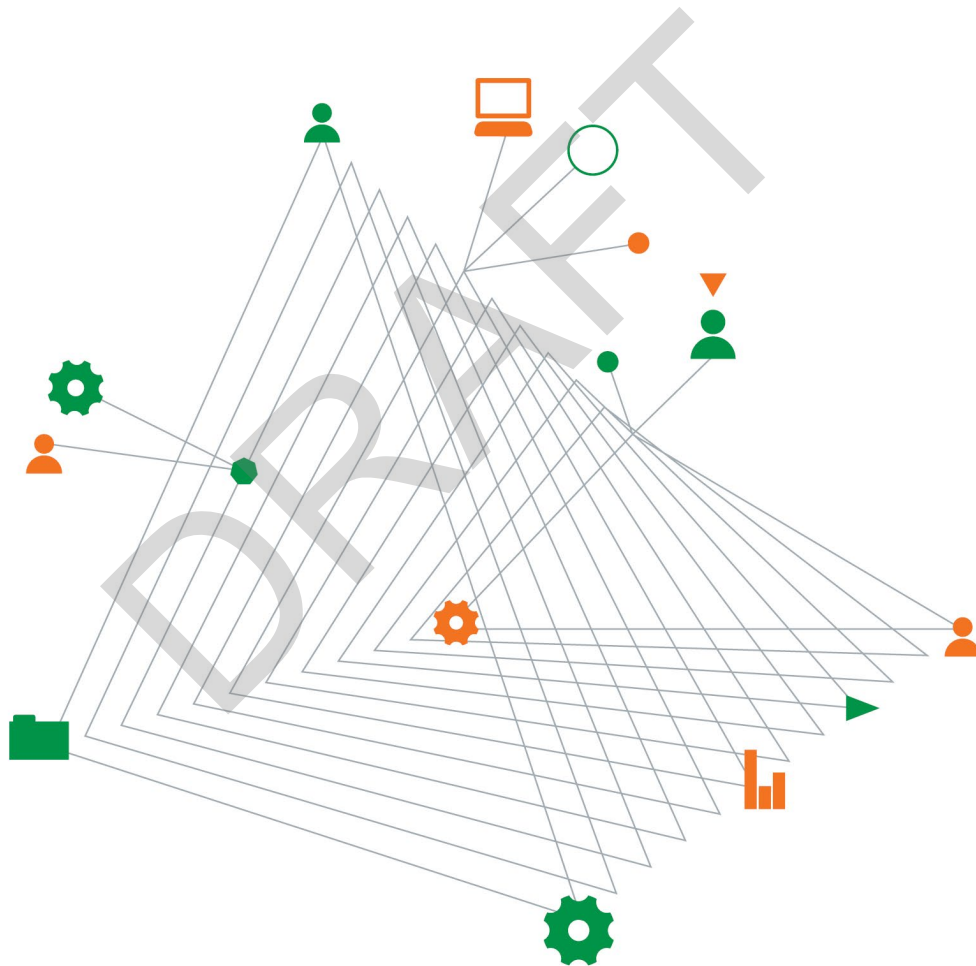


**Department of Veteran Affairs**

**114 Newdegate Street Greenslopes  
Remediation Planning**

Sampling, Analysis and Quality Plan (SAQP)

19 July 2021



Experience  
comes to life  
when it is  
powered by  
expertise

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# 114 Newdegate Street Greenslopes Remediation Planning

Prepared for  
Department of Veteran Affairs

Prepared by

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## Quality information

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Revision	Description	Date	Author	Reviewer
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Rev B	Draft SAQP	19/07/2021	J Wicks	DVA, Site Auditor

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# 1. Introduction

The Department of Veteran Affairs (DVA) is planning the redevelopment of 114 Newdegate Street, Greenslopes (Lot 123-125 RP46047) ("the Site") for park/community use and pass the Land Title to Brisbane City Council (BCC).

The Site is listed on the Environmental Management Register (EMR) for Hazardous Contaminants as a result of organochlorine pesticides (OCPs) being previously detected in soil. The Site is not subject to a Site Management Plan (SMP) and the EMR listing does not include a Site Suitability Statement<sup>1</sup>. The Site is currently vacant and contains two large buildings with Asbestos Containing Materials (ACM).

Previous investigations of the Site have been completed in 2013 and 2019 and are summarised in Section 3 and Section 4. Previous investigations have confirmed the presence of the OCPs Aldrin + Dieldrin which exceed the Schedule B1 *National Environment Protection (Assessment of Site Contamination) Measure 1999* (NEPM) Health-based Investigation Levels for recreational areas (HIL-C). OCPs are associated with historical application of termite barriers around buildings. Fragments of ACM and asbestos fines have also been reported in soil which exceed NEPM guidelines for recreational areas.

A review of the previous investigations identified data gaps which need to be addressed for the planning of remediation and redevelopment of the Site. These data gaps are summarised in Section 5.

This document provides the Sampling Analysis Quality Plan (SAQP) for investigating the data gaps described in Section 5.

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<sup>1</sup> A Site Suitability Statement is a statement prepared by a Suitably Qualified Person (SQP) which describes the permitted uses of the land, and whether there is a requirement for a SMP. The Site Suitability Statement can also include a statement that the site is 'suitable for any use' (i.e. can be removed from the EMR).

## 2. Site Description

### 2.1. Site Identification

The Site is located on the corner of Newdegate Street and Headfort Street, Greenslopes, Brisbane. The Site is shown in Figure 2-1 below, and the location of the Site in Brisbane is shown in Figure 1, Appendix A.



Figure 2-1 114 Newdegate Street, Greenslopes (Image source: Queensland Globe, 2021)

Two buildings are located on the Site and comprise a former Main Hall Building and Accommodation Building (see Figure 2-1). The Site is currently not in use due to the condition of the buildings and the presence of ACM.

Further information on the Site and surrounding land use is summarised in Table 2-1.

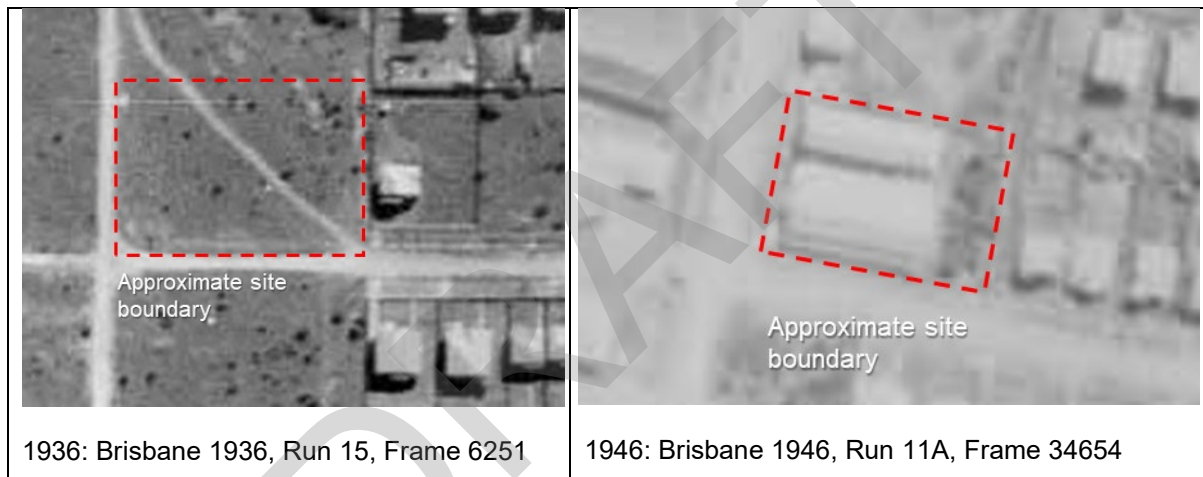
Table 2-1: Site Identification Details

Item	Detail
Site Address	114 Newdegate Street, Greenslopes QLD
Lot/Plan Number	Lot 123 on RP46047 Lot 124 on RP46047 Lot 125 on RP46047

Item	Detail
Current Zoning	NC Neighbourhood Centre <sup>2</sup>
Local Council	Brisbane City Council
Total Site Area	Approximately 1,933 m <sup>2</sup>
Site Owner	The site is currently owned by Department of Veterans Affairs.
Land Use	The property is currently consisted of disused main hall and accommodation building.
Surrounding Land Uses	North – Residential houses and small cafeteria East – Residential houses South – Residential houses West – Health care (Greenslopes Private Hospital)

## 2.2. Site History

Historical aerial photography shows the Site was cleared land in 1936, and potentially in use for rural purposes (see image below). The site was acquired by the Commonwealth of Australia in 1945 for the development of the Australian Red Cross Centre (RCC). The ARC was developed on the Site in approximately 1945 and is shown in historical aerial imagery from 1946 (see image below).



The RCC was built to provide recreational services to military personnel who were patients at the 112th Australian Military Hospital. Post World War II the RCC was used for a similar purpose to for service personnel and veterans. The buildings on the Site were later used for community purposes and to provide temporary accommodation for the families of patients at the Greenslopes Reparation Hospital.<sup>3</sup> The former RCC buildings remain on the Site to the present day. It is not known whether historically there were smaller structures located on the Site which have subsequently been demolished and the source of any fill material used on the Site.

<sup>2</sup> Brisbane City Plan 2014

Neighbourhood centre is a small mix of land uses to service residential neighbourhoods. It includes small-scale convenience shopping, professional offices, community services and other uses that directly support the immediate community.

<sup>3</sup> <https://heritage.brisbane.qld.gov.au/heritage-places/806>, accessed 16 July 2021.



## **2.3. Environmental Management Register**

The Site is listed on the EMR for Hazardous Contaminants OCPs. The Site is not subject to a SMP and the EMR listing does not include a Site Suitability Statement.

## **2.4. Topography and Drainage**

The Site is located at approximately 25 m AHD. Topography in the vicinity of the Site falls in an approximate north west direction toward a drain in Ekibin Park East.

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### 3. Previous Investigations

Previous investigations of the Site were completed in 2013 and 2019. A brief summary of these investigations is provided as follows. A summary of the data from the previous investigations is provided in Section 4. Sampling locations from previous investigations is provided in Figure 2, **Appendix A**.

**Coffey, 2013a. Department of Veteran Affairs Phase 1 Contaminated Land Assessment, 114 Newdegate Street, Greenslopes Queensland**

This investigation comprised a desk top review, site inspection and limited soil sampling program. The limited sampling program identified elevated concentrations of zinc and OCPs which were below the adopted health investigations levels (NEPM residential guidelines with accessible soils or HIL A). Zinc is potentially derived from metallic materials present on the Site.

