



Environmental
Site Assessments

SITE ASSESSMENT REPORT

321-359 & 361-399 Ibbotson Street,
St Leonards

DOCUMENT CONTROL

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PO Box 3106, Waurin Ponds, VIC 3216

Report Title:	Site Assessment Report 321-359 & 361-399 Ibbotson Street, St Leonards
Doc. Ref:	ESA/029/2014
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REVISION STATUS

Revision #	Status	Date	Writer	Reviewer
1	Final	1-Nov-14	S.Lillas	S.Lillas

DOCUMENTS DISTRIBUTION

Revision #	Number of copies	Type	Recipient	Position and Company
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1.0 EXECUTIVE SUMMARY

1.1 Background

Ministerial Direction No. 1 – Potentially Contaminated Land (Direction No. 1) requires planning authorities when preparing planning scheme amendments, to satisfy themselves that the environmental conditions of land proposed to be used for a sensitive use (defined as residential, child-care centre, pre-school centre or primary school), agriculture or public open space are, or will be, suitable for that use.

The planning system is the primary means for regulating land use and approving development and is an important mechanism for triggering the consideration of potentially contaminated land.

Potentially contaminated land is defined in Ministerial Direction No. 1 – Potentially Contaminated Land, as land used or known to have been used for industry, mining or the storage of chemicals, gas, wastes or liquid fuel (if not ancillary to another use of land). This practice note also deals with land that may have been contaminated by other means such as by ancillary activities, contamination from surrounding land, fill using contaminated soil or agricultural uses.

Contamination of land is often a result of current or historical activities that have taken place at a site, or adjacent to it. To identify the potential for contamination, the following steps may assist:

- Identify whether an Environmental Audit Overlay (EAO) exists over the site.
- Consider any available information about the site:
 - The current and previous zoning, ownership or activities carried out on the site (for example council, rail, other utility or defence).
 - Any previous investigations or site assessments conducted.
 - Any potential contamination from surrounding land uses (for example, an adjacent service station known to be causing off-site contamination).
- Review lists of Certificates and Statements of Environmental Audit held by council and EPA. Environmental auditors are required to provide a copy of any Certificate or Statement issued to both the relevant council and the EPA.
- Review the EPA Priority Sites Register for information about sites with a current EPA Notice (for example, clean-up notice or pollution abatement notice).
- Inspect the site. Observations should be made regarding evidence of contamination or historical activities that may give rise to contamination (for example, fuel tanks).

This Site Assessment will cover the previously mentioned criteria and also provide a conclusion regarding the likely contamination status of the site.

1.2 Site Assessment Conclusions.

Conclusions	There is a Low likelihood of chemical contamination of soil in the paddocks due to application of fertilisers and/or herbicides. There is a Low likelihood of contamination of soil at the site due to
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	other chemicals. There is a Low likelihood of contamination of soil at the site due to industrial waste. There is a Low probability of occurrence of Acid Sulfate soils on site. The site is surrounded by low risk properties. There is no apparent soil staining, soil discolouration or odours at the site. There is no apparent asbestos contamination. There is no apparent Prescribed Industrial Waste or Putrescible Waste. There is no apparent imported fill on site.
Risk of Contamination	Based on all available information, this soil at the site has a Low risk of contamination. All soils analysed were BELOW the upper thresholds for NEPM HIL A and are therefore considered suitable for residential purposes.

2.0 INTRODUCTION, OBJECTIVES, SCOPE OF WORKS

2.1 Introduction

Environmental Site Assessments Pty Ltd ('ESA') was engaged by Costa Property Nine Pty Ltd (the 'Client') to undertake a Site Assessment including a limited soil sampling program at 321-359 & 361-399 Ibbotson Street, St Leonards (the 'Site'). Currently, the site consists of vacant paddocks with a shed at the southern end.



Insert: Image showing the Site (Land.vic.gov.au)

2.2 Project Objective

The purpose of the site assessment is to establish:

- Whether previous or current land use may have caused contamination on the site.
- What the contaminants of concern are likely to be and where they are located.

