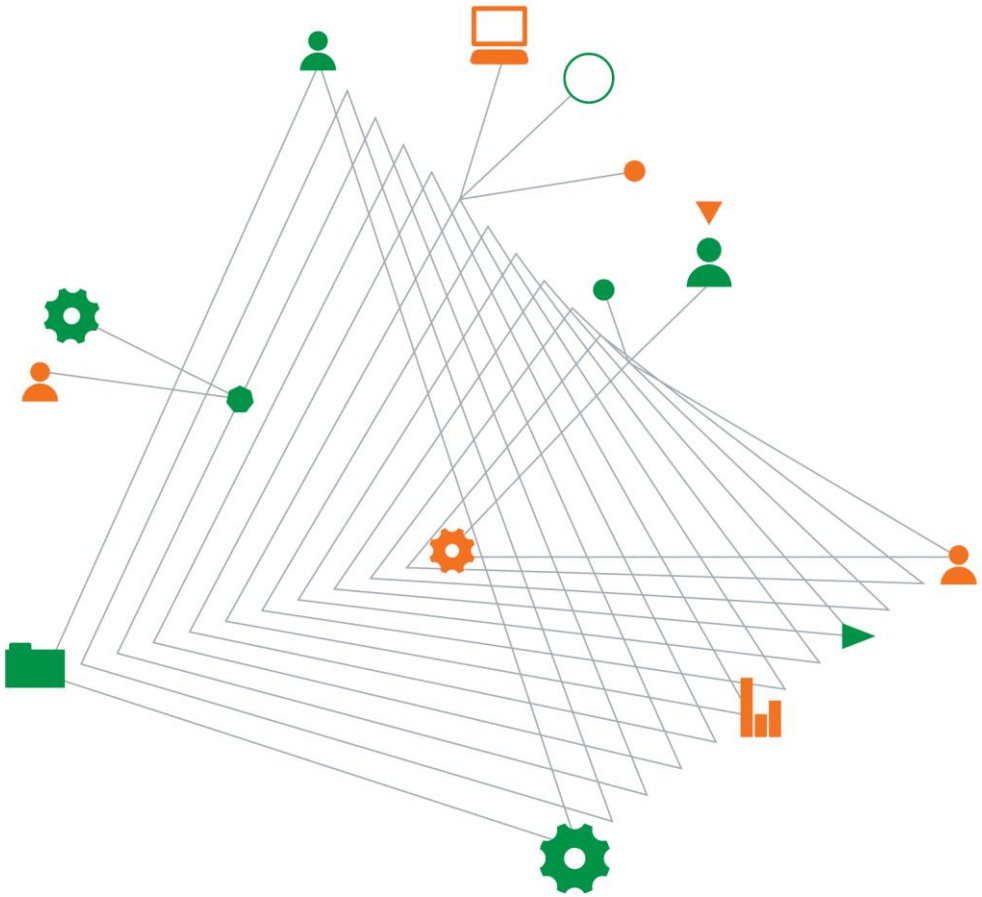
Epworth HealthCare

Environmental Site Assessment

1000 Whitehorse Road, Box Hill, Victoria 3128

22 March 2017

Partner:



Experience comes to life when it is powered by expertise

Environmental Site Assessment

Prepared for
Epworth HealthCare

Prepared by
Coffey Services Australia Pty Ltd
Level 1, 436 Johnston Street
Abbotsford VIC 3067 Australia
t: 03 9290 7000

ABN: 55 139 460 521

Project Director	Tim Shanahan Senior Associate Environmental Engineer
Project Manager	Johnson Bei Environmental Engineer

22 March 2017

ENAUABTF202044AA-R01

Quality information

Revision history

Revision	Description	Date	Author	Reviewer
v1	Draft	22/03/2017	Johnson Bei	Tim Shanahan

Distribution

Report Status	No. of copies	Format	Distributed to	Date
v1	1	PDF	Epworth HealthCare	22/03/2017

Executive summary

Epworth Healthcare (Epworth) has engaged Coffey Services Australia Pty Ltd (Coffey) to carry out a preliminary environmental site assessment (ESA) at the eastern half (approximately 50%) of a site located on 1000 Whitehorse Road, Box Hill, Victoria (the site). It is understood that the land is currently owned by Box Hill Institute which is likely to be subdivided and sold. It is proposed for sale to Epworth. A site locality plan and site layout plan are provided in Figure 1 and Figure 2.

The aims of the environmental investigation were as follows:

- Assess potential historical and current sources of contamination.
- Provide a preliminary indication of the soil contamination status of soil at the site in the context of:
  - Preliminary soil classification for the purpose of off-site disposal.
  - Potential risk to future site occupants (based on commercial/mixed use).

In order to meet these objectives a Phase 1 ESA, a desktop study of relevant information at the site was conducted. This was followed by a Phase 2 ESA involving the soil sampling of ten soil bores location and laboratory analysis. The Phase 1 and Phase 2 ESA are incorporated in this report. The outcomes of the assessment include the following:

- A Phase 1 assessment of the site found that there were potential sources of contamination at the site, including:
  - historical site development demolition,
  - infilling with potentially contaminated soil and/or building waste, and,
  - contamination associated with a portion of the site that was used as a car park (such as leaks and spills of fuel and oil).
- A Phase 2 assessment involving soil sampling of 10 soil boreholes across the assessment area.
- The site was underlain by fill to approximately 0.3 mbgs, overlaying disturbed clay/siltstone to approximately 0.4 mbgs, and overlying natural siltstone/clay.
- No olfactory evidence of contamination was noted during field works.
- Some building waste comprising brick and concrete fragments was observed within the fill soil from BH3 and BH4 (car park area, northwest corner of site).
- Some large cobbles, possible historical imported fill material was observed within the fill soil from BH10 location (service lane from Bank Street, south western portion of site)
- Soil samples were collected and analysed for contaminants of potential concern COPCs.
- Detectable concentrations of fluoride, TRH, PAHs and metals were reported in several fill and natural samples across the site.
- Lead, zinc and PAHs impact was noted in the car park area (BH3 location). These elevated metal and PAHs concentration is likely attributed from historical backfilled material during site development before it turned into a visitor car park.
- For the purpose of off-site disposal, each assessed area is preliminary classified as follow:
  - Fill soils in the car parking area located north western portion of site (BH3 and BH4) is preliminary classified as Category C Contaminated Soil.
  - Fill soils in the car parking area (BH1 and BH2), lawn area and service lane area is preliminary classified as Fill Material.
  - Natural soil in the car parking area (BH4) is preliminary classified as Category C Contaminated Soil. It is noted that additional sampling is likely to be required depending on the final volume of soil to be excavated as part of the redevelopment.

    - Natural soil in the car parking area (BH1, BH2 and BH3), lawn area and service lane area is preliminary classified as Fill Material.

- None of the reported concentrations of the contaminants assessed exceed the adopted health investigate level (HIL-D) for commercial/industrial land uses.
- No groundwater assessment (other than a desktop review of publically available information) was undertaken as part of this assessment.
- Although visual assessment during fieldworks did not identify suspected asbestos containing materials, works and asbestos was not identified in the soil samples analysed, there is always considered to be potential for asbestos to be encountered during redevelopment in a developed urban setting. Consideration should be given to adopting adequate safety measures to avoid risks from exposure to asbestos during any demolition and redevelopment.
- This report should be read in conjunction with the Important Information Sheet included in the report.
- This Executive Summary should be read in conjunction with the report and the Important Information Sheet included in the report.

Table of contents

Figures

Tables

Appendices

Abbreviations

bgs	below ground surface
BH	Borehole
BTEXN	Benzene, Toluene, Ethylbenzene, Xylenes and Naphthalene
C6-C36	Hydrocarbon chainlength fraction
COC	Chain of Custody
COPC	Chemical of potential concern
ESA	Environmental Site Assessment
Eurofins	Eurofins Environment Testing Australia Pty Ltd, trading as Eurofins-mgt
LOR	Limit of Reporting
mg/kg	milligrams per kilogram
NATA	National Association of Testing Authorities
NEPM	National Environment Protection (Assessment of Site Contamination) Measure
PAH	Polycyclic Aromatic Hydrocarbon
PCB	Polychlorinated Biphenyl
PID	Photoionisation Detector
ppmv	parts per million by volume
QA	Quality Assurance
QC	Quality Control
RPD	Relative Percent Difference
SB	Soil Bore
SOP	Standard Operating Procedures
TRH	Total Recoverable Hydrocarbon
VOC	Volatile Organic Compound

1. Introduction

Epworth Healthcare (Epworth) has engaged Coffey Services Australia Pty Ltd (Coffey) to carry out a preliminary environmental site assessment (ESA) at the eastern half (approximately 50%) of a land located on 1000 Whitehorse Road, Box Hill, Victoria (the site). It is understood that the land is currently owned by Box Hill Institute which is likely to be subdivided and sold. It is understood that it is proposed for sale to Epworth. A site locality plan and site layout plan are provided in Figure 1 and Figure 2.

1.1. Objectives

The aims of the environmental investigation were as follows:

- Assess historical and current potential sources of contamination.
- Provide a preliminary indication of the soil contamination status of soil at the site in the context of:
  - Preliminary soil classification for the purpose of off-site disposal.
  - Potential risk to future site occupants (based on commercial/mixed use).

1.2. Scope of works

The scope of works undertaken included a Phase 1 desktop study and preliminary Phase 2 environmental assessment.

1.2.1. Phase 1 Desktop Study

A limited desktop study was undertaken to assess current and historical potential sources of contamination at the site. The desktop study comprised a review of the following:

- Current and historical aerial photographs (from 1940 to present, where available).
- Publically available EPA Audit reports for the site and surrounds.
- EPA Priority Sites Register for the site and surrounds.
- A selection of other publically available documentation to support the Phase 1 assessment work (e.g. geological, hydrogeological and acid sulphate maps).

1.2.2. Phase 2 environmental assessment

The scope of works for the preliminary Phase 2 assessment was undertaken to further support the objectives of the environmental assessment. The Phase 2 environmental assessment comprised the following scope of works:

- Underground services clearance of ten borehole locations.
- Concrete coring in eight locations and hand augering of ten soil boreholes at the following accessible areas:
  - BH1 to BH4 in visitor car parks, north east corner of site;
  - BH5 to BH6 in lawn area, western boundary of site; and,
  - BH7 to BH10 in service laneway from Bank Street, south western portion of site.
- Boreholes were progressed at least 0.5 m into natural soils or until refusal.

- Collection of soil samples generally from near surface soils (0-0.2m), 0.5 m below ground surface (bgs), 1 m bgs and where any change in lithology was observed.
- Soil samples were field screened for volatile compounds using a photoionisation detector (PID).
- Soil samples were submitted to a NATA accredited laboratory for the following analysis:
  - 19 samples for polycyclic aromatic hydrocarbons (PAH), total recoverable hydrocarbons (TRH), benzene, toluene, ethylbenzene, xylenes and naphthalene (BTEXN) and metals.
  - Three samples for EPA Victoria Industrial Waste Resource Guidelines (IWRG) 621 suite (TRH, PAH, phenols, organochlorine pesticides (OCP), polychlorinated biphenyls (PCB), volatile organic compounds (VOC), vinyl chloride, metals, hexavalent chromium, cyanide, total fluoride and pH).
- Preparation of this report.

2. Phase 1 assessment

This section presents the information obtained as part of the Phase 1 Desktop study.

2.1. Site identification

General site information is presented in Tables 2.1 and 2.2 below and site features are shown on Figure 2.

Table 2.1: Site identification

Site Address	1000 Whitehorse Road, Box Hill, Victoria 3128
Approximate Site Area	5,950 m^2
Title Identification Details	11 parcels identified on site and includes Lot 14 LP1132, Lot 15 LP1132, Lot 15 LP1132, Lot 17 LP1132, Lot 1 TP238803, Lot 1 TP241232, Lot 1 TP387632, Lot 1 TP449721, Lot 1 TP514199, Lot 1 TP677377 and Lot 1 TP909247.
Planning Authority	Whitehorse City Council
Current Zoning	Public Use Zone – Education (PUZ2)
Current Overlays	Heritage Overlay – (HO117) Parking Overlay – (PO1)
Current Site Use	Tertiary education centre for Box Hill Institute
Adjoining Site Uses	North: Whitehorse Road, followed by a mixture of commercial business/office buildings East: Box Hill Town Hall, Anglican Diocese of Melbourne and Box Hill Library. South: Bank Street, followed by a railway line then, a mixture of commercial business. West: YMCA Victoria (local community centre), followed by a range of commercial business (restaurant, hair salon etc.).

2.2. Site history

A review of selected aerial photographs was undertaken for the site at intervals of approximately ten years. The earliest aerial photograph is dated 1931 and the most recent is dated 1991. A review of Google Earth images has also been undertaken for year 2000 and 2009. Aerial Photographs are presented in Lotsearch Report, Appendix A and summarised in the table below.

Date	Comments
1931	On site: Low resolution aerial image available, but site appears to be a mixture of residential lots and small scale retail or commercial premises. Off site: Residential lots to east and west of site. Whitehorse Road to the north and followed by more residential lots. Bank Street and railway line to the south and followed by more residential lots.
1945	On site: Some residential lots appear to have been demolished in the south western and northern portions of the site. A large building of unknown use is located on the mid western boundary and a large building in the north west, as well as another building in the north east are present on the site. These buildings do not appear residential. Off site: A number of residential properties to the east appear to be developed in to current layout of Box Hill Town Hall.
1951	On site: Image is blurred and of poor quality. A new building appear to have been constructed in the south western portion of site. Other buildings appear unchanged. Off site: No noticeable significant changes
1954	No noticeable significant changes
1966	On site: Site appears to be redeveloped with additional infrastructure established on site. Off site: Residential properties appears to be redeveloped to the west of site.
1974	On site: Significant site redevelopment, old infrastructure in the north and south west appear to have been demolished. Three new large buildings have been established on site, connecting to existing building to the north west to new buildings along the eastern site boundary. Off site: Residential properties appear to be redeveloped into commercial premises to the south of site. No other significant change is apparent.
1987	On site: A new building appears to be constructed, attached to the existing building in the north west of site. Three new buildings appear to be established along the eastern boundary of site. It appears that the site has been developed into the current layout. Off site: More residential properties appear to be redeveloped into commercial premises to the south of site. A large building appears to be demolished and developed into car parking facility to the west of site.
1991	On site: No noticeable significant changes. Off site: A large development appears to be under construction to the west of site.
2000	On site: No noticeable significant changes. Off site: No noticeable significant changes.
2009	On site: No noticeable significant changes. Off site: No noticeable significant changes.

2.3. Geology and hydrogeology

A review of available data indicates that the geology of the site comprises fill and clay overlying Silurian aged siltstone, Anderson Creek Formation (Sxa) which comprise sandstone, thick to thin bedded, siltstone and minor conglomerate.

The groundwater table is anticipated to be between 5 to 10 m bgs.

Groundwater at the site is expected to the flow to the south towards Gardiners Creek, located approximately 1,800 m south to south east of the site.

2.4. Priority sites register

A review of the EPA Victoria Priority Sites Register was carried out by Lotsearch and indicated that this site is not listed on, and is not within 500 m radius of any site listed on the Priority Sites Register as of the date of the search. The results of the search is presented in Lotsearch Report, Appendix A.

2.5. Acid sulphate soil

A review of the coastal acid sulfate soil distribution map, indicated that the site is not within 1,000 m radius of prospective land. It is considered acid sulphate soil is unlikely to be present on site.

2.6. Environmental audits

Review of the available database indicated two Environmental Audits have been completed on sites within a 500 m radius of site at the time of preparation of this review. A map showing the location of the audit sites is presented in Lotsearch Report, Appendix A.

It is noted two audit sites are located south west to the site, approximately 234 m and 431 m respectively. For the purpose of this soil investigation, a review of the closest audit to the site was undertaken. As this assessment is focused on soil, it is not believed that any audit site which is not directly adjacent to the site are likely to have had an impact on the soil conditions of the site.

A summary of regional conditions observed at the closest audit to the site is provided below:

519 – 521 Station Street, Box Hill, Victoria 3128.

- Audit completed in 21 January 2016 (CARMS No:73893-1)
- Site is approximately 0.63 ha.
- Historically used a low density residential and service station was in the northeast corner of site.
- Currently operated as public car park.
- Potentially contaminated fill soil from historical market garden, demolition of former structures and operation of a retail petroleum service station and work shop has been deposited across the site.
- Characterisation of soil condition across the site identified the fill soil to be contaminated with predominately hydrocarbons and metals. The northeast corner of the site was historically used as a retail petroleum service station and workshop.
- Groundwater beneath the site was investigated and found to be not polluted.
- Groundwater flow to the south west.
- The auditor considers the site to be suitable for the beneficial uses associated with the *Sensitive Use High Density*, *Commercial* and *Industrial* land use categories. A condition of the site's

suitability for a *Sensitive Use-High Density* use purpose is that the site must be covered with a physical barrier, such as concrete, asphalt or other permanent hardstand, and any land scaped area of garden bed must have at least 0.5m thickness of clean soil below the finished surface.

2.7. Summary of Phase 1 assessment

A summary of relevant information obtained during the Phase 1 site history review, and associated contaminants of potential concern (COPCs), is presented below.

- The site has previously been residential use and is currently used as a tertiary education centre known as Box Hill TAFE or Box Hill Institute.
- There is the potential for areas of in-filled land to be present across the site.

Potential sources of contamination on the site include:

- Building waste from the previous residential properties.
- Importation of contaminated backfill material.
- Use of the site for vehicles parking

It is considered that the COPCs associated with the likely sources listed above include the following:

- TRH
- BTEXN
- PAHs
- Metals (As, Cd, Cr, Cu, Hg, Ni, Pb and Zn).
- Asbestos.

3. Methodology

Field activities were conducted by Coffey on 3 March 2017 and are summarised below.

Table 3.1: Site Field Activities

Activity	Details
Underground services	A review of Dial Before You Dig (DBYD) plans was carried out. Services were located and drilling locations cleared by a service location contractor (Underground Services Detection).
Hand augering of Soil Bore	Hand augering was conducted by Coffey field engineer. All locations were advanced to a maximum depth of 1.1 mbgs, 0.5 m into natural soil or to refusal on hard surface/siltstone. Soil type classifications and descriptions are based on USCS and AS4482.1-1997. Soil bore logs are included in Appendix B and soil bore locations are shown on Figure 2.
Field Screening	Soils were screened for volatile components using a photo-ionisation detector (PID) which was calibrated daily to 100ppm$_v$ *iso*-butylene calibration gas.
Soil Decontamination Procedure	Decontamination was completed according to Coffey SOPs using Decon 90 and deionised water.
Disposal of Soil Cuttings	Excess soil cuttings were used to backfill the soil bores. Backfilled material was compacted using hand tools and re-surfaced with concrete or asphalt to match the original surface condition.
Laboratory Analysis	Samples were stored in an esky with ice and dispatched to a NATA accredited laboratory for analysis. The primary laboratory was ALS. The secondary laboratory was Eurofins-mgt. The following analysis was carried out: • 19 samples for PAH, metals, TPH, BTEXN; and, • 3 samples for IWRG621 broad screen

4. Assessment criteria

Based on the project objectives, the soil analytical results have been assessed against the following criteria:

4.1. Human health

- *National Environment Protection (Assessment of Site Contamination) Measure 1999*, as amended in 2013 (NEPM 2013) Health Investigation Levels (HILs), Commercial/industrial use (HIL-D) and Health Screening Levels (HSLs), Commercial/industrial use (HSL-D), clay soils.

4.2. Classification of soil for disposal

- EPA VIC IWRG621 *Soil Hazard Categorisation and Management*.

5. Results

5.1. Site specific geology

Soil bore locations are indicated on the sample location plan (Figure 2). Bore logs are included in Appendix B. The subsurface lithology of the site encountered at the sampling locations is summarised in the table below.

Table 5.1: Site specific lithology

Depth (mbgs)	Soil Description
0.0-0.15	Asphalt / Concrete
0.15 to 0.3	FILL: Gravelly SAND / Silty SAND, fine to coarse grained sand, dark brown, fine to coarse grained, sub-angular gravels.
0.3 to 0.4	FILL: Disturbed SILTSTONE / CLAY, extremely weathered / residual soil, orange/brown, with some high plasticity clay, dark brown, trace of brick, tile, concrete fragments.
0.4 to1.1 (Limit of Investigation)	SILTSTONE / CLAY, extremely weathered to residual soil, orange/brown/dark brown, high plasticity clay, orange mottled brown.

The thickness of fill and natural clay/siltstone varied across the assessment area. The thickness of fill varied from approximately 0.2 m to 0.4 m bgs.

5.2. Site inspection

A site inspection was carried out during the soil sampling event on 3 March 2017. The summary of the observations made is provided below:

- The site was generally flat and covered with asphalt/concrete hardstand. The surrounding land scape slightly slopes down to the south.
- The site comprise a number of buildings including tertiary education class rooms, workshops, offices, an open space asphalt car park and underground car parking lots.
- The site is currently operational as a tertiary educational facility.
- No visual or olfactory evidence of contamination was noted on site surface.
- No signs of stressed vegetation were noted on site.

5.3. Soil field observations

No hydrocarbon odour or staining was observed during field works. PID readings were observed between 0.4 ppm_v to 11.3 ppm_v in all samples.

No asbestos containing material (ACM) was observed during field works.

5.4. Analytical results

Soil analytical results are presented in Tables 1 and 2. Analytical laboratory reports and chain of custody (COC) documentation are presented in Appendix C.

5.4.1. Human health

A summary of the analytical results with respect to human health is provided below:

- Detectable concentrations of metals, including arsenic, cadmium, chromium, copper, lead, mercury, nickel, tin and zinc were reported in several samples across the site, but below the adopted human health assessment criteria.
- Detectable concentrations of TRH were reported in four samples (BH3 0.3-0.4, BH4 0.1-0.2, BH9 0.16-0.2 and BH10 0.2-0.3), but below the adopted human health assessment criteria.
- Detectable concentrations of PAHs were reported in two samples (BH3 0 0.3-0.4 and BH10 0.2-0.3), but below the adopted human health assessment criteria.
- Detectable concentrations of cyanide were reported in two samples from (BH7 0.7-0.8 and BH10 0.2-0.3), but below the adopted human health assessment criteria.
- Detectable concentrations of fluoride was reported in one sample from (BH7 0.7-0.8), but below the adopted human health assessment criteria.
- Three soil samples returned pH concentration between 6.2 and 8.2 within the expected natural soil values.
- Concentrations of OCPs, phenols, PCBs and VOCs were reported below the laboratory limit of reporting (LOR) in all samples analysed.
- Over all, the reported concentration of COPC were below the adopted human health assessment criteria for commercial/industrial land use and direct contact for maintenance/construction workers.

5.4.2. Preliminary classification of soil for disposal

Analytical results of the soil assessment program were compared against soil quality guidelines from EPA Victoria publication *Industrial Waste Resource Guideline (IWRG) 621 'Soil Hazard Categorisation and Management'*.

A total of thirteen fill samples and nine natural soil samples were analysed. This enables a preliminary classification of soils for disposal. In the event that soil is required for disposal as part of any future redevelopment of the site, additional sampling is required to provide adequate classification of the soils. Additional sampling requirements would be dependent on the areas of the site which is excavated for redevelopment, the depth of excavation and the total volume of soil for disposal. These factors have not been considered as part of this assessment. Additionally, ASLP analysis would be required to confirm the disposal category of soils from the site for lead, which marginally exceeds .

Concentrations of lead and zinc within the existing car parking area (BH3 and BH4) in two fill samples were reported above the upper limit of Fill Material criteria.

Concentrations of total PAHs in one fill sample within the car parking area (BH3) was reported above the upper limit of Fill Material criteria.

Concentration of COPC in all other fill soil samples within the lawn and service lane area were below the upper limit of Fill Material Criteria.

Based on the maximum concentrations of lead, zinc and total PAHs in the fill soil of the site, the preliminary classification for fill soil in each assessed area would be:

- Car parking area (BH3 and BH4) (approximately the top 0.4 m) has a preliminary classification of **Category C Contaminated Soil**.
- Car parking area (BH1 and BH2) has a preliminary classification of **Fill Material**.

- Lawn area (BH5 and BH6) and service lane area (BH7 to BH10) has a preliminary classification of **Fill Material**.

Of the nine natural soil samples collected, concentration of lead within the existing car parking area (BH4) and concentration of fluoride within the service lane area were above the upper limit of Fill Material criteria. All other natural soil samples in the car parking area, lawn area and service lane have concentration of COPC below the upper limit of Fill Material criteria.

Based on the maximum concentrations of lead and fluoride in the natural soil of the site, the preliminary classification for natural soil in each assessed area would be:

- Car parking area (BH4) (approximately the top 0.4 m) has a preliminary classification of **Category C Contaminated Soil**.
- Car parking area (BH1, BH2 and BH3), lawn area (BH5 and BH6) and service lane area (BH10) have a preliminary classification of **Fill Material**.

It is noted that if additional natural samples are collected (to make a minimum total of ten samples) then statistical analysis can be applied to the results which may bring the classification of natural soil in the car parking area down to Fill Material, depending on results of additional samples. It is also noted the marginal elevated concentration of fluoride could be naturally occurring from the Anderson Creek Formation Sandstone/siltstone.

It is noted, for the purpose of the preliminary soil classification, additional testing to determine the leachability potential of lead was not undertaken.

The results are summarised in Table 2 and presented in the laboratory reports in Appendix C.

Classification results are summarised in Table 5.2 below:

Table 5.2: Soil classification

Location	Volume of soil to be disposed	No. samples analysed	Sample Collection	Area	Analyte	Maximum concentration (mg/kg)	Fill Material upper limit (mg/kg)	Soils classified by	Classification
Fill soil*	Not known	2	In situ	Car parking area (BH3 and BH4)	Lead	379	300	Maximum Concentrations	Category C Contaminated Soil.
					Zinc	252	200		
					Total PAHs	35.8^	20		
		11	In situ	Car parking area (BH1 and BH2), lawn and service lane	Lead	73	300	Maximum Concentrations	Fill Material
					Zinc	74	200		
					Total PAHs	1	20		
Natural soil**	Not known	1	In situ	Car parking area (BH4)	Lead	452	300	Maximum Concentrations	Category C Contaminated Soil
		9	In situ	Car parking area (BH1, BH2 and BH3), lawn and service lane	Lead	40	300	Maximum Concentrations	Fill Material

*considered to be 0.0 m to approximately 0.4 mbgs

**considered to be approximately 0.4 m to 1.1 mbgs (limit of investigation)

^ highest reported concentration adopted as conservative measure from primary, duplicate and triplicate sample.

6. Data Validation and Quality Assessment

Coffey has completed a review of the quality assurance (QA) steps and quality control (QC) results, according to the following documents.

- Australian Standard AS 4482.1-2005: Guide to the investigation and sampling of sites with potentially contaminated soil – Non-volatile and semi-volatile compounds
- Australian Standard AS 4482.2-1999: Guide to the sampling and investigation of potentially contaminated soil – Volatile substances
- US EPA Guidance on Environmental Data Verification and Data Validation (2002);
- US EPA Contract Laboratory Program for Organic (1999) and Inorganic (2002) Data Review;

This included examining holding times, laboratory accreditation, sample preservation methods, a review of field quality control sample results and a review of laboratory quality control sample results.

The steps in the sampling and analysis process are subject to natural and inherent variability, and this can affect the results produced, and the overall quality of the data sets generated. In order to minimise the effect of this variation, standard procedures are used throughout works carried out in the field, and in the laboratory. The use of such procedures represents one aspect of the quality assurance process. To measure the effectiveness of the quality assurance process, quality control samples can be tested, and other quality control tests can be conducted during the analysis of samples taken in the field.

Quality control (QC) samples and tests can be used to assess both the accuracy and the precision of the results produced.

- Measures of ACCURACY provide information on how close to the true result is the reported result. For practical reasons, measures of accuracy are usually confined to the laboratory steps in the overall process.
- Measures of PRECISION provide information on the variability in the results. Precision can be assessed as:
  "repeatability" or intra-laboratory variation– the degree of variation in a result when the same laboratory analyses a sample (or blind replicate) several times, and;
  "reproducibility" or inter-laboratory variation – the degree of variation in a result when a different laboratory separately analyses a sample.

In addition, blank samples can be used to assess whether extraneous materials and factors have contributed to the results obtained from the sampling and analysis process.

Quality control testing can be conducted covering all steps of the process (referred to as Field QC in this report), or just one portion of the process, such as the laboratory steps (referred to as Laboratory QC in this report).

6.1. Field Quality Assurance/Quality Control (QA/QC) Samples

Field QA/QC samples analysed for the soil assessment included two intra-laboratory duplicates and two inter-laboratory duplicates. Primary and intra-laboratory duplicate soil samples collected were analysed by ALS. Inter-laboratory groundwater samples were analysed by Eurofins-mgt. Both laboratories are NATA accredited for the analysis undertaken. In addition, one trip blank and one rinsate blank samples were also collected. A summary of QC samples is provided in the table below.

Table 6.1: Summary of QC samples

Sample number	Sample type	Parent sample
QC1	Trip blank	-
QC2	Rinsate blank	-
QC3	Duplicate	BH3 0.0-0.4
QC4	Triplicate	BH3 0.0-0.4
QC5	Duplicate	BH8 0.2-0.25

6.2. Field QA/QC Results

Relative Percentage Differences (RPDs) were calculated to assess the difference between the concentrations of compounds reported in the primary and intra-laboratory/inter-laboratory duplicate samples. The results of the field QA/QC samples are summarised in Tables 3 and 4. Comparison of RPDs showed that the variability between primary and duplicate samples was within the acceptance criteria, with the exception of a number of PAH results in BH3 0.3-0.4 and its duplicate and triplicate samples (QC3 and QC4) and one TRH C_{10}-C_{36} results BH3 0.3-0.4 and its triplicate sample (QC4)

It is considered that the variability in concentrations of the above analytes is likely associated with the heterogeneous nature of fill encountered. As a conservative measure, the highest concentration reported from primary, duplicate and triplicate samples was adopted for the representative of the fill material collected.

An adequate number of trip blanks and rinsate blanks were collected during this assessment. The overall absence of any detectable contamination in the equipment rinsate blanks indicates that adequate field cleaning protocols were implemented to prevent/minimise the possibility of any sampling cross contamination. Blank results are presented in Table 4.

6.3. Laboratory QA/QC

Laboratory QC data was provided with the analytical report, which is presented with the laboratory results in Appendix C.

An assessment of laboratory QA/QC results indicated the following:

- Analytical results in method blanks were less than LORs.
- Matrix spike recoveries were outside of the acceptable range for monocyclic aromatic hydrocarbons, total petroleum hydrocarbon and phenolic compounds. A review of the laboratory comments, indicates the matrix spike recovery was not determined due to the background level greater than or equal to 4x spike level for monocyclic aromatic hydrocarbons and total petroleum hydrocarbon, based on the maximum detectable concentration in all soil samples below the

assessment criteria, and as phenols are not considered COPCs, this is not considered to impact the on the outcome of this assessment.

- Sample surrogate recoveries were within the acceptance criteria for all other analytes.
- Results of laboratory duplicate and control sample were within the acceptance RPD criteria for the required analytes.
- All analysis was within the laboratory recommended holding time.

In addition, all samples were received by the laboratory in appropriate pre-treated and preserved containers.

Based on the field QA/QC and laboratory QA/QC data assessment, the analytical results are considered to meet the project data quality objectives, and are therefore considered to be suitable for interpretative purposes.

7. Conclusions and recommendations

Based on the outcomes of the Phase 1 and Phase 2 ESA, Coffey concludes the following:

- A Phase 1 assessment of the site found that there were potential sources of contamination at the site, from historical site development including demolition, and infilling with, potentially contaminated soil and/or building waste, as well as contamination associated with a portion of the site was used as a car park (such as leaks and spills of fuel and oil).
- A Phase 2 assessment involving soil sampling of the targeted soil boreholes across the assessment area.
- The site was underlain by fill to approximately 0.3 mbgs, overlaying disturbed clay/siltstone to approximately 0.4 mbgs, and overlying natural siltstone/clay.
- No olfactory evidence of contamination was noted during field works.
- Some building waste comprising brick and concrete fragments was observed within the fill soil from BH3 and BH4 (car park area, northwest corner of site).
- Some large cobbles, possible historical imported fill material was observed within the fill soil from BH10 location (service land from Bank Street, south western portion of site)
- Soil samples were collected and analysed for COPCs.
- Detectable concentrations of fluoride, TRH, PAHs and metals were reported in several fill and natural samples across the site.
- Lead, zinc and PAHs impact is noted in the car park area (BH3 location) and appears to be localised. These elevated metal and PAHs concentration is likely attributed from historical backfilled material during site development before it turned into a visitor car park.
- For the purpose of off-site disposal, each assessed area is preliminary classified as follow:
    - Fill soils in the car parking area located north western portion of site (BH3 and BH4) is preliminary classified as Category C Contaminated Soil.
    - Fill soils in the car parking area (BH1 and BH2), lawn area and service lane area is preliminary classified as Fill Material.
    - Natural soil in the car parking area (BH4) is preliminary classified as Category C Contaminated Soil. It is noted that additional sampling is likely to be required depending on the final volume of soil to be excavated as part of the redevelopment.
    - Natural soil in the car parking area (BH1, BH2 and BH3), lawn area and service lane area is preliminary classified as Fill Material.
- None of the reported concentrations of the contaminants assessed exceed the adopted health investigate level (HIL-D) for commercial/industrial land uses.
- No groundwater assessment was undertaken.
- Although visual assessment during fieldworks did not identify suspected asbestos containing materials. Asbestos was not identified in the soil samples analysed. However, there is considered to be potential for asbestos to be encountered during any redevelopment of a site within an urban area. Consideration should be given to introducing adequate safety measures to avoid risks from exposure to asbestos during redevelopment.
- This report should be read in conjunction with the Important Information Sheet included in the report.

8. References

ANZECC (1992). *'Australian and New Zealand Guidelines for the Assessment and Management of Contaminated Sites'*, Published by the Australian and New Zealand Environment and Conservation Council, National Health and Medical Research Council.

Friebel & Nadebaum (2011). *Health Screening Levels for Petroleum Hydrocarbons in Soil and Groundwater* (technical paper No.10) Guidelines, CRC for Contamination Assessment and Remediation of the Environment (CRC CARE)

NEPC (1999) *National Environmental Protection (Assessment of Site Contamination)* Measure 1999, National Environment Protection Council.

NEPC (2013) *National Environmental Protection (Assessment of Site Contamination)* Measure 1999, as amended in 2013, National Environment Protection Council.

Standards Australia (2005). *Guide to the Sampling and Investigation of Potentially Contaminated Soil*. Part 1: Non-volatile and semi-volatile compounds, AS 4482.1-2005, Standards Australia, Homebush NSW.