Fragments of ACM were observed on the Site. Asbestos fines (AF) in soil exceed the nominated investigation levels in two samples collected (SS01 0.007% w/w and SS02 0.02% w/w).

**Coffey, 2013b. Department of Veteran Affairs Phase 2 Contaminated Land Assessment, 114 Newdegate Street, Greenslopes Queensland**

This investigation comprised a further soil sampling program to investigate the presence of contamination on the Site. Key findings of the investigation included:

- the presence of ACM in soil beneath the Main Hall Building and Accommodation Building which exceeded the nominated investigation levels (HIL-A).
- AF (chrysotile) detected in one soil sample with levels below the nominated investigation levels.
- Asbestos were not detected in nine of the ten samples collected. The report noted that the Phase 2 investigation adopted a methodology compliant with Australian Standards and was considered to supersede the findings of the Phase 1 Investigation.
- OCPs (aldrin + dieldrin) with concentrations which exceeded the nominated investigation levels (HIL-A) along the southern wall of the Main Hall, and beneath and along the southern wall of the Accommodation Building.
- the presence of anthropogenic materials including slag in soil material at sample sites located on the southern boundary of the Site (A05 and A06), sample locations to the west of the Accommodation Building (A04), and beneath and north of the Main Hall (A08 and A10).

**Coffey, 2019. Department of Veteran Affairs Delineation of Organochlorine Soil Impacts, 114 Newdegate Street, Greenslopes Queensland**

This investigation comprised a further soil sampling program to further delineate the extent of OCPs on the Site, and slag material found on the southern side of the Main Hall. The slag material was observed as being potentially used as drainage material on the Site.

The investigation found OCPs which exceeded the nominated investigations levels (HIL-A and HIL-C) primarily where building external walls intersected the ground. Leachability analysis of selected soil samples via the TCLP<sup>4</sup> were undertaken for waste classification purposes.

This investigation observed the presence of ACM materials on the ground surface however no further investigation of ACM was undertaken.

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<sup>4</sup> Toxicity Characteristic Leaching Procedure

## 4. Summary of Previous Site Investigation Data

### 4.1. Site Geology

Coffey (2019) describes soils on the Site to be mainly comprised of silty CLAY to 0.3 m, and CLAY with silt and sand to 0.5 m. Fill material containing anthropogenic materials (wood, brick, concrete, and/or slag) has also been found on the Site in previous investigations.

### 4.2. Analytical Data

Data from the previous investigation has been consolidated in a single table and is provided in Appendix B.

Based on a review of the data, the data has been conceptualised into three categories of materials including:

- soil materials from surface to 0.2 m below ground level (bgl)
- soil materials deeper than 0.2 m bgl
- soil materials containing slag

The following sections provide a summary of the results of these materials for OCP

#### 4.2.1. Soil materials surface to 0.2 m bgl

Soil investigation results for OCPs and metals are summarised in the following table for samples collected from surface to 0.2 mgl.

Table 4-1 Summary of Soil Data Surface to 0.2 m bgl

Analyte (mg/kg unless shown)	No. of Samples / Detects	Minimum Value	Maximum Value	HIL-A Residential	No. of Samples Exceeding HIL-A Residential	HIL-C Recreational	No. of Samples Exceeding HIL-C Recreational
<b>OCPs</b>							
4,4-DDE	49 / 35	<0.05	2.2		-		-
a-BHC	38 / 0	<0.05	<0.1		-		-
Aldrin	49 / 15	<0.05	2.32		-		-
Aldrin + Dieldrin	49 / 27	<0.05	109	6	15	10	13
b-BHC	49 / 0	<0.05	<0.1		-		-
chlordane	49 / 28	<0.05	140	50	2	70	1
d-BHC	49 / 0	<0.05	<0.1		-		-
DDD	49 / 21	<0.05	2.1		-		-
DDT	49 / 31	<0.05	23		-		-
DDT+DDE+DDD	49 / 33	<0.05	26.5	240	0	400	0
Dieldrin	49 / 33	<0.05	107		-		-
Endrin aldehyde	49 / 4	<0.05	0.24		-		-
Endrin ketone	48 / 17	<0.05	1.4		-		-
Endosulfan I	49 / 2	<0.05	0.26	270	0	340	0
Endosulfan II	48 / 0	<0.05	<0.05		-		-
Endosulfan sulphate	49 / 0	<0.05	<0.1		-		-
Endrin	49 / 16	<0.05	1.47	10	0	20	0
g-BHC (Lindane)	49 / 0	<0.05	<0.1		-		-
Heptachlor	49 / 9	<0.05	1	6	0	10	0
Heptachlor epoxide	49 / 18	<0.05	3.4		-		-
Hexachlorobenzene	49 / 0	<0.05	<0.1	10	0	10	0
Methoxychlor	49 / 0	<0.05	<0.2	300	0	400	0

Analyte (mg/kg unless shown)	No. of Samples / Detects	Minimum Value	Maximum Value	HIL-A Residential	No. of Samples Exceeding HIL-A Residential	HIL-C Recreational	No. of Samples Exceeding HIL-C Recreational
Toxaphene	45 / 0	<0.1	<1	20	0	30	0
<b>Metals</b>							
Arsenic	16 / 16	9.3	32	100	0	300	0
Cadmium	16 / 4	<0.4	1.4	20	0	90	0
Chromium (III+VI)	16 / 16	12	90	100	0	300	0
Copper	16 / 16	6.4	33	6000	0	17000	0
Lead	16 / 16	7.3	140	300	0	600	0
Mercury	16 / 1	<0.1	0.1	10	0	13	0
Nickel	16 / 16	8.4	35	400	0	1200	0
Zinc	16 / 16	26	2000	7400	0	30000	0

In summary OCP pesticides were detected in soils beneath and surrounding the buildings on the Site.

Elevated concentrations of the OCP pesticides aldrin and dieldrin have been found in soil samples which exceed NEPM HIL-A and HIL-C guidelines. The OCP chlordane also exceeded these investigation levels in one sample.

A range of other OCPs were also detected though were below the HIL-A and HIL-C guidelines in the samples analysed including:

- DDT+DDE+DDD
- Endosulfan I
- Endrin
- Heptachlor.

Endrin aldehyde and endrin ketone were also detected in samples analysed and do not have guideline values in the NEPM. These compounds are breakdown products on endrin.

Heptachlor epoxide which is a breakdown product of heptachlor were also detected in samples analysed and does not have guideline values in the NEPM.

All samples of metals analysed were below the NEPM HIL-A and HIL-C guidelines, however elevated concentrations of zinc were noted in sample locations SS01 and SS02.

Fragments of ACM have been observed in surface soils, and asbestos fines have previously been reported in sample locations SS01, SS02 and SA01.

#### 4.2.2. Soil materials deeper than 0.2 m bgl

Soil investigation results for OCPs from samples collected deeper than 0.2 mgl are summarised in the following table. Note metals were not analysed in samples at these depth with the exception of material containing slag.

Table 4-2 Summary of Soil Data deeper than 0.2 m bgl

Analyte (mg/kg unless shown)	No. of Samples / Detects	Minimum Value	Maximum Value	HIL-A Residential	No. of Samples Exceeding HIL-A Residential	HIL-C Recreational	No. of Samples Exceeding HIL-C Recreational
<b>OCPs</b>							
4,4-DDE	19 / 2	<0.05	0.22		-		-
a-BHC	19 / 0	<0.05	<0.05		-		-
Aldrin	19 / 3	<0.05	0.21		-		-
Aldrin + Dieldrin	19 / 7	<0.05	14	6	2	10	1

Analyte (mg/kg unless shown)	No. of Samples / Detects	Minimum Value	Maximum Value	HIL-A Residential	No. of Samples Exceeding HIL-A Residential	HIL-C Recreational	No. of Samples Exceeding HIL-C Recreational
b-BHC	19 / 0	<0.05	<0.05		-		-
chlordane	19 / 4	<0.1	0.4	50	0	70	0
d-BHC	19 / 0	<0.05	<0.05		-		-
DDD	19 / 1	<0.05	0.15		-		-
DDT	19 / 0	<0.05	<0.2		-		-
DDT+DDE+DDD	19 / 2	<0.05	0.37	240	0	400	0
Dieldrin	19 / 7	<0.05	14		-		-
Endrin aldehyde	19 / 0	<0.05	<0.05		-		-
Endrin ketone	19 / 1	<0.05	0.05		-		-
Endosulfan I	19 / 0	<0.05	<0.05	270	0	340	0
Endosulfan II	19 / 0	<0.05	<0.05		-		-
Endosulfan sulphate	19 / 0	<0.05	<0.05		-		-
Endrin	19 / 2	<0.05	0.1	10	0	20	0
g-BHC (Lindane)	19 / 0	<0.05	<0.05		-		-
Heptachlor	19 / 0	<0.05	<0.05	6	0	10	0
Heptachlor epoxide	19 / 0	<0.05	<0.05		-		-
Hexachlorobenzene	19 / 0	<0.05	<0.05	10	0	10	0
Methoxychlor	19 / 0	<0.05	<0.2	300	0	400	0
Toxaphene	18 / 0	<1	<1	20	0	30	0

In summary lower concentrations of OCP pesticides were detected in soils deeper than 0.2 m bgl on the Site. This finding would be consistent with the source of contamination being the application of termiticides. Aldrin+Endrin exceeded HIL-A residential guidelines in two samples (10-0.45 and 11-0.45) and HIL-C recreational guidelines in 11-0.45. Sample location 10 is located on the southern side of the Accommodation Building and sample location 11 located on the eastern side of this building.

#### 4.2.3. Soil materials containing slag

Soil investigation results for OCPs, metals and polyaromatic hydrocarbons (PAH) are summarised in the following table for samples where slag was observed.