2.3 Scope of Works

Environmental Site Assessments provided the following services as part of the scope of works:

1. A review of site history information
2. A physical site inspection
3. Preparation of a report which summarises:
 - Site history information including potentially contaminating uses.

- Soil sample analysis for the site.
- The likely contamination status of the site.

3.0 THE SITE

The site is zoned as Farming Zone (FZ) and is located in St Leonards. Currently, the site consists of vacant paddocks and a shed at the southern end. According to site history information, the site has only ever been used for farming purposes. The soil profile was checked at ten points across the site and there was no indication of chemical or other contamination. There was no visible imported fill or waste material in the soil profile.



Insert above: Image showing the site on the day of inspection

3.1 Potential Contaminants of Concern

According to AS4482.1¹, the site has the following potential contaminants of concern due to its previous land uses:

- Fertilisers – Copper, Boron, Cadmium
- Herbicides – Arsenic, Mercury, Organochlorines, Organophosphates
- Fuels/Oils – Hydrocarbons, Metals

There were no instances of Asbestos contaminated material observed on site.

4.0 SITE ASSESSMENT

4.1 Land Parcel Identification & Location

Standard Parcel Identifiers	1\TP804600 2\TP804600
Site Address	321-399 Ibbotson Road, St Leonards
Melways	459 J9
Current Title Details (See Appendix 2)	VOLUME 05863 FOLIO 416 LAND DESCRIPTION Lots 1 and 2 on Title Plan 804600F. PARENT TITLE Volume 04803 Folio 413 REGISTERED PROPRIETOR

¹ AS 4482.1-2005 Guide to the investigation and sampling of sites with potentially contaminated soil - Non-volatile and Semi-Volatile compounds

	Estate Fee Simple Sole Proprietor COSTA PROPERTY NINE PTY LTD of LEVEL 1 2 MYERS STREET GEELONG VIC 3220
Title History (See Appendix 2)	19/08/1902 – William George Sharp (Timber Merchant) purchased the site. 13/11/1902 - George Alexander Hood and Joseph Latrobe Hood (Farmers) purchased the site. 18/01/1911 – David Morrison (Grazier) purchased the site. 09/03/1911 – David Morrison transfers the site to James Morrison. 28/03/1912 – Alexander Tyson (Farmer) purchases the site. 21/09/1917 – Claude William Hamilton and Walter John Carre Riddell purchased the site, No occupation was given. 21/05/1923 – George Alexander Hood and Joseph Latrobe Hood (Farmers) purchased the site. 30/12/1930 – Joseph Hood dies and the site is transferred to his wife Mary Hood. 01/08/1933 – The site is purchased by George Alexander Hood (Farmer). 21/10/1940 – The site is transferred to Teresa Veronica Hood after George Hood died on 05/12/1934. 27/03/1947 – The site is bequeathed to Eustace Edmund Wilson and Edna Lincoln after Teresa Hood died on 08/01/1945. 23/04/1947 – Gordon Alexander Hood (Grazier) purchased the site. 10/07/1951 – James Nathaniel Rigby (Fisherman) purchased the site. 27/11/1964 – Basil Dudley Parry purchased the site. 22/04/1991 – The site is bequeathed to Lois Marie Parry and Glen Russell Parry. 08/04/2002 – The site is purchased by MacFarlane Farmers Pty Ltd, Jordan Park Pty Ltd and Schokman Management Services Pty Ltd. 22/07/2008 – The site is transferred to Jordan Park Pty Ltd and Schokman Management Services Pty Ltd. 27/03/2012 – The site is purchased by Costa Property Nine Pty Ltd.
4.2 Planning Setting of Land Parcel	
Planning Scheme Zoning of Land Parcel (from DPCD)	Farming Zone (FZ)