Appendix A – LotSearch Report

This page has been left intentionally blank

Lotsearch

Environmental Risk and Planning Report

1000 Whitehorse Road, Box Hill, VIC 3128

Report Buffer: 1000m

Report Date: 06 Mar 2017 17:21:14

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

Table of Contents

Location Confidences

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

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

Dataset Listing

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

Dataset Name	Custodian	Supply Date	Currency Date	Update Frequency	No. Features Onsite	No. Features within 100m	No. Features in Buffer
Topographic and Cadastre data	State Government Victoria - Department of Environment, Land, Water & Planning	06/02/2017	06/02/2017	Quarterly	-	-	-
Current Priority Sites	Environment Protection Authority (Vic)	06/02/2017	31/12/2016	Monthly	0	0	1
Former Priority Sites & other Pollution Notices	Environment Protection Authority (Vic)	06/02/2017	05/01/2017	Monthly	0	0	3
EPA Environmental Audit Reports	Environment Protection Authority (Vic)	06/02/2017	24/11/2016	Monthly	0	0	5
Groundwater Zones with Restricted Uses	Environment Protection Authority (Vic)	06/02/2017	27/01/2017	Monthly	0	0	0
Licensed Activities	Environment Protection Authority (Vic)	06/02/2017	29/01/2017	Monthly	0	0	0
Former Licensed Activities	Environment Protection Authority (Vic)	06/02/2017	29/01/2017	Monthly	0	0	0
Works Approvals	Environment Protection Authority (Vic)	06/02/2017	06/02/2017	Monthly	0	0	0
National Waste Management Site Database	Geoscience Australia	06/02/2017	15/11/2012	Quarterly	0	0	0
Statewide Waste and Resource Recovery Infrastructure Plan Facilities	State Government Victoria - Department of Sustainability	27/11/2014	31/12/2012	None planned	0	0	0
EPA Prescribed Industrial Waste	Environment Protection Authority (Vic)	04/01/2017	04/01/2017	Quarterly	0	0	0
UBD Business to Business Directory 1991	Hardie Grant			Not required	1	50	97
UBD Business to Business Directory 1991 - Garages & Service Stations	Hardie Grant			Not required	0	0	4
UBD Business Directory 1980	Hardie Grant			Not required	0	55	99
UBD Business Directory 1980 Drycleaners, Motor Garages & Service Stations	Hardie Grant			Not required	0	1	13
UBD Business Directory 1960 Drycleaners, Motor Garages & Service Stations	Hardie Grant			Not required	0	4	27
UBD Business Directory 1950	Hardie Grant			Not required	0	88	132
UBD Business Directory 1950 Drycleaners, Motor Garages & Service Stations	Hardie Grant			Not required	0	2	14
Features of Interest	State Government Victoria - Department of Environment, Land, Water & Planning	03/02/2017	27/01/2017	Quarterly	3	7	82
Hydrogeology Map of Australia	Commonwealth of Australia (Geoscience Australia)	08/10/2014	17/03/2000	As required	1	1	1
Groundwater Salinity	State Government Victoria - Department of Environment, Land, Water & Planning	14/08/2015	29/08/2012	Unknown	1	-	-
Depth to Watertable	State Government Victoria - Department of Environment, Land, Water & Planning	14/08/2015	29/08/2012	Unknown	2	-	-
Surface Elevation	State Government Victoria - Department of Environment, Land, Water & Planning	14/08/2015	23/09/2013	Unknown	1	-	-
Basement Elevation	State Government Victoria - Department of Environment, Land, Water & Planning	14/08/2015	23/09/2013	Unknown	1	-	-
Groundwater Boreholes WMIS	State Government Victoria - Department of Environment, Land, Water & Planning	29/04/2016	28/04/2016	Annually	0	1	40
Groundwater Boreholes Earth Resources Database	The State of Victoria, Department of Economic Development, Jobs, Transport and Resources	29/04/2016	17/02/2010	As required	0	0	0
Groundwater Boreholes Fed Uni	Federation University Australia	29/04/2016	07/01/2014	As required	0	0	0
Historical Mining Activity - Shafts	State Government Victoria - Department of Economic Development, Jobs, Transport and Resources	20/02/2017	08/11/2016	As required	0	0	0
Geological Units 1:50,000	State Government Victoria - Department of Economic Development, Jobs, Transport and Resources	13/01/2015	24/06/2014	Unknown	1	-	2

Dataset Name	Custodian	Supply Date	Currency Date	Update Frequency	No. Features Onsite	No. Features within 100m	No. Features in Buffer
Geological Structures 1:50,000	State Government Victoria - Department of Economic Development, Jobs, Transport and Resources	13/01/2015	24/06/2014	Unknown	0	-	0
Dykes and Marker Beds 50k	State Government Victoria - Department of Economic Development, Jobs, Transport and Resources	13/01/2015	24/06/2014	Unknown	0	0	0
Shear zones 250k	State Government Victoria - Department of Economic Development, Jobs, Transport and Resources	13/01/2015	24/06/2014	Unknown	0	-	0
Coastal Acid Sulfate Soils	The State of Victoria, Department of Economic Development, Jobs, Transport and Resources	15/07/2016	30/03/2011	None planned	0	0	0
Planning Scheme Zones	State Government Victoria - Department of Environment, Land, Water & Planning	27/01/2017	27/01/2017	Quarterly	2	10	95
Planning Scheme Overlay	State Government Victoria - Department of Environment, Land, Water & Planning	27/01/2017	27/01/2017	Quarterly	2	8	111
Cultural Heritage Sensitivity	State Government Victoria - Department of Planning and Community Development	03/02/2017	27/01/2017	Quarterly	0	0	1
Bushfire Prone Area	State Government Victoria - Department of Transport, Planning and Local Infrastructure	27/01/2017	27/01/2017	Quarterly	0	0	0
Fire History	State Government Victoria - Department of Environment, Land, Water & Planning	27/01/2017	27/01/2017	Quarterly	0	0	0
Flood - 1 in 100 Year Modelled Flood Extent	State Government Victoria - Department of Environment, Land, Water & Planning	27/01/2017	27/01/2017	Quarterly	0	0	0
Native Vegetation (Modelled 2005 Ecological Vegetation Classes)	State Government Victoria - Department of Environment, Land, Water & Planning	13/01/2015	31/12/2005	None planned	0	0	1
RAMSAR Wetlands	State Government Victoria - Department of Environment, Land, Water & Planning	13/01/2015	24/06/2013	None planned	0	0	0

Aerial Imagery 2015

1000 Whitehorse Road, Box Hill, VIC 3128

Scale:
0 25 50 100
Meters

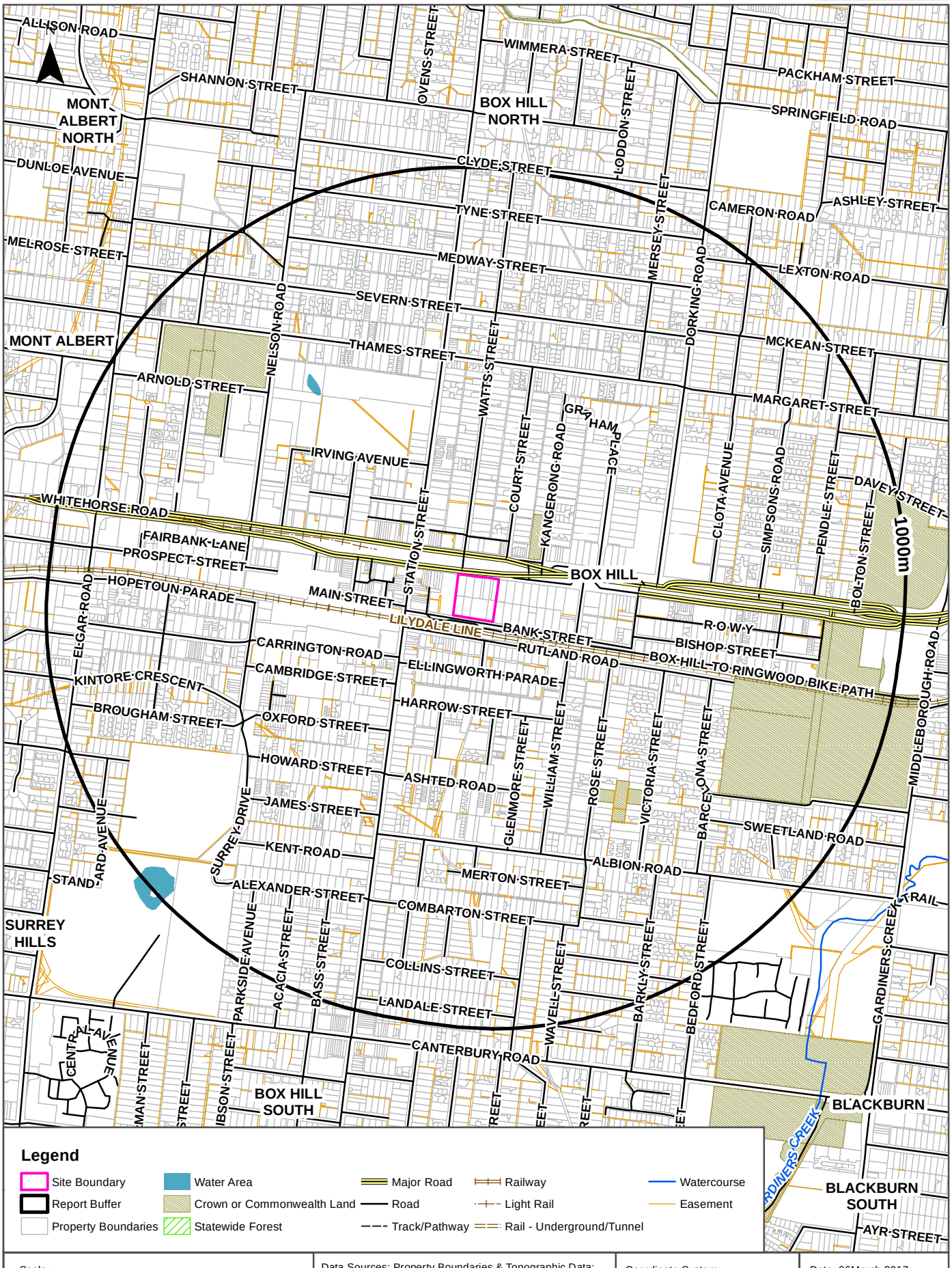
Data Sources: Aerial Imagery © 2016 Google Inc, used with permission. Google and the Google logo are registered trademarks of Google Inc.

Coordinate System:
GDA 1994 MGA Zone 55

Date: 03March, 2017

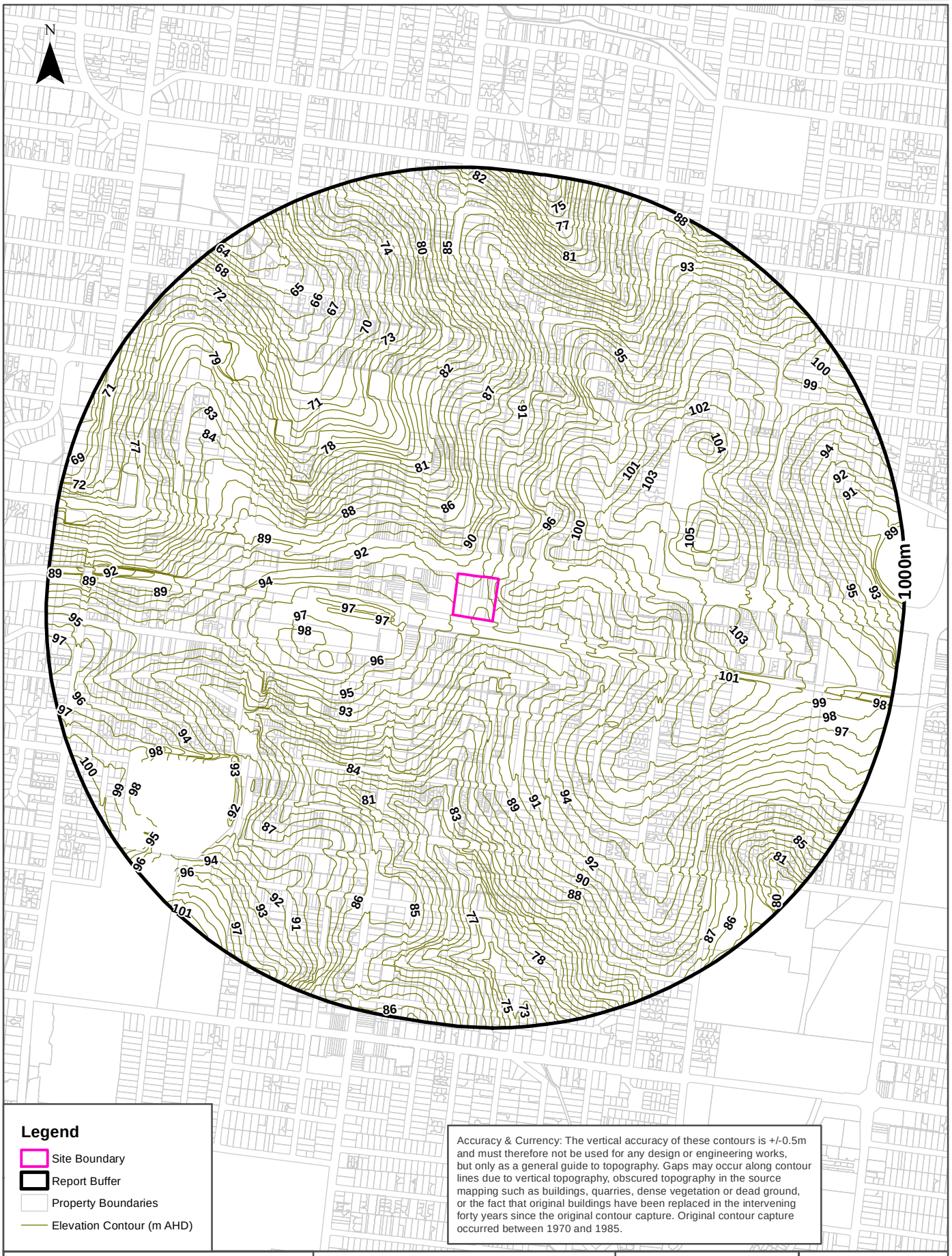
Topographic Data

1000 Whitehorse Road, Box Hill, VIC 3128



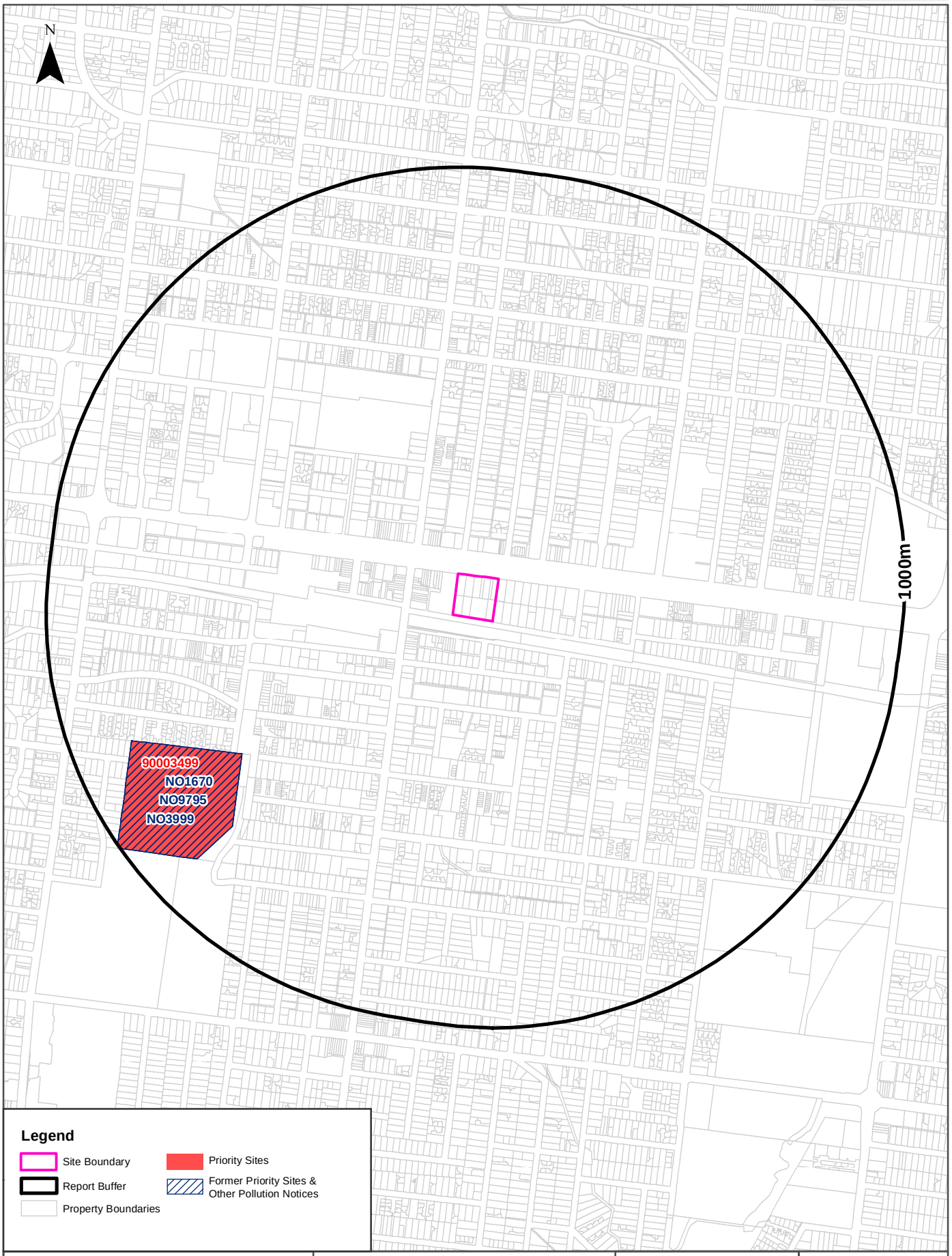
Elevation Contours (m AHD)

1000 Whitehorse Road, Box Hill, VIC 3128



EPA Records - Priority Sites & Pollution Notices

1000 Whitehorse Road, Box Hill, VIC 3128



EPA Records

1000 Whitehorse Road, Box Hill, VIC 3128

Current EPA Priority Sites Register

What sites on the current EPA priority sites register exist within the report buffer?

Notice No	Address	Suburb	Issue	Loc Conf	Dist (m)	Direction
90003499	14 Federation ST	BOX HILL	Former Landfill. Requires ongoing management	Premise Match	621m	South West

Priority Sites Data Custodian: State Government Victoria - Environment Protection Authority (EPA)

Former EPA Priority Sites & Other Pollution Notices

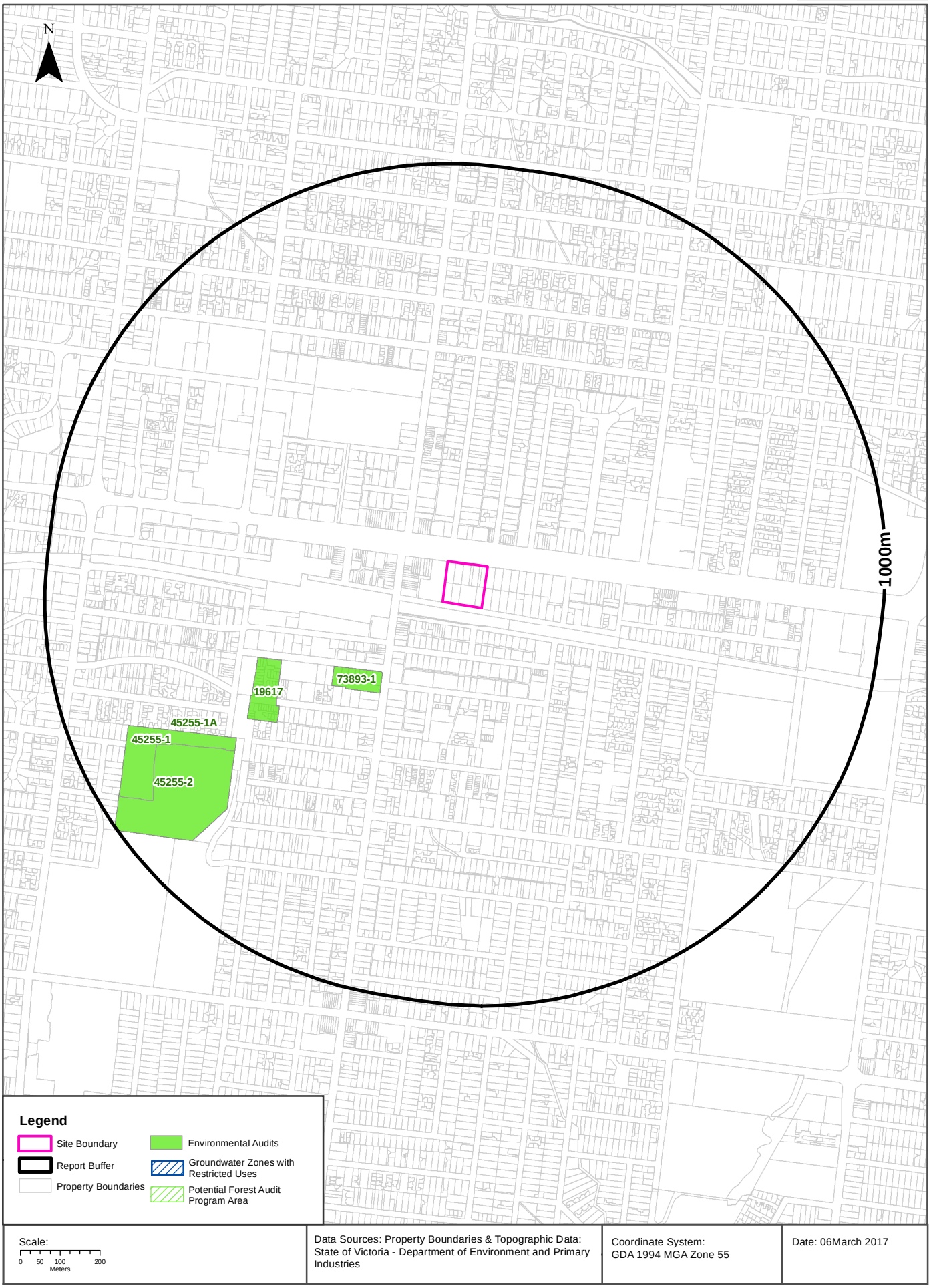
What sites within the report buffer have been issued a Pollution Notice?
Note. Due to pollution notices being revoked and removed from published lists this is not an exhaustive list of all past pollution notices.

Notice No	Notice Type	Company	Address	Suburb	Status	Issue	Date Issued	Loc Conf	Dist	Dir
NO9795	31A(1)	PHILEO AUST LTD	14 FEDERATION ST	BOX HILL	Legacy EPA Database Pollution Notice	Former Landfill, Requires ongoing management.	21/10/2011	Premise Match	621m	South West
NO3999	31B(1)	PHILEO AUST LTD	14 FEDERATION ST	BOX HILL	Legacy EPA Database Pollution Notice	Former Landfill, Requires ongoing management.	04/06/2004	Premise Match	621m	South West
NO1670	31A(1)	PHILEO AUST LTD	14 FEDERATION ST	BOX HILL	Legacy EPA Database Pollution Notice		23/05/2000	Premise Match	621m	South West

Pollution Notice Data Custodian: State Government Victoria - Environment Protection Authority (EPA)

EPA Records - Audit Reports & GQRUZ

1000 Whitehorse Road, Box Hill, VIC 3128



EPA Records

1000 Whitehorse Road, Box Hill, VIC 3128

EPA Environmental Audits

What EPA environmental audit records exist within the report buffer?
Note. Please click on CARMS No. to activate a hyperlink to online documentation. If link does not work, documentation may still be accessible via the EPA Interaction Portal.

CARMS No	Transaction No	Site	Address	Suburb	Date Complete	Loc Conf	Distance	Direction
73893-1	8004798	519-521 STATION STREET	519-521 STATION STREET	BOX HILL	21/01/2016	Premise Match	234m	South West
19617	8000128	27-28 OXFORD ST	27-28 OXFORD ST	BOX HILL	04/10/1993	Premise Match	431m	South West
45255-1	8001325	FEDERATION STREET, (STAGE 1) PROPOSED RESIDENTIAL DEVELOPMENT AREA FORMER BOX HILL LANDFILL REVISED AUDIT	FEDERATION STREET	BOX HILL	18/10/2004	Premise Match	621m	South West
45255-1A	8001326	PART OF FORMER BOX HILL LANDFILL FEDERATION ST, PROPOSED RESIDENTIAL DEV. AREA, ALONG NORTHERN & WESTERN BOUNDARY	FEDERATION ST	BOX HILL	17/11/2003	Premise Match	621m	South West
45255-2	8001327	FORMER BOX HILL LANDFILL, FEDERATION ST 14 FEDERATION ST	STAGE 2 PART OF FORMER BOX HILL LANDFILL & BRICKWORKS FEDERATION ST	BOX HILL	07/06/2004	Premise Match	621m	South West

Environmental Audit Data Custodian: State Government Victoria - Environment Protection Authority (EPA)

EPA Records

1000 Whitehorse Road, Box Hill, VIC 3128

EPA Groundwater Zones with Restricted Uses

What EPA GQRUZ exist within the report buffer?
Note. Please click on CARMS No. to activate a hyperlink to online documentation.

CARMS No	EPA Id	Site History	Site Address	Restricted Uses	Loc Conf	Distance	Direction
N/A	No records in buffer						

Environmental GQRUZ Data Custodian: State Government Victoria - Environment Protection Authority (EPA)

EPA Records

1000 Whitehorse Road, Box Hill, VIC 3128

EPA Licensed Activities

What EPA licensed activities exist within the report buffer?

Trans No	Licence No	Licence Type	Organisation	Premise Ref	Premise Address 1	Premise Address 2	Activities	Loc Conf	Dist (m)	Direction
N/A	No records in buffer									

Licensed Activity Data Custodian: State Government Victoria - Environment Protection Authority (EPA)

Former EPA Licensed Activities

What former EPA licensed activities exist within the report buffer?

Licence No	Organisation	Premise Address	Suburb	Activities	Loc Conf	Dist (m)	Direction
N/A	No records in buffer						

Former Licensed Activity Data Custodian: State Government Victoria - Environmental Protection Authority (EPA)

EPA Works Approvals

What EPA works approvals exist within the report buffer?

Transaction No	Status	Approval No	Organisation	Premise Address	Suburb	Scheduled Categories	Loc Conf	Dist (m)	Direction
N/A	No records in buffer								

Works Approvals Data Custodian: State Government Victoria - Environment Protection Authority (EPA)

Waste Management Facilities

1000 Whitehorse Road, Box Hill, VIC 3128

National Waste Management Site Database

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

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

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

Statewide Waste and Resource Recovery Infrastructure Plan Facilities

Statewide Waste and Resource Recovery Infrastructure Plan Facilities within the report buffer:

Map Id	Owner	Site Name	Address	Suburb	Category	Sub Category	Loc Conf	Distance	Direction
N/A	No records in buffer								

SWRRIPF Data Source: State Government Victoria - Department of Sustainability

EPA Prescribed Industrial Waste

EPA Prescribed industrial waste sites within the report buffer:

Map Id	Company Name	Address	Suburb	Treatment /Disposal	Transport	Accredited Agent	EPA List Status	Loc Conf	Dist (m)	Direct
N/A	No records in buffer									

Prescribed Industrial Waste Data Custodian: State Government Victoria - Environment Protection Authority (EPA)

Historical Business to Business Directory Activity 1991

1000 Whitehorse Road, Box Hill, VIC 3128

Legend

- Site Centre
- Site Boundary
- Report Buffer
- Property Boundary
- 1991 Business Directory Premise Match
- 1991 Business Directory Road Match

Scale: 0 20 40 80 Meters

Data Sources: Universal Business Directories (UBD) - Derived Data Licensed from Hardie Grant.
Property Boundaries & Topographic Data: State of Victoria - Department of Environment and Primary Industries 2017

Coordinate System: GDA 1994 MGA Zone 55

Date: 06March 2017

Historical Business Directories

1000 Whitehorse Road, Box Hill, VIC 3128

1991 Business to Business Directory Records

1991 UBD Business Directory Records within 150m of the site:

Activity	Organisation	Address	Ref No.	Location Confidence	Distance	Direction
Management Consultants	Centrend	1000 Whitehorse Rd Box Hill 3128	2117	Premise Match	0m	Onsite
Employment Agencies	Commonwealth Employment Service	Bank St Box Hill 3128	2113	Road Match	0m	South East
Electric Power Supply	box hill electricity supply	1022,whitehorse rd,boxhill,3128	28336	Premise Match	38m	East
Information Service	Box Hill Citizens Advice Butreau	25 Bank St Box Hill	5958	Premise Match	39m	South East
Eastern Goods Merchants	Thai sanh food market	5 bank st,boxhill 3128	9513	Premise Match	57m	West
Importers	Rizzo Importers	976 Whitehorse Rd Box Hill 3128	23054	Premise Match	61m	North West
Wholesale Distributors	Rizzo Importers	976 Whitehorse Rd Box Hill 3128	14015	Premise Match	61m	North West
Burglar Alarm &/or Protection Systems Mfrs &/or Dists &/or Installers	primex security systems pty ltd	18 b rutland rd box hill3128	12422	Premise Match	66m	South West
Security Services	Primex Security Systems Pty Ltd	18B Rutland Rd Box Hill 3128	33129	Premise Match	66m	South West
Security Systems &/or Equipment Mfrs &/or Suppliers	Primex Security Systems Pty Ltd	18B Rutland Rd Box Hill 3128	34384	Premise Match	66m	South West
Taxation Consultants &/or Specialists	Block, H. & R.	18A Rutland Rd.. Box Hilt 3128	14357	Premise Match	68m	South West
Insurance Consultants	Diamond Professional Service Pty Ltd	30 Rutland Rd Box Hill 3128	35432	Premise Match	70m	South
Investment Counsellors	Diamond Professional Service Pty Ltd	30 Rutland Rd Box Hill 3128	15877	Premise Match	70m	South
Investment Counsellors	Lyndon M R & G R & Assoc	30 Rutland Rd Box Hill 3128	41630	Premise Match	70m	South
Accountants and Auditors	Lyndon M.r & G.R& Assoc	30 Rutland Rd., Box Hill 3128	15581	Premise Match	70m	South
Taxation Consultants &/or Specialists	Lyndon, M. R. & G. R. & Assoc.	30 Rutland Rd., Box Hill. 3128	5842	Premise Match	70m	South
Chemical Mfrs &/or Imps &/or Dists	swift watts winter company,	the,28 rutland rd,box hill 3128	44980	Premise Match	70m	South
Solicitors	Crisafi S P & Associates	18 Rutland Rd Box Hill 3128	3627	Premise Match	70m	South West
Barristers	crisafi,s.p&associates	18,rudland st,boxhill.3128	36958	Premise Match	70m	South West
Accountants and Auditors	Touche, Ross & Co	36 Rutland Rd., Box Hill 3128	17191	Premise Match	71m	South
Taxation Consultants &/or Specialists	Touche, Ross & Co.	36 Rutland Rd.. Box Hill..3128	17192	Premise Match	71m	South
Stone Masons	Heath Memorials PTY LTD	22 Rutland Rd., Box Hill. 3120	57433	Premise Match	71m	South West
Monumental Masons	HEATH MEMORIALS PTY LTD	22 Rutland Road Box Hill 3128	33977	Premise Match	71m	South West
Monumental Masons	Heath Memorials Pty Ltd	22 Ruttland Rd Box Hill 3128	5829	Premise Match	71m	South West
Hair Care Products	Mayo International Pty Ltd	20 Rutland Rd Box Hill 3128	14722	Premise Match	71m	South West
Importers	Rizzo Importers Showroom	38 Rutland Rd Box Hill 3128	48557	Premise Match	73m	South
Manchester Goods Mfrs &/or W/salers	Rizzo Importers Showroom	38 Rutland Rd Box Hill 3128	7350	Premise Match	73m	South
Clothing Mfrs &/or W/salers - Aprons &/or Overalls	Rizzo importers showroom	38 Rutland Rd, Boxhill 3128	48558	Premise Match	73m	South
Insurance Agents	V F L Insurance Co Ltd	1013 Whitehorse Rd Box Hill 3128	2311	Premise Match	75m	North

Activity	Organisation	Address	Ref No.	Location Confidence	Distance	Direction
Solicitors	Searle Peter & Associates	1025 Whitehorse Rd Box Hill 3128	7530	Premise Match	76m	North East
Banks	ANZ Banking Group Ltd	995 Whitehorse Rd, Box Hill 3128	54693	Premise Match	77m	North
Insurance Consultants	Yarra Valley Tax Centre	Shop 1/991 Whitehorse Rd Box Hill 3128	11772	Premise Match	77m	North
Taxation Consultants &/or Specialists	Yarra Valley Tax Centre	Shop 1/991 Whitehorse Rd., Box Hill. 3128	57267	Premise Match	77m	North
Investment Counsellors	Yarra Valley Tax Centre Shop	1/991 WhiteHorse Rd Hill 3128	51823	Premise Match	77m	North
Kitchen Units Mfrs &/or Dists &/or Installers	knebel Kichens Pty Ltd	Shop 3/1031 Whitehourse Rd Box Hill 3128	24127	Premise Match	81m	North East
Furniture Mfrs &/or W/salers - Kitchen	Knebel Kitchens Pty Ltd	Shop 3/1031 Whitehorse Rd Box Hill 3128	50921	Premise Match	81m	North East
Printers – General	Printrvik,	1031 Whitehorse Rd., Box Hill. 3128	50219	Premise Match	81m	North East
Printers – Instant	Prirdevrik,	1031 Whitehorse Rd., Box Hal. 3128	55215	Premise Match	81m	North East
Printers – Lithographic	Ptintevek,	1031 Whitehorse Rd. Box Hill. 3128	12177	Premise Match	81m	North East
Bathroom Equipment &/or Fittings Mfrs &/or Dists	Whitehorse bathroom centre	shop 2/1031 whitehorse rd box hill 3128	13134	Premise Match	81m	North East
Bakers	Little Johns Bakehouse	966 Whitehorse Rd., Box Hill 3128	23368	Premise Match	83m	West
T-Shirt-Printers &/or Suppliers	Box Top Records	598 Station Box Hill 3128	44349	Premise Match	86m	West
Optical Prescription Dispensers	Optical City,	600 Station St., Box Hilt 3128	53773	Premise Match	86m	West
Accountants and Auditors	Yoong T P & Associates	960 Whitehorse Rd., Box Hill 3128	51782	Premise Match	95m	West
Business Consultants	yoong T.P& Associates	960 whitehorse Rd,box hill 3128	23085	Premise Match	95m	West
Taxation Consultants &/or Specialists	Personal Portfolio Taxation PTY LTD	44 Rutland Rd., Box Hill, 3128	44960	Premise Match	96m	South East
Finance Brokers	Portfolio Group	The 44 Rutland Rd Box Hill 3128	42730	Premise Match	96m	South East
Accountants and Auditors	Sargent C	44 rutland Rd., Box Hill 3128	56249	Premise Match	96m	South East
Plumbers &/or Gasfitters	Able, M. R. Plumbing Service,	10 Rutland Rd.. Box HID. 3128	9135	Premise Match	96m	South West
Jewellery Manfacturers Designers Imps &/or W/salers	Bluestone Jewellery Manufactures	588 Station St Box Hill 3128	20009	Premise Match	96m	West
Credit Card Organisations	fleet systems pty ltd	25 ellinhsworth pde box hill 3128	44652	Premise Match	103m	South
Buying Agents &/or Confirming Houses	supply logistics pty ltd	21 ellingworth pde box hill 3128	15703	Premise Match	104m	South
Information Service	Supply Logistic Pty Ltd	21 Ellingworth Pde Box Hill 3128	15843	Premise Match	104m	South
Management Consultants	Supply Logistics Pty Ltd	21 Ellingworth Pde Box Hill 3128	35975	Premise Match	104m	South
Computer Consultants	Supply logistics pty ltd	21 elingworth pde box hill 3128	36303	Premise Match	104m	South
Insurance Compamies - Life	MLC Life Ltd	13 Ellingworth Pde Box Hill 3128	27526	Premise Match	105m	South
Hospital Equipment &/or Supplies Mfrs &/or Imps &/or Dists	Sancella Pty Ltd	15 Ellingworth Pde Box Hill 3128	2780	Premise Match	105m	South
Medical Equipment &/or Supplies Mfrs &.or Imps &/or Dists	Sancella Pty Ltd	15 Ellingworth Pde Box Hill 3128	33674	Premise Match	105m	South
Perfume &/or Toilet Preparation Mfrs. &/or Imps. &/or W/salers.	Sancella Pty. Ltd..	15 Ellingworth Pde . Box Hill 3128	28735	Premise Match	105m	South
Financiers &/or Finance Agents	Scerrisons Pty Ltd	17 Elhingworth Pde Box Hill 3128	32470	Premise Match	105m	South
Insurance Consultants	Scerrisons Pty Ltd	17 Elligsworth Pde Box Hill 3128	3988	Premise Match	105m	South
Electronic Components Mfrs &/or Imps &/or Dists	Connect Electronics (Vic) Pty Ltd	46 Rutland Road Box Hill 3128	51968	Premise Match	107m	South East
Electronic Components Mfrs &/or Imps &/or Dists	Connect Electronics (Vic) Pty Ltd	46 Ruthland Rd Box Hill 3128	40357	Premise Match	107m	South East
Computer Accessories &/or Supplies	Connect electronics (Vic.) pty. Ltd.,	46 Rutland Rd., Box hill 3128	41490	Premise Match	107m	South East

Activity	Organisation	Address	Ref No.	Location Confidence	Distance	Direction
Cable Flexible &/or Wire Mfrs &/or Dists	connect eletronics(vic) pty ltd	46 Rulland Rd, Box hill 3128	41905	Premise Match	107m	South East
Auctioneers - Real Estate	Duncan & Weller Pty Ltd	580 Station St., Box Hill 3128	43353	Premise Match	107m	South West
Real Estate Agents	Duncan & Weller Pty Ltd	580 Station St Box Hill 3128	41414	Premise Match	107m	South West
Property Management	Duncan & Weller Pty. Ltd..	580 SEation St., Box Hilt 3128	56354	Premise Match	107m	South West
Builders &/or Building Contractors	Galvin Construction Group Pty.ltd.	9, Ellingworth Pde, Box Hill, 3128	57253	Premise Match	108m	South West
Inquiry Agents	Higgins J G	574 Satation St BoxHill 3128	41058	Premise Match	114m	South West
Barristers	vale p	574 station st box hill 3128	44841	Premise Match	114m	South West
Solicitors	Vale P	574 Station St Box Hill 3128	18953	Premise Match	114m	South West
Barristers	zigouras j n & Co	574 station st box hill 3128	42264	Premise Match	114m	South West
Solicitors	Zigouras J N & Co	574 Station St Box Hill 3128	44842	Premise Match	114m	South West
Theatrical Costumes &/or Supplies	Martin's Ballet Boutique	963 Whitehorse Rd., Box Hill. 3128	23366	Premise Match	115m	North West
Financiers &/or Finance Agents	Custom Credit Corp Ltd	6 Watts St Box Hill 3128	11012	Premise Match	119m	North
Accountants and Auditors	Harris J.C & Co	Room 5, 1st Fl., 6 Watts ST, Box Hill 3128	22592	Premise Match	119m	North
Accountants and Auditors	Lunstrom Dickson & Associates Pty Ltd	Room 6, 1st Fl., 6 Watts ST, Box Hill 3128	51546	Premise Match	119m	North
Information Service	WhiteHorse Information Syatem Ltd	Room 1 1 St Fl 6 Watts St Box Hill 3128	10051	Premise Match	119m	North
Accountants and Auditors	Young A E	Room 2 1st Fl., 6 Watts St., Box Hill 3128	46793	Premise Match	119m	North
Microfilm Service	Hudson Allen Ltd	48 Rutland Rd Box Hill 3128	20488	Premise Match	120m	South East
Canvas Goods Mfrs &/or Dists	whitehorse disposals	959 whitehorse rd,box hill 3128	22978	Premise Match	122m	North West
Caterers	Le bon Appetit Restaurant	pedestrain mall main st,box hill 3128	5717	Road Match	128m	West
Building Societies	Austalian natives association	8 watts box hill 3128	21997	Premise Match	135m	North
Investment Counsellors	Australian Natives Association	8 Watts St Box Hill 3128	56974	Premise Match	135m	North
Insurance Consultants	Australian Natives Association	8 Watts St Box Hill 3128	49811	Premise Match	135m	North
Earth Moving Machinery Parts Mfrs &/or Dists	Bcx hill asian food centre	562 station st,box hill 3128	56562	Premise Match	137m	South West
Banks	ANZ Banking Group Ltd	587 Station St, Box Hill 3128	10525	Premise Match	138m	West
Banks	National Australia Bank	595, Station Rd, Box Hill, 3128	44288	Premise Match	138m	West
Tea Merchants &/or Packers	Brasilia House	605 Station St., Box Hill. 3128	20052	Premise Match	139m	West
Earth Moving Machinery Parts Mfrs &/or Dists	Huong-long	607 station st,box hill 3128	20404	Premise Match	139m	West
Uniform Specialists	Crown Uniforms & White Coats	704 Station St Box Hill 3128	20419	Premise Match	141m	North West
Clothing Mfrs &/or W/salers - Uniforms & Smocks	crown uniforms&white coats	704 station st,Box hill 3128	44912	Premise Match	141m	North West
Clothing Mfrs &/or W/salers - Uniforms & Smocks	Work in style pty ltd	704 Station St., Box hill 3128	20420	Premise Match	141m	North West
Insurance Consultants	Mission Enterprises Aust Ltd	Rear 599 Satation St Box Hill 3128	21762	Premise Match	146m	West
Builders &/or Building Contractors	jennings a.v home Improvements	52 rutand rd box hill 3128	53814	Premise Match	148m	South East
Home Improvements	Jennings A V Home Improvements	52 Rutland Rd Box Hill 3128	10773	Premise Match	148m	South East

