of Borehole 7 (DP 2013); ADE has assumed a similar height datum of 95 m AHD.

There is an apparent gradient difference in ground level of Borehole 7 and BH10 (95 m AHD) compared to Borehole 6 (89.7 m AHD), approximately 5.3 m. The depth of the standing water level at Borehole 6 was recorded at 85.4 m AHD and the final depth of Borehole 7 was 87 m AHD. This difference of 1.6 m may provide an explanation why groundwater was not encountered at Borehole 7 or BH10.

Underlying bedrock encountered within the Site varied from Shale within the eastern portion of the Site and Sandstone within the western portion of the Site. It is expected that groundwater levels would be expected to vary seasonally and that perched groundwater may occur (especially after large rainfall events) over the top of the confined Shale. However, BH10 was advanced to 4 m BGL where weathered shale was encountered which would be expected to occur above the confined Shale, as such the final depth of BH10 would suggest that if perched groundwater were to exist it would have been encountered.

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Borehole 6 (DP 2013) was located approximately 100 m hydraulically down gradient of the dry cleaning business. Although no VHCs were detected within the groundwater at Borehole 6, the slow hydraulic conductivity of shale (estimated at 1×10^{-4} m/day) would suggest that if VHCs were present within groundwater that they simply have not reached Borehole 6 at the time of the DP (2013) investigation and sampling/analysis. As such, the potential risk of VHCs within groundwater and the subsequent vapour intrusion of volatiles cannot be discounted.

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11. DATA QUALITY ASSESSMENT

In order to carry out the assessment of the data acquired in the course of the investigation, the US EPA Guidelines including, but not limited to the 'Guidance on Assessing Quality Systems' (2003) and 'Guidance on Systematic Planning using the Data Quality Objectives Process ' (2006) (refer to Section 14 – References) were used.

The Guidelines provide general strategy on assessing data quality criteria and performance specifications for decision making. The following is the output from most of the steps of the Data Quality Assessment (DQA) Process provided in the Guidelines. The sub-steps recommended are given in *italic*.

11.1 Data Review

Quality control reports from the laboratories subcontracted for sample analyses were reviewed. The data included laboratory blank samples, duplicate samples, control samples, spiked samples and method blanks.

The review of the QA/QC program was conducted in accordance with the items recommended by the NSW EPA to be included in the consultants' reports. Some additional recommendations from the US EPA methodology referred to by AS 4482.1 were also followed.

11.2 COC

Australian Standard AS 4482.1 defines the Chain-Of-Custody (COC) documentation as the link in the transfer of samples between the time of collection and arrival at the laboratory.

The COC utilised by ADE included the items recommended by the Standard:

- a) Name of person transferred the samples;
- b) Name of person who received the samples;
- c) Date the samples were collected;
- d) Date the samples were received at the laboratory; and
- e) Name and contact details of client.

The Sample Receipt Advice documentation was also supplied by Eurofins I MGT where time of samples received was specified.

11.3. Record Of Holding Times

The objective was to ascertain the validity of the analysis results based on the holding time of the samples from the time of collection to the time of analysis. The technical holding time criteria for soil samples are summarised in Table 13.

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Table 13 – Recommended preservation and holding time for soil and water samples.

Analyte	Recommended Preservation	Recommended Holding Time	Time taken to from field works to laboratory submission
Metals (excluding Hg & Cr VI)	No preserve required	6 months	< 2 days
Mercury or Chromium VI	4 ⁰ C	28 days	< 2 days
SVOCs (including OCP/OPPs, PAHs, PCBs)	4 ⁰ C	14 days	< 2 days
TPH (C6-C9) plus BTEX	4 ⁰ C, zero headspace	14 days	< 2 days
TPH/TRH (C10-C40)	4 ⁰ C	14 days	< 2 days
Polychlorinated Biphenyls	6 ⁰ C	28 days	< 2 days

Holding times from collection of the soil samples to submission to Environmental and OH&S Laboratories (EOHS) and Eurofins MGT meet the recommended criteria, with all soil samples submitted to the laboratory within two days and analysed within seven days from the time of collection (refer to Appendix VII – Analytical Reports).

11.4. Analytical Methods Used

Refer to Appendix VII – Analytical Reports for the specification of analytical methods used by the laboratories.

11.5. Laboratory Accreditation for Analytical Methods Used

Refer to Appendix VII – Analytical Reports for the details of laboratory accreditations for analytical methods used.

11.6. Detection Limits/Practical Quantification Limits

The smallest amount of a substance that can be detected by EOH&S Laboratory above the noise in a procedure and within a stated confidence level is the detection limit. Current practice identifies several detection limits. These are the instrument detection limit (IDL), the lower level detection (LLD), the method detection limit (MDL) and the practical quantitation limit (PQL).

The relationship among these levels is approximately IDL : LLD : MDL : PQL = 1 : 2 : 4 : 10. Refer to Appendix VII – Analytical Reports for the list of PQLs provided by EOH&S Laboratory. When dilution of a sample is involved in the sample preparation, the method detection limit is adjusted by the dilution factor.

11.7. Field QA/QC

A summary of the QA/QC samples collected during field works is provided in the following Table 14.

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Table 14 – Summary of field QA/QC samples collected

Field QA/QC	Frequency	Sample details
Blind replicate samples	1 per 20	10625-BR1 (Soil), is a blind replicate of sample 10625-BH07C, collected on the 16.06.2016.
Split (triplicate) samples	1 per 20	10625-SP1 (Soil), is a split replicate of sample 10625-BH07C, collected on the 16.06.2016.
Trip blank	1 per sampling event	10625-Trip Blank-1 (Soil), is a trip blank sample used during the sampling event on the 15.06.2016.
Trip spike	1 per sampling event	10625-Trip Spike-1 (Soil), is a trip blank sample used during the sampling event on the 15.06.2016.
Rinsate	1 per sampling event	10625-RINSATE 1 was collected on the 15.06.16.

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11.8. Summary of Data Quality Indicators

A summary of QA/QC results compared to the DQI's is provided in Table 15 below. Tables with results of QA/QC samples and relative percentage differences (RPD) are presented in Appendix II – Results Tables.

Table 15 - Summary of DQI's

Precision
Precision is a measure of agreement among replicate measurements of the same property, made under prescribed similar conditions. <u>Blind Replicate Sample:</u> - One (1) blind replicate samples were collected to determine the variability of the sampling process. Samples were collected simultaneously from the same source and under identical conditions as the original sample. - Australian Standard 4482.1 specifies the typical RPD values for blind replicate samples to be 30% - 50%. Combining the AS acceptance criteria with the recommendations of the USEPA methodology, the control limits described below were used. - Considering the heterogeneous nature of the material within the site the following criteria was considered appropriate: - A control limit of 50% for the RPD for original and blind replicate sample values greater than or equal to 5x the Detection Limit (DL), - A control limit of $\pm$ the DL if either the sample or duplicate value is less than 5x the DL. - If both samples values are less than the DL, the RPD is not calculated. Appendix II – Results Tables provides the Relative Percent Difference (RPD) values for the original and blind replicate samples collected during the soil investigations. Where condition 2 or 3 was applicable, an estimated level of agreement between the results was provided and, where appropriate, an RPD value calculated. QA/QC Table 1 in Appendix II show the blind replicate samples in comparison to primary samples. Blind Replicate (BR) sample showed 16 valid values and 2 invalid values. <u>Laboratory Split Samples:</u> - One (1) split sample was analysed to measure the variability between laboratories. - The split sample was submitted for analysis at Eurofins, MGT. These were compared to the original samples analysed by Environmental and OH&S Laboratory. QA/QC Table 2 in Appendix II shows the split samples in comparison to primary samples. The assessment variability of the split samples showed 32 valid values and 0 invalid values. Overall, precision has been deemed acceptable.

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Table 15 - Continued...

Accuracy

Accuracy is a measure of the closeness of an individual measurement to the true value. Accuracy is determined by analysing a reference material of known pollutant concentration or by re-analysing a sample to which a material of known concentration or amount of pollutant has been added. Accuracy was also evaluated by reviewing the values of percentage recoveries reported in spike samples.

Trip Blank Results:

- One trip blank sample was prepared prior to the soil sampling event on the 15.06.2016 and was stored with the investigative samples throughout the sampling event. The trip blank sample was then packaged for shipment with the other representative samples and submitted for analysis. Trip blanks are used to determine if samples were contaminated during storage and/or transportation back to the laboratory (a measure of sample handling variability resulting in positive bias in contaminant concentration)
- Trip blank samples and results are presented in **QA/QC Table 3 of Appendix II.**
- **The trip blank sample analysed returned results below the detection limit, resulting in 5 valid values and 0 invalid values.**

Trip Spike Results:

- One spiked BTEX sample was analysed in order to estimate the loss of volatile compounds during the storage, handling and transportation of samples collected in the field during the sampling event on the 15.06.2016.
- The samples were prepared by Environmental and OH&S Laboratory prior to the field work and spiked with 40 µg/L of BTEX. The samples were stored, handled, and transported in exactly the same way as the field samples. The percent recoveries for BTEX from both sampling events are provided in Appendix II.
- Trip spike samples and results are presented in **QA/QC Table 4 of Appendix II.**
- **The trip spike sample analysed returned results within the adopted criteria (60-140% of the original concentration), resulting in 5 valid values and 0 invalid values.**

Spike and Surrogates:

- According to the US EPA methodology, it is recommended to consider the following actions based on the spike recovery results for inorganic analytes:
- If the spike recovery is >125% and the reported sample results are less than the Practical Quantitation Limit (< PQL), the data is acceptable for use,
- If the spike recovery is >125% or <75% and the sample results are > PQL, qualify the data for these samples as “estimated”,
- If the spike recovery falls within the range of 30-74% and the sample results are < PQL, qualify the data for these samples as “estimated and may be inaccurate or imprecise”,
- If spike recovery results fall <30% and the sample results are < PQL, qualify the data for these samples as “unusable”.
- Environmental and OH&S Laboratory limit of 70-130% for inorganics / metals, and 60-140% for

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organics was used in order to validate matrix spikes and laboratory control samples. The laboratory limit of 50-150% was implemented in order to validate surrogate recoveries for organic

- analytes. These criteria, generally, conform to the USEPA recommended standards.
- **Analysis of spikes and surrogates showed 511 valid values and 0 invalid value.**

Laboratory Duplicates:

- Duplicate sample determinations were provided by the laboratories to demonstrate acceptable method precision at the time of analysis. Duplicates are, generally, analysed at a frequency of 1 for every 10 samples. AS 4482.1 provides an acceptable range of the Relative Percent Difference (RPD) values up to 50% for quality control samples.
- **Analysis of laboratory duplicates showed 330 valid values and 2 invalid values of RPD.**

Laboratory Blanks:

- The assessment of blank analysis results was to determine the existence and magnitude of contamination resulting from laboratory activities.
- The assessment of blank analysis results was carried out in order to determine the existence and magnitude of contamination resulting from laboratory activities. No contaminants were found in the blanks analysed by the laboratory.
- **Analysis of laboratory blanks showed 260 valid values and 0 invalid values.**

Rinsate Samples:

- One rinsate sample was collected during the decontamination of the sampling equipment was analysed per sampling event. The purpose of this analysis was to determine whether the decontamination procedures were performed correctly and to assess the possibility of cross-contamination during the sampling procedures.
- **Analysis results of the rinsate sample showed 32 analytes to be valid (<DL) and 0 to be invalid.**

Rinsate samples and results are presented in **QA/QC Table 5 of Appendix II.**

Representativeness

Representativeness is a measure of the degree to which data accurately and precisely represent a characteristic of a population parameter at a sampling point or for a process condition or environmental condition.

It was verified that each point in space had an equal probability of being selected for sampling.

The Site investigation revealed that soil samples collected were representative of the stratigraphic formations from which they were collected. It appears that measurements of the population of interest were made in such a manner that the resulting data appropriately reflect the environment investigated.

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Table 15 - Continued...

Comparability
Comparability is the qualitative term that expresses the ability to fairly compare sample test results taken from the same site at different times. ADE's field personnel assigned for the project had considerable experience in the environmental investigations of contaminated sites. Training records of the personnel are kept in the Quality Assurance Manual ADE-QAM-III. Sampling and measurements in the field were performed by the same personnel during the field stage of the investigation. Standard ADE's environmental investigation procedures were used by the personnel in the field. No deviations from the sampling procedures were observed by the site supervisor during the fieldwork. Therefore, none or negligent bias in the data collection was expected. The spatial and temporal changes on the Site during this period did not have significant influence in order to bias the data due to the environmental dynamics. Units in which the data was measured in the field and the laboratory analysis had the same metrics.
Completeness
<u>Document Completeness</u> In the author's opinion, the documentation used in the course of the investigation were completed to satisfactory standards, including: • Field observation logs, • Chain of Custodies, • Orders, • Laboratory accreditation, and • Laboratory reports. <u>Data Completeness</u> Please see the following table, providing a summary of the data validity.

11.9. QA/QC Data Evaluation

The principles DQIs are precision, accuracy, representativeness, comparability, and completeness referred to by the acronym PARCC. Precision and accuracy are the quantitative measures, representativeness and comparability are qualitative, and completeness is a combination of both quantitative and qualitative measures. In the following, Table 16 summarises the DQO reconciliation.

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Table 16 - Summary of DQO reconciliation.

QA/QC Item	DQO Criteria	Valid Values	Not Valid Values	Completeness	Conclusion
Laboratory duplicate samples	95%	330	2	99.40%	Acceptable
Laboratory blank samples	100%	260	0	100.00%	Acceptable
Laboratory spike/surrogate recoveries	95%	511	0	100.00%	Acceptable
Laboratory control (split) sample	75%	32	0	100.00%	Acceptable
Blind replicate samples	75%	16	2	88.89%	Acceptable
Rinsate Samples	75%	32	0	100.00%	Acceptable
Trip blank sample	95%	5	0	100.00%	Acceptable
Spike BTEX	75%	5	0	100.00%	Acceptable
Overall Completeness:	95%	1191	4	99.67%	Acceptable

In total, four (4) 'Not Valid' results were recorded during the data quality assessment. ADE considers the four (4) 'Not Valid' results to be associated with the duplicate and replicate soil samples (Duplicates and Blinds). ADE considers that this is likely due to the heterogeneous nature of the infill soil material. Due to the heterogeneous nature of the materials, variation in chemical composition is likely. Considering this, it is expected that some non-valid QAQC samples will occur.

The ratio of the valid data to the total number of the analyses conducted in the QA/QC program yielded 99.67%. As such, the data collected in the course of the investigation meets the target result for the completeness of the QA/QC program stated in the DQOs (95%).

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12. CONCLUSIONS

Based on a review of the available desktop search data, Site observations during the DSI, results of analytical reports and the proposed future development of the Site that will include a new mixed use precinct with community buildings, boutique shops, cafes/restaurants and a below ground supermarket, ADE concludes that:

- The concentrations of chemical contamination detected within fill material and underlying VENM at the Site meet the adopted SAC with regards to HIL/HSLs, Management Limits and do not pose an unacceptable risk to human health;
- The concentrations of chemical contamination detected within overlying topsoil/fill material at the following sampling locations; BH02, BH08, BH10, BH17, BH18 and BH20 within the Site do not meet the adopted SAC, with regards to EIL/ESLs and pose an unacceptable risk to ecological receptors (refer to Appendix III – Sample Maps);
- No asbestos containing materials were observed or detected within fill materials and underlying VENM within any of the boreholes/test pits during the field works;
- Following a review of the results for soils within Site, ADE considers that the client does not have a Duty to Report Contamination to the NSW EPA regarding on-site contamination of soils;
- After consulting the 'Preferred Option 2' designs supplied to ADE by the client, it was observed that the basement depth of the proposed development would be approximately 15 m BGL. ADE considers that due to the depth of the proposed basement car park, groundwater may be encountered during the main civil works to be undertaken as part of the development of the Lindfield Community Hub; and
- At the time of this report a hazardous building material survey report was not available for the remaining low density residential properties within the northern section of the Site or the standalone single car garage within the northern portion of the southern section of the Site. It is recommended that prior to any demolition works; a hazardous building material survey is undertaken and consulted before all demolition works as per relevant codes of practice so as not to contaminate the Site.

12.1. Contamination Status of the Site

Based on the findings of the DSI, the concentrations of the potential contaminants within the soil samples collected were below the assessment criteria with regards to human health. However, several samples returned concentrations that exceed the ecological assessment criteria and have been highlighted as potential risks to ecological receptors. There also remain uncertainties as to the quality of the groundwater at Site, in particular along the eastern boundary adjacent to the dry cleaning business and within the southern portion adjacent to the electrical substation. Taking this into the consideration, the Site is not suitable for the proposed future land use in its current state.

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ADE considers that the Site can be made suitable for the proposed developed, subject to further groundwater assessment and the development of a Remediation Action Plan (RAP) in order to limit risk to ecological receptors from the identified contamination present within the Site.

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13. RECOMMENDATIONS

ADE has made the following recommendations:

- A review of the 'Preferred Option 2' designs supplied to ADE by the client (refer to Appendix IX – Design Plans) indicates that basement of the building may intercept groundwater within the Site. As groundwater was not encountered during the investigative works, ADE recommends that a groundwater assessment is undertaken. This would involve the installation of a groundwater monitoring well along the eastern boundary adjacent to the dry cleaning business, southern portion of the adjacent to the electrical substation and subsequent sampling of the newly installed groundwater monitoring well including sampling of the existing groundwater well on Site (Boreholes 6 – DP 2013 Report) if it can be found;
- A Site specific RAP should be developed for the Site. The RAP will detail the works which are essential to remediate the Site to a standard suitable for the proposed land use and will provide an appropriate scope of validation works sufficient to demonstrate that the Site has been successfully remediated. At this stage the RAP will target contaminated soils at the following sample locations; BH02, BH08, BH10, BH17, BH18 and BH20 (refer to Appendix III – Sample Maps) which have demonstrated exceedances of the SACs with regards to EIL/ESLs;
- The RAP should also address the potential for further soil assessment, with the aim of reducing the hotspot area (refer to Appendix III – Sample Maps). ADE would recommend step out sampling from the initial hotspot location to minimise the quantity of contaminated soil that would require removing, specifically for identified contaminants that exceeded the EIL/ESLs. ADE would also recommend additional collection of samples for the analysis of the physicochemical properties (ph, CEC, % clay), in order to better determine the ACLs throughout the Site;
- The RAP may also extend to groundwater contamination depending on the conclusions of the groundwater assessment; and
- Prior to any demolition works, the hazardous materials building survey of the low density residential properties remaining in the northern section of the Site and the standalone single car garage within the northern portion of the southern section of the Site should be undertaken.

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14. LIMITATIONS

This report has been prepared for use by the client who has commissioned the works in accordance with the project brief only, and has been based on information provided by the client. The advice herein relates only to this project and all results, and conclusions made should be reviewed by a competent and experienced person with experience in environmental investigations, before being used for any other purpose. A.D. Envirotech Australia Pty Ltd (ADE) accepts no liability for use or interpretation by any person or body outside the consent authority. This report should not be reproduced or amended in any way without prior approval by the client or ADE and should not be relied upon by any other party, who should make their own independent enquiries.

The extent of sampling of soils and subsequent analysis has been necessarily limited and has been targeted towards areas where contamination is considered to be most likely based on the knowledge of the site history and visual observation. This approach maximises the probability of identifying contaminants, however, it may not identify contamination which occurs in unexpected locations or from unexpected sources.

Further, soils rock and aquifer conditions are often variable, resulting in non-homogenous contaminant distributions across a site. Contaminant concentrations have been identified at chosen sample locations, however, conditions between samples locations can only be inferred on the basis of the estimated geological and hydrogeological conditions and the nature and extent of indentified contamination. Boundaries between zones of variable contamination are often indistinct and have been interpreted based on available information and the application of professional judgement. The accuracy with which the subsurface conditions have been characterised depends on the frequency and methods of sampling and the uniformity of subsurface conditions and is therefore limited by the scope of works undertaken.

This report does not provide a complete assessment of the environmental status of the site and it is limited to the scope defined herein.

Should information become available regarding conditions at the site including previously unknown sources of contamination, ADE reserves the right to review the report in the context of the additional information.

ADE accepts no liability for the unlawful disposal of waste materials from any site. ADE does not accept any responsibility for the material tracking, loading, management, transport or disposal of waste from the site.

ADE's professional opinions are based upon its professional judgement, experience, training and results from analytical data. In some cases further testing and analysis may be required, thus producing different results and/or opinions. ADE has limited investigation to the scope agreed upon with its client.

ADE has used a degree of care and skill ordinarily exercised in similar investigations by reputable member of the Environmental Industry within Australia. No other warranty, expressed or implied, is made or intended.

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- National Environmental Protection Council (NEPC) National Environmental Protection (Assessment of Site Contamination) Measure 1999, 2013 Amendment (NEPM 2013).
- NSW EPA Sampling Design Guidelines (1995).
- NEPM (2013) "Schedule B(1) Guideline on the Investigation Levels for Soil and Groundwater".
- NSW EPA Draft Environmental Guidelines: Solid Waste Landfill, Second Edition, 2015 (NSW EPA 2015).
- NSW Office of Environment and Heritage (OEH) Guidelines for Consultants Reporting on Contaminated Sites (OEH 2011).
- NSW EPA Sampling Design Guidelines, (NSW EPA 1995).
- NSW EPA Waste Classification Guidelines Part 1: Classifying Waste (NSW EPA 2014).
- The Enhealth Guidelines for Asbestos in the Non-Occupational Environment (2005).

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APPENDIX I – PHOTOGRAPHS

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Photograph 1. Western portion of the Southern section of the Site, (facing south), showing sample location of at BH15.



Photograph 2. Soil conditions (fill material) encountered (brown clayey loam with gravels and asphalt pieces) at BH15 from approximately 0.05-0.3 m BGL.

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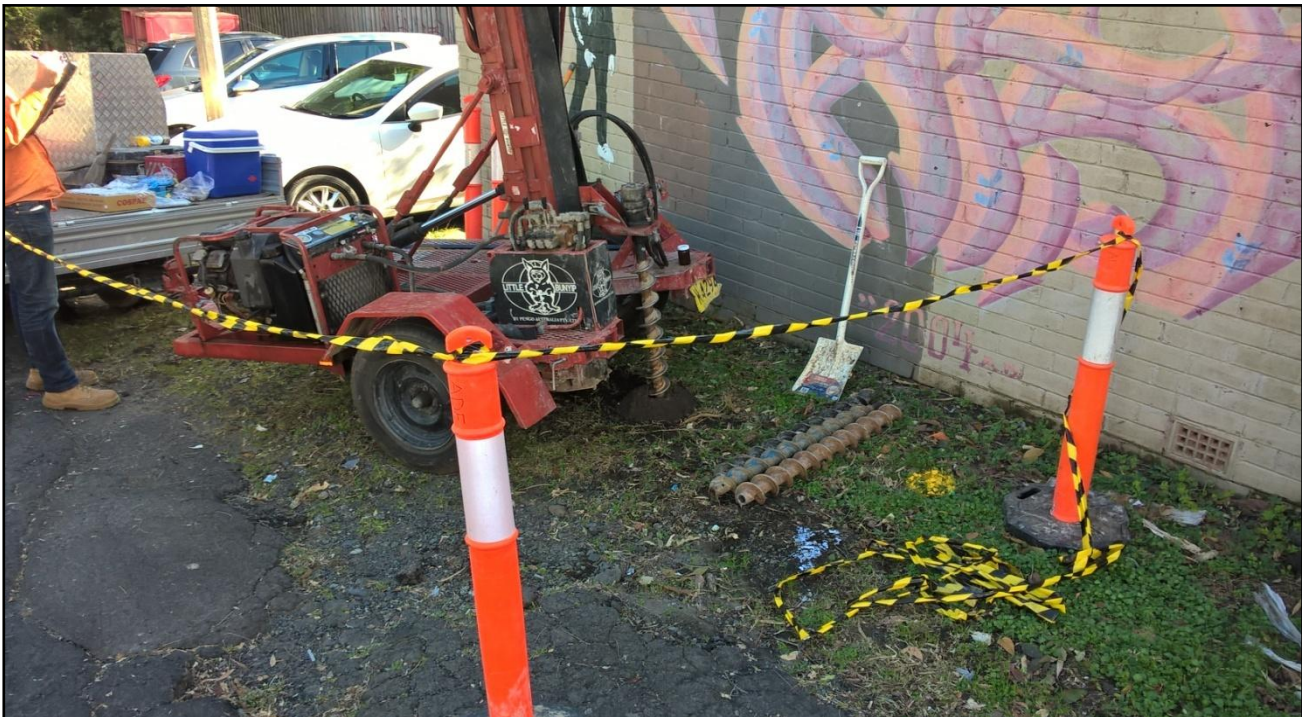
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Photograph 3. Soil conditions (VENM) encountered (orange brown clay) at BH15 from approximately 0.3-1.0 m BGL.



Photograph 4. Northern portion of the Southern section of the Site, (facing north west), showing sample location of at BH10.

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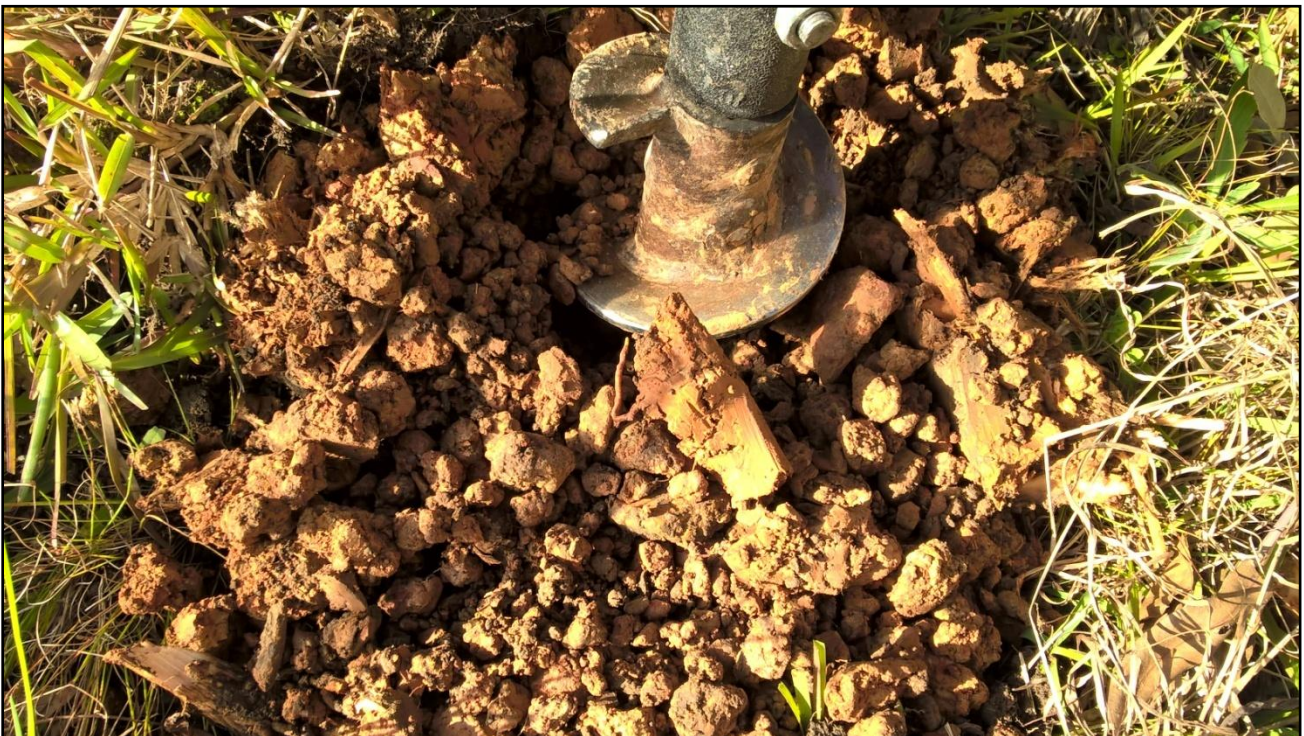
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Photograph 5. South western portion of the Northern section of the Site, (facing south), showing sample location of at BH07.



Photograph 6. Soil conditions (VENM) encountered (orange brown clay) at BH07 from approximately 0.3-1.0 m BGL. Sampled 10625-BH07C, 10625-BR1 and 10625-SP1

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APPENDIX II – RESULTS TABLE

New South Wales Office:	Queensland Office:	Telephone:	Internet:	ABN:
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Exposure Information - 8 m to 12 m (BBL-A) [mg/kg] ²⁴		Exposure Information - 1 m to 12 m (BBL-A) [mg/kg] ²⁴		Exposure Information - 1 m to 12 m (BBL-A) [mg/kg] ²⁴		Exposure Information - 8m (BBL-A) [mg/kg] ²⁴		Management Limits - Residential, parkland and public open space [mg/kg] _{1,2}		Correct Contact (BBL-A) [mg/kg] ²⁴		Residential Maintenance Worker (Shedule Treaty) 8 m to 12 m [mg/kg]		Residential Maintenance Worker (Shedule Treaty) 1 m to 12 m [mg/kg]		Residential Maintenance Worker (Shedule Treaty) 1 m [mg/kg]		Integrated Investigation Levels (BBL) - Urban Residential/Public Open Space		Integrated Investigation Levels (BBL) - Urban Residential/Public Open Space	
Sample ID	Concentration	Date	Depth (m BCL)	PH																	
10625-BH01A	AKC	18.08.16	0.0-0.3	0.0																	
10625-BH02A	AKC	18.08.16	0.0-0.3	0.0																	
10625-BH03A	AKC	18.08.16	0.0-0.3	0.1																	
10625-BH04A	AKC	18.08.16	0.0-0.3	0.0																	
10625-BH05A	AKC	18.08.16	0.0-0.3	0.0																	
10625-BH06A	AKC	18.08.16	0.0-0.3	0.0																	
10625-BH07A	AKC	18.08.16	0.0-0.3	0.1																	
10625-BH08A	AKC	18.08.16	0.0-0.3	0.1																	
10625-BH09A	AKC	18.08.16	0.0-0.3	0.0																	
10625-BH10A	AKC	18.08.16	0.0-0.3	0.0																	
10625-BH10C	AKC	18.08.16	1.0	0.0																	
10625-BH10D	AKC	18.08.16	1.5	0.1																	
10625-BH11A	AKC	18.08.16	0.0-0.3	0.4																	
10625-BH12A	AKC	18.08.16	0.0-0.3	2.3																	
10625-BH14A	AKC	18.08.16	0.0-0.3	0.0																	
10625-BH15A	AKC	18.08.16	0.0-0.3	0.1																	
10625-BH16A	AKC	18.08.16	0.0-0.3	0.0																	
10625-BH17A	AKC	18.08.16	0.0-0.3	0.0																	
10625-BH18A	AKC	18.08.16	0.0-0.3	0.0																	
10625-BH19A	AKC	18.08.16	0.0-0.3	0.0																	
10625-BH20A	AKC	18.08.16	0.0-0.3	0.1																	
10625-BH21A	AKC	18.08.16	0.0-0.3	0.0																	
10625-BH22A	AKC	18.08.16	0.0-0.3	0.1																	
10625-BH23A	AKC	18.08.16	0.0-0.3	0.0																	
10625-BH24A	AKC	18.08.16	0.0-0.3	0.0																	
10625-BH25A	AKC	18.08.16	0.0-0.3	0.0																	
10625-BH7C	AKC	18.08.16	1.0	0.1																	
10625-BH11C	AKC	18.08.16	1.0	0.0																	
10625-BH11D	AKC	18.08.16	1.5	0.0																	
10625-BH20C	AKC	18.08.16	1.0																		

Cell highlighted in bold above the laboratory detection limit

ADE - A.D. Envirotech Australia Pty Ltd

TB - Trip Manager

TS - Trip Spike

1 - file assessment criteria selected

a) Health Investigation Levels (HIL) for Residential with garden/accessible and (home grown produce <10% fruit and vegetable

b) Health Screening Levels (HSL) for low-high density residential.