Planning Scheme Overlays of Land Parcel	Design and Development Overlay (DDO)
Adjacent Areas Planning Scheme Zoning and Overlays	North SUZ3 South R3Z East R3Z West FZ
EPA Priority Sites within 500m ²	Nil
Statutory Environmental Audit Completed on site ³	Nil
Statutory Environmental Audit Completed within 500m of site	Nil
4.3 Environmental Setting of Land Parcel	
Published Geology ⁴	Qd11 – Quaternary, Sedimentary. Aeolian: Coastal and inland dunes: dune sand, some swamp deposits.
Surface Soil Texture (incl. clay content %) ⁵	Sand, loamy sand or clayey sand (<10%)
Nearby Surface Water	Port Phillip Bay to the east.
Location of settlement ponds	Nil
Potential Acid Sulphate Soils ⁶	No Known Occurrence
Potential nearby sources of contamination within 500m	Nil
4.4 Land Parcel Site Inspection Details	
Date and Time of Inspection	20.5.14 8.00am
Weather Conditions	Overcast, slight breeze
Current Site Use	Farming

² http://www.epa.vic.gov.au/your-environment/land-and-groundwater/~/_media/Files/land/docs/PSRaccessregister.pdf

³ <http://www.epa.vic.gov.au/our-work/environmental-auditing/53v-reports-certificates-statements-of-environmental-audit>

⁴ GeoVic

⁵ http://www.asris.csiro.au/index_other.html

⁶ http://www.asris.csiro.au/index_other.html

Previous Site Uses	Farming
Site Coverage incl. condition and type of ground cover, e.g. bare ground, asphalt, concrete, gravel, etc.	The site is predominantly comprised of paddocks with grass. There was no visible asphalt, concrete or gravel. The floor of the shed on site was exposed soil overlain in part by timber. No soil staining or odours were apparent.
Current Adjacent Land Uses incl. the apparent condition of adjacent properties	Residential/Farming/Golf Course. All properties appear to be in good condition.
Details of Structures on site incl. location and condition of all visible features, including foundations, positions of former buildings, tanks, pits, wells, drains and bores.	In the southern portion of the site there is a shed with a small stock enclosure. To the west of this shed is an above ground water tank. There are various fences on site in varying states of repair.
Process Details (in relation to current site use)	There are currently no processes on site.
Details of Chemical use incl. chemical storage and transfer areas, including the presence of waste or chemical containers	No chemicals or chemical transfer areas were sighted. There were no visible chemical containers.
Presence of above ground storage tanks	There is one above ground water tank at the southern end of the site.
Presence of underground storage tanks	Nil known or observed.
Presence of septic tanks	Nil known or observed.
Details of waste handling	No waste handling processes observed.
Evidence of burning or burying of waste	Nil
Spill Incidents	Nil known or observed.
Spill control systems, e.g. bund (materials of construction should be noted)	Nil
Locations of dispensing or fill points	There was a hose connected to the above ground water tank.
Evidence of Fill Materials	Nil imported fill observed.

Presence of any stockpiled material	Nil
Evidence of Scrap and industrial or chemical waste	Nil
Evidence of settlement, subsidence and disturbed ground	Nil apparent.
Evidence of on site or adjacent cut and fill activities or quarrying	Nil
Evidence of Contamination (discoloured soil, polluted water, affected plant growth)	Nil
Potential Asbestos containing material	Nil
Animal populations	Nil sighted.
Significant odours	Nil
Assessment of soil loss or deposition that has occurred in the past and evaluation of the future erosion potential	Nil apparent.
The direction of the flow of water run-off from the site and adjacent properties	North to south.
The depth of any standing water, the direction and rate of flow of rivers, streams or canals, together with their flood levels and any tidal fluctuations	Nil
Transformers	Nil
4.5 Site Assessment Conclusions and Recommendations	
Conclusions	There is a Medium likelihood of chemical contamination of soil in the paddocks due to application of fertilisers and/or herbicides. There is a Medium likelihood of chemical contamination of soil in the vicinity of the water tank and inside the shed. There is a Low likelihood of contamination of soil at the site due to industrial waste.