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

1991 Business to Business Directory Garages & Service Stations

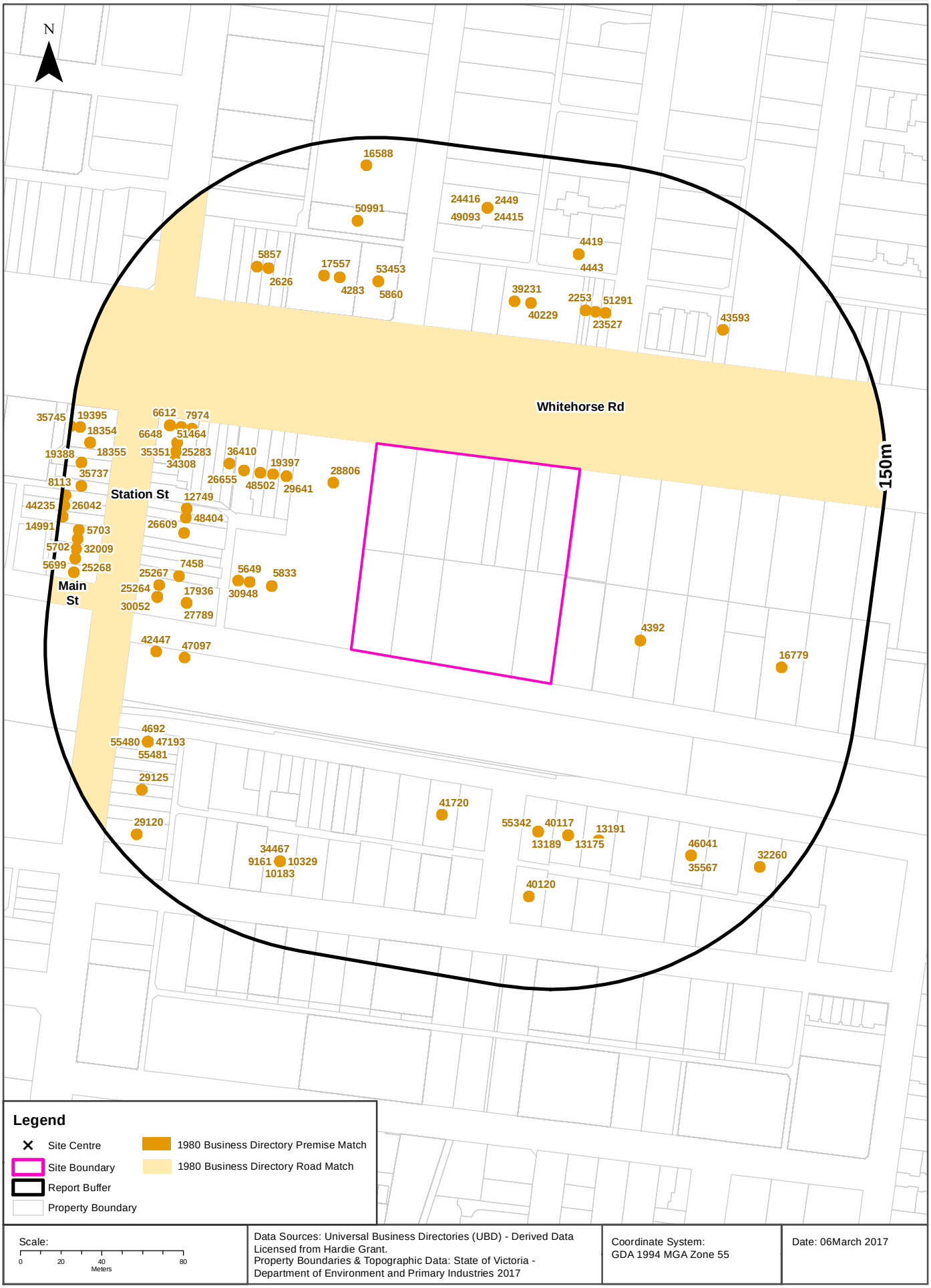
1991 UBD Business Directory Garages & Service Stations within 1km of the site:

Activity	Organisation	Address	Ref No.	Location Confidence	Distance	Direction
Motor Garages & Service Stations	Box Hill V W	55 Carrington Rd. Box Hill. 3128	44272	Premise Match	361m	West
Motor Garages & Service Stations	BP Box Hill Motors	757 Station St. Box Hill. 3128	48807	Premise Match	517m	North
Motor Garages & Service Stations	Viola Auto Mobiles Pty. Ltd..	10 Nelson Rd., Box Hill. 3128	31263	Premise Match	520m	North West
Motor Garages & Service Stations	BP Whitehorse Rad Service Station	839 Whitehorse Rd. Box Hill. 3128	10793	Premise Match	767m	West

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

Historical Business Directory Activity 1980

1000 Whitehorse Road, Box Hill, VIC 3128



Legend

- Site Centre
- Site Boundary
- Report Buffer
- Property Boundary
- 1980 Business Directory Premise Match
- 1980 Business Directory Road Match

Scale: 0 20 40 80 Meters

Data Sources: Universal Business Directories (UBD) - Derived Data Licensed from Hardie Grant.
Property Boundaries & Topographic Data: State of Victoria - Department of Environment and Primary Industries 2017

Coordinate System: GDA 1994 MGA Zone 55

Date: 06March 2017

Historical Business Directories

1000 Whitehorse Road, Box Hill, VIC 3128

1980 Business Directory Records

1980 UBD Business Directory Records within 150m of the site:

Activity	Premise	Ref No.	Location Confidence	Distance	Direction
CHEMISTS-PHARMACEUTICAL.	Grandolfo, Michael, Whitehorse Rd., Box Hill.	4288	Road Match	0m	East
H SCHOOLS &/ORCOLLEGES- PRIVATE &/OR PUBLIC.	Box Hill High School, Whitehorse Rd., Box Hill.	29655	Road Match	0m	East
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Amoco Australia Pty. Ltd., Whitehorse Rd., Box Hill.	324	Road Match	0m	East
BOOT &/OR SHOE REPAIRERS.	Agnent, M., 16 Arcade, Whitehorse Rd., Box Hill.	7696	Road Match	0m	East
FLORISTS.	Alladon Florists, 10 Arcade, Whitehorse Rd., Box Hill.	24306	Road Match	0m	East
BOOKSELLERS &/OR STATIONERS.	Spada Rose; 12 Arcade, Whitehorse Rd., Box Hill.	7483	Road Match	0m	East
GROCERS - LICENSED.	Murphy, J. J., 994 Whitehorse Rd., Box Hill.	28806	Premise Match	17m	North West
ASSOCIATIONS &/OR SOCIETIES.	Box Hill Infant Welfare Centre, 29 Bank St., Box Hill.	4392	Premise Match	39m	South East
H SCHOOLS &/ORCOLLEGES- PRIVATE &/OR PUBLIC.	Whitehorse Technical College, 984 Whitehorse Rd., Box Hill.	29641	Premise Match	40m	North West
BANKS.	Commercial Bank Australia, 9 Bank St., Box Hill.	5833	Premise Match	40m	West
DRESS FABRIC RETAILERS.	Spotlight Fabrics, 980 Whitehorse Rd., Box Hill,	19397	Premise Match	47m	North West
BANKS.	National Bank of Australasia, 5 Bank St., Box Hill.	5649	Premise Match	51m	West
RESTAURANTS.	Yang Tse, 978 Whitehorse Rd., Box Hill.	48502	Premise Match	53m	North West
HAIRDRESSERS-LADIES &/OR BEAUTY SALONS.	Henleys Beauty Bar, 3 Bank St., Box Hill	30948	Premise Match	57m	West
FURNISHERS - HOUSEHOLD.	Box Hill Furnishing Co., 974 Whitehorse Rd., Box Hill.	26655	Premise Match	61m	North West
MERCERS- MENS &/OR BOYS OUTFITTERS.	Alexanders, 972 Whitehorse Rd., Box Hill.	36410	Premise Match	68m	North West
PAINT &/OR VARNISH MFRS. &/OR DISTS.	Modern Products Pty. Ltd., 28 Rutland Rd., Box Hill	41720	Premise Match	70m	South
UPHOLSTERERS.	Dobell, B, E., 36 Rutland Rd., Box Hill.	55342	Premise Match	71m	South
MOTOR TRIMMERS.	Dobell, B. E., 36 Rutland Rd., Box Hill.	40117	Premise Match	71m	South
CARPET &/OR FLOOR COVERING LAYERS SUPPLIES.	Hotwill Carpets Pty. Ltd., 38 Rutland Rd., Box Hill.	13175	Premise Match	73m	South
CARPET &/OR FLOOR COVERING RETAILERS &/OR SPECIALISTS.	Hotwill Carpets Pty. Ltd., 38 Rutland Rd., Box Hill	13189	Premise Match	73m	South
MOTOR HIRE SERVICES - DRIVE YOURSELF &/OR RENTAL.	Budget Rent A Car, 1011 Whitehorse Rd., Box Hill.	39231	Premise Match	76m	North
MOTOR TYRE & TUBE SALES &/OR SERVICE.	Dunlop All Stars, 1013 Whitehorse Rd., Box Hill.	40229	Premise Match	76m	North
FINANCIERS &/OR FINANCE AGENTS.	B. F.C. Finance Pty. Ltd., 1027 Whitehorse Rd., Box Hill.	23527	Premise Match	76m	North East
SPORTING GOODS - RETAIL.	Grays Cycles, 1029 Whitehorse Rd., Box Hill.	51291	Premise Match	76m	North East
ACCOUNTANTS & AUDITORS.	McNeil, R. J., 50 Queen St., McPhall, E. F., 1025 Whitehorse Rd., Box Hill.	2253	Premise Match	76m	North East
BANKS.	Australia & New Zealand Banking Group Ltd., 995 Whitehorse Rd., Box Hill.	5860	Premise Match	77m	North
TAXATION CONSULTANTS.	Tax Aid, 993 Whitehorse Rd., Box Hill.	53453	Premise Match	77m	North

CARPET &/OR FLOOR COVERING RETAILERS &/OR SPECIALISTS.	Riddiford Carpet Services, 40 Rutland Rd., Box Hill	13191	Premise Match	78m	South East
RADIO &/OR TELEVISION SALES &/OR SERVICE &/OR HIRERS.	Wholesale Repairs, 6 Bank St., Box Hill.	47097	Premise Match	80m	West
ARTISTS SUPPLIES.	Touch of Earth, 987 Whitehorse Rd., Box Hill.	4283	Premise Match	81m	North West
DELICATESSENS.	Constantinou, S., 1b Bank St., Box Hill.	17936	Premise Match	81m	West
GIFT SHOPS.	Knighthood Glory Box, 1 Bank St., Box Hill.	27789	Premise Match	81m	West
CYCLE DEALERS &/OR ACCESSORIES.	Haines, Mike, 985 Whitehorse Rd.. Box Hill.	17557	Premise Match	84m	North West
BOOKSELLERS &/OR STATIONERS.	Angus & Robertson, 592 Station St., Box Hill.	7458	Premise Match	86m	West
CAKE & SANDWICH SHOPS.	De Canda, P. P. & F., 606 Station St., Box Hill.	12749	Premise Match	86m	West
RESTAURANTS.	Nicks Gourmet Restaurant, 604 Station St., Box Hill.	48404	Premise Match	86m	West
FURNISHERS - HOUSEHOLD.	Patersons Pty. Ltd., Home Furnishings, 600 Station St., Box Hill.	26609	Premise Match	86m	West
BOOT &/OR SHOE RETAILERS.	Eazywalkins Shoes, 964 Whitehorse Rd., Box Hill.	7974	Premise Match	89m	North West
FROCK & COAT SALONS.	Jeans Fashions, 962 Whitehorse Rd., Box Hill.	25372	Premise Match	94m	North West
PET SHOPS &/OR SUPPLIES.	Box Hill Pets Store, 4 Banks St., Box Hill.	42447	Premise Match	94m	West
LINGERIE SPECIALISTS - RETAIL	Barnett, Edna., 618 Station Rd., Box Hill.	35351	Premise Match	95m	West
FROCK & COAT SALONS.	Freedom Stores, 590 Station St., Box Hill.	25267	Premise Match	95m	West
LINGERIE SPECIALISTS - RETAIL	Marcia Lee Boutique, 618 Station St., Box Hill.	35379	Premise Match	95m	West
JEWELLERS &/OR WATCHMAKERS.	Newsome, L.L., 616 Station St., Box Hill.	34308	Premise Match	95m	West
FROCK & COAT SALONS.	Nyleks Fashion, 614 Station St., Box Hill.	25283	Premise Match	95m	West
PHYSICIANS & SURGEONS.	Booth, A. W. H., 1033 Whitehorse Rd., Box Hill.	43593	Premise Match	96m	North East
HAIRDRESSERS - MENS.	Ians Hairdressing, 588 Station St., Box Hill.	30052	Premise Match	96m	West
FROCK & COAT SALONS.	Pink Orpheus, 588 Station St., Box Hill.	25264	Premise Match	96m	West
ACCOUNTANTS & AUDITORS.	Mellody, R.J., 971 Whitehorse Rd., Box HID.	2626	Premise Match	99m	North West
BARRISTERS.	Boulton, K. M., 960 Whitehorse Rd., Box Hill.	6612	Premise Match	100m	North West
SOLICITORS.	Boulton, K. M., 960 Whitehorse Rd., Box Hill.	50612	Premise Match	100m	North West
SOLICITORS.	Fulton, J., 960 Whitehorse Rd., Bon Hill.	50744	Premise Match	100m	North West
BARRISTERS.	Fulton, J., 960 Whitehorse Rd., Box Hill.	6648	Premise Match	100m	North West
SPORTSWEAR RETAILERS.	Sabine Sportswear, 960 Whitehorse Rd., Box Hill.	51464	Premise Match	100m	North West
ASSOCIATIONS &/OR SOCIETIES.	Missionary Aviation Fellowship, 5 Court St., Box Hill.	4419	Premise Match	103m	North
ASSOCIATIONS &/OR SOCIETIES.	United Aborigines Mission, 5 Court Rd., Box Hill.	4443	Premise Match	103m	North
BANKS.	Bank of New South Wales, 969 Whitehorse Rd., Box Hill.	5857	Premise Match	103m	North West
MOTOR TRIMMERS.	Fontana Trimming Pty. Ltd., 25 Ellingworth Pde., Box Hill.	40120	Premise Match	103m	South
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Franks Auto Port, Station St., Box Hill.	1138	Road Match	106m	South West
MACHINE TOOLS	Fletcher Machine Tools Pty. Ltd., 46 Rutland Rd., Box Hill.	35567	Premise Match	107m	South East
POWER TOOLS.	Machinery Center, The, 46 Rutland Rd., Box Hill.	46041	Premise Match	107m	South East
AUCTIONEERS.	Ellingworthe Estate Agancy, 580 Station St., Bail Hill.	4785	Premise Match	107m	South West
REAL ESTATE AGENTS.	Ellingworths Estate Agency, 580 Station St, Box Hill	47193	Premise Match	107m	South West

VALUERS.	Ellingworths Estate Agency, 580 Station St., Box Hill.	55480	Premise Match	107m	South West
VALUERS.	Leach, T., 580 Station St. Box Hill.	55481	Premise Match	107m	South West
AUCTIONEERS.	Leach, T., 580 Station St. Box Hill.	4692	Premise Match	107m	South West
SOLICITORS.	Pippey, P. H., 1 Watts St., Box Hill.	50991	Premise Match	108m	North
BUILDERS - MASTER	Galvin, A. J., Pty. Ltd., 9 Ellingworth Pd, Box Hill.	9161	Premise Match	108m	South West
BUILDERS &/OR BUILDING CONTRACTORS.	Galvin, A., s: Pty. Ltd., 9 Ellingworth Pde., Box HID.	10329	Premise Match	108m	South West
BUILDERS &/OR BUILDING CONTRACTORS.	Jeffrey, F. T. Pty. Ltd., 9 Ellingworth Pde., Box Hill.	10183	Premise Match	108m	South West
JOINERY MANUFACTURERS.	Jeffrey, F. T. Pty. Ltd., 9 Ellingworth Pde., Box Hill.	34467	Premise Match	108m	South West
KINDERGARTENS &/OR CHILD MINDING CENTRES.	Saint Peters, 33 Bank St., Box Hill.	16779	Premise Match	109m	East
FLOWMETERS.	Shankel controls 4/6 Watts Street, Box Hill,	24415	Premise Match	119m	North
ACCOUNTANTS & AUDITORS.	Harris, J. C., 6 Watts St., Box Hill.	2449	Premise Match	119m	North
FLOWMETERS.	Shankel Controls, 4/6 Watts St., Box Hill.	24416	Premise Match	119m	North
SCALE &/OR WEIGHING MACHINE MFRS. &/OR DISTS. &/OR IMPS.	Shankel Controls, 4/6 Watts St., Box Hill.	49093	Premise Match	119m	North
GROCERS - RETAIL	Indochina Grocery, 570 Station St., Box Hill	29125	Premise Match	122m	South West
FRUITERERS &/OR GREENGROCERS.	D'Agostino, A., Main St., Box Hill.	26187	Road Match	128m	West
ARTISTS SUPPLIES.	Box HHI Arts & Craft Centre, Main St., Box Hill.	4284	Road Match	128m	West
PHYSICIANS & SURGEONS.	Brett, P. R., Main St., Box Hill.	43607	Road Match	128m	West
HOME IMPROVEMENTS.	Jennings, A. V. Home Improvements, 50 Rutland Rd., Box Hill.	32260	Premise Match	134m	South East
CLUBS &/OR SPORTING BODIES.	Box Hill Bowling Club, 5 Watt St., Box Hill	16588	Premise Match	135m	North
GROCERS - RETAIL	Kindlers Riteway, 562 Station St., Box Hill	29120	Premise Match	137m	South West
DENTISTS	Tweedie, I. M., 615 Station St., Box Hill	18354	Premise Match	137m	West
DENTISTS	Tweedie, M. G., 615 Station St., Box Hill.	18355	Premise Match	137m	West
BANKS.	Australia & New Zealand Banking Group Ltd., 587 Station St., Box Hill.	5699	Premise Match	138m	West
HEALTH FOODS	Box Hill Health Foods, 593 Station St., Box Hill.	32009	Premise Match	138m	West
BANKS.	C.B.C. Savings Bank Limited Box Hill: 595 Station St.	5702	Premise Match	138m	West
BANKS.	Commercial Banking Co. of Sydney Ltd., 597 Station St., Box Hill.	5703	Premise Match	138m	West
FROCK & COAT SALONS.	Mall Fashion House, The, 591 Station St., Box Hill.	25268	Premise Match	138m	West
MANCHESTER SPECIALISTS &/OR RETAILERS	Louis Economy Shop, 605 Station St., Box Hill.	35737	Premise Match	139m	West
DRESS FABRIC RETAILERS.	Suzannes Silk Stores Pty. Ltd., 609 Station St., Box Hill.	19388	Premise Match	140m	West
DRESS FABRIC RETAILERS.	Taits Corner Stores, 952 Whitehorse Rd., Box Hill.	19395	Premise Match	143m	West
FRUITERERS &/OR GREENGROCERS.	Ferlazzo, A., 601 Station St., Box Hill	26042	Premise Match	146m	West
PHYSICIANS & SURGEONS.	Murphy, J., 601a Station St., Box Hill.	44235	Premise Match	146m	West
BOOT &/OR SHOE RETAILERS.	Williams The Shoemen, 603 Station St., Box HHI.	8113	Premise Match	146m	West
CHEMISTS-PHARMACEUTICAL.	Williams, K. T., 599 Station St., Box Hill.	14991	Premise Match	146m	West
MANCHESTER SPECIALISTS &/OR RETAILERS	Showplace Pty. Ltd., 950 Whitehorse Rd., Box Hill.	35745	Premise Match	148m	West

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

1980 Business Directory Drycleaners, Garages & Service Stations

Drycleaners, Garages & Service Stations from the 1980 UBD Business Directory within 1km of the site:

Activity	Premise	Ref No.	Location Confidence	Distance	Direction
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Amoco Australia Pty. Ltd., Whitehorse Rd., Box Hill.	324	Road Match	0m	East
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Franks Auto Port, Station St., Box Hill.	1138	Road Match	106m	South West
DRY CLEANERS, PRESSERS &/OR DYERS.	One Hour Dry Cleaners, 21 Main St., Box Hill.	182	Premise Match	156m	West
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Garia Auto Port, 913 Whitehorse Rd., Box Hill.	1147	Premise Match	270m	North West
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Shell Cambridge Service Station, 521 Station St., Box Hill.	1721	Premise Match	291m	South West
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Caltex Oil Box Hill, 526 Station St., Box Hill.	796	Premise Match	307m	South West
DRY CLEANERS, PRESSERS &/OR DYERS.	Brown Gouge, 33 Whitehorse Plaza, Box Hill	75	Premise Match	397m	West
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Fiske Bros., 883 Whitehorse Rd., Box Hill.	1116	Premise Match	502m	West
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Caltex Oil Box Hill, 860 Whitehorse Rd., Box Hill.	797	Premise Match	560m	West
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Kays. Anthony Service Station, 771 Station St., Box Hill.	1373	Premise Match	591m	North
DRY CLEANERS, PRESSERS &/OR DYERS.	As New, Dry Cleaning, 440 Station St., Box Hill.	47	Premise Match	818m	South
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	BP Box Hill, Elgar Rd., Box Hill.	563	Road Match	904m	West
MOTOR GARAGES &/OR ENGINEERS &/OR SERVICE STATIONS.	Elgar Service Station Pty. Ltd., Elgar Rd., Mont Albert.	1064	Road Match	907m	West

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

Historical Business Directories

1000 Whitehorse Road, Box Hill, VIC 3128

1960 Business Directory Drycleaners, Garages & Service Stations

Drycleaners, Garages & Service Stations from the 1960 UBD Business Directory within 1km of the site:

Activity	Premise	Ref No.	Location Confidence	Distance	Direction
MOTOR GARAGES AND ENGINEERS	Box Hill Motors, 1020 Whitehorse Rd., Box Hill	347	Road Match	0m	East
MOTOR GARAGES AND ENGINEERS	Coffey, Alan, Motors Pty. Ltd., 1020 Whitehorse Rd., Box Hill	348	Road Match	0m	East
MOTOR GARAGES AND ENGINEERS	Motor Sales (Garage), 1020 Whitehorse Rd., Box Hill	349	Road Match	0m	East
MOTOR SERVICE STATIONS, PETROL, ETC.	Box Hill Tyre Service Pty. Ltd., 1013 Whitehorse Rd., Box Hill	346	Premise Match	68m	North
DRY CLEANERS, DYERS & PRESSERS	Medley, H., 21 Main St., Box Hill	94	Premise Match	156m	West
MOTOR SERVICE STATIONS, PETROL, ETC.	Holmes, H. M., 941 Whitehorse Rd., Box Hill	323	Premise Match	187m	North West
MOTOR GARAGES AND ENGINEERS	Semloh Motors, 941 Whitehorse Rd., Box Hill	324	Premise Match	187m	North West
MOTOR GARAGES AND ENGINEERS	McCay, A. W., 720 Station St., Box Hill	333	Premise Match	238m	North
MOTOR SERVICE STATIONS, PETROL, ETC.	Garla Auto Port, Cnr. Whitehorse Rd. & Bruce St., Box Hill	341	Road Intersection	289m	North West
MOTOR GARAGES AND ENGINEERS	Campbell's, D., Motors, 39-41 Carrington Rd., Box Hill	350	Premise Match	324m	South West
MOTOR SERVICE STATIONS, PETROL, ETC.	Underwoods Service Station, 74 Main St., Box Hill	331	Premise Match	343m	West
MOTOR GARAGES AND ENGINEERS	Crooke, R. J., 54 Carrington Rd., Box Hill	334	Premise Match	370m	West
MOTOR GARAGES AND ENGINEERS	Robinson, C. B., 54 Carrington Rd., Box Hill	335	Premise Match	370m	West
MOTOR SERVICE STATIONS, PETROL, ETC.	Box Hill: 901 Whitehorse Rd.	320	Premise Match	375m	West
MOTOR GARAGES AND ENGINEERS	Russell Burrows Pty. Ltd., 889 Whitehorse Rd., Box Hill	325	Premise Match	445m	West
MOTOR SERVICE STATIONS, PETROL, ETC.	Blue Hills Service Station, cnr. Whitehorse & Nelson Rds., Box Hill	340	Road Intersection	521m	West
MOTOR SERVICE STATIONS, PETROL, ETC.	Thames Service Station Caltex Service Station Cnr. Station & Thames Sts., Box Hill	344	Road Intersection	537m	North
MOTOR SERVICE STATIONS, PETROL, ETC.	Thames Service Station. Cnr. Station & Thames Sts, Box Hill	343	Road Intersection	537m	North
MOTOR SERVICE STATIONS, PETROL, ETC.	Cole, T. A., 860 Whitehorse Rd., Box Hill	327	Premise Match	560m	West
MOTOR SERVICE STATIONS, PETROL, ETC.	Lesock B & R 860 Whitehorse Rd	326	Premise Match	560m	West
MOTOR SERVICE STATIONS, PETROL, ETC.	Prices Service Station, 860 Whitehorse Rd., Box Hill	328	Premise Match	560m	West
MOTOR SERVICE STATIONS, PETROL, ETC.	Box Hill: Cnr. Station & Albion Sts.	342	Road Intersection	568m	South West
MOTOR SERVICE STATIONS, PETROL, ETC.	Barron Motor & Engineering Co., 500 Station St., Box Hill	336	Premise Match	582m	South
MOTOR GARAGES AND ENGINEERS	Barron Motor & Engineering Co., 500 Station St., Box Hill	338	Premise Match	582m	South
MOTOR GARAGES AND ENGINEERS	Barron Motor & Engineering Co 500 Station St., Box Hill	337	Premise Match	582m	South
MOTOR SERVICE STATIONS, PETROL, ETC.	Whelan, T., 72 Albion Rd., Box Hill	332	Premise Match	694m	South East
MOTOR SERVICE STATIONS, PETROL, ETC.	Elgar Service Station, cnr. Whitehorse & Elgar Rds., Box Hill	345	Road Intersection	895m	West

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

Historical Business to Business Directory Activity 1950

1000 Whitehorse Road, Box Hill, VIC 3128

Historical Business Directories

1000 Whitehorse Road, Box Hill, VIC 3128

1950 Business Directory Records

1950 UBD Business Directory Records within 150m of the site:

Activity	Premise	Ref No.	Location Confidence	Distance	Direction
CANVAS GOODS & CAMPING EQUIPMENT	Thompson, A. J. & M. E., 1016 Whitehorse Rd., Box Hill	13458	Road Match	0m	East
CONFECTIONERY SHOPS & MILK BARS	King, M. A., 1008 Whitehorse Rd., Box Hill	20055	Road Match	0m	East
DRY CLEANERS, DYERS & PRESSERS	Dennison's Tailorised Dry Cleaners & Pressers 1018 Whitehorse Rd., Box Hill	27280	Road Match	0m	East
ELECTRICAL SUPPLIES & APPLIANCES	Clack, F. T., 1010 Whitehorse Rd., Box Hill	28733	Road Match	0m	East
GROCERS	Kemp, P. E., 1012 Whitehorse Rd., Box Hill	40054	Road Match	0m	East
MOTOR CAR & TRUCK DEALERS	Smith, 0. H., 1020 Whitehorse Rd., Box Hill	57016	Road Match	0m	East
MOTOR GARAGES & ENGINEERS	Motor Sales (Garage) (0. H. Smith), 1020 Whitehorse Rd., Box Hill	58348	Road Match	0m	East
RADIO SALES & SERVICE	Clack, F. T., 1010 Whitehorse Rd., Box Hill	67762	Road Match	0m	East
PLUMBERS	Spear, H. G., 1010 Whitehorse Rd., Box Hill	65813	Road Match	0m	East
TOY DEALERS	Thompson, A. J, 1016 Whitehorse Rd, Box Hill	77788	Road Match	0m	East
SCHOOLS, COLLEGES, ETC.	Box Hill Girls' Technical School, Whitehorse Rd., Box Hill	70268	Road Match	0m	East
LOCAL BODIES	Box Hill City Council, Whitehorse Rd., Box Hill	81583	Road Match	0m	East
HALLS	Soldiers' Memorial Halls, Whitehorse Rd., Box Hill	43843	Road Match	0m	East
FUEL & ICE MERCHANTS	Box Hill Fuel Supply (L. Pollard), Whitehorse Rd., Box Hill	35523	Road Match	0m	East
ELECTRICITY SUPPLIERS	Box Hill City Council, Whitehorse. Rd., Box Hill	29155	Road Match	0m	East
CEMETERIES	Box Hill, Whitehorse Rd., Box Hill	15195	Road Match	0m	East
ASSOCIATIONS & SOCIETIES	Returned Sailors, Soldiers & Airmen's Imperial League of Australia, Whitehorse Rd., Box Hill	3406	Road Match	0m	East
HARDWARE-RETAIL	Ready, J., 998 Whitehorse Rd., Box Hill	44697	Premise Match	3m	North West
SADDLERS	Ready, F. C., 996 Whitehorse Rd., Box Hill	69848	Premise Match	8m	North West
HAIRDRESSERS & TOBACCONISTS-MEN'S	Trewartha, R., 994 Whitehorse Rd., Box Hill	42465	Premise Match	13m	North West
BOOT & SHOE RETAILERS	Payne, E. W., 992 Whitehorse Rd., Box Hill	7707	Premise Match	19m	North West
GROCERS	Moran & Cato Pty. Ltd., 990 Whitehorse Rd., Box Hill	40430	Premise Match	24m	North West
NEWSAGENTS	McKelvie & Son, 988 Whitehorse Rd., Box Hill	60817	Premise Match	29m	North West
CONFECTIONERY SHOPS & MILK BARS	Cullis, G. W., 986 Whitehorse Rd., Box Hill	19517	Premise Match	34m	North West
CAKE SHOPS, HOME COOKERIES & SANDWICH SHOPS	Cullis, G. W., 986 Whitehorse Rd., Box Hill	12791	Premise Match	34m	North West
BUTCHERS	Tacy, J., 984 Whitehorse Rd., Box Hill	11395	Premise Match	40m	North West
DENTISTS	Terry, W., 982 Whitehorse Rd., Box Hill	24012	Premise Match	45m	North West
FLORISTS	Roseforde Arts & Gardens Pty. Ltd., 980 Whitehorse Rd., Box Hill	33346	Premise Match	48m	North West
RIDING SCHOOLS	Box Hill Riding School, 7 Bank St. Box Hill	69549	Premise Match	51m	West

CHEMISTS & DRUGGISTS-RETAIL	Martin, C. J., 978 Whitehorse Rd., Box Hill	15902	Premise Match	53m	North West
FURNISHERS-HOUSEHOLD	Box Hill Furnishing Co., 976 Whitehorse Rd., Box Hill	36393	Premise Match	58m	North West
OPTICIANS & OPTOMETRISTS	Jackson, A., 974 Whitehorse Rd., Box Hill	61660	Premise Match	63m	West
JEWELLERS & WATCHMAKERS	Jackson, A., 974 Whitehorse Rd., Box Hill	48201	Premise Match	63m	West
FLORISTS	Robertson, J., 972 Whitehorse Rd., Box Hill	33340	Premise Match	68m	North West
CYCLE BUILDERS, DEALERS & ACCESSORIES	Stone, E. A., 972 Whitehorse Rd., Box Hill	21964	Premise Match	68m	North West
CYCLE BUILDERS, DEALERS & ACCESSORIES	Westbury Cycle, 972 Whitehorse Rd., Box Hill	21981	Premise Match	68m	North West
MOTOR TRIMMERS	Dobell, B. E., 36 Rutland Rd., Box Hill	59974	Premise Match	71m	South
UPHOLSTERERS	Dobell, B. E., 36 Rutland St., Box Hill	78907	Premise Match	71m	South
PASTRYCOOKS	Baird Shortbread Co., The, 20 Reutland Rd., Box Hill	63179	Premise Match	71m	South West
CAKE SHOPS, HOME COOKERIES & SANDWICH SHOPS	Baird Shortbread Co., 20 Rutland Rd., Box Hill	12687	Premise Match	71m	South West
FRUITERERS & GREENGROCERS	Russo, G., 970 Whitehorse Rd., Box Hill	35085	Premise Match	73m	West
BOOT & SHOE REPAIRERS	Barnes, H. S., 1021 Whitehorse Rd., Box Hill	6727	Premise Match	75m	North
FURNISHERS-HOUSEHOLD	Cochrane, M., 1023 Whitehorse Rd., Box Hill	36419	Premise Match	75m	North East
FURNITURE-SECONDHAND	Cockrane, M., 1023 Whitehorse Rd., Box Hill	37554	Premise Match	75m	North East
SECONDHAND DEALERS	Cochrane, M., 1023 Whitehorse Rd., Box Hill	70727	Premise Match	75m	North East
MOTOR TYRE DEALERS, RETREADERS, REPAIRERS & VULCANISE	Box Hill Tyre Service Pty. Ltd., 1013 Whitehorse Rd., Box Hill	60066	Premise Match	76m	North
MOTOR TYRE DEALERS, RETREADERS, REPAIRERS & VULCANISE	Box Hill Tyre Service Pty. Ltd.1013 Whitehorse Road, Box Hill	60067	Premise Match	76m	North
FURNISHINGS-WHOLESALE	Wilsoma Furnishing Co., 1025 Whitehorse Rd., Box Hill	36823	Premise Match	76m	North East
CLOTHING-SECONDHAND	Partridge, Mrs. H. E., 1029 Whitehorse Rd., Box Hill	17961	Premise Match	76m	North East
EMPLOYMENT AGENCIES	Partridge Mrs M.E-' 1029 Whitehorse Rd., Box Hill	29512	Premise Match	76m	North East
CONFECTIONERY SHOPS & MILK BARS	Maggs & Parfett, 991 Whitehorse Rd., Box Hill	20191	Premise Match	77m	North
CONFECTIONERY SHOPS & MILK BARS	Ward, H. J. & W. J, 968 Whitehorse Rd, Box Hill	20947	Premise Match	78m	West
CONFECTIONERY SHOPS & MILK BARS	Ward, H. J. & W. J., 968 Whitehorse Rd., Box Hill	19095	Premise Match	78m	West
MEDICAL PRACTITIONERS	Booth, A. W. H., 1031 Whitehorse Rd.,	53531	Premise Match	81m	North East
PLUMBERS	Hudson & Keen, 983 Whitehorse Rd., Box Hill	65270	Premise Match	82m	North West
BUILDERS' SUPPLIES	Hudson & Keen Pty. Ltd., 983-985 Whitehorse Rd., Box Hill	9967	Premise Match	82m	North West
GROCERS	Cronn, F. C., 966 Whitehorse Rd., Box Hill	39449	Premise Match	83m	West
HARDWARE-RETAIL	Hudson & Keen Pty. Ltd, 981-983 Whitehorse Rd, Box Hill	44529	Premise Match	84m	North West
ENGINEERS-FURNACE	Robson, W. J., 2 Watt St., Box Hill	29688	Premise Match	86m	North
FUEL & ICE MERCHANTS	Blake, li. II., 979 Whitehorse Rd., Box Hill	35515	Premise Match	86m	North West
PRODUCE MERCHANTS	Blake, K. E., 979 Whitehorse Rd., Box Hill	67081	Premise Match	86m	North West
SEEDSMEN & NURSERYMEN	Ellis, J. E., 594 Station St., Box Hill	71096	Premise Match	86m	West
GROCERS	Crofts Stores., 598 Station St., Box Hill;	39395	Premise Match	86m	West
HARDWARE-RETAIL	Chandler, D. & W., Ltd.,600- Station St., Box Hill	44381	Premise Match	86m	West
FLORISTS	Ellis, J. E., 594 Station St., Box Hill	33088	Premise Match	86m	West

FRUITERERS & GREENGROCERS	Cincotta, G., 604 Station St., Box Hill	34163	Premise Match	86m	West
DELICATESSENS	Dean, C. G., 606 Station St., 8ox Hill	22837	Premise Match	86m	West
CHEMISTS & DRUGGISTS-RETAIL (AMCAL)	Cheshire, F., 596 Station St., Box Hill	15578	Premise Match	86m	West
BOOT & SHOE RETAILERS	Ezywalkin Pty. Ltd.: 964 Whitehorse Rd., Box Hill	7490	Premise Match	89m	North West
TAILORS-LADIES' & GENT'S	Perrin, N, 977 Whitehorse Rd, Box Hill	75350	Premise Match	89m	North West
HARDWARE MANUFACTURERS	Jolly Boy Products, 975 Whitehorse Rd., Box Hill	44116	Premise Match	91m	North West
BABY CARRIAGE MANUFACTURERS	Jolly Boy Products, 975 Whitehorse Rd., Box Hill	3802	Premise Match	91m	North West
CHILDRENS CLOTHING SPECIALISTS	Lawrence, A. B., 975 Whitehorse Rd., Box Hill	16563	Premise Match	91m	North West
COPPERSMITHS	Jolly-Boy Products, 975 Whitehorse Rd., Box Hill	21199	Premise Match	91m	North West
CORSET SPECIALISTS	Barnett, Edna, 962 Whitehorse Rd., Box Hill	21348	Premise Match	94m	North West
DRAPERS-RETAIL	Barnett, Edna, 962 Whitehorse Rd., Box Hill	24688	Premise Match	94m	North West
PHOTOGRAPHERS-PORTRAIT	Baker, Geoffrey, 962 Whitehorse Rd., Box Hill	64091	Premise Match	94m	North West
DISPENSARIES	Box Hill, 10 Rutland Rd., Box Hill	24403	Premise Match	95m	South West
DRESS, FROCK, GOWN & BLOUSE SPECIALISTS	Finn, Joan, 614 Station St., Box Hill	25970	Premise Match	95m	West
FISHMONGERS	Johnson, J., 584 Station St., Box Hill	32551	Premise Match	95m	West
BANKS	Commonwealth Bank Of Australia, Box Hill: 588 Station St.	4730	Premise Match	96m	West
BUTCHERS	Lloyd, E., 608 Station St., Box Hill	10989	Premise Match	97m	West
BANKS	Commercial Bank Of Australia Box Hill: 610 Station St.	4679	Premise Match	98m	West
ACCOUNTANTS (PUBLIC) & AUDITORS	Harris, D. J., 960 Whitehorse Rd., Box Hill	1714	Premise Match	99m	North West
DRESSMAKERS & COSTUMIERS	Mackay, D. J., 960 Whitehorse Rd., Box Hill	26806	Premise Match	99m	North West
SOLICITORS	Fulton, J. H., 960 Whitehorse Rd., Box Hill	72951	Premise Match	99m	North West
HAIRDRESSERS & TOBACCONISTS-MEN'S	Larsen, L. W., 612 Station St., Box Hill	42099	Premise Match	99m	West
CHIROPODISTS	Coleman, William W., 2 Bank St., Box Hill	16989	Premise Match	100m	West
DRAPERS-RETAIL	Watkins, R. R., 958 Whitehorse Rd., Box Hill	25292	Premise Match	103m	North West
MERCERS, BOYS' & MEN'S OUTFITTERS	Watkins, R. R., 958 Whitehorse Rd., Box Hill	54838	Premise Match	103m	North West
DENTISTS	Prior, Herbert E., 2 Rutland Rd., Box Hill	23935	Premise Match	103m	South West
JEWELLERS-MANUFACTURING & WHOLESALE	Anketell, G. F., 27 Ellingworth Pde., Box Hill	48554	Premise Match	105m	South
CONFECTIONERY SHOPS & MILK BARS	Forbes, W. J., 967 Whitehorse Rd., Box Hill	19680	Premise Match	106m	North West
VALUERS	Ellingworth, E. J., 580 Station St., Box Hill	79253	Premise Match	107m	South West
DELICATESSENS	Sleswick, J. E. & M. E., 578 Station St., Box Hill	23307	Premise Match	109m	South West
BANKS	Union Bank Of Australia Ltd., Box Hill: 965 Whitehorse Rd.	5017	Premise Match	110m	North West
MILLINERS	Lyons, Josephine, 965 Whitehorse Rd., Box Hill	55848	Premise Match	110m	North West
FRUITERERS & GREENGROCERS	Penniment, A. E., 576 Station St., Box Hill	34917	Premise Match	111m	South West
FRUITERERS & GREENGROCERS	Clark, J E., 576 Station St., Box Hill	34170	Premise Match	111m	South West
BUSINESS AGENTS	Duke, Allan H., 963 Whitehorse Rd., Box Hill	10225	Premise Match	114m	North West
REAL ESTATE AGENTS	Duke, Allan H., 963 Whitehorse Rd. Box Hill	68652	Premise Match	114m	North West
REAL ESTATE AGENTS	Duke, Allan H., 963 Whitehorse Rd., Box Hill	68653	Premise Match	114m	North West