2 - Carcinogenic PAHs: HIL is based on the 8 carcinogenic PAHs and their Toxic Equivalency Factors

3 - Most conservative criteria adopted outlined for via vapour and direct contact exposure pathways. Values adopted for 'Sands' where applicable for screening purposes.

4 - Management Limits for TPH fractions F1-F4 in soil, as per Table 1 B(7) of NEPM 2013.

5 - Most conservative criteria adopted for screening purposes i.e. Coarse soil texture.

Summary of collated results from soil data at Lindfield Community Hub, Lindfield NSW

	TRH (without silica gel clean-up)				TPH (with silica gel clean-up)				BTEX				Metals								PAHs																					
	C6-C10 (F1)	C10-C16 (F2)	C16-C34 (F3)	C34-C40 (F4)	C6-C10 (F1)	C10-C16 (F2)	C16-C34 (F3)	C34-C40 (F4)	Benzene	Toluene	Ethylbenzene	Xylenes (Total)	Arsenic	Cadmium	Chromium (IV)	Copper	Lead	Mercury	Nickel	Zinc	Acenaphthene	Acenaphthylene	Anthracene	Benzo[a]anthracene	Benzo[a]pyrene	Benzo[b]fluoranthene	Benzo[k]fluoranthene	Chrysene	Dibenzo[a,h]anthracene	Fluoranthene	Fluorene	Indeno[1,2,3-cd]pyrene	Naphthalene	Phenanthrene	Pyrene	Carcinogenic PAHs (BaP TEQ) ²	Total PAHs					
Residential Land-use (HIL-A) (mg/kg) ^{1a}	-	-	-	-	-	-	-	-	-	-	-	-	100	20	100	6,000	300	40	400	7,400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	300			
Vapour Intrusion - 0 m to <1 m (HSL-A) (mg/kg) ^{1b,3}	45	110	-	-	45	110	-	-	0.5	160	55	40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
Vapour Intrusion - 1 m to <2 m (HSL-A) (mg/kg) ^{1b,3}	70	240	-	-	70	240	-	-	0.5	220	-	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
Vapour Intrusion - 2 m to <4 m (HSL-A) (mg/kg) ^{1b,3}	110	440	-	-	110	440	-	-	0.5	310	-	95	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
Vapour Intrusion - 4m+ (HSL-A) (mg/kg) ^{1b,3}	200	-	-	-	200	-	-	-	0.5	540	-	170	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
Management Limits - Residential, parkland and public open space (mg/kg) ^{4,5}	700	1,000	2,500	10,000	700	1,000	2,500	10,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
Direct Contact (HSL-A) (mg/kg) ^{1b}	4,400	3,300	4,500	6,300	4,400	3,300	4,500	6,300	100	14,000	4,500	12,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
Intrusive Maintenance Worker (Shallow Trench) 0 m to <2 m (mg/kg) ³	-	-	-	-	-	-	-	-	77	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
Intrusive Maintenance Worker (Shallow Trench) 2 m to <4 m (mg/kg) ³	-	-	-	-	-	-	-	-	160	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
Intrusive Maintenance Worker (Shallow Trench) 4 m+ (mg/kg) ³	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
Ecological Investigation Levels (EILs) - Urban Residential/Public Open Space	-	-	-	-	-	-	-	-	-	-	-	-	110	-	222	108	1100	-	40	160	-	-	-	-	-	-	-	-	-	-	-	170	-	-	-	-	-					
Ecological Screening Levels (ESLs) - Urban Residential/Public Open Space	180	120	300	2,800	-	-	-	-	50	85	70	105	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
Sample I.D.	Consultant	Date	Depth (m BGL)	PID																																						
10625-BH01A	ADE	16.06.16	0.2-0.3	0.0	<35	<50	<100	<100	-	-	-	-	<0.5	<0.5	<1	<3	2.3	<0.3	13.0	25.0	110.0	<0.2	<10	130	<0.3	<0.3	0.4	0.8	1.2	1.4	1.0	0.5	0.8	<0.3	1.3	<0.3	0.9	<0.3	0.4	1.3	1.9	11.5
10625-BH02A	ADE	16.06.16	0.2-0.3	0.0	<35	<50	<100	<100	-	-	-	-	<0.5	<0.5	<1	<3	4.0	<0.3	170.0	39.0	21.0	<0.2	120.0	31.0	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.3	<0.3	<0.3	<0.3	0.3	0.7	4.8
10625-BH03A	ADE	16.06.16	0.2-0.3	0.1	<35	<50	<100	<100	-	-	-	-	<0.5	<0.5	<1	<3	15.0	<0.3	23.0	16.0	14.0	<0.2	<10	<5	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.7	4.8
10625-BH04A	ADE	16.06.16	0.2-0.3	0.0	<35	<50	<100	<100	-	-	-	-	<0.5	<0.5	<1	<3	11.0	<0.3	17.0	9.2	24.0	<0.2	<10	<5	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.7	4.8
10625-BH05A	ADE	16.06.16	0.2-0.3	0.0	<35	<50	<100	<100	-	-	-	-	<0.5	<0.5	<1	<3	14.0	<0.3	22.0	6.1	46.0	<0.2	<10	<5	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.7	4.8
10625-BH06A	ADE	16.06.16	0.2-0.3	0.0	<35	<50	<100	<100	-	-	-	-	<0.5	<0.5	<1	<3	27.0	<0.3	42.0	14.0	82.0	<0.2	11.0	48.0	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.7	4.8
10625-BH07A	ADE	16.06.16	0.2-0.3	0.1	<35	<50	<100	<100	-	-	-	-	<0.5	<0.5	<1	<3	14.0	<0.3	23.0	20.0	64.0	<0.2	<10	51.0	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.7	4.8
10625-BH08A	ADE	16.06.16	0.2-0.3	0.1	<35	<50	<100	<100	-	-	-	-	<0.5	<0.5	<1	<3	14.0	<0.3	30.0	22.0	110.0	<0.2	11.0	490.0	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.7	4.8
10625-BH09A	ADE	16.06.16	0.2-0.3	0.0	<35	<50	<100	<100	-	-	-	-	<0.5	<0.5	<1	<3	9.3	<0.3	22.0	36.0	190.0	<0.2	13.0	200.0	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.7	4.8
10625-BH10A	ADE	16.06.16	0.2-0.3	0.0	<35	<50	<100	<100	-	-	-	-	<0.5	<0.5	<1	<3	11.0	<0.3	38.0	110.0	490.0	0.9	56.0	400.0	<0.3	<0.3	1.2	0.7	0.6	0.7	0.4	<0.3	0.7	<0.3	1.7	<0.3	0.4	<0.3	1.2	1.4	1.1	10.8
10625-BH10C	ADE	16.06.16	1.0	0.0	<35	<50	<100	<100	-	-	-	-	<0.5	<0.5	<1	<3	23.0	<0.3	63.0	67	69.0	<0.2	15.0	42.0	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.7	4.8	
10625-BH10D	ADE	16.06.16	1.5	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
10625-BH11A	ADE	16.06.16	0.2-0.3	0.4	<35	<50	<100	<100	-	-	-	-	<0.5	<0.5	<1	<3	8.5	<0.3	6.6	5.5	<10	<0.2	<10	25.0	<0.3	<0.3	<0.3	<0.3	<													

m BGL - metres below ground level

1 - Site assessment criteria adopted from the 'National Environmental Protection (Assessment of Site Contamination) Measure 1999, 2013 Amendment.

a) Health Investigation Levels (HIL) for Residential with garden/accessible soil (home grown produce <10% fruit and vegetable intake (no poultry)), also includes childcare centres, preschools and primary schools.

b) Health Screening Levels (HSL) for Low-high density residential.

2 - Carcinogenic PAHs: HIL is based on the 8 carcinogenic PAHs and their Toxic Equivalency Factor (TEFs) (potency relative to B(a)P). The B(a)P TEQ (Toxic Equivalency Quantity) is calculated by multiplying the concentration of each carcinogenic PAH in the sample by its B(a)P TEF.

3 - Most conservative criteria adopted outlined for via vapour and direct contact exposure pathways. Values adopted for 'Sand' where applicable for screening purposes.

4 - Management Limits for TPH fractions F1-F4 in soil, as per Table 1 B(7) of NEPM 2013.

5 - Most conservative criteria adopted for screening purposes i.e. Coarse soil texture.

Summary of collated results from soil data at Lindfield Community Hub, Lindfield NSW

	OCPs																				OPPs																				Other							
	Aldrin + Dieldrin	Chlordane	Endosulfan	DDT+DDE+DDD	Heptachlor	γ-BHC	β-BHC	δ-BHC	γ-BHC (lindane)	trans-chlordane	Endosulfan sulfate	endrin	endrin aldehyde	endrin ketone	heptachlor epoxide	hexachlorobenzene	methoxychlor	toxaphene	BoStar	chlorpyrifos	chlorpyrifos methyl	demeton-o	diazinon	dichlorvos	disulfoton	ethion	ethionprop	fenitrothion	fen硫fenthion	fen硫fenthion	Merphos	methyl azinphos	methyl parathion	mevinphos	naled	phorate	propox	ronnel	tokuthion	trichlorinate	tributylphosphorothioate	Phenol	PCBs (Total)	Conductivity (EC) (uS/cm)	Cation Exchange Capacity (meq/100g)	pH	Asbestos (AS 4964-2004)	Asbestos (500ml Sample)
Residential Land-use (HIL-A) (mg/kg) ^{1a}	6	50	270	240	6	-	-	-	-	-	-	-	-	-	-	-	-	20	-	160	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vapour Intrusion - 0 m to <1 m (HSL-A) (mg/kg) ^{1b,3}	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vapour Intrusion - 1 m to <2 m (HSL-A) (mg/kg) ^{1b,3}	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vapour Intrusion - 2 m to <4 m (HSL-A) (mg/kg) ^{1b,3}	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vapour Intrusion - 4m+ (HSL-A) (mg/kg) ^{1b,3}	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Management Limits - Residential, parkland and public open space (mg/kg) ^{4,5}	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Direct Contact (HSL-A) (mg/kg) ^{1b}	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Intrusive Maintenance Worker (Shallow Trench) 0 m to <2 m (mg/kg) ³	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Intrusive Maintenance Worker (Shallow Trench) 2 m to <4 m (mg/kg) ³	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Intrusive Maintenance Worker (Shallow Trench) 4 m+ (mg/kg) ³	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ecological Investigation Levels (EILs) - Urban Residential/Public Open Space	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ecological Screening Levels (ESLs) - Urban Residential/Public Open Space	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sample I.D.	Consultant	Date	Depth (m BGL)	PID	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.3	<0.2	<0.2	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.1	-	-	-	-	-	-	<0.1	-	-	-	<0.1	-	<0.6	-	-	-	ND	-				
10625-BH01A	ADE	16.06.16	0.2-0.3	0.0	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.3	<0.2	<0.2	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.1	-	-	-	-	-	<0.1	-	-	-	<0.1	-	<0.6	-	-	-	ND	-				
10625-BH02A	ADE	16.06.16	0.2-0.3	0.0	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.3	<0.2	<0.2	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.1	-	-	-	-	-	<0.1	-	-	-	<0.1	-	<0.6	-	-	-	ND	-				
10625-BH03A	ADE	16.06.16	0.2-0.3	0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.3	<0.2	<0.2	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.1	-	-	-	-	-	<0.1	-	-	-	<0.1	-	<0.6	-	-	-	ND	-				
10625-BH04A	ADE	16.06.16	0.2-0.3	0.0	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.3	<0.2	<0.2	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.1	-	-	-	-	-	<0.1	-	-	-	<0.1	-	<0.6	-	-	-	ND	-				
10625-BH05A	ADE	16.06.16	0.2-0.3	0.0	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.3	<0.2	<0.2	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.1	-	-	-	-	-	<0.1	-	-	-	<0.1	-	<0.6	-	-	-	ND	-				
10625-BH06A	ADE	16.06.16	0.2-0.3	0.0	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.3	<0.2	<0.2	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.1	-	-	-	-	-	<0.1	-	-	-	<0.1	-	<0.6	-	-	-	ND	-				
10625-BH07A	ADE	16.06.16	0.2-0.3	0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.3	<0.2	<0.2	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.1	-	-	-	-	-	<0.1	-	-	-	<0.1	-	<0.6	-	-	-	ND	-				
10625-BH08A	ADE	16.06.16	0.2-0.3	0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.3	<0.2	<0.2	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.1	-	-	-	-	-	<0.1	-	-	-	<0.1	-	<0.6	-	-	-	ND	-				
10625-BH09A	ADE	16.06.16	0.2-0.3	0.0	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.3	<0.2	<0.2	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.1	-	-	-	-	-	<0.1	-	-	-	<0.1	-	<0.6	-	-	-	ND	-				
10625-BH10A	ADE	16.06.16	0.2-0.3	0.0	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.3	<0.2	<0.2	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.1	-	-	-	-	-	<0.1	-	-	-	<0.1	-	<0.6	-	-	-	ND	-				
10625-BH10C	ADE	16.06.16	1.0	0.0	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.3	<0.2	<0.2	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.1	-	-	-	-	-	<0.1	-	-	-	<0.1	-	<0.6	-	-	-	ND	-				
10625-BH10D	ADE	16.06.16	1.5	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
10625-BH11A	ADE	16.06.16	0.2-0.3	0.4	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.3	<0.2	<0.2	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.1	-	-	-	-	-	<0.1	-	-	-	<0.1	-	<0.6	-	-	-	ND	-				
10625-BH12A	ADE	16.06.16	0.2-0.3	2.3	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.3	<0.2	<0.2	<0.1	<0.2	<0.1																															

				BTEX						TRH - 1999 NEPM Fractions					TRH - 2013 NEPM Fractions			
				Benzene	Toluene	Ethylbenzene	m&p-Xylenes	o-Xylene	Xylenes - Total	TRH C6-9	TRH C10-C14	TRH C15-C28	TRH C29-C36	TRH C10-36 (Total)	TRH C6-C10 less BTEX (F1)	TRH >C10-C16 less Naphthalene (F2)	TRH >C16-C34	TRH >C34-C40
				mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
NEPM 2013 Groundwater HSI's for Vapour Intrusion ¹				30	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ANZECC (2000) Guidelines for Freshwater Quality ²				0.950 ^e	0.18 ^a	0.08 ^a	0.075 ^{a,c}	0.350 ^a	-	-	-	-	-	-	-	-	-	-
ANZECC (2000) Guidelines for Marine Water Quality ²				0.5 ^b	0.18 ^a	0.005 ^a	0.075 ^{a,c}	0.350 ^a	-	-	-	-	-	-	-	-	-	-
Consultant	Date	MW I.D.	Sample I.D.															
DP	10.04.2013	BH6	BH6	ND	ND	ND	ND	ND	ND	-	-	-	-	-	0.0012	ND	ND	ND
DP	10.04.2013	BH6	BDS/100413	ND	ND	ND	ND	ND	ND	-	-	-	-	-	ND	ND	ND	ND

Notes to table

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a. In the absence of a high reliability concentration, the moderate or low reliability guideline concentration has been adopted.

b. Due to the potential for the chemical to bioaccumulate, a 99% percent protection level has been adopted.

c. As the two isomers m-Xylene and p-Xylene cannot be distinguished analytically, the lower threshold of 75 µg/l has been adopted.

d. Figure may not protect key species from chronic toxicity, ANZECC 2000.

e. ADE notes ANZECC (2000) outlines potential for bioaccumulation, 95% percent protection level has been adopted as a screening level.

f. As total concentration was reported for the analyte, the most stringent valence threshold was adopted.

g. As total Arsenic is provided in analytical results, the most stringent criteria of As III and As V has been adopted.
- 3 - Australian drinking water guidelines, National Health and Medical Research Council, 2011 (NHMRC).

h – listed as Chromium VI.

i – insufficient data to set a guideline value based on health considerations.
- 4 - Insufficient data or assessment criteria not reported. Concentration for Freshwater Criteria adopted for screening purposes.
- 5 - Insufficient data or assessment criteria not reported. ANZECCC (2000) considers extreme pH values of <4 and >11 to have the potential to cause adverse health.
- 6 - Guideline value for adverse health effects not necessary. ANZECCC (2000) considers <60 mg/L CaCO3 to be soft but possibly corrosive, while >500 mg/L CaCO3 to be capable of causing severe scaling.
- 7 - No guidance value for (cis) or (trans) 1,2-dichloroethene exists - therefore ANZECC/ARMCANZ (2000) low reliability trigger value for 1,1-dicholoroethene was
- 8 - Laboratory measured pH
- 9 - Results for 'Sulphide' from samples collected by Douglas Partners converted to Hydrogen Sulphide by using a conversion factor of 1.06.
- Bold - Indates result detected above the laboratory PQL.
- * Total metals (i.e. Not field filtered)
- NT- Not Tested
- ND- Not Detected
- ADE - A.D. Envirotech Australia Pty Ltd
- DP - Douglas Partners Pty Ltd

				Polycyclic Aromatic Hydrocarbons																
				Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(b&j)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene	Total PAH*
				mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
NEPM 2013 Groundwater HSI's for Vapour Intrusion ¹				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
ANZECC (2000) Guidelines for Freshwater Quality ²				-	-	0.00001 ^{a,b}	-	0.0001 ^{a,b}	-	-	-	-	0.0001 ^{a,b}	-	0.016	0.0006 ^{a,b}	-	-		
ANZECC (2000) Guidelines for Marine Water Quality ²				-	-	0.00001 ^{a,b}	-	0.0001 ^{a,b}	-	-	-	-	0.0001 ^{a,b}	-	0.07	0.0006 ^{a,b}	-	-		
NHMRC 2011 Drinking Water - Health ³				-	-	-	-	0.00001	-	-	-	-	-	-	-	-	-	-		
Adopted Screening Values				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Consultant	Date	MW I.D.	Sample I.D.																	
DP	10.04.2013	BH6	BH6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.00001	ND	ND	0.00016	
DP	10.04.2013	BH6	BDS/100413	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Notes to table

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- a. In the absence of a high reliability concentration, the moderate or low reliability guideline concentration has been adopted.
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- e. ADE notes ANZECC (2000) outlines potential for bioaccumulation, 95% percent protection level has been adopted as a screening level.
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- g. As total Arsenic is provided in analytical results, the most stringent criteria of As III and As V has been adopted.
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- * Total metals (i.e. Not field filtered)
- NT- Not Tested
- ND- Not Detected
- ADE - A.D. Envirotech Australia Pty Ltd
- DP - Douglas Partners Pty Ltd

				Heavy Metals																			
				Aluminium (filtered)	Antimony (filtered)	Arsenic (filtered)	Beryllium (filtered)	Boron (filtered)	Cadmium (filtered)	Chromium (filtered)	Hexavalent Chromium	Cobalt (filtered)	Copper (filtered)	Lead (filtered)	Manganese (filtered)	Mercury (filtered)	Molybdenum (filtered)	Nickel (filtered)	Selenium (filtered)	Silver (filtered)	Tin (filtered)	Vanadium (filtered)	Zinc (filtered)
				mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
NEPM 2013 Groundwater HSL's for Vapour Intrusion ¹				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
ANZECC (2000) Guidelines for Freshwater Quality ²				0.15	-	0.013 ^f	-	1.3	0.0008	0.001 ^e	0.001 ^e	-	0.0014	0.0094	3.6	0.00006 ^b	-	0.011	0.034	0.0002	-	0.008	
ANZECC (2000) Guidelines for Marine Water Quality ²				-	-	0.0023 ^{a,f}	-	-	0.036	0.0044 ^e	0.0044 ^e	0.150	0.0013	0.012	-	0.0001 ^b	-	0.7	-	0.0026	0.00005	0.015	
Consultant	Date	MW I.D.	Sample I.D.																				
DP	10.04.2013	BH6	BH6	-	-	ND	-	-	ND	ND	-	-	0.002	ND	-	ND	-	0.016	-	-	-	0.065	
DP	10.04.2013	BH6	BDS/100413	-	-	ND	-	-	ND	ND	-	-	0.002	ND	-	ND	-	0.014	-	-	-	0.062	

Notes to table

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- a. In the absence of a high reliability concentration, the moderate or low reliability guideline concentration has been adopted.
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- c. As the two isomers m-Xylene and p-Xylene cannot be distinguished analytically, the lower threshold of 75 µg/l has been adopted.
- d. Figure may not protect key species from chronic toxicity, ANZECC 2000.
- e. ADE notes ANZECC (2000) outlines potential for bioaccumulation, 95% percent protection level has been adopted as a screening level.
- f. As total concentration was reported for the analyte, the most stringent valence threshold was adopted.
- g. As total Arsenic is provided in analytical results, the most stringent criteria of As III and As V has been adopted.
- 3 - Australian drinking water guidelines, National Health and Medical Research Council, 2011 (NHMRC).
- h – listed as Chromium VI.
- i – insufficient data to set a guideline value based on health considerations.

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- 5 - Insufficient data or assessment criteria not reported. ANZECCC (2000) considers extreme pH values of <4 and >11 to have the potential to cause adverse health.
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- 7 - No guidance value for (cis) or (trans) 1,2-dichloroethene exists - therefore ANZECC/ARMCANZ (2000) low reliability trigger value for 1,1-dichloroethene was
- 8 - Laboratory measured pH
- 9 - Results for 'Sulphide' from samples collected by Douglas Partners converted to Hydrogen Sulphide by using a conversion factor of 1.06.

Bold - Indicates result detected above the laboratory PQL.

* Total metals (i.e. Not field filtered)

Grey Shading indicates results above the Site Assessment Criteria.

NT- Not Tested

ND- Not Detected

ADE - A.D. Envirotech Australia Pty Ltd

DP - Douglas Partners Pty Ltd

QA/QC Table 1: Soil Blind replicate (duplicate) samples compared with primary samples

	DL EOHS	10625-BR1	10625-BH07C	RPD, %
Benzene	0.5	<0.5	<0.5	0.0
Toluene	0.5	<0.5	<0.5	0.0
Ethylbenzene	1	<1	<1	0.0
Xylenes	3	<3	<3	0.0
Benzo(a)pyrene	0.3	<0.3	<0.3	0.0
Total PAH	4.8	<4.8	<4.8	0.0
TRH C ₆ -C ₁₀	35	<35	<35	0.0
TRH C ₁₀ -C ₁₆	50	<50	<50	0.0
TRH C ₁₆ -C ₃₄	100	<100	<100	0.0
TRH C ₃₄ -C ₄₀	100	<100	<100	0.0
Arsenic	2	5.1	14	N
Cadmium	0.3	<0.3	<0.3	0.0
Chromium	5	30	29	0.0
Copper	5	7.4	13	0.0
Lead	10	22	35	N
Mercury	0.2	<0.2	<0.2	0.0
Nickel	10	<10	<10	0.0
Zinc	5	<5	<5	0.0
				V - valid result
				16
				N - not valid result
				2

QA/QC Table 2: Soil split replicate (triplicate) samples compared with primary samples

	DL EOHS/ MGT (mg/kg)	10625-BH07C	10625-SP1	RPD, %
Arsenic	2	14	17.0	0.0
Cadmium	0.3/0.4	<0.3	<0.4	0.0
Chromium	5	29	24	0.0
Copper	5	13	17.0	0.0
Lead	10.0/5.0	35	22.0	0.0
Mercury	0.2/0.05	<0.2	0.1	0.0
Nickel	10.0/5.0	<10	<5	0.0
Zinc	5	<5	5.1	0.0
Acenaphthene	0.3/0.5	<0.3	<0.5	0.0
Acenaphthylene	0.3/0.5	<0.3	<0.5	0.0
Anthracene	0.3/0.5	<0.3	<0.5	0.0
Benz(a)anthracene	0.3/0.5	<0.3	<0.5	0.0
Benzo(a)pyrene	0.3/0.5	<0.3	<0.5	0.0
Benzo(b&j)fluoranthene	0.3/0.5	<0.3	<0.5	0.0
Benzo(g,h,i)perylene	0.3/0.5	<0.3	<0.5	0.0
Benzo(k)fluoranthene	0.3/0.5	<0.3	<0.5	0.0
Chrysene	0.3/0.5	<0.3	<0.5	0.0
Dibenz(a,h)anthracene	0.3/0.5	<0.3	<0.5	0.0
Fluoranthene	0.3/0.5	<0.3	<0.5	0.0
Fluorene	0.3/0.5	<0.3	<0.5	0.0
Indeno(1,2,3-cd)pyrene	0.3/0.5	<0.3	<0.5	0.0
Naphthalene	0.3/0.5	<0.3	<0.5	0.0
Phenanthrene	0.3/0.5	<0.3	<0.5	0.0
Pyrene	0.3/0.5	<0.3	<0.5	0.0
Benzene	0.5/0.1	<0.5	<0.1	0.0
Toluene	0.5/0.1	<0.5	<0.1	0.0
Ethylbenzene	1/0.1	<1	<0.1	0.0
Xylenes	3/0.3	<3	<0.3	0.0
TRH C ₆ -C ₁₀	35/20	<35	<20	0.0
TRH C ₁₀ -C ₁₆	50	<50	<50	0.0
TRH C ₁₆ -C ₃₄	100	<100	<100	0.0
TRH C ₃₄ -C ₄₀	100	<100	<100	0.0
V - valid result				32
N - not valid result				0

QA/QC Table 3: Analysis results for trip blank samples

Analyte	PQL	10625-Trip Blank-1
Benzene	1	<1
Toluene	1	<1
Ethyl Benzene	1	<1
m, p- Xylene(s)	2	<2
o-Xylene	1	<1
V - valid result		5
N - not valid result		0

QA/QC Table 4: Analysis results for trip spike samples

Analyte	Acceptable range, %	10625-TripSpike concentration s (ug/L)	10625-Trip Spike
Benzene	60 - 140	40	104%
Toluene	60 - 140	40	100%
Ethyl Benzene	60 - 140	40	99%
m, p- Xylene(s)	60 - 140	40	98%
o-Xylene	60 - 140	40	100%
V - valid result			5
N - not valid result			0

QA/QC Table 5: Analysis results for rinsate samples

Analyte	DL (ug/L)	10625-Rinsate-1
Arsenic	1	<1
Cadmium	0.1	<0.1
Chromium	1	<1
Copper	1	<1
Lead	1	<1
Mercury	0.05	<0.05
Nickel	1	<1
Zinc	1	<1
Acenaphthylene	0.1	<0.1
Anthracene	0.1	<0.1
Benz(a)anthracene	0.1	<0.1
Benzo(a)pyrene	0.1	<0.1
Benzo(b&j)fluoranthene	0.1	<0.1
Benzo(g,h,i)perylene	0.1	<0.1
Benzo(k)fluoranthene	0.1	<0.1
Chrysene	0.1	<0.1
Dibenz(a,h)anthracene	0.1	<0.1
Fluoranthene	0.1	<0.1
Fluorene	0.1	<0.1
Indeno(1,2,3-cd)pyrene	0.1	<0.1
Naphthalene	0.1	<0.1
Phenanthrene	0.1	<0.1
Pyrene	0.1	<0.1
Benzene	1	<1
Toluene	1	<1
Ethylbenzene	1	<1
o-Xylene	2	<2
m+p-Xylene(s)	1	<1
TRH >C6 – C10	25	<25
TRH >C10 – C16	50	<50
TRH >C16 – C34	100	<100
TRH >C34 – C40	100	<100
	V - valid result	32
	N - not valid result	0

APPENDIX III – SAMPLE MAP

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Telephone:

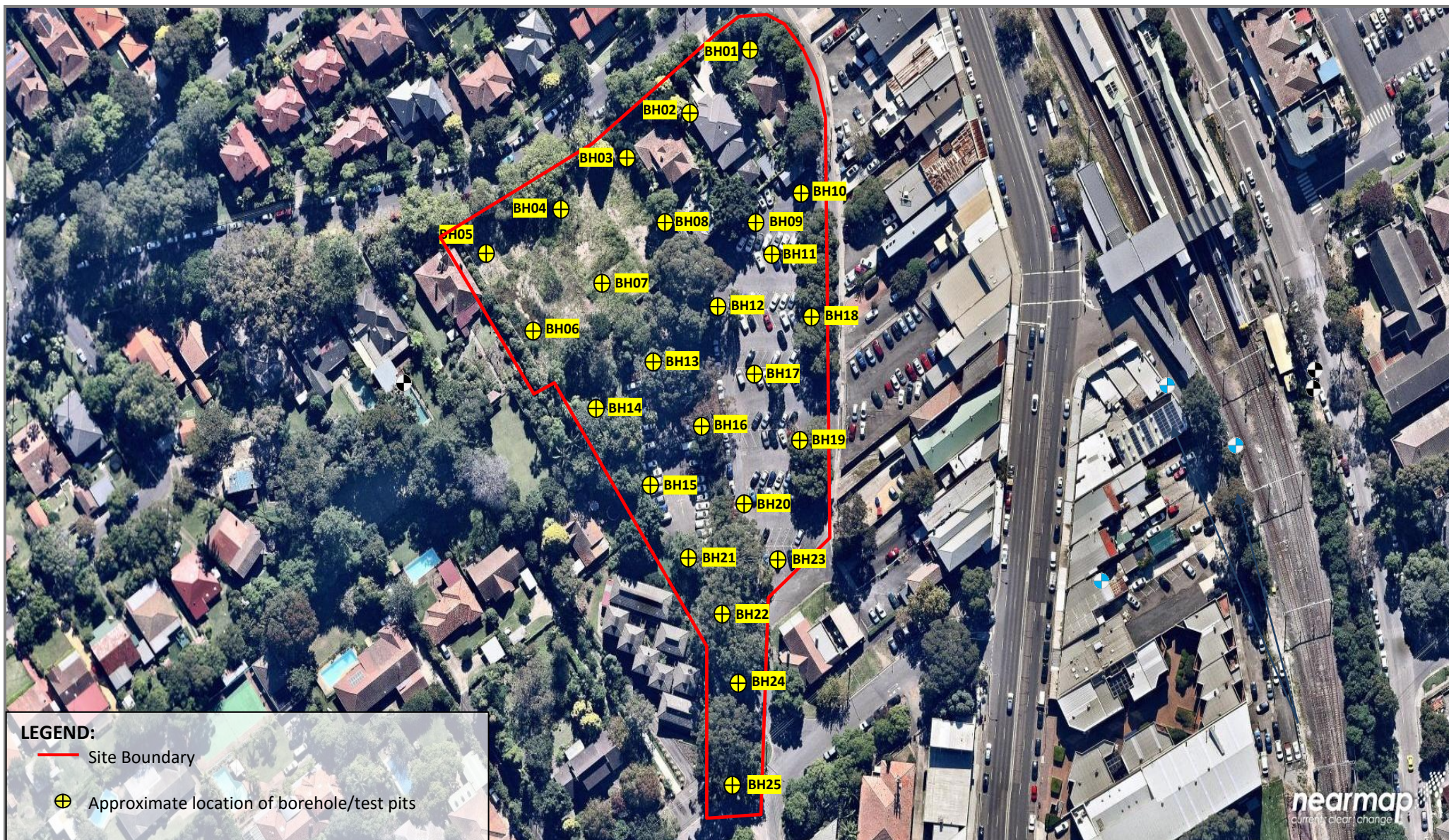
NSW: (02) 8541 7214
QLD: (07) 5519 4610

Internet:

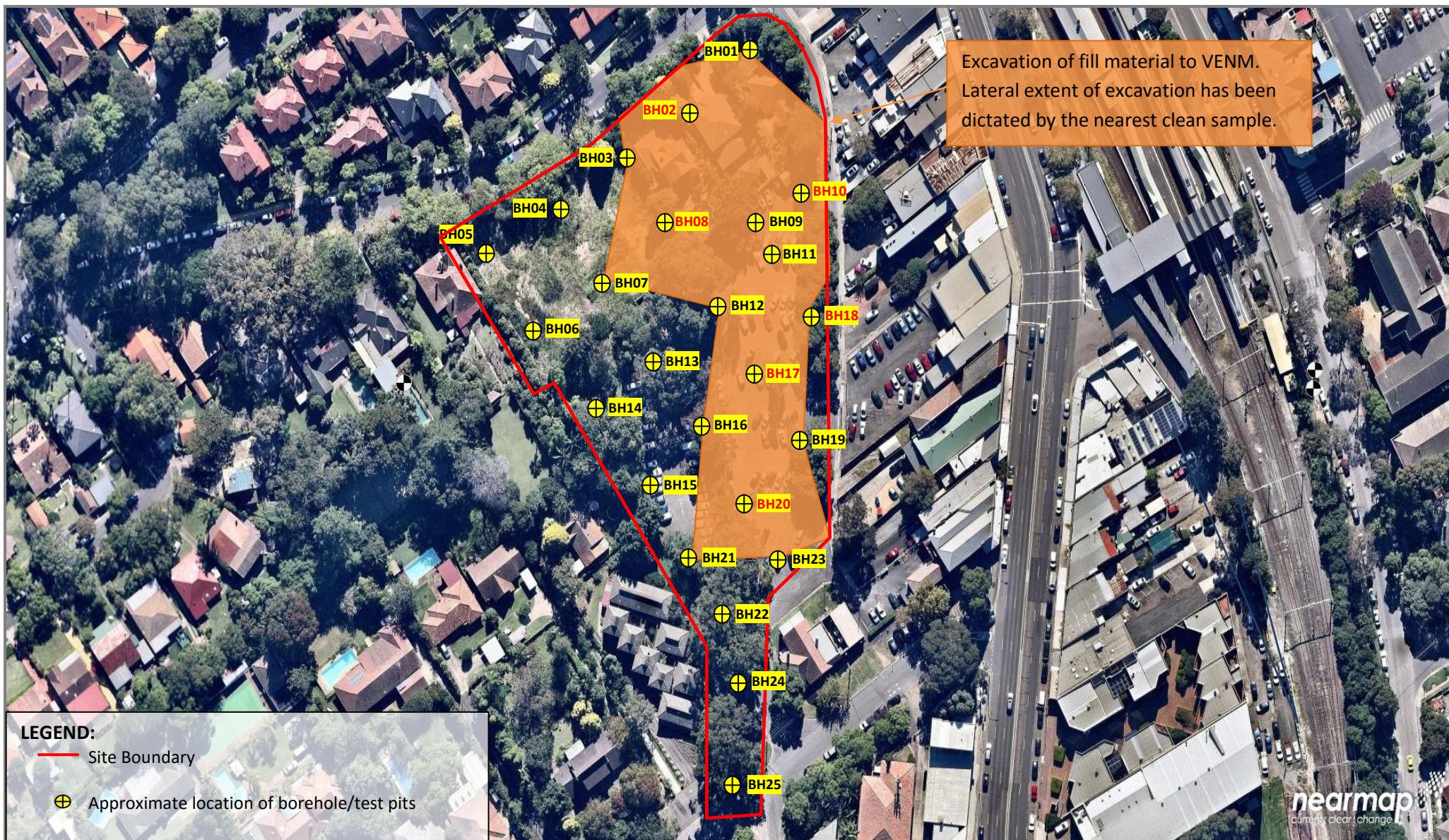
site: www.ADenvirotech.com.au
e-mail info@ADenvirotech.com.au

ABN:

520 934 529 50



 ADE CONSULTING GROUP SOLUTIONS THROUGH INNOVATION	CLIENT: Ku-ring-gai Council		TITLE: Sample Locations		PROJECT: STC-155-10625
	DRAWN BY: KM	CHECKED BY: JE			Figure No: A1
	SCALE: As shown	Date: 04.07.16	SOURCE: Map adapted from 2016 Nearmap Ltd		Revision: v1



 ADE CONSULTING GROUP SOLUTIONS THROUGH INNOVATION	CLIENT: Ku-ring-gai Council		TITLE: Sample Locations that have exceeded the SAC for EIL/ESLs. Excavation undertaken to nearest clean sample.		PROJECT: STC-155-10625
	DRAWN BY: KM	CHECKED BY: JE			Figure No: A2
	SCALE: As shown	Date: 04.07.16			SOURCE: Map adapted from 2016 Nearmap Ltd



Legend

- Borehole Location
- Approximate Site Boundary

APPENDIX IV – BOREHOLES LOGS AND SOIL STRATIGRAPHY

New South Wales Office:

A. D. Envirotech Australia Pty Ltd
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ABN:

520 934 529 50



CLIENT Ku-ring-gai Council **PROJECT NAME** Lindfield Coummnity Hub Project
PROJECT NUMBER STC-155-10625 **PROJECT LOCATION** Woodford Lane, Lindfield NSW

DATE STARTED 15/6/16 **COMPLETED** 15/6/16 **R.L. SURFACE** **DATUM**
DRILLING CONTRACTOR **SLOPE** 90° **BEARING** ---
EQUIPMENT Trailer Mounted Drill Rig 100mm Solid Flight Auger **HOLE LOCATION**
HOLE SIZE 100 mm **LOGGED BY** DB **CHECKED BY** KM

NOTES

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
						Clayey LOAM, dark brown with gravel		
			0.5		CL-CH	CLAY (CL) brown/grey, dry (natural)	Sampled at BH01A	PID Headspace = 0.0 ppm
ADT						Borehole BH01 terminated at 0.5m		
			1.0					
			1.5					
			2.0					
			2.5					
			3.0					
			3.5					
			4.0					
			4.5					



CLIENT Ku-ring-gai Council **PROJECT NAME** Lindfield Coummnity Hub Project
PROJECT NUMBER STC-155-10625 **PROJECT LOCATION** Woodford Lane, Lindfield NSW

DATE STARTED 15/6/16 **COMPLETED** 15/6/16 **R.L. SURFACE** _____ **DATUM** _____
DRILLING CONTRACTOR _____ **SLOPE** 90° **BEARING** ---
EQUIPMENT Trailer Mounted Drill Rig 100mm Solid Flight Auger **HOLE LOCATION** _____
HOLE SIZE 100 mm **LOGGED BY** DB **CHECKED BY** KM

NOTES

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
						Clayey LOAM, light brown with gravel and broken brick		
			0.5		CL-CH	CLAY (CL) grey, dry (natural)	Sampled at BH02A	PID Headspace = 0.0 ppm
						Borehole BH02 terminated at 0.7m	Sampled at BH02C	PID Headspace = 0.0 ppm
ADT			1.0					
			1.5					
			2.0					
			2.5					
			3.0					
			3.5					
			4.0					
			4.5					



CLIENT Ku-ring-gai Council **PROJECT NAME** Lindfield Coummnity Hub Project
PROJECT NUMBER STC-155-10625 **PROJECT LOCATION** Woodford Lane, Lindfield NSW

DATE STARTED 15/6/16 **COMPLETED** 15/6/16 **R.L. SURFACE** _____ **DATUM** _____
DRILLING CONTRACTOR _____ **SLOPE** 90° **BEARING** ---
EQUIPMENT Trailer Mounted Drill Rig 100mm Solid Flight Auger **HOLE LOCATION** _____
HOLE SIZE 100 mm **LOGGED BY** DB **CHECKED BY** KM

NOTES

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
			0.5			Clayey LOAM, light brown with gravel and broken brick		
			1.0		CL-CH	CLAY (CL) brown/grey, dry (natural)	Sampled at BH03A	PID Headspace = 0.1 ppm
ADT			1.0			Borehole BH03 terminated at 1m	Sampled at BH03C	PID Headspace = 0.0 ppm
			1.5					
			2.0					
			2.5					
			3.0					
			3.5					
			4.0					
			4.5					



CLIENT Ku-ring-gai Council **PROJECT NAME** Lindfield Coummnity Hub Project
PROJECT NUMBER STC-155-10625 **PROJECT LOCATION** Woodford Lane, Lindfield NSW

DATE STARTED 15/6/16 **COMPLETED** 15/6/16 **R.L. SURFACE** _____ **DATUM** _____
DRILLING CONTRACTOR _____ **SLOPE** 90° **BEARING** ---
EQUIPMENT Trailer Mounted Drill Rig 100mm Solid Flight Auger **HOLE LOCATION** _____
HOLE SIZE 100 mm **LOGGED BY** DB **CHECKED BY** KM

NOTES

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
						CLAY (CL) red mottled orange, dry (natural)		
			0.5		CL-CH	CLAY (CL) red mottled orange/brown, dry (natural)	Sampled at BH04A	PID Headspace = 0.0 ppm
						Borehole BH04 terminated at 0.8m	Sampled at BH04C	PID Headspace = 0.0 ppm
ADT			1.0					
			1.5					
			2.0					
			2.5					
			3.0					
			3.5					
			4.0					
			4.5					

CLIENT Ku-ring-gai Council

PROJECT NAME Lindfield Community Hub Project

PROJECT NUMBER STC-155-10625

PROJECT LOCATION Woodford Lane, Lindfield NSW

DATE STARTED 15/6/16

COMPLETED 15/6/16

R.L. SURFACE

DATUM**DRILLING CONTRACTOR**

SLOPE 90°

BEARING ---

EQUIPMENT Trailer Mounted Drill Rig 100mm Solid Flight Auger

HOLE LOCATION

HOLE SIZE 100 mm

LOGGED BY DB

CHECKED BY KM

NOTES

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
						Silty LOAM, light brown with gravel		PID Headspace = 0.0 ppm
			0.5			CLAY (CL) brown, dry	Sampled at BH5A	
			1.0					
			1.5		CL-CH	CLAY (CL) red mottled orange, dry (natural)	Sampled at BH5C	PID Headspace = 0.0 ppm
ADT			2.0			Borehole BH05 terminated at 1.7m		
			2.5					
			3.0					
			3.5					
			4.0					
			4.5					



CLIENT Ku-ring-gai Council **PROJECT NAME** Lindfield Coummnity Hub Project
PROJECT NUMBER STC-155-10625 **PROJECT LOCATION** Woodford Lane, Lindfield NSW

DATE STARTED 15/6/16 **COMPLETED** 15/6/16 **R.L. SURFACE** _____ **DATUM** _____
DRILLING CONTRACTOR _____ **SLOPE** 90° **BEARING** ---
EQUIPMENT Trailer Mounted Drill Rig 100mm Solid Flight Auger **HOLE LOCATION** _____
HOLE SIZE 100 mm **LOGGED BY** DB **CHECKED BY** KM

NOTES

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
						Silty LOAM, light brown with gravel		
			0.5		CL-CH	CLAY (CL) red mottled orange, dry (natural)	Sampled at BH06A	PID Headspace = 0.0 ppm
			1.0				Sampled at BH06C	PID Headspace = 0.0 ppm
ADT						Borehole BH06 terminated at 1m		
			1.5					
			2.0					
			2.5					
			3.0					
			3.5					
			4.0					
			4.5					

CLIENT Ku-ring-gai Council

PROJECT NAME Lindfield Community Hub Project

PROJECT NUMBER STC-155-10625

PROJECT LOCATION Woodford Lane, Lindfield NSW

DATE STARTED 15/6/16

COMPLETED 15/6/16

R.L. SURFACE

DATUM

DRILLING CONTRACTOR

SLOPE 90°

BEARING ---

EQUIPMENT Trailer Mounted Drill Rig 100mm Solid Flight Auger

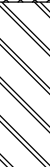
HOLE LOCATION

HOLE SIZE 100 mm

LOGGED BY DB

CHECKED BY KM

NOTES

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
ADT			0.5			Silty LOAM, light brown with gravel	 Sampled at BH07A	PID Headspace = 0.1 ppm
			1.0		CL-CH	CLAY (CL) red mottled orange, dry (natural)	 Sampled at BH07C	
			1.5			Borehole BH07 terminated at 1m		PID Headspace = 0.0 ppm
			2.0					
			2.5					
			3.0					
			3.5					
			4.0					
			4.5					



CLIENT Ku-ring-gai Council **PROJECT NAME** Lindfield Coummnity Hub Project
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DATE STARTED 15/6/16 **COMPLETED** 15/6/16 **R.L. SURFACE** _____ **DATUM** _____
DRILLING CONTRACTOR _____ **SLOPE** 90° **BEARING** ---
EQUIPMENT Trailer Mounted Drill Rig 100mm Solid Flight Auger **HOLE LOCATION** _____
HOLE SIZE 100 mm **LOGGED BY** DB **CHECKED BY** KM

NOTES

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
						Silty LOAM, light brown with gravel		
			0.5		CL-CH	CLAY (CL) red mottled orange, dry (natural)	Sampled at BH08A	PID Headspace = 0.1 ppm
			1.0				Sampled at BH08C	PID Headspace = 0.1 ppm
ADT						Borehole BH08 terminated at 1m		
			1.5					
			2.0					
			2.5					
			3.0					
			3.5					
			4.0					
			4.5					



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DATE STARTED 15/6/16 **COMPLETED** 15/6/16 **R.L. SURFACE** _____ **DATUM** _____
DRILLING CONTRACTOR _____ **SLOPE** 90° **BEARING** ---
EQUIPMENT Trailer Mounted Drill Rig 100mm Solid Flight Auger **HOLE LOCATION** _____
HOLE SIZE 100 mm **LOGGED BY** DB **CHECKED BY** KM

NOTES

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
			0.5			Silty LOAM, light brown with gravel	 Sampled at BH09A	PID Headspace = 0.0 ppm
ADT						Borehole BH09 terminated at 0.5m		
			1.0					
			1.5					
			2.0					
			2.5					
			3.0					
			3.5					
			4.0					
			4.5					



CLIENT Ku-ring-gai Council **PROJECT NAME** Lindfield Coummnity Hub Project
PROJECT NUMBER STC-155-10625 **PROJECT LOCATION** Woodford Lane, Lindfield NSW

DATE STARTED 15/6/16 **COMPLETED** 15/6/16 **R.L. SURFACE** _____ **DATUM** _____
DRILLING CONTRACTOR _____ **SLOPE** 90° **BEARING** ---
EQUIPMENT Trailer Mounted Drill Rig 100mm Solid Flight Auger **HOLE LOCATION** _____
HOLE SIZE 100 mm **LOGGED BY** DB **CHECKED BY** KM

NOTES

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
			0.5			Silty LOAM, light brown with gravel	Sampled at BH10A	PID Headspace = 0.0 ppm
			1.0			Silty LOAM, grey brown with gravel	Sampled at BH10C	PID Headspace = 0.0 ppm
			1.5		CL-CH	CLAY (CL) white mottled grey, dry (natural)	Sampled at BH10D	PID Headspace = 0.1 ppm
			2.0		CL-CH	CLAY (CL) grey orange, dry (natural), with shale pieces		PID Headspace = 0.0 ppm
			2.5		CL-CH	CLAY (CL) grey clay, dry (natural), with weathered shale pieces		PID Headspace = 0.0 ppm
			3.0					PID Headspace = 0.0 ppm
			3.5					
			4.0			Borehole BH10 terminated at 4m		PID Headspace = 0.0 ppm
ADT			4.5					



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PAGE 1 OF 1

PROJECT NAME Lindfield Coummnity Hub Project

PROJECT LOCATION Woodford Lane, Lindfield NSW

DATUM

BEARING ---

HOLE LOCATION

CHECKED BY KM

NOTES

BOREHOLE / TEST PIT 10625.GPJ GINT STD AUSTRALIA.GDT 6/7/16



CLIENT Ku-ring-gai Council **PROJECT NAME** Lindfield Coummnity Hub Project
PROJECT NUMBER STC-155-10625 **PROJECT LOCATION** Woodford Lane, Lindfield NSW

DATE STARTED 15/6/16 **COMPLETED** 15/6/16 **R.L. SURFACE** _____ **DATUM** _____
DRILLING CONTRACTOR _____ **SLOPE** 90° **BEARING** ---
EQUIPMENT Trailer Mounted Drill Rig 100mm Solid Flight Auger **HOLE LOCATION** _____
HOLE SIZE 100 mm **LOGGED BY** DB **CHECKED BY** KM

NOTES

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
			0.5			Silty LOAM, light brown with gravel	Sampled at BH12A	PID Headspace = 2.3 ppm
			1.0			Sandy LOAM, brown with ballast		
			1.0			Clayey LOAM, light orange brown with gravel	Sampled at BH12C	PID Headspace = 0.2 ppm
			1.5		CL-CH	CLAY (CL) red mottled yellow/orange, dry (natural)	Sampled at BH12D	PID Headspace = 0.0 ppm
ADT			2.0			Borehole BH12 terminated at 1.5m		
			2.5					
			3.0					
			3.5					
			4.0					
			4.5					



CLIENT Ku-ring-gai Council **PROJECT NAME** Lindfield Coummnity Hub Project
PROJECT NUMBER STC-155-10625 **PROJECT LOCATION** Woodford Lane, Lindfield NSW

DATE STARTED 15/6/16 **COMPLETED** 15/6/16 **R.L. SURFACE** _____ **DATUM** _____
DRILLING CONTRACTOR _____ **SLOPE** 90° **BEARING** ---
EQUIPMENT Trailer Mounted Drill Rig 100mm Solid Flight Auger **HOLE LOCATION** _____
HOLE SIZE 100 mm **LOGGED BY** DB **CHECKED BY** KM

NOTES _____

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
						Silty LOAM, light brown with gravel		
			0.5		CL-CH	CLAY (CL) red mottled yellow/orange, dry (natural)	Sampled at BH13A	PID Headspace = 0.1 ppm
			1.0				Sampled at BH13C	PID Headspace = 0.1 ppm
ADT						Borehole BH13 terminated at 1m		
			1.5					
			2.0					
			2.5					
			3.0					
			3.5					
			4.0					
			4.5					



CLIENT Ku-ring-gai Council **PROJECT NAME** Lindfield Coummnity Hub Project
PROJECT NUMBER STC-155-10625 **PROJECT LOCATION** Woodford Lane, Lindfield NSW

DATE STARTED 15/6/16 **COMPLETED** 15/6/16 **R.L. SURFACE** _____ **DATUM** _____
DRILLING CONTRACTOR _____ **SLOPE** 90° **BEARING** ---
EQUIPMENT Trailer Mounted Drill Rig 100mm Solid Flight Auger **HOLE LOCATION** _____
HOLE SIZE 100 mm **LOGGED BY** DB **CHECKED BY** KM

NOTES

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
			0.5			Silty LOAM, light brown with gravel	Sampled at BH14A	PID Headspace = 0.0 ppm
			1.0				Sampled at BH14C	PID Headspace = 0.1 ppm
			1.5		CL-CH	CLAY (CL) red mottled yellow/orange, dry (natural)	Sampled at BH14D	PID Headspace = 0.0 ppm
ADT			2.0			Borehole BH14 terminated at 1.5m		
			2.5					
			3.0					
			3.5					
			4.0					
			4.5					



CLIENT Ku-ring-gai Council **PROJECT NAME** Lindfield Coummnity Hub Project
PROJECT NUMBER STC-155-10625 **PROJECT LOCATION** Woodford Lane, Lindfield NSW

DATE STARTED 15/6/16 **COMPLETED** 15/6/16 **R.L. SURFACE** _____ **DATUM** _____
DRILLING CONTRACTOR _____ **SLOPE** 90° **BEARING** ---
EQUIPMENT Trailer Mounted Drill Rig 100mm Solid Flight Auger **HOLE LOCATION** _____
HOLE SIZE 100 mm **LOGGED BY** DB **CHECKED BY** KM

NOTES

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
						Bitumen layer		
						Silty LOAM, light brown with gravel		
					CL-CH	CLAY (CL) brown, dry (natural)	Sampled at BH15A	PID Headspace = 0.1 ppm
			0.5					
					CL-CH	CLAY (CL) red mottled yellow/orange, dry (natural)		
			1.0				Sampled at BH15C	PID Headspace = 0.1 ppm
ADT						Borehole BH15 terminated at 1m		
			1.5					
			2.0					
			2.5					
			3.0					
			3.5					
			4.0					
			4.5					



CLIENT Ku-ring-gai Council **PROJECT NAME** Lindfield Coummnity Hub Project
PROJECT NUMBER STC-155-10625 **PROJECT LOCATION** Woodford Lane, Lindfield NSW

DATE STARTED 15/6/16 **COMPLETED** 15/6/16 **R.L. SURFACE** _____ **DATUM** _____
DRILLING CONTRACTOR _____ **SLOPE** 90° **BEARING** ---
EQUIPMENT Trailer Mounted Drill Rig 100mm Solid Flight Auger **HOLE LOCATION** _____
HOLE SIZE 100 mm **LOGGED BY** DB **CHECKED BY** KM

NOTES

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
						Ashphalt		
			0.5			Silty LOAM, light brown with gravel	 Sampled at BH16A	PID Headspace = 0.0 ppm
			1.0		CL-CH	CLAY (CL) red mottled yellow/orange, dry (natural)	 Sampled at BH16C	PID Headspace = 0.0 ppm
ADT						Borehole BH16 terminated at 1m		
			1.5					
			2.0					
			2.5					
			3.0					
			3.5					
			4.0					
			4.5					



CLIENT Ku-ring-gai Council **PROJECT NAME** Lindfield Coummnity Hub Project
PROJECT NUMBER STC-155-10625 **PROJECT LOCATION** Woodford Lane, Lindfield NSW

DATE STARTED 15/6/16 **COMPLETED** 15/6/16 **R.L. SURFACE** _____ **DATUM** _____
DRILLING CONTRACTOR _____ **SLOPE** 90° **BEARING** ---
EQUIPMENT Trailer Mounted Drill Rig 100mm Solid Flight Auger **HOLE LOCATION** _____
HOLE SIZE 100 mm **LOGGED BY** DB **CHECKED BY** KM

NOTES _____

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
						Ashphalt Layer		
			0.5			Silty LOAM, light brown with gravel	Sampled at BH17A	PID Headspace = 0.0 ppm
			1.0		CL-CH	CLAY (CL) red mottled yellow/orange, dry (natural)	Sampled at BH17C	PID Headspace = 0.0 ppm
ADT			1.5			Borehole BH17 terminated at 1m		
			2.0					
			2.5					
			3.0					
			3.5					
			4.0					
			4.5					

CLIENT Ku-ring-gai Council

PROJECT NAME Lindfield Community Hub Project

PROJECT NUMBER STC-155-10625

PROJECT LOCATION Woodford Lane, Lindfield NSW

DATE STARTED 15/6/16

COMPLETED 15/6/16

R.L. SURFACE

DATUM**DRILLING CONTRACTOR**

SLOPE 90°

BEARING ---

EQUIPMENT Trailer Mounted Drill Rig 100mm Solid Flight Auger

HOLE LOCATION

HOLE SIZE 100 mm

LOGGED BY DB

CHECKED BY KM

NOTES

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
			0.5			Silty LOAM, light brown with gravel	 Sampled at BH18A	PID Headspace = 0.0 ppm
			1.0		CL-CH	CLAY (CL) red mottled yellow/orange, dry (natural)	 Sampled at BH18C	PID Headspace = 0.0 ppm
ADT			1.5			Borehole BH18 terminated at 1.1m		
			2.0					
			2.5					
			3.0					
			3.5					
			4.0					
			4.5					



CLIENT Ku-ring-gai Council **PROJECT NAME** Lindfield Coummnity Hub Project
PROJECT NUMBER STC-155-10625 **PROJECT LOCATION** Woodford Lane, Lindfield NSW

DATE STARTED 15/6/16 **COMPLETED** 15/6/16 **R.L. SURFACE** _____ **DATUM** _____
DRILLING CONTRACTOR _____ **SLOPE** 90° **BEARING** ---
EQUIPMENT Trailer Mounted Drill Rig 100mm Solid Flight Auger **HOLE LOCATION** _____
HOLE SIZE 100 mm **LOGGED BY** DB **CHECKED BY** KM

NOTES

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
						Ashphalt		
						Silty LOAM, light brown with gravel		
							Sampled at BH19A	PID Headspace = 0.0 ppm
			0.5		CL-CH	CLAY (CL) red mottled yellow/orange, dry (natural)		
			1.0				Sampled at BH19C	PID Headspace = 0.0 ppm
ADT						Borehole BH19 terminated at 1m		
			1.5					
			2.0					
			2.5					
			3.0					
			3.5					
			4.0					
			4.5					

CLIENT Ku-ring-gai Council

PROJECT NAME Lindfield Community Hub Project

PROJECT NUMBER STC-155-10625

PROJECT LOCATION Woodford Lane, Lindfield NSW

DATE STARTED 16/6/16

COMPLETED 16/6/16

R.L. SURFACE

DATUM

DRILLING CONTRACTOR

SLOPE 90°

BEARING ---

EQUIPMENT Trailer Mounted Drill Rig 100mm Solid Flight Auger

HOLE LOCATION

HOLE SIZE 100 mm

LOGGED BY DB

CHECKED BY KM

NOTES

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
			0.5 1.0	CL-CH		Ashphalt	Sampled at BH20A Sampled at BH20C	PID Headspace = 0.1 ppm
						Silty LOAM, light brown with gravel and bricks present		
						CLAY (CL) red mottled yellow/orange, dry (natural)		
ADT			1.5 2.0 2.5 3.0 3.5 4.0 4.5		Borehole BH20 terminated at 1m		PID Headspace = 0.0 ppm	



CLIENT Ku-ring-gai Council **PROJECT NAME** Lindfield Coummnity Hub Project
PROJECT NUMBER STC-155-10625 **PROJECT LOCATION** Woodford Lane, Lindfield NSW

DATE STARTED 16/6/16 **COMPLETED** 16/6/16 **R.L. SURFACE** _____ **DATUM** _____
DRILLING CONTRACTOR _____ **SLOPE** 90° **BEARING** ---
EQUIPMENT Trailer Mounted Drill Rig 100mm Solid Flight Auger **HOLE LOCATION** _____
HOLE SIZE 100 mm **LOGGED BY** DB **CHECKED BY** KM

NOTES _____

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
						Asphalt		
					CL-CH	CLAY (CL) red mottled yellow/orange, dry (natural)		
			0.5				Sampled at BH21A	PID Headspace = 0.0 ppm
ADT						Borehole BH21 terminated at 0.6m		
			1.0					
			1.5					
			2.0					
			2.5					
			3.0					
			3.5					
			4.0					
			4.5					

CLIENT Ku-ring-gai Council

PROJECT NAME Lindfield Coummnity Hub Project

PROJECT NUMBER STC-155-10625

PROJECT LOCATION Woodford Lane, Lindfield NSW

DATE STARTED 16/6/16

COMPLETED 16/6/16

R.L. SURFACE

DATUM

DRILLING CONTRACTOR

SLOPE 90°

BEARING ---

EQUIPMENT Trailer Mounted Drill Rig 100mm Solid Flight Auger

HOLE LOCATION

HOLE SIZE 100 mm

LOGGED BY DB

CHECKED BY KM

NOTES

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
ADT					Top Soil	Dark brown clay loam with gravel		PID Headspace = 0.1 ppm
				CL-CH	CLAY (CL) red mottled yellow/orange, dry (natural)	Sampled at BH22A		
						Sampled at BH22C		
			1.0			Borehole BH22 terminated at 1m		PID Headspace = 0.0 ppm
			1.5					
			2.0					
			2.5					
			3.0					
			3.5					
			4.0					
			4.5					



CLIENT Ku-ring-gai Council **PROJECT NAME** Lindfield Coummnity Hub Project
PROJECT NUMBER STC-155-10625 **PROJECT LOCATION** Woodford Lane, Lindfield NSW

DATE STARTED 16/6/16 **COMPLETED** 16/6/16 **R.L. SURFACE** _____ **DATUM** _____
DRILLING CONTRACTOR _____ **SLOPE** 90° **BEARING** ---
EQUIPMENT Trailer Mounted Drill Rig 100mm Solid Flight Auger **HOLE LOCATION** _____
HOLE SIZE 100 mm **LOGGED BY** DB **CHECKED BY** KM

NOTES

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
					FILL	Dark brown clay loam with gravel		
			0.5		CL-CH	CLAY (CL) red mottled yellow/orange, dry (natural)	Sampled at BH23A	PID Headspace = 0.0 ppm
			1.0				Sampled at BH23C	PID Headspace = 0.0 ppm
ADT			1.5			Borehole BH23 terminated at 1m		
			2.0					
			2.5					
			3.0					
			3.5					
			4.0					
			4.5					



CLIENT Ku-ring-gai Council **PROJECT NAME** Lindfield Coummnity Hub Project
PROJECT NUMBER STC-155-10625 **PROJECT LOCATION** Woodford Lane, Lindfield NSW

DATE STARTED 16/6/16 **COMPLETED** 16/6/16 **R.L. SURFACE** _____ **DATUM** _____
DRILLING CONTRACTOR _____ **SLOPE** 90° **BEARING** ---
EQUIPMENT Hand Excavated **HOLE LOCATION** _____
HOLE SIZE 100 mm **LOGGED BY** DB **CHECKED BY** KM

NOTES

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
						Dark brown clay loam with gravel		
					CL-CH	CLAY (CL) red mottled yellow/orange, dry (natural)	Sampled at BH24A	PID Headspace = 0.1 ppm
ADT			0.5			Borehole BH24 terminated at 0.5m		
			1.0					
			1.5					
			2.0					
			2.5					
			3.0					
			3.5					
			4.0					
			4.5					



CLIENT Ku-ring-gai Council **PROJECT NAME** Lindfield Coummnity Hub Project
PROJECT NUMBER STC-155-10625 **PROJECT LOCATION** Woodford Lane, Lindfield NSW

DATE STARTED 16/6/16 **COMPLETED** 16/6/16 **R.L. SURFACE** **DATUM**
DRILLING CONTRACTOR **SLOPE** 90° **BEARING** ---
EQUIPMENT Hand Excavated **HOLE LOCATION**
HOLE SIZE 100 mm **LOGGED BY** DB **CHECKED BY** KM

NOTES

Method	Water	RL (m)	Depth (m)	Graphic Log	Classification Symbol	Material Description	Samples Tests Remarks	Additional Observations
					TOP SOIL	Dark brown clay loam with gravel		
					CL-CH	CLAY (CL) red mottled yellow/orange, dry (natural)	Sampled at BH24A	PID Headspace = 0.0 ppm
ADT			0.5			Borehole BH25 terminated at 0.5m		
			1.0					
			1.5					
			2.0					
			2.5					
			3.0					
			3.5					
			4.0					
			4.5					

APPENDIX V – CALIBRATION CERTIFICATES

New South Wales Office:

A. D. Envirotech Australia Pty Ltd
Unit 6/7 Millennium Court
Silverwater, NSW 2128

Queensland Office:

A. D. Envirotech Australia Pty Ltd
P.O. Box 288
Upper Coomera, QLD 4209

Telephone:

NSW: (02) 8541 7214
QLD: (07) 5519 4610

Internet:

site: www.ADenvirotech.com.au
e-mail info@ADenvirotech.com.au

ABN:

520 934 529 50



Air-Met Scientific P/L
7-11 Ceylon Street
Nunawading
Victoria 3131, Australia

PID 1

Calibration Certificate

This document hereby certifies that this instrument detailed has been calibrated to the parameters listed below.