Table 4-3 Summary of Soil Materials with Slag

Analyte (mg/kg unless shown)	No. of Samples / Detects	Minimum Value	Maximum Value	HIL-A Residential	No. of Samples Exceeding HIL-A Residential	HIL-C Recreational	No. of Samples Exceeding HIL-C Recreational
<b>OCPs</b>							
4,4-DDE	3 / 0	<0.05	<0.5		-		-
a-BHC	2 / 0	<0.05	<0.05		-		-
Aldrin	3 / 1	<0.05	86		-		-
Aldrin + Dieldrin	3 / 1	<0.05	506	6	1	10	1
b-BHC	3 / 0	<0.05	<0.05		-		-
chlordane	3 / 3	0.4	5.4	50	0	70	0
d-BHC	3 / 0	<0.05	<0.05		-		-
DDD	3 / 0	<0.05	<0.05		-		-
DDT	3 / 0	<0.05	<0.05		-		-
DDT+DDE+DDD	3 / 0	<0.05	<0.55	240	0	400	0
Dieldrin	3 / 1	<0.05	420		-		-
Endrin aldehyde	3 / 0	<0.05	<0.05		-		-
Endrin ketone	3 / 1	<0.05	8.5		-		-
Endosulfan I	3 / 0	<0.05	<0.05	270	0	340	0
Endosulfan II	3 / 0	<0.05	<0.05		-		-
Endosulfan sulphate	3 / 0	<0.05	<0.05		-		-
Endrin	3 / 1	<0.05	6.5	10	0	20	0
g-BHC (Lindane)	3 / 0	<0.05	<0.05		-		-

Analyte (mg/kg unless shown)	No. of Samples / Detects	Minimum Value	Maximum Value	HIL-A Residential	No. of Samples Exceeding HIL-A Residential	HIL-C Recreational	No. of Samples Exceeding HIL-C Recreational
Heptachlor	3 / 1	<0.05	0.87	6	0	10	0
Heptachlor epoxide	3 / 3	0.11	0.26		-		-
Hexachlorobenzene	3 / 0	<0.05	<0.05	10	0	10	0
Methoxychlor	3 / 0	<0.05	<0.05	300	0	400	0
Toxaphene	3 / 0	<1	<1	20	0	30	0
<b>PAHs</b>							
Benzo(a)pyrene TEQ calc (Half)	2 / 2	0.6	0.6	3	0	3	0
Benzo(a)pyrene TEQ (LOR)	2 / 2	1.2	1.2	3	0	3	0
Benzo(a)pyrene TEQ calc (Zero)	2 / 0	<0.5	<0.5	3	0	3	0
Benzo(b+j)fluoranthene	2 / 0	<0.5	<0.5		-		-
Acenaphthene	2 / 0	<0.5	<0.5		-		-
Acenaphthylene	2 / 0	<0.5	<0.5		-		-
Anthracene	2 / 0	<0.5	<0.5		-		-
Benz(a)anthracene	2 / 0	<0.5	<0.5		-		-
Benzo(a) pyrene	2 / 0	<0.5	<0.5		-		-
Benzo(g,h,i)perylene	2 / 0	<0.5	<0.5		-		-
Benzo(k)fluoranthene	2 / 0	<0.5	<0.5		-		-
Chrysene	2 / 0	<0.5	<0.5		-		-
Dibenz(a,h)anthracene	2 / 0	<0.5	<0.5		-		-
Fluoranthene	2 / 0	<0.5	<0.5		-		-
Fluorene	2 / 0	<0.5	<0.5		-		-
Indeno(1,2,3-c,d)pyrene	2 / 0	<0.5	<0.5		-		-
Naphthalene	2 / 0	<0.5	<0.5		-		-
PAHs (Sum of total)	2 / 0	<0.5	<0.5	300	0	300	0
Phenanthrene	2 / 0	<0.5	<0.5		-		-
Pyrene	2 / 0	<0.5	<0.5		-		-
<b>Metals</b>							
Arsenic	3 / 3	2.1	19	100	0	300	0
Cadmium	3 / 0	<0.4	<0.4	20	0	90	0
Chromium (III+VI)	3 / 1	<5	22	100	0	300	0
Copper	3 / 3	11	19	6000	0	17000	0
Lead	3 / 3	19	120	300	0	600	0
Mercury	3 / 0	<0.1	<0.1	10	0	13	0
Nickel	3 / 3	5.8	8.7	400	0	1200	0
Zinc	3 / 3	51	330	7400	0	30000	0

Elevated levels of metals and PAHs can be present in slag materials. However elevated concentrations of these contaminants were not observed in the limited number of soil samples analysed. PAHs were not above laboratory limits of reporting (LOR) and metals were reported with concentrations below HIL-A and HIL-C.

Aldrin and dieldrin exceeded HIL-C in sample HA10 located on the southern side of the Accommodation Building. This result would be attributed to the application of termiticides to soil rather than OCPs being derived from the slag.

#### 4.2.4. Other Potential Contaminants

Areas of potential hydrocarbon impact were not observed during previous investigations and this is consistent with the site history which has not identified fuel storage/use on the Site.

In the Phase 1 Investigation (Coffey, 2013a) hydrocarbons (TRH) were not reported above the LOR three of the four samples analysed, and BTEX<sup>5</sup> was not above the LOR in the four samples analysed. Hydrocarbons were reported in one sample location (SS04) however this result is potentially a false

<sup>5</sup> Benzene, toluene, ethylbenzene, xylenes.

positive from organic matter present in the sample and it is noted that no visual or olfactory signs of hydrocarbon contamination were observed at this sample location (or elsewhere on the Site).

Other potential contaminants including organophosphate pesticides were not reported in samples analysed in the Phase 1 Investigation.

#### 4.2.5. Summary of Contamination

In summary the primary contaminants of concern (CoC) on the Site are considered to be OCPs (mainly aldrin and dieldrin) and asbestos (ACM and AF).

Based on previous site investigations metals are not considered to be CoC on the Site. Elevated concentrations of zinc were reported in two sample locations which have potential implication for waste disposal; the concentrations however were below HIL-A residential and HIL-C recreational guidelines.

### 4.3. Areas of Interest

Based on the data from previous investigations the Site has been conceptualised into three main areas of interest (AOI) which are shown in Figure 5-1. These are summarised as follows.

- **Area 1:** This area includes the former Accommodation Building. OCP contamination which exceeds HIL-C guidelines has been reported predominantly in surface soil materials less than 0.2 m depth along the southern perimeter of the building, and to a lesser amount along the western and northern side of the building and within a small area within the central portion of the building. OCP contamination which exceeds HIL-C was reported in one location (11) at 0.45 m depth.
- **Area 2:** This area includes the former Main Hall. With the exception of a small area of OCP contamination in Area 3, OCP contamination in Area 2 is below the HIL-C guidelines.
- **Area 3:** Area 3 is located along the southern boundary of the Site and has OCP contamination which exceeds the HIL-C guidelines in surface soil materials less than 0.2 m depth.

Other points of note from previous investigations include the following:

- **Asbestos:** ACM fragments have been observed in surface soil materials within Area 1 and Area 2/3. Previous investigations have also found Asbestos Fines (loose asbestos fibres) in soil materials in both Area 1 and Area 2.
- **Fill Material:** Fill material containing anthropogenic materials (e.g. wood, concrete, brick, slag, coal) have been observed in shallow soil materials. While fill materials containing anthropogenic materials such as slag, concrete and brick may be within NEPM Guidelines, such materials are undesirable aesthetically for a park and may pose physical hazards (sharp and angular) and should therefore be removed.

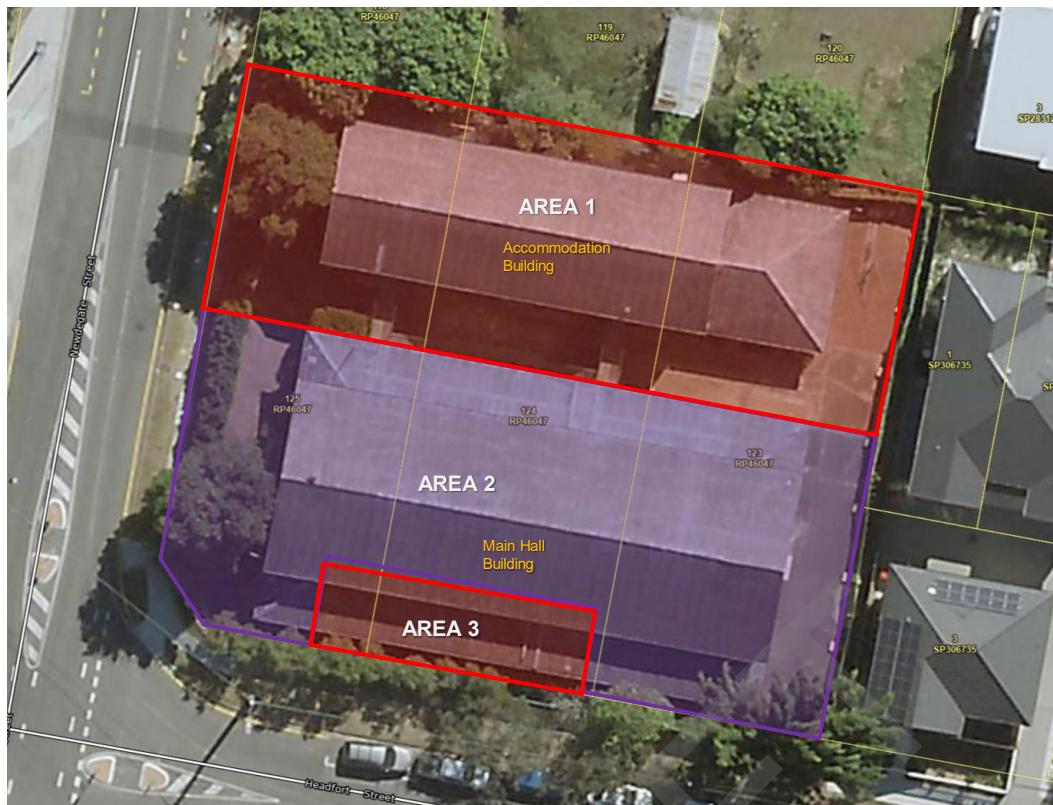


Figure 5-1 Areas of Interest

## 4.4. Implications for Site Redevelopment

The Site is currently zoned for community use however it is understood that a Planning Application will be required to redevelop the Site as a Park.

There are two remediation strategies which could be considered for the Site including:

- Partial remediation of the Site such that the property is suitable for Park and Community use and remains on the EMR. The strategy will require a Contaminated Land Investigation Document (CLID) including a Site Suitability Statement and Draft SMP. As BCC will take ownership for the Site the Department of Environment and Science (DES) will require BCC to consent to the SMP (and therefore any residual contamination present on the Site and its on-going management).
- Full remediation of the site enabling the Site to be removed from the EMR through completion of a CLID/Validation Report.

Site Auditor Certification will need to accompany the CLID/Draft SMP or Validation Report, and will be required prior to use of the Site as a Park.



## 5. Data Gaps

Based on a review of the previous investigations the following data gaps have been identified:

- Previous investigations have not sampled soil materials beneath the concrete slab located along the northern half of the Accommodation Building, and beneath the concrete pavement along the eastern boundary of the Site.
- Elevated concentrations of zinc were found at two locations in Area 2 (SS01 and SS02). While the concentrations are below NEPM Guidelines for Parks and Open Spaces, recipient landfills may require leachability tests for waste classification purposes.
- The potential for contamination in the concrete slabs has not been previously investigated. OCPs have the potential to be present in concrete slabs as well as building stumps/footings.
- Soil materials containing slag have been analysed however it is recommended that the slag materials be crushed and analysed.