PHOTOGRAPHERS-GENERAL	Baker, 6eoffry, 961 Whitehorse Rd., Box Hill	64002	Premise Match	117m	North West
FUNERAL DIRECTORS	Padbury, A. W., & Co., Cnr. Station St. & Whitehorse Rd., Box Hill	36250	Road Intersection	117m	North West
DRESS, FROCK, GOWN & BLOUSE SPECIALISTS	Mannequin Modes, 572 Station St., Box Hill	26174	Premise Match	118m	South West
CLUBS & SPORTS BODIES	Box Hill Bowling Club, 5 Watt St., Box Hill	18061	Premise Match	120m	North
FUNERAL DIRECTORS	Woorrell, A., 959 Whitehorse Rd., Box Hill	36267	Premise Match	121m	North West
BUTCHERS	Turley, L., 568 Station St., Box Hill	11425	Premise Match	126m	South West
HALLS	Scout Halls, Main St., Box Hill	43814	Road Match	128m	West
DRY CLEANERS, DYERS & PRESSERS	Master- Dry Cleaners, Medley, H., 566 Station St., Box Hill	27431	Premise Match	130m	South West
BRICKLAYERS	Edis, J. C., 50 Rutland Rd. ,Box Hill	8236	Premise Match	134m	South East
HALLS	A.N.A. Halls, 8 Watt St., Box Hill	43527	Premise Match	135m	North
FUEL & ICE MERCHANTS	Eagles, C, 564 Station St, Box Hill	35645	Premise Match	137m	South West
MUSIC-TEACHERS OF	Lemin, N., 615 Station St., Box Hill	60364	Premise Match	137m	West
SOLICITORS	Russell, Leslie F., 615 Station St., Box Hill	73312	Premise Match	137m	West
UPHOLSTERERS	Gray, J. H., 613 Station St., Box Hill	78943	Premise Match	137m	West
CAKE SHOPS, HOME COOKERIES & SANDWICH SHOPS	Adams, Herbert, Pty. Ltd., 617 Station St., Box Hill	12640	Premise Match	137m	West
BABY WEAR SPECIALISTS	Reed, E., 593 Station St., Box Hill	4146	Premise Match	138m	West
BANKS	Bank Of Australasia, Box Hill: 587 Station St., Box Hill, E.ll	4590	Premise Match	138m	West
CHILDRENS CLOTHING SPECIALISTS	Reed, E. D., 593 Station St., Box Hill	16670	Premise Match	138m	West
DRAPERS-RETAIL	Tait's Corner Stores Pty. Ltd., 954 Whitehorse Rd., Box Hill	25239	Premise Match	138m	West
MUSIC-TEACHERS OF	Macalpin, M., 591 Station St., Box Hill	60370	Premise Match	138m	West
PASTRYCOOKS	Moyes, N. J., 591 Station St., Box Hill	63405	Premise Match	138m	West
TAILORS-LADIES' & GENT'S	Cot C. L., 607 Station St., Box Hill	75019	Premise Match	139m	West
DRAPERS-RETAIL	F. & G. Stores (0. Gilpin) Ltd., 609-611 Station St., Box Hill	24855	Premise Match	139m	West
CONFECTIONERY SHOPS & MILK BARS	Masorid, G. C-, 952 Whitehorse Rd., Box Hill	20209	Premise Match	142m	West
DRY CLEANERS, DYERS & PRESSERS	Ronalds Dry Cleaning Co. Pty. Ltd., 683 Station St., Box Hill	27571	Premise Match	146m	North West
FRUITERERS & GREENGROCERS	Ferlazzo, A., 601 Station St., Box Hill	34381	Premise Match	146m	West
CHEMISTS & DRUGGISTS-RETAIL	Williams, K. T., 599 Station St., Box Hill	16105	Premise Match	146m	West
BOOT & SHOE RETAILERS	Patterson's Shoes Pty. Ltd., 603 Station Rd., Box Hill	7706	Premise Match	146m	West
REAL ESTATE AGENTS	Ellingsworth, J. R., 560 Station St. Box Hill	68654	Premise Match	147m	South West
CHEMISTS & DRUGGISTS-RETAIL	Wood, Chas. P-, 950 Whitehorse Rd., Box Hill	16112	Premise Match	147m	West

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

1950 Business Directory Drycleaners, Garages & Service Stations

Drycleaners, Garages & Service Stations from the 1950 UBD Business Directory within 1km of the site:

Activity	Premise	Ref No.	Location Confidence	Distance	Direction
DRY CLEANERS, DYERS & PRESSERS	Dennison's Tailorised Dry Cleaners & Pressers 1018 Whitehorse Rd., Box Hill	27280	Road Match	0m	East
MOTOR GARAGES & ENGINEERS	Motor Sales (Garage) (0. H. Smith), 1020 Whitehorse Rd., Box Hill	58348	Road Match	0m	East
DRY CLEANERS, DYERS & PRESSERS	Master- Dry Cleaners, Medley, H., 566 Station St., Box Hill	27431	Premise Match	130m	South West
DRY CLEANERS, DYERS & PRESSERS	Ronalds Dry Cleaning Co. Pty. Ltd., 683 Station St., Box Hill	27571	Premise Match	146m	North West
MOTOR GARAGES & ENGINEERS	Ebsworth, A. N., 41 Main St., Box Hill	58097	Premise Match	156m	West
DRY CLEANERS, DYERS & PRESSERS	Gouge Pty. Ltd., 6 Main St., Box Hill	27331	Premise Match	159m	West
MOTOR SERVICE STATIONS-PETROL, ETC.	Holmes, H. M., 951 Whitehorse Rd., Box Hill	59633	Premise Match	171m	North West
MOTOR GARAGES & ENGINEERS	Semloh Motors, 941 Whitehorse Rd., Box Hill	58475	Premise Match	187m	North West
DRY CLEANERS, DYERS & PRESSERS	Billings, B. A., 3 Carrington Rd., Box Hill	27213	Premise Match	208m	South West
MOTOR GARAGES & ENGINEERS	McCay, A. W., 720 Station St., Box Hill	58320	Premise Match	238m	North
MOTOR GARAGES & ENGINEERS	Campbell, D. W., 41 Carrington Rd., Box Hill	57997	Premise Match	324m	South West
MOTOR GARAGES & ENGINEERS	Crooke, R. J., 54 Carrington Rd., Box Hill	58057	Premise Match	370m	West
MOTOR GARAGES & ENGINEERS	Cole, T. A., Service Station Pty. Ltd., 860 Whitehorse Rd., Box Hill	58037	Premise Match	560m	West
MOTOR SERVICE STATIONS-PETROL, ETC.	Cole, T. A., 860 Whitehorse Rd., Box Hill	59523	Premise Match	560m	West

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

Aerial Imagery 2009

1000 Whitehorse Road, Box Hill, VIC 3128

Scale:
0 25 50 100
Meters

Data Sources: Aerial Imagery © 2016 Google Inc, used with permission. Google and the Google logo are registered trademarks of Google Inc.

Coordinate System:
GDA 1994 MGA Zone 55

Date: 03March, 2017

Aerial Imagery 2000

1000 Whitehorse Road, Box Hill, VIC 3128

Scale: 0 25 50 100 Meters	Data Sources: Aerial Imagery © 2016 Google Inc, used with permission. Google and the Google logo are registered trademarks of Google Inc.	Coordinate System: GDA 1994 MGA Zone 55	Date: 03March, 2017

Aerial Imagery 1991

1000 Whitehorse Road, Box Hill, VIC 3128

Scale:
0 25 50 100
Meters

Data Sources: Historical Aerials: © Department of Environment & Primary Industries (Vicmap Topographic Mapping Program)

Coordinate System: GDA 1994 MGA Zone 55

Date: 03March, 2017

Aerial Imagery 1987

1000 Whitehorse Road, Box Hill, VIC 3128

Scale:
0 25 50 100
Meters

Data Sources: Historical Aerials: © Department of Environment & Primary Industries (Vicmap Topographic Mapping Program)

Coordinate System: GDA 1994 MGA Zone 55

Date: 03March, 2017

Aerial Imagery 1974

1000 Whitehorse Road, Box Hill, VIC 3128

Scale:
0 25 50 100
Meters

Data Sources: Historical Aerials: © Department of Environment & Primary Industries (Vicmap Topographic Mapping Program)

Coordinate System: GDA 1994 MGA Zone 55

Date: 03March, 2017

Aerial Imagery 1966

1000 Whitehorse Road, Box Hill, VIC 3128

Scale: 0 25 50 100 Meters	Data Sources: Historical Aerials: © Department of Environment & Primary Industries (Vicmap Topographic Mapping Program)	Coordinate System: GDA 1994 MGA Zone 55	Date: 03March, 2017

Aerial Imagery 1954

1000 Whitehorse Road, Box Hill, VIC 3128

Scale: 0 25 50 100 Meters	Data Sources: Historical Aerials: © Department of Environment & Primary Industries (Vicmap Topographic Mapping Program)	Coordinate System: GDA 1994 MGA Zone 55	Date: 03March, 2017

Aerial Imagery 1951

1000 Whitehorse Road, Box Hill, VIC 3128

Scale: 0 25 50 100 Meters	Data Sources: Historical Aerials: © Department of Environment & Primary Industries (Vicmap Topographic Mapping Program)	Coordinate System: GDA 1994 MGA Zone 55	Date: 03March, 2017

Aerial Imagery 1945

1000 Whitehorse Road, Box Hill, VIC 3128

Scale: 0 25 50 100 Meters	Data Sources: Historical Aerials: © Department of Environment & Primary Industries (Vicmap Topographic Mapping Program)	Coordinate System: GDA 1994 MGA Zone 55	Date: 03March, 2017

Aerial Imagery 1931

1000 Whitehorse Road, Box Hill, VIC 3128

Scale:
0 25 50 100
Meters

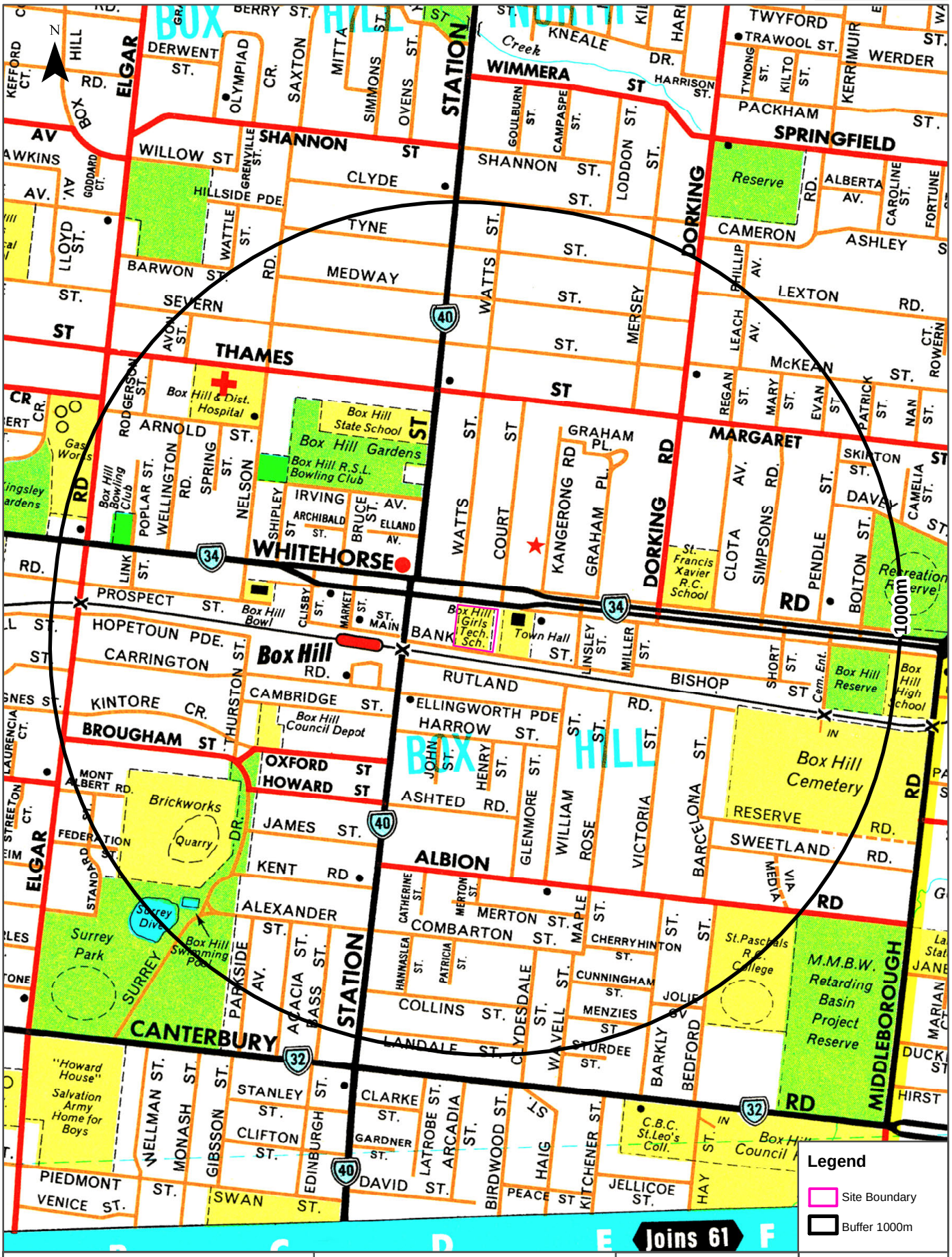
Data Sources: Historical Aerials: © Department of Environment & Primary Industries (Vicmap Topographic Mapping Program)

Coordinate System: GDA 1994 MGA Zone 55

Date: 03March, 2017

Historical Map ca.1966

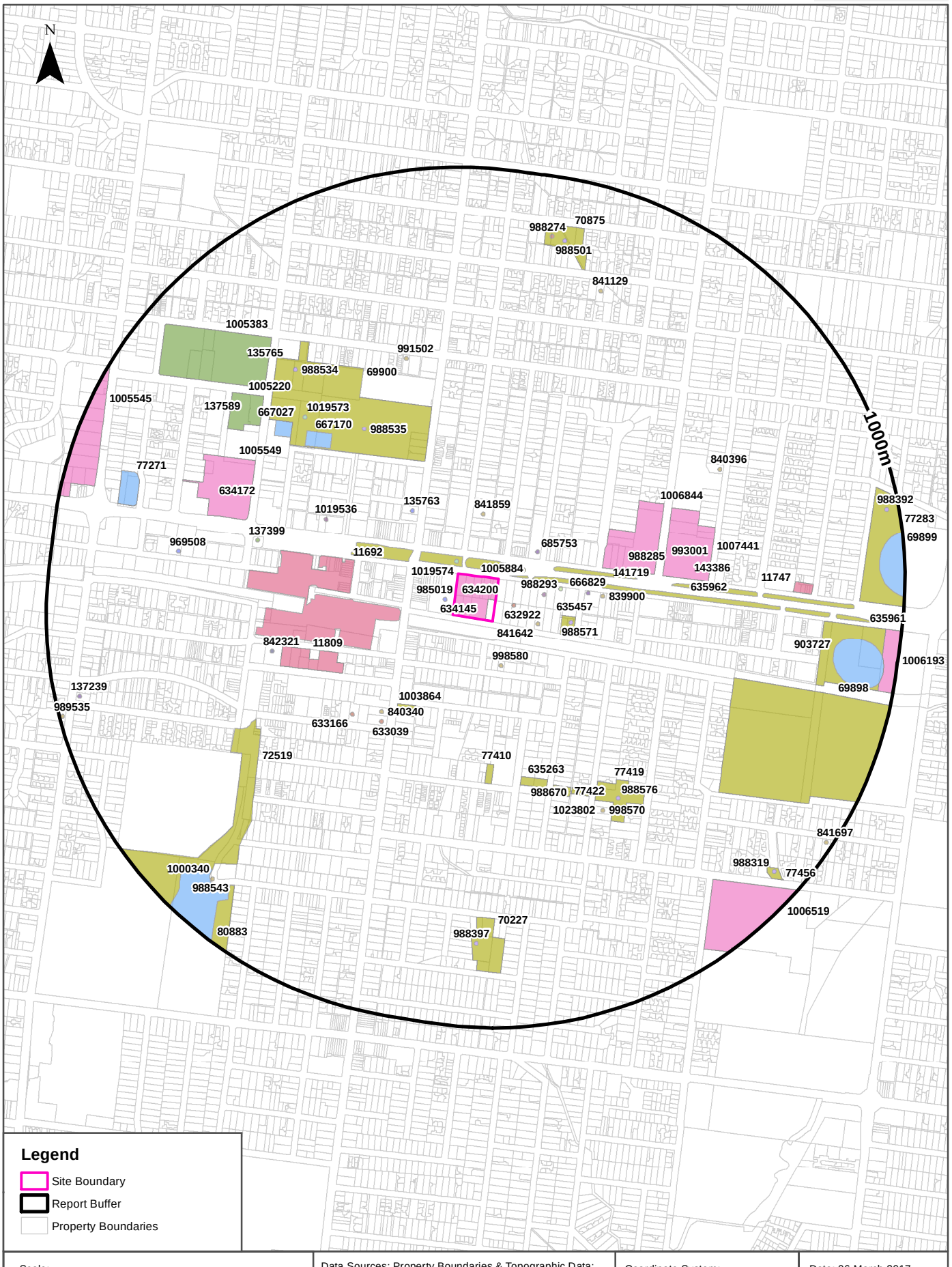
1000 Whitehorse Road, Box Hill, VIC 3128



Scale: 0 100 200 400 Meters	Data Sources: Maps reproduced from 1st Edition 1966 of the Melway Street Directory	Coordinate System: GDA 1994 MGA Zone 55	Date: 06 March 2017

Features of Interest

1000 Whitehorse Road, Box Hill, VIC 3128



Legend

- Site Boundary
- Report Buffer
- Property Boundaries

Scale: 0 50 100 200 Meters

Data Sources: Property Boundaries & Topographic Data: State of Victoria - Department of Environment and Primary Industries

Coordinate System: GDA 1994 MGA Zone 55

Date: 06 March 2017

Features of Interest

1000 Whitehorse Road, Box Hill, VIC 3128

Features of Interest

Features of Interest within 1km of the site:

Feature Id	Feature Type	Feature Sub Type	Name	Distance	Direction
634145	education centre	tertiary institution	Box Hill Institute Of Tafe	0m	Onsite
634200	education centre	tertiary institution	Box Hill Institute Of Tafe - Whitehorse Campus	0m	Onsite
1005884	education centre	education complex		0m	Onsite
635962	reserve	park	Whitehorse Road Linear Reserve	18m	East
985019	admin facility	office	Tax Offices	20m	West
1019574	landmark	monument	South Africa And China War Memorial	26m	North West
632922	community venue	hall	Box Hill Town Hall	40m	East
841642	care facility	child care	St Peters Anglican Kindergarten	105m	South East
998580	care facility	child care	Mothers Love Family Day Care	106m	South
988293	place of worship	church	St Peters Anglican Church	110m	East
685753	emergency facility	police station	Box Hill Police Station	111m	North East
11692	commercial facility	shopping centre		130m	West
702356	cultural centre	library	Box Hill Library	149m	East
841859	care facility	child care	Watts Street Childrens Centre	150m	North
635457	reserve	park	Linsley Street Reserve	166m	East
988571	recreational resource	playground		185m	East
135763	admin facility	custodial service	Box Hill Jsc	188m	North West
666829	emergency facility	fire station	Box Hill MFB	217m	East
1003864	reserve	park	Pioneer Park	242m	South West
839900	care facility	child care	Goodstart Early Learning Box Hill - Whitehorse Road	254m	East
1006844	education centre	education complex		256m	East
69900	reserve	gardens	Box Hill Gardens	288m	North West
840340	care facility	child care	Central Box Hill Childrens Services Centre	291m	South West
11809	commercial facility	shopping precinct		295m	West
633039	community venue	hall	Oxford Theatre	311m	South West
141719	education centre	secondary school	Our Lady Of Sion College	323m	East
633166	community venue	hall	Wesley Hall	344m	South West
1019536	place of worship	church	St Andrews Uniting Church	347m	North West
77410	reserve	park		350m	South
635263	reserve	park	Glenmore Street Reserve	387m	South
1007441	education centre	education complex		402m	East
988285	place of worship	church	St Francis Xaviers Church	416m	East

Feature Id	Feature Type	Feature Sub Type	Name	Distance	Direction
988535	recreational resource	playground		420m	North West
77422	reserve	park		428m	South East
667170	sport facility	tennis court		440m	North West
842321	communication service	telephone exchange	Box Hill Telephone Exchange	449m	West
988670	reserve	park		452m	South East
993001	care facility	child care	Camp Australia - St Francis Xavier School Oshc	458m	East
143386	education centre	primary school	St Francis Xaviers School	461m	East
77419	reserve	park		469m	South East
137399	hospital	day procedure centre	Vision Day Surgery Eastern	495m	West
988576	recreational resource	playground		527m	South East
667027	sport facility	bowling green	Box Hill Rsl Bowls Club	532m	North West
998570	care facility	child care	Biala Box Hill	532m	South East
1023802	care facility	child care	Biala Early Intervention Centre	532m	South East
1019573	landmark	monument	Box Hill War Memorial	535m	North West
1005549	education centre	education complex		536m	North West
991502	care facility	aged care	Uniting Agewell Box Hill	539m	North
72519	reserve	park	Surrey Park	548m	South West
634172	education centre	tertiary institution	Box Hill Institute Of Tafe - Nelson Campus	590m	West
840396	care facility	child care	Clota Cottage	601m	North East
69898	reserve	cemetery	Box Hill Cemetery	608m	South East
1005220	hospital	hospital complex		609m	North West
988534	recreational resource	playground		637m	North West
137589	hospital	general hospital	Epworth Freemasons, Box Hill	658m	North West
1005383	hospital	hospital complex		660m	North West
969508	admin facility	office	Box Hill Prospect St	684m	West
135765	hospital	general hospital (emergency)	Box Hill Hospital	714m	North West
11747	commercial facility	shopping precinct		723m	East
70227	reserve	park	Combarton Park	727m	South
841129	care facility	child care	Marys Little Lambs Early Learning Centre	746m	North
988397	recreational resource	playground		787m	South
70875	reserve	park	Halligan Park	788m	North
635961	reserve	park	Whitehorse Reserve	806m	East
77271	sport facility	bowling green	Box Hill Bowls Club	810m	West
1006519	education centre	education complex		833m	South East
903727	sport facility	sports ground	Howard Wilson Oval	840m	East
988501	recreational resource	playground		842m	North
988274	community venue	hall		847m	North
80883	sport facility	sports complex	Aqualink Box Hill	861m	South West
1000340	care facility	child care	Aqualink Box Hill Creche	874m	South West
77283	reserve	park		887m	East

Feature Id	Feature Type	Feature Sub Type	Name	Distance	Direction
77456	reserve	park		900m	South East
988543	sport facility	swimming pool	Aqualink Box Hill	914m	South West
988319	recreational resource	playground		920m	South East
1005545	education centre	education complex		920m	North West
137239	emergency facility	ambulance station	Doncaster Ambulance Station	935m	West
69899	sport facility	sports ground	Box Hill City Oval	936m	East
1006193	education centre	education complex		959m	East
988392	recreational resource	playground		963m	East
841697	care facility	child care	Sweetland Road Early Learning Centre	977m	South East
989535	care facility	aged care	Mont Albert Manor	987m	West

Features of Interest Data Custodian: State Government Victoria - Dept of Environment, Land, Water & Planning
Creative Commons 3.0 © Commonwealth of Australia http://creativecommons.org/licenses/by/3.0/au/deed.en

Hydrogeology & Groundwater

1000 Whitehorse Road, Box Hill, VIC 3128

Hydrogeology

Description of aquifers within report buffer:

Description	Distance	Direction
Fractured or fissured, extensive aquifers of low to moderate productivity	0m	Onsite

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

Groundwater Salinity

On-site Groundwater Salinity:

Groundwater Salinity	Percent Of Site Area
3,500 - 7,000 mg/l	100

Depth to Watertable

On-site Depth to Watertable:

Depth to Watertable	Percent Of Site Area
5 to 10 metres	96
10 to 20 metres	4

Surface Elevation

Approximate on-site Surface Elevation:

Surface Elevation
92 AHDm to 96 AHDm

Basement Elevation

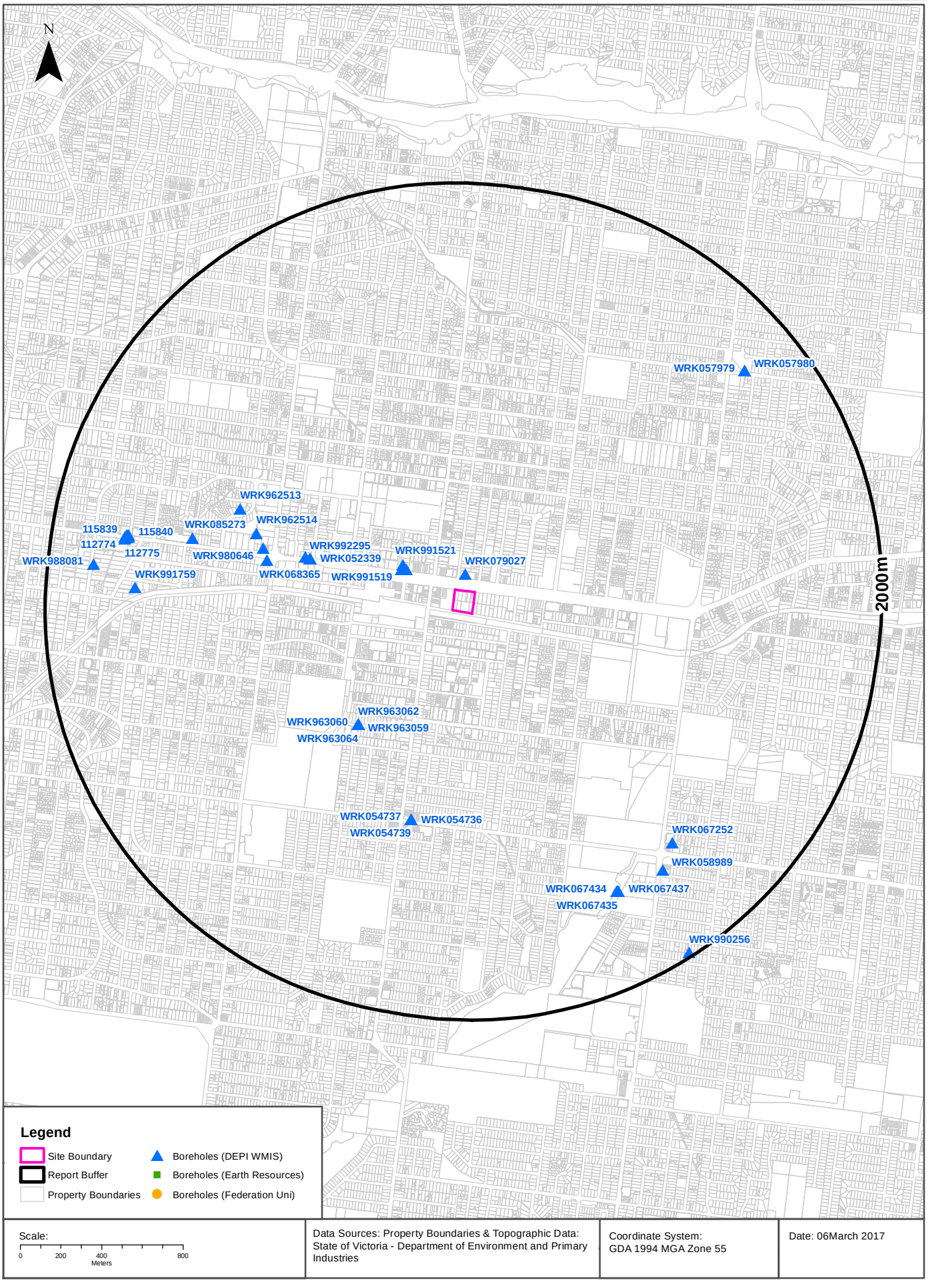
Approximate on-site Basement Elevation:

Basement Elevation - Basement Rocks comprise Lower Palaeozoic basement rocks that form the highlands and the crystalline basement; and Mesozoic rocks of the Otway and Gippsland basins both outcropping and subsurface
92 AHDm to 96 AHDm

Groundwater Data Custodian: State Government Victoria - Dept of Environment, Land, Water & Planning
Creative Commons 3.0 © Commonwealth of Australia http://creativecommons.org/licenses/by/3.0/au/deed.en

Groundwater Boreholes

1000 Whitehorse Road, Box Hill, VIC 3128



Groundwater Boreholes

1000 Whitehorse Road, Box Hill, VIC 3128

Boreholes (DEPI WMIS)

Boreholes from the Department of Environment and Primary Industries' Water Measurement Information System, within the report buffer:

Bore Id	Use Type	Drillers Log	Construction	Latest Water Levels	Geology	Completed Date	Dist (m)	Dir
WRK079027	Observation	0.00m-0.50m FILL 0.50m-2.50m CLAY 2.50m-16.00m SILTSTONE	0.00m-10.00m INNER LINING - CASING = Pvc 10.00m-16.00m INNER LINING - SCREEN = Pvc 0.00m-9.50m OUTER LINING - GRAVEL = Bentonite 9.50m-16.00m OUTER LINING - GRAVEL = Gravel		10.00m-16.00m Siltstone	2014-05-12	80	North
WRK991520							257	North West
WRK991519							281	North West
WRK991521							283	North West
WRK052339	Observation	0.00m-0.20m Concrete 0.20m-10.00m Siltstone	0.00m-7.00m INNER LINING - CASING = Pvc 7.00m-10.00m INNER LINING - SCREEN = Pvc 0.00m-0.30m OUTER LINING - GRAVEL = Cement 5.50m-6.50m OUTER LINING - GRAVEL = Bentonite 6.50m-10.00m OUTER LINING - GRAVEL = Gravel		0.00m-7.00m Siltstone 7.00m-10.00m Siltstone	2009-11-11	725	West
WRK963063	Groundwater Investigation	0.00m-1.00m TOP SOIL 1.00m-30.00m DRY WEATHERED SILTSTONE	0.00m-24.00m INNER LINING - CASING = Pvc 24.00m-30.00m INNER LINING - SCREEN = Pvc 0.00m-22.00m OUTER LINING - GRAVEL = Cement 22.00m-23.00m OUTER LINING - GRAVEL = Bentonite 23.00m-30.00m OUTER LINING - GRAVEL = Gravel			2003-10-15	727	South West
WRK963062	Groundwater Investigation	0.00m-1.00m TOP SOIL 1.00m-30.00m DRY WEATHERED SILTSTONE	0.00m-24.00m INNER LINING - CASING = Pvc 24.00m-30.00m INNER LINING - SCREEN = Pvc 0.00m-22.00m OUTER LINING - GRAVEL = Cement 22.00m-23.00m OUTER LINING - GRAVEL = Bentonite 23.00m-30.00m OUTER LINING - GRAVEL = Gravel			2003-10-15	727	South West
WRK963061	Groundwater Investigation	0.00m-1.00m TOP SOIL 1.00m-30.00m DRY WEATHERED SILTSTONE	0.00m-24.00m INNER LINING - CASING = Pvc 24.00m-30.00m INNER LINING - SCREEN = Pvc 0.00m-22.00m OUTER LINING - GRAVEL = Cement 22.00m-23.00m OUTER LINING - GRAVEL = Bentonite 23.00m-30.00m OUTER LINING - GRAVEL = Gravel			2003-10-15	727	South West
WRK963064	Groundwater Investigation	0.00m-1.00m TOP SOIL 1.00m-30.00m DRY WEATHERED SILTSTONE	0.00m-24.00m INNER LINING - CASING = Pvc 24.00m-30.00m INNER LINING - SCREEN = Pvc 0.00m-22.00m OUTER LINING - GRAVEL = Cement 22.00m-23.00m OUTER LINING - GRAVEL = Bentonite 23.00m-30.00m OUTER LINING - GRAVEL = Gravel			2003-10-15	727	South West
WRK963060	Groundwater Investigation	0.00m-1.00m TOP SOIL 1.00m-30.00m DRY WEATHERED SILTSTONE	0.00m-24.00m INNER LINING - CASING = Pvc 24.00m-30.00m INNER LINING - SCREEN = Pvc 0.00m-22.00m OUTER LINING - GRAVEL = Cement 22.00m-23.00m OUTER LINING - GRAVEL = Bentonite 23.00m-30.00m OUTER LINING - GRAVEL = Gravel			2003-10-15	727	South West

Bore Id	Use Type	Drillers Log	Construction	Latest Water Levels	Geology	Completed Date	Dist (m)	Dir
WRK963059	Groundwater Investigation	0.00m-1.00m TOP SOIL 1.00m-30.00m DRY WEATHERED SILTSTONE	0.00m-24.00m INNER LINING - CASING = Pvc 24.00m-30.00m INNER LINING - SCREEN = Pvc 0.00m-22.00m OUTER LINING - GRAVEL = Cement 22.00m-23.00m OUTER LINING - GRAVEL = Bentonite 23.00m-30.00m OUTER LINING - GRAVEL = Gravel			2003-10-15	727	South West
WRK992295	Groundwater Investigation	0.00m-0.35m fill/concrete and gravel 0.35m-0.60m silty clay 0.60m-10.90m siltstone	0.00m-7.90m INNER LINING - CASING = Pvc 7.90m-10.90m INNER LINING - SCREEN = Pvc 0.00m-0.30m OUTER LINING - GRAVEL = Cement 5.90m-6.90m OUTER LINING - GRAVEL = Bentonite 6.90m-10.90m OUTER LINING - GRAVEL = Gravel			2009-08-11	728	West
WRK992293							750	West
WRK068365	Observation	0.00m-1.00m FILL 1.00m-11.00m SILTSTONE	0.00m-1.50m INNER LINING - CASING = Pvc 1.50m-11.00m INNER LINING - SCREEN = Pvc 1.00m-11.00m OUTER LINING - GRAVEL = Gravel		1.50m-11.00m Siltstone	2012-03-05	932	West
WRK980646							963	West
WRK962514	Groundwater Investigation	0.00m-0.30m FILL 0.30m-1.70m YELLOW SILTY CLAY 1.70m-7.50m WEATHERED SILT STONE	0.00m-4.50m INNER LINING - CASING = Pvc 4.50m-7.50m INNER LINING - SCREEN = Pvc			2003-07-09	1012	West
WRK054739	Observation	0.00m-0.20m concrete 0.20m-1.00m fill 1.00m-11.00m siltstone	0.00m-6.50m INNER LINING - CASING = Pvc 6.50m-11.00m INNER LINING - SCREEN = Pvc 0.00m-5.00m OUTER LINING - GRAVEL = Cement 5.00m-6.00m OUTER LINING - GRAVEL = Bentonite 6.00m-11.00m OUTER LINING - GRAVEL = Gravel		0.00m-6.50m Siltstone 6.50m-11.00m Siltstone	2010-04-21	1047	South
WRK054736	Observation	0.00m-0.20m concrete 0.20m-1.00m fill 1.00m-11.00m siltstone	0.00m-6.50m INNER LINING - CASING = Pvc 6.50m-11.00m INNER LINING - SCREEN = Pvc 0.00m-5.00m OUTER LINING - GRAVEL = Cement 5.00m-6.00m OUTER LINING - GRAVEL = Bentonite 6.00m-11.00m OUTER LINING - GRAVEL = Gravel		0.00m-6.50m Siltstone 6.50m-11.00m Siltstone	2010-04-21	1047	South
WRK054737	Observation	0.00m-0.20m concrete 0.20m-1.00m fill 1.00m-11.00m siltstone	0.00m-6.50m INNER LINING - CASING = Pvc 6.50m-11.00m INNER LINING - SCREEN = Pvc 0.00m-5.00m OUTER LINING - GRAVEL = Cement 5.00m-6.00m OUTER LINING - GRAVEL = Bentonite 6.00m-11.00m OUTER LINING - GRAVEL = Gravel		0.00m-6.50m Siltstone 6.50m-11.00m Siltstone	2010-04-21	1048	South
WRK962513	Groundwater Investigation	0.00m-0.30m FILL 0.30m-1.70m YELLOW SILTY CLAY 1.70m-7.50m WEATHERED SILT STONE	0.00m-4.50m INNER LINING - CASING = Pvc 4.50m-7.50m INNER LINING - SCREEN = Pvc 0.00m-3.50m OUTER LINING - GRAVEL = Cement 3.50m-4.00m OUTER LINING - GRAVEL = Bentonite 4.00m-7.50m OUTER LINING - GRAVEL = Gravel			2003-07-09	1126	North West
WRK085273	Observation		0.00m-0.00m OUTER LINING - GRAVEL = Not Known			2014-12-01	1313	West
WRK067252	Observation					2011-01-25	1494	South East
WRK067436	Observation					2012-02-29	1538	South East
WRK067434	Observation	0.00m-5.00m CLAY	0.00m-1.50m INNER LINING - CASING = Pvc 1.50m-5.00m INNER LINING - SCREEN = Pvc 0.00m-1.00m OUTER LINING - GRAVEL = Bentonite 1.00m-5.00m OUTER LINING - GRAVEL = Gravel		1.50m-5.00m Clay	2012-02-29	1538	South East
WRK067435	Observation					2012-02-29	1541	South East
WRK067437	Observation					2012-02-29	1542	South East