Certificate Print Date: 30 March, 2016

Call ID: 00189463

Calibration Date: 30 March, 2016

Job / SO Number: 215986

Next Calibration Due: 30 September, 2016

Customer: A D Envirotech Australia Pty Ltd

Type: Port Gas Det

Model: PID

Serial No: T-108116

Description: PID

Sensor	Date Code	Gas Bottle No.	Calibration Gas and Concentration	C.F	C.V	Certified	Instrument Readings	
							Before / Span Res.	After
PID	//	ME215	ISOBUTYLENE 99.95PPM, AIR			NIST	FAILED	99.9PPM
PID	//	ME217	ISOBUTYLENE 1000PPM, AIR			NIST	FAILED	1012PPM
	//							
	//							
	//							
	//							

Completed by: Shaun Stephens

Signed: 

Australian Standard Alarm Levels ☒

CF - Conversion Factor, CV Compensated Value
CV = CF * Span Gas

CERTIFICATE
checked
Dimitris
Wofralin
31.03.2016

APPENDIX VI – UCL CALCULATIONS

New South Wales Office:

A. D. Envirotech Australia Pty Ltd
Unit 6/7 Millennium Court
Silverwater, NSW 2128

Queensland Office:

A. D. Envirotech Australia Pty Ltd
P.O. Box 288
Upper Coomera, QLD 4209

Telephone:

NSW: (02) 8541 7214
QLD: (07) 5519 4610

Internet:

site: www.ADenvirotech.com.au
e-mail info@ADenvirotech.com.au

ABN:

520 934 529 50

	A	B	C	D	E	F	G	H	I	J	K	L	
1				General UCL Statistics for Full Data Sets									
2	User Selected Options												
3	From File			WorkSheet.wst									
4	Full Precision			OFF									
5	Confidence Coefficient			95%									
6	Number of Bootstrap Operations			2000									
7													
8													
9	Zinc												
10													
11	General Statistics												
12	Number of Valid Observations				29		Number of Distinct Observations				17		
13													
14	Raw Statistics					Log-transformed Statistics							
15					Minimum	5					Minimum of Log Data	1.609	
16					Maximum	490					Maximum of Log Data	6.194	
17					Mean	127.9					Mean of log Data	3.792	
18					Median	48					SD of log Data	1.723	
19					SD	151							
20					Coefficient of Variation	1.181							
21					Skewness	1.175							
22													
23	Relevant UCL Statistics												
24	Normal Distribution Test					Lognormal Distribution Test							
25					Shapiro Wilk Test Statistic	0.794					Shapiro Wilk Test Statistic	0.858	
26					Shapiro Wilk Critical Value	0.926					Shapiro Wilk Critical Value	0.926	
27	Data not Normal at 5% Significance Level					Data not Lognormal at 5% Significance Level							
28													
29	Assuming Normal Distribution					Assuming Lognormal Distribution							
30					95% Student's-t UCL	175.6					95% H-UCL	608.2	
31	95% UCLs (Adjusted for Skewness)									95% Chebyshev (MVUE) UCL	491.3		
32					95% Adjusted-CLT UCL (Chen-1995)	180.6					97.5% Chebyshev (MVUE) UCL	628.2	
33					95% Modified-t UCL (Johnson-1978)	176.6					99% Chebyshev (MVUE) UCL	897.1	
34													
35	Gamma Distribution Test					Data Distribution							
36					k star (bias corrected)	0.548	Data do not follow a Discernable Distribution (0.05)						
37					Theta Star	233.5							
38					MLE of Mean	127.9							
39					MLE of Standard Deviation	172.8							
40					nu star	31.77							
41					Approximate Chi Square Value (.05)	19.89	Nonparametric Statistics						
42					Adjusted Level of Significance	0.0407					95% CLT UCL	174	
43					Adjusted Chi Square Value	19.32					95% Jackknife UCL	175.6	
44											95% Standard Bootstrap UCL	172.5	
45					Anderson-Darling Test Statistic	1.114					95% Bootstrap-t UCL	184.2	
46					Anderson-Darling 5% Critical Value	0.802					95% Hall's Bootstrap UCL	178.9	
47					Kolmogorov-Smirnov Test Statistic	0.187					95% Percentile Bootstrap UCL	174.7	
48					Kolmogorov-Smirnov 5% Critical Value	0.171					95% BCA Bootstrap UCL	175.7	
49	Data not Gamma Distributed at 5% Significance Level					95% Chebyshev(Mean, Sd) UCL							250.1
50											97.5% Chebyshev(Mean, Sd) UCL	303	
51	Assuming Gamma Distribution					99% Chebyshev(Mean, Sd) UCL							406.9
52					95% Approximate Gamma UCL	204.3							
53					95% Adjusted Gamma UCL	210.2							
54													

	A	B	C	D	E	F	G	H	I	J	K	L
55	Potential UCL to Use						Use 95% Chebyshev (Mean, Sd) UCL					250.1
56												
57	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
58	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
59	and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.											
60												

	A	B	C	D	E	F	G	H	I	J	K	L
1				General UCL Statistics for Full Data Sets								
2	User Selected Options											
3	From File			WorkSheet.wst								
4	Full Precision			OFF								
5	Confidence Coefficient			95%								
6	Number of Bootstrap Operations			2000								
7												
8												
9	TRH C16-C34											
10												
11	General Statistics											
12	Number of Valid Observations				29		Number of Distinct Observations				3	
13												
14	Raw Statistics						Log-transformed Statistics					
15	Minimum				100		Minimum of Log Data				4.605	
16	Maximum				910		Maximum of Log Data				6.813	
17	Mean				131		Mean of log Data				4.703	
18	Median				100		SD of log Data				0.423	
19	SD				150.7							
20	Coefficient of Variation				1.15							
21	Skewness				5.286							
22												
23												
24	Warning: There are only 3 Distinct Values in this data											
25	There are insufficient Distinct Values to perform some GOF tests and bootstrap methods.											
26	Those methods will return a 'N/A' value on your output display!											
27												
28	It is necessary to have 4 or more Distinct Values to compute bootstrap methods.											
29	However, results obtained using 4 to 9 distinct values may not be reliable.											
30	It is recommended to have 10-15 or more observations for accurate and meaningful bootstrap results.											
31												
32	Relevant UCL Statistics											
33	Normal Distribution Test						Lognormal Distribution Test					
34	Shapiro Wilk Test Statistic				0.22		Shapiro Wilk Test Statistic				0.259	
35	Shapiro Wilk Critical Value				0.926		Shapiro Wilk Critical Value				0.926	
36	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
37												
38	Assuming Normal Distribution						Assuming Lognormal Distribution					
39	95% Student's-t UCL				178.7		95% H-UCL				140.3	
40	95% UCLs (Adjusted for Skewness)						95% Chebyshev (MVUE) UCL				162.7	
41	95% Adjusted-CLT UCL (Chen-1995)				206.4		97.5% Chebyshev (MVUE) UCL				181.1	
42	95% Modified-t UCL (Johnson-1978)				183.2		99% Chebyshev (MVUE) UCL				217.2	
43												
44	Gamma Distribution Test						Data Distribution					
45	k star (bias corrected)				2.769		Data do not follow a Discernable Distribution (0.05)					
46	Theta Star				47.31							
47	MLE of Mean				131							
48	MLE of Standard Deviation				78.74							
49	nu star				160.6							
50	Approximate Chi Square Value (.05)				132.3		Nonparametric Statistics					
51	Adjusted Level of Significance				0.0407		95% CLT UCL				177.1	
52	Adjusted Chi Square Value				130.8		95% Jackknife UCL				178.7	
53							95% Standard Bootstrap UCL				N/A	
54	Anderson-Darling Test Statistic				9.908		95% Bootstrap-t UCL				N/A	

	A	B	C	D	E	F	G	H	I	J	K	L
55	Anderson-Darling 5% Critical Value					0.753	95% Hall's Bootstrap UCL					N/A
56	Kolmogorov-Smirnov Test Statistic					0.532	95% Percentile Bootstrap UCL					N/A
57	Kolmogorov-Smirnov 5% Critical Value					0.164	95% BCA Bootstrap UCL					N/A
58	Data not Gamma Distributed at 5% Significance Level						95% Chebyshev(Mean, Sd) UCL					253.1
59							97.5% Chebyshev(Mean, Sd) UCL					305.8
60	Assuming Gamma Distribution						99% Chebyshev(Mean, Sd) UCL					409.6
61	95% Approximate Gamma UCL					159.1						
62	95% Adjusted Gamma UCL					160.9						
63												
64	Potential UCL to Use						Use 95% Student's-t UCL					178.7
65							or 95% Modified-t UCL					183.2
66												
67	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
68	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
69	and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.											
70												

	A	B	C	D	E	F	G	H	I	J	K	L
1				General UCL Statistics for Full Data Sets								
2	User Selected Options											
3	From File			WorkSheet.wst								
4	Full Precision			OFF								
5	Confidence Coefficient			95%								
6	Number of Bootstrap Operations			2000								
7												
8												
9	Pb											
10												
11	General Statistics											
12	Number of Valid Observations				29		Number of Distinct Observations				27	
13												
14	Raw Statistics						Log-transformed Statistics					
15					Minimum	10					Minimum of Log Data	2.303
16					Maximum	610					Maximum of Log Data	6.413
17					Mean	130.3					Mean of log Data	4.229
18					Median	64					SD of log Data	1.155
19					SD	159.8						
20					Coefficient of Variation	1.226						
21					Skewness	1.872						
22												
23	Relevant UCL Statistics											
24	Normal Distribution Test						Lognormal Distribution Test					
25					Shapiro Wilk Test Statistic	0.726					Shapiro Wilk Test Statistic	0.949
26					Shapiro Wilk Critical Value	0.926					Shapiro Wilk Critical Value	0.926
27	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level					
28												
29	Assuming Normal Distribution						Assuming Lognormal Distribution					
30					95% Student's-t UCL	180.8					95% H-UCL	239.2
31	95% UCLs (Adjusted for Skewness)										95% Chebyshev (MVUE) UCL	271.6
32					95% Adjusted-CLT UCL (Chen-1995)	190.1					97.5% Chebyshev (MVUE) UCL	333.2
33					95% Modified-t UCL (Johnson-1978)	182.5					99% Chebyshev (MVUE) UCL	454.4
34												
35	Gamma Distribution Test						Data Distribution					
36					k star (bias corrected)	0.839	Data Follow Appr. Gamma Distribution at 5% Significance Level					
37					Theta Star	155.2						
38					MLE of Mean	130.3						
39					MLE of Standard Deviation	142.2						
40					nu star	48.69						
41					Approximate Chi Square Value (.05)	33.67	Nonparametric Statistics					
42					Adjusted Level of Significance	0.0407					95% CLT UCL	179.1
43					Adjusted Chi Square Value	32.92					95% Jackknife UCL	180.8
44											95% Standard Bootstrap UCL	176.6
45					Anderson-Darling Test Statistic	0.955					95% Bootstrap-t UCL	201
46					Anderson-Darling 5% Critical Value	0.778					95% Hall's Bootstrap UCL	187.7
47					Kolmogorov-Smirnov Test Statistic	0.157					95% Percentile Bootstrap UCL	179.6
48					Kolmogorov-Smirnov 5% Critical Value	0.168					95% BCA Bootstrap UCL	192.4
49	Data follow Appr. Gamma Distribution at 5% Significance Level										95% Chebyshev(Mean, Sd) UCL	259.6
50											97.5% Chebyshev(Mean, Sd) UCL	315.6
51	Assuming Gamma Distribution										99% Chebyshev(Mean, Sd) UCL	425.5
52					95% Approximate Gamma UCL	188.4						
53					95% Adjusted Gamma UCL	192.7						
54												

	A	B	C	D	E	F	G	H	I	J	K	L
55	Potential UCL to Use						Use 95% Approximate Gamma UCL					188.4
56												
57	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
58	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
59	and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.											
60												

	A	B	C	D	E	F	G	H	I	J	K	L
1				General UCL Statistics for Full Data Sets								
2	User Selected Options											
3	From File			WorkSheet.wst								
4	Full Precision			OFF								
5	Confidence Coefficient			95%								
6	Number of Bootstrap Operations			2000								
7												
8												
9	Nickel											
10												
11	General Statistics											
12	Number of Valid Observations				29		Number of Distinct Observations				14	
13												
14	Raw Statistics						Log-transformed Statistics					
15					Minimum	5					Minimum of Log Data	1.609
16					Maximum	120					Maximum of Log Data	4.787
17					Mean	21.83					Mean of log Data	2.74
18					Median	10					SD of log Data	0.739
19					SD	24.72						
20					Coefficient of Variation	1.132						
21					Skewness	2.819						
22												
23	Relevant UCL Statistics											
24	Normal Distribution Test						Lognormal Distribution Test					
25					Shapiro Wilk Test Statistic	0.591					Shapiro Wilk Test Statistic	0.784
26					Shapiro Wilk Critical Value	0.926					Shapiro Wilk Critical Value	0.926
27	Data not Normal at 5% Significance Level						Data not Lognormal at 5% Significance Level					
28												
29	Assuming Normal Distribution						Assuming Lognormal Distribution					
30					95% Student's-t UCL	29.64					95% H-UCL	27.55
31	95% UCLs (Adjusted for Skewness)										95% Chebyshev (MVUE) UCL	33.21
32					95% Adjusted-CLT UCL (Chen-1995)	31.94					97.5% Chebyshev (MVUE) UCL	38.88
33					95% Modified-t UCL (Johnson-1978)	30.04					99% Chebyshev (MVUE) UCL	50.02
34												
35	Gamma Distribution Test						Data Distribution					
36					k star (bias corrected)	1.459	Data do not follow a Discernable Distribution (0.05)					
37					Theta Star	14.96						
38					MLE of Mean	21.83						
39					MLE of Standard Deviation	18.07						
40					nu star	84.6						
41					Approximate Chi Square Value (.05)	64.4	Nonparametric Statistics					
42					Adjusted Level of Significance	0.0407					95% CLT UCL	29.38
43					Adjusted Chi Square Value	63.35					95% Jackknife UCL	29.64
44											95% Standard Bootstrap UCL	29.22
45					Anderson-Darling Test Statistic	3.565					95% Bootstrap-t UCL	35.77
46					Anderson-Darling 5% Critical Value	0.762					95% Hall's Bootstrap UCL	37.36
47					Kolmogorov-Smirnov Test Statistic	0.293					95% Percentile Bootstrap UCL	29.72
48					Kolmogorov-Smirnov 5% Critical Value	0.165					95% BCA Bootstrap UCL	32.45
49	Data not Gamma Distributed at 5% Significance Level										95% Chebyshev(Mean, Sd) UCL	41.83
50											97.5% Chebyshev(Mean, Sd) UCL	50.49
51	Assuming Gamma Distribution										99% Chebyshev(Mean, Sd) UCL	67.5
52					95% Approximate Gamma UCL	28.67						
53					95% Adjusted Gamma UCL	29.15						
54												

	A	B	C	D	E	F	G	H	I	J	K	L
55	Potential UCL to Use						Use 95% Chebyshev (Mean, Sd) UCL					41.83
56												
57	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
58	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
59	and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.											
60												

	A	B	C	D	E	F	G	H	I	J	K	L		
1				General UCL Statistics for Full Data Sets										
2	User Selected Options													
3	From File			WorkSheet.wst										
4	Full Precision			OFF										
5	Confidence Coefficient			95%										
6	Number of Bootstrap Operations			2000										
7														
8														
9	Copper													
10														
11	General Statistics													
12	Number of Valid Observations				29		Number of Distinct Observations				23			
13														
14	Raw Statistics						Log-transformed Statistics							
15					Minimum	5.5						Minimum of Log Data	1.705	
16					Maximum	120						Maximum of Log Data	4.787	
17					Mean	34.92						Mean of log Data	3.155	
18					Median	22						SD of log Data	0.91	
19					SD	33.33								
20					Coefficient of Variation	0.955								
21					Skewness	1.497								
22														
23	Relevant UCL Statistics													
24	Normal Distribution Test						Lognormal Distribution Test							
25					Shapiro Wilk Test Statistic	0.782						Shapiro Wilk Test Statistic	0.958	
26					Shapiro Wilk Critical Value	0.926						Shapiro Wilk Critical Value	0.926	
27	Data not Normal at 5% Significance Level						Data appear Lognormal at 5% Significance Level							
28														
29	Assuming Normal Distribution						Assuming Lognormal Distribution							
30					95% Student's-t UCL	45.45						95% H-UCL	53.25	
31	95% UCLs (Adjusted for Skewness)										95% Chebyshev (MVUE) UCL	63.69		
32					95% Adjusted-CLT UCL (Chen-1995)	46.94						97.5% Chebyshev (MVUE) UCL	76.19	
33					95% Modified-t UCL (Johnson-1978)	45.73						99% Chebyshev (MVUE) UCL	100.7	
34														
35	Gamma Distribution Test						Data Distribution							
36					k star (bias corrected)	1.278		Data appear Gamma Distributed at 5% Significance Level						
37					Theta Star	27.33								
38					MLE of Mean	34.92								
39					MLE of Standard Deviation	30.89								
40					nu star	74.11								
41					Approximate Chi Square Value (.05)	55.29		Nonparametric Statistics						
42					Adjusted Level of Significance	0.0407						95% CLT UCL	45.1	
43					Adjusted Chi Square Value	54.31						95% Jackknife UCL	45.45	
44												95% Standard Bootstrap UCL	45.32	
45					Anderson-Darling Test Statistic	0.672						95% Bootstrap-t UCL	49.03	
46					Anderson-Darling 5% Critical Value	0.765						95% Hall's Bootstrap UCL	46.1	
47					Kolmogorov-Smirnov Test Statistic	0.119						95% Percentile Bootstrap UCL	45.31	
48					Kolmogorov-Smirnov 5% Critical Value	0.166						95% BCA Bootstrap UCL	47.27	
49	Data appear Gamma Distributed at 5% Significance Level												95% Chebyshev(Mean, Sd) UCL	61.9
50												97.5% Chebyshev(Mean, Sd) UCL	73.57	
51	Assuming Gamma Distribution												99% Chebyshev(Mean, Sd) UCL	96.51
52					95% Approximate Gamma UCL	46.81								
53					95% Adjusted Gamma UCL	47.64								
54														

	A	B	C	D	E	F	G	H	I	J	K	L
55	Potential UCL to Use						Use 95% Approximate Gamma UCL					46.81
56												
57	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
58	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
59	and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.											
60												

	A	B	C	D	E	F	G	H	I	J	K	L
1				General UCL Statistics for Full Data Sets								
2	User Selected Options											
3	From File			WorkSheet.wst								
4	Full Precision			OFF								
5	Confidence Coefficient			95%								
6	Number of Bootstrap Operations			2000								
7												
8												
9	Cr IV											
10												
11	General Statistics											
12	Number of Valid Observations				29		Number of Distinct Observations				23	
13												
14	Raw Statistics					Log-transformed Statistics						
15	Minimum				6.6		Minimum of Log Data				1.887	
16	Maximum				170		Maximum of Log Data				5.136	
17	Mean				34.98		Mean of log Data				3.354	
18	Median				29		SD of log Data				0.613	
19	SD				29.49							
20	Coefficient of Variation				0.843							
21	Skewness				3.659							
22												
23	Relevant UCL Statistics											
24	Normal Distribution Test					Lognormal Distribution Test						
25	Shapiro Wilk Test Statistic				0.622		Shapiro Wilk Test Statistic				0.952	
26	Shapiro Wilk Critical Value				0.926		Shapiro Wilk Critical Value				0.926	
27	Data not Normal at 5% Significance Level					Data appear Lognormal at 5% Significance Level						
28												
29	Assuming Normal Distribution					Assuming Lognormal Distribution						
30	95% Student's-t UCL				44.3		95% H-UCL				43.78	
31	95% UCLs (Adjusted for Skewness)					95% Chebyshev (MVUE) UCL				52.37		
32	95% Adjusted-CLT UCL (Chen-1995)				47.97		97.5% Chebyshev (MVUE) UCL				60.2	
33	95% Modified-t UCL (Johnson-1978)				44.92		99% Chebyshev (MVUE) UCL				75.57	
34												
35	Gamma Distribution Test					Data Distribution						
36	k star (bias corrected)				2.399		Data Follow Appr. Gamma Distribution at 5% Significance Level					
37	Theta Star				14.58							
38	MLE of Mean				34.98							
39	MLE of Standard Deviation				22.59							
40	nu star				139.1							
41	Approximate Chi Square Value (.05)				112.9		Nonparametric Statistics					
42	Adjusted Level of Significance				0.0407		95% CLT UCL				43.99	
43	Adjusted Chi Square Value				111.5		95% Jackknife UCL				44.3	
44							95% Standard Bootstrap UCL				43.93	
45	Anderson-Darling Test Statistic				0.948		95% Bootstrap-t UCL				53.4	
46	Anderson-Darling 5% Critical Value				0.754		95% Hall's Bootstrap UCL				83.41	
47	Kolmogorov-Smirnov Test Statistic				0.145		95% Percentile Bootstrap UCL				44.94	
48	Kolmogorov-Smirnov 5% Critical Value				0.164		95% BCA Bootstrap UCL				49.48	
49	Data follow Appr. Gamma Distribution at 5% Significance Level					95% Chebyshev(Mean, Sd) UCL				58.85		
50							97.5% Chebyshev(Mean, Sd) UCL				69.18	
51	Assuming Gamma Distribution					99% Chebyshev(Mean, Sd) UCL				89.47		
52	95% Approximate Gamma UCL				43.12							
53	95% Adjusted Gamma UCL				43.67							
54												

	A	B	C	D	E	F	G	H	I	J	K	L
55	Potential UCL to Use						Use 95% Approximate Gamma UCL					43.12
56												
57	Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.											
58	These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)											
59	and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.											
60												

APPENDIX VII – ANALYTICAL REPORTS

New South Wales Office:

A. D. Envirotech Australia Pty Ltd
Unit 6/7 Millennium Court
Silverwater, NSW 2128

Queensland Office:

A. D. Envirotech Australia Pty Ltd
P.O. Box 288
Upper Coomera, QLD 4209

Telephone:

NSW: (02) 8541 7214
QLD: (07) 5519 4610

Internet:

site: www.ADenvirotech.com.au
e-mail info@ADenvirotech.com.au

ABN:

520 934 529 50



Environmental and OH&S Laboratory

A division of A. D. Envirotech Australia Pty Ltd
Unit 4/10-11 Millennium Court,
Silverwater 2128

A.C.N. 093 452 950

Analysis report: STC-155-10625 ASB 1

Date Received: 17.06.2016
Date Analysed: 23.06.2016
Report Date: 24.06.2016
Client: Ku-ring-gai Council
Job Location: Woodford Lane, Lindfield NSW
Analytical method: Polarised Light Microscopy with dispersion staining (ADE method ABI)

Analysis performed by:

Lili Shi
Approved asbestos identifier

Results Authorised By:

Lili Shi
Approved Signatory



Accreditation No.14664.

Accredited for compliance with ISO/IEC 17025.
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Tests not covered by NATA are denoted with *.

Laboratory Sample No.	Sample Description/Matrix	Sample Dimensions (cm) unless stated otherwise	Result	Comments
10625-Asb1	Soil / BH01A	56 grams	No Chrysotile asbestos found at reporting limit of 0.1 g/kg.	Nil
			No Amosite asbestos found at reporting limit of 0.1 g/kg.	Nil
			No Crocidolite asbestos found at reporting limit of 0.1 g/kg.	Nil
			No Synthetic Mineral Fibres found	Nil
			Organic fibres found	Nil
10625-Asb2	Soil / BH03A	60 grams	No Chrysotile asbestos found at reporting limit of 0.1 g/kg.	Nil
			No Amosite asbestos found at reporting limit of 0.1 g/kg.	Nil
			No Crocidolite asbestos found at reporting limit of 0.1 g/kg.	Nil
			No Synthetic Mineral Fibres found	Nil
			Organic fibres found	Nil
10625-Asb3	Soil / BH05A	85 grams	No Chrysotile asbestos found at reporting limit of 0.1 g/kg.	Nil
			No Amosite asbestos found at reporting limit of 0.1 g/kg.	Nil
			No Crocidolite asbestos found at reporting limit of 0.1 g/kg.	Nil
			No Synthetic Mineral Fibres found	Nil
			Organic fibres found	Nil
10625-Asb4	Soil / BH06A	78 grams	No Chrysotile asbestos found at reporting limit of 0.1 g/kg.	Nil
			No Amosite asbestos found at reporting limit of 0.1 g/kg.	Nil
			No Crocidolite asbestos found at reporting limit of 0.1 g/kg.	Nil
			No Synthetic Mineral Fibres found	Nil
			Organic fibres found	Nil
10625-Asb5	Soil / BH08A	82 grams	No Chrysotile asbestos found at reporting limit of 0.1 g/kg.	Nil
			No Amosite asbestos found at reporting limit of 0.1 g/kg.	Nil
			No Crocidolite asbestos found at reporting limit of 0.1 g/kg.	Nil
			No Synthetic Mineral Fibres found	Nil
			Organic fibres found	Nil
10625-Asb6	Soil / BH10A	88 grams	No Chrysotile asbestos found at reporting limit of 0.1 g/kg.	Nil
			No Amosite asbestos found at reporting limit of 0.1 g/kg.	Nil
			No Crocidolite asbestos found at reporting limit of 0.1 g/kg.	Nil
			No Synthetic Mineral Fibres found	Nil
			Organic fibres found	Nil
10625-Asb7	Soil / BH11A	77 grams	No Chrysotile asbestos found at reporting limit of 0.1 g/kg.	Nil
			No Amosite asbestos found at reporting limit of 0.1 g/kg.	Nil
			No Crocidolite asbestos found at reporting limit of 0.1 g/kg.	Nil
			No Synthetic Mineral Fibres found	Nil
			Organic fibres found	Nil

Laboratory Sample No.	Sample Description/Matrix	Sample Dimensions (cm) unless stated otherwise	Result	Comments
10625-Asb8	Soil / BH14A	66 grams	No Chrysotile asbestos found at reporting limit of 0.1 g/kg.	Nil
			No Amosite asbestos found at reporting limit of 0.1 g/kg.	Nil
			No Crocidolite asbestos found at reporting limit of 0.1 g/kg.	Nil
			No Synthetic Mineral Fibres found	Nil
			Organic fibres found	Nil
10625-Asb9	Soil / BH17A	93 grams	No Chrysotile asbestos found at reporting limit of 0.1 g/kg.	Nil
			No Amosite asbestos found at reporting limit of 0.1 g/kg.	Nil
			No Crocidolite asbestos found at reporting limit of 0.1 g/kg.	Nil
			No Synthetic Mineral Fibres found	Nil
			Organic fibres found	Nil
10625-Asb10	Soil / BH19A	105 grams	No Chrysotile asbestos found at reporting limit of 0.1 g/kg.	Nil
			No Amosite asbestos found at reporting limit of 0.1 g/kg.	Nil
			No Crocidolite asbestos found at reporting limit of 0.1 g/kg.	Nil
			No Synthetic Mineral Fibres found	Nil
			Organic fibres found	Nil
10625-Asb11	Soil / BH21A	100 grams	No Chrysotile asbestos found at reporting limit of 0.1 g/kg.	Nil
			No Amosite asbestos found at reporting limit of 0.1 g/kg.	Nil
			No Crocidolite asbestos found at reporting limit of 0.1 g/kg.	Nil
			No Synthetic Mineral Fibres found	Nil
			Organic fibres found	Nil
10625-Asb12	Soil / BH23A	81 grams	No Chrysotile asbestos found at reporting limit of 0.1 g/kg.	Nil
			No Amosite asbestos found at reporting limit of 0.1 g/kg.	Nil
			No Crocidolite asbestos found at reporting limit of 0.1 g/kg.	Nil
			No Synthetic Mineral Fibres found	Nil
			Organic fibres found	Nil
10625-Asb13	Soil / BH24A	95 grams	No Chrysotile asbestos found at reporting limit of 0.1 g/kg.	Nil
			No Amosite asbestos found at reporting limit of 0.1 g/kg.	Nil
			No Crocidolite asbestos found at reporting limit of 0.1 g/kg.	Nil
			No Synthetic Mineral Fibres found	Nil
			Organic fibres found	Nil

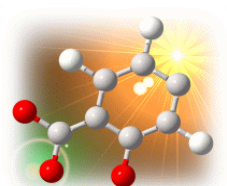
General Comments:

All samples are analysed as received.
Sampling performed by AD Envirotech is not covered by NATA scope.
Samples are stored for period of 3 months.
Due to the difficulty of estimating the load on the swab the test is carried out for presence or absence of asbestos only.
¹ Independent confirming technique such as infrared spectroscopy, X-ray diffraction, scanning or transmission electron microscopy is advised.