	There is a Low probability of occurrence of Acid Sulfate soils on site. The site is surrounded by low risk properties. There is no apparent soil staining, soil discolouration or odours at the site. There is no apparent asbestos contamination. There is no apparent Prescribed Industrial Waste or Putrescible Waste. There is no apparent imported fill on site.
Risk of Contamination	Based on information collected to this point, soils at the site have a Low-Medium risk of contamination.
Recommendations	Soil samples from the paddocks are required to discount impacts due to fertiliser/herbicide contamination. Additional samples of soil are required to be collected from the roadway in front of the above ground water tank and within the shed. These would be the likely areas where chemical/hydrocarbon impacts would be found due to vehicle traffic and potential capacity for fuel/oil/chemical storage.

5.0 Soil Sampling Program – 20th of May, 2014

This sampling program was undertaken on site on the 20th of May, 2014. Samples were collected by ESA staff from the surface soils (0-0.15m BGL) by hand trowel. The trowel was cleaned between samples with phosphate free detergent and rinsed with deionised water. The approximate sampling points for the site are shown in Figure 5.0 and 5.0.1 below.

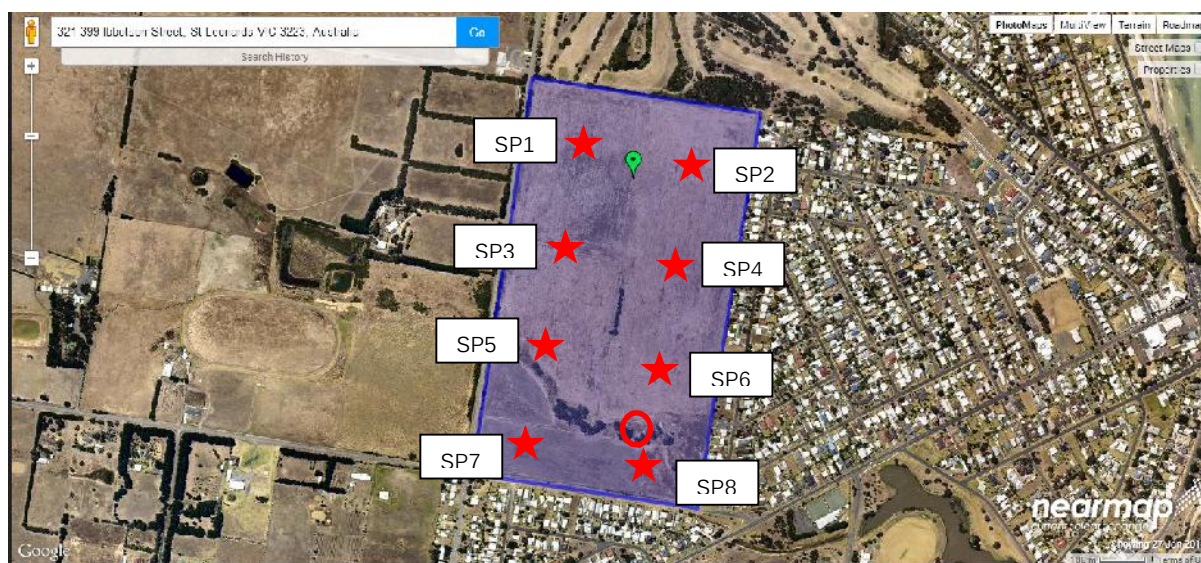


Figure 5.0 – Approximate sampling locations at the site. The red circle indicates the location of the above ground water tank and shed.



Figure 5.0.1 – Approximate sampling locations in the vicinity of the above ground water tank.

Table 5.0 illustrates the samples that were collected. The samples that were collected consisted of a dark brown sandy loam.