Bore Id	Use Type	Drillers Log	Construction	Latest Water Levels	Geology	Completed Date	Dist (m)	Dir
WRK991759	Domestic & Stock	0.00m-6.00m clay 6.00m-32.00m mudstone 32.00m-119.00m bluestone	0.00m-101.00m INNER LINING - CASING = Pvc 101.00m-113.00m INNER LINING - SLOT = Pvc 113.00m-119.00m INNER LINING - CASING = Pvc 31.00m-32.00m OUTER LINING - GRAVEL = Bentonite			2009-08-18	1561	West
WRK058989	Observation	0.00m-6.00m CLAY 6.00m-14.00m SILTSTONE	0.00m-9.00m INNER LINING - CASING = Pvc 9.00m-14.00m INNER LINING - SCREEN = Pvc 0.00m-7.50m OUTER LINING - GRAVEL = Cement 7.50m-8.50m OUTER LINING - GRAVEL = Bentonite 8.50m-14.00m OUTER LINING - GRAVEL = Gravel		0.00m-9.00m Clay 9.00m-14.00m Siltstone	2010-10-04	1567	South East
112776	Groundwater Investigation	0.00m-0.50m CONCRETE / FILL TOP SOIL 0.50m-2.00m SILTY CLAY ORANGE-BROWN 2.00m-10.00m SILTSTONE / SANDSTONE ORANGE-BROWN WEATHERED	0.00m-7.00m INNER LINING - CASING = Pvc 7.00m-10.00m INNER LINING - SCREEN = Pvc 6.00m-6.40m OUTER LINING - GRAVEL = Bentonite 6.40m-10.00m OUTER LINING - GRAVEL = Gravel		7.00m-10.00m Siltstone	1992-03-04	1622	West
115840	Groundwater Investigation	0.00m-0.15m CONCRETE 0.15m-2.10m FILL SAND BROWN POORLY GRADED 2.10m-2.25m LAYER OF CONCRETE 2.25m-4.50m SAND BROWN MOIST FINE TO MEDIUM	-0.10m-1.00m INNER LINING - CASING = Pvc Class 18 4.00m-4.50m INNER LINING - SCREEN = Pvc Class 18 0.00m-0.75m OUTER LINING - GRAVEL = Cement 0.75m-1.00m OUTER LINING - GRAVEL = Bentonite 1.00m-4.50m OUTER LINING - GRAVEL = Gravel			1993-05-04	1624	West
115838	Groundwater Investigation	0.00m-1.10m FILL BROWN GRAVELLY SAND 1.10m-2.20m SILTY SAND ORANGE/BROWN 2.20m-5.00m MUDSTONE/SILTSONE ORANGE/BROWN MOIST 5.00m-5.70m SANDSTONE SOFT LAYERS	0.10m-1.70m INNER LINING - CASING = Pvc Class 18 1.70m-4.00m INNER LINING - SCREEN = Pvc Class 18 0.00m-1.45m OUTER LINING - GRAVEL = Cement 1.45m-1.60m OUTER LINING - GRAVEL = Bentonite 1.60m-5.70m OUTER LINING - GRAVEL = Gravel			1993-05-04	1627	West
115841	Groundwater Investigation	0.00m-1.10m FILLBROWN CLAYEY SAND 1.10m-2.00m SILTY SAND BROWN MOIST 2.00m-7.50m MUDSTONE/SILTSTONE LIGHT BROWN MOIST	-0.10m-2.30m INNER LINING - CASING = Pvc Class 18 6.70m-7.50m INNER LINING - SCREEN = Pvc Class 18 0.00m-2.00m OUTER LINING - GRAVEL = Cement 2.00m-2.30m OUTER LINING - GRAVEL = Bentonite 2.30m-7.50m OUTER LINING - GRAVEL = Gravel			1993-05-04	1632	West
112777	Groundwater Investigation	0.00m-0.50m CONCRETE/FILL/TOP SOIL 0.50m-2.00m SILTY CLAY ORANGE-BROWN 2.00m-10.00m SILTSTONE/SANDSTONE BROWN-GREY WEATHERED	0.00m-7.00m INNER LINING - CASING = Pvc 7.00m-10.00m INNER LINING - SCREEN = Pvc 5.70m-6.00m OUTER LINING - GRAVEL = Bentonite 6.00m-10.00m OUTER LINING - GRAVEL = Gravel			1992-03-04	1633	West
115839	Groundwater Investigation	0.00m-1.25m FILL BROWN GRAVELLY SAND 1.25m-2.00m CLAY ORANGE MOTTLED 2.00m-7.50m MUDSTONE/SILTSTONE ORANGE/BROWN	-0.10m-3.00m INNER LINING - CASING = Pvc Class 18 7.00m-7.50m INNER LINING - SCREEN = Pvc Class 18 0.00m-2.40m OUTER LINING - GRAVEL = Cement 2.40m-2.70m OUTER LINING - GRAVEL = Bentonite 2.70m-7.50m OUTER LINING - GRAVEL = Gravel			1993-05-04	1634	West
112775	Groundwater Investigation	0.00m-0.50m CONCRETE / SAND FILL 0.50m-1.60m SILTY CLAY BROWN MOIST 1.60m-3.00m SAND MEDIUM / FINE ORANGE-BROWN 3.00m-7.50m WEATHERED SANDSTONE RED-BROWN	0.00m-4.50m INNER LINING - CASING = Pvc 4.50m-7.50m INNER LINING - SCREEN = Pvc 2.70m-3.00m OUTER LINING - GRAVEL = Bentonite 3.00m-7.50m OUTER LINING - GRAVEL = Gravel		4.50m-7.50m Sandstone	1992-02-04	1640	West
112774	Groundwater Investigation	0.00m-0.40m CONCRETE / SAND FILL 0.40m-1.50m SILTY CLAY BROWN 1.50m-7.00m WEATHERED SILTSTONE BROWN / GREY IRONSTONE LAYERS	0.00m-2.30m INNER LINING - CASING = Pvc 2.30m-6.80m INNER LINING - SCREEN = Pvc 1.70m-2.00m OUTER LINING - GRAVEL = Bentonite 2.00m-7.00m OUTER LINING - GRAVEL = Gravel		2.30m-6.80m Siltstone	1992-02-04	1641	West
WRK057979	Observation					2010-08-04	1714	North East

Bore Id	Use Type	Drillers Log	Construction	Latest Water Levels	Geology	Completed Date	Dist (m)	Dir
WRK057980	Observation	0.00m-1.50m soil 1.50m-17.30m siltstone	0.00m-11.30m INNER LINING - CASING = Pvc 11.30m-17.30m INNER LINING - SCREEN = Pvc 0.00m-8.00m OUTER LINING - GRAVEL = Cement 8.00m-10.00m OUTER LINING - GRAVEL = Bentonite 10.00m-17.30m OUTER LINING - GRAVEL = Gravel		0.00m-11.30m Siltstone 11.30m-17.30m Siltstone	2010-08-04	1714	North East
WRK988081							1776	West
WRK990256							1978	South East

Boreholes WMIS Data Custodian: State Government Victoria - Dept of Environment, Land, Water & Planning
Creative Commons 3.0 © Commonwealth of Australia http://creativecommons.org/licenses/by/3.0/au/deed.en

Groundwater Boreholes

1000 Whitehorse Road, Box Hill, VIC 3128

Boreholes (Earth Resources Database)

Boreholes from the Earth Resources dataset, within the report buffer:

Bore Id	Bore Type	Company	Usage	Method	Status	Drill Date	Depth	Elevation	Accuracy (m)	Dist (m)	Direct
N/A	No records within buffer										

Boreholes Earth Resources Data Source: © The State of Victoria, Department of Economic Development, Jobs, Transport and Resources 2015. Creative Commons Attribution 3.0 Australia

Boreholes (Federation University)

Boreholes from the Federation University Australia dataset, within the report buffer:

Bore Id	Authority	Type	Uses	Initial TD	Log	Dist (m)	Direct
N/A	No records within buffer						

Boreholes FedUni Data Source: © Federation University Australia

Historical Mining Activity - Shafts

1000 Whitehorse Road, Box Hill, VIC 3128

Historical Mining Activity - Shafts

Mine Shaft Locations were collected by a variety of methods from 1869 in some areas of the state, mainly concentrating in Ballarat and Bendigo. In places a shaft may be recorded multiple times with a different source. In cases where several shaft locations are shown close together (generally with separations less than stated position errors) and they have different sources, it is possible that one shaft has been mapped several times. In cases where several shaft locations are shown close together but they have the same information source, it is possible that each shaft location represents a different shaft on the ground.

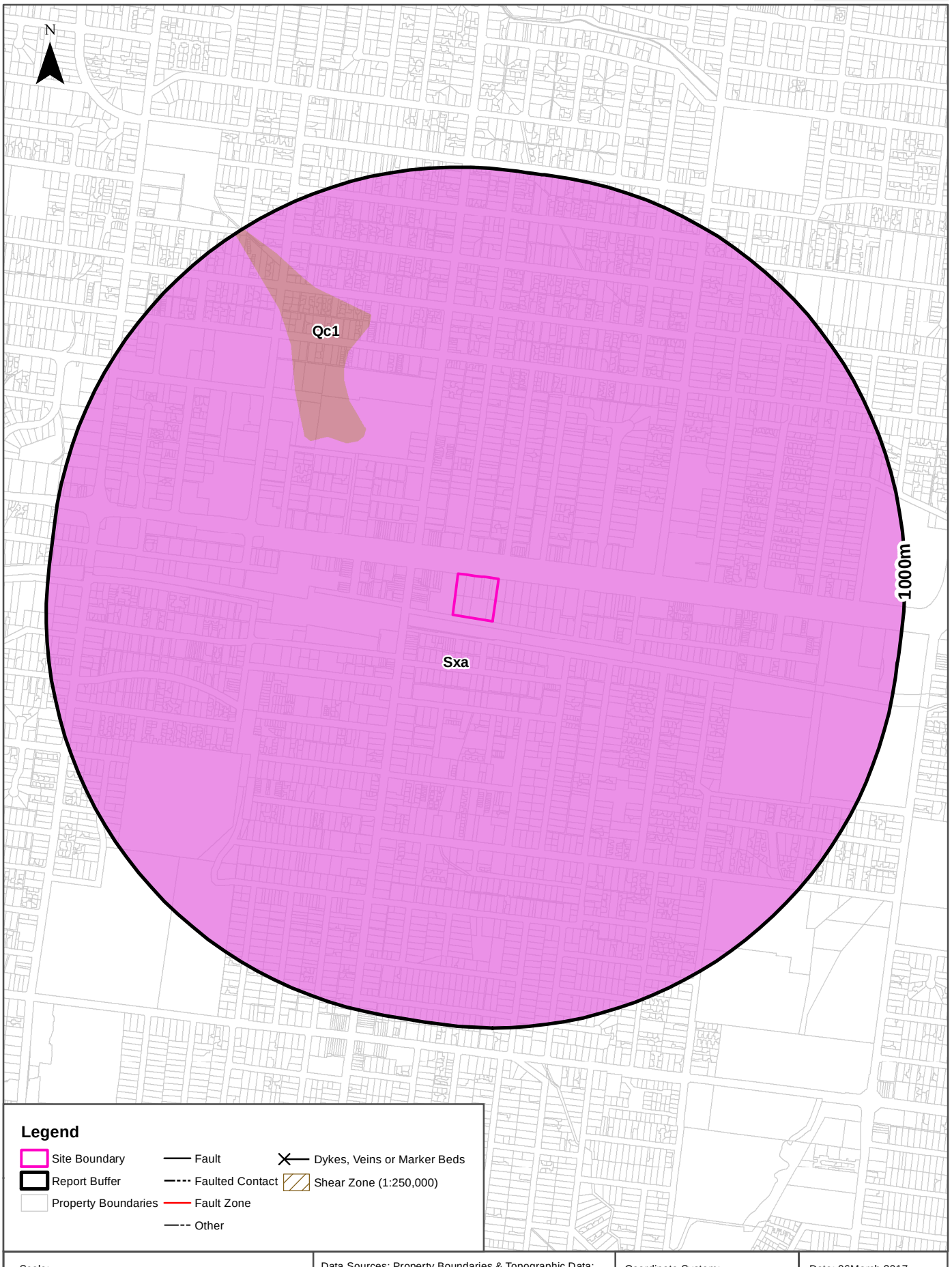
Historical Mine Shafts within the report buffer:

Map Id	Name	Source	Depth (m)	Collar (ft)	Fill/Cap Method	Location Desc	Location Accuracy	Distance	Direction
N/A	No records in buffer								

Historical Mining Activity Data Custodian: State Government Victoria - Dept of Economic Development, Jobs, Transport & Resources
Creative Commons 4.0 © Commonwealth of Australia https://creativecommons.org/licenses/by/4.0/

Geology 1:50,000

1000 Whitehorse Road, Box Hill, VIC 3128



Geology

1000 Whitehorse Road, Box Hill, VIC 3128

Geological Units

What are the Geological Units onsite?

Symbol	Name	Description	Geological Age	Lithology	Dataset
Sxa	Anderson Creek Formation(Sxa): generic	Sandstone: thick to thin bedded; siltstone, minor conglomerate	Llandovery to Wenlock	siltstone (major proportion); sandstone (significant); conglomerate (minor proportion)	1:50,000

What are the Geological Units within the report buffer?

Symbol	Name	Description	Geological Age	Lithology	Dataset
Qc1	colluvium(Qc1): generic	Diamictite, gravel, sand, silt, clay, rubble: sorting variable, usually poor; generally poorly rounded; clasts locally sourced; includes channel deposits with better rounding and sorting	Pliocene to Holocene	diamictite (dominant); gravel material (significant); sand (significant); silt material (significant)	1:50,000
Sxa	Anderson Creek Formation(Sxa): generic	Sandstone: thick to thin bedded; siltstone, minor conglomerate	Llandovery to Wenlock	siltstone (major proportion); sandstone (significant); conglomerate (minor proportion)	1:50,000

Geology Data Custodian: State Government Victoria - Dept of Economic Development, Jobs, Transport & Resources
Creative Commons 3.0 © Commonwealth of Australia http://creativecommons.org/licenses/by/3.0/au/deed.en

Geology

1000 Whitehorse Road, Box Hill, VIC 3128

Geological Structures

What are the Geological Faults or Faulted Contacts onsite?

Map Id	Type	Name	Contact	Positional Accuracy	Dataset
No features					1:50,000

What are the Dykes, Marker Beds and Veins onsite?

Map Id	Type	Name	Description	Positional Accuracy	Dataset
No features					1:50,000

What are the Shear Zones onsite (1:250,000 scale)?

Map Id	Type	Name	Description	Positional Accuracy	Dataset
No features					1:250,000

What are the Geological Faults or Faulted Contacts within the report buffer?

Map Id	Type	Name	Contact	Positional Accuracy	Dataset
No features					1:50,000

What are the Dykes, Marker Beds and Veins within the report buffer?

Map Id	Type	Name	Description	Positional Accuracy	Dataset
No features					1:50,000

What are the Shear Zones within the report buffer (1:250,000 scale)?

Map Id	Type	Name	Description	Positional Accuracy	Dataset
No features					1:250,000

Geology Data Custodian: State Government Victoria - Dept of Economic Development, Jobs, Transport & Resources
Creative Commons 3.0 © Commonwealth of Australia http://creativecommons.org/licenses/by/3.0/au/deed.en

Coastal Acid Sulfate Soils

1000 Whitehorse Road, Box Hill, VIC 3128

Coastal Acid Sulfate Soils

What are the on-site Coastal Acid Sulfate Soil types?

Coastal Acid Sulfate Soil Types
There are no Acid Sulfate areas onsite

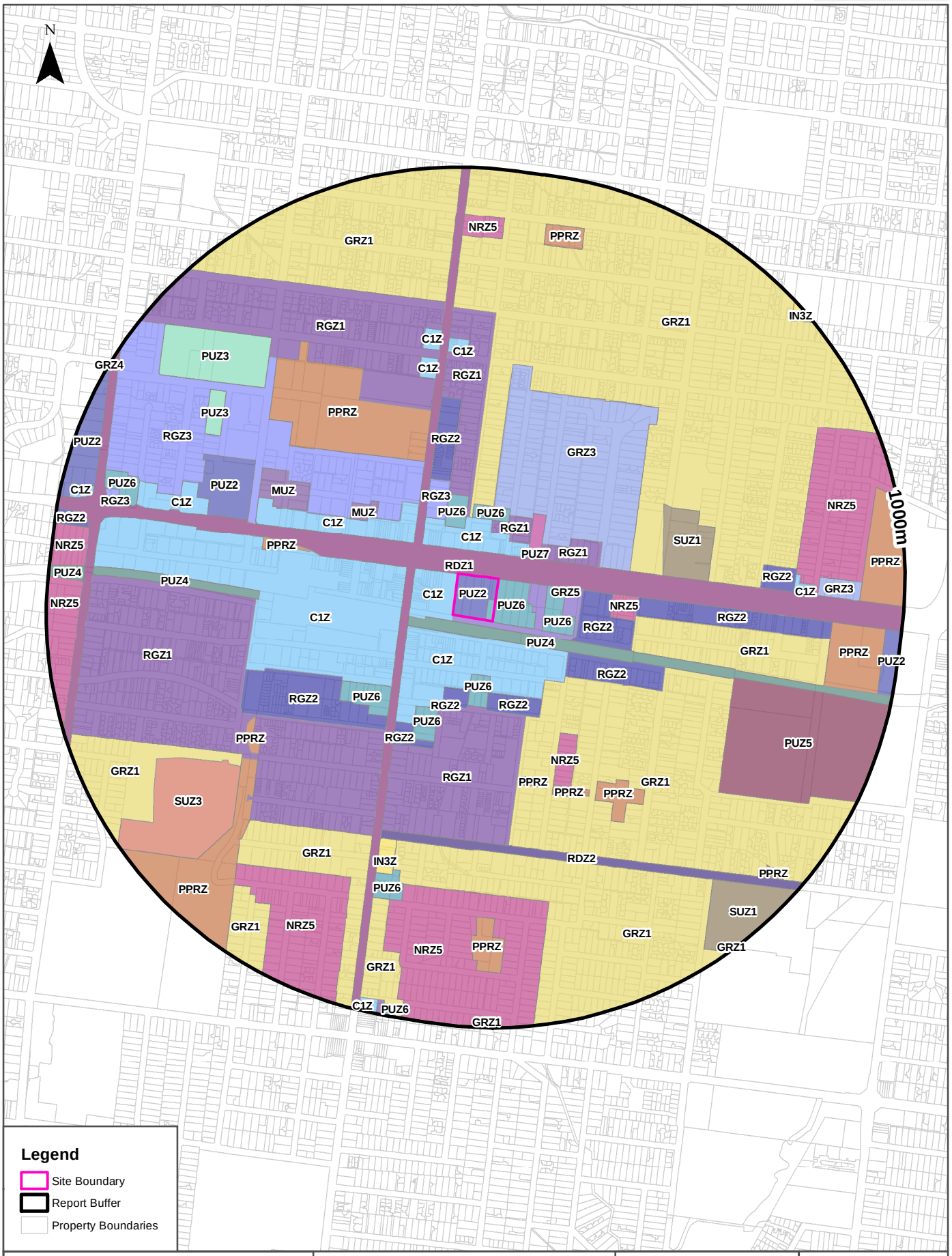
What are the Coastal Acid Sulfate Soil types within the report buffer?

Coastal Acid Sulfate Soil Types	Distance	Direction
There are no Acid Sulfate areas within the report buffer		

Coastal Acid Sulfate Data Custodian: State Government Victoria - Dept of Environment, Land, Water & Planning
Creative Commons 3.0 © Commonwealth of Australia http://creativecommons.org/licenses/by/3.0/au/deed.en

Planning Zones

1000 Whitehorse Road, Box Hill, VIC 3128



Planning Zones

1000 Whitehorse Road, Box Hill, VIC 3128

Planning Zones

Planning zones within the report buffer:

Zone Code	Description	Distance	Direction
PUZ2	PUBLIC USE ZONE - EDUCATION	0m	Onsite
PUZ6	PUBLIC USE ZONE - LOCAL GOVERNMENT	0m	Onsite
C1Z	COMMERCIAL 1 ZONE	0m	West
GRZ5	GENERAL RESIDENTIAL ZONE - SCHEDULE 5	0m	East
RDZ1	ROAD ZONE - CATEGORY 1	0m	East
PUZ4	PUBLIC USE ZONE - TRANSPORT	14m	East
C1Z	COMMERCIAL 1 ZONE	43m	South
C1Z	COMMERCIAL 1 ZONE	60m	North
PUZ7	PUBLIC USE ZONE - OTHER PUBLIC USE	88m	North East
RGZ1	RESIDENTIAL GROWTH ZONE - SCHEDULE 1	96m	North East
RGZ1	RESIDENTIAL GROWTH ZONE - SCHEDULE 1	111m	North East
PUZ6	PUBLIC USE ZONE - LOCAL GOVERNMENT	114m	North
PUZ6	PUBLIC USE ZONE - LOCAL GOVERNMENT	121m	East
C1Z	COMMERCIAL 1 ZONE	128m	West
C1Z	COMMERCIAL 1 ZONE	132m	North West
PUZ6	PUBLIC USE ZONE - LOCAL GOVERNMENT	135m	South
GRZ3	GENERAL RESIDENTIAL ZONE - SCHEDULE 3	136m	North East
RGZ3	RESIDENTIAL GROWTH ZONE - SCHEDULE 3	138m	North
PUZ6	PUBLIC USE ZONE - LOCAL GOVERNMENT	142m	North
GRZ1	GENERAL RESIDENTIAL ZONE - SCHEDULE 1	143m	North East
RGZ1	RESIDENTIAL GROWTH ZONE - SCHEDULE 1	143m	North
RGZ2	RESIDENTIAL GROWTH ZONE - SCHEDULE 2	175m	South
RGZ2	RESIDENTIAL GROWTH ZONE - SCHEDULE 2	176m	South
GRZ1	GENERAL RESIDENTIAL ZONE - SCHEDULE 1	191m	South East
RGZ3	RESIDENTIAL GROWTH ZONE - SCHEDULE 3	194m	North West
RGZ2	RESIDENTIAL GROWTH ZONE - SCHEDULE 2	198m	East
RGZ2	RESIDENTIAL GROWTH ZONE - SCHEDULE 2	199m	South East
RGZ1	RESIDENTIAL GROWTH ZONE - SCHEDULE 1	213m	South
RGZ2	RESIDENTIAL GROWTH ZONE - SCHEDULE 2	228m	North
PUZ6	PUBLIC USE ZONE - LOCAL GOVERNMENT	233m	South
PUZ6	PUBLIC USE ZONE - LOCAL GOVERNMENT	234m	South West
MUZ	MIXED USE ZONE	243m	North West
NRZ5	NEIGHBOURHOOD RESIDENTIAL ZONE - SCHEDULE 5	282m	East

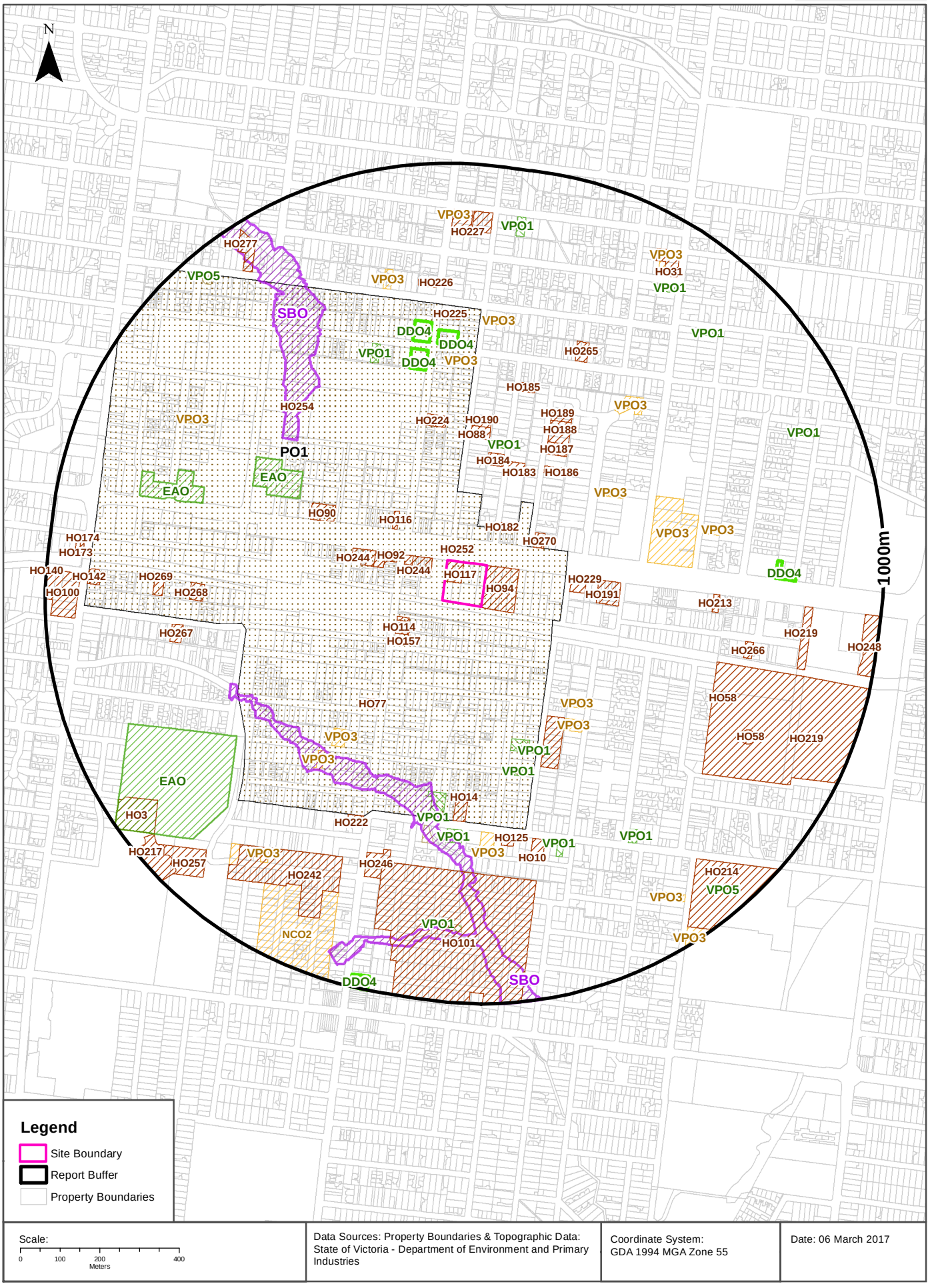
Zone Code	Description	Distance	Direction
RGZ2	RESIDENTIAL GROWTH ZONE - SCHEDULE 2	286m	South West
PPRZ	PUBLIC PARK AND RECREATION ZONE	288m	North West
RGZ2	RESIDENTIAL GROWTH ZONE - SCHEDULE 2	297m	South West
NRZ5	NEIGHBOURHOOD RESIDENTIAL ZONE - SCHEDULE 5	319m	South East
RGZ1	RESIDENTIAL GROWTH ZONE - SCHEDULE 1	328m	West
GRZ1	GENERAL RESIDENTIAL ZONE - SCHEDULE 1	345m	East
RGZ2	RESIDENTIAL GROWTH ZONE - SCHEDULE 2	345m	East
PPRZ	PUBLIC PARK AND RECREATION ZONE	367m	West
PPRZ	PUBLIC PARK AND RECREATION ZONE	387m	South
SUZ1	SPECIAL USE ZONE - SCHEDULE 1	402m	East
MUZ	MIXED USE ZONE	403m	North West
RGZ1	RESIDENTIAL GROWTH ZONE - SCHEDULE 1	409m	North West
PPRZ	PUBLIC PARK AND RECREATION ZONE	428m	South East
PPRZ	PUBLIC PARK AND RECREATION ZONE	452m	South East
PPRZ	PUBLIC PARK AND RECREATION ZONE	469m	South East
PUZ4	PUBLIC USE ZONE - TRANSPORT	479m	West
C1Z	COMMERCIAL 1 ZONE	482m	North
PUZ2	PUBLIC USE ZONE - EDUCATION	536m	North West
C1Z	COMMERCIAL 1 ZONE	540m	North
RDZ2	ROAD ZONE - CATEGORY 2	542m	South East
PPRZ	PUBLIC PARK AND RECREATION ZONE	546m	South West
C1Z	COMMERCIAL 1 ZONE	551m	North
GRZ1	GENERAL RESIDENTIAL ZONE - SCHEDULE 1	563m	South
IN3Z	INDUSTRIAL 3 ZONE	571m	South
GRZ1	GENERAL RESIDENTIAL ZONE - SCHEDULE 1	578m	South West
PPRZ	PUBLIC PARK AND RECREATION ZONE	598m	South West
PUZ5	PUBLIC USE ZONE - CEMETERY/CREMATORIUM	608m	South East
GRZ1	GENERAL RESIDENTIAL ZONE - SCHEDULE 1	621m	South West
C1Z	COMMERCIAL 1 ZONE	634m	West
SUZ3	SPECIAL USE ZONE - SCHEDULE 3	642m	South West
PUZ6	PUBLIC USE ZONE - LOCAL GOVERNMENT	643m	South
RGZ2	RESIDENTIAL GROWTH ZONE - SCHEDULE 2	643m	East
PUZ3	PUBLIC USE ZONE - HEALTH AND COMMUNITY	660m	North West
NRZ5	NEIGHBOURHOOD RESIDENTIAL ZONE - SCHEDULE 5	667m	South
GRZ1	GENERAL RESIDENTIAL ZONE - SCHEDULE 1	670m	North
PUZ3	PUBLIC USE ZONE - HEALTH AND COMMUNITY	676m	North West
NRZ5	NEIGHBOURHOOD RESIDENTIAL ZONE - SCHEDULE 5	693m	South West
C1Z	COMMERCIAL 1 ZONE	725m	East
PPRZ	PUBLIC PARK AND RECREATION ZONE	727m	South
NRZ5	NEIGHBOURHOOD RESIDENTIAL ZONE - SCHEDULE 5	731m	East

Zone Code	Description	Distance	Direction
GRZ3	GENERAL RESIDENTIAL ZONE - SCHEDULE 3	784m	East
PUZ6	PUBLIC USE ZONE - LOCAL GOVERNMENT	810m	West
PPRZ	PUBLIC PARK AND RECREATION ZONE	826m	East
NRZ5	NEIGHBOURHOOD RESIDENTIAL ZONE - SCHEDULE 5	828m	North
PPRZ	PUBLIC PARK AND RECREATION ZONE	829m	North
SUZ1	SPECIAL USE ZONE - SCHEDULE 1	833m	South East
GRZ1	GENERAL RESIDENTIAL ZONE - SCHEDULE 1	834m	South West
RGZ3	RESIDENTIAL GROWTH ZONE - SCHEDULE 3	855m	West
PPRZ	PUBLIC PARK AND RECREATION ZONE	887m	East
PPRZ	PUBLIC PARK AND RECREATION ZONE	900m	South East
NRZ5	NEIGHBOURHOOD RESIDENTIAL ZONE - SCHEDULE 5	912m	West
PUZ4	PUBLIC USE ZONE - TRANSPORT	913m	West
NRZ5	NEIGHBOURHOOD RESIDENTIAL ZONE - SCHEDULE 5	914m	West
RGZ2	RESIDENTIAL GROWTH ZONE - SCHEDULE 2	915m	West
C1Z	COMMERCIAL 1 ZONE	920m	West
PUZ2	PUBLIC USE ZONE - EDUCATION	920m	North West
PUZ2	PUBLIC USE ZONE - EDUCATION	959m	East
IN3Z	INDUSTRIAL 3 ZONE	960m	North East
MUZ	MIXED USE ZONE	963m	South
C1Z	COMMERCIAL 1 ZONE	964m	South
PUZ6	PUBLIC USE ZONE - LOCAL GOVERNMENT	970m	South
GRZ4	GENERAL RESIDENTIAL ZONE - SCHEDULE 4	997m	North West

Planning Zone Data Custodian: State Government Victoria - Dept of Environment, Land, Water & Planning
Creative Commons 3.0 © Commonwealth of Australia http://creativecommons.org/licenses/by/3.0/au/deed.en

Planning Overlays

1000 Whitehorse Road, Box Hill, VIC 3128



Planning Overlays

1000 Whitehorse Road, Box Hill, VIC 3128

Planning Overlays

Planning overlays within the report buffer:

Zone Code	Description	Distance	Direction
PO1	PARKING OVERLAY - PRECINCT 1	0m	Onsite
HO117	HERITAGE OVERLAY (HO117)	0m	Onsite
HO94	HERITAGE OVERLAY (HO94)	0m	East
HO252	HERITAGE OVERLAY (HO252)	27m	North
HO244	HERITAGE OVERLAY (HO244)	39m	North West
HO93	HERITAGE OVERLAY (HO93)	88m	North West
HO115	HERITAGE OVERLAY (HO115)	94m	South West
HO182	HERITAGE OVERLAY (HO182)	99m	North East
HO114	HERITAGE OVERLAY (HO114)	106m	South West
HO157	HERITAGE OVERLAY (HO157)	116m	South West
HO270	HERITAGE OVERLAY (HO270)	124m	North East
HO92	HERITAGE OVERLAY (HO92)	128m	West
HO116	HERITAGE OVERLAY (HO116)	149m	North West
HO244	HERITAGE OVERLAY (HO244)	151m	West
HO91	HERITAGE OVERLAY (HO91)	158m	West
HO244	HERITAGE OVERLAY (HO244)	182m	West
HO229	HERITAGE OVERLAY (HO229)	214m	East
HO183	HERITAGE OVERLAY (HO183)	238m	North East
HO184	HERITAGE OVERLAY (HO184)	252m	North
HO186	HERITAGE OVERLAY (HO186)	275m	North East
HO191	HERITAGE OVERLAY (HO191)	282m	East
HO77	HERITAGE OVERLAY (HO77)	297m	South West
VPO1	VEGETATION PROTECTION OVERLAY - SCHEDULE 1	298m	North
HO90	HERITAGE OVERLAY (HO90)	303m	North West
HO88	HERITAGE OVERLAY (HO88)	314m	North
VPO3	VEGETATION PROTECTION OVERLAY - SCHEDULE 3	315m	South East
HO187	HERITAGE OVERLAY (HO187)	318m	North East
HO212	HERITAGE OVERLAY (HO212)	319m	South East
VPO3	VEGETATION PROTECTION OVERLAY - SCHEDULE 3	331m	North East
HO224	HERITAGE OVERLAY (HO224)	334m	North
VPO1	VEGETATION PROTECTION OVERLAY - SCHEDULE 1	340m	South
HO190	HERITAGE OVERLAY (HO190)	344m	North
HO188	HERITAGE OVERLAY (HO188)	346m	North East

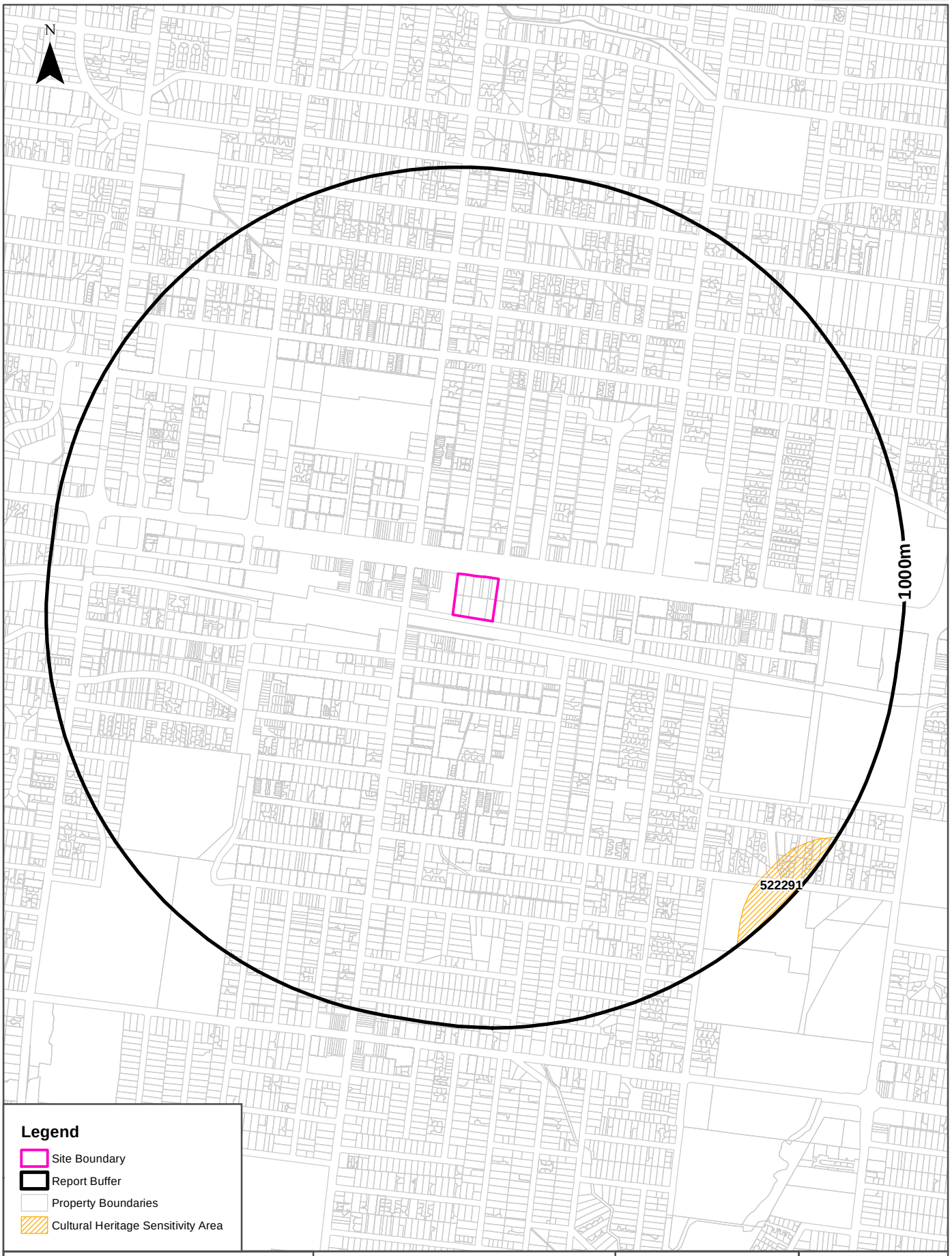
Zone Code	Description	Distance	Direction
VPO3	VEGETATION PROTECTION OVERLAY - SCHEDULE 3	351m	South East
HO189	HERITAGE OVERLAY (HO189)	399m	North East
VPO3	VEGETATION PROTECTION OVERLAY - SCHEDULE 3	402m	East
EAO	ENVIRONMENTAL AUDIT OVERLAY	405m	North West
VPO3	VEGETATION PROTECTION OVERLAY - SCHEDULE 3	406m	South West
VPO1	VEGETATION PROTECTION OVERLAY - SCHEDULE 1	407m	South
HO185	HERITAGE OVERLAY (HO185)	448m	North
SBO	SPECIAL BUILDING OVERLAY	455m	South
HO14	HERITAGE OVERLAY (HO14)	477m	South
VPO1	VEGETATION PROTECTION OVERLAY - SCHEDULE 1	478m	South
VPO3	VEGETATION PROTECTION OVERLAY - SCHEDULE 3	482m	South West
DDO4	DESIGN AND DEVELOPMENT OVERLAY - SCHEDULE 4	482m	North
SBO	SPECIAL BUILDING OVERLAY	485m	North West
VPO3	VEGETATION PROTECTION OVERLAY - SCHEDULE 3	501m	North
VPO3	VEGETATION PROTECTION OVERLAY - SCHEDULE 3	506m	North East
VPO1	VEGETATION PROTECTION OVERLAY - SCHEDULE 1	528m	North
HO254	HERITAGE OVERLAY (HO254)	532m	North West
DDO4	DESIGN AND DEVELOPMENT OVERLAY - SCHEDULE 4	541m	North
VPO3	VEGETATION PROTECTION OVERLAY - SCHEDULE 3	547m	East
DDO4	DESIGN AND DEVELOPMENT OVERLAY - SCHEDULE 4	551m	North
HO265	HERITAGE OVERLAY (HO265)	561m	North East
VPO1	VEGETATION PROTECTION OVERLAY - SCHEDULE 1	563m	South
VPO5	VEGETATION PROTECTION OVERLAY - SCHEDULE 5	565m	South
VPO3	VEGETATION PROTECTION OVERLAY - SCHEDULE 3	566m	South
HO213	HERITAGE OVERLAY (HO213)	574m	East
HO125	HERITAGE OVERLAY (HO125)	575m	South
HO222	HERITAGE OVERLAY (HO222)	578m	South West
HO10	HERITAGE OVERLAY (HO10)	596m	South
HO268	HERITAGE OVERLAY (HO268)	601m	West
VPO3	VEGETATION PROTECTION OVERLAY - SCHEDULE 3	604m	North
HO225	HERITAGE OVERLAY (HO225)	606m	North
HO219	HERITAGE OVERLAY (HO219)	608m	South East
EAO	ENVIRONMENTAL AUDIT OVERLAY	621m	South West
VPO1	VEGETATION PROTECTION OVERLAY - SCHEDULE 1	621m	South
EAO	ENVIRONMENTAL AUDIT OVERLAY	634m	West
HO246	HERITAGE OVERLAY (HO246)	643m	South
HO58	HERITAGE OVERLAY (HO58)	643m	South East
HO267	HERITAGE OVERLAY (HO267)	656m	West
HO101	HERITAGE OVERLAY (HO101)	667m	South
HO266	HERITAGE OVERLAY (HO266)	670m	East