These data gaps should be investigated to inform decision making on redevelopment and remediation of the Site.

## 6. Data quality objectives

The National Environment Protection Measure (NEPM, Schedule B2 Guideline on Site Characterisation -2013) states that the nature and quality of the data collected for a particular assessment will be determined by the Data Quality Objectives (DQOs). The NEPM and the Australian Standard AS4482.1-2005 reference the US EPA *Guidance on Systematic Planning Using the Data Quality Objectives Process* (US EPA, 2006) which defines the DQO process. The US EPA defines the process as ‘a strategic planning approach based on the Scientific Methods that is used to prepare for a data collection activity. It provides a systematic procedure for defining the criteria that a data collection design should satisfy, including when to collect samples, where to collect samples, the tolerable level of decision errors for the study, and how many samples to collect.’

The process for establishing DQOs appropriate for a project is defined by the US EPA and comprises seven steps. The DQOs have been briefly summarised in Table 2-1.

Table 5-1: Data Quality Objectives

Data Quality Objectives
<p>1. State the Problem</p> <p>DVA is planning to redevelop the Site for park/community use. DVA has advised that it has had preliminary discussions with BCC which support the end use of the Site as a Park, and has advised that remediation of the Site to a standard suitable for Park is an appropriate remediation strategy for the Site. Previous investigations have identified OCPs and asbestos which exceed guidelines for recreational use. Review of previous investigation have identified four ‘Data Gaps’ which include:</p> <ol style="list-style-type: none"> <li>Previous investigations have generally sampled from accessible areas on the Site and accordingly there are number of locations on the Site which have not been investigated. Materials within these areas require investigation to inform the planning for the redevelopment and remediation of the Site.</li> <li>Elevated concentrations of zinc have previously been reported in two sample locations which have potential implications for off-site disposal to landfill. These locations require leachability (TCLP) tests to confirm landfill disposal requirements.</li> <li>OCPs are potentially present in concrete slabs present on the Site as well as stumps and footings; these materials require investigation.</li> <li>Slag materials are present on the Site. Samples of slag should be collected and crushed for chemical testing.</li> </ol>
<p>2. Identify the goal of the study</p> <p>The purpose of the investigation is to investigate the Data Gaps described in Section 5.</p>
<p>3. Identify information inputs</p> <ul style="list-style-type: none"> <li>Previous investigations (where applicable)</li> <li>Field observations including the presence of visual/olfactory indicators of contamination</li> <li>Analytical data of sample media, and quality assurance / quality control (QA/QC) samples</li> <li>Outcome of QA/QC samples</li> <li>Nominated investigation levels.</li> </ul>
<p>4. Define the boundary of the study</p>

The study boundary is defined as Lot 123-125 RP46047 ("the Site), and the investigation of soil materials to approximately 0.5 m below ground level within the Site. The investigation will be undertaken over a period of approximately one day.

5. Develop a decision rule

Primary and QA/QC samples will be collected and analysed by the laboratories for potential contaminants of concern (CoCs). Where contamination is identified and exceeds the nominated investigation levels for the protection of human health and/or the environment a recommendation will be made for:

- completion of further investigations to assess the nature and extent of OCP contamination requiring management (if required)
- remediation of the Site to enable the Site to be used for its intended use.

6. Specify performance of acceptance criteria

Analytical data quality indicators are described in Section 10.

7. Develop a plan for obtaining the data

The methodology and rationale for obtaining relevant data for the detailed site investigation is described in this plan.

## 7. Investigation levels

The nominated investigation levels (ILs) have been selected to assess the suitability of the Site for its intended use for recreational purposes or removal of the Site from the EMR. Based on the CoC identified in previous investigations the nominated ILs include:

### Assessment of the Site for Recreational Use

- NEPM health-based investigation levels in recreational land use (HIL-C)
- NEPM health screening level for asbestos for recreational land use (HSL-C)
- NEPM Ecological Investigation Levels (EIL) for in Urban Residential/Public Open Space land use settings
- Other guideline as required based on the findings of the investigation.

### Assessment of the Site for removal from EMR

- NEPM health-based investigation levels in residential landuse with accessible gardens/soil (HIL-A)
- NEPM health screening level for asbestos for residential landuse with accessible gardens/soil (HSL-A)
- NEPM Ecological Investigation Levels in Urban Residential/Public Open Space land use settings
- Other guideline as required based on the findings of the investigation.

## 8. Preliminary conceptual site model

Historical termiticides applied to Site and asbestos containing materials (ACM) (most likely from buildings on the Site) are considered to be the **primary sources** of contamination on the Site.

Contamination present in soil and other environmental media as a result of the primary source is considered as a **secondary source of contamination**.

Once in soil, contamination has the potential to be distributed through **transportation pathways** such as erosion and deposition (wind and water) and the leaching of contaminants to groundwater and surface water, and anthropogenic activities which involve the movement of soil materials such as site redevelopment. Transportation pathways can also be considered as secondary sources of contamination (e.g. contamination in groundwater).

**Receptors** could potentially be exposed to contaminants derived from the disturbance of contaminants present in within soil.

Potential receptors considered applicable redevelopment of the Site include:

- workers involved with the Site work
- persons involved with the cleaning clothing, vehicles and equipment used in redevelopment
- general public including persons who could be subject to contaminated media generated during redevelopment (e.g. dust)
- ecological receptors including native and domestic terrestrial flora and fauna
- groundwater and surface water receptors.

Post redevelopment potential receptors which may be exposed to contaminants in soil include:

- general public accessing the park
- persons involved with maintenance of the park
- persons who could be subject to contaminated media generated from the Site (e.g. dust)
- ecological receptors including terrestrial and aquatic flora and fauna (including native and domestic terrestrial fauna).
- groundwater and surface water receptors.

## 9. Sample locations and depths

The sample locations proposed to be undertaken under this SAQP are shown in Figure 3, Appendix A and summarised in the following table.

Sample Location	Proposed sampling
BH01 to BH08	Concrete coring and soil sampling beneath the main hall, drive way along the eastern end of the Site. Soil samples will be collected at 0-0.1 m, 0.3 m and up to 0.5 m below ground level (if practicable). Concrete cores and soil samples will be submitted for laboratory analysis.
BH09 to BH11	Concrete coring between the accommodation building and main hall, and submission of concrete cores for laboratory analysis.
BH12 to BH13	Two surface soil samples (0-0.1 m bgl) where elevated levels of zinc were reported in previous investigations
BH14 to BH15	Two boreholes at previous sampling sites where elevated concentrations of OCPs were reported and there is currently no leachability data including HA10 and HA09. Soil samples will be collected at 0-0.1 m, 0.3 m and up to 0.5 m where practicable.
BH16 to BH17	Two boreholes at previous sampling sites where elevated concentrations of OCPs were reported and there is currently no leachability data including HA10 and HA09. Soil samples will be collected at 0-0.1 m, 0.3 m and up to 0.5 m where practicable.
BH16 to BH20	Four boreholes around the perimeter of the Site in grassy areas outside the building envelope and the collection of soil samples at 0-0.1 m and 0.3 m.
Slag 1 to 2	Collection of two pieces of slag from the southern side of the Main Hall.

Addition soil samples will be collected where visual or olfactory signs of contamination are observed during sampling.

Samples of ACM will be collected where observed at sampling sites.

Soil samples will be collected by hand using the methods described in Section 10.2. Ground conditions and access (e.g. limited head height under buildings) may limit sample depths which can be achieved.

## 10. Sample analysis and quality control

Samples collected will be submitted to NATA accredited laboratory for analysis of the following:

- Soil samples: OCPs, metals (arsenic, cadmium, chromium, copper, lead, nickel and zinc), and asbestos
- concrete samples: OCPs
- slag samples: metals, PAH, OCPs

TCLP leachability tests will be undertaken on selected soil and/or concrete samples.

Primary, intra-laboratory duplicate, inter-laboratory duplicate, rinsate and trip samples will be submitted to either Eurofins laboratory located in Brisbane for primary analysis or ALS Environmental laboratory for secondary analysis. The selected laboratories are hold NATA accredited analytical methods for the analysis required.

Laboratory analysis will be conducted in accordance with the requirements of NEPM and are referenced to USEPA, NEPM and APHA methods.

### 10.1. Quality control

The recommendations of this procedure are based on the guidelines presented in:

- NEPM [the National Environment Protection (Assessment of Site Contamination) Measure 1999
- AS4482.1 Guide to the sampling and investigation of potentially contaminated soil, Part 1: Non Volatile and Semi-volatile Substances.

Samples will be collected by field experienced in sampling technical for materials with ACM and AF, and contaminated sites.

The following table provides a summary of the field quality control samples to be collected.

Table 9-1: Field Quality control samples

Sample Type	Comments
Intra-laboratory duplicates	<p>Intra-laboratory field duplicates will be collected at a minimum frequency of one sample per twenty samples collected (5%). The analytical results of the duplicate samples will be compared to assess the precision of the sampling protocol and to provide an indication of variation in the sample source.</p> <p>Repeatability will be assessed by calculating the relative percentage difference (RPD) between the primary and duplicate results. Where the RPD is greater than 30%, the potential causes of variability will be reviewed.</p>
Inter-laboratory duplicates	<p>Inter-laboratory field duplicates will be collected at a frequency of one sample per twenty samples collected (5%). The analytical results of the duplicate samples will be compared to assess the precision of the sampling protocol, provide an indication of variation in the sample source and to assess the accuracy of analysis.</p> <p>Reproducibility will be assessed by calculating the relative percentage difference (RPD) between the primary and duplicate sample results. Where the RPD is greater than 30%, the potential causes of variability will be reviewed.</p>

Sample Type	Comments
Rinsate blanks	Rinsate samples will be prepared in the field using empty bottles and the laboratory provided rinsate water. These samples will be a check of field decontamination procedures. A rinsate sample will be collected and analysed for each day of field work carried out, where non-disposable sampling equipment has been used.

## 10.2. Laboratory QA/QC

Laboratory quality control will include:

- the laboratory analysis of samples will be undertaken by a NATA accredited environmental testing laboratory; and
- the laboratory analyses will include reagent blanks, spike samples, duplicate spikes, matrix spikes, and surrogate spikes and duplicates to assess the laboratory quality control.