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Environmental and OH&S Laboratory

A division of A. D. Envirotech Australia Pty Ltd

A.C.N. 093 452 950

Unit 4/10-11 Millennium Court,

Silverwater 2128

Ph: (02) 9648-6669

Analysis report: STC-155-10625-3

Customer: A. D. Envirotech Australia Pty. Ltd.

Attention: Kyle McClintock

Sample Log In Details

Your reference:	STC-155-10625-3
No. of Samples:	1
Date Received:	05.07.2016
Date completed instructions received:	05.07.2016
Date of analysis:	05.07.2016

Report Details

Report Date:	05.07.2016
Method number**:	AS 1289.4.3.1

Results Authorised By:

Dr Dominika Wojtalewicz (MRACI CCHEM)

Quality System Manager/Chemist



Accreditation No.14664.

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Lab ID	PQL (mg/kg)	10625-C26
Sample Name		10625-BH14D
pH (average for 3 measurements)		5.2

General Comments and Glossary

Tests not covered by NATA are denoted with *.	
Samples are analysed on "as received" basis.	
Samples were delivered chilled	Yes
Samples were preserved in correct manner	Yes
Sample containers for volatile analysis were received with minimal headspace	Yes
Samples were analysed within holding time	Yes
Some samples have been subcontracted	No

- 1. All samples are tested in batches of 20.
- 2. All results for soil samples are reported per gram of dry soil, unless otherwise stated.
- 3. However surrogate standards are added to samples due to PAH and BTEX analysis and recoveries are calculated, samples' results are not corrected for standards recoveries.
- 4. Analysis of VOC in water samples are performed on unfiltered waters (as received), spiked with surrogate
- 5. If heterogenous or insufficient material provided LCS is used as matrix spike for QA/QC purposes.
- 6. Duplicate sample and matrix spike recoveries may not be prepared on smaller jobs, however, were analysed at a frequency
- 7. QA/QC samples shown within the report that states the word "BATCH"; Batch Blank, Matrix Spike and Duplicate were prepared on samples from outside of reported job.

Blank: This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.

Duplicate: This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.

Matrix Spike: A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.

LCS (Laboratory Control Sample): This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.

Surr. (Surrogate Spike): Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

INS: Insufficient sample for this test

>: Greater than

LCS: Laboratory Control Sample

NT: Not tested

<: Less than

RPD: Relative Percent Difference

NA: Test not required

PQL: Practical Quantitation Limit

Laboratory Acceptance Criteria

Matrix Spikes and LCS: Generally 70-130% for inorganics/metals, 60-140% for organics is acceptable.
Matrix heterogeneity may result in matrix spike analyses falling outside these limits.

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the PQL : No Limit

Results between 10-20 times the PQL : RPD must lie between 0-50%

Results >20 times the PQL : RPD must lie between 0-30%

Surrogate Recoveries : Recoveries must lie between 50-150% - Phenols 20-130%.



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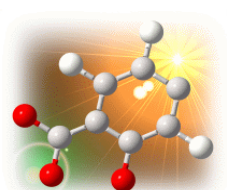
****Methods Number Description:**

ESA-MP-01	Determination of metals by MP-AES
ESA-MP-02	Digestion of soil samples for MP-AES analysis
ESA-MP-03	Preparation of water samples for metals determination by MP-AES
ESA-MP-04	TCLP for inorganic contaminants
ESA-MP-05	Digestion of paint and dust samples for lead context determination
ESA-MP-06	Digestion of air filters
ESA-MP-07	Digestion of swabs for determination of lead content in dust
ESA-P-ORG02	Analysis of PAHs by GC-MS
ESA-P-ORG03	Analysis of TRH and TPH by GC-FID
ESA-P-ORG04	Separatory funnel extraction of PAHs from water matrices including TCLP extracts
ESA-P-ORG05	Separatory funnel extraction of TRH and TPH from water matrices
ESA-P-ORG06	Silica gel clean up of soil and water extracts, prior analysis for STPH
ESA-P-ORG07	Extraction of BTEX and VTRX from soil matrices
ESA-P-ORG08	Analysis of soil extracts and waters by P&T GCMS
ESA-P-ORG09	Extraction of TRH from solid matrices
ESA-P-ORG14	Extraction of PCB (Aroclor) OCP OPP and PAH from soil matrices
ESA-P-ORG15	Analysis of PCB OCP OPP and PAH by GCMS
AS 1289.4.3.1	Determination of the pH value of a soil-Electrometric method
AS 1289.3.6.1	Determination of the particle size distribution of a soil - Standard method of analysis by sieving
T276	NSW RMS Test Method T 276 Foreign materials content of recycled crushed concrete
*Texture Assessment based on;	Salinity Notes, Number 8, Oct 2000, ISSN 1 325-4448, "How to Texture soils & Test for Salinity"
*ESA-P-16	Procedure for measurement of Electrical Conductivity EC
ESA-P-12	Moisture by classical in-house method; Procedure for gravimetric moisture determination



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Environmental and OH&S Laboratory

A division of A. D. Envirotech Australia Pty Ltd

A.C.N. 093 452 950

Unit 4/10-11 Millennium Court,

Silverwater 2128

Ph: (02) 9648-6669

Analysis report: STC-155-10625-2

Customer: A. D. Envirotech Australia Pty. Ltd.

Attention: Kyle McClintock

Sample Log In Details

Your reference: STC-155-10625-2
No. of Samples: 3
Date Received: 17.06.2016
Date completed instructions received: 17.06.2016
Date of analysis: 17-22.06.2016

Report Details

Report Date: 23.06.2016
Method number:** ESA-P-ORG03
 ESA-P-ORG04
 ESA-P-ORG05
 ESA-P-ORG08
 ESA-P-ORG12

Results Authorised By:

Dr Dominika Wojtalewicz (MRACI CCHEM)

Quality System Manager/Chemist



Accreditation No.14664.

Accredited for compliance with ISO/IEC 17025.

The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Tests not covered by NATA are denoted with *.

Lab ID	PQL (µg/L)	10625-C29	10625-C30	10625-C31
Sample Name		10625-Trip Blank-1	10625-Trip Spike-1	10625- Rinsate-1
PAH				
Acenaphthene	0.1	NT	NT	<0.1
Acenaphthylene	0.1	NT	NT	<0.1
Anthracene	0.1	NT	NT	<0.1
Benzo[a]anthracene	0.1	NT	NT	<0.1
Benzo[a]pyrene	0.1	NT	NT	<0.1
Benzo[b]fluoranthene	0.1	NT	NT	<0.1
Benzo[g,h,i]perylene	0.1	NT	NT	<0.1
Benzo[k]fluoranthene	0.1	NT	NT	<0.1
Chrysene	0.1	NT	NT	<0.1
Dibenzo[a,h]anthracene	0.1	NT	NT	<0.1
Fluoranthene	0.1	NT	NT	<0.1
Fluorene	0.1	NT	NT	<0.1
Indeno(1,2,3-cd)pyrene	0.1	NT	NT	<0.1
Naphthalene	0.1	NT	NT	<0.1
Phenanthrene	0.1	NT	NT	<0.1
Pyrene	0.1	NT	NT	<0.1
p-Terphenyl-d14	surr.	NT	NT	95%
TRH				
>C6-C10	25	NT	NT	<25
>C10-C16	50	NT	NT	<50
>C16-C34	200	NT	NT	<200
>C34-C40	200	NT	NT	<200
BTEX				
Benzene	1	<1	104%	<1
Toluene	1	<1	100%	<1
Ethylbenzene	1	<1	99%	<1
m, p- Xylene(s)	2	<2	98%	<2
o-Xylene	1	<1	100%	<1
Fluorobenzene	surr.	104%	102%	131%

Lab ID	PQL (µg/L)	Blank 1	Blank spike 1	Matrix spike 1	Duplicate 1 - Value 1	Duplicate 1 - Value 2	Duplicate 1
Sample Name							
PAH							
Acenaphthene	0.1	<0.1	89%	89%	<0.1	<0.1	ACCEPT
Acenaphthylene	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
Anthracene	0.1	<0.1	97%	96%	<0.1	<0.1	ACCEPT
Benzo[a]anthracene	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
Benzo[a]pyrene	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
Benzo[b]fluoranthene	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
Benzo[g,h,i]perylene	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
Benzo[k]fluoranthene	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
Chrysene	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
Dibenzo[a,h]anthracene	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
Fluoranthene	0.1	<0.1	88%	88%	<0.1	<0.1	ACCEPT
Fluorene	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
Indeno(1,2,3-cd)pyrene	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
Naphthalene	0.1	<0.1	85%	85%	<0.1	<0.1	ACCEPT
Phenanthrene	0.1	<0.1	97%	96%	<0.1	<0.1	ACCEPT
Pyrene	0.1	<0.1	89%	89%	<0.1	<0.1	ACCEPT
p-Terphenyl-d14	surr.		90%	89%	95%	92%	
TRH							
>C6-C10	25	<25	NT	NT	57	42	ACCEPT
>C10-C16	50	<50	96%	97%	<50	<50	ACCEPT
>C16-C34	200	<200	NT	NT	<200	<200	ACCEPT
>C34-C40	200	<200	NT	NT	<200	<200	ACCEPT
		Batch Blank 1	Batch Blank spike 1	Batch Matrix spike 1	Batch Duplicate 1 - Value 1	Batch Duplicate 1 - Value 2	Batch Duplicate 1
BTEX							
Benzene	1	<1	100%	99%	<1	<1	ACCEPT
Toluene	1	<1	95%	93%	<1	<1	ACCEPT
Ethylbenzene	1	<1	92%	92%	<1	<1	ACCEPT
m, p- Xylene(s)	2	<2	91%	90%	<2	<2	ACCEPT
o-Xylene	1	<1	93%	92%	<1	<1	ACCEPT
Fluorobenzene	surr.		98%	97%	99%	99%	

Lab ID	PQL (µg/L)	Batch Duplicate 2 - Value 1	Batch Duplicate 2 - Value 2	Batch Duplicate 2
Sample Name				
PAH				
Acenaphthene	0.1	NT	NT	NT
Acenaphthylene	0.1	NT	NT	NT
Anthracene	0.1	NT	NT	NT
Benzo[a]anthracene	0.1	NT	NT	NT
Benzo[a]pyrene	0.1	NT	NT	NT
Benzo[b]fluoranthene	0.1	NT	NT	NT
Benzo[g,h,i]perylene	0.1	NT	NT	NT
Benzo[k]fluoranthene	0.1	NT	NT	NT
Chrysene	0.1	NT	NT	NT
Dibenzo[a,h]anthracene	0.1	NT	NT	NT
Fluoranthene	0.1	NT	NT	NT
Fluorene	0.1	NT	NT	NT
Indeno(1,2,3-cd)pyrene	0.1	NT	NT	NT
Naphthalene	0.1	NT	NT	NT
Phenanthrene	0.1	NT	NT	NT
Pyrene	0.1	NT	NT	NT
p-Terphenyl-d14	surr.	NT	NT	
TRH				
>C6-C10	25	68	41	ACCEPT
>C10-C16	50	NT	NT	NT
>C16-C34	200	NT	NT	NT
>C34-C40	200	NT	NT	NT
BTEX				
Benzene	1	<1	<1	ACCEPT
Toluene	1	<1	<1	ACCEPT
Ethylbenzene	1	<1	<1	ACCEPT
m, p- Xylene(s)	2	<2	<2	ACCEPT
o-Xylene	1	<1	<1	ACCEPT
Fluorobenzene	surr.	95%	109%	

General Comments and Glossary

Samples are analysed on "as received" basis.	
Samples were delivered chilled	Yes
Samples were preserved in correct manner	Yes
Sample containers for volatile analysis were received with minimal headspace	Yes
Samples were analysed within holding time	Yes
Some samples have been subcontracted	No

- 1. All samples are tested in batches of 20.
- 2. All results for soil samples are reported per gram of dry soil, unless otherwise stated.
- 3. However surrogate standards are added to samples due to PAH and BTEX analysis and recoveries are calculated, samples' results are not corrected for standards recoveries.
- 4. Analysis of VOC in water samples are performed on unfiltered waters (as received), spiked with surrogate
- 5. If heterogenous or insufficient material provided LCS is used as matrix spike for QA/QC purposes.
- 6. Duplicate sample and matrix spike recoveries may not be prepared on smaller jobs, however, were analysed at a frequency
- 7. QA/QC samples shown within the report that states the word "BATCH"; Batch Blank, Matrix Spike and Duplicate were prepared on samples from outside of reported job.

Blank: This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.

Duplicate: This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.

Matrix Spike: A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.

LCS (Laboratory Control Sample): This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.

Surr. (Surrogate Spike): Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

INS: Insufficient sample for this test

>: Greater than

LCS: Laboratory Control Sample

NT: Not tested

<: Less than

RPD: Relative Percent Difference

NA: Test not required

PQL: Practical Quantitation Limit

Laboratory Acceptance Criteria

Matrix Spikes and LCS: Generally 70-130% for inorganics/metals, 60-140% for organics is acceptable. Matrix heterogeneity may result in matrix spike analyses falling outside these limits.

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the PQL : No Limit

Results between 10-20 times the PQL : RPD must lie between 0-50%

Results >20 times the PQL : RPD must lie between 0-30%

Surrogate Recoveries : Recoveries must lie between 50-150% - Phenols 20-130%.



Accreditation No.14664.

Accredited for compliance with ISO/IEC 17025.

The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Tests not covered by NATA are denoted with *.

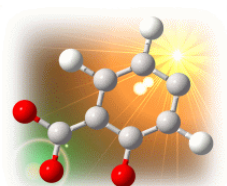
****Methods Number Description:**

ESA-MP-01	Determination of metals by MP-AES
ESA-MP-02	Digestion of soil samples for MP-AES analysis
ESA-MP-03	Preparation of water samples for metals determination by MP-AES
ESA-MP-04	TCLP for inorganic contaminants
ESA-MP-05	Digestion of paint and dust samples for lead content determination
ESA-MP-06	Digestion of air filters
ESA-MP-07	Digestion of swabs for determination of lead content in dust
ESA-P-ORG03	Analysis of TRH and TPH by GC-FID
ESA-P-ORG04	Separatory funnel extraction of PAHs from water matrices including TCLP extracts
ESA-P-ORG05	Separatory funnel extraction of TRH and TPH from water matrices
ESA-P-ORG07	Extraction of BTEX and VTRX from soil matrices
ESA-P-ORG08	Analysis of soil extracts and waters by P&T GCMS
ESA-P-ORG09	Extraction of TRH from solid matrices
ESA-P-ORG11	Extraction of OCP OPP and PAH from soil matrices
ESA-P-ORG12	Analysis of OCP OPP and PAHs by GC-MS
AS 1289.4.3.1	Determination of the pH value of a soil-Electrometric method



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Environmental and OH&S Laboratory

A division of A. D. Envirotech Australia Pty Ltd

A.C.N. 093 452 950

Unit 4/10-11 Millennium Court,

Silverwater 2128

Ph: (02) 9648-6669

Analysis report: STC-155-10625-1

Customer: A. D. Envirotech Australia Pty. Ltd.

Attention: Kyle McClintock

Sample Log In Details

Your reference: STC-155-10625-1
No. of Samples: 28
Date Received: 17.06.2016
Date completed instructions received: 17.06.2016
Date of analysis: 17-21.06.2016

Report Details

Report Date: 23.06.2016
Method number:** ESA-MP-01
 ESA-MP-02
 ESA-P-ORG03
 ESA-P-ORG07
 ESA-P-ORG08
 ESA-P-ORG09
 ESA-P-ORG14
 ESA-P-ORG15
 AS 1289.2.1.1

Results Authorised By:

Dr Dominika Wojtalewicz (MRACI CCHEM)

Quality System Manager/Chemist



Accreditation No.14664.

Accredited for compliance with ISO/IEC 17025.

The results of the tests, calibrations and/or
 measurements included in this document are traceable
 to Australian/national standards.

Tests not covered by NATA are denoted with *.

Lab ID	PQL (mg/kg)	10625-C1	10625-C2	10625-C3	10625-C4	10625-C5	10625-C6
Sample Name		10625-BH01A	10625-BH02A	10625-BH03A	10625-BH04A	10625-BH05A	10625-BH06A
PAH							
Acenaphthene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Acenaphthylene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Anthracene	0.3	0.4	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo[a]anthracene	0.3	0.8	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo[a]pyrene	0.3	1.2	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo[b]fluoranthene	0.3	1.4	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo[g,h,i]perylene	0.3	1.0	<0.3	<0.3	<0.3	<0.3	<0.3
Benzo[k]fluoranthene	0.3	0.5	<0.3	<0.3	<0.3	<0.3	<0.3
Chrysene	0.3	0.8	<0.3	<0.3	<0.3	<0.3	<0.3
Dibenzo[a,h]anthracene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Fluoranthene	0.3	1.3	0.3	<0.3	<0.3	<0.3	<0.3
Fluorene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Indeno(1,2,3-cd)pyrene	0.3	0.9	<0.3	<0.3	<0.3	<0.3	<0.3
Naphthalene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Phenanthrene	0.3	0.4	<0.3	<0.3	<0.3	<0.3	<0.3
Pyrene	0.3	1.3	0.3	<0.3	<0.3	<0.3	<0.3
p-Terphenyl-d14	surr.	93%	89%	90%	89%	91%	91%
OCPs							
aldrin	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
a-BHC	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
b-BHC	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
d-BHC	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
g-BHC (lindane)	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
cis-chlordane	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-chlordane	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
4,4'-DDD	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
4,4'-DDE	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
4,4'-DDT	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
dieldrin	0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1
endosulfan I	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
endosulfan II	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
endosulfan sulfate	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
endrin	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
endrin aldehyde	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
endrin ketone	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
heptachlor	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
heptachlor epoxide	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
hexachlorobenzene	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
methoxychlor	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TCMX	surr.	102%	103%	103%	102%	105%	104%
OPPs							
chlorpyrifos	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
chlorpyrifos methyl	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
diazinon	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
fenchlorphos	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
methyl parathion	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
prophos	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
tributylphosphorotrithioite	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
PCB							
Total PCB		<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
2-fluorobiphenyl	surr.	94%	101%	102%	102%	101%	105%

Lab ID	PQL (mg/kg)	10625-C1	10625-C2	10625-C3	10625-C4	10625-C5	10625-C6
Sample Name		10625-BH01A	10625-BH02A	10625-BH03A	10625-BH04A	10625-BH05A	10625-BH06A
TRH							
>C6-C10	35	<35	<35	<35	<35	<35	<35
>C10-C16	50	<50	<50	<50	<50	<50	<50
>C16-C34	100	<100	<100	<100	<100	<100	<100
>C34-C40	100	<100	<100	<100	<100	<100	<100
BTEX							
Benzene	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	1	<1	<1	<1	<1	<1	<1
m, p- Xylene(s)	2	<2	<2	<2	<2	<2	<2
o-Xylene	1	<1	<1	<1	<1	<1	<1
Fluorobenzene	surr.	104%	105%	93%	119%	101%	113%
Metals							
Arsenic	2	2.3	4.0	15	11	14	27
Cadmium	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium	5	13	170	23	17	22	42
Copper	5	25	39	16	9.2	6.1	14
Lead	10	110	21	14	24	46	82
Mercury	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Nickel	10	<10	120	<10	<10	<10	11
Zinc	5	130	31	<5	<5	<5	48
Moisture	%	25%	13%	23%	24%	18%	20%

Lab ID	PQL (mg/kg)	10625-C7	10625-C8	10625-C9	10625-C10	10625-C11	10625-C12
Sample Name		10625-BH07A	10625-BH08A	10625-BH09A	10625-BH10A	10625-BH10C	10625-BH11A
PAH							
Acenaphthene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Acenaphthylene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Anthracene	0.3	<0.3	<0.3	<0.3	1.2	<0.3	<0.3
Benzo[a]anthracene	0.3	<0.3	<0.3	<0.3	0.7	<0.3	<0.3
Benzo[a]pyrene	0.3	<0.3	<0.3	<0.3	0.6	<0.3	<0.3
Benzo[b]fluoranthene	0.3	<0.3	<0.3	<0.3	0.7	<0.3	<0.3
Benzo[g,h,i]perylene	0.3	<0.3	<0.3	<0.3	0.4	<0.3	<0.3
Benzo[k]fluoranthene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chrysene	0.3	<0.3	<0.3	<0.3	0.7	<0.3	<0.3
Dibenzo[a,h]anthracene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Fluoranthene	0.3	<0.3	<0.3	<0.3	1.7	<0.3	<0.3
Fluorene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Indeno(1,2,3-cd)pyrene	0.3	<0.3	<0.3	<0.3	0.4	<0.3	<0.3
Naphthalene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Phenanthrene	0.3	<0.3	<0.3	<0.3	1.2	<0.3	<0.3
Pyrene	0.3	<0.3	<0.3	<0.3	1.4	<0.3	<0.3
p-Terphenyl-d14	surr.	91%	89%	88%	87%	91%	88%
OCPs							
aldrin	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
a-BHC	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
b-BHC	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
d-BHC	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
g-BHC (lindane)	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
cis-chlordane	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-chlordane	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
4,4'-DDD	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
4,4'-DDE	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
4,4'-DDT	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
dieldrin	0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1
endosulfan I	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
endosulfan II	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
endosulfan sulfate	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
endrin	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
endrin aldehyde	0.1	<0.1	<0.1	<0.1	0.3	<0.1	<0.1
endrin ketone	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
heptachlor	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
heptachlor epoxide	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
hexachlorobenzene	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
methoxychlor	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TCMX	surr.	105%	103%	101%	97%	105%	99%
OPPs							
chlorpyrifos	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
chlorpyrifos methyl	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
diazinon	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
fenchlorphos	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
methyl parathion	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
prophos	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
tributylphosphorotrithioite	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
PCB							
Total PCB		<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
2-fluorobiphenyl	surr.	107%	93%	103%	101%	106%	101%

Lab ID	PQL (mg/kg)	10625-C7	10625-C8	10625-C9	10625-C10	10625-C11	10625-C12
Sample Name		10625-BH07A	10625-BH08A	10625-BH09A	10625-BH10A	10625-BH10C	10625-BH11A
TRH							
>C6-C10	35	<35	<35	<35	<35	<35	<35
>C10-C16	50	<50	<50	<50	<50	<50	<50
>C16-C34	100	<100	<100	<100	<100	<100	<100
>C34-C40	100	<100	<100	<100	<100	<100	<100
BTEX							
Benzene	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	1	<1	<1	<1	<1	<1	<1
m, p- Xylene(s)	2	<2	<2	<2	<2	<2	<2
o-Xylene	1	<1	<1	<1	<1	<1	<1
Fluorobenzene	surr.	117%	100%	111%	116%	107%	124%
Metals							
Arsenic	2	14	14	9.3	11	23	8.5
Cadmium	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium	5	23	30	22	38	63	6.6
Copper	5	20	22	36	110	67	5.5
Lead	10	64	110	190	490	69	<10
Mercury	0.2	<0.2	<0.2	<0.2	0.9	<0.2	<0.2
Nickel	10	<10	11	13	56	15	<10
Zinc	5	51	490	200	400	42	25
Moisture	%	25%	26%	18%	18%	52%	8%

Lab ID	PQL (mg/kg)	10625-C13	10625-C14	10625-C15	10625-C16	10625-C17	10625-C18
Sample Name		10625-BH12A	10625-BH14A	10625-BH15A	10625-BH16A	10625-BH17A	10625-BH18A
PAH							
Acenaphthene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Acenaphthylene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Anthracene	0.3	<0.3	0.4	<0.3	0.7	<0.3	<0.3
Benzo[a]anthracene	0.3	<0.3	0.7	<0.3	1.1	0.3	0.3
Benzo[a]pyrene	0.3	<0.3	1.0	<0.3	1.1	<0.3	0.4
Benzo[b]fluoranthene	0.3	<0.3	1.1	<0.3	1.2	<0.3	0.4
Benzo[g,h,i]perylene	0.3	<0.3	0.7	<0.3	0.8	<0.3	<0.3
Benzo[k]fluoranthene	0.3	<0.3	0.4	<0.3	0.5	<0.3	<0.3
Chrysene	0.3	<0.3	0.7	<0.3	1.1	0.3	0.3
Dibenzo[a,h]anthracene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Fluoranthene	0.3	<0.3	1.3	<0.3	1.9	<0.3	0.6
Fluorene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Indeno(1,2,3-cd)pyrene	0.3	<0.3	0.7	<0.3	0.8	<0.3	<0.3
Naphthalene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Phenanthrene	0.3	<0.3	0.4	<0.3	0.7	<0.3	<0.3
Pyrene	0.3	<0.3	1.4	<0.3	1.9	<0.3	0.6
p-Terphenyl-d14	surr.	86%	90%	86%	88%	90%	86%
OCPs							
aldrin	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
a-BHC	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
b-BHC	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
d-BHC	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
g-BHC (lindane)	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
cis-chlordane	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-chlordane	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
4,4'-DDD	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
4,4'-DDE	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
4,4'-DDT	0.1	<0.1	<0.1	0.2	<0.1	<0.1	<0.1
dieldrin	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
endosulfan I	0.2	<0.2	<0.2	<0.2	0.3	<0.2	<0.2
endosulfan II	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
endosulfan sulfate	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
endrin	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
endrin aldehyde	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
endrin ketone	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
heptachlor	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
heptachlor epoxide	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
hexachlorobenzene	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
methoxychlor	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TCMX	surr.	99%	100%	95%	97%	97%	93%
OPPs							
chlorpyrifos	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
chlorpyrifos methyl	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
diazinon	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
fenchlorphos	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
methyl parathion	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
prophos	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
tributylphosphorotrithioite	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
PCB							
Total PCB		<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
2-fluorobiphenyl	surr.	88%	93%	99%	97%	93%	86%

Lab ID	PQL (mg/kg)	10625-C13	10625-C14	10625-C15	10625-C16	10625-C17	10625-C18
Sample Name		10625-BH12A	10625-BH14A	10625-BH15A	10625-BH16A	10625-BH17A	10625-BH18A
TRH							
>C6-C10	35	<35	<35	<35	<35	<35	<35
>C10-C16	50	<50	<50	<50	<50	<50	<50
>C16-C34	100	<100	<100	190	<100	910	<100
>C34-C40	100	<100	<100	<100	<100	340	<100
BTEX							
Benzene	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	1	<1	<1	<1	<1	<1	<1
m, p- Xylene(s)	2	<2	<2	<2	<2	<2	<2
o-Xylene	1	<1	<1	<1	<1	<1	<1
Fluorobenzene	surr.	122%	91%	120%	103%	107%	125%
Metals							
Arsenic	2	6.8	56	21	13	9.5	36
Cadmium	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium	5	8.9	36	68	46	33	32
Copper	5	5.5	110	30	83	67	120
Lead	10	20	246	48	310	210	500
Mercury	0.2	<0.2	0.2	<0.2	<0.2	<0.2	<0.2
Nickel	10	<10	38	74	36	26	41
Zinc	5	21	230	130	200	290	450
Moisture	%	10%	24%	16%	15%	12%	16%

Lab ID	PQL (mg/kg)	10625-C19	10625-C20	10625-C21	10625-C22	10625-C23	10625-C24
Sample Name		10625-BH20A	10625-BH21A	10625-BH22A	10625-BH23A	10625-BH25A	10625-BH7C
PAH							
Acenaphthene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Acenaphthylene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Anthracene	0.3	<0.3	<0.3	<0.3	0.4	0.4	<0.3
Benzo[a]anthracene	0.3	0.4	<0.3	<0.3	0.6	0.5	<0.3
Benzo[a]pyrene	0.3	0.4	<0.3	<0.3	0.6	0.6	<0.3
Benzo[b]fluoranthene	0.3	0.5	<0.3	<0.3	0.6	0.6	<0.3
Benzo[g,h,i]perylene	0.3	0.3	<0.3	<0.3	0.4	0.4	<0.3
Benzo[k]fluoranthene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chrysene	0.3	0.3	<0.3	<0.3	0.6	0.5	<0.3
Dibenzo[a,h]anthracene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Fluoranthene	0.3	0.6	<0.3	0.6	1.2	1.0	<0.3
Fluorene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Indeno(1,2,3-cd)pyrene	0.3	0.3	<0.3	<0.3	0.3	0.4	<0.3
Naphthalene	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Phenanthrene	0.3	<0.3	<0.3	<0.3	<0.3	0.3	<0.3
Pyrene	0.3	0.6	<0.3	0.5	1.1	1.0	<0.3
p-Terphenyl-d14	surr.	88%	93%	92%	86%	90%	88%
OCPs							
aldrin	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
a-BHC	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
b-BHC	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
d-BHC	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
g-BHC (lindane)	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
cis-chlordane	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
trans-chlordane	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
4,4'-DDD	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
4,4'-DDE	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
4,4'-DDT	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
dieldrin	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
endosulfan I	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
endosulfan II	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
endosulfan sulfate	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
endrin	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
endrin aldehyde	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
endrin ketone	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
heptachlor	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
heptachlor epoxide	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
hexachlorobenzene	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
methoxychlor	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
TCMX	surr.	101%	101%	107%	100%	101%	100%
OPPs							
chlorpyrifos	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
chlorpyrifos methyl	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
diazinon	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
fenchlorphos	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
methyl parathion	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
prophos	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
tributylphosphorotrithioite	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
PCB							
Total PCB		<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
2-fluorobiphenyl	surr.	102%	104%	96%	105%	106%	94%