Zone Code	Description	Distance	Direction
VPO1	VEGETATION PROTECTION OVERLAY - SCHEDULE 1	671m	South East
HO226	HERITAGE OVERLAY (HO226)	689m	North
HO242	HERITAGE OVERLAY (HO242)	693m	South West
VPO3	VEGETATION PROTECTION OVERLAY - SCHEDULE 3	698m	North
HO269	HERITAGE OVERLAY (HO269)	703m	West
VPO3	VEGETATION PROTECTION OVERLAY - SCHEDULE 3	712m	North West
DDO4	DESIGN AND DEVELOPMENT OVERLAY - SCHEDULE 4	725m	East
HO58	HERITAGE OVERLAY (HO58)	728m	South East
VPO3	VEGETATION PROTECTION OVERLAY - SCHEDULE 3	761m	South West
NCO2	NEIGHBOURHOOD CHARACTER OVERLAY - SCHEDULE 2	781m	South West
VPO1	VEGETATION PROTECTION OVERLAY - SCHEDULE 1	788m	North East
NCO2	NEIGHBOURHOOD CHARACTER OVERLAY - SCHEDULE 2	799m	South West
VPO5	VEGETATION PROTECTION OVERLAY - SCHEDULE 5	801m	South
VPO1	VEGETATION PROTECTION OVERLAY - SCHEDULE 1	801m	South
HO219	HERITAGE OVERLAY (HO219)	806m	East
VPO1	VEGETATION PROTECTION OVERLAY - SCHEDULE 1	821m	North East
VPO3	VEGETATION PROTECTION OVERLAY - SCHEDULE 3	828m	North
HO227	HERITAGE OVERLAY (HO227)	828m	North
HO228	HERITAGE OVERLAY (HO228)	830m	North
VPO1	VEGETATION PROTECTION OVERLAY - SCHEDULE 1	832m	North
VPO5	VEGETATION PROTECTION OVERLAY - SCHEDULE 5	833m	South East
HO214	HERITAGE OVERLAY (HO214)	833m	South East
VPO1	VEGETATION PROTECTION OVERLAY - SCHEDULE 1	844m	North East
VPO3	VEGETATION PROTECTION OVERLAY - SCHEDULE 3	849m	North East
HO31	HERITAGE OVERLAY (HO31)	855m	North East
HO142	HERITAGE OVERLAY (HO142)	864m	West
HO257	HERITAGE OVERLAY (HO257)	865m	South West
HO3	HERITAGE OVERLAY (HO3)	877m	South West
HO277	HERITAGE OVERLAY (HO277)	878m	North West
HO174	HERITAGE OVERLAY (HO174)	913m	West
HO100	HERITAGE OVERLAY (HO100)	914m	West
VPO5	VEGETATION PROTECTION OVERLAY - SCHEDULE 5	915m	North West
HO173	HERITAGE OVERLAY (HO173)	923m	West
HO217	HERITAGE OVERLAY (HO217)	935m	South West
VPO3	VEGETATION PROTECTION OVERLAY - SCHEDULE 3	957m	South East
HO248	HERITAGE OVERLAY (HO248)	959m	East
DDO4	DESIGN AND DEVELOPMENT OVERLAY - SCHEDULE 4	964m	South
HO140	HERITAGE OVERLAY (HO140)	999m	West

Planning Overlay Data Custodian: State Government Victoria - Dept of Environment, Land, Water & Planning
Creative Commons 3.0 © Commonwealth of Australia http://creativecommons.org/licenses/by/3.0/au/deed.en

Cultural Heritage Sensitivity

1000 Whitehorse Road, Box Hill, VIC 3128



Cultural Heritage Sensitivity

1000 Whitehorse Road, Box Hill, VIC 3128

Cultural Heritage Sensitivity

Areas of Cultural Heritage Sensitivity as specified in Division 3 of Part 2 in the Aboriginal Heritage Regulations 2007, within the report buffer:

Map Id	Culturally Sensitive	Distance	Direction
522291	YES	914m	South

Cultural Heritage Sensitivity Data Custodian: State Government Victoria - Dept of Planning and Community Development
Creative Commons 3.0 © Commonwealth of Australia http://creativecommons.org/licenses/by/3.0/au/deed.en

Natural Hazards

1000 Whitehorse Road, Box Hill, VIC 3128

Bushfire Prone Areas

What are the designated bushfire prone areas within the report buffer?

Map ID	Feature	Plan No	LGA	Gazetted Date	Distance	Direction
N/A	No records within buffer					

Bushfire Prone Area Data Custodian: State Government Victoria - Dept of Transport, Planning & Local Infrastructure
Creative Commons 3.0 © Commonwealth of Australia http://creativecommons.org/licenses/by/3.0/au/deed.en

Fire History

What are the fire history records of fires primarily on public land, within the report buffer?

Map Id	Fire Type	Fire Key	Season	Fire No	Fire Name	Treatment	Fire Cover	Start Date	Dist (m)	Direction
N/A	No records within buffer									

Fire History Data Custodian: State Government Victoria - Dept of Environment, Land, Water & Planning
Creative Commons 3.0 © Commonwealth of Australia http://creativecommons.org/licenses/by/3.0/au/deed.en

Flood - 1 in 100 year modelled flood extent

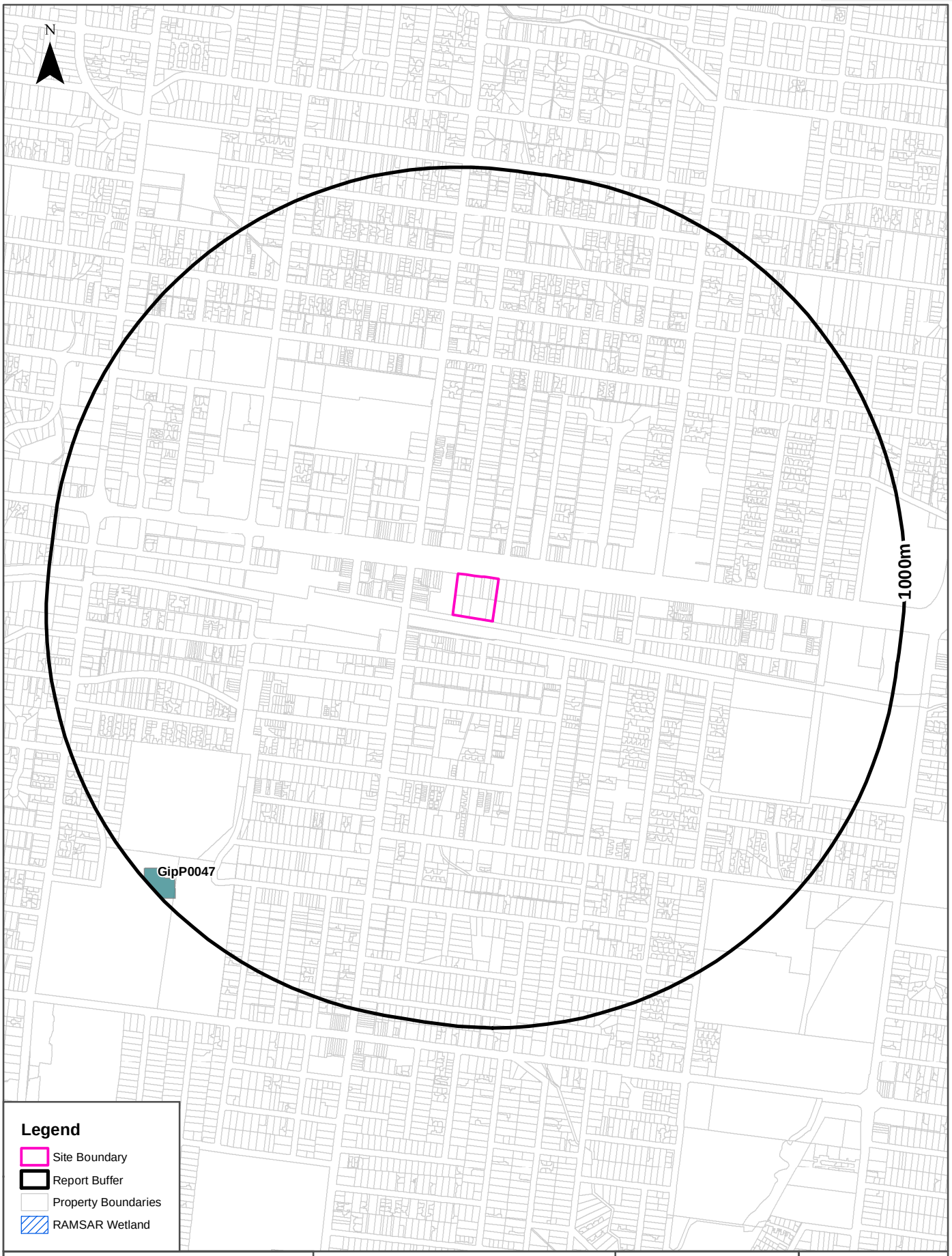
What 1 in 100 year flood extent features exist within the report buffer?

Feature	Source	Method	Scale	Modified Date	Distance	Direction
N/A	No records within buffer					

Flood Data Custodian: State Government Victoria - Dept of Environment, Land, Water & Planning
Creative Commons 3.0 © Commonwealth of Australia http://creativecommons.org/licenses/by/3.0/au/deed.en

Ecological Constraints - Native Vegetation 2005 & RAMSAR Wetlands

1000 Whitehorse Road, Box Hill, VIC 3128



Ecological Constraints

1000 Whitehorse Road, Box Hill, VIC 3128

Native Vegetation (Modelled 2005 Ecological Vegetation Classes)

What native vegetation exists within the report buffer?

Veg Code	EVC Name	EVCCode	Group	Subgroup	Bioregion	Conservation Status	Geographic Occurance	Distance
GipP0047	Valley Grassy Forest	0047	Dry Forests	Sheltered and/or higher altitude	Gippsland Plain	Vulnerable	Minor	941m

Native Vegetation Data Custodian: State Government Victoria - Dept of Environment, Land, Water & Planning
Creative Commons 3.0 © Commonwealth of Australia http://creativecommons.org/licenses/by/3.0/au/deed.en

RAMSAR Wetlands

What RAMSAR wetland areas exist within the report buffer?

Map ID	Site Name	Lake Name	Distance	Direction
N/A	No records within buffer			

RAMSAR Wetland Area Data Custodian: State Government Victoria - Dept of Environment, Land, Water & Planning
Creative Commons 3.0 © Commonwealth of Australia http://creativecommons.org/licenses/by/3.0/au/deed.en

USE OF REPORT – APPLICABLE TERMS

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

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

Appendix B – Bore Logs

This page has been left intentionally blank

coffey
A TETRA TECH COMPANY

Drilling Log

Soil Boring **BH1**

Project *Epworth Box Hill Soil Assessment* Owner *Epworth HealthCare*

Location *1000 Whitehorse Road, Box Hill* Proj. No. *754-MELEN202044*

Surface Elev. *NA* Total Hole Depth *0.6 m.* North *NA* East *NA*

Top of Casing *NA* Water Level Initial *NA* Static *NA* Diameter *150 mm.*

Screen: Dia *NA* Length *NA* Type/Size *NA*

Casing: Dia *NA* Length *NA* Type *NA*

Fill Material *Backfilled* Rig/Core *N/A*

Drill Co. _____ Method *Hand Auger*

Driller _____ Log By *J. Bei* Date *3/3/17* Permit # *NA*

Checked By *I. Newby* License No. *N/A*

COMMENTS

Depth (m.)	PID (ppm)	Sample ID / % Recovery	Blow Count Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
0						
						ASPHALT
	8.7	BH1_0.09-0.11			SWG	**Fill: Gravelly SAND;** fine to coarse grained, dark brown, fine to coarse grained, sub-angular gravel, moist.
						SILTSTONE; extremely weathered, residual soil, high plasticity, brown, moist.
	6.5	BH1_0.2-0.3				
	5.8	BH1_0.5-0.6				becoming pale brown.
						End of investigation at 0.6mbgs.
1						

coffey
A TETRA TECH COMPANY

Drilling Log

Soil Boring **BH10**

Project *Epworth Box Hill Soil Assessment* Owner *Epworth HealthCare*

Location *1000 Whitehorse Road, Box Hill* Proj. No. *754-MELEN202044*

Surface Elev. *NA* Total Hole Depth *1.1 m.* North *NA* East *NA*

Top of Casing *NA* Water Level Initial *NA* Static *NA* Diameter *150 mm.*

Screen: Dia *NA* Length *NA* Type/Size *NA*

Casing: Dia *NA* Length *NA* Type *NA*

Fill Material *Backfilled* Rig/Core *N/A*

Drill Co. _____ Method *Hand Auger*

Driller _____ Log By *J. Bei* Date *3/3/17* Permit # *NA*

Checked By *I. Newby* License No. *N/A*

COMMENTS

Depth (m.)	PID (ppm)	Sample ID / % Recovery	Blow Count Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
0						
						CONCRETE
	5.0	BH10_0.15-0.2			SW	**Fill: SAND;** fine to medium grained, grey, moist.
	7.2	BH10_0.2-0.3				**Fill: GRAVELS;** fine to coarse grained, sub-angular, dark brown with some cobbles and high plasticity clay, orange/brown.
	2.9	BH10_0.5-0.6			CH	**CLAY;** high plasticity, dark grey, trace of black smearing, moist.
1	3.6	BH10_1.0-1.1			CH	**CLAY;** high plasticity, orange mottled brown, moist.
						End of investigation at 1.1mbgs.
2						

coffey
A TETRA TECH COMPANY

Drilling Log

Soil Boring **BH2**

Project *Epworth Box Hill Soil Assessment* Owner *Epworth HealthCare*

Location *1000 Whitehorse Road, Box Hill* Proj. No. *754-MELEN202044*

Surface Elev. *NA* Total Hole Depth *0.6 m.* North *NA* East *NA*

Top of Casing *NA* Water Level Initial *NA* Static *NA* Diameter *150 mm.*

Screen: Dia *NA* Length *NA* Type/Size *NA*

Casing: Dia *NA* Length *NA* Type *NA*

Fill Material *Backfilled* Rig/Core *N/A*

Drill Co. _____ Method *Hand Auger*

Driller _____ Log By *J. Bei* Date *3/3/17* Permit # *NA*

Checked By *I. Newby* License No. *N/A*

COMMENTS

Depth (m.)	PID (ppm)	Sample ID / % Recovery	Blow Count Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
0						
						ASPHALT
	6.9	BH2_0.1-0.2			SWG	**Fill: Gravelly SAND;** fine to coarse grained, dark brown, fine to coarse grained, sub-angular gravel, moist.
	5.0	BH2_0.4-0.5				**SILTSTONE;** extremely weathered, residual soil, pale brown, high plasticity, moist.
						SILTSTONE; extremely weathered, residual soil, orange/brown, dry.
						Refusal at 0.58mbgs.
1						

COFFEY ENVIRONMENTS Rev: 28/1/16 754-MELEN202044.GPJ IT_CORP.GDT 22/3/17

coffey
A TETRA TECH COMPANY

Drilling Log

Soil Boring **BH3**

Page: 1 of 1

Project *Epworth Box Hill Soil Assessment* Owner *Epworth HealthCare*

Location *1000 Whitehorse Road, Box Hill* Proj. No. *754-MELEN202044*

Surface Elev. *NA* Total Hole Depth *0.6 m.* North *NA* East *NA*

Top of Casing *NA* Water Level Initial *NA* Static *NA* Diameter *150 mm.*

Screen: Dia *NA* Length *NA* Type/Size *NA*

Casing: Dia *NA* Length *NA* Type *NA*

Fill Material *Backfilled* Rig/Core *N/A*

Drill Co. Method *Hand Auger*

Driller Log By *J. Bei* Date *3/3/17* Permit # *NA*

Checked By *I. Newby* License No. *N/A*

COMMENTS

Depth (m.)	PID (ppm)	Sample ID / % Recovery	Blow Count Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
0						
						ASPHALT
						CONCRETE
	3.3	BH3_0.2-0.3			SWG	**Fill: Gravelly SAND;** fine to coarse grained, dark brown, fine to coarse grained, sub-angular gravel, moist.
	11.2	BH3_0.3-0.4			CL ML	**Fill: Silty CLAY;** high plasticity, brown with some fine to coarse grained sand, dark brown, fine to coarse grained, sub-angular gravel, trace of brick fragments (red).
	2.4	BH3_0.5-0.6				**SILTSTONE;** extremely weathered, residual soil, orange mottled grey, high plasticity, dry.
1						Refusal on hard siltstone at 0.6mbgs.

coffey
A TETRA TECH COMPANY

Drilling Log

Soil Boring **BH4**

Project *Epworth Box Hill Soil Assessment* Owner *Epworth HealthCare*

Location *1000 Whitehorse Road, Box Hill* Proj. No. *754-MELEN202044*

Surface Elev. *NA* Total Hole Depth *0.5 m.* North *NA* East *NA*

Top of Casing *NA* Water Level Initial *NA* Static *NA* Diameter *150 mm.*

Screen: Dia *NA* Length *NA* Type/Size *NA*

Casing: Dia *NA* Length *NA* Type *NA*

Fill Material *Backfilled* Rig/Core *N/A*

Drill Co. _____ Method *Hand Auger*

Driller _____ Log By *J. Bei* Date *3/3/17* Permit # *NA*

Checked By *I. Newby* License No. *N/A*

COMMENTS

Depth (m.)	PID (ppm)	Sample ID / % Recovery	Blow Count Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
0						
						ASPHALT
	3.8	BH4_0.1-0.2			SWG	**Fill: Gravelly SAND;** fine to coarse grained, dark brown, fine to coarse grained, sub-angular gravel, trace of brick, tile and concrete fragments, moist.
	6.0	BH4_0.3-0.4				**Fill: disturbed SILTSTONE;** extremely weathered, residual soil, orange with some high plasticity clay, dark brown, trace of brick fragments, moist.
	5.1	BH4_0.4-0.5				**SILTSTONE;** extremely weathered, residual soil, orange mottled grey, dry.
						Refusal at 0.5mbgs.
1						

coffey
A TETRA TECH COMPANY

Drilling Log

Soil Boring **BH5**

Project *Epworth Box Hill Soil Assessment* Owner *Epworth HealthCare*

Location *1000 Whitehorse Road, Box Hill* Proj. No. *754-MELEN202044*

Surface Elev. *NA* Total Hole Depth *1.0 m.* North *NA* East *NA*

Top of Casing *NA* Water Level Initial *NA* Static *NA* Diameter *150 mm.*

Screen: Dia *NA* Length *NA* Type/Size *NA*

Casing: Dia *NA* Length *NA* Type *NA*

Fill Material *Backfilled* Rig/Core *N/A*

Drill Co. _____ Method *Hand Auger*

Driller _____ Log By *J. Bei* Date *3/3/17* Permit # *NA*

Checked By *I. Newby* License No. *N/A*

COMMENTS

Depth (m.)	PID (ppm)	Sample ID / % Recovery / Blow Count Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) — Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
0	3.6	BH5_0.0-0.2			**GRASS**
				SM	**Fill: Silty SAND;** fine grained, dark brown, trace of organic roots, dry.
				SWG	**Fill: Gravelly SAND;** fine to coarse grained sand, dark brown, fine to coarse grained, sub-angular gravels, dry.
	8.0	BH5_0.4-0.5			**SILTSTONE;** extremely weathered, residual soil, dark brown, dry.
					SILTSTONE; extremely weathered, orange/brown, dry.
	6.7	BH5_0.9-1.0			
1					End of investigation at 1.0mbgs.
2					

coffey
A TETRA TECH COMPANY

Drilling Log

Soil Boring **BH6**

Project *Epworth Box Hill Soil Assessment* Owner *Epworth HealthCare*

Location *1000 Whitehorse Road, Box Hill* Proj. No. *754-MELEN202044*

Surface Elev. *NA* Total Hole Depth *0.9 m.* North *NA* East *NA*

Top of Casing *NA* Water Level Initial *NA* Static *NA* Diameter *150 mm.*

Screen: Dia *NA* Length *NA* Type/Size *NA*

Casing: Dia *NA* Length *NA* Type *NA*

Fill Material *Backfilled* Rig/Core *N/A*

Drill Co. _____ Method *Hand Auger*

Driller _____ Log By *J. Bei* Date *3/3/17* Permit # *NA*

Checked By *I. Newby* License No. *N/A*

COMMENTS

Depth (m.)	PID (ppm)	Sample ID / % Recovery	Blow Count Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) — Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
0						
						GRASS
	6.4	BH6_0.1-0.2			SM	**Fill: Silty SAND;** fine grained, dark brown,trace of organic roots, dry.
					GW	**Fill: GRAVEL;** fine to coarse grained, sub-angular gravel, dark blue/grey with some fine to coarse grained sand, dry.
	4.5	BH6_0.4-0.5				**SILTSTONE;** extremely weathered, residual soil, dark brown, high plasticity, dry.
	7.0	BH6_0.8-0.9			CH	**CLAY;** high plasticity, dark brown, dry.
						End of investigation at 0.9mbgs.
1						

coffey
A TETRA TECH COMPANY

Drilling Log

Soil Boring **BH7**

Project *Epworth Box Hill Soil Assessment* Owner *Epworth HealthCare*

Location *1000 Whitehorse Road, Box Hill* Proj. No. *754-MELEN202044*

Surface Elev. *NA* Total Hole Depth *0.8 m.* North *NA* East *NA*

Top of Casing *NA* Water Level Initial *NA* Static *NA* Diameter *150 mm.*

Screen: Dia *NA* Length *NA* Type/Size *NA*

Casing: Dia *NA* Length *NA* Type *NA*

Fill Material *Backfilled* Rig/Core *N/A*

Drill Co. _____ Method *Hand Auger*

Driller _____ Log By *J. Bei* Date *3/3/17* Permit # *NA*

Checked By *I. Newby* License No. *N/A*

COMMENTS

Depth (m.)	PID (ppm)	Sample ID / % Recovery	Blow Count Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
0						
						CONCRETE
	0.4	BH7_0.1-0.15			SW	**Fill: SAND;** fine to medium grained sand, grey, moist.
					GW	**Fill: GRAVEL;** fine to coarse grained, sub-angular gravel, dark brown with some cobbles and clay, high plasticity, dark brown with a trace of fine grained sand.
	2.1	BH7_0.3-0.4			CH	**CLAY;** high plasticity, orange mottled brown, moist, no odour.
	3.0	BH7_0.7-0.8				**SILTSTONE;** extremely weathered, residual soil, orange mottled grey, moist, no odour.
						End of investigation at 0.8mbgs.
1						

coffey
A TETRA TECH COMPANY

Drilling Log

Soil Boring **BH8**

Project *Epworth Box Hill Soil Assessment* Owner *Epworth HealthCare*

Location *1000 Whitehorse Road, Box Hill* Proj. No. *754-MELEN202044*

Surface Elev. *NA* Total Hole Depth *0.8 m.* North *NA* East *NA*

Top of Casing *NA* Water Level Initial *NA* Static *NA* Diameter *150 mm.*

Screen: Dia *NA* Length *NA* Type/Size *NA*

Casing: Dia *NA* Length *NA* Type *NA*

Fill Material *Backfilled* Rig/Core *N/A*

Drill Co. _____ Method *Hand Auger*

Driller _____ Log By *J. Bei* Date *3/3/17* Permit # *NA*

Checked By *I. Newby* License No. *N/A*

COMMENTS

Depth (m.)	PID (ppm)	Sample ID / % Recovery	Blow Count Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
0						
						CONCRETE
	2.3	BH8_0.2-0.25			GW	**Fill: GRAVEL;** fine to coarse grained, sub-angular gravels, dark brown with some cobbles and clay, high plasticity, dark brown, trace of fine grained sand, moist.
	7.1	BH8_0.3-0.4			CH	**CLAY;** high plasticity, brown, moist.
	5.5	BH8_0.6-0.7				becoming brown/mottled orange.
1						End of investigation at 0.75mbgs.

coffey
A TETRA TECH COMPANY

Drilling Log

Soil Boring **BH9**

Project *Epworth Box Hill Soil Assessment* Owner *Epworth HealthCare*

Location *1000 Whitehorse Road, Box Hill* Proj. No. *754-MELEN202044*

Surface Elev. *NA* Total Hole Depth *0.3 m.* North *NA* East *NA*

Top of Casing *NA* Water Level Initial *NA* Static *NA* Diameter *150 mm.*

Screen: Dia *NA* Length *NA* Type/Size *NA*

Casing: Dia *NA* Length *NA* Type *NA*

Fill Material *Backfilled* Rig/Core *N/A*

Drill Co. Method *Hand Auger*

Driller Log By *J. Bei* Date *3/3/17* Permit # *NA*

Checked By *I. Newby* License No. *N/A*

COMMENTS

Depth (m.)	PID (ppm)	Sample ID / % Recovery	Blow Count Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) Geologic descriptions are based on ASTM Standard D 2487-93 and the USCS.
0						
						CONCRETE
	11.3	BH9_0.16-0.2			GW	**Fill: GRAVEL;** fine to coarse grained, sub-angular gravel, dark brown with some cobbles and clay, high plasticity, dark brown, trace of fine grained sand, moist.
	10.5	BH9_0.2-0.25			CH	**Fill: CLAY;** high plasticity, dark brown, trace of asphalt (black), brick fragments and fine to coarse grained gravels, moist.
						Refusal on concrete pipe at 0.28mbgs.
1						

Appendix C – Laboratory Analytical Reports

This page has been left intentionally blank

ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **EM1702580**	Page	: 1 of 33
Client	: **COFFEY ENVIRONMENTS PTY LTD**	Laboratory	: Environmental Division Melbourne
Contact	: MR JOHNSON BEI	Contact	: Bronwyn Sheen
Address	: LEVEL 1, 436 JOHNSTON STREET ABBOTSFORD VIC, AUSTRALIA 3067	Address	: 4 Westall Rd Springvale VIC Australia 3171
Telephone	: +61 03 9290 7000	Telephone	: +61-3-8549 9636
Project	: 754-MELEN 202044	Date Samples Received	: 06-Mar-2017 14:10
Order number	: ----	Date Analysis Commenced	: 08-Mar-2017
C-O-C number	: 10162	Issue Date	: 16-Mar-2017 18:08
Sampler	: JOHNSON BEI		
Site	: ----		
Quote number	: EN/077/14		
No. of samples received	: 33		
No. of samples analysed	: 26		

Accreditation No. 825
Accredited for compliance with
ISO/IEC 17025 - Testing

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QA/QC Compliance Assessment to assist with Quality Review and Sample Receipt Notification.

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Chris Lemaitre	Non-Metals Team Leader	Melbourne Inorganics, Springvale, VIC
Eric Chau	Metals Team Leader	Melbourne Inorganics, Springvale, VIC
Nikki Stepniewski	Senior Inorganic Instrument Chemist	Melbourne Inorganics, Springvale, VIC
Xing Lin	Senior Organic Chemist	Melbourne Organics, Springvale, VIC

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When no sampling time is provided, the sampling time will default 00:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory and displayed in brackets without a time component.

Where a result is required to meet compliance limits the associated uncertainty must be considered. Refer to the ALS Contact for details.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting
ø = ALS is not NATA accredited for these tests.
~ = Indicates an estimated value.

- EP074-UT: Unable to determine matrix spike recovery for (EM1702565-012) due to high level contaminants.
- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a.h)anthracene (1.0), Benzo(g.h.i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero, for 'TEQ 1/2LOR' are treated as half the reported LOR, and for 'TEQ LOR' are treated as being equal to the reported LOR. Note: TEQ 1/2LOR and TEQ LOR will calculate as 0.6mg/Kg and 1.2mg/Kg respectively for samples with non-detects for all of the eight TEQ PAHs.
- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a.h)anthracene (1.0), Benzo(g.h.i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero.

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH1 0.09-0.11	BH1 0.2-0.3	BH2 0.1-0.2	BH2 0.4-0.5	BH3 0.2-0.3
			Client sampling date / time	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00
Compound	CAS Number	LOR	Unit	EM1702580-001	EM1702580-002	EM1702580-004	EM1702580-005	EM1702580-006
				Result	Result	Result	Result	Result
EA001: pH in soil using 0.01M CaCl extract								
pH (CaCl2)	----	0.1	pH Unit	8.2	----	----	----	----
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1	%	8.7	24.5	2.7	19.4	8.0
EG005T: Total Metals by ICP-AES								
Molybdenum	7439-98-7	2	mg/kg	<2	----	----	----	----
Selenium	7782-49-2	5	mg/kg	<5	----	----	----	----
Silver	7440-22-4	2	mg/kg	<2	----	----	----	----
Tin	7440-31-5	5	mg/kg	6	----	----	----	----
Arsenic	7440-38-2	5	mg/kg	<5	<5	9	<5	6
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	----	42	9	20	8
Copper	7440-50-8	5	mg/kg	42	14	20	10	22
Lead	7439-92-1	5	mg/kg	64	23	54	13	73
Nickel	7440-02-0	2	mg/kg	37	10	26	10	26
Zinc	7440-66-6	5	mg/kg	74	9	58	8	71
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EG048: Hexavalent Chromium (Alkaline Digest)								
Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	----	----	----	----
EK026SF: Total CN by Segmented Flow Analyser								
Total Cyanide	57-12-5	1	mg/kg	<1	----	----	----	----
EK040T: Fluoride Total								
Fluoride	16984-48-8	40	mg/kg	230	----	----	----	----
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	----	----	----	----
EP074A: Monocyclic Aromatic Hydrocarbons								
Benzene	71-43-2	0.2	mg/kg	<0.2	----	----	----	----
Toluene	108-88-3	0.5	mg/kg	<0.5	----	----	----	----
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	----	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	----	----	----	----
Styrene	100-42-5	0.5	mg/kg	<0.5	----	----	----	----
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	----	----	----	----
^ Sum of monocyclic aromatic hydrocarbons	----	0.2	mg/kg	<0.2	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	BH1 0.09-0.11	BH1 0.2-0.3	BH2 0.1-0.2	BH2 0.4-0.5	BH3 0.2-0.3
				Client sampling date / time	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00
Compound	CAS Number	LOR	Unit		EM1702580-001	EM1702580-002	EM1702580-004	EM1702580-005	EM1702580-006
					Result	Result	Result	Result	Result
EP074A: Monocyclic Aromatic Hydrocarbons - Continued									
^ **Total Xylenes**	1330-20-7	0.5	mg/kg		<0.5	----	----	----	----
EP074H: Naphthalene									
Naphthalene	91-20-3	1	mg/kg		<1	----	----	----	----
EP074I: Volatile Halogenated Compounds									
Vinyl chloride	75-01-4	0.02	mg/kg		<0.02	----	----	----	----
1.1-Dichloroethene	75-35-4	0.01	mg/kg		<0.01	----	----	----	----
Methylene chloride	75-09-2	0.4	mg/kg		<0.4	----	----	----	----
trans-1.2-Dichloroethene	156-60-5	0.02	mg/kg		<0.02	----	----	----	----
cis-1.2-Dichloroethene	156-59-2	0.01	mg/kg		<0.01	----	----	----	----
Chloroform	67-66-3	0.02	mg/kg		<0.02	----	----	----	----
1.1.1-Trichloroethane	71-55-6	0.01	mg/kg		<0.01	----	----	----	----
Carbon Tetrachloride	56-23-5	0.01	mg/kg		<0.01	----	----	----	----
1.2-Dichloroethane	107-06-2	0.02	mg/kg		<0.02	----	----	----	----
Trichloroethene	79-01-6	0.02	mg/kg		<0.02	----	----	----	----
1.1.2-Trichloroethane	79-00-5	0.04	mg/kg		<0.04	----	----	----	----
Tetrachloroethene	127-18-4	0.02	mg/kg		<0.02	----	----	----	----
1.1.1.2-Tetrachloroethane	630-20-6	0.01	mg/kg		<0.01	----	----	----	----
1.1.2.2-Tetrachloroethane	79-34-5	0.02	mg/kg		<0.02	----	----	----	----
Hexachlorobutadiene	87-68-3	0.02	mg/kg		<0.02	----	----	----	----
Chlorobenzene	108-90-7	0.02	mg/kg		<0.02	----	----	----	----
1.4-Dichlorobenzene	106-46-7	0.02	mg/kg		<0.02	----	----	----	----
1.2-Dichlorobenzene	95-50-1	0.02	mg/kg		<0.02	----	----	----	----
1.2.4-Trichlorobenzene	120-82-1	0.01	mg/kg		<0.01	----	----	----	----
^ **Sum of volatile chlorinated hydrocarbons**	----	0.01	mg/kg		<0.01	----	----	----	----
^ **Sum of other chlorinated hydrocarbons**	----	0.01	mg/kg		<0.01	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		----	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg		----	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg		----	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg		----	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg		----	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg		----	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg		----	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg		----	<0.5	<0.5	<0.5	<0.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	BH1 0.09-0.11	BH1 0.2-0.3	BH2 0.1-0.2	BH2 0.4-0.5	BH3 0.2-0.3
				Client sampling date / time	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00
Compound	CAS Number	LOR	Unit		EM1702580-001	EM1702580-002	EM1702580-004	EM1702580-005	EM1702580-006
					Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
Benz(a)anthracene	56-55-3	0.5	mg/kg		----	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg		----	<0.5	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		----	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		----	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg		----	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		----	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		----	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		----	<0.5	<0.5	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg		----	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg		----	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg		----	**0.6**	**0.6**	**0.6**	**0.6**
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg		----	**1.2**	**1.2**	**1.2**	**1.2**
EP075A: Phenolic Compounds (Halogenated)									
2-Chlorophenol	95-57-8	0.03	mg/kg		<0.04	----	----	----	----
2.4-Dichlorophenol	120-83-2	0.03	mg/kg		<0.04	----	----	----	----
2.6-Dichlorophenol	87-65-0	0.03	mg/kg		<0.04	----	----	----	----
4-Chloro-3-methylphenol	59-50-7	0.03	mg/kg		<0.04	----	----	----	----
2.4.5-Trichlorophenol	95-95-4	0.05	mg/kg		<0.05	----	----	----	----
2.4.6-Trichlorophenol	88-06-2	0.05	mg/kg		<0.05	----	----	----	----
2.3.5.6-Tetrachlorophenol	935-95-5	0.03	mg/kg		<0.04	----	----	----	----
2.3.4.5 & 2.3.4.6-Tetrachlorophenol	4901-51-3/58-90-2	0.05	mg/kg		<0.07	----	----	----	----
Pentachlorophenol	87-86-5	0.2	mg/kg		<0.2	----	----	----	----
^ Sum of Phenols (halogenated)	----	0.03	mg/kg		<0.04	----	----	----	----
EP075A: Phenolic Compounds (Non-halogenated)									
Phenol	108-95-2	1	mg/kg		<1	----	----	----	----
2-Methylphenol	95-48-7	1	mg/kg		<1	----	----	----	----
3- & 4-Methylphenol	1319-77-3	1	mg/kg		<1	----	----	----	----
2-Nitrophenol	88-75-5	1	mg/kg		<1	----	----	----	----
2.4-Dimethylphenol	105-67-9	1	mg/kg		<1	----	----	----	----
2.4-Dinitrophenol	51-28-5	5	mg/kg		<5	----	----	----	----
4-Nitrophenol	100-02-7	5	mg/kg		<5	----	----	----	----
2-Methyl-4.6-dinitrophenol	8071-51-0	5	mg/kg		<5	----	----	----	----
Dinoseb	88-85-7	5	mg/kg		<5	----	----	----	----
2-Cyclohexyl-4.6-Dinitrophenol	131-89-5	5	mg/kg		<5	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	BH1 0.09-0.11	BH1 0.2-0.3	BH2 0.1-0.2	BH2 0.4-0.5	BH3 0.2-0.3
				Client sampling date / time	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00
Compound	CAS Number	LOR	Unit		EM1702580-001	EM1702580-002	EM1702580-004	EM1702580-005	EM1702580-006
					Result	Result	Result	Result	Result
EP075A: Phenolic Compounds (Non-halogenated) - Continued									
^ Sum of Phenols (non-halogenated)	----	1	mg/kg		<1	----	----	----	----
EP075B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	----	----	----	----
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	----	----	----	----
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	----	----	----	----
Fluorene	86-73-7	0.5	mg/kg		<0.5	----	----	----	----
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	----	----	----	----
Anthracene	120-12-7	0.5	mg/kg		<0.5	----	----	----	----
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	----	----	----	----
Pyrene	129-00-0	0.5	mg/kg		<0.5	----	----	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	----	----	----	----
Chrysene	218-01-9	0.5	mg/kg		<0.5	----	----	----	----
Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	0.5	mg/kg		<0.5	----	----	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	----	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	----	----	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	----	----	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	----	----	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg		<0.5	----	----	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg		<0.5	----	----	----	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg		**0.6**	----	----	----	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg		**1.2**	----	----	----	----
EP075I: Organochlorine Pesticides									
alpha-BHC	319-84-6	0.03	mg/kg		<0.04	----	----	----	----
Hexachlorobenzene (HCB)	118-74-1	0.03	mg/kg		<0.04	----	----	----	----
beta-BHC	319-85-7	0.03	mg/kg		<0.04	----	----	----	----
gamma-BHC	58-89-9	0.03	mg/kg		<0.04	----	----	----	----
delta-BHC	319-86-8	0.03	mg/kg		<0.04	----	----	----	----
Heptachlor	76-44-8	0.03	mg/kg		<0.04	----	----	----	----
Aldrin	309-00-2	0.03	mg/kg		<0.04	----	----	----	----
Heptachlor epoxide	1024-57-3	0.03	mg/kg		<0.04	----	----	----	----
cis-Chlordane	5103-71-9	0.03	mg/kg		<0.04	----	----	----	----
trans-Chlordane	5103-74-2	0.03	mg/kg		<0.04	----	----	----	----
Endosulfan 1	959-98-8	0.03	mg/kg		<0.04	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	BH1 0.09-0.11	BH1 0.2-0.3	BH2 0.1-0.2	BH2 0.4-0.5	BH3 0.2-0.3
				Client sampling date / time	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00
Compound	CAS Number	LOR	Unit		EM1702580-001	EM1702580-002	EM1702580-004	EM1702580-005	EM1702580-006
					Result	Result	Result	Result	Result
EP075l: Organochlorine Pesticides - Continued									
4.4`-DDE	72-55-9	0.05	mg/kg		<0.05	----	----	----	----
Dieldrin	60-57-1	0.03	mg/kg		<0.04	----	----	----	----
Endrin aldehyde	7421-93-4	0.03	mg/kg		<0.04	----	----	----	----
Endrin	72-20-8	0.03	mg/kg		<0.04	----	----	----	----
Endosulfan 2	33213-65-9	0.03	mg/kg		<0.04	----	----	----	----
4.4`-DDD	72-54-8	0.05	mg/kg		<0.05	----	----	----	----
Endosulfan sulfate	1031-07-8	0.03	mg/kg		<0.04	----	----	----	----
4.4`-DDT	50-29-3	0.05	mg/kg		<0.05	----	----	----	----
Methoxychlor	72-43-5	0.03	mg/kg		<0.04	----	----	----	----
^ Sum of organochlorine pesticides	----	0.03	mg/kg		<0.04	----	----	----	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.03	mg/kg		<0.04	----	----	----	----
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg		<0.05	----	----	----	----
^ Chlordane	57-74-9	0.03	mg/kg		<0.04	----	----	----	----
^ Sum of other organochlorine pesticides	----	0.03	mg/kg		<0.04	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		----	<10	<10	<10	<10
C6 - C9 Fraction	----	10	mg/kg		<10	----	----	----	----
C10 - C14 Fraction	----	50	mg/kg		----	<50	<50	<50	<50
C10 - C14 Fraction	----	50	mg/kg		<50	----	----	----	----
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	----	----	----	----
C15 - C28 Fraction	----	100	mg/kg		----	<100	<100	<100	<100
C15 - C28 Fraction	----	100	mg/kg		<100	----	----	----	----
C29 - C36 Fraction	----	100	mg/kg		----	<100	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg		<100	----	----	----	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg		----	<50	<50	<50	<50
^ C10 - C36 Fraction (sum)	----	50	mg/kg		<50	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		----	<10	<10	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		----	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg		----	<50	<50	<50	<50
>C10 - C16 Fraction	----	50	mg/kg		<50	----	----	----	----
>C16 - C34 Fraction	----	100	mg/kg		----	<100	<100	<100	<100
>C16 - C34 Fraction	----	100	mg/kg		<100	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	BH1 0.09-0.11	BH1 0.2-0.3	BH2 0.1-0.2	BH2 0.4-0.5	BH3 0.2-0.3
				Client sampling date / time	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00
Compound	CAS Number	LOR	Unit		EM1702580-001	EM1702580-002	EM1702580-004	EM1702580-005	EM1702580-006
					Result	Result	Result	Result	Result
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued									
>C34 - C40 Fraction	----	100	mg/kg		----	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg		<100	----	----	----	----
^ **>C10 - C40 Fraction (sum)**	----	50	mg/kg		----	<50	<50	<50	<50
^ **>C10 - C40 Fraction (sum)**	----	50	mg/kg		<50	----	----	----	----
^ **>C10 - C16 Fraction minus Naphthalene (F2)**	----	50	mg/kg		----	<50	<50	<50	<50
>C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		<50	----	----	----	----
C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		<10	----	----	----	----
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		----	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg		----	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg		----	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		----	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		----	<0.5	<0.5	<0.5	<0.5
^ **Sum of BTEX**	----	0.2	mg/kg		----	<0.2	<0.2	<0.2	<0.2
^ **Total Xylenes**	1330-20-7	0.5	mg/kg		----	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg		----	<1	<1	<1	<1
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		**99.4**	----	----	----	----
EP074S: VOC Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.1	%		**89.1**	----	----	----	----
Toluene-D8	2037-26-5	0.1	%		**84.4**	----	----	----	----
4-Bromofluorobenzene	460-00-4	0.1	%		**91.9**	----	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		----	**77.4**	**87.7**	**82.5**	**87.4**
2-Chlorophenol-D4	93951-73-6	0.5	%		----	**96.6**	**96.5**	**97.7**	**100**
2.4.6-Tribromophenol	118-79-6	0.5	%		----	**73.9**	**56.4**	**57.7**	**52.8**
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		----	**99.8**	**96.4**	**93.6**	**92.0**
Anthracene-d10	1719-06-8	0.5	%		----	**122**	**123**	**124**	**128**
4-Terphenyl-d14	1718-51-0	0.5	%		----	**114**	**110**	**108**	**108**
EP075S: Acid Extractable Surrogates									