## 10.3. Data quality assessment

The laboratory quality control data shall be assessed as follows:

- checking the reporting limits and procedures are satisfactory;
- checking that the samples are analysed within holding times;
- checking that laboratory blanks / reagent blanks are less than the laboratory reporting limits;
- checking the reproducibility of samples by calculating the Relative Percentage Differences (RPDs) between primary and duplicate laboratory samples; and
- checking that spikes, surrogate spikes, matrix spikes and duplicate matrix spike recoveries are within acceptable control limits.

Data Quality Indicators that will be adopted for quality control samples are presented below.

The quality of the data is assessed against a range of factors including documentation, data completeness, comparability, reliability, precision and accuracy. The criteria for assessing data quality are listed in the below table.

Table 9-2: Acceptance Criteria for Data Quality

Data Quality Indicator	Acceptance Criteria
Field Duplicates and Split Samples and Laboratory Duplicates.	<p>Relative Percentage Difference (RPD):</p> <ul style="list-style-type: none"> <li>• &lt; 10 times the laboratory's limit of reporting (LOR) – No limit.</li> <li>• 10 – 20 times the LOR – less than 50% RPD.</li> <li>• &gt; 20 times the LOR – less than 30% RPD.</li> </ul> <p>This acceptance criteria is adopted by the NATA accredited laboratories and will be applicable to all contaminant types assessed. Any exceedance of this acceptance criteria will be investigated and reported on within the contaminated land investigation document.</p>
Rinsate and Trip Blank Samples	Concentrations below the laboratory LOR



Data Quality Indicator	Acceptance Criteria
Matrix Spikes	Recoveries between 70-130%
Method Blanks	Concentrations below the laboratory LOR

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# 11. Field methods and procedures

## 11.1. Field equipment

A summary of general field equipment that will be required for assessment works at the Site include the following (where appropriate):

- Notebook/indelible marker pens;
- Pick/shovel/hand trowel;
- Hand auger
- Decontamination buckets;
- Laboratory provided deionised water;
- Laboratory prepared sample containers;
- Ice chests and ice;
- Disposable nitrile gloves;
- Personal protective equipment (PPE);
- Measuring tap; and
- Liquinox.

## 11.2. Soil sampling

Soil samples will be collected by hand using a hand augur and/or geological hammer/spike to scrape the surface material and loosen the underlying soils to allow for collection with a small shovel.

All reusable field equipment (geological hammer/spike/auger) will be decontaminated using Liquinox detergent and deionised water and dedicated disposable nitrile gloves will be used for each sample.

Soil samples will be placed in clean acid washed glass jars supplied by the laboratory and sealed with a Teflon-lined lid, or laboratory provided 500 g sample bags for samples for asbestos analysis. 10 L samples will be collected where visible ACM is observed at the sample location.

Where ACM is observed at the sampling sites, the ACM will be collected for analysis and the following information will be recorded:

- the no. and size of ACM fragments
- the shape (angular vs. rounded) of the fragments and relative strength (i.e. does it crumble with moderate hand pressure)

## 11.3. Decontamination procedures

Where applicable, the following procedures will be applied for decontamination of sampling equipment.

- Re-useable equipment (e.g. augur) shall be decontaminated prior to first use each day at each site, and between each sampling location or at an increased frequency to provide a satisfactory level of decontamination suitable to meet the project requirements/site conditions.

- Disposable (single use) equipment such as nitrile gloves will be disposed of appropriately following each use. This equipment is not to be re-used and therefore does not require decontamination.
- Care will be taken at all times to handle the cleaned equipment and samples only with clean disposable nitrile gloves. Equipment will be stored after decontamination and prior to use, in clean polypropylene bags, to ensure the cleaned equipment does not come into contact with anything that may introduce contamination to the equipment.
- Care will be taken to ensure that the decontamination process does not contribute to the spread of contamination of the site, stormwater or off site locations.

The procedure noted below will be followed as a minimum when decontaminating reusable equipment used to sample soil/sediment at the site.

- For equipment used to sample solids, all adhered materials (such as soil, vegetation) will be removed from the sampling equipment by gloved hand, paper towel or scrubbing brush.
- Wash the equipment in a bucket of potable water.
- Rinse the equipment thoroughly in a second bucket containing distilled water.
- Spray rinse the equipment with potable water.
- Dry the decontaminated equipment with disposable towels or air dry on a surface that will not result in the re-contamination of the equipment.
- Where equipment is being temporarily stored between sample locations (i.e. where another round of decontamination washing is not being undertaken) the equipment is to be stored in clean polypropylene bags, to prevent re-contamination prior to its next use.

## 11.4. Waste management

Wastes will include:

- Excess soil cuttings from sampling
- Wash water from decontamination procedures
- General used consumables and waste.

The following procedures are proposed in relation to waste management:

- Disposable (single use) equipment, such as nitrile gloves will be removed from site and disposed of appropriately following each use.
- Soil cuttings generated will be retained on site at the location where the sample was taken.
- Wastewater (i.e. decontamination wash water) will be spread on the adjacent ground to allow it to evaporate. Wastewater will not be placed near drains.
- All waste soil and water will be placed so that it does not present an unacceptable risk to the surrounding environment, enter stormwater systems and in a way that does not pose an unacceptable aesthetic outcome.

## 12. Sample preservation and documentation

Samples will be placed in laboratory prepared containers suitable for the selected analysis. The sample containers will then be placed directly into an insulated ice chest containing ice, for

transportation to Eurofins and Australian Laboratory Services, as the NATA accredited analytical laboratories with the Chain of Custody form recording the following information:

- project reference;
- date of sampling;
- sample identifications;
- matrix and container details;
- preservation methods;
- name of sampler;
- required analysis;
- turnaround times required; and
- signatures of sender and receiving laboratory.

## **13. Health and safety**

Sampling work will be undertaken in accordance with the Coffey (2021) Health, Safety, Security and Environment (HSSE) Plan.

Coffey understand that all underground services have been disconnected on-site and has therefore no allowance has been included for clearance for underground services prior to sampling.

## **14. Reporting**

Results of the investigation will be provided to DVA and the Site Auditor in a simple factual letter report which summarises the findings of the investigations and compares the laboratory results to the nominated ILs and landfill waste acceptance criteria.

## 15. References

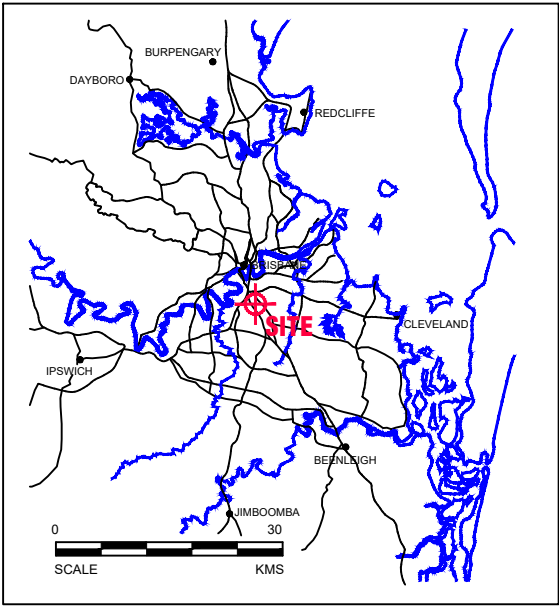
- AS4482.1 Guide to the sampling and investigation of potentially contaminated soil, Part 1: Non Volatile and Semi-volatile Substances.
- Coffey, 2013a. Department of Veteran Affairs Phase 1 Contaminated Land Assessment, 114 Newdegate Street, Greenslopes Queensland
- Coffey, 2013b. Department of Veteran Affairs Phase 2 Contaminated Land Assessment, 114 Newdegate Street, Greenslopes Queensland
- Coffey, 2019. Department of Veteran Affairs Delineation of Organochlorine Soil Impacts, 114 Newdegate Street, Greenslopes Queensland
- NEPC (2013) National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended in 2013, National Environment Protection Council

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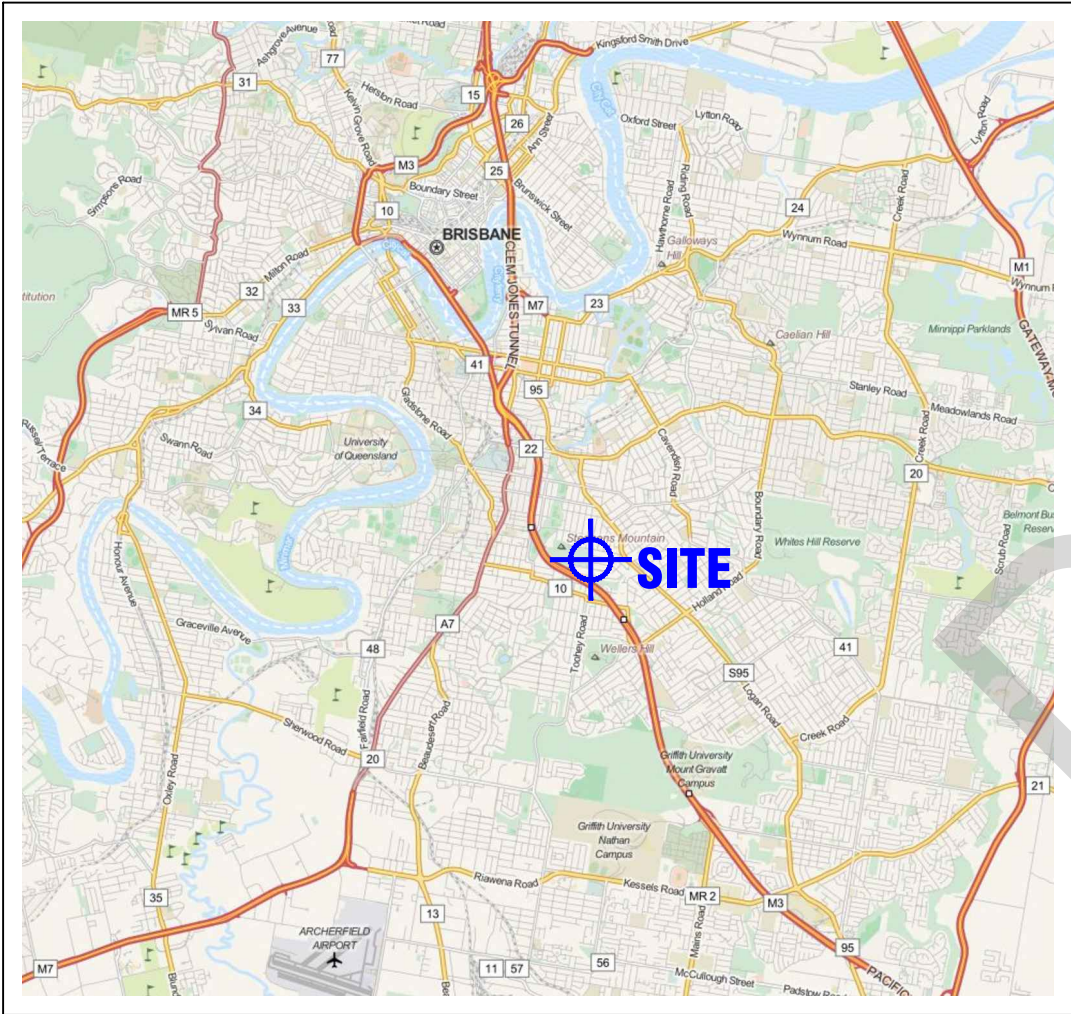
## Appendix A Figures