Table 5.0

Sample ID	Sampling Point	Depth of Sample (mbgl)	Lab Analysis	PID (PPM)/Odour
SP1/0-0.15	SP1	0-0.15	NEPM Suite***	0.0/Nil
SP2/0-0.15	SP2	0-0.15	15 Metals**	0.0/Nil
SP3/0-0.15	SP3	0-0.15	15 Metals**	0.0/Nil
SP4/0-0.15	SP4	0-0.15	15 Metals**	0.0/Nil
SP5/0-0.15	SP5	0-0.15	15 Metals**	0.0/Nil
SP6/0-0.15	SP6	0-0.15	NEPM Suite***	0.0/Nil
SP7/0-0.15	SP7	0-0.15	15 Metals**	0.0/Nil
SP8/0-0.15	SP8	0-0.15	Total Recoverable Hydrocarbons and 8 Metals*	0.0/Nil
SP9/0-0.15	SP9	0-0.15	Total Recoverable Hydrocarbons and 8 Metals*	0.0/Nil
SP10/0-0.15 SP10/0-0.15/B SP10/0-0.15/S	SP10	0-0.15	15 Metals**	0.0/Nil

* = 8 Metals including As, Cd, Cr, Cu, Hg, Ni, Pb, Zn

** = 15 Metals including As, Ba, Be, B, Cd, Cr, Co, Cu, Hg, Mn, Ni, Pb, Se V, Zn

*** = 15 Metals including As, Ba, Be, B, Cd, Cr, Co, Cu, Hg, Mn, Ni, Pb, Se V, Zn, TRH(C6-C36 or 40) / BTEXN, PAH/Phenols (16 PAHs & 12 Phenols), OC/OP Pesticides Including Triazine, Pesticides (Atrazine) and Bifenthrin, PCB , Cyanide – WAD, Chromium – Hexavalent (Alkaline Leach)

The following sections describe the guidelines, standards and investigation methods adopted for the soil sampling program.

5.1 Relevant Guidelines and Standards

The sampling program was undertaken in accordance with the following guidelines, standards and policies:

- Environment Protection Act 1970
- Environment Protection (Industrial Waste Resource) Regulations 2009
- Environment Protection Authority Victoria IWRG600.2 – Waste Categorisation – December 2010
- Environment Protection Authority Victoria IWRG621 – Soil Hazard Categorisation and Management – June 2009
- Environment Protection Authority Victoria IWRG701 – Sampling and Analysis of Waters, Wastewaters, Soils and Wastes – June 2009
- Environment Protection Authority Victoria IWRG702 – Soil Sampling – June 2009
- Australia Standard (AS 4482.1) - Guide to the Investigation and Sampling of Sites with Potentially Contaminated Soil, Part 1: Non-volatile and Semi-volatile compounds (Standards Australia, 2005).
- Australia Standard (AS 4482.2) - Guide to the Sampling and Investigation of Potentially Contaminated Soil, Part 2: Volatile Substances (Standards Australia, 1999).
- National Environment Protection (Assessment of Site Contamination) Measure 1999 (Amended)
- State Environment Protection Policy (Prevention and Management of Contamination of Land) No. S95, EPA Victoria, June 2002

5.2 Quality Assurance / Quality Control

5.2.1 Environmental Site Assessments Quality Assurance (QA) Program

Environmental Site Assessments has developed and implemented a Quality Assurance Program in general accordance with the following guidelines:

- Australia Standard (AS 4482.1) - Guide to the Investigation and Sampling of Sites with Potentially Contaminated Soil, Part 1: Non-volatile and Semi-volatile compounds (Standards Australia, 2005).
- National Environment Protection Council (NEPC) - National Environment Protection (Assessment of Site Contamination) Measure (NEPM) - Schedule B3 Guideline on Laboratory Analysis of Potentially Contaminated Soils, 1999 (Amended).

As part of the Quality Assurance Program, Environmental Site Assessments ensures that the following methodology is employed:

- The use of appropriately qualified and trained environmental scientists to perform intrusive works.
- The use of standardised field sheets to record the findings of the site investigations.
- The collection and analysis of Quality Control samples as per AS 4482.1.
- The use of Chain of Custody procedures to ensure that sample integrity is maintained through the transport and handling stages.
- Only using NATA accredited laboratories for the analysis of samples collected during the investigation activities.