Lab ID	PQL (mg/kg)	10625-C19	10625-C20	10625-C21	10625-C22	10625-C23	10625-C24
Sample Name		10625-BH20A	10625-BH21A	10625-BH22A	10625-BH23A	10625-BH25A	10625-BH7C
TRH							
>C6-C10	35	<35	<35	<35	<35	<35	<35
>C10-C16	50	<50	<50	<50	<50	<50	<50
>C16-C34	100	<100	<100	<100	<100	<100	<100
>C34-C40	100	<100	<100	<100	<100	<100	<100
BTEX							
Benzene	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	1	<1	<1	<1	<1	<1	<1
m, p- Xylene(s)	2	<2	<2	<2	<2	<2	<2
o-Xylene	1	<1	<1	<1	<1	<1	<1
Fluorobenzene	surr.	107%	94%	108%	68%	113%	110%
Metals							
Arsenic	2	27	8.8	11	8.9	5.3	14
Cadmium	0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Chromium	5	48	23	27	40	21	29
Copper	5	44	13	28	23	39	13
Lead	10	610	30	120	140	150	35
Mercury	0.2	0.9	<0.2	<0.2	<0.2	<0.2	<0.2
Nickel	10	14	<10	14	19	<10	<10
Zinc	5	400	27	200	99	200	<5
Moisture	%	21%	21%	23%	23%	20%	31%

Lab ID	PQL (mg/kg)	10625-C25	10625-C26	10625-C27	10625-C28
Sample Name		10625-BH11C	10625-BH14D	10625-BH20C	10625-BR1
PAH					
Acenaphthene	0.3	<0.3	<0.3	<0.3	<0.3
Acenaphthylene	0.3	<0.3	<0.3	<0.3	<0.3
Anthracene	0.3	<0.3	<0.3	<0.3	<0.3
Benzo[a]anthracene	0.3	<0.3	<0.3	<0.3	<0.3
Benzo[a]pyrene	0.3	<0.3	<0.3	<0.3	<0.3
Benzo[b]fluoranthene	0.3	<0.3	<0.3	<0.3	<0.3
Benzo[g,h,i]perylene	0.3	<0.3	<0.3	<0.3	<0.3
Benzo[k]fluoranthene	0.3	<0.3	<0.3	<0.3	<0.3
Chrysene	0.3	<0.3	<0.3	<0.3	<0.3
Dibenzo[a,h]anthracene	0.3	<0.3	<0.3	<0.3	<0.3
Fluoranthene	0.3	<0.3	<0.3	<0.3	<0.3
Fluorene	0.3	<0.3	<0.3	<0.3	<0.3
Indeno(1,2,3-cd)pyrene	0.3	<0.3	<0.3	<0.3	<0.3
Naphthalene	0.3	<0.3	<0.3	<0.3	<0.3
Phenanthrene	0.3	<0.3	<0.3	<0.3	<0.3
Pyrene	0.3	<0.3	<0.3	<0.3	<0.3
p-Terphenyl-d14	surr.	86%	91%	95%	96%
OCPs					
aldrin	0.1	<0.1	<0.1	<0.1	<0.1
a-BHC	0.1	<0.1	<0.1	<0.1	<0.1
b-BHC	0.1	<0.1	<0.1	<0.1	<0.1
d-BHC	0.1	<0.1	<0.1	<0.1	<0.1
g-BHC (lindane)	0.1	<0.1	<0.1	<0.1	<0.1
cis-chlordane	0.1	<0.1	<0.1	<0.1	<0.1
trans-chlordane	0.1	<0.1	<0.1	<0.1	<0.1
4,4'-DDD	0.1	<0.1	<0.1	<0.1	<0.1
4,4'-DDE	0.1	<0.1	<0.1	<0.1	<0.1
4,4'-DDT	0.1	<0.1	<0.1	<0.1	<0.1
dieldrin	0.1	<0.1	<0.1	<0.1	<0.1
endosulfan I	0.2	<0.2	<0.2	<0.2	<0.2
endosulfan II	0.2	<0.2	<0.2	<0.2	<0.2
endosulfan sulfate	0.1	<0.1	<0.1	<0.1	<0.1
endrin	0.2	<0.2	<0.2	<0.2	<0.2
endrin aldehyde	0.1	<0.1	<0.1	<0.1	<0.1
endrin ketone	0.1	<0.1	<0.1	<0.1	<0.1
heptachlor	0.1	<0.1	<0.1	<0.1	<0.1
heptachlor epoxide	0.1	<0.1	<0.1	<0.1	<0.1
hexachlorobenzene	0.1	<0.1	<0.1	<0.1	<0.1
methoxychlor	0.1	<0.1	<0.1	<0.1	<0.1
TCMX	surr.	100%	100%	104%	108%
OPPs					
chlorpyrifos	0.1	<0.1	<0.1	<0.1	<0.1
chlorpyrifos methyl	0.1	<0.1	<0.1	<0.1	<0.1
diazinon	0.1	<0.1	<0.1	<0.1	<0.1
fenchlorphos	0.1	<0.1	<0.1	<0.1	<0.1
methyl parathion	0.1	<0.1	<0.1	<0.1	<0.1
prophos	0.1	<0.1	<0.1	<0.1	<0.1
tributylphosphorotrithioite	0.1	<0.1	<0.1	<0.1	<0.1
PCB					
Total PCB		<0.6	<0.6	<0.6	<0.6
2-fluorobiphenyl	surr.	106%	110%	107%	97%

Lab ID	PQL (mg/kg)	10625-C25	10625-C26	10625-C27	10625-C28
Sample Name		10625-BH11C	10625-BH14D	10625-BH20C	10625-BR1
TRH					
>C6-C10	35	<35	<35	<35	<35
>C10-C16	50	<50	<50	<50	<50
>C16-C34	100	<100	<100	<100	<100
>C34-C40	100	<100	<100	<100	<100
BTEX					
Benzene	0.5	<0.5	<0.5	<0.5	<0.5
Toluene	0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	1	<1	<1	<1	<1
m, p- Xylene(s)	2	<2	<2	<2	<2
o-Xylene	1	<1	<1	<1	<1
Fluorobenzene	surr.	106%	102%	99%	105%
Metals					
Arsenic	2	3.9	10	2.9	5.1
Cadmium	0.3	<0.3	<0.3	<0.3	<0.3
Chromium	5	18	32	29	30
Copper	5	8.9	13	21	7.4
Lead	10	25	27	34	22
Mercury	0.2	<0.2	<0.2	<0.2	<0.2
Nickel	10	<10	<10	<10	<10
Zinc	5	<5	<5	<5	<5
Moisture	%	21%	29%	20%	32%

Lab ID	PQL (mg/kg)	Blank 1	Blank spike 1	Matrix spike 1	Duplicate 1- Value 1	Duplicate 1- Value 2	Duplicate 1
Sample Name							
PAH							
Acenaphthene	0.3	<0.3	99%	101%	<0.3	<0.3	ACCEPT
Acenaphthylene	0.3	<0.3	NT	NT	<0.3	<0.3	ACCEPT
Anthracene	0.3	<0.3	96%	97%	<0.3	<0.3	ACCEPT
Benzo[a]anthracene	0.3	<0.3	NT	NT	<0.3	<0.3	ACCEPT
Benzo[a]pyrene	0.3	<0.3	NT	NT	<0.3	<0.3	ACCEPT
Benzo[b]fluoranthene	0.3	<0.3	NT	NT	<0.3	<0.3	ACCEPT
Benzo[g,h,i]perylene	0.3	<0.3	NT	NT	<0.3	<0.3	ACCEPT
Benzo[k]fluoranthene	0.3	<0.3	NT	NT	<0.3	<0.3	ACCEPT
Chrysene	0.3	<0.3	NT	NT	<0.3	<0.3	ACCEPT
Dibenzo[a,h]anthracene	0.3	<0.3	NT	NT	<0.3	<0.3	ACCEPT
Fluoranthene	0.3	<0.3	95%	95%	0.3	<0.3	ACCEPT
Fluorene	0.3	<0.3	NT	NT	<0.3	<0.3	ACCEPT
Indeno(1,2,3-cd)pyrene	0.3	<0.3	NT	NT	<0.3	<0.3	ACCEPT
Naphthalene	0.3	<0.3	98%	101%	<0.3	<0.3	ACCEPT
Phenanthrene	0.3	<0.3	96%	97%	<0.3	<0.3	ACCEPT
Pyrene	0.3	<0.3	94%	93%	0.3	<0.3	ACCEPT
p-Terphenyl-d14	surr.		94%	97%	89%	92%	
OCPs							
aldrin	0.1	<0.1	95%	97%	<0.1	<0.1	ACCEPT
a-BHC	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
b-BHC	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
d-BHC	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
g-BHC (lindane)	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
cis-chlordane	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
trans-chlordane	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
4,4'-DDD	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
4,4'-DDE	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
4,4'-DDT	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
dieldrin	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
endosulfan I	0.2	<0.2	NT	NT	<0.2	<0.2	ACCEPT
endosulfan II	0.2	<0.2	NT	NT	<0.2	<0.2	ACCEPT
endosulfan sulfate	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
endrin	0.2	<0.2	80%	106%	<0.2	<0.2	ACCEPT
endrin aldehyde	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
endrin ketone	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
heptachlor	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
heptachlor epoxide	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
hexachlorobenzene	0.1	<0.1	102%	103%	<0.1	<0.1	ACCEPT
methoxychlor	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
TCMX	surr.		97%	100%	103%	106%	
OPPs							
chlorpyrifos	0.1	<0.1	94%	98%	<0.1	<0.1	ACCEPT
chlorpyrifos methyl	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
diazinon	0.1	<0.1	92%	96%	<0.1	<0.1	ACCEPT
fenchlorphos	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
methyl parathion	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
prophos	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
tributylphosphorotrithioite	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
PCB							
Total PCB		<0.6	NT	NT	<0.6	<0.6	ACCEPT
2-fluorobiphenyl	surr.		103%	113%	101%	93%	

Lab ID	PQL (mg/kg)	Blank 1	Blank spike 1	Matrix spike 1	Duplicate 1- Value 1	Duplicate 1- Value 2	Duplicate 1
Sample Name							
TRH							
>C6-C10	35	<35	NT	NT	<35	<35	ACCEPT
>C10-C16	50	<50	98%	94%	<50	<50	ACCEPT
>C16-C34	100	<100	NT	NT	<100	<100	ACCEPT
>C34-C40	100	<100	NT	NT	<100	<100	ACCEPT
BTEX							
Benzene	0.5	<0.5	125%	109%	<0.5	<0.5	ACCEPT
Toluene	0.5	<0.5	114%	104%	<0.5	<0.5	ACCEPT
Ethylbenzene	1	<1	110%	104%	<1	<1	ACCEPT
m, p- Xylene(s)	2	<2	111%	102%	<2	<2	ACCEPT
o-Xylene	1	<1	111%	104%	<1	<1	ACCEPT
Fluorobenzene	surr.		120%	108%	105%	102%	
Metals							
Arsenic	2	<2	102%	101%	4.0	7.6	ACCEPT
Cadmium	0.3	<0.3	98%	95%	<0.3	<0.3	ACCEPT
Chromium	5	<5	91%	90%	170	120	FAIL
Copper	5	<5	95%	95%	39	29	ACCEPT
Lead	10	<10	88%	96%	21	22	ACCEPT
Mercury	0.2	<0.2	92%	83%	<0.2	<0.2	ACCEPT
Nickel	10	<10	95%	99%	120	85	ACCEPT
Zinc	5	<5	98%	98%	31	27	ACCEPT
Moisture	%						

Lab ID	PQL (mg/kg)	Duplicate 2- Value 1	Duplicate 2- Value 2	Duplicate 2
Sample Name				
PAH				
Acenaphthene	0.3	<0.3	<0.3	ACCEPT
Acenaphthylene	0.3	<0.3	<0.3	ACCEPT
Anthracene	0.3	<0.3	<0.3	ACCEPT
Benzo[a]anthracene	0.3	<0.3	<0.3	ACCEPT
Benzo[a]pyrene	0.3	<0.3	<0.3	ACCEPT
Benzo[b]fluoranthene	0.3	<0.3	<0.3	ACCEPT
Benzo[g,h,i]perylene	0.3	<0.3	<0.3	ACCEPT
Benzo[k]fluoranthene	0.3	<0.3	<0.3	ACCEPT
Chrysene	0.3	<0.3	<0.3	ACCEPT
Dibenzo[a,h]anthracene	0.3	<0.3	<0.3	ACCEPT
Fluoranthene	0.3	<0.3	<0.3	ACCEPT
Fluorene	0.3	<0.3	<0.3	ACCEPT
Indeno(1,2,3-cd)pyrene	0.3	<0.3	<0.3	ACCEPT
Naphthalene	0.3	<0.3	<0.3	ACCEPT
Phenanthrene	0.3	<0.3	<0.3	ACCEPT
Pyrene	0.3	<0.3	<0.3	ACCEPT
p-Terphenyl-d14	surr.	91%	93%	
OCPs				
aldrin	0.1	<0.1	<0.1	ACCEPT
a-BHC	0.1	<0.1	<0.1	ACCEPT
b-BHC	0.1	<0.1	<0.1	ACCEPT
d-BHC	0.1	<0.1	<0.1	ACCEPT
g-BHC (lindane)	0.1	<0.1	<0.1	ACCEPT
cis-chlordane	0.1	<0.1	<0.1	ACCEPT
trans-chlordane	0.1	<0.1	<0.1	ACCEPT
4,4'-DDD	0.1	<0.1	<0.1	ACCEPT
4,4'-DDE	0.1	<0.1	<0.1	ACCEPT
4,4'-DDT	0.1	<0.1	<0.1	ACCEPT
dieldrin	0.1	0.1	0.2	ACCEPT
endosulfan I	0.2	<0.2	<0.2	ACCEPT
endosulfan II	0.2	<0.2	<0.2	ACCEPT
endosulfan sulfate	0.1	<0.1	<0.1	ACCEPT
endrin	0.2	<0.2	<0.2	ACCEPT
endrin aldehyde	0.1	<0.1	<0.1	ACCEPT
endrin ketone	0.1	<0.1	<0.1	ACCEPT
heptachlor	0.1	<0.1	<0.1	ACCEPT
heptachlor epoxide	0.1	<0.1	<0.1	ACCEPT
hexachlorobenzene	0.1	<0.1	<0.1	ACCEPT
methoxychlor	0.1	<0.1	<0.1	ACCEPT
TCMX	surr.	105%	105%	
OPPs				
chlorpyrifos	0.1	<0.1	<0.1	ACCEPT
chlorpyrifos methyl	0.1	<0.1	<0.1	ACCEPT
diazinon	0.1	<0.1	<0.1	ACCEPT
fenchlorphos	0.1	<0.1	<0.1	ACCEPT
methyl parathion	0.1	<0.1	<0.1	ACCEPT
prophos	0.1	<0.1	<0.1	ACCEPT
tributylphosphorotrithioite	0.1	<0.1	<0.1	ACCEPT
PCB				
Total PCB		<0.6	<0.6	ACCEPT
2-fluorobiphenyl	surr.	106%	100%	

Lab ID	PQL (mg/kg)	Duplicate 2- Value 1	Duplicate 2- Value 2	Duplicate 2
Sample Name				
TRH				
>C6-C10	35	<35	<35	ACCEPT
>C10-C16	50	<50	<50	ACCEPT
>C16-C34	100	<100	<100	ACCEPT
>C34-C40	100	<100	<100	ACCEPT
BTEX				
Benzene	0.5	<0.5	<0.5	ACCEPT
Toluene	0.5	<0.5	<0.5	ACCEPT
Ethylbenzene	1	<1	<1	ACCEPT
m, p- Xylene(s)	2	<2	<2	ACCEPT
o-Xylene	1	<1	<1	ACCEPT
Fluorobenzene	surr.	95%	107%	
Metals				
Arsenic	2	23	14	FAIL
Cadmium	0.3	<0.3	<0.3	ACCEPT
Chromium	5	63	61	ACCEPT
Copper	5	67	65	ACCEPT
Lead	10	69	69	ACCEPT
Mercury	0.2	<0.2	<0.2	ACCEPT
Nickel	10	15	17	ACCEPT
Zinc	5	42	48	ACCEPT
Moisture	%			

Lab ID	PQL (mg/kg)	Blank 2	Blank spike 2	Matrix spike 2	Duplicate 3 - Value 1	Duplicate 3- Value 2	Duplicate 3
Sample Name							
PAH							
Acenaphthene	0.3	<0.3	98%	98%	<0.3	<0.3	ACCEPT
Acenaphthylene	0.3	<0.3	NT	NT	<0.3	<0.3	ACCEPT
Anthracene	0.3	<0.3	99%	96%	0.4	1.4	ACCEPT
Benzo[a]anthracene	0.3	<0.3	NT	NT	0.6	1.7	ACCEPT
Benzo[a]pyrene	0.3	<0.3	NT	NT	0.6	1.6	ACCEPT
Benzo[b]fluoranthene	0.3	<0.3	NT	NT	0.6	1.8	ACCEPT
Benzo[g,h,i]perylene	0.3	<0.3	NT	NT	0.4	0.9	ACCEPT
Benzo[k]fluoranthene	0.3	<0.3	NT	NT	<0.3	0.7	ACCEPT
Chrysene	0.3	<0.3	NT	NT	0.6	1.7	ACCEPT
Dibenzo[a,h]anthracene	0.3	<0.3	NT	NT	<0.3	<0.3	ACCEPT
Fluoranthene	0.3	<0.3	96%	95%	1.2	3.6	ACCEPT
Fluorene	0.3	<0.3	NT	NT	<0.3	<0.3	ACCEPT
Indeno(1,2,3-cd)pyrene	0.3	<0.3	NT	NT	0.3	0.9	ACCEPT
Naphthalene	0.3	<0.3	100%	98%	<0.3	<0.3	ACCEPT
Phenanthrene	0.3	<0.3	101%	96%	<0.3	0.5	ACCEPT
Pyrene	0.3	<0.3	97%	93%	1.1	3.1	ACCEPT
p-Terphenyl-d14	surr.		93%	93%	86%	95%	
OCPs							
aldrin	0.1	<0.1	98%	96%	<0.1	<0.1	ACCEPT
a-BHC	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
b-BHC	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
d-BHC	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
g-BHC (lindane)	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
cis-chlordane	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
trans-chlordane	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
4,4'-DDD	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
4,4'-DDE	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
4,4'-DDT	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
dieldrin	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
endosulfan I	0.2	<0.2	NT	NT	<0.2	<0.2	ACCEPT
endosulfan II	0.2	<0.2	NT	NT	<0.2	<0.2	ACCEPT
endosulfan sulfate	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
endrin	0.2	<0.2	66%	77%	<0.2	<0.2	ACCEPT
endrin aldehyde	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
endrin ketone	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
heptachlor	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
heptachlor epoxide	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
hexachlorobenzene	0.1	<0.1	105%	100%	<0.1	<0.1	ACCEPT
methoxychlor	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
TCMX	surr.		98%	96%	100%	105%	
OPPs							
chlorpyrifos	0.1	<0.1	95%	94%	<0.1	<0.1	ACCEPT
chlorpyrifos methyl	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
diazinon	0.1	<0.1	96%	94%	<0.1	<0.1	ACCEPT
fenchlorphos	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
methyl parathion	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
prophos	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
tributylphosphorotrithioite	0.1	<0.1	NT	NT	<0.1	<0.1	ACCEPT
PCB							
Total PCB		<0.6	NT	NT	<0.6	<0.6	ACCEPT
2-fluorobiphenyl	surr.		119%	117%	105%	109%	

Lab ID	PQL (mg/kg)	Blank 2	Blank spike 2	Matrix spike 2	Duplicate 3 - Value 1	Duplicate 3- Value 2	Duplicate 3
Sample Name							
TRH							
>C6-C10	35	<35	NT	NT	<35	<35	ACCEPT
>C10-C16	50	<50	96%	91%	<50	<50	ACCEPT
>C16-C34	100	<100	NT	NT	<100	<100	ACCEPT
>C34-C40	100	<100	NT	NT	<100	<100	ACCEPT
BTEX							
Benzene	0.5	<0.5	129%	135%	<0.5	<0.5	ACCEPT
Toluene	0.5	<0.5	119%	123%	<0.5	<0.5	ACCEPT
Ethylbenzene	1	<1	115%	124%	<1	<1	ACCEPT
m, p- Xylene(s)	2	<2	115%	119%	<2	<2	ACCEPT
o-Xylene	1	<1	116%	123%	<1	<1	ACCEPT
Fluorobenzene	surr.		127%	134%	68%	96%	
Metals							
Arsenic	2	<2	101%	93%	8.9	7.0	ACCEPT
Cadmium	0.3	<0.3	95%	98%	<0.3	<0.3	ACCEPT
Chromium	5	<5	97%	124%	40	37	ACCEPT
Copper	5	<5	93%	95%	23	17	ACCEPT
Lead	10	<10	95%	113%	140	90	ACCEPT
Mercury	0.2	<0.2	88%	89%	<0.2	<0.2	ACCEPT
Nickel	10	<10	92%	104%	19	10	ACCEPT
Zinc	5	<5	96%	72%	99	61	ACCEPT
Moisture	%						

Comments:
FAIL caused by inhomogenous matrix

General Comments and Glossary

Tests not covered by NATA are denoted with *.
Samples are analysed on "as received" basis.

Samples were delivered chilled
Samples were preserved in correct manner
Sample containers for volatile analysis were received with minimal headspace
Samples were analysed within holding time
Some samples have been subcontracted

Yes
Yes
Yes
Yes
No

- 1. All samples are tested in batches of 20.
- 2. All results for soil samples are reported per gram of dry soil, unless otherwise stated.
- 3. However surrogate standards are added to samples due to PAH and BTEX analysis and recoveries are calculated, samples' results are not corrected for standards recoveries.
- 4. Analysis of VOC in water samples are performed on unfiltered waters (as received), spiked with surrogate
- 5. If heterogenous or insufficient material provided LCS is used as matrix spike for QA/QC purposes.
- 6. Duplicate sample and matrix spike recoveries may not be prepared on smaller jobs, however, were analysed at a frequency
- 7. QA/QC samples shown within the report that states the word "BATCH"; Batch Blank, Matrix Spike and Duplicate were prepared on samples from outside of reported job.

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

INS: Insufficient sample for this test
>: Greater than
LCS: Laboratory Control Sample
NT: Not tested
<: Less than
RPD: Relative Percent Difference
NA: Test not required
PQL: Practical Quantitation Limit

Laboratory Acceptance Criteria

Matrix Spikes and LCS: Generally 70-130% for inorganics/metals, 60-140% for organics is acceptable.
Matrix heterogeneity may result in matrix spike analyses falling outside these limits.

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:
Results <10 times the PQL : No Limit
Results between 10-20 times the PQL : RPD must lie between 0-50%
Results >20 times the PQL : RPD must lie between 0-30%
Surrogate Recoveries : Recoveries must lie between 50-150% - Phenols 20-130%.



Accreditation No.14664.
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The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.
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****Methods Number Description:**

ESA-MP-01	Determination of metals by MP-AES
ESA-MP-02	Digestion of soil samples for MP-AES analysis
ESA-MP-03	Preparation of water samples for metals determination by MP-AES
ESA-MP-04	TCLP for inorganic contaminants
ESA-MP-05	Digestion of paint and dust samples for lead context determination
ESA-MP-06	Digestion of air filters
ESA-MP-07	Digestion of swabs for determination of lead content in dust
ESA-P-ORG02	Analysis of PAHs by GC-MS
ESA-P-ORG03	Analysis of TRH and TPH by GC-FID
ESA-P-ORG04	Separatory funnel extraction of PAHs from water matrices including TCLP extracts
ESA-P-ORG05	Separatory funnel extraction of TRH and TPH from water matrices
ESA-P-ORG06	Silica gel clean up of soil and water extracts, prior analysis for STPH
ESA-P-ORG07	Extraction of BTEX and VTRX from soil matrices
ESA-P-ORG08	Analysis of soil extracts and waters by P&T GCMS
ESA-P-ORG09	Extraction of TRH from solid matrices
ESA-P-ORG14	Extraction of PCB (Aroclor) OCP OPP and PAH from soil matrices
ESA-P-ORG15	Analysis of PCB OCP OPP and PAH by GCMS
AS 1289.4.3.1	Determination of the pH value of a soil-Electrometric method
AS 1289.3.6.1	Determination of the particle size distribution of a soil - Standard method of analysis by sieving
T276	NSW RMS Test Method T 276 Foreign materials content of recycled crushed concrete
*Texture Assessment based on;	Salinity Notes, Number 8, Oct 2000, ISSN 1 325-4448, "How to Texture soils & Test for Salinity"
*ESA-P-16	Procedure for measurement of Electrical Conductivity EC
AS 1289.2.1.1	Soil moisture content tests—Determination of the moisture content of a soil—Oven drying method (standard method)



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Certificate of Analysis

AD Envirotech Aust Pty Ltd
Unit 4/ 10-11 Millenium Court
Silverwater
NSW 2128



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Attention: Kyle McClintock

Report 506579-S
Project name 10625_BH14D
Received Date Jul 03, 2016

Client Sample ID			10625_BH14D
Sample Matrix			Soil
Eurofins mgt Sample No.			S16-JI01748
Date Sampled			Jun 16, 2016
Test/Reference	LOR	Unit	
Conductivity (1:5 aqueous extract at 25°C)	10	uS/cm	75
pH (1:5 Aqueous extract)	0.1	pH Units	4.2
% Moisture	1	%	21
Ion Exchange Properties			
Cation Exchange Capacity	0.05	meq/100g	2.0

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.

A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (regarding both quality and NATA accreditation).

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Conductivity (1:5 aqueous extract at 25°C) - Method: LTM-INO-4030	Melbourne	Jul 05, 2016	7 Day
Ion Exchange Properties	Melbourne	Jul 06, 2016	
pH (1:5 Aqueous extract) - Method: LTM-GEN-7090 pH in soil by ISE	Sydney	Jul 04, 2016	7 Day
% Moisture - Method: LTM-GEN-7080 Moisture	Sydney	Jul 03, 2016	14 Day

Company Name: AD Envirotech Aust Pty Ltd
Address: Unit 4/ 10-11 Millenium Court
Silverwater
NSW 2128
Project Name: 10625_BH14D

Order No.:
Report #: 506579
Phone: 02 9400 7711
Fax: 02 9401 0097

Received: Jul 3, 2016 12:28 PM
Due: Jul 5, 2016
Priority: 1 Day
Contact Name: Kyle McClintock

Eurofins | mgt Analytical Services Manager : Mary Makarios

Sample Detail						pH (1:5 Aqueous extract)	Moisture Set	Cation Exchange Capacity
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X
Sydney Laboratory - NATA Site # 18217						X	X	
Brisbane Laboratory - NATA Site # 20794								
External Laboratory								
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID			
1	10625_BH14D	Jun 16, 2016		Soil	S16-JI01748	X	X	X
Test Counts						1	1	1

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
4. Results are uncorrected for matrix spikes or surrogate recoveries.
5. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
6. Samples were analysed on an 'as received' basis. 7. 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.

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per Kilogram

ug/l: micrograms per litre

ppb: Parts per billion

org/100ml: Organisms per 100 millilitres

MPN/100mL: Most Probable Number of organisms per 100 millilitres

mg/l: milligrams per litre

ppm: Parts per million

%: Percentage

NTU: Nephelometric Turbidity Units

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery
CRM	Certified Reference Material - reported as percent recovery
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands. In the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
Batch Duplicate	A second piece of analysis from a sample outside of the clients batch of samples but run within the laboratory batch of analysis.
Batch SPIKE	Spike recovery reported on a sample from outside of the clients batch of samples but run within the laboratory batch of analysis.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries: Recoveries must lie between 50-150%-Phenols & PFASs 20-130%

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " - " in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test				Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank										
Conductivity (1:5 aqueous extract at 25°C)				uS/cm	< 10			10	Pass	
Method Blank										
Ion Exchange Properties										
Cation Exchange Capacity				meq/100g	< 0.05			0.05	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1				Acceptance Limits	Pass Limits	Qualifying Code
Duplicate										
				Result 1	Result 2	RPD				
Conductivity (1:5 aqueous extract at 25°C)	S16-JI01748	CP	uS/cm	75	69	9.0	30%	Pass		
pH (1:5 Aqueous extract)	S16-Jn25463	NCP	pH Units	4.6	4.6	pass	30%	Pass		
% Moisture	S16-JI01748	CP	%	21	23	9.0	30%	Pass		

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Authorised By

Mary Makarios	Analytical Services Manager
Bob Symons	Senior Analyst-Inorganic (NSW)
Emily Rosenberg	Senior Analyst-Metal (VIC)
Huong Le	Senior Analyst-Inorganic (VIC)



Glenn Jackson

National Operations 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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Certificate of Analysis

AD Envirotech Aust Pty Ltd
Unit 4/ 10-11 Millenium Court
Silverwater
NSW 2128



NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025.
The results of the tests, calibrations and/or
measurements included in this document are traceable
to Australian/national standards.

Attention: Kyle McClintock

Report 505270-W
Project name STC-155-10625
Received Date Jun 17, 2016

Client Sample ID			10625- RINSATE
Sample Matrix			Water
Eurofins mgt Sample No.			S16-Jn20089
Date Sampled			Jun 15, 2016
Test/Reference	LOR	Unit	
Heavy Metals			
Arsenic	0.001	mg/L	< 0.001
Cadmium	0.0002	mg/L	< 0.0002
Chromium	0.001	mg/L	< 0.001
Copper	0.001	mg/L	< 0.001
Lead	0.001	mg/L	< 0.001
Mercury	0.0001	mg/L	< 0.0001
Nickel	0.001	mg/L	< 0.001
Zinc	0.005	mg/L	< 0.005

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.

A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (regarding both quality and NATA accreditation).

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Eurofins mgt Suite B10			
Metals M8	Sydney	Jun 24, 2016	28 Day
- Method: LTM-MET-3040 Metals in Waters by ICP-MS			

Company Name: AD Envirotech Aust Pty Ltd
Address: Unit 4/ 10-11 Millenium Court
Silverwater
NSW 2128
Project Name: STC-155-10625

Order No.:
Report #: 505270
Phone: 02 9400 7711
Fax: 02 9401 0097

Received: Jun 17, 2016 3:30 PM
Due: Jun 24, 2016
Priority: 5 Day
Contact Name: Kyle McClintock

Eurofins | mgt Analytical Services Manager : Mary Makarios

Sample Detail						Metals M8	Halogenated Volatile Organics	Moisture Set	Eurofins mgt Suite B10
Melbourne Laboratory - NATA Site # 1254 & 14271									
Sydney Laboratory - NATA Site # 18217						X	X	X	X
Brisbane Laboratory - NATA Site # 20794									
External Laboratory									
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID				
1	10625-SP1	Jun 15, 2016		Soil	S16-Jn20087			X	X
2	10625-BH10D	Jun 15, 2016		Soil	S16-Jn20088		X	X	
3	10625-RINSATE	Jun 15, 2016		Water	S16-Jn20089	X			
Test Counts						1	1	2	1

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
4. Results are uncorrected for matrix spikes or surrogate recoveries.
5. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
6. Samples were analysed on an 'as received' basis. 7. 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.