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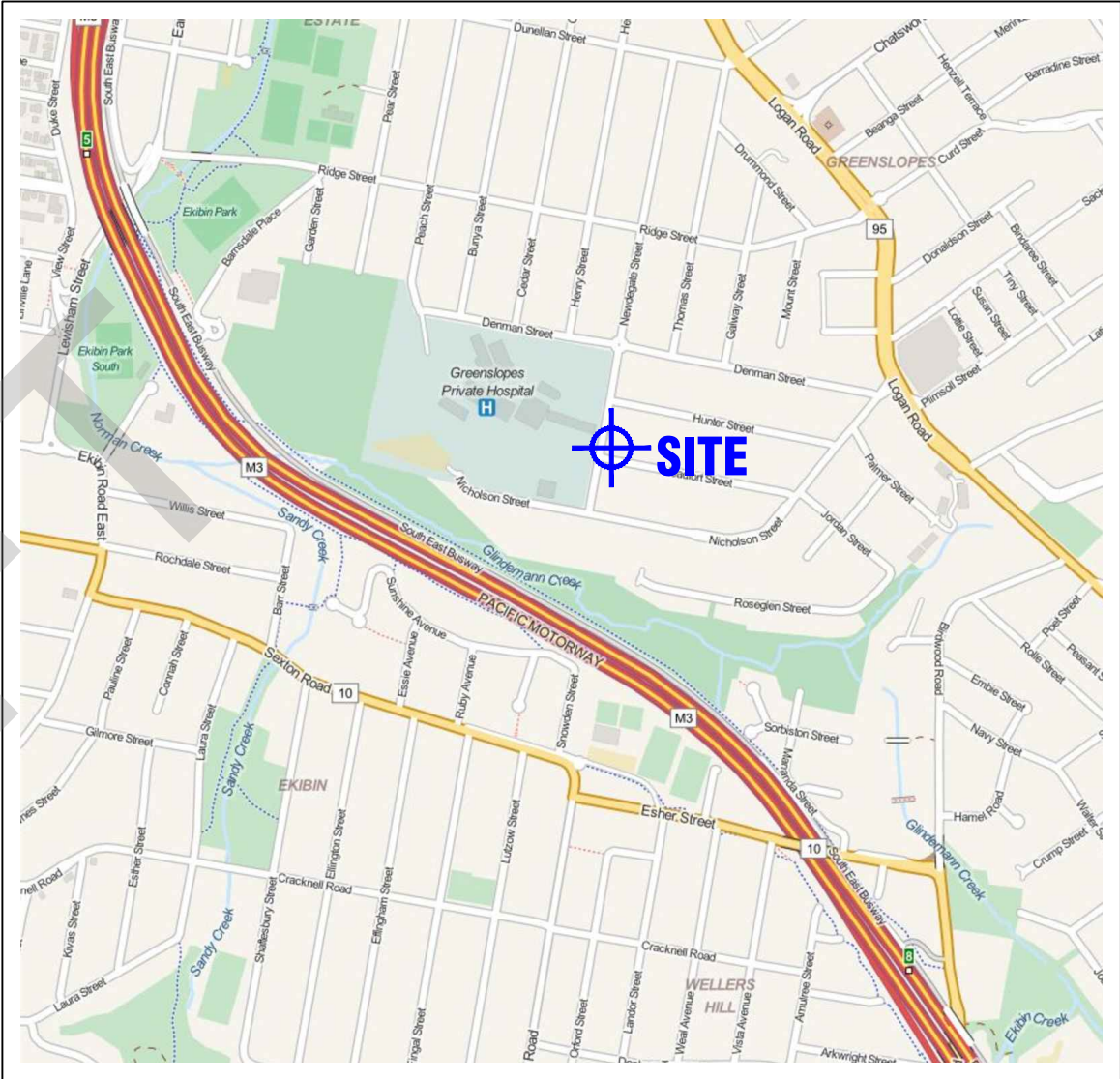
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GENERAL AREA MAP

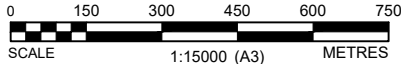


REGIONAL AREA MAP



LOCAL AREA MAP

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project:	REMEDATION PLANNING 114 NEWDEGATE STREET, GREENSLOPES, QLD		
title:	SITE LOCALITY PLAN		
project no:	754-BNEEN282781	figure no:	FIGURE 1
		rev:	A





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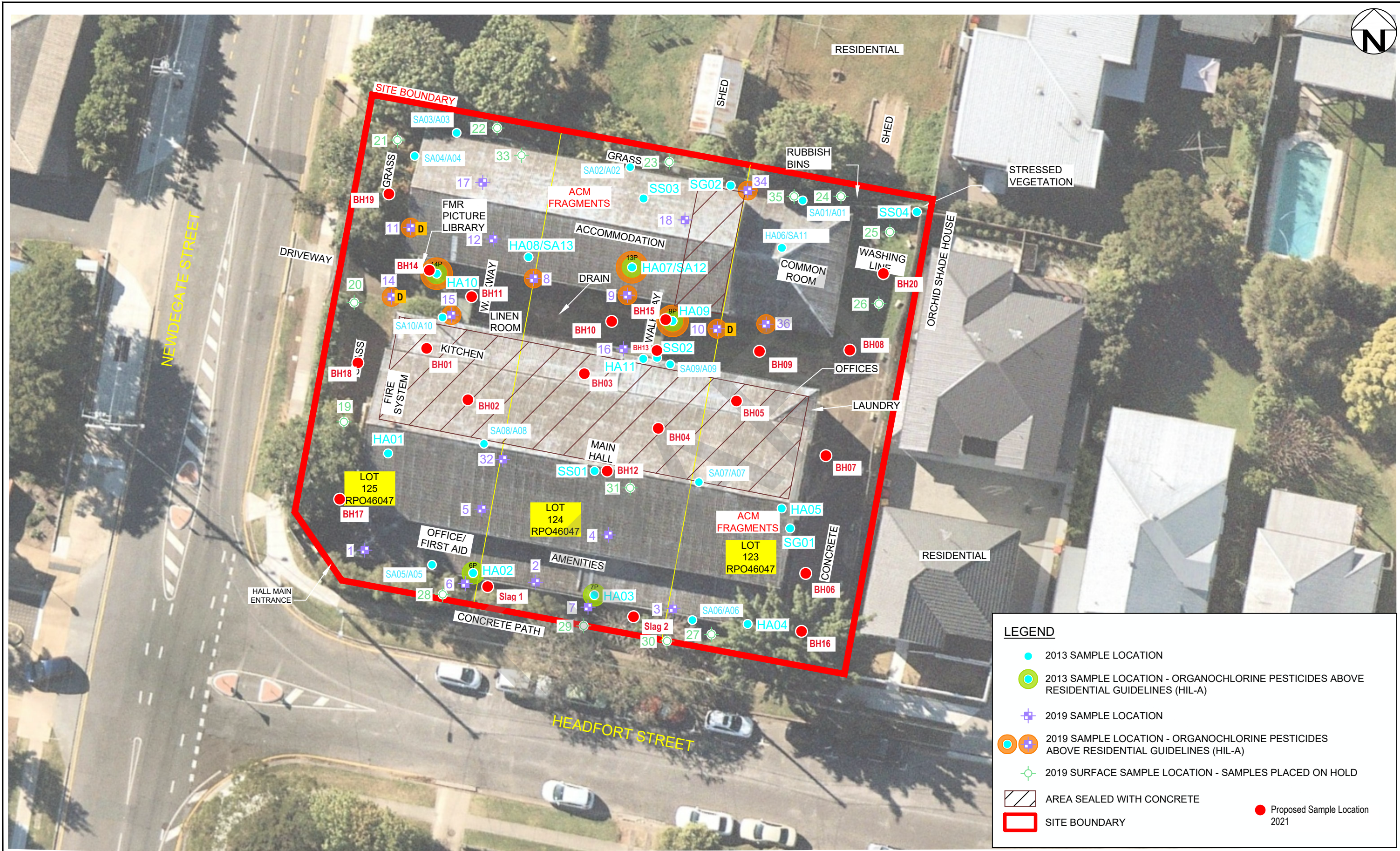
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client: DEPARTMENT OF VETERAN AFFAIRS		
project: REMEDIATION PLANNING 114 NEWDEGATE STREET, GREENSLOPES, QLD		
title: SITE FEATURES AND SAMPLE LOCATIONS		
project no: 754-BNEEN282781	figure no: FIGURE 2	rev: A

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## Appendix B Data Table

DRAFT

## 114 Newdegate Street Greenslopes Soil Data

[illegible]

## 114 Newdegate Street Greenslopes Soil Data

[illegible]