As per the Environmental Site Assessments Quality Assurance Program, the following data quality indicators were used for the assessment of the laboratory analytical data:

- All sample analysis to be conducted using NATA registered methods in accordance with NEPM 1999 (Amended) guidelines.
- Laboratory method blank analysis required to be below the Limit of Reporting (LOR).
- Surrogate compound concentrations required to be spiked at similar concentration to sample result.

5.2.2 Environmental Site Assessments Quality Control (QC) Program

The overall precision of field quality control samples, laboratory split samples and laboratory duplicates is generally assessed by their Relative Percentage Difference (RPD), given by:

$$\frac{(C1 - C2) \times 100}{\frac{(C1 + C2)}{2}}$$

Where:

C1 is the primary sample concentration.

C2 is the duplicate sample concentration.

The Relative Percentage Difference (RPD) of duplicated analysis were calculated and compared to the following criteria for acceptability. The acceptance criteria are listed in AS4482.1 (2005):

- Less than 50% for field quality control samples
- Less than 30% for laboratory duplicates where the detection is less than 10 times the LOR
- Less than 20% for laboratory duplicates where the detection is greater than 10 times the LOR
- RPDs for control spike duplicates will be compared to an acceptable limit of 20%
- RPDs for matrix spike duplicates will be compared to an acceptable limit of 20%, and
- Percentage recoveries of control spikes and matrix spikes will be compared to an acceptable range of 70% – 130%. Where this range is exceeded, reference to the laboratories internal data quality objective limits will be made. In addition, percentage recoveries of surrogates will also be compared to the USEPA surrogate recovery limits.

5.2.3 Field Quality Control Samples

5.2.3.1 Equipment Blanks

One equipment rinsate blank was collected to evaluate field sampling and decontamination procedures. The rinsate blank was obtained by passing deionised water over a cleaned hand trowel. The rinsate blank that was collected was analysed for 15 Metals including As, Ba, Be, B, Cd, Cr, Co, Cu, Hg, Mn, Ni, Pb, Se V, Zn. The equipment rinsate blank was preserved, packaged and sealed in the manner described for the environmental samples. The time that the rinsate was collected was recorded.

5.2.3.2 Field Blanks

One field blank was collected to evaluate whether contaminants have been introduced into the samples during the sampling due to contamination from sample containers. Field blank samples are obtained by pouring deionised water into a sampling container at the sampling point. The field blank that was

collected was analysed for 15 Metals including As, Ba, Be, B, Cd, Cr, Co, Cu, Hg, Mn, Ni, Pb, Se V, Zn. The field blank was preserved and packaged, and sealed in the manner described for the environmental samples.

5.2.3.3 Trip Blanks

One trip blank was prepared to evaluate if the transport and handling procedures had introduced contaminants into the samples, and if cross contamination in the form of VOC migration had occurred between the collected samples. One trip blank was included in the cooler box being transported to and from ALS laboratory.

The sealed trip blank was not opened in the field and was transported to the laboratory in the same cooler with the samples collected for volatile analysis. The trip blank was preserved, packaged, and sealed in the manner described for the environmental samples. The trip blank was analysed for TRH C6-C9 and BTEXN.

5.2.3.4 Assessment of Field Variability (Blind Replicate and Split samples)

One quality control soil sample was collected for every ten primary soil samples collected.

Quality control samples were preserved, packaged, and sealed in the same manner as other samples of the same matrix. A separate sample number was assigned to each sample, and it was submitted blind to the laboratory. Blind replicate samples were submitted to ALS whilst split samples submitted to Eurofins MGT.

5.2.4 Sample Documentation

All samples collected were labelled in a clear and precise way for proper identification in the field and for tracking in the laboratory.

The samples had identifiable and unique numbers. The sample labels contained the following information:

- Company name
- Name of sampler
- Sample ID
- Date/Time sample was collected

Chain-of-custody forms were used to document sample collection and transport to laboratories for analysis. All sample transports for analysis were accompanied by a chain-of-custody form.

The chain-of-custody forms identified the contents of each transport and maintained the custodial integrity of the samples. The coolers in which samples were stored were sealed with self-adhesive custody seals. All custody seals were signed.