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	BH1 0.09-0.11	BH1 0.2-0.3	BH2 0.1-0.2	BH2 0.4-0.5	BH3 0.2-0.3
				Client sampling date / time	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00
Compound	CAS Number	LOR	Unit		EM1702580-001	EM1702580-002	EM1702580-004	EM1702580-005	EM1702580-006
					Result	Result	Result	Result	Result
EP075S: Acid Extractable Surrogates - Continued									
Phenol-d6	13127-88-3	0.025	%		**79.7**	----	----	----	----
2-Chlorophenol-D4	93951-73-6	0.025	%		**87.6**	----	----	----	----
2.4.6-Tribromophenol	118-79-6	0.025	%		**101**	----	----	----	----
EP075T: Base/Neutral Extractable Surrogates									
Nitrobenzene-D5	4165-60-0	0.025	%		**86.5**	----	----	----	----
1.2-Dichlorobenzene-D4	2199-69-1	0.025	%		**84.9**	----	----	----	----
2-Fluorobiphenyl	321-60-8	0.025	%		**98.4**	----	----	----	----
Anthracene-d10	1719-06-8	0.025	%		**101**	----	----	----	----
4-Terphenyl-d14	1718-51-0	0.025	%		**102**	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		----	**73.5**	**87.7**	**83.8**	**87.3**
Toluene-D8	2037-26-5	0.2	%		----	**75.4**	**85.0**	**85.8**	**83.8**
4-Bromofluorobenzene	460-00-4	0.2	%		----	**84.8**	**96.2**	**97.9**	**96.4**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH3 0.3-0.4	BH4 0.1-0.2	BH4 0.4-0.5	BH5 0.0-0.2	BH5 0.9-1.0
			Client sampling date / time	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00
Compound	CAS Number	LOR	Unit	EM1702580-007	EM1702580-009	EM1702580-011	EM1702580-012	EM1702580-014
				Result	Result	Result	Result	Result
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1	%	17.6	9.1	18.5	12.6	21.4
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	<5	<5	<5	<5
Cadmium	7440-43-9	1	mg/kg	1	1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	25	19	23	16	35
Copper	7440-50-8	5	mg/kg	83	98	37	12	16
Lead	7439-92-1	5	mg/kg	314	379	452	32	19
Nickel	7440-02-0	2	mg/kg	21	34	23	5	16
Zinc	7440-66-6	5	mg/kg	232	252	66	62	12
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	0.2	0.3	<0.1	<0.1	<0.1
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	0.6	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	0.8	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	1.4	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	0.6	0.6	0.6	0.6	0.6
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	1.2	1.2	1.2	1.2	1.2
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	<10	<10	<10	<10

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	BH3 0.3-0.4	BH4 0.1-0.2	BH4 0.4-0.5	BH5 0.0-0.2	BH5 0.9-1.0
				Client sampling date / time	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00
Compound	CAS Number	LOR	Unit		EM1702580-007	EM1702580-009	EM1702580-011	EM1702580-012	EM1702580-014
					Result	Result	Result	Result	Result
EP080/071: Total Petroleum Hydrocarbons - Continued									
C10 - C14 Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg		**270**	<100	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg		**320**	**100**	<100	<100	<100
^ **C10 - C36 Fraction (sum)**	----	50	mg/kg		**590**	**100**	<50	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	<10	<10	<10	<10
^ **C6 - C10 Fraction minus BTEX (F1)**	C6_C10-BTEX	10	mg/kg		<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg		**510**	**160**	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg		**150**	<100	<100	<100	<100
^ **>C10 - C40 Fraction (sum)**	----	50	mg/kg		**660**	**160**	<50	<50	<50
^ **>C10 - C16 Fraction minus Naphthalene (F2)**	----	50	mg/kg		<50	<50	<50	<50	<50
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ **Sum of BTEX**	----	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
^ **Total Xylenes**	1330-20-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg		<1	<1	<1	<1	<1
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		**76.3**	**83.3**	**77.6**	**79.2**	**87.4**
2-Chlorophenol-D4	93951-73-6	0.5	%		**87.4**	**91.4**	**100**	**98.4**	**102**
2.4.6-Tribromophenol	118-79-6	0.5	%		**61.4**	**53.9**	**56.4**	**59.0**	**52.6**
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		**93.6**	**93.5**	**95.3**	**94.8**	**95.0**
Anthracene-d10	1719-06-8	0.5	%		**121**	**124**	**129**	**121**	**126**
4-Terphenyl-d14	1718-51-0	0.5	%		**101**	**106**	**114**	**105**	**109**
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		**84.4**	**74.6**	**90.5**	**86.3**	**86.0**
Toluene-D8	2037-26-5	0.2	%		**82.6**	**69.3**	**88.2**	**87.6**	**83.0**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	BH3 0.3-0.4	BH4 0.1-0.2	BH4 0.4-0.5	BH5 0.0-0.2	BH5 0.9-1.0
				Client sampling date / time	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00
Compound	CAS Number	LOR	Unit		EM1702580-007	EM1702580-009	EM1702580-011	EM1702580-012	EM1702580-014
					Result	Result	Result	Result	Result
EP080S: TPH(V)/BTEX Surrogates - Continued									
4-Bromofluorobenzene	460-00-4	0.2	%		**95.2**	**83.0**	**100**	**97.7**	**96.9**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH6 0.1-0.2	BH6 0.4-0.5	BH7 0.1-0.15	BH7 0.7-0.8	BH8 0.2-0.25
			Client sampling date / time	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00
Compound	CAS Number	LOR	Unit	EM1702580-015	EM1702580-016	EM1702580-018	EM1702580-020	EM1702580-021
				Result	Result	Result	Result	Result
EA001: pH in soil using 0.01M CaCl extract								
pH (CaCl2)	----	0.1	pH Unit	----	----	----	6.2	----
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1	%	18.0	13.7	5.0	15.5	13.3
EG005T: Total Metals by ICP-AES								
Molybdenum	7439-98-7	2	mg/kg	----	----	----	<2	----
Selenium	7782-49-2	5	mg/kg	----	----	----	<5	----
Silver	7440-22-4	2	mg/kg	----	----	----	<2	----
Tin	7440-31-5	5	mg/kg	----	----	----	<5	----
Arsenic	7440-38-2	5	mg/kg	6	<5	<5	<5	<5
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	16	16	<2	----	23
Copper	7440-50-8	5	mg/kg	14	12	20	9	43
Lead	7439-92-1	5	mg/kg	30	40	7	21	92
Nickel	7440-02-0	2	mg/kg	6	6	6	7	36
Zinc	7440-66-6	5	mg/kg	63	25	71	6	72
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	0.1	<0.1	<0.1	0.1
EG048: Hexavalent Chromium (Alkaline Digest)								
Hexavalent Chromium	18540-29-9	0.5	mg/kg	----	----	----	<0.5	----
EK026SF: Total CN by Segmented Flow Analyser								
Total Cyanide	57-12-5	1	mg/kg	----	----	----	3	----
EK040T: Fluoride Total								
Fluoride	16984-48-8	40	mg/kg	----	----	----	460	----
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	----	----	----	<0.1	----
EP074A: Monocyclic Aromatic Hydrocarbons								
Benzene	71-43-2	0.2	mg/kg	----	----	----	<0.2	----
Toluene	108-88-3	0.5	mg/kg	----	----	----	<0.5	----
Ethylbenzene	100-41-4	0.5	mg/kg	----	----	----	<0.5	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	----	----	----	<0.5	----
Styrene	100-42-5	0.5	mg/kg	----	----	----	<0.5	----
ortho-Xylene	95-47-6	0.5	mg/kg	----	----	----	<0.5	----
^ Sum of monocyclic aromatic hydrocarbons	----	0.2	mg/kg	----	----	----	<0.2	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	BH6 0.1-0.2	BH6 0.4-0.5	BH7 0.1-0.15	BH7 0.7-0.8	BH8 0.2-0.25
				Client sampling date / time	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00
Compound	CAS Number	LOR	Unit		EM1702580-015	EM1702580-016	EM1702580-018	EM1702580-020	EM1702580-021
					Result	Result	Result	Result	Result
EP074A: Monocyclic Aromatic Hydrocarbons - Continued									
^ **Total Xylenes**	1330-20-7	0.5	mg/kg		----	----	----	<0.5	----
EP074H: Naphthalene									
Naphthalene	91-20-3	1	mg/kg		----	----	----	<1	----
EP074I: Volatile Halogenated Compounds									
Vinyl chloride	75-01-4	0.02	mg/kg		----	----	----	<0.02	----
1.1-Dichloroethene	75-35-4	0.01	mg/kg		----	----	----	<0.01	----
Methylene chloride	75-09-2	0.4	mg/kg		----	----	----	<0.4	----
trans-1.2-Dichloroethene	156-60-5	0.02	mg/kg		----	----	----	<0.02	----
cis-1.2-Dichloroethene	156-59-2	0.01	mg/kg		----	----	----	<0.01	----
Chloroform	67-66-3	0.02	mg/kg		----	----	----	<0.02	----
1.1.1-Trichloroethane	71-55-6	0.01	mg/kg		----	----	----	<0.01	----
Carbon Tetrachloride	56-23-5	0.01	mg/kg		----	----	----	<0.01	----
1.2-Dichloroethane	107-06-2	0.02	mg/kg		----	----	----	<0.02	----
Trichloroethene	79-01-6	0.02	mg/kg		----	----	----	<0.02	----
1.1.2-Trichloroethane	79-00-5	0.04	mg/kg		----	----	----	<0.04	----
Tetrachloroethene	127-18-4	0.02	mg/kg		----	----	----	<0.02	----
1.1.1.2-Tetrachloroethane	630-20-6	0.01	mg/kg		----	----	----	<0.01	----
1.1.2.2-Tetrachloroethane	79-34-5	0.02	mg/kg		----	----	----	<0.02	----
Hexachlorobutadiene	87-68-3	0.02	mg/kg		----	----	----	<0.02	----
Chlorobenzene	108-90-7	0.02	mg/kg		----	----	----	<0.02	----
1.4-Dichlorobenzene	106-46-7	0.02	mg/kg		----	----	----	<0.02	----
1.2-Dichlorobenzene	95-50-1	0.02	mg/kg		----	----	----	<0.02	----
1.2.4-Trichlorobenzene	120-82-1	0.01	mg/kg		----	----	----	<0.01	----
^ **Sum of volatile chlorinated hydrocarbons**	----	0.01	mg/kg		----	----	----	<0.01	----
^ **Sum of other chlorinated hydrocarbons**	----	0.01	mg/kg		----	----	----	<0.01	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	<0.5	<0.5	----	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	<0.5	<0.5	----	<0.5
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	<0.5	<0.5	----	<0.5
Fluorene	86-73-7	0.5	mg/kg		<0.5	<0.5	<0.5	----	<0.5
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	<0.5	<0.5	----	<0.5
Anthracene	120-12-7	0.5	mg/kg		<0.5	<0.5	<0.5	----	<0.5
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	<0.5	<0.5	----	<0.5
Pyrene	129-00-0	0.5	mg/kg		<0.5	<0.5	<0.5	----	<0.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	BH6 0.1-0.2	BH6 0.4-0.5	BH7 0.1-0.15	BH7 0.7-0.8	BH8 0.2-0.25
				Client sampling date / time	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00
Compound	CAS Number	LOR	Unit		EM1702580-015	EM1702580-016	EM1702580-018	EM1702580-020	EM1702580-021
					Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	<0.5	<0.5	----	<0.5
Chrysene	218-01-9	0.5	mg/kg		<0.5	<0.5	<0.5	----	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		<0.5	<0.5	<0.5	----	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	<0.5	<0.5	----	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	<0.5	<0.5	----	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	<0.5	<0.5	----	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	<0.5	<0.5	----	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	<0.5	<0.5	----	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg		<0.5	<0.5	<0.5	----	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg		<0.5	<0.5	<0.5	----	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg		**0.6**	**0.6**	**0.6**	----	**0.6**
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg		**1.2**	**1.2**	**1.2**	----	**1.2**
EP075A: Phenolic Compounds (Halogenated)									
2-Chlorophenol	95-57-8	0.03	mg/kg		----	----	----	<0.04	----
2.4-Dichlorophenol	120-83-2	0.03	mg/kg		----	----	----	<0.04	----
2.6-Dichlorophenol	87-65-0	0.03	mg/kg		----	----	----	<0.04	----
4-Chloro-3-methylphenol	59-50-7	0.03	mg/kg		----	----	----	<0.04	----
2.4.5-Trichlorophenol	95-95-4	0.05	mg/kg		----	----	----	<0.05	----
2.4.6-Trichlorophenol	88-06-2	0.05	mg/kg		----	----	----	<0.05	----
2.3.5.6-Tetrachlorophenol	935-95-5	0.03	mg/kg		----	----	----	<0.04	----
2.3.4.5 & 2.3.4.6-Tetrachlorophenol	4901-51-3/58-90-2	0.05	mg/kg		----	----	----	<0.07	----
Pentachlorophenol	87-86-5	0.2	mg/kg		----	----	----	<0.2	----
^ Sum of Phenols (halogenated)	----	0.03	mg/kg		----	----	----	<0.04	----
EP075A: Phenolic Compounds (Non-halogenated)									
Phenol	108-95-2	1	mg/kg		----	----	----	<1	----
2-Methylphenol	95-48-7	1	mg/kg		----	----	----	<1	----
3- & 4-Methylphenol	1319-77-3	1	mg/kg		----	----	----	<1	----
2-Nitrophenol	88-75-5	1	mg/kg		----	----	----	<1	----
2.4-Dimethylphenol	105-67-9	1	mg/kg		----	----	----	<1	----
2.4-Dinitrophenol	51-28-5	5	mg/kg		----	----	----	<5	----
4-Nitrophenol	100-02-7	5	mg/kg		----	----	----	<5	----
2-Methyl-4.6-dinitrophenol	8071-51-0	5	mg/kg		----	----	----	<5	----
Dinoseb	88-85-7	5	mg/kg		----	----	----	<5	----
2-Cyclohexyl-4.6-Dinitrophenol	131-89-5	5	mg/kg		----	----	----	<5	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH6 0.1-0.2	BH6 0.4-0.5	BH7 0.1-0.15	BH7 0.7-0.8	BH8 0.2-0.25
			Client sampling date / time	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00
Compound	CAS Number	LOR	Unit	EM1702580-015	EM1702580-016	EM1702580-018	EM1702580-020	EM1702580-021
				Result	Result	Result	Result	Result
EP075A: Phenolic Compounds (Non-halogenated) - Continued								
^ Sum of Phenols (non-halogenated)	----	1	mg/kg	----	----	----	<1	----
EP075B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	----	----	----	<0.5	----
Acenaphthene	83-32-9	0.5	mg/kg	----	----	----	<0.5	----
Acenaphthylene	208-96-8	0.5	mg/kg	----	----	----	<0.5	----
Fluorene	86-73-7	0.5	mg/kg	----	----	----	<0.5	----
Phenanthrene	85-01-8	0.5	mg/kg	----	----	----	<0.5	----
Anthracene	120-12-7	0.5	mg/kg	----	----	----	<0.5	----
Fluoranthene	206-44-0	0.5	mg/kg	----	----	----	<0.5	----
Pyrene	129-00-0	0.5	mg/kg	----	----	----	<0.5	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	----	----	----	<0.5	----
Chrysene	218-01-9	0.5	mg/kg	----	----	----	<0.5	----
Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	0.5	mg/kg	----	----	----	<0.5	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	----	----	----	<0.5	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	----	----	----	<0.5	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	----	----	----	<0.5	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	----	----	----	<0.5	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	----	----	----	<0.5	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	----	----	----	<0.5	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	----	----	----	**0.6**	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	----	----	----	**1.2**	----
EP075I: Organochlorine Pesticides								
alpha-BHC	319-84-6	0.03	mg/kg	----	----	----	<0.04	----
Hexachlorobenzene (HCB)	118-74-1	0.03	mg/kg	----	----	----	<0.04	----
beta-BHC	319-85-7	0.03	mg/kg	----	----	----	<0.04	----
gamma-BHC	58-89-9	0.03	mg/kg	----	----	----	<0.04	----
delta-BHC	319-86-8	0.03	mg/kg	----	----	----	<0.04	----
Heptachlor	76-44-8	0.03	mg/kg	----	----	----	<0.04	----
Aldrin	309-00-2	0.03	mg/kg	----	----	----	<0.04	----
Heptachlor epoxide	1024-57-3	0.03	mg/kg	----	----	----	<0.04	----
cis-Chlordane	5103-71-9	0.03	mg/kg	----	----	----	<0.04	----
trans-Chlordane	5103-74-2	0.03	mg/kg	----	----	----	<0.04	----
Endosulfan 1	959-98-8	0.03	mg/kg	----	----	----	<0.04	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	BH6 0.1-0.2	BH6 0.4-0.5	BH7 0.1-0.15	BH7 0.7-0.8	BH8 0.2-0.25
				Client sampling date / time	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00
Compound	CAS Number	LOR	Unit		EM1702580-015	EM1702580-016	EM1702580-018	EM1702580-020	EM1702580-021
					Result	Result	Result	Result	Result
EP075l: Organochlorine Pesticides - Continued									
4.4`-DDE	72-55-9	0.05	mg/kg		----	----	----	<0.05	----
Dieldrin	60-57-1	0.03	mg/kg		----	----	----	<0.04	----
Endrin aldehyde	7421-93-4	0.03	mg/kg		----	----	----	<0.04	----
Endrin	72-20-8	0.03	mg/kg		----	----	----	<0.04	----
Endosulfan 2	33213-65-9	0.03	mg/kg		----	----	----	<0.04	----
4.4`-DDD	72-54-8	0.05	mg/kg		----	----	----	<0.05	----
Endosulfan sulfate	1031-07-8	0.03	mg/kg		----	----	----	<0.04	----
4.4`-DDT	50-29-3	0.05	mg/kg		----	----	----	<0.05	----
Methoxychlor	72-43-5	0.03	mg/kg		----	----	----	<0.04	----
^ Sum of organochlorine pesticides	----	0.03	mg/kg		----	----	----	<0.04	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.03	mg/kg		----	----	----	<0.04	----
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg		----	----	----	<0.05	----
^ Chlordane	57-74-9	0.03	mg/kg		----	----	----	<0.04	----
^ Sum of other organochlorine pesticides	----	0.03	mg/kg		----	----	----	<0.04	----
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	<10	<10	----	<10
C6 - C9 Fraction	----	10	mg/kg		----	----	----	<10	----
C10 - C14 Fraction	----	50	mg/kg		<50	<50	<50	----	<50
C10 - C14 Fraction	----	50	mg/kg		----	----	----	<50	----
C6 - C10 Fraction	C6_C10	10	mg/kg		----	----	----	<10	----
C15 - C28 Fraction	----	100	mg/kg		<100	<100	<100	----	<100
C15 - C28 Fraction	----	100	mg/kg		----	----	----	<100	----
C29 - C36 Fraction	----	100	mg/kg		<100	<100	<100	----	<100
C29 - C36 Fraction	----	100	mg/kg		----	----	----	<100	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg		<50	<50	<50	----	<50
^ C10 - C36 Fraction (sum)	----	50	mg/kg		----	----	----	<50	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	<10	<10	----	<10
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		<10	<10	<10	----	<10
>C10 - C16 Fraction	----	50	mg/kg		<50	<50	<50	----	<50
>C10 - C16 Fraction	----	50	mg/kg		----	----	----	<50	----
>C16 - C34 Fraction	----	100	mg/kg		<100	<100	<100	----	<100
>C16 - C34 Fraction	----	100	mg/kg		----	----	----	<100	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	BH6 0.1-0.2	BH6 0.4-0.5	BH7 0.1-0.15	BH7 0.7-0.8	BH8 0.2-0.25
				Client sampling date / time	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00
Compound	CAS Number	LOR	Unit		EM1702580-015	EM1702580-016	EM1702580-018	EM1702580-020	EM1702580-021
					Result	Result	Result	Result	Result
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued									
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	<100	----	<100
>C34 - C40 Fraction	----	100	mg/kg		----	----	----	<100	----
^ **>C10 - C40 Fraction (sum)**	----	50	mg/kg		<50	<50	<50	----	<50
^ **>C10 - C40 Fraction (sum)**	----	50	mg/kg		----	----	----	<50	----
^ **>C10 - C16 Fraction minus Naphthalene (F2)**	----	50	mg/kg		<50	<50	<50	----	<50
>C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		----	----	----	<50	----
C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		----	----	----	<10	----
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	----	<0.2
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	<0.5	----	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5	<0.5	----	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	<0.5	----	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	----	<0.5
^ **Sum of BTEX**	----	0.2	mg/kg		<0.2	<0.2	<0.2	----	<0.2
^ **Total Xylenes**	1330-20-7	0.5	mg/kg		<0.5	<0.5	<0.5	----	<0.5
Naphthalene	91-20-3	1	mg/kg		<1	<1	<1	----	<1
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		----	----	----	**71.6**	----
EP074S: VOC Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.1	%		----	----	----	**92.6**	----
Toluene-D8	2037-26-5	0.1	%		----	----	----	**89.2**	----
4-Bromofluorobenzene	460-00-4	0.1	%		----	----	----	**103**	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		**76.6**	**83.1**	**79.2**	----	**78.0**
2-Chlorophenol-D4	93951-73-6	0.5	%		**92.5**	**99.6**	**89.8**	----	**98.3**
2.4.6-Tribromophenol	118-79-6	0.5	%		**61.1**	**56.8**	**48.1**	----	**48.2**
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		**94.6**	**94.3**	**91.7**	----	**94.1**
Anthracene-d10	1719-06-8	0.5	%		**124**	**123**	**123**	----	**125**
4-Terphenyl-d14	1718-51-0	0.5	%		**110**	**106**	**106**	----	**106**
EP075S: Acid Extractable Surrogates									

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	BH6 0.1-0.2	BH6 0.4-0.5	BH7 0.1-0.15	BH7 0.7-0.8	BH8 0.2-0.25
				Client sampling date / time	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00
Compound	CAS Number	LOR	Unit		EM1702580-015	EM1702580-016	EM1702580-018	EM1702580-020	EM1702580-021
					Result	Result	Result	Result	Result
EP075S: Acid Extractable Surrogates - Continued									
Phenol-d6	13127-88-3	0.025	%		----	----	----	**64.3**	----
2-Chlorophenol-D4	93951-73-6	0.025	%		----	----	----	**62.4**	----
2.4.6-Tribromophenol	118-79-6	0.025	%		----	----	----	**61.7**	----
EP075T: Base/Neutral Extractable Surrogates									
Nitrobenzene-D5	4165-60-0	0.025	%		----	----	----	**66.3**	----
1.2-Dichlorobenzene-D4	2199-69-1	0.025	%		----	----	----	**61.5**	----
2-Fluorobiphenyl	321-60-8	0.025	%		----	----	----	**67.3**	----
Anthracene-d10	1719-06-8	0.025	%		----	----	----	**71.6**	----
4-Terphenyl-d14	1718-51-0	0.025	%		----	----	----	**70.0**	----
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		**87.8**	**72.7**	**92.6**	----	**90.4**
Toluene-D8	2037-26-5	0.2	%		**83.3**	**71.5**	**86.9**	----	**84.3**
4-Bromofluorobenzene	460-00-4	0.2	%		**97.1**	**84.1**	**99.1**	----	**94.6**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH8 0.3-0.4	BH8 0.6-0.7	BH9 0.16-0.2	BH9 0.2-0.25	BH10 0.15-0.2
			Client sampling date / time	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00
Compound	CAS Number	LOR	Unit	EM1702580-022	EM1702580-023	EM1702580-024	EM1702580-025	EM1702580-026
				Result	Result	Result	Result	Result
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1	%	19.3	20.2	10.9	15.6	18.5
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	<5	<5	<5	10
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	37	40	34	29	3
Copper	7440-50-8	5	mg/kg	9	14	31	31	<5
Lead	7439-92-1	5	mg/kg	13	21	12	36	<5
Nickel	7440-02-0	2	mg/kg	5	8	45	44	3
Zinc	7440-66-6	5	mg/kg	6	8	36	50	7
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	0.6	0.6	0.6	0.6	0.6
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	1.2	1.2	1.2	1.2	1.2
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	<10	<10	<10	<10