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per Kilogram

ug/l: micrograms per litre

ppb: Parts per billion

org/100ml: Organisms per 100 millilitres

MPN/100mL: Most Probable Number of organisms per 100 millilitres

mg/l: milligrams per litre

ppm: Parts per million

%: Percentage

NTU: Nephelometric Turbidity Units

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery
CRM	Certified Reference Material - reported as percent recovery
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands. In the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
Batch Duplicate	A second piece of analysis from a sample outside of the clients batch of samples but run within the laboratory batch of analysis.
Batch SPIKE	Spike recovery reported on a sample from outside of the clients batch of samples but run within the laboratory batch of analysis.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries: Recoveries must lie between 50-150%-Phenols & PFASs 20-130%

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " - " in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test			Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank									
Heavy Metals									
Arsenic			mg/L	< 0.001			0.001	Pass	
Cadmium			mg/L	< 0.0002			0.0002	Pass	
Chromium			mg/L	< 0.001			0.001	Pass	
Copper			mg/L	< 0.001			0.001	Pass	
Lead			mg/L	< 0.001			0.001	Pass	
Mercury			mg/L	< 0.0001			0.0001	Pass	
Nickel			mg/L	< 0.001			0.001	Pass	
Zinc			mg/L	< 0.005			0.005	Pass	
LCS - % Recovery									
Heavy Metals									
Arsenic			%	86			70-130	Pass	
Cadmium			%	87			70-130	Pass	
Chromium			%	91			70-130	Pass	
Copper			%	90			70-130	Pass	
Lead			%	86			70-130	Pass	
Mercury			%	84			70-130	Pass	
Nickel			%	90			70-130	Pass	
Zinc			%	85			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	S16-Jn18177	NCP	%	84			70-130	Pass	
Cadmium	S16-Jn18177	NCP	%	86			70-130	Pass	
Chromium	S16-Jn18177	NCP	%	88			70-130	Pass	
Copper	S16-Jn18177	NCP	%	87			70-130	Pass	
Lead	S16-Jn18177	NCP	%	87			70-130	Pass	
Mercury	S16-Jn18177	NCP	%	84			70-130	Pass	
Nickel	S16-Jn18177	NCP	%	88			70-130	Pass	
Zinc	S16-Jn18177	NCP	%	81			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	S16-Jn20089	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Cadmium	S16-Jn20089	CP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium	S16-Jn20089	CP	mg/L	< 0.001	0.003	97	30%	Fail	Q15
Copper	S16-Jn20089	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Lead	S16-Jn20089	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Mercury	S16-Jn20089	CP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel	S16-Jn20089	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Zinc	S16-Jn20089	CP	mg/L	< 0.005	< 0.005	<1	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
Q15	The RPD reported passes Eurofins mgt's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

Authorised By

Mary Makarios	Analytical Services Manager
Ivan Taylor	Senior Analyst-Metal (NSW)



Glenn Jackson

National Operations 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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Certificate of Analysis

AD Envirotech Aust Pty Ltd
Unit 4/ 10-11 Millenium Court
Silverwater
NSW 2128



NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025.
The results of the tests, calibrations and/or
measurements included in this document are traceable
to Australian/national standards.

Attention: Kyle McClintock

Report 505270-S
Project name STC-155-10625
Received Date Jun 17, 2016

Client Sample ID			10625-SP1	10625-BH10D
Sample Matrix			Soil	Soil
Eurofins mgt Sample No.			S16-Jn20087	S16-Jn20088
Date Sampled			Jun 15, 2016	Jun 15, 2016
Test/Reference	LOR	Unit		
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				
TRH C6-C9	20	mg/kg	< 20	-
TRH C10-C14	20	mg/kg	< 20	-
TRH C15-C28	50	mg/kg	< 50	-
TRH C29-C36	50	mg/kg	< 50	-
TRH C10-36 (Total)	50	mg/kg	< 50	-
BTEX				
Benzene	0.1	mg/kg	< 0.1	-
Toluene	0.1	mg/kg	< 0.1	-
Ethylbenzene	0.1	mg/kg	< 0.1	-
m&p-Xylenes	0.2	mg/kg	< 0.2	-
o-Xylene	0.1	mg/kg	< 0.1	-
Xylenes - Total	0.3	mg/kg	< 0.3	-
4-Bromofluorobenzene (surr.)	1	%	90	-
Halogenated Volatile Organics				
1.1-Dichloroethane	0.5	mg/kg	-	< 0.5
1.1-Dichloroethene	0.5	mg/kg	-	< 0.5
1.1.1-Trichloroethane	0.5	mg/kg	-	< 0.5
1.1.1.2-Tetrachloroethane	0.5	mg/kg	-	< 0.5
1.1.2-Trichloroethane	0.5	mg/kg	-	< 0.5
1.1.2.2-Tetrachloroethane	0.5	mg/kg	-	< 0.5
1.2-Dibromoethane	0.5	mg/kg	-	< 0.5
1.2-Dichlorobenzene	0.5	mg/kg	-	< 0.5
1.2-Dichloroethane	0.5	mg/kg	-	< 0.5
1.2-Dichloropropane	0.5	mg/kg	-	< 0.5
1.2.3-Trichloropropane	0.5	mg/kg	-	< 0.5
1.3-Dichlorobenzene	0.5	mg/kg	-	< 0.5
1.3-Dichloropropane	0.5	mg/kg	-	< 0.5
1.4-Dichlorobenzene	0.5	mg/kg	-	< 0.5
Bromodichloromethane	0.5	mg/kg	-	< 0.5
Bromoform	0.5	mg/kg	-	< 0.5
Bromomethane	0.5	mg/kg	-	< 0.5
Carbon Tetrachloride	0.5	mg/kg	-	< 0.5
Chlorobenzene	0.5	mg/kg	-	< 0.5
Chloroform	0.5	mg/kg	-	< 0.5
Chloromethane	0.5	mg/kg	-	< 0.5
cis-1.2-Dichloroethene	0.5	mg/kg	-	< 0.5

Client Sample ID			10625-SP1	10625-BH10D
Sample Matrix			Soil	Soil
Eurofins mgt Sample No.			S16-Jn20087	S16-Jn20088
Date Sampled			Jun 15, 2016	Jun 15, 2016
Test/Reference	LOR	Unit		
Halogenated Volatile Organics				
cis-1.3-Dichloropropene	0.5	mg/kg	-	< 0.5
Dibromochloromethane	0.5	mg/kg	-	< 0.5
Dibromomethane	0.5	mg/kg	-	< 0.5
Iodomethane	0.5	mg/kg	-	< 0.5
Methylene Chloride	0.5	mg/kg	-	< 0.5
Tetrachloroethene	0.5	mg/kg	-	< 0.5
trans-1.2-Dichloroethene	0.5	mg/kg	-	< 0.5
trans-1.3-Dichloropropene	0.5	mg/kg	-	< 0.5
Trichloroethene	0.5	mg/kg	-	< 0.5
Trichlorofluoromethane	0.5	mg/kg	-	< 0.5
Vinyl chloride	0.5	mg/kg	-	< 0.5
Fluorobenzene (surr.)	1	%	-	106
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				
Naphthalene ^{N02}	0.5	mg/kg	0.8	-
TRH C6-C10	20	mg/kg	< 20	-
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	-
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	-
Polycyclic Aromatic Hydrocarbons				
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	-
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	-
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	-
Acenaphthene	0.5	mg/kg	< 0.5	-
Acenaphthylene	0.5	mg/kg	< 0.5	-
Anthracene	0.5	mg/kg	< 0.5	-
Benz(a)anthracene	0.5	mg/kg	< 0.5	-
Benzo(a)pyrene	0.5	mg/kg	< 0.5	-
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	-
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	-
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	-
Chrysene	0.5	mg/kg	< 0.5	-
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	-
Fluoranthene	0.5	mg/kg	< 0.5	-
Fluorene	0.5	mg/kg	< 0.5	-
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	-
Naphthalene	0.5	mg/kg	< 0.5	-
Phenanthrene	0.5	mg/kg	< 0.5	-
Pyrene	0.5	mg/kg	< 0.5	-
Total PAH*	0.5	mg/kg	< 0.5	-
2-Fluorobiphenyl (surr.)	1	%	100	-
p-Terphenyl-d14 (surr.)	1	%	105	-
Organochlorine Pesticides				
Chlordanes - Total	0.1	mg/kg	< 0.1	-
4.4'-DDD	0.05	mg/kg	< 0.05	-
4.4'-DDE	0.05	mg/kg	< 0.05	-
4.4'-DDT	0.05	mg/kg	< 0.05	-
a-BHC	0.05	mg/kg	< 0.05	-
Aldrin	0.05	mg/kg	< 0.05	-
b-BHC	0.05	mg/kg	< 0.05	-
d-BHC	0.05	mg/kg	< 0.05	-

Client Sample ID			10625-SP1	10625-BH10D
Sample Matrix			Soil	Soil
Eurofins mgt Sample No.			S16-Jn20087	S16-Jn20088
Date Sampled			Jun 15, 2016	Jun 15, 2016
Test/Reference	LOR	Unit		
Organochlorine Pesticides				
Dieldrin	0.05	mg/kg	< 0.05	-
Endosulfan I	0.05	mg/kg	< 0.05	-
Endosulfan II	0.05	mg/kg	< 0.05	-
Endosulfan sulphate	0.05	mg/kg	< 0.05	-
Endrin	0.05	mg/kg	< 0.05	-
Endrin aldehyde	0.05	mg/kg	< 0.05	-
Endrin ketone	0.05	mg/kg	< 0.05	-
g-BHC (Lindane)	0.05	mg/kg	< 0.05	-
Heptachlor	0.05	mg/kg	< 0.05	-
Heptachlor epoxide	0.05	mg/kg	< 0.05	-
Hexachlorobenzene	0.05	mg/kg	< 0.05	-
Methoxychlor	0.2	mg/kg	< 0.2	-
Toxaphene	1	mg/kg	< 1	-
Dibutylchloroendate (surr.)	1	%	136	-
Tetrachloro-m-xylene (surr.)	1	%	133	-
Organophosphorus Pesticides (OP)				
Azinphos-methyl	0.2	mg/kg	< 0.2	-
Chlorpyrifos	0.2	mg/kg	< 0.2	-
Coumaphos	2	mg/kg	< 2	-
Demeton (total)	1	mg/kg	< 1	-
Diazinon	0.2	mg/kg	< 0.2	-
Dichlorvos	0.2	mg/kg	< 0.2	-
Dimethoate	0.2	mg/kg	< 0.2	-
Disulfoton	0.2	mg/kg	< 0.2	-
Ethoprop	0.2	mg/kg	< 0.2	-
Fenitrothion	0.2	mg/kg	< 0.2	-
Fensulfothion	0.2	mg/kg	< 0.2	-
Fenthion	0.2	mg/kg	< 0.2	-
Malathion	0.2	mg/kg	< 0.2	-
Methyl parathion	0.2	mg/kg	< 0.2	-
Mevinphos	0.2	mg/kg	< 0.2	-
Monocrotophos	2	mg/kg	< 2	-
Parathion	0.5	mg/kg	< 0.5	-
Phorate	0.2	mg/kg	< 0.2	-
Profenofos	0.2	mg/kg	< 0.2	-
Prothiofos	0.5	mg/kg	< 0.5	-
Ronnel	0.2	mg/kg	< 0.2	-
Stirophos	0.5	mg/kg	< 0.5	-
Trichloronate	0.2	mg/kg	< 0.2	-
Triphenylphosphate (surr.)	1	%	82	-
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				
TRH >C10-C16	50	mg/kg	< 50	-
TRH >C16-C34	100	mg/kg	< 100	-
TRH >C34-C40	100	mg/kg	< 100	-
Heavy Metals				
Arsenic	2	mg/kg	17	-
Cadmium	0.4	mg/kg	< 0.4	-
Chromium	5	mg/kg	24	-
Copper	5	mg/kg	17	-

Client Sample ID			10625-SP1	10625-BH10D
Sample Matrix			Soil	Soil
Eurofins mgt Sample No.			S16-Jn20087	S16-Jn20088
Date Sampled			Jun 15, 2016	Jun 15, 2016
Test/Reference	LOR	Unit		
Heavy Metals				
Lead	5	mg/kg	22	-
Mercury	0.05	mg/kg	0.06	-
Nickel	5	mg/kg	< 5	-
Zinc	5	mg/kg	5.1	-
% Moisture	1	%	25	16

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (regarding both quality and NATA accreditation).

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Eurofins mgt Suite B10			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Sydney	Jun 23, 2016	14 Day
- Method: TRH C6-C36 - LTM-ORG-2010			
BTEX	Sydney	Jun 22, 2016	14 Day
- Method: TRH C6-C40 - LTM-ORG-2010			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Jun 22, 2016	14 Day
- Method: TRH C6-C40 - LTM-ORG-2010			
Polycyclic Aromatic Hydrocarbons	Sydney	Jun 23, 2016	14 Day
- Method: E007 Polyaromatic Hydrocarbons (PAH)			
Organochlorine Pesticides	Sydney	Jun 23, 2016	14 Day
- Method: E013 Organochlorine Pesticides (OC)			
Organophosphorus Pesticides (OP)	Sydney	Jun 23, 2016	14 Day
- Method: E014 Organophosphorus Pesticides (OP)			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Sydney	Jun 23, 2016	14 Day
- Method: TRH C6-C40 - LTM-ORG-2010			
Metals M8	Sydney	Jun 22, 2016	28 Day
- Method: LTM-MET-3040_R0 TOTAL AND DISSOLVED METALS AND MERCURY IN WATERS BY ICP-MS			
Halogenated Volatile Organics	Sydney	Jun 22, 2016	7 Day
- Method: E016 Volatile Halogenated Compounds (VHC)			
% Moisture	Sydney	Jun 22, 2016	14 Day
- Method: LTM-GEN-7080 Moisture			

Company Name: AD Envirotech Aust Pty Ltd
Address: Unit 4/ 10-11 Millenium Court
Silverwater
NSW 2128
Project Name: STC-155-10625

Order No.:
Report #: 505270
Phone: 02 9400 7711
Fax: 02 9401 0097

Received: Jun 17, 2016 3:30 PM
Due: Jun 24, 2016
Priority: 5 Day
Contact Name: Kyle McClintock

Eurofins | mgt Analytical Services Manager : Mary Makarios

Sample Detail						Metals M8	Halogenated Volatile Organics	Moisture Set	Eurofins mgt Suite B10
Melbourne Laboratory - NATA Site # 1254 & 14271									
Sydney Laboratory - NATA Site # 18217						X	X	X	X
Brisbane Laboratory - NATA Site # 20794									
External Laboratory									
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID				
1	10625-SP1	Jun 15, 2016		Soil	S16-Jn20087			X	X
2	10625-BH10D	Jun 15, 2016		Soil	S16-Jn20088		X	X	
3	10625-RINSATE	Jun 15, 2016		Water	S16-Jn20089	X			
Test Counts						1	1	2	1

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
4. Results are uncorrected for matrix spikes or surrogate recoveries.
5. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
6. Samples were analysed on an 'as received' basis. 7. 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.

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per Kilogram

ug/l: micrograms per litre

ppb: Parts per billion

org/100ml: Organisms per 100 millilitres

MPN/100mL: Most Probable Number of organisms per 100 millilitres

mg/l: milligrams per litre

ppm: Parts per million

%: Percentage

NTU: Nephelometric Turbidity Units

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery
CRM	Certified Reference Material - reported as percent recovery
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands. In the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
Batch Duplicate	A second piece of analysis from a sample outside of the clients batch of samples but run within the laboratory batch of analysis.
Batch SPIKE	Spike recovery reported on a sample from outside of the clients batch of samples but run within the laboratory batch of analysis.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries: Recoveries must lie between 50-150%-Phenols & PFASs 20-130%

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " - " in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/kg	< 20			20	Pass	
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
Method Blank							
BTEX							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Halogenated Volatile Organics							
1.1-Dichloroethane	mg/kg	< 0.5			0.5	Pass	
1.1-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
1.1.1-Trichloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.1.2-Tetrachloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.2-Trichloroethane	mg/kg	< 0.5			0.5	Pass	
1.1.2.2-Tetrachloroethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dibromoethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.2-Dichloroethane	mg/kg	< 0.5			0.5	Pass	
1.2-Dichloropropane	mg/kg	< 0.5			0.5	Pass	
1.2.3-Trichloropropane	mg/kg	< 0.5			0.5	Pass	
1.3-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
1.3-Dichloropropane	mg/kg	< 0.5			0.5	Pass	
1.4-Dichlorobenzene	mg/kg	< 0.5			0.5	Pass	
Bromodichloromethane	mg/kg	< 0.5			0.5	Pass	
Bromoform	mg/kg	< 0.5			0.5	Pass	
Bromomethane	mg/kg	< 0.5			0.5	Pass	
Carbon Tetrachloride	mg/kg	< 0.5			0.5	Pass	
Chlorobenzene	mg/kg	< 0.5			0.5	Pass	
Chloroform	mg/kg	< 0.5			0.5	Pass	
Chloromethane	mg/kg	< 0.5			0.5	Pass	
cis-1.2-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
cis-1.3-Dichloropropene	mg/kg	< 0.5			0.5	Pass	
Dibromochloromethane	mg/kg	< 0.5			0.5	Pass	
Dibromomethane	mg/kg	< 0.5			0.5	Pass	
Iodomethane	mg/kg	< 0.5			0.5	Pass	
Methylene Chloride	mg/kg	< 0.5			0.5	Pass	
Tetrachloroethene	mg/kg	< 0.5			0.5	Pass	
trans-1.2-Dichloroethene	mg/kg	< 0.5			0.5	Pass	
trans-1.3-Dichloropropene	mg/kg	< 0.5			0.5	Pass	
Trichloroethene	mg/kg	< 0.5			0.5	Pass	
Trichlorofluoromethane	mg/kg	< 0.5			0.5	Pass	
Vinyl chloride	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/kg	< 0.5			0.5	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
TRH C6-C10	mg/kg	< 20			20	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b&i)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzo(g,h,i)perylene	mg/kg	< 0.5			0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a,h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Organochlorine Pesticides							
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	
α-BHC	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
β-BHC	mg/kg	< 0.05			0.05	Pass	
δ-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	
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	
γ-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	< 1			1	Pass	
Method Blank							
Organophosphorus Pesticides (OP)							
Azinphos-methyl	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos	mg/kg	< 0.2			0.2	Pass	
Coumaphos	mg/kg	< 2			2	Pass	
Demeton (total)	mg/kg	< 1			1	Pass	
Diazinon	mg/kg	< 0.2			0.2	Pass	
Dichlorvos	mg/kg	< 0.2			0.2	Pass	
Dimethoate	mg/kg	< 0.2			0.2	Pass	
Disulfoton	mg/kg	< 0.2			0.2	Pass	
Ethoprop	mg/kg	< 0.2			0.2	Pass	
Fenitrothion	mg/kg	< 0.2			0.2	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Fensulfothion	mg/kg	< 0.2			0.2	Pass	
Fenthion	mg/kg	< 0.2			0.2	Pass	
Malathion	mg/kg	< 0.2			0.2	Pass	
Methyl parathion	mg/kg	< 0.2			0.2	Pass	
Mevinphos	mg/kg	< 0.2			0.2	Pass	
Monocrotophos	mg/kg	< 2			2	Pass	
Parathion	mg/kg	< 0.5			0.5	Pass	
Phorate	mg/kg	< 0.2			0.2	Pass	
Profenofos	mg/kg	< 0.2			0.2	Pass	
Prothiofos	mg/kg	< 0.5			0.5	Pass	
Ronnel	mg/kg	< 0.2			0.2	Pass	
Stirophos	mg/kg	< 0.5			0.5	Pass	
Trichloronate	mg/kg	< 0.2			0.2	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
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							
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	< 0.05			0.05	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	88			70-130	Pass	
TRH C10-C14	%	92			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	116			70-130	Pass	
Toluene	%	119			70-130	Pass	
Ethylbenzene	%	114			70-130	Pass	
m&p-Xylenes	%	119			70-130	Pass	
o-Xylene	%	114			70-130	Pass	
Xylenes - Total	%	117			70-130	Pass	
LCS - % Recovery							
Halogenated Volatile Organics							
1.1-Dichloroethane	%	104			70-130	Pass	
1.1-Dichloroethene	%	87			70-130	Pass	
1.1.1-Trichloroethane	%	105			70-130	Pass	
1.1.1.2-Tetrachloroethane	%	109			70-130	Pass	
1.1.2-Trichloroethane	%	117			70-130	Pass	
1.1.2.2-Tetrachloroethane	%	112			70-130	Pass	
1.2-Dibromoethane	%	118			70-130	Pass	
1.2-Dichlorobenzene	%	117			70-130	Pass	
1.2-Dichloroethane	%	110			70-130	Pass	
1.2-Dichloropropane	%	109			70-130	Pass	
1.2.3-Trichloropropane	%	112			70-130	Pass	
1.3-Dichlorobenzene	%	117			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
1.3-Dichloropropane	%	114			70-130	Pass	
1.4-Dichlorobenzene	%	117			70-130	Pass	
Bromodichloromethane	%	110			70-130	Pass	
Bromoform	%	110			70-130	Pass	
Bromomethane	%	100			70-130	Pass	
Carbon Tetrachloride	%	100			70-130	Pass	
Chlorobenzene	%	118			70-130	Pass	
Chloroform	%	113			70-130	Pass	
Chloromethane	%	101			70-130	Pass	
cis-1.2-Dichloroethene	%	125			70-130	Pass	
cis-1.3-Dichloropropene	%	90			70-130	Pass	
Dibromochloromethane	%	112			70-130	Pass	
Dibromomethane	%	116			70-130	Pass	
Iodomethane	%	80			70-130	Pass	
Methylene Chloride	%	121			70-130	Pass	
Tetrachloroethene	%	125			70-130	Pass	
trans-1.2-Dichloroethene	%	104			70-130	Pass	
trans-1.3-Dichloropropene	%	100			70-130	Pass	
Trichloroethene	%	125			70-130	Pass	
Vinyl chloride	%	100			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	121			70-130	Pass	
TRH C6-C10	%	81			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	112			70-130	Pass	
Acenaphthylene	%	117			70-130	Pass	
Anthracene	%	116			70-130	Pass	
Benz(a)anthracene	%	111			70-130	Pass	
Benzo(a)pyrene	%	90			70-130	Pass	
Benzo(b&j)fluoranthene	%	94			70-130	Pass	
Benzo(g,h,i)perylene	%	73			70-130	Pass	
Benzo(k)fluoranthene	%	107			70-130	Pass	
Chrysene	%	116			70-130	Pass	
Dibenz(a,h)anthracene	%	80			70-130	Pass	
Fluoranthene	%	116			70-130	Pass	
Fluorene	%	113			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	78			70-130	Pass	
Naphthalene	%	119			70-130	Pass	
Phenanthrene	%	108			70-130	Pass	
Pyrene	%	112			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	105			70-130	Pass	
4.4'-DDD	%	108			70-130	Pass	
4.4'-DDE	%	110			70-130	Pass	
4.4'-DDT	%	96			70-130	Pass	
a-BHC	%	106			70-130	Pass	
Aldrin	%	105			70-130	Pass	
b-BHC	%	99			70-130	Pass	
d-BHC	%	112			70-130	Pass	
Dieldrin	%	105			70-130	Pass	
Endosulfan I	%	105			70-130	Pass	

Test			Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endosulfan II			%	106			70-130	Pass	
Endosulfan sulphate			%	112			70-130	Pass	
Endrin			%	101			70-130	Pass	
Endrin aldehyde			%	125			70-130	Pass	
Endrin ketone			%	108			70-130	Pass	
g-BHC (Lindane)			%	105			70-130	Pass	
Heptachlor			%	125			70-130	Pass	
Heptachlor epoxide			%	103			70-130	Pass	
Hexachlorobenzene			%	101			70-130	Pass	
Methoxychlor			%	94			70-130	Pass	
Toxaphene			%	111			70-130	Pass	
LCS - % Recovery									
Organophosphorus Pesticides (OP)									
Dimethoate		%	72				70-130	Pass	
Fenitrothion		%	95				70-130	Pass	
Mevinphos		%	80				70-130	Pass	
LCS - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions									
TRH >C10-C16		%	88				70-130	Pass	
LCS - % Recovery									
Heavy Metals									
Arsenic		%	98				70-130	Pass	
Cadmium		%	99				70-130	Pass	
Chromium		%	101				70-130	Pass	
Copper		%	103				70-130	Pass	
Lead		%	96				70-130	Pass	
Mercury		%	97				70-130	Pass	
Nickel		%	103				70-130	Pass	
Zinc		%	101				70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	S16-Jn16905	NCP	%	96			70-130	Pass	
TRH C10-C14	S16-Jn17694	NCP	%	97			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	S16-Jn16905	NCP	%	77			70-130	Pass	
Toluene	S16-Jn16905	NCP	%	76			70-130	Pass	
Ethylbenzene	S16-Jn16905	NCP	%	81			70-130	Pass	
m&p-Xylenes	S16-Jn16905	NCP	%	82			70-130	Pass	
o-Xylene	S16-Jn16905	NCP	%	79			70-130	Pass	
Xylenes - Total	S16-Jn16905	NCP	%	81			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	S16-Jn16905	NCP	%	107			70-130	Pass	
TRH C6-C10	S16-Jn16905	NCP	%	113			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	S16-Jn17699	NCP	%	117			70-130	Pass	
Acenaphthylene	S16-Jn17699	NCP	%	120			70-130	Pass	
Anthracene	S16-Jn17699	NCP	%	117			70-130	Pass	
Benz(a)anthracene	S16-Jn17699	NCP	%	120			70-130	Pass	
Benzo(a)pyrene	S16-Jn17699	NCP	%	95			70-130	Pass	
Benzo(b&i)fluoranthene	S16-Jn17699	NCP	%	84			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Benzo(g,h,i)perylene	S16-Jn17699	NCP	%	77			70-130	Pass	
Benzo(k)fluoranthene	S16-Jn17699	NCP	%	97			70-130	Pass	
Chrysene	S16-Jn17699	NCP	%	124			70-130	Pass	
Dibenz(a,h)anthracene	S16-Jn17699	NCP	%	85			70-130	Pass	
Fluoranthene	S16-Jn17699	NCP	%	128			70-130	Pass	
Fluorene	S16-Jn17699	NCP	%	118			70-130	Pass	
Indeno(1,2,3-cd)pyrene	S16-Jn17699	NCP	%	83			70-130	Pass	
Naphthalene	S16-Jn17699	NCP	%	120			70-130	Pass	
Phenanthrene	S16-Jn17699	NCP	%	118			70-130	Pass	
Pyrene	S16-Jn17699	NCP	%	124			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	S16-Jn16278	NCP	%	87			70-130	Pass	
4,4'-DDD	S16-Jn17336	NCP	%	118			70-130	Pass	
4,4'-DDE	S16-Jn17336	NCP	%	119			70-130	Pass	
4,4'-DDT	S16-Jn17336	NCP	%	96			70-130	Pass	
a-BHC	S16-Jn17336	NCP	%	111			70-130	Pass	
Aldrin	S16-Jn17336	NCP	%	114			70-130	Pass	
b-BHC	S16-Jn17336	NCP	%	105			70-130	Pass	
d-BHC	S16-Jn17336	NCP	%	123			70-130	Pass	
Dieldrin	S16-Jn17336	NCP	%	116			70-130	Pass	
Endosulfan I	S16-Jn17336	NCP	%	114			70-130	Pass	
Endosulfan II	S16-Jn17336	NCP	%	113			70-130	Pass	
Endosulfan sulphate	S16-Jn17336	NCP	%	117			70-130	Pass	
Endrin	S16-Jn17336	NCP	%	102			70-130	Pass	
Endrin aldehyde	S16-Jn17336	NCP	%	123			70-130	Pass	
Endrin ketone	S16-Jn17336	NCP	%	117			70-130	Pass	
g-BHC (Lindane)	S16-Jn17336	NCP	%	109			70-130	Pass	
Heptachlor	S16-Jn17336	NCP	%	124			70-130	Pass	
Heptachlor epoxide	S16-Jn17336	NCP	%	110			70-130	Pass	
Hexachlorobenzene	S16-Jn17336	NCP	%	106			70-130	Pass	
Methoxychlor	S16-Jn17336	NCP	%	95			70-130	Pass	
Spike - % Recovery									
Organophosphorus Pesticides (OP)				Result 1					
Dimethoate	S16-Jn17344	NCP	%	109			70-130	Pass	
Fenitrothion	S16-Jn17344	NCP	%	111			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
TRH >C10-C16	S16-Jn17694	NCP	%	93			70-130	Pass	
Spike - % Recovery									
Halogenated Volatile Organics				Result 1					
1,1-Dichloroethane	S16-Jn18665	NCP	%	106			70-130	Pass	
1,1-Dichloroethene	S16-Jn18665	NCP	%	80			70-130	Pass	
1,1,1-Trichloroethane	S16-Jn18665	NCP	%	93			70-130	Pass	
1,1,1,2-Tetrachloroethane	S16-Jn18665	NCP	%	94			70-130	Pass	
1,1,2-Trichloroethane	S16-Jn18665	NCP	%	113			70-130	Pass	
1,1,2,2-Tetrachloroethane	S16-Jn18665	NCP	%	114			70-130	Pass	
1,2-Dibromoethane	S16-Jn18665	NCP	%	112			70-130	Pass	
1,2-Dichlorobenzene	S16-Jn18665	NCP	%	109			70-130	Pass	
1,2-Dichloroethane	S16-Jn18665	NCP	%	100			70-130	Pass	
1,2-Dichloropropane	S16-Jn18665	NCP	%	106			70-130	Pass	
1,2,3-Trichloropropane	S16-Jn18665	NCP	%	111			70-130	Pass	
1,3-Dichlorobenzene	S16-Jn18665	NCP	%	110			70-130	Pass	
1,3-Dichloropropane	S16-Jn18665	NCP	%	112			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
1,4-Dichlorobenzene	S16-Jn18665	NCP	%	110			70-130	Pass	
Bromodichloromethane	S16-Jn18665	NCP	%	99			70-130	Pass	
Bromoform	S16-Jn18665	NCP	%	94			70-130	Pass	
Bromomethane	S16-Jn18665	NCP	%	116			70-130	Pass	
Carbon Tetrachloride	S16-Jn18665	NCP	%	81			70-130	Pass	
Chlorobenzene	S16-Jn18665	NCP	%	114			70-130	Pass	
Chloroform	S16-Jn18665	NCP	%	104			70-130	Pass	
Chloromethane	S16-Jn18665	NCP	%	105			70-130	Pass	
cis-1,2-Dichloroethene	S16-Jn18655	NCP	%	110			70-130	Pass	
cis-1,3-Dichloropropene	S16-Jn18665	NCP	%	79			70-130	Pass	
Dibromochloromethane	S16-Jn18665	NCP	%	97			70-130	Pass	
Dibromomethane	S16-Jn18665	NCP	%	111			70-130	Pass	
Iodomethane	S16-Jn18665	NCP	%	90			70-130	Pass	
Methylene Chloride	S16-Jn18665	NCP	%	107			70-130	Pass	
Tetrachloroethene	S16-Jn18665	NCP	%	116			70-130	Pass	
trans-1,2-Dichloroethene	S16-Jn18665	NCP	%	106			70-130	Pass	
trans-1,3-Dichloropropene	S16-Jn18665	NCP	%	88			70-130	Pass	
Trichloroethene	S16-Jn18665	NCP	%	116			70-130	Pass	
Vinyl chloride	S16-Jn18665	NCP	%	126			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C10-C14	S16-Jn20498	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	S16-Jn20498	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	S16-Jn20498	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	S16-Jn17698	NCP	mg/kg	3.2	< 0.5	200	30%	Fail	Q15
Acenaphthylene	S16-Jn17698	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	S16-Jn17698	NCP	mg/kg	1.3	< 0.5	92	30%	Fail	Q15
Benz(a)anthracene	S16-Jn17698	NCP	mg/kg	2.5	1.6	45	30%	Fail	Q15
Benzo(a)pyrene	S16-Jn17698	NCP	mg/kg	1.7	1.2	36	30%	Fail	Q15
Benzo(b&j)fluoranthene	S16-Jn17698	NCP	mg/kg	2.1	1.4	40	30%	Fail	Q15
Benzo(g,h,i)perylene	S16-Jn17698	NCP	mg/kg	0.7	0.6	24	30%	Pass	
Benzo(k)fluoranthene	S16-Jn17698	NCP	mg/kg	1.7	1.0	55	30%	Fail	Q15
Chrysene	S16-Jn17698	NCP	mg/kg	2.4	1.4	49	30%	Fail	Q15
Dibenz(a,h)anthracene	S16-Jn17698	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	S16-Jn17698	NCP	mg/kg	4.5	3.3	31	30%	Fail	Q15
Fluorene	S16-Jn17698	NCP	mg/kg	2.7	< 0.5	200	30%	Fail	Q15
Indeno(1,2,3-cd)pyrene	S16-Jn17698	NCP	mg/kg	0.7	< 0.5	35	30%	Fail	Q15
Naphthalene	S16-Jn17698	NCP	mg/kg	3.3	< 0.5	200	30%	Fail	Q15
Phenanthrene	S16-Jn17698	NCP	mg/kg	4.3	0.8	140	30%	Fail	Q15
Pyrene	S16-Jn17698	NCP	mg/kg	3.9	3.2	18	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	S16-Jn16878	NCP	mg/kg	0.3	0.8	86	30%	Fail	Q15
4,4'-DDD	S16-Jn16878	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4,4'-DDE	S16-Jn16878	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4,4'-DDT	S16-Jn16878	NCP	mg/kg	0.16	0.10	47	30%	Fail	Q15
a-BHC	S16-Jn16878	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	S16-Jn16878	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	S16-Jn16878	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	S16-Jn16878	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	S16-Jn16878	NCP	mg/kg	0.23	0.16	32	30%	Fail	Q15