5.2.5 Packaging and Transport

All sample containers were placed in a plastic cooler. The following outlines the packaging procedures that were followed for samples:

- When ice was used, it was packed in zip-locked, double plastic bags. The drain plug of the cooler was sealed with fiberglass tape to prevent melting ice from leaking out of the cooler.

- The bottom of the cooler was lined with bubble wrap to prevent breakage during transport.
- All glass sample containers were enclosed in bubble wrap to prevent breakage.
- Where required, empty space in the cooler was filled with bubble wrap to prevent movement and breakage during transport.
- Ice used to cool samples was placed on top and around the samples to chill them to the correct temperature.
- Each cooler was securely taped shut with signed custody seals.

5.2.6 Field Notes

The following information was recorded during the collection of each sample:

- Sample location and description
- Sampling area sketch showing sample location and measured distances (where required)
- Sampler's name(s)
- Date and time of sample collection
- Sample ID
- Type of soil/material encountered (Fill, Natural etc.)
- GPS Coordinates
- PID readings
- Field observations and details related to analysis or integrity of samples (e.g., weather conditions, noticeable odours, colours etc.)
- Soil descriptions as per AS1726-1993.
- Sample preservation details

In addition to the sampling information, the following specific information was also recorded in the field logbook:

- Team members and their responsibilities
- Time of arrival/entry on site and time of site departure
- Other personnel on site
- Summary of any meetings or discussions
- Deviations from sampling plans
- Changes in personnel and responsibilities with reasons for the changes
- Calibration readings for any equipment used and equipment model and serial number

5.3 Photoionisation Calibration

The photoionisation detector was calibrated prior to sample collection. The PID calibration sheet is attached to **Appendix 3**. All samples were analysed using the PID and the results are shown in Table 5.0.

5.4 Results of Analysis

The laboratories used for conducting the soil analysis were Australian Laboratory Services Pty Ltd ('ALS') and Eurofins MGT ('MGT'). ALS and MGT are NATA certified for the analysis undertaken.

The comparison tables for laboratory results are attached in **Appendix 5**. All chain of custody forms, certificates of analysis and laboratory QA/QC documents are in **Appendix 4**. The laboratory report numbers are EM1404854 and 419177.

The laboratory results were compared with NEPM 1999 (Amended) guidelines for HIL A ('HIL A').

HILs are scientifically based, generic assessment criteria designed to be used in the first stage (Tier 1 or 'screening') of an assessment of potential risks to human health from chronic exposure to contaminants. They are intentionally conservative and are based on a reasonable worst-case scenario for four generic land use settings:

HIL A is residential with garden/accessible soil (home grown produce <10% fruit and vegetable intake, (no poultry). It also includes children's day care centres, preschools and primary schools.

The comparison results were as follows:

- There were no results in excess of NEPM HIL A upper thresholds.

There was one detectable reading for TRH C29-C36 (SP8/0-0.15 = 160 mg/kg). It was noted that the sample did contain grass which is known to give a false positive for TRH readings⁷. There was no visual, olfactory or PID indication that the sample point was impacted from hydrocarbons. As such it is the opinion of the author that no further investigation is required at SP8.

5.5 ESA Quality Control

5.5.1 Equipment Rinsate Blanks

One rinsate blank was collected (RB/1) from the hand trowel that was used to collect samples. It was analysed for 15 Metals (As, Ba, Be, B, Cd, Cr, Co, Cu, Hg, Mn, Ni, Pb, Se V, Zn). All analytes were below the LOR. The results are attached to **Appendix 5**.

5.5.2 Field Blanks

One field blank was collected (FB/1). It was analysed for 15 Metals (As, Ba, Be, B, Cd, Cr, Co, Cu, Hg, Mn, Ni, Pb, Se V, Zn). All analytes were below the LOR. The results are attached to **Appendix 5**.

5.5.3 Trip Blanks

One trip blank (TB/1) was placed in the ALS cooler box containing soil samples submitted for analysis. It was analysed for TRH C6-C9 and BTEXN. All analytes were below the LOR. The results are attached to **Appendix 5**.