114 Newdegate Street Greenslopes Soil Data

SAMPLE ID	Sample Depth (m)	Sample Depth (m)	Sampled_Date	Asbestos			Organochlorine Pesticides																										
				Asbestos (ID)	ACM (w/w)	Asbestos Fines (w/w)	4,4-DDE	α-BHC	Aldrin	Aldrin + Dieldrin	β-BHC	chlordane	γ-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endrin aldehyde	Endrin ketone	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	γ-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Methoxychlor	Toxaphene	Organochlorine pesticides EPA/Vic	Other organochlorine pesticides EPA/Vic		
Units	-	-	-	-	-	-	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	
EQL	-	-	-	-	-	-	0.05	0.05	0.05	0.05	0.05	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1	0.1	0.1		
EIL - Res/Open Space	-	-	-	-	-	-									180																		
HIL-A Residential	-	-	-	-	0.01%	0.001%				6		50				240				270			10		6		10	300	20				
HIL-C Recreational	-	-	-	-	0.02%	0.001%				10		70				400				340			20		10		10	400	30				
13P-0.0 (HA07)	0	0.1	1/10/2019				0.13	<0.05	<0.05	7.5	<0.05	<0.1	<0.05	0.11	0.08	0.32	7.5	<0.05	0.17	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	7.82	<0.1		
13P-0.2 (HA07)	0.2	0.2	1/10/2019				<0.05	<0.05	<0.05	10	<0.05	<0.1	<0.05	<0.05	0.05	0.05	10	<0.05	0.16	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	10.05	<0.1		
14-0.0	0	0.1	1/10/2019				<0.05	<0.05	<0.05	0.07	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	0.07	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.1	<0.1		
14-0.45	0.45	0.45	1/10/2019				<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.1	<0.1		
14P-0.0 (HA10)	0	0.1	1/10/2019				0.12	<0.05	1.1	61.1	<0.05	0.1	<0.05	<0.05	<0.05	0.12	60	<0.05	0.58	<0.05	<0.05	<0.05	0.62	<0.05	<0.05	0.09	<0.05	<0.05	<0.1	62.03	0.81		
QC07	0	0.1	1/10/2019				0.24	<0.05	1.9	75.9	<0.05	0.3	<0.05	0.05	<0.05	0.29	74	<0.05	1.2	<0.05	<0.05	<0.05	1.2	<0.05	0.06	0.22	<0.05	<0.05	<0.1				
QC08	0	0.1	1/10/2019				<0.05	<0.05	2.32	109	<0.05	0.37	<0.05	<0.05	<0.2	<0.05	107	<0.05	1.4	<0.05	<0.05	<0.05	1.47	<0.05	0.16	0.22	<0.05	<0.2	-				
14P-0.42 (HA10)	0.42	0.42	1/10/2019				<0.05	<0.05	0.06	3.86	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	3.8	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	3.86	<0.1		
QC09	0	0.1	1/10/2019				<0.05	<0.05	0.06	5.06	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1				
QC10	0	0.1	1/10/2019				<0.05	<0.05	<0.05	3.08	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	3.08	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	-			
15-0.0	0	0.1	1/10/2019				<0.05	<0.05	0.09	8.29	<0.05	7.4	<0.05	<0.05	<0.05	<0.05	8.2	0.13	0.09	0.26	<0.05	<0.05	0.09	<0.05	0.19	0.38	<0.05	<0.05	<0.1	16.74	8.45		
16-0.0	0	0.1	1/10/2019				<0.05	<0.05	<0.05	<0.05	<0.05	1.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.11	<0.05	<0.05	<0.1	1.41	1.41			
16-0.45	0.45	0.45	1/10/2019				<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.1	<0.1		
17-0.0	0	0.1	1/10/2019				0.18	<0.05	<0.05	0.62	<0.05	<0.1	<0.05	<0.05	0.18	0.36	0.62	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	0.98	<0.1		
17-0.25	0.25	0.25	1/10/2019				<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.1	<0.1		
18-0.0	0	0.1	1/10/2019				2.2	<0.05	<0.05	0.61	<0.05	<0.1	<0.05	0.35	3.8	6.35	0.61	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	6.96	<0.1		
18-0.2	0.2	0.2	1/10/2019				0.11	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	0.07	0.18	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	0.18	<0.1		
32-0.0	0	0.1	1/10/2019				1.4	<0.05	<0.05	0.3	<0.05	0.1	<0.05	2.1	23	26.5	0.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	26.9	0.1		
34-0.0	0	0.1	1/10/2019				1	<0.05	0.49	17.49	<0.05	<0.1	<0.05	0.15	0.51	1.66	17	<0.05	0.22	<0.05	<0.05	<0.05	0.18	<0.05	<0.05	<0.05	<0.05	<0.1	19.33	0.18			
36-0.0	0	0.1	1/10/2019				0.07	<0.05	<0.05	20	<0.05	<0.1	<0.05	<0.05	<0.05	0.07	20	<0.05	0.12	<0.05	<0.05	<0.05	0.11	<0.05	<0.05	<0.05	<0.05	<0.1	20.18	0.11			

114 Newdegate Street Greenslopes Soil Data

SAMPLE ID	Sample Depth (m)	Sample Depth (m)	Sampled_Date	Organophosphate Pesticides																		Polyaromatic Hydrocarbons (PAH)																									
				Azinophos methyl	Boštar (Sulprofós)	Chlorpyrifos	Demeton-O	Diazinon	Dichlorvos	Disulfoton	Ethion	Ethoprop	Fenitrothion	Fensulfotion	Fenthion	Merphos	Methyl parathion	Mevinphos (Phosdrin)	Naled (Dibrom)	Phorate	Ronnel	Trichloronate	Tokuthion	Benzo(a)pyrene TEQ calc (Half)	Benzo(a)pyrene TEQ (LOR)	Benzo(a)pyrene TEQ calc (Zero)	Benzo(b,j)fluoranthene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a) pyrene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	PAHs (Sum of total)	Phenanthrene	Pyrene				
Units	-	-	-	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg			
EQL	-	-	-																				0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5				
EIL - Res/Open Space	-	-	-																																												
HIL-A Residential	-	-	-																				3	3	3																	300					
HIL-C Recreational	-	-	-																				3	3	3																		300				
SS01	0	0.1	16/07/2013	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2	<0.2	<0.2	<0.2	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
SS02	0	0.1	16/07/2013	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2	<0.2	<0.2	<0.2	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SS03	0	0.1	16/07/2013	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2	<0.2	<0.2	<0.2	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SS04	0	0.1	16/07/2013	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.5	<0.2	<0.2	<0.2	<0.2	-	-	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SA01/A01	0	0.1	25/09/2013																																												
SA02/A02	0	0.1	25/09/2013																																												
SA03/A03	0	0.1	25/09/2013																																												
SA04/A04	0	0.1	25/09/2013																																												
SA05/A05	0	0.1	25/09/2013																																												
SA06/A06	0	0.1	25/09/2013																																												
SA06/A06	0.3	0.4	25/09/2013																																												
SA07/A07	0	0.1	25/09/2013																																												
SA08/A08	0	0.1	25/09/2013																																												
SA09/A09	0	0.1	25/09/2013																																												
SA10/A10	0	0.1	25/09/2013																																												
SA11/A11	0	0.1	25/09/2013																																												
SA13/A13	0	0.1	25/09/2013																																												
Main Hall (under building)	0	0	25/09/2013																																												
Accommodation Building (under building)	0	0	25/09/2013																																												
Unsealed External Areas	0	0.01	25/09/2013																																												
A01, A04, A10	0.15	0.15	25/09/2013																																												
A06, A10	0.15	0.15	25/09/2013																																												
HA01	0	0.1	25/09/2013																																												
HA02	0	0.1	25/09/2013																																												
HA03	0	0.1	25/09/2013																																												
HA04	0	0.1	25/09/2013																																												

114 Newdegate Street Greenslopes Soil Data

SAMPLE ID	Sample Depth (m)	Sample Depth (m)	Sampled_Date	Organophosphate Pesticides																		Polyaromatic Hydrocarbons (PAH)																							
				Azinphos methyl	Bolstar (Sulprofos)	Chlorpyrifos	Demeton-O	Diazinon	Dichlorvos	Disulfoton	Ethion	Ethoprop	Fenitrothion	Fensulfotion	Fenthion	Merphos	Methyl parathion	Mevinphos (Phosdrin)	Naled (Dibrom)	Phorate	Ronnel	Trichloronate	Tokuthion	Benzo(a)pyrene TEQ calc (Half)	Benzo(a)pyrene TEQ (LOR)	Benzo(a)pyrene TEQ calc (Zero)	Benzo(b,j)fluoranthene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a) pyrene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	PAHs (Sum of total)	Phenanthrene	Pyrene		
Units	-	-	-	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	
EQL	-	-	-																				0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		
EIL - Res/Open Space	-	-	-																																						170				
HIL-A Residential	-	-	-																				3	3	3																	300			
HIL-C Recreational	-	-	-																				3	3	3																	300			
1-0.0	0	0.1	1/10/2019																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1-0.3	0.3	0.3	1/10/2019																																										
2-0.0	0	0.1	1/10/2019																																										
QC01	0	0.1																																											
QC02	0	0.1																																											
2-0.3	0.3	0.3	1/10/2019																																										
QC03	0.3	0.3																																											
QC04	0.3	0.3																																											
3-0.0	0	0.1	1/10/2019																																										
3-0.35	0.35	0.35	1/10/2019																																										
4-0.0	0	0.1	1/10/2019																																										
4-0.35	0.35	0.35	1/10/2019																																										
5-0.0	0	0.1	1/10/2019																																										
5-0.35	0.35	0.35	1/10/2019																																										
6-0.0	0	0.1	1/10/2019																																										
6-0.45	0.45	0.45	1/10/2019																					0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
6P-0.0 (HA02)	0	0.1	1/10/2019																					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6P-0.3 (HA02)	0.3	0.3	1/10/2019																																										
7-0.0	0	0.1	1/10/2019																																										
7-0.45	0.45	0.45	1/10/2019																					0.6	1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
7P-0.0 (HA03)	0	0.1	1/10/2019																					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7P-0.25 (HA03)	0.25	0.25	1/10/2019																					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8-0.0	0	0	1/10/2019																					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8-0.42	0.42	0.42	1/10/2019																					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9-0.0	0	0.1	1/10/2019																					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9-0.42	0.42	0.42	1/10/2019																					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9P-0.0 (HA09)	0	0.1	1/10/2019																					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9P-0.45 (HA09)	0.45	0.45	1/10/2019																					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10-0.0	0	0.1	1/10/2019																					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10-0.45	0.45	0.45	1/10/2019																					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11-0.0	0	0.1	1/10/2019																					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11-0.45	0.45	0.45	1/10/2019																					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12-0.0	0	0.1	1/10/2019																					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12-0.25	0.25	0.25	1/10/2019																					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