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	BH8 0.3-0.4	BH8 0.6-0.7	BH9 0.16-0.2	BH9 0.2-0.25	BH10 0.15-0.2
				Client sampling date / time	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00
Compound	CAS Number	LOR	Unit		EM1702580-022	EM1702580-023	EM1702580-024	EM1702580-025	EM1702580-026
					Result	Result	Result	Result	Result
EP080/071: Total Petroleum Hydrocarbons - Continued									
C10 - C14 Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg		<100	<100	**120**	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg		<50	<50	**120**	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	<10	<10	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg		<100	<100	**150**	<100	<100
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		<50	<50	**150**	<50	<50
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		<50	<50	<50	<50	<50
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
^ Total Xylenes	1330-20-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg		<1	<1	<1	<1	<1
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		**81.6**	**70.8**	**79.6**	**71.2**	**79.9**
2-Chlorophenol-D4	93951-73-6	0.5	%		**98.8**	**87.2**	**91.6**	**93.3**	**96.8**
2.4.6-Tribromophenol	118-79-6	0.5	%		**50.0**	**49.7**	**44.5**	**49.3**	**56.3**
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		**93.5**	**87.1**	**91.3**	**89.3**	**91.3**
Anthracene-d10	1719-06-8	0.5	%		**115**	**126**	**116**	**128**	**129**
4-Terphenyl-d14	1718-51-0	0.5	%		**110**	**107**	**111**	**109**	**110**
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		**86.5**	**86.6**	**90.9**	**87.3**	**89.8**
Toluene-D8	2037-26-5	0.2	%		**77.6**	**83.0**	**86.3**	**84.9**	**86.8**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	BH8 0.3-0.4	BH8 0.6-0.7	BH9 0.16-0.2	BH9 0.2-0.25	BH10 0.15-0.2
				Client sampling date / time	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00
Compound	CAS Number	LOR	Unit		EM1702580-022	EM1702580-023	EM1702580-024	EM1702580-025	EM1702580-026
					Result	Result	Result	Result	Result
EP080S: TPH(V)/BTEX Surrogates - Continued									
4-Bromofluorobenzene	460-00-4	0.2	%		**85.6**	**93.4**	**101**	**97.5**	**100**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	BH10 0.2-0.3	BH10 0.5-0.6	QC3	QC5	----
			Client sampling date / time	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00	----
Compound	CAS Number	LOR	Unit	EM1702580-027	EM1702580-028	EM1702580-032	EM1702580-033	--------
				Result	Result	Result	Result	----
EA001: pH in soil using 0.01M CaCl extract								
pH (CaCl2)	----	0.1	pH Unit	7.4	----	----	----	----
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1	%	14.8	16.0	19.7	13.4	----
EG005T: Total Metals by ICP-AES								
Molybdenum	7439-98-7	2	mg/kg	<2	----	----	----	----
Selenium	7782-49-2	5	mg/kg	<5	----	----	----	----
Silver	7440-22-4	2	mg/kg	<2	----	----	----	----
Tin	7440-31-5	5	mg/kg	<5	----	----	----	----
Arsenic	7440-38-2	5	mg/kg	<5	<5	<5	<5	----
Cadmium	7440-43-9	1	mg/kg	<1	<1	1	<1	----
Chromium	7440-47-3	2	mg/kg	----	18	23	24	----
Copper	7440-50-8	5	mg/kg	24	11	85	40	----
Lead	7439-92-1	5	mg/kg	22	37	419	69	----
Nickel	7440-02-0	2	mg/kg	47	3	27	35	----
Zinc	7440-66-6	5	mg/kg	46	23	257	72	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.3	<0.1	----
EG048: Hexavalent Chromium (Alkaline Digest)								
Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	----	----	----	----
EK026SF: Total CN by Segmented Flow Analyser								
Total Cyanide	57-12-5	1	mg/kg	3	----	----	----	----
EK040T: Fluoride Total								
Fluoride	16984-48-8	40	mg/kg	290	----	----	----	----
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	----	----	----	----
EP074A: Monocyclic Aromatic Hydrocarbons								
Benzene	71-43-2	0.2	mg/kg	<0.2	----	----	----	----
Toluene	108-88-3	0.5	mg/kg	<0.5	----	----	----	----
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	----	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	----	----	----	----
Styrene	100-42-5	0.5	mg/kg	<0.5	----	----	----	----
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	----	----	----	----
^ Sum of monocyclic aromatic hydrocarbons	----	0.2	mg/kg	<0.2	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	BH10 0.2-0.3	BH10 0.5-0.6	QC3	QC5	----
				Client sampling date / time	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00	----
Compound	CAS Number	LOR	Unit		EM1702580-027	EM1702580-028	EM1702580-032	EM1702580-033	--------
					Result	Result	Result	Result	----
EP074A: Monocyclic Aromatic Hydrocarbons - Continued									
^ **Total Xylenes**	1330-20-7	0.5	mg/kg		<0.5	----	----	----	----
EP074H: Naphthalene									
Naphthalene	91-20-3	1	mg/kg		<1	----	----	----	----
EP074I: Volatile Halogenated Compounds									
Vinyl chloride	75-01-4	0.02	mg/kg		<0.02	----	----	----	----
1.1-Dichloroethene	75-35-4	0.01	mg/kg		<0.01	----	----	----	----
Methylene chloride	75-09-2	0.4	mg/kg		<0.4	----	----	----	----
trans-1.2-Dichloroethene	156-60-5	0.02	mg/kg		<0.02	----	----	----	----
cis-1.2-Dichloroethene	156-59-2	0.01	mg/kg		<0.01	----	----	----	----
Chloroform	67-66-3	0.02	mg/kg		<0.02	----	----	----	----
1.1.1-Trichloroethane	71-55-6	0.01	mg/kg		<0.01	----	----	----	----
Carbon Tetrachloride	56-23-5	0.01	mg/kg		<0.01	----	----	----	----
1.2-Dichloroethane	107-06-2	0.02	mg/kg		<0.02	----	----	----	----
Trichloroethene	79-01-6	0.02	mg/kg		<0.02	----	----	----	----
1.1.2-Trichloroethane	79-00-5	0.04	mg/kg		<0.04	----	----	----	----
Tetrachloroethene	127-18-4	0.02	mg/kg		<0.02	----	----	----	----
1.1.1.2-Tetrachloroethane	630-20-6	0.01	mg/kg		<0.01	----	----	----	----
1.1.2.2-Tetrachloroethane	79-34-5	0.02	mg/kg		<0.02	----	----	----	----
Hexachlorobutadiene	87-68-3	0.02	mg/kg		<0.02	----	----	----	----
Chlorobenzene	108-90-7	0.02	mg/kg		<0.02	----	----	----	----
1.4-Dichlorobenzene	106-46-7	0.02	mg/kg		<0.02	----	----	----	----
1.2-Dichlorobenzene	95-50-1	0.02	mg/kg		<0.02	----	----	----	----
1.2.4-Trichlorobenzene	120-82-1	0.01	mg/kg		<0.01	----	----	----	----
^ **Sum of volatile chlorinated hydrocarbons**	----	0.01	mg/kg		<0.01	----	----	----	----
^ **Sum of other chlorinated hydrocarbons**	----	0.01	mg/kg		<0.01	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		----	<0.5	<0.5	<0.5	----
Acenaphthylene	208-96-8	0.5	mg/kg		----	<0.5	<0.5	<0.5	----
Acenaphthene	83-32-9	0.5	mg/kg		----	<0.5	<0.5	<0.5	----
Fluorene	86-73-7	0.5	mg/kg		----	<0.5	<0.5	<0.5	----
Phenanthrene	85-01-8	0.5	mg/kg		----	<0.5	**5.2**	<0.5	----
Anthracene	120-12-7	0.5	mg/kg		----	<0.5	**2.0**	<0.5	----
Fluoranthene	206-44-0	0.5	mg/kg		----	<0.5	**7.0**	<0.5	----
Pyrene	129-00-0	0.5	mg/kg		----	<0.5	**6.7**	<0.5	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	BH10 0.2-0.3	BH10 0.5-0.6	QC3	QC5	----
				Client sampling date / time	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00	----
Compound	CAS Number	LOR	Unit		EM1702580-027	EM1702580-028	EM1702580-032	EM1702580-033	--------
					Result	Result	Result	Result	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
Benz(a)anthracene	56-55-3	0.5	mg/kg		----	<0.5	**3.2**	<0.5	----
Chrysene	218-01-9	0.5	mg/kg		----	<0.5	**3.0**	<0.5	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		----	<0.5	**2.2**	<0.5	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		----	<0.5	**1.5**	<0.5	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg		----	<0.5	**2.5**	<0.5	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		----	<0.5	**1.1**	<0.5	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		----	<0.5	<0.5	<0.5	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		----	<0.5	**1.4**	<0.5	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg		----	<0.5	**35.8**	<0.5	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg		----	<0.5	**3.3**	<0.5	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg		----	**0.6**	**3.6**	**0.6**	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg		----	**1.2**	**3.8**	**1.2**	----
EP075A: Phenolic Compounds (Halogenated)									
2-Chlorophenol	95-57-8	0.03	mg/kg		<0.04	----	----	----	----
2.4-Dichlorophenol	120-83-2	0.03	mg/kg		<0.04	----	----	----	----
2.6-Dichlorophenol	87-65-0	0.03	mg/kg		<0.04	----	----	----	----
4-Chloro-3-methylphenol	59-50-7	0.03	mg/kg		<0.04	----	----	----	----
2.4.5-Trichlorophenol	95-95-4	0.05	mg/kg		<0.05	----	----	----	----
2.4.6-Trichlorophenol	88-06-2	0.05	mg/kg		<0.05	----	----	----	----
2.3.5.6-Tetrachlorophenol	935-95-5	0.03	mg/kg		<0.04	----	----	----	----
2.3.4.5 & 2.3.4.6-Tetrachlorophenol	4901-51-3/58-90-2	0.05	mg/kg		<0.07	----	----	----	----
Pentachlorophenol	87-86-5	0.2	mg/kg		<0.2	----	----	----	----
^ Sum of Phenols (halogenated)	----	0.03	mg/kg		<0.04	----	----	----	----
EP075A: Phenolic Compounds (Non-halogenated)									
Phenol	108-95-2	1	mg/kg		<1	----	----	----	----
2-Methylphenol	95-48-7	1	mg/kg		<1	----	----	----	----
3- & 4-Methylphenol	1319-77-3	1	mg/kg		<1	----	----	----	----
2-Nitrophenol	88-75-5	1	mg/kg		<1	----	----	----	----
2.4-Dimethylphenol	105-67-9	1	mg/kg		<1	----	----	----	----
2.4-Dinitrophenol	51-28-5	5	mg/kg		<5	----	----	----	----
4-Nitrophenol	100-02-7	5	mg/kg		<5	----	----	----	----
2-Methyl-4.6-dinitrophenol	8071-51-0	5	mg/kg		<5	----	----	----	----
Dinoseb	88-85-7	5	mg/kg		<5	----	----	----	----
2-Cyclohexyl-4.6-Dinitrophenol	131-89-5	5	mg/kg		<5	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	BH10 0.2-0.3	BH10 0.5-0.6	QC3	QC5	----
				Client sampling date / time	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00	----
Compound	CAS Number	LOR	Unit		EM1702580-027	EM1702580-028	EM1702580-032	EM1702580-033	--------
					Result	Result	Result	Result	----
EP075A: Phenolic Compounds (Non-halogenated) - Continued									
^ Sum of Phenols (non-halogenated)	----	1	mg/kg		<1	----	----	----	----
EP075B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	----	----	----	----
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	----	----	----	----
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	----	----	----	----
Fluorene	86-73-7	0.5	mg/kg		<0.5	----	----	----	----
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	----	----	----	----
Anthracene	120-12-7	0.5	mg/kg		<0.5	----	----	----	----
Fluoranthene	206-44-0	0.5	mg/kg		0.5	----	----	----	----
Pyrene	129-00-0	0.5	mg/kg		0.5	----	----	----	----
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	----	----	----	----
Chrysene	218-01-9	0.5	mg/kg		<0.5	----	----	----	----
Benzo(b+j) & Benzo(k)fluoranthene	205-99-2 207-08-9	0.5	mg/kg		<0.5	----	----	----	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	----	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	----	----	----	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	----	----	----	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	----	----	----	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg		1.0	----	----	----	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg		<0.5	----	----	----	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg		0.6	----	----	----	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg		1.2	----	----	----	----
EP075I: Organochlorine Pesticides									
alpha-BHC	319-84-6	0.03	mg/kg		<0.04	----	----	----	----
Hexachlorobenzene (HCB)	118-74-1	0.03	mg/kg		<0.04	----	----	----	----
beta-BHC	319-85-7	0.03	mg/kg		<0.04	----	----	----	----
gamma-BHC	58-89-9	0.03	mg/kg		<0.04	----	----	----	----
delta-BHC	319-86-8	0.03	mg/kg		<0.04	----	----	----	----
Heptachlor	76-44-8	0.03	mg/kg		<0.04	----	----	----	----
Aldrin	309-00-2	0.03	mg/kg		<0.04	----	----	----	----
Heptachlor epoxide	1024-57-3	0.03	mg/kg		<0.04	----	----	----	----
cis-Chlordane	5103-71-9	0.03	mg/kg		<0.04	----	----	----	----
trans-Chlordane	5103-74-2	0.03	mg/kg		<0.04	----	----	----	----
Endosulfan 1	959-98-8	0.03	mg/kg		<0.04	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	BH10 0.2-0.3	BH10 0.5-0.6	QC3	QC5	----
				Client sampling date / time	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00	----
Compound	CAS Number	LOR	Unit		EM1702580-027	EM1702580-028	EM1702580-032	EM1702580-033	--------
					Result	Result	Result	Result	----
EP075(l): Organochlorine Pesticides - Continued									
4.4`-DDE	72-55-9	0.05	mg/kg		<0.05	----	----	----	----
Dieldrin	60-57-1	0.03	mg/kg		<0.04	----	----	----	----
Endrin aldehyde	7421-93-4	0.03	mg/kg		<0.04	----	----	----	----
Endrin	72-20-8	0.03	mg/kg		<0.04	----	----	----	----
Endosulfan 2	33213-65-9	0.03	mg/kg		<0.04	----	----	----	----
4.4`-DDD	72-54-8	0.05	mg/kg		<0.05	----	----	----	----
Endosulfan sulfate	1031-07-8	0.03	mg/kg		<0.04	----	----	----	----
4.4`-DDT	50-29-3	0.05	mg/kg		<0.05	----	----	----	----
Methoxychlor	72-43-5	0.03	mg/kg		<0.04	----	----	----	----
^ Sum of organochlorine pesticides	----	0.03	mg/kg		<0.04	----	----	----	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.03	mg/kg		<0.04	----	----	----	----
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg		<0.05	----	----	----	----
^ Chlordane	57-74-9	0.03	mg/kg		<0.04	----	----	----	----
^ Sum of other organochlorine pesticides	----	0.03	mg/kg		<0.04	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		----	<10	<10	<10	----
C6 - C9 Fraction	----	10	mg/kg		<10	----	----	----	----
C10 - C14 Fraction	----	50	mg/kg		----	<50	<50	<50	----
C10 - C14 Fraction	----	50	mg/kg		<50	----	----	----	----
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	----	----	----	----
C15 - C28 Fraction	----	100	mg/kg		----	<100	**440**	<100	----
C15 - C28 Fraction	----	100	mg/kg		<100	----	----	----	----
C29 - C36 Fraction	----	100	mg/kg		----	<100	**340**	<100	----
C29 - C36 Fraction	----	100	mg/kg		<100	----	----	----	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg		----	<50	**780**	<50	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg		<50	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		----	<10	<10	<10	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		----	<10	<10	<10	----
>C10 - C16 Fraction	----	50	mg/kg		----	<50	<50	<50	----
>C10 - C16 Fraction	----	50	mg/kg		<50	----	----	----	----
>C16 - C34 Fraction	----	100	mg/kg		----	<100	**700**	<100	----
>C16 - C34 Fraction	----	100	mg/kg		**110**	----	----	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	BH10 0.2-0.3	BH10 0.5-0.6	QC3	QC5	----
				Client sampling date / time	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00	----
Compound	CAS Number	LOR	Unit		EM1702580-027	EM1702580-028	EM1702580-032	EM1702580-033	--------
					Result	Result	Result	Result	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued									
>C34 - C40 Fraction	----	100	mg/kg		----	<100	**140**	<100	----
>C34 - C40 Fraction	----	100	mg/kg		<100	----	----	----	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		----	<50	**840**	<50	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		**110**	----	----	----	----
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		----	<50	<50	<50	----
>C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		<50	----	----	----	----
C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		<10	----	----	----	----
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		----	<0.2	<0.2	<0.2	----
Toluene	108-88-3	0.5	mg/kg		----	<0.5	<0.5	<0.5	----
Ethylbenzene	100-41-4	0.5	mg/kg		----	<0.5	<0.5	<0.5	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		----	<0.5	<0.5	<0.5	----
ortho-Xylene	95-47-6	0.5	mg/kg		----	<0.5	<0.5	<0.5	----
^ Sum of BTEX	----	0.2	mg/kg		----	<0.2	<0.2	<0.2	----
^ Total Xylenes	1330-20-7	0.5	mg/kg		----	<0.5	<0.5	<0.5	----
Naphthalene	91-20-3	1	mg/kg		----	<1	<1	<1	----
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		**104**	----	----	----	----
EP074S: VOC Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.1	%		**82.9**	----	----	----	----
Toluene-D8	2037-26-5	0.1	%		**84.0**	----	----	----	----
4-Bromofluorobenzene	460-00-4	0.1	%		**90.2**	----	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		----	**73.5**	**78.9**	**81.9**	----
2-Chlorophenol-D4	93951-73-6	0.5	%		----	**87.2**	**89.6**	**104**	----
2.4.6-Tribromophenol	118-79-6	0.5	%		----	**65.8**	**64.1**	**66.1**	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		----	**94.6**	**94.4**	**118**	----
Anthracene-d10	1719-06-8	0.5	%		----	**120**	**109**	**108**	----
4-Terphenyl-d14	1718-51-0	0.5	%		----	**120**	**101**	**120**	----
EP075S: Acid Extractable Surrogates									

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	BH10 0.2-0.3	BH10 0.5-0.6	QC3	QC5	----
				Client sampling date / time	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00	03-Mar-2017 00:00	----
Compound	CAS Number	LOR	Unit		EM1702580-027	EM1702580-028	EM1702580-032	EM1702580-033	--------
					Result	Result	Result	Result	----
EP075S: Acid Extractable Surrogates - Continued									
Phenol-d6	13127-88-3	0.025	%		**89.4**	----	----	----	----
2-Chlorophenol-D4	93951-73-6	0.025	%		**99.5**	----	----	----	----
2.4.6-Tribromophenol	118-79-6	0.025	%		**113**	----	----	----	----
EP075T: Base/Neutral Extractable Surrogates									
Nitrobenzene-D5	4165-60-0	0.025	%		**100**	----	----	----	----
1.2-Dichlorobenzene-D4	2199-69-1	0.025	%		**95.5**	----	----	----	----
2-Fluorobiphenyl	321-60-8	0.025	%		**110**	----	----	----	----
Anthracene-d10	1719-06-8	0.025	%		**108**	----	----	----	----
4-Terphenyl-d14	1718-51-0	0.025	%		**108**	----	----	----	----
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		----	**73.9**	**87.6**	**84.3**	----
Toluene-D8	2037-26-5	0.2	%		----	**70.8**	**83.7**	**80.8**	----
4-Bromofluorobenzene	460-00-4	0.2	%		----	**81.4**	**95.2**	**97.4**	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)			Client sample ID	QC1	QC2	----	----	----
			Client sampling date / time	03-Mar-2017 00:00	03-Mar-2017 00:00	----	----	----
Compound	CAS Number	LOR	Unit	EM1702580-030	EM1702580-031	--------	--------	--------
				Result	Result	----	----	----
EG020F: Dissolved Metals by ICP-MS								
Arsenic	7440-38-2	0.001	mg/L	----	<0.001	----	----	----
Cadmium	7440-43-9	0.0001	mg/L	----	<0.0001	----	----	----
Chromium	7440-47-3	0.001	mg/L	----	<0.001	----	----	----
Copper	7440-50-8	0.001	mg/L	----	<0.001	----	----	----
Lead	7439-92-1	0.001	mg/L	----	<0.001	----	----	----
Nickel	7440-02-0	0.001	mg/L	----	<0.001	----	----	----
Zinc	7440-66-6	0.005	mg/L	----	<0.005	----	----	----
EG035F: Dissolved Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	----	<0.0001	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	1	µg/L	----	<1.0	----	----	----
Acenaphthylene	208-96-8	1	µg/L	----	<1.0	----	----	----
Acenaphthene	83-32-9	1	µg/L	----	<1.0	----	----	----
Fluorene	86-73-7	1	µg/L	----	<1.0	----	----	----
Phenanthrene	85-01-8	1	µg/L	----	<1.0	----	----	----
Anthracene	120-12-7	1	µg/L	----	<1.0	----	----	----
Fluoranthene	206-44-0	1	µg/L	----	<1.0	----	----	----
Pyrene	129-00-0	1	µg/L	----	<1.0	----	----	----
Benz(a)anthracene	56-55-3	1	µg/L	----	<1.0	----	----	----
Chrysene	218-01-9	1	µg/L	----	<1.0	----	----	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	1	µg/L	----	<1.0	----	----	----
Benzo(k)fluoranthene	207-08-9	1	µg/L	----	<1.0	----	----	----
Benzo(a)pyrene	50-32-8	0.5	µg/L	----	<0.5	----	----	----
Indeno(1.2.3.cd)pyrene	193-39-5	1	µg/L	----	<1.0	----	----	----
Dibenz(a.h)anthracene	53-70-3	1	µg/L	----	<1.0	----	----	----
Benzo(g.h.i)perylene	191-24-2	1	µg/L	----	<1.0	----	----	----
^ **Sum of polycyclic aromatic hydrocarbons**	----	0.5	µg/L	----	<0.5	----	----	----
^ **Benzo(a)pyrene TEQ (zero)**	----	0.5	µg/L	----	<0.5	----	----	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	20	µg/L	<20	<20	----	----	----
C10 - C14 Fraction	----	50	µg/L	----	<50	----	----	----
C15 - C28 Fraction	----	100	µg/L	----	<100	----	----	----
C29 - C36 Fraction	----	50	µg/L	----	<50	----	----	----
^ **C10 - C36 Fraction (sum)**	----	50	µg/L	----	<50	----	----	----

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Client sample ID	QC1	QC2	----	----	----
				Client sampling date / time	03-Mar-2017 00:00	03-Mar-2017 00:00	----	----	----
Compound	CAS Number	LOR	Unit		EM1702580-030	EM1702580-031	--------	--------	--------
					Result	Result	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	20	µg/L		<20	<20	----	----	----
^ **C6 - C10 Fraction minus BTEX (F1)**	C6_C10-BTEX	20	µg/L		<20	<20	----	----	----
>C10 - C16 Fraction	----	100	µg/L		----	<100	----	----	----
>C16 - C34 Fraction	----	100	µg/L		----	<100	----	----	----
>C34 - C40 Fraction	----	100	µg/L		----	<100	----	----	----
^ **>C10 - C40 Fraction (sum)**	----	100	µg/L		----	<100	----	----	----
^ **>C10 - C16 Fraction minus Naphthalene (F2)**	----	100	µg/L		----	<100	----	----	----
EP080: BTEXN									
Benzene	71-43-2	1	µg/L		<1	<1	----	----	----
Toluene	108-88-3	2	µg/L		<2	<2	----	----	----
Ethylbenzene	100-41-4	2	µg/L		<2	<2	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L		<2	<2	----	----	----
ortho-Xylene	95-47-6	2	µg/L		<2	<2	----	----	----
^ **Total Xylenes**	1330-20-7	2	µg/L		<2	<2	----	----	----
^ **Sum of BTEX**	----	1	µg/L		<1	<1	----	----	----
Naphthalene	91-20-3	5	µg/L		<5	<5	----	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	1	%		----	**29.0**	----	----	----
2-Chlorophenol-D4	93951-73-6	1	%		----	**57.5**	----	----	----
2.4.6-Tribromophenol	118-79-6	1	%		----	**72.5**	----	----	----
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	1	%		----	**76.7**	----	----	----
Anthracene-d10	1719-06-8	1	%		----	**90.1**	----	----	----
4-Terphenyl-d14	1718-51-0	1	%		----	**82.8**	----	----	----
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	2	%		**104**	**101**	----	----	----
Toluene-D8	2037-26-5	2	%		**108**	**105**	----	----	----
4-Bromofluorobenzene	460-00-4	2	%		**120**	**118**	----	----	----

Surrogate Control Limits

Sub-Matrix: **SOIL**

Compound	CAS Number	Recovery Limits (%) Low	High
EP066S: PCB Surrogate			
Decachlorobiphenyl	2051-24-3	41	122
EP074S: VOC Surrogates			
1.2-Dichloroethane-D4	17060-07-0	59	119
Toluene-D8	2037-26-5	55	117
4-Bromofluorobenzene	460-00-4	59	123
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	54	125
2-Chlorophenol-D4	93951-73-6	65	123
2.4.6-Tribromophenol	118-79-6	34	122
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	61	125
Anthracene-d10	1719-06-8	62	130
4-Terphenyl-d14	1718-51-0	67	133
EP075S: Acid Extractable Surrogates			
Phenol-d6	13127-88-3	28	134
2-Chlorophenol-D4	93951-73-6	27	123
2.4.6-Tribromophenol	118-79-6	25	149
EP075T: Base/Neutral Extractable Surrogates			
Nitrobenzene-D5	4165-60-0	29	125
1.2-Dichlorobenzene-D4	2199-69-1	31	117
2-Fluorobiphenyl	321-60-8	44	136
Anthracene-d10	1719-06-8	53	133
4-Terphenyl-d14	1718-51-0	59	141
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	51	125
Toluene-D8	2037-26-5	55	125
4-Bromofluorobenzene	460-00-4	56	124

Sub-Matrix: **WATER**

Compound	CAS Number	Recovery Limits (%) Low	High
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	10	46
2-Chlorophenol-D4	93951-73-6	23	104
2.4.6-Tribromophenol	118-79-6	28	130
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	36	114
Anthracene-d10	1719-06-8	51	119
4-Terphenyl-d14	1718-51-0	49	127

Sub-Matrix: **WATER**		Recovery Limits (%)	
Compound	*CAS Number*	*Low*	*High*
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	73	129
Toluene-D8	2037-26-5	70	125
4-Bromofluorobenzene	460-00-4	71	129

coffey

Chain of Custody

No: 101

Laboratory Quotation / Order No:

Job No: 754-MELEN 202044

Sheet 1 of

Dispatch to: (Address & Phone No.) ALS	Sampled by: Johnson Bei	~~Consigning Officer:~~ Profocs Epworth Box Date Dispatched:
Attention:	Project Manager: (report results to) Johnson Bei Johnson.bei@Coffey	Courier Service: Consignment Note No:

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Coffey	6-3-17	13:32	[signature]	6/3/17	1:30
			Marvin Au	6/3	14:00

Comments	Sample Matrix	Container Type and Preservative	Sample No.	Date Sampled	PAHs	TPHs	MAHs = BTEX	Metals:		HOLD									Sample Condition on Receipt
1	Soil	Glass Jar	BH1 0.09-0.11	3-3-17						X									
2			BH1 0.2-0.3							X									
3			BH1 0.5-0.6							X									
4			BH2 0.1-0.2							X									
5			BH2 0.4-0.5							X									
6			BH3 0.2-0.3							X									
7			BH3 0.3-0.4							X									
8			BH3 0.5-0.6							X									
9			BH4 0.1-0.2							X									
10			BH4 0.3-0.4							X									
11			BH4 0.4-0.5							X									
12			BH5 0.0-0.2							X									
13			BH5 0.4-0.5							X									
14			BH5 0.9-1.0							X									
15			BH6 0.1-0.2							X									
16			BH6 0.4-0.5							X									
17			BH6 0.8-0.9							X									

Forwarded to Secondary Lab
Initials R Date 7/3/17

Environmental Division
Melbourne
Work Order Reference
EM1702580

Telephone : + 61-3-8549 9600

Special Laboratory Instructions:

Detection Limits: Standard

Turnaround Required: Standard

JOB NUMBER **MUST** BE REFERENCED ON ALL SUBSEQUENT PAGES

64220/9-06

Copies: WHITE: Sign on release. **YELLOW:** If dispatched to interstate Lab, Lab to sign on receipt and fax back to Coffey. **BLUE:** To be returned with results.

coffey

Chain of Custody

No: 10162

Laboratory Quotation / Order No:

Job No:

Sheet 2 of 2

Dispatch to: (Address & Phone No.) ALS	Sampled by: Johnson Bei	Consigning Officer: Date Dispatched:
Attention:	Project Manager: (report results to)	Courier Service: Consignment Note No:

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Coffey	6-3-17	13:32	[illegible]		
			[illegible]	6/3	14:00

Comments	Sample Matrix	Container Type and Preservative	Sample No.	Date Sampled	PAHs	TPHs	MAHs = BTEX	Metals:		Hold	Sample Condition on Receipt
18	Soil	Glass Jar	BH7 0.1-0.15	3-3-17						✓	
19			BH7 0.3-0.4								
20			BH7 0.7-0.8								
21			BH8 0.2-0.25								
22			BH8 0.3-0.4								
23			BH8 0.6-0.7								
24			BH9 0.16-0.2								
25			BH9 0.2-0.25								
26			BH10 0.15-0.2								
27			BH10 0.2-0.3								
28			BH10 0.5-0.6								
29			BH10 1.0-1.1								
30	water	~~[illegible]~~ 2xVials	QC1								
31	"	2xVials, 1xA HP	QC2								
32	Soil	Glass ~~[illegible]~~ Jar	QC3								
33	"	"	QC4								
34	"	"	QC5								

Special Laboratory Instructions:

Detection Limits:

Turnaround Required:

JOB NUMBER **MUST** BE REFERENCED ON ALL SUBSEQUENT PAGES

64220/9-06

Copies: WHITE: Sign on release. **YELLOW:** If dispatched to interstate Lab, Lab to sign on receipt and fax back to Coffey. **BLUE:** To be returned with results.

Updated COC 6/3/17 1702. [illegible]

coffey

Chain of Custody

No: 10161

Laboratory Quotation / Order No:

Job No: 754-MELEN 202044

Sheet 1 of 2

Dispatch to: (Address & Phone No.) ALS

Sampled by: Johnson Bei

~~Consigning Officer:~~ Project Epworth Box Hill ESA

Date Dispatched:

Attention: please forward Sample "QC4" to Enviro-mark for Selected analysis

Project Manager: (report results to) Johnson Bei johnson.bei@Coffey

Courier Service:

Consignment Note No:

Relinquished by:	Date:	Time:	Received by:	Date:	Time:

Comments	Sample Matrix	Container Type and Preservative	Sample No.	Date Sampled	PAHs	TPHs	MAHs = BTEX	Metals:	HOLD	IWRG 621 Suite	TRH/PAH/BTEX/Metals(8)	Sample Condition on Receipt
1	Soil	Glass Jar	BH1 0.09-0.11	3-3-17						X		
2			BH1 0.2-0.3								X	
3			BH1 0.5-0.6						X			
4			BH2 0.1-0.2								X	
5			BH2 0.4-0.5								X	
6			BH3 0.2-0.3								X	
7			BH3 0.3-0.4								X	
8			BH3 0.5-0.6						X			
9			BH4 0.1-0.2								X	
10			BH4 0.3-0.4						X			
11			BH4 0.4-0.5								X	
12			BH5 0.0-0.2								X	
13			BH5 0.4-0.5						X			
14			BH5 0.9-1.0								X	
15			BH6 0.1-0.2								X	
16			BH6 0.4-0.5								X	
17			BH6 0.8-0.9						X			

Special Laboratory Instructions:

Detection Limits: Standard

Turnaround Required: Standard

JOB NUMBER MUST BE REFERENCED ON ALL SUBSEQUENT PAGES

642209-06

Copies: WHITE: Sign on release. YELLOW: If dispatched to interstate Lab, Lab to sign on receipt and fax back to Coffey. BLUE: To be returned with results.

coffey

Chain of Custody

No: 10162

Laboratory Quotation / Order No:

Job No:

Sheet 2 of 2

Dispatch to: (Address & Phone No.) ALS	Sampled by: Johnson Bei	Consigning Office: melt Date Dispatched: 6/03/2017
Attention: Bronwyn Sheen	Project Manager: (report results to) Johnson Bei	Courier Service: Consignment Note No:

Relinquished by:	Date:	Time:	Received by:	Date:	Time:

Comments	Sample Matrix	Container Type and Preservative	Sample No.	Date Sampled	Analyses Required: PAHs	TPHs C6-C9/BTEX	MAHs = BTEX	Metals: 8	Hold	TPH/PAH/BTEX/Metals(8)	TWRG 6+ Suite	Sample Condition on Receipt
CA	Soil	Glass Jar	BH7 0.1-0.15	3-3-17						X		
C9			BH7 0.3-0.4						X			
20			BH7 0.7-0.8						X		X	
21			BH8 0.2-0.25							X		
22			BH8 0.3-0.4							X		
23			BH8 0.6-0.7							X		
24			BH9 0.16-0.2							X		
25			BH9 0.2-0.25							X		
26			BH10 0.15-0.2							X		
27			BH10 0.2-0.3								X	
28			BH10 0.5-0.6							X		
29			BH10 1.0-1.1						X			
30	water	~~Glass~~ 2xVials	QC1			X						
31	"	2xVials, 1xA 1xP	QC2							X		
32	Soil	Glass ~~Jar~~ Jar	QC3							X		
~~33~~	"	"	QC4							X		
33 34	"	"	QC5							X		

Special Laboratory Instructions:

Detection Limits:

Turnaround Required:

JOB NUMBER **MUST** BE REFERENCED ON ALL SUBSEQUENT PAGES

8422019-06

Copies: WHITE: Sign on release. YELLOW: If dispatched to interstate Lab, Lab to sign on receipt and fax back to Coffey. BLUE: To be returned with results.

eurofins | mgt

Certificate of Analysis

Coffey Environments Pty Ltd VIC
3G Marine Pde
Abbotsford
VIC 3067

NATA Accredited
Accreditation Number 1261
Site Number 1254

Accredited for compliance with ISO/IEC 17025 – Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Attention: **Johnson Bei**

Report **537172-S**
Project name PROJECT EPWORTH BOX HILL ESA
Project ID 754-MELEN 202044
Received Date Mar 08, 2017

Client Sample ID			**QC4**
Sample Matrix			**Soil**
Eurofins | mgt Sample No.			**M17-Ma09194**
Date Sampled			**Mar 03, 2017**
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	140
TRH C29-C36	50	mg/kg	140
TRH C10-36 (Total)	50	mg/kg	280
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	%	76
Total Recoverable Hydrocarbons - 2013 NEPM Fractions			
Naphthalene[N02]	0.5	mg/kg	< 0.5
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50
TRH C6-C10	20	mg/kg	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20
Polycyclic Aromatic Hydrocarbons			
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	3.7
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	3.7
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	3.7
Acenaphthene	0.5	mg/kg	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5
Anthracene	0.5	mg/kg	0.9
Benz(a)anthracene	0.5	mg/kg	3.4
Benzo(a)pyrene	0.5	mg/kg	2.0
Benzo(b&j)fluoranthene[N07]	0.5	mg/kg	3.7
Benzo(g.h.i)perylene	0.5	mg/kg	2.8
Benzo(k)fluoranthene	0.5	mg/kg	2.3
Chrysene	0.5	mg/kg	2.2
Dibenz(a.h)anthracene	0.5	mg/kg	0.5
Fluoranthene	0.5	mg/kg	3.0
Fluorene	0.5	mg/kg	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	1.7

Client Sample ID			QC4
Sample Matrix			**Soil**
Eurofins | mgt Sample No.			**M17-Ma09194**
Date Sampled			**Mar 03, 2017**
Test/Reference	LOR	Unit	
Polycyclic Aromatic Hydrocarbons			
Naphthalene	0.5	mg/kg	< 0.5
Phenanthrene	0.5	mg/kg	3.6
Pyrene	0.5	mg/kg	3.1
Total PAH*	0.5	mg/kg	29.2
2-Fluorobiphenyl (surr.)	1	%	80
p-Terphenyl-d14 (surr.)	1	%	58
Total Recoverable Hydrocarbons - 2013 NEPM Fractions			
TRH >C10-C16	50	mg/kg	< 50
TRH >C16-C34	100	mg/kg	120
TRH >C34-C40	100	mg/kg	< 100
Heavy Metals			
Arsenic	2	mg/kg	4.4
Cadmium	0.4	mg/kg	1.9
Chromium	5	mg/kg	39
Copper	5	mg/kg	82
Lead	5	mg/kg	260
Mercury	0.1	mg/kg	0.6
Nickel	5	mg/kg	30
Zinc	5	mg/kg	250
% Moisture	1	%	13

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
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Melbourne	Mar 10, 2017	14 Day
- Method: TRH C6-C36 - LTM-ORG-2010			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Mar 10, 2017	14 Day
- Method: TRH C6-C40 - LTM-ORG-2010			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Mar 10, 2017	14 Day
- Method: TRH C6-C40 - LTM-ORG-2010			
BTEX	Melbourne	Mar 10, 2017	14 Day
- Method: TRH C6-C40 - LTM-ORG-2010			
Polycyclic Aromatic Hydrocarbons	Melbourne	Mar 10, 2017	14 Day
- Method: USEPA 8270 Polycyclic Aromatic Hydrocarbons			
Metals M8	Melbourne	Mar 10, 2017	28 Days
- Method: LTM-MET-3030 by ICP-OES (hydride ICP-OES for Mercury)			
% Moisture	Melbourne	Mar 09, 2017	14 Day
- Method: LTM-GEN-7080 Moisture			

ABN– 50 005 085 521
e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

Brisbane
1/21 Smallwood Place
Murarrie QLD 4172
Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 18217

Company Name:	Coffey Environments Pty Ltd VIC	**Order No.:**		**Received:**	Mar 8, 2017 3:59 PM
Address:	3G Marine Pde	**Report #:**	537172	**Due:**	Mar 16, 2017
	Abbotsford	**Phone:**	03 8413 6900	**Priority:**	5 Day
	VIC 3067	**Fax:**		**Contact Name:**	Johnson Bei
Project Name:	PROJECT EPWORTH BOX HILL ESA				
Project ID:	754-MELEN 202044				

Eurofins | mgt Analytical Services Manager : Mary Makarios

Sample Detail						Polycyclic Aromatic Hydrocarbons	Metals M8	BTEX	Moisture Set	Total Recoverable Hydrocarbons
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X
Sydney Laboratory - NATA Site # 18217										
Brisbane Laboratory - NATA Site # 20794										
Perth Laboratory - NATA Site # 18217										
External Laboratory										
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**					
1	QC4	Mar 03, 2017		Soil	M17-Ma09194	X	X	X	X	X
Test Counts						1	1	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

mg/l: milligrams per litre

ug/l: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100ml: Organisms per 100 millilitres

NTU: Nephelometric Turbidity Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery
CRM	Certified Reference Material - reported as percent recovery
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands. 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							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
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&j)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzo(g.h.i)perylene	mg/kg	< 0.5			0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a.h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1.2.3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
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	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
LCS - % Recovery							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	108			70-130	Pass	
TRH C10-C14	%	72			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	112			70-130	Pass	
Toluene	%	114			70-130	Pass	
Ethylbenzene	%	122			70-130	Pass	
m&p-Xylenes	%	119			70-130	Pass	
Xylenes - Total	%	119			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	111			70-130	Pass	
TRH C6-C10	%	97			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	91			70-130	Pass	
Acenaphthylene	%	98			70-130	Pass	
Anthracene	%	115			70-130	Pass	
Benz(a)anthracene	%	89			70-130	Pass	
Benzo(a)pyrene	%	93			70-130	Pass	
Benzo(b&j)fluoranthene	%	103			70-130	Pass	
Benzo(g.h.i)perylene	%	116			70-130	Pass	
Benzo(k)fluoranthene	%	72			70-130	Pass	
Chrysene	%	105			70-130	Pass	
Dibenz(a.h)anthracene	%	105			70-130	Pass	
Fluoranthene	%	77			70-130	Pass	
Fluorene	%	99			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	130			70-130	Pass	
Naphthalene	%	90			70-130	Pass	
Phenanthrene	%	103			70-130	Pass	
Pyrene	%	82			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
TRH >C10-C16	%	76			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	111			80-120	Pass	
Cadmium	%	109			80-120	Pass	
Chromium	%	102			80-120	Pass	
Copper	%	107			80-120	Pass	
Lead	%	107			80-120	Pass	
Mercury	%	102			75-125	Pass	
Nickel	%	100			80-120	Pass	
Zinc	%	115			80-120	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	M17-Ma08800	NCP	%	90			70-130	Pass	
TRH C10-C14	P17-Ma09291	NCP	%	119			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	M17-Ma08800	NCP	%	90			70-130	Pass	
Toluene	M17-Ma08800	NCP	%	93			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Ethylbenzene	M17-Ma08800	NCP	%	100			70-130	Pass	
m&p-Xylenes	M17-Ma08800	NCP	%	97			70-130	Pass	
o-Xylene	M17-Ma08800	NCP	%	96			70-130	Pass	
Xylenes - Total	M17-Ma08800	NCP	%	97			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	M17-Ma08800	NCP	%	74			70-130	Pass	
TRH C6-C10	M17-Ma08800	NCP	%	81			70-130	Pass	
Spike - % Recovery									
Polycyclic Aromatic Hydrocarbons				Result 1					
Acenaphthene	M17-Ma08728	NCP	%	80			70-130	Pass	
Acenaphthylene	M17-Ma08728	NCP	%	84			70-130	Pass	
Anthracene	M17-Ma08728	NCP	%	108			70-130	Pass	
Benz(a)anthracene	M17-Ma08728	NCP	%	123			70-130	Pass	
Benzo(a)pyrene	M17-Ma08728	NCP	%	82			70-130	Pass	
Benzo(b&j)fluoranthene	M17-Ma08728	NCP	%	84			70-130	Pass	
Benzo(g.h.i)perylene	M17-Ma08728	NCP	%	120			70-130	Pass	
Benzo(k)fluoranthene	M17-Ma08728	NCP	%	76			70-130	Pass	
Chrysene	M17-Ma08728	NCP	%	122			70-130	Pass	
Dibenz(a.h)anthracene	M17-Ma08728	NCP	%	111			70-130	Pass	
Fluoranthene	M17-Ma08728	NCP	%	73			70-130	Pass	
Fluorene	M17-Ma08728	NCP	%	84			70-130	Pass	
Indeno(1.2.3-cd)pyrene	M17-Ma08728	NCP	%	114			70-130	Pass	
Naphthalene	M17-Ma08728	NCP	%	90			70-130	Pass	
Phenanthrene	M17-Ma08728	NCP	%	84			70-130	Pass	
Pyrene	M17-Ma08728	NCP	%	73			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
TRH >C10-C16	P17-Ma09291	NCP	%	125			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	P17-Ma10096	NCP	%	108			75-125	Pass	
Cadmium	P17-Ma10096	NCP	%	113			75-125	Pass	
Chromium	P17-Ma10096	NCP	%	114			75-125	Pass	
Copper	P17-Ma10096	NCP	%	125			75-125	Pass	
Lead	P17-Ma10096	NCP	%	112			75-125	Pass	
Mercury	P17-Ma10096	NCP	%	107			70-130	Pass	
Nickel	P17-Ma10096	NCP	%	124			75-125	Pass	
Zinc	P17-Ma10096	NCP	%	117			75-125	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	M17-Ma08728	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	M17-Ma08725	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	M17-Ma08725	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	M17-Ma08725	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M17-Ma08728	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	M17-Ma08728	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	M17-Ma08728	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	M17-Ma08728	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	M17-Ma08728	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total	M17-Ma08728	NCP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	

Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	M17-Ma08728	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	M17-Ma08728	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD			
Acenaphthene	M17-Ma10871	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Acenaphthylene	M17-Ma10871	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Anthracene	M17-Ma10871	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benz(a)anthracene	M17-Ma10871	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(a)pyrene	M17-Ma10871	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(b&j)fluoranthene	M17-Ma10871	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(g.h.i)perylene	M17-Ma10871	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Benzo(k)fluoranthene	M17-Ma10871	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Chrysene	M17-Ma10871	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Dibenz(a.h)anthracene	M17-Ma10871	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluoranthene	M17-Ma10871	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Fluorene	M17-Ma10871	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Indeno(1.2.3-cd)pyrene	M17-Ma10871	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Naphthalene	M17-Ma10871	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Phenanthrene	M17-Ma10871	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Pyrene	M17-Ma10871	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
TRH >C10-C16	M17-Ma08725	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	M17-Ma08725	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	M17-Ma08725	NCP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M17-Ma08804	NCP	mg/kg	16	16	1.0	30%	Pass	
Cadmium	M17-Ma08804	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M17-Ma08804	NCP	mg/kg	20	20	1.0	30%	Pass	
Copper	M17-Ma08804	NCP	mg/kg	24	26	6.0	30%	Pass	
Lead	M17-Ma08804	NCP	mg/kg	120	130	6.0	30%	Pass	
Mercury	M17-Ma08804	NCP	mg/kg	0.1	0.1	1.0	30%	Pass	
Nickel	M17-Ma08804	NCP	mg/kg	11	11	1.0	30%	Pass	
Zinc	M17-Ma08804	NCP	mg/kg	190	230	19	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M17-Ma09195	NCP	%	12	11	8.0	30%	Pass	

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs

Authorised By

Mary Makarios	Analytical Services Manager
Alex Petridis	Senior Analyst-Metal (VIC)
Alex Petridis	Senior Analyst-Organic (VIC)
Harry Bacalis	Senior Analyst-Volatile (VIC)
Huong Le	Senior Analyst-Inorganic (VIC)
Joseph Edouard	Senior Analyst-Organic (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.

Eurofins | mgt shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall Eurofins | mgt be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.