Duplicate								
Organochlorine Pesticides				Result 1	Result 2	RPD		
Endosulfan I	S16-Jn16878	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan II	S16-Jn16878	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan sulphate	S16-Jn16878	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin	S16-Jn16878	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin aldehyde	S16-Jn16878	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin ketone	S16-Jn16878	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
g-BHC (Lindane)	S16-Jn16878	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor	S16-Jn16875	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor epoxide	S16-Jn16878	NCP	mg/kg	< 0.05	0.15	120	30%	Fail
Hexachlorobenzene	S16-Jn16878	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Methoxychlor	S16-Jn16878	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Toxaphene	S16-Jn16878	NCP	mg/kg	< 1	< 1	<1	30%	Pass
Duplicate								
Organophosphorus Pesticides (OP)				Result 1	Result 2	RPD		
Azinphos-methyl	S16-Jn17309	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Chlorpyrifos	S16-Jn17309	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Coumaphos	S16-Jn17309	NCP	mg/kg	< 2	< 2	<1	30%	Pass
Demeton (total)	S16-Jn17309	NCP	mg/kg	< 1	< 1	<1	30%	Pass
Diazinon	S16-Jn17309	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Dichlorvos	S16-Jn17309	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Dimethoate	S16-Jn17309	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Disulfoton	S16-Jn17309	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Ethoprop	S16-Jn17309	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Fenitrothion	S16-Jn17309	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Fensulfthion	S16-Jn17309	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Fenthion	S16-Jn17309	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Malathion	S16-Jn17309	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Methyl parathion	S16-Jn17309	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Mevinphos	S16-Jn17309	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Monocrotophos	S16-Jn17309	NCP	mg/kg	< 2	< 2	<1	30%	Pass
Parathion	S16-Jn17309	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Phorate	S16-Jn17309	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Profenofos	S16-Jn17309	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Prothiofos	S16-Jn17309	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Ronnel	S16-Jn17309	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Stirophos	S16-Jn17309	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Trichloronate	S16-Jn17309	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD		
TRH >C10-C16	S16-Jn20498	NCP	mg/kg	< 50	< 50	<1	30%	Pass
TRH >C16-C34	S16-Jn20498	NCP	mg/kg	< 100	< 100	<1	30%	Pass
TRH >C34-C40	S16-Jn20498	NCP	mg/kg	< 100	< 100	<1	30%	Pass
Duplicate								
				Result 1	Result 2	RPD		
% Moisture	S16-Jn03733	NCP	%	5.4	5.1	6.0	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD		
TRH C6-C9	S16-Jn20088	CP	mg/kg	< 20	< 20	<1	30%	Pass
Duplicate								
BTEX				Result 1	Result 2	RPD		
Benzene	S16-Jn20088	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Toluene	S16-Jn20088	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Ethylbenzene	S16-Jn20088	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
m&p-Xylenes	S16-Jn20088	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass

Duplicate								
BTX				Result 1	Result 2	RPD		
o-Xylene	S16-Jn20088	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Xylenes - Total	S16-Jn20088	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass
Duplicate								
Halogenated Volatile Organics				Result 1	Result 2	RPD		
1.1-Dichloroethane	S16-Jn20088	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.1-Dichloroethene	S16-Jn20088	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.1.1-Trichloroethane	S16-Jn20088	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.1.1.2-Tetrachloroethane	S16-Jn20088	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.1.2-Trichloroethane	S16-Jn20088	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.1.2.2-Tetrachloroethane	S16-Jn20088	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2-Dibromoethane	S16-Jn20088	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2-Dichlorobenzene	S16-Jn20088	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2-Dichloroethane	S16-Jn20088	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2-Dichloropropane	S16-Jn20088	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.2.3-Trichloropropane	S16-Jn20088	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.3-Dichlorobenzene	S16-Jn20088	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.3-Dichloropropane	S16-Jn20088	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
1.4-Dichlorobenzene	S16-Jn20088	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromodichloromethane	S16-Jn20088	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromoform	S16-Jn20088	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Bromomethane	S16-Jn20088	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Carbon Tetrachloride	S16-Jn20088	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chlorobenzene	S16-Jn20088	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chloroform	S16-Jn20088	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Chloromethane	S16-Jn20088	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
cis-1.2-Dichloroethene	S16-Jn20088	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
cis-1.3-Dichloropropene	S16-Jn20088	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibromochloromethane	S16-Jn20088	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Dibromomethane	S16-Jn20088	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Iodomethane	S16-Jn20088	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Methylene Chloride	S16-Jn20088	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Tetrachloroethene	S16-Jn20088	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
trans-1.2-Dichloroethene	S16-Jn20088	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
trans-1.3-Dichloropropene	S16-Jn20088	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Trichloroethene	S16-Jn20088	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Trichlorofluoromethane	S16-Jn20088	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Vinyl chloride	S16-Jn20088	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD		
Naphthalene	S16-Jn20088	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
TRH C6-C10	S16-Jn20088	CP	mg/kg	< 20	< 20	<1	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 mgt's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

Authorised By

Mary Makarios	Analytical Services Manager
Bob Symons	Senior Analyst-Inorganic (NSW)
Ivan Taylor	Senior Analyst-Metal (NSW)
Ryan Hamilton	Senior Analyst-Organic (NSW)
Ryan Hamilton	Senior Analyst-Volatile (NSW)



Glenn Jackson

National Operations 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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APPENDIX VIII – CHAIN OF CUSTODY

New South Wales Office:

A. D. Envirotech Australia Pty Ltd
Unit 6/7 Millennium Court
Silverwater, NSW 2128

Queensland Office:

A. D. Envirotech Australia Pty Ltd
P.O. Box 288
Upper Coomera, QLD 4209

Telephone:

NSW: (02) 8541 7214
QLD: (07) 5519 4610

Internet:

site: www.ADenvirotech.com.au
e-mail info@ADenvirotech.com.au

ABN:

520 934 529 50

506579

Job Number: _____

From:
6/7 Millennium Court,
Silverwater NSW 2128
Phone: (02) 8541 7214
Email: info@adenvirotech.com.au

To: Eurofins MGT
Sydney
Unit F3-6 Bldg F 16
Mars Rd Lane Cove NSW 2066
Attention: _____



ADE

CONSULTING

GROUP

Sampler: _____ *print name* _____ *signature* **Date:** _____

Delivery: _____ *print name* _____ *signature* **Date:** _____

Received for Laboratory: Vinod Jamb *print name* _____ *signature* **Date:** 3/1/12

SAMPLE DETAILS

Laboratory Sample ID	ADE Sample ID	Sample Date	Sample Type	Container	Analysis Required			
					CEC	%	pH	
	10625-BH14D	16.6.16	Soil ^{ref}	125ml amber glass jar no pres	/	/	/	

Further instructions:

1. Please provide PQLs below the health-based investigation levels published in NEPC Guidelines (Table 5A) for soil samples:

Analyte	PQLs, mg/kg
Heavy Metals Screen (As, Be, Cd, Cr, Pb, Hg, Mo, Ni, Se, Ag)	5 (except for Cd – 1, Hg – 0.1)
OCPs	1
PAHs individual	0.5 (except for Benzo[a]Pyrene – 0.1)
PCBs	1
Total Phenols	1
CN	1
TPH	250
BTEX	0.2, 1, 1, 3
SPOCAS - POCAS, % Sulfur oxidisable (oven dry basis)	0.3

- 2. Please send back COC/ORDER and SRA.
- 3. Please analyse all samples on **24hr turnaround time** and report results to kmclintock@adenvirotech.com.au
- 4. Please keep samples in refrigerated condition for 3 months.

Job Number: **STC-155-10625**

505270

From:
6/7 Millennium Court,
Silverwater NSW 2128
Phone: (02) 8541 7214
Email: info@adenvirotech.com.au

To: Eurofins MGT
Sydney
Unit F3-6 Bldg F 16
Mars Rd Lane Cove NSW 2066
Attention:



ADE

CONSULTING GROUP

Sampler: Kyle McClintock
print name


signature

Date: 17.06.16

Delivery:

Ben Everingham
print name


signature

Date: 17.6.16

Received for Laboratory:

Siamak
print name


signature

Date: 16:30

SAMPLE DETAILS

Laboratory Sample ID	ADE Sample ID	Sample Date	Sample Type	Container	Analysis Required			
					MGT Suite B10	VHCs	8 Metals	
	10625-SP1	15.06.16	Soil	125ml amber glass jar; no pres	X			
	10625-BH10D	15.06.16	Soil	125ml amber glass jar; no pres		X		
	10625-RINSATE1	15.06.16	Water	1 x plastic bottle HNO3 pres.			X	

Further Instructions:

1. Please provide PQLs below the health-based Investigation levels published in NEPC Guidelines (Table 5A) for soil samples:

Analyte	PQLs, mg/kg
Heavy Metals Screen (As, Be, Cd, Cr, Pb, Hg, Mo, Ni, Se, Ag)	5 (except for Cd – 1, Hg – 0.1)
OCPs	1
PAHs individual	0.5 (except for Benzo[a]Pyrene – 0.1)
PCBs	1
Total Phenols	1
CN	1
TPH	250
BTEX	0.2, 1, 1, 3
SPOCAS - POAS, % Sulfur oxidisable (oven dry basis)	0.3

2. Please send back COC/ORDER and SRA.

3. Please analyse all samples on **5 DAY turnaround time** and report results to k.mcclintock@adenvirotech.com.au

4. Please keep samples in refrigerated condition for 3 months.

Date printed: 17/06/2016

Chain of Custody (Internal)

Environmental and OHS Laboratory

Ku-ring-gai Council

LABORATORY REFERENCE NO. (Lab use ONLY):

10625-1

CLIENT / PROJECT:

CLIENT CODE - PROJECT NUMBER

INVOICE NUMBER

STC-155-10625

SAMPLES DELIVERED BY: ADE Consulting Group

6/7 Millennium Ct, Silverwater NSW 2128

SAMPLERS:

Kylie McClintock

TURNAROUND:

24h: ☐ 48h: ☐ 72h: ☐ 5 WORKING DAYS: X

SAMPLING DATE:

15.06.16 & 16.06.16

AFTER TEST STORAGE:

ROOM TEMP: X FRIDGE: ☐ FREEZER: ☐ > 4 WEEKS:
☐ OTHER: ☐

REPORT FORMAT:

DISK: X E-MAIL: ☐

SIGNATURE:

JOB CONTACT E-MAIL:

NOTES

SAMPLE DATA

CONTAINER DATA

Sample ID (Lab Use)	Sample Name		MATRIX	DELIVERY DATE	DELIVERY TIME	TYPE & PRESERVATIVE	NO.														
	Invoice Number	Sample number						6 Metal Suite	8 Metal Suite	BTEX	PAH	OCP/OPP	PCB	vTRH (C6-C10)	TRH (C10-C40)	pH/EC	pH/pH fox	TCLP			
C1 50	10625	BH01A	Soil	17.06.16	9:00	125ml amber glass jar; no pres	1	X	X	X	X	X	X	X	X						
C2 40	10625	BH02A	Soil	17.06.16	9:00	125ml amber glass jar; no pres	2	X	X	X	X	X	X	X	X						
C3	10625	BH03A	Soil	17.06.16	9:00	125ml amber glass jar; no pres	3	X	X	X	X	X	X	X	X						
C4	10625	BH04A	Soil	17.06.16	9:00	125ml amber glass jar; no pres	4	X	X	X	X	X	X	X	X						
C5	10625	BH05A	Soil	17.06.16	9:00	125ml amber glass jar; no pres	5	X	X	X	X	X	X	X	X						
C6	10625	BH06A	Soil	17.06.16	9:00	125ml amber glass jar; no pres	6	X	X	X	X	X	X	X	X						
C7	10625	BH07A	Soil	17.06.16	9:00	125ml amber glass jar; no pres	7	X	X	X	X	X	X	X	X						
C8	10625	BH08A	Soil	17.06.16	9:00	125ml amber glass jar; no pres	8	X	X	X	X	X	X	X	X						
C9	10625	BH09A	Soil	17.06.16	9:00	125ml amber glass jar; no pres	9	X	X	X	X	X	X	X	X						
C10	10625	BH10A	Soil	17.06.16	9:00	125ml amber glass jar; no pres	10	X	X	X	X	X	X	X	X						
C11 40	10625	BH10C	Soil	17.06.16	9:00	125ml amber glass jar; no pres	11	X	X	X	X	X	X	X	X						
C12	10625	BH11A	Soil	17.06.16	9:00	125ml amber glass jar; no pres	12	X	X	X	X	X	X	X	X						
C13	10625	BH12A	Soil	17.06.16	9:00	125ml amber glass jar; no pres	13	X	X	X	X	X	X	X	X						
C14	10625	BH14A	Soil	17.06.16	9:00	125ml amber glass jar; no pres	14	X	X	X	X	X	X	X	X						
C15	10625	BH15A	Soil	17.06.16	9:00	125ml amber glass jar; no pres	15	X	X	X	X	X	X	X	X						
C16	10625	BH16A	Soil	17.06.16	9:00	125ml amber glass jar; no pres	16	X	X	X	X	X	X	X	X						

ANALYSIS REQUIRED

TCLP

TCLP Prep ONLY

TCLP PAH B(a)P
PQL<0.2 ug/LTCLP PAH B(a)P
PQL<5.0 ug/LTCLP Metals (SPECIFY
METALS WHICH NEED TO
BE ANALYSED)

SAMPLES SUBMITTED										ABI Laboratory									
BY: ADE Consulting Group, Unit 6/7 Millennium Court Silverwater, 2128 NSW										LABORATORY REF. NO.:									
SAMPLERS:										RECEIVED BY: 10625 ASB1									
REPORT FORMAT:										TIME: 11 5/11									
JOB CONTACT E-MAIL:										SIGNATURE: 9.20.04. 17.06.16									
CLIENT:										K-ring-gai Council									
CLIENT CODE - PROJECT NUMBER - INVOICE NUMBER										SIGNATURE:									
JOB LOCATION: Woodford Lane, Lindfield NSW										7									
SAMPLE DATA										MATRIX									
Sample ID (Lab Use)	INVOICE NUMBER	SAMPLE NUMBER	FC	FM	BM	VT	VC	Mastic	Vermiculite	Soil	Soil (500 mL) for NEPM	Other	DATE	TIME	DATE	TIME			
10625-1361	10625	BH01A								X			17.06.16	9:00	24.06.16	12:00			
2	10625	BH03A								X			17.06.16	9:00	24.06.16	12:00			
3	10625	BH05A								X			17.06.16	9:00	24.06.16	12:00			
4	10625	BH06A								X			17.06.16	9:00	24.06.16	12:00			
5	10625	BH08A								X			17.06.16	9:00	24.06.16	12:00			
6	10625	BH10A								X			17.06.16	9:00	24.06.16	12:00			
7	10625	BH11A								X			17.06.16	9:00	24.06.16	12:00			
8	10625	BH14A								X			17.06.16	9:00	24.06.16	12:00			
9	10625	BH17A								X			17.06.16	9:00	24.06.16	12:00			
10	10625	BH19A								X			17.06.16	9:00	24.06.16	12:00			
11	10625	BH21A								X			17.06.16	9:00	24.06.16	12:00			
12	10625	BH23A								X			17.06.16	9:00	24.06.16	12:00			
13	10625	BH24A								X			17.06.16	9:00	24.06.16	12:00			

APPENDIX IX – DESIGN PLANS

New South Wales Office:

A. D. Envirotech Australia Pty Ltd
Unit 6/7 Millennium Court
Silverwater, NSW 2128

Queensland Office:

A. D. Envirotech Australia Pty Ltd
P.O. Box 288
Upper Coomera, QLD 4209

Telephone:

NSW: (02) 8541 7214
QLD: (07) 5519 4610

Internet:

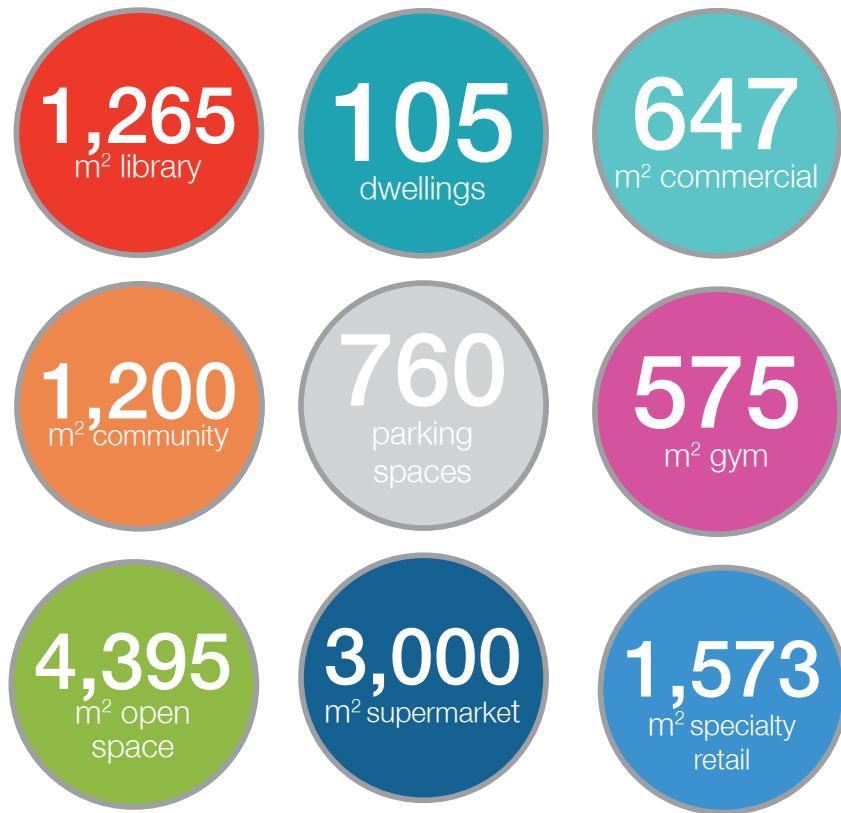
site: www.ADenvirotech.com.au
e-mail info@ADenvirotech.com.au

ABN:

520 934 529 50

Option 02

Concept



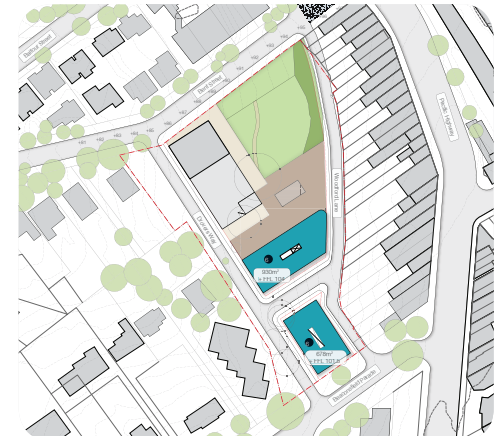
Option 02

Overview

Development Feasibility (JLL)

Option creates a competitive tension between Coles and Woolworths. Not considered viable from an investment perspective but may be made viable based on the site being considered 'strategic'. In summary;

- Additional residential and retail uses improve viability,
- Fails to adequately cover costs associated with 'community / library / park'
- Development outcome reliant on appetite of major supermarkets
- Major imposition on existing road network



Option 02

Configuration

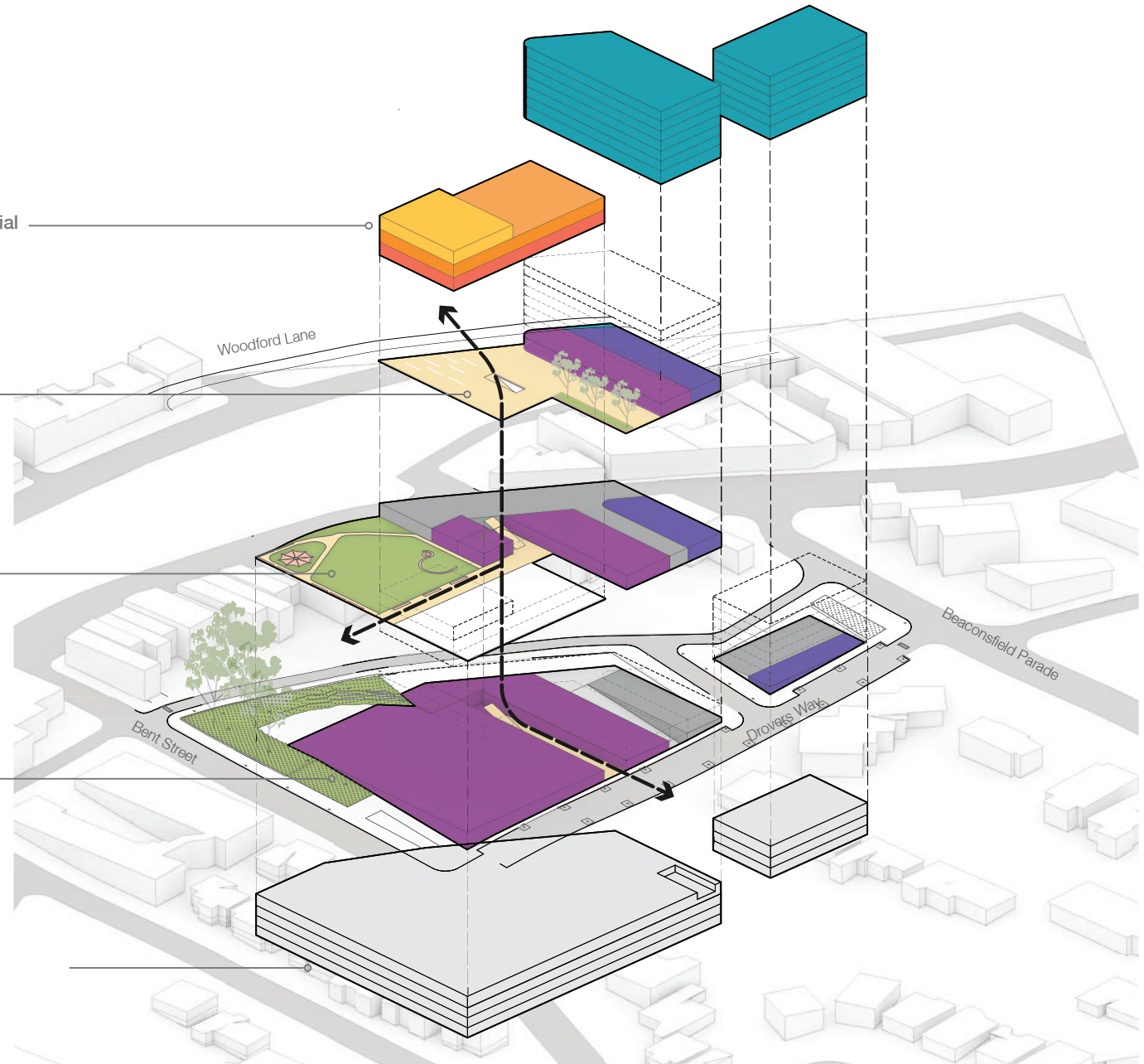
Above - Library, Community Centre, Childcare & Residential

Plaza Level - Retail and Commercial with access off Woodford Lane.

Park Level - Retail and Community Facilities accessed off Bent Street

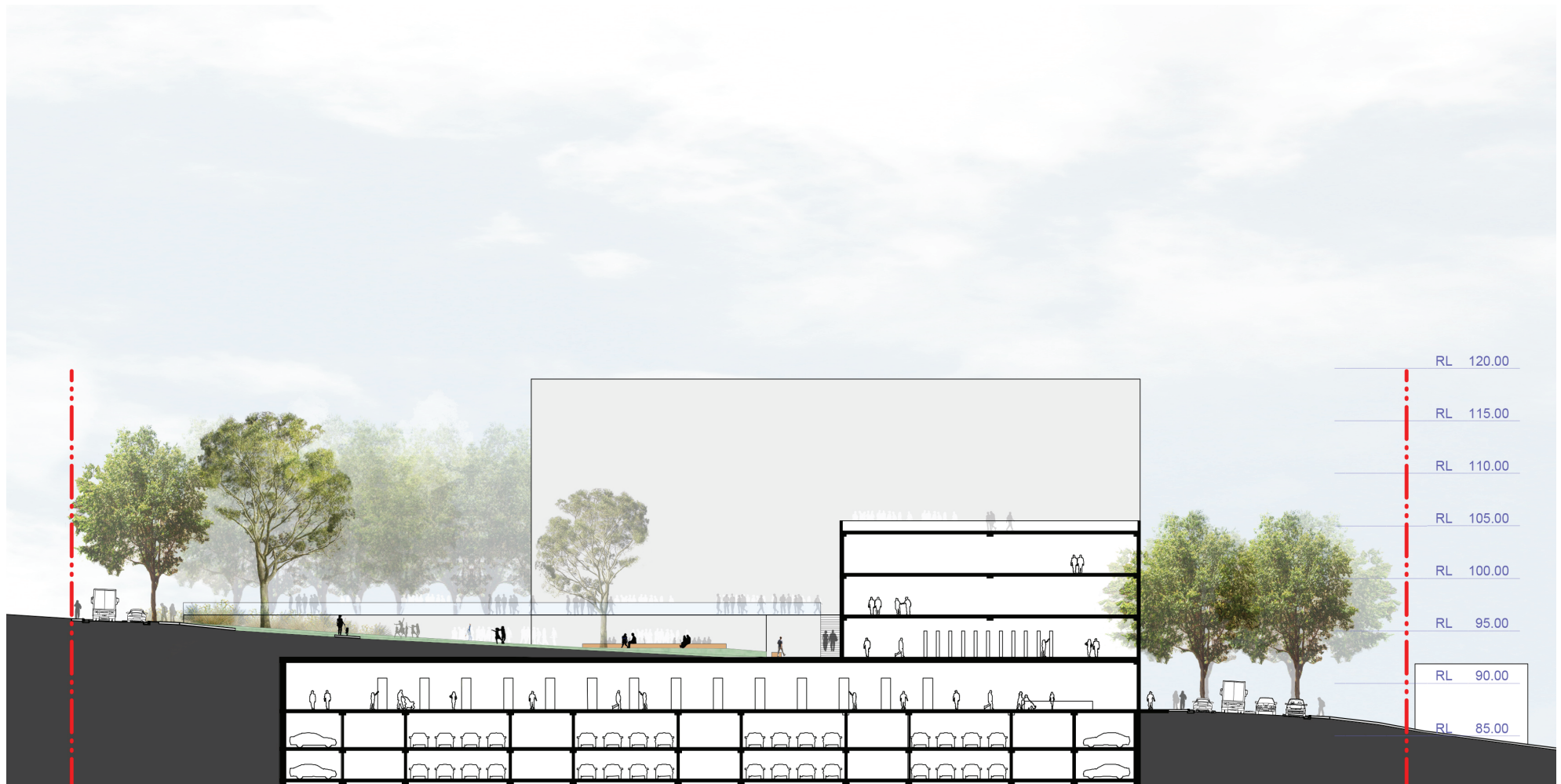
Supermarket Level - Retail accessed off Drovers Way via ramp

Basement - 2 basements accessed off Drovers way



Option 02

Sections



Option 02

Masterplan

- Larger active development- many uses
- No existing trees retained
- New park with some deep soil planting
- Community Hub is visibility from Pacific Highway
- Civic edge to Bent Street
- Built edge to Drovers Way
- Public space to Woodford Lane
- Residential edge to Beaconsfield Parade