114 Newdegate Street Greenslopes Soil Data

SAMPLE ID	Sample Depth (m)	Sample Depth (m)	Sampled_Date	Organophosphate Pesticides																		Polyaromatic Hydrocarbons (PAH)																						
				Azinophos methyl	BoStar (Sulprofós)	Chlorpyrifos	Demeton-O	Diazinon	Dichlorvos	Disulfoton	Ethion	Ethioprop	Fenitrothion	Fensulfotion	Fenthion	Merphos	Methyl parathion	Mevinphos (Phosdrin)	Naled (Dibrom)	Phorate	Ronnel	Trichloronate	Tokuthion	Benzo(a)pyrene TEQ calc (Half)	Benzo(a)pyrene TEQ (LOR)	Benzo(a)pyrene TEQ calc (Zero)	Benzo(b+J)fluoranthene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a) pyrene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	PAHs (Sum of total)	Phenanthrene	Pyrene	
Units	-	-	-	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	-	-	-																				0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
EIL - Res/Open Space	-	-	-																																									
HIL-A Residential	-	-	-																				3	3	3															170		300		
HIL-C Recreational	-	-	-																				3	3	3																	300		
13P-0.0 (HA07)	0	0.1	1/10/2019																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
13P-0.2 (HA07)	0.2	0.2	1/10/2019																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14-0.0	0	0.1	1/10/2019																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14-0.45	0.45	0.45	1/10/2019																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14P-0.0 (HA10)	0	0.1	1/10/2019																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC07	0	0.1	1/10/2019																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC08	0	0.1	1/10/2019																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14P-0.42 (HA10)	0.42	0.42	1/10/2019																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC09	0	0.1	1/10/2019																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
QC10	0	0.1	1/10/2019																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15-0.0	0	0.1	1/10/2019																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16-0.0	0	0.1	1/10/2019																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16-0.45	0.45	0.45	1/10/2019																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17-0.0	0	0.1	1/10/2019																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17-0.25	0.25	0.25	1/10/2019																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18-0.0	0	0.1	1/10/2019																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18-0.2	0.2	0.2	1/10/2019																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32-0.0	0	0.1	1/10/2019																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34-0.0	0	0.1	1/10/2019																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
36-0.0	0	0.1	1/10/2019																				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



114 Newdegate Street Greenslopes Soil Data

SAMPLE ID	Sample Depth (m)	Sample Depth (m)	Sampled_Date	Metals								TRH				BTEX							Other			
				Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc	C6-C10	C10-C16	C16-C34	C34-C40	Benzene	Toluene	Ethyl benzene	Xylene (m & p)	Xylene (o)	Xylenes	Total BTEX	CEC	pH		
Units	-	-	-	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg				
EQL	-	-	-	2	0.4	5	5	5	0.1	5	5															
EIL - Res/Open Space	-	-	-	100		224	201	1100		288	457															
HIL-A Residential	-	-	-	100	20	100	6000	300	10	400	7400															
HIL-C Recreational	-	-	-	300	90	300	17000	600	13	1200	30000															
SS01	0	0.1	16/07/2013	32	0.7	54	21	39	<0.1	35	760	<20	<50	<100	<100	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3					
SS02	0	0.1	16/07/2013	10	1.4	12	27	100	<0.1	8.4	2000	<20	<50	<100	<100	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3					
SS03	0	0.1	16/07/2013	16	0.4	42	20	75	<0.1	18	190	<20	<50	<100	<100	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3					
SS04	0	0.1	16/07/2013	10	0.6	22	33	72	<0.1	11	250	<20	<50	260	<100	<0.1	<0.1	<0.1	<0.2	<0.1	<0.3					
SA01/A01	0	0.1	25/09/2013																							
SA02/A02	0	0.1	25/09/2013																							
SA03/A03	0	0.1	25/09/2013																							
SA04/A04	0	0.1	25/09/2013																							
SA05/A05	0	0.1	25/09/2013																							
SA06/A06	0	0.1	25/09/2013																							
SA06/A06	0.3	0.4	25/09/2013																							
SA07/A07	0	0.1	25/09/2013																							
SA08/A08	0	0.1	25/09/2013																							
SA09/A09	0	0.1	25/09/2013																							
SA10/A10	0	0.1	25/09/2013																							
SA11/A11	0	0.1	25/09/2013																							
SA13/A13	0	0.1	25/09/2013																							
Main Hall (under building)	0	0	25/09/2013																							
Accommodation Building (under building)	0	0	25/09/2013																							
Unsealed External Areas	0	0.01	25/09/2013																							
A01, A04, A10	0.15	0.15	25/09/2013																							
A06, A10	0.15	0.15	25/09/2013																							
HA01	0	0.1	25/09/2013	9.3	<0.4	39	8.1	7.3	<0.1	20	64															
HA02	0	0.1	25/09/2013	14	<0.4	44	6.4	15	<0.1	24	44															
HA03	0	0.1	25/09/2013	20	<0.4	69	12	27	<0.1	25	92															
HA04	0	0.1	25/09/2013	14	<0.4	54	11	14	<0.1	16	26															
HA05	0	0.1	25/09/2013	17	<0.4	66	9.2	10	<0.1	19	45															
QC01 (HA05)	0	0.1	26/09/2013	21	<0.4	73	10	16	<0.1	20	54															
QC01A (HA05)	0	0.1	26/09/2013	11	<0.4	90	12	20	<0.1	27	74															
HA06/SA11	0	0.1	25/09/2013	22	<0.4	88	9.3	13	<0.1	19	41															
HA07/SA12	0	0.1	25/09/2013	15	<0.4	43	13	63	<0.1	15	140												30	5.8		
HA08/SA13	0	0.1	25/09/2013	10	<0.4	39	14	50	<0.1	11	72															
HA09	0	0.2	25/09/2013	10	<0.4	25	24	120	0.1	8.8	380															
HA10	0	0.2	25/09/2013	19	<0.4	22	19	120	<0.1	8.7	330															
HA11	0	0.1	25/09/2013	23	<0.4	50	15	140	<0.1	13	450												25	6.3		

114 Newdegate Street Greenslopes Soil Data

SAMPLE ID	Sample Depth (m)	Sample Depth (m)	Sampled_Date	Metals								TRH				BTEX							Other			
				Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc	C6-C10	C10-C16	C16-C34	C34-C40	Benzene	Toluene	Ethyl benzene	Xylene (m & p)	Xylene (o)	Xylenes	Total BTEX	CEC	pH		
Units	-	-	-	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg				
EQL	-	-	-	2	0.4	5	5	5	0.1	5	5															
EIL - Res/Open Space	-	-	-	100		224	201	1100		288	457															
HIL-A Residential	-	-	-	100	20	100	6000	300	10	400	7400															
HIL-C Recreational	-	-	-	300	90	300	17000	600	13	1200	30000															
1-0.0	0	0.1	1/10/2019	-	-	-	-	-	-	-	-															
1-0.3	0.3	0.3	1/10/2019																							
2-0.0	0	0.1	1/10/2019	-	-	-	-	-	-	-	-															
QC01	0	0.1																								
QC02	0	0.1																								
2-0.3	0.3	0.3	1/10/2019																							
QC03	0.3	0.3																								
QC04	0.3	0.3																								
3-0.0	0	0.1	1/10/2019	-	-	-	-	-	-	-	-															
3-0.35	0.35	0.35	1/10/2019																							
4-0.0	0	0.1	1/10/2019	-	-	-	-	-	-	-	-															
4-0.35	0.35	0.35	1/10/2019																							
5-0.0	0	0.1	1/10/2019	-	-	-	-	-	-	-	-															
5-0.35	0.35	0.35	1/10/2019																							
6-0.0	0	0.1	1/10/2019	-	-	-	-	-	-	-	-															
6-0.45	0.45	0.45	1/10/2019	2.1	<0.4	<5	11	32	<0.1	5.8	72															
6P-0.0 (HA02)	0	0.1	1/10/2019	-	-	-	-	-	-	-	-															
6P-0.3 (HA02)	0.3	0.3	1/10/2019																							
7-0.0	0	0.1	1/10/2019	-	-	-	-	-	-	-	-															
7-0.45	0.45	0.45	1/10/2019	2.6	<0.4	<5	12	19	<0.1	5.8	51															
7P-0.0 (HA03)	0	0.1	1/10/2019	-	-	-	-	-	-	-	-															
7P-0.25 (HA03)	0.25	0.25	1/10/2019																							
8-0.0	0	0	1/10/2019	-	-	-	-	-	-	-	-															
8-0.42	0.42	0.42	1/10/2019																							
9-0.0	0	0.1	1/10/2019	-	-	-	-	-	-	-	-															
9-0.42	0.42	0.42	1/10/2019																							
9P-0.0 (HA09)	0	0.1	1/10/2019	-	-	-	-	-	-	-	-															
9P-0.45 (HA09)	0.45	0.45	1/10/2019																							
10-0.0	0	0.1	1/10/2019	-	-	-	-	-	-	-	-															
10-0.45	0.45	0.45	1/10/2019																							
11-0.0	0	0.1	1/10/2019	-	-	-	-	-	-	-	-															
11-0.45	0.45	0.45	1/10/2019																							
12-0.0	0	0.1	1/10/2019	-	-	-	-	-	-	-	-															
12-0.25	0.25	0.25	1/10/2019																							

114 Newdegate Street Greenslopes Soil Data

SAMPLE ID	Sample Depth (m)	Sample Depth (m)	Sampled_Date	Metals								TRH				BTEX							Other			
				Arsenic	Cadmium	Chromium (III+VI)	Copper	Lead	Mercury	Nickel	Zinc	C6-C10	C10-C16	C16-C34	C34-C40	Benzene	Toluene	Ethyl benzene	Xylene (m & p)	Xylene (o)	Xylenes	Total BTEX	CEC	pH		
Units	-	-	-	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg				
EQL	-	-	-	2	0.4	5	5	5	0.1	5	5															
EIL - Res/Open Space	-	-	-	100		224	201	1100		288	457															
HIL-A Residential	-	-	-	100	20	100	6000	300	10	400	7400															
HIL-C Recreational	-	-	-	300	90	300	17000	600	13	1200	30000															
13P-0.0 (HA07)	0	0.1	1/10/2019	-	-	-	-	-	-	-	-															
13P-0.2 (HA07)	0.2	0.2	1/10/2019	-	-	-	-	-	-	-	-															
14-0.0	0	0.1	1/10/2019	-	-	-	-	-	-	-	-															
14-0.45	0.45	0.45	1/10/2019																							
14P-0.0 (HA10)	0	0.1	1/10/2019	-	-	-	-	-	-	-	-															
QC07	0	0.1	1/10/2019																							
QC08	0	0.1	1/10/2019																							
14P-0.42 (HA10)	0.42	0.42	1/10/2019																							
QC09	0	0.1	1/10/2019																							
QC10	0	0.1	1/10/2019																							
15-0.0	0	0.1	1/10/2019	-	-	-	-	-	-	-	-															
16-0.0	0	0.1	1/10/2019	-	-	-	-	-	-	-	-															
16-0.45	0.45	0.45	1/10/2019																							
17-0.0	0	0.1	1/10/2019	-	-	-	-	-	-	-	-															
17-0.25	0.25	0.25	1/10/2019																							
18-0.0	0	0.1	1/10/2019	-	-	-	-	-	-	-	-															
18-0.2	0.2	0.2	1/10/2019	-	-	-	-	-	-	-	-															
32-0.0	0	0.1	1/10/2019	-	-	-	-	-	-	-	-															
34-0.0	0	0.1	1/10/2019	-	-	-	-	-	-	-	-															
36-0.0	0	0.1	1/10/2019	-	-	-	-	-	-	-	-															

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