5.5.4 Blind Replicate and Split Sample Analysis

The Blind Replicate and Split samples that were collected as part of the sampling program are detailed in Table 5.0. The RPD's were calculated for these samples. The complete RPD comparison table is attached in **Appendix 5**.

- For the blind replicate there was an elevated RPD for Nickel (53%).

⁷ API Publication 4709 September 2001

- For the split sample there were elevated RPDs for Arsenic (50%),

The following comments should be noted when interpreting the elevated RPD calculation:

- Where results were outside the acceptable range, these were all less than an order of magnitude from the original.
- It is considered that the variations reported in inter-lab sample may be due to differences in testing procedures.

RPD exceedences are not considered to adversely affect the data quality and hence, alter the findings of the investigation. Where the reported concentrations of the quality control sample are higher than the primary samples, the higher concentrations will be adopted for comparison against the relevant screening criteria.

5.6 Laboratory QA/QC

As part of their NATA accreditation, ALS and MGT perform internal duplicate analysis of samples for comparison of results to demonstrate precision. Laboratory standards including matrix spike samples, laboratory control samples and surrogates are also conducted as a basis to demonstrate accuracy. In addition, internal laboratory blank samples are run to assess the potential for laboratory equipment errors. The laboratory QA/QC results are attached in **Appendix 4**.

5.6.1 ALS Environmental Laboratory

- For all matrices, no Method Blank value outliers occur.
- For all matrices, no Duplicate outliers occur.
- For all matrices, no Laboratory Control outliers occur.
- For soil, one Matrix Spike outlier occurred for Manganese due to the background level being greater than or equal to 4x spike level.
- For all matrices, no Surrogate Recovery outliers occur.

5.6.2 Eurofins MGT

- For all matrices, no Method Blank value outliers occur.
- For soil, Duplicate outliers occurred for Cobalt, Copper, Nickel and Vanadium.
- For all matrices, no Laboratory Control outliers occur.
- For all matrices, no Matrix Spike outliers occur.
- For all matrices, no Surrogate Recovery outliers occur.

5.6.3 Sample Holding Times and Sample Receipt Temperature

Sample holding times were within acceptable ranges from collection to extraction. The documented temperature of samples upon receipt at the respective laboratory was within an acceptable range.

5.6.4 Conclusion

A review of the laboratory reports indicates that ALS and MGT have met their internal acceptance criteria for the quality control samples.

7.0 CONCLUSION OF SITE ASSESSMENT

Conclusions	There is a Low likelihood of chemical contamination of soil in the paddocks due to application of fertilisers and/or herbicides. There is a Low likelihood of contamination of soil at the site due to other chemicals. There is a Low likelihood of contamination of soil at the site due to industrial waste. There is a Low probability of occurrence of Acid Sulfate soils on site. The site is surrounded by low risk properties. There is no apparent soil staining, soil discolouration or odours at the site. There is no apparent asbestos contamination. There is no apparent Prescribed Industrial Waste or Putrescible Waste. There is no apparent imported fill on site.
Risk of Contamination	Based on all available information, this soil at the site has a Low risk of contamination. All soils analysed were BELOW the upper thresholds for NEPM HIL A and are therefore considered suitable for residential purposes.

8.0 BIBLIOGRAPHY

Some or all of these documents may have been referred to in the preparation of this report.

- Ministerial Direction No. 1 – Potentially Contaminated Land (Direction No. 1)
- Environment Protection Authority of Victoria. June 2009. Industrial Waste Resource Guidelines (IWRG701) Sampling and Analysis of Waters, Wastewaters, Soils and Wastes
- Environment Protection Authority of Victoria. June 2009. Industrial Waste Resource Guidelines (IWRG702) Soil Sampling
- Environment Protection Authority of Victoria. June 2009. Industrial Waste Resource Guidelines (IWRG621) Soil Hazard Categorisation & Management
- Environment Protection Authority of Victoria. Priority Sites Register.
<http://www.epa.vic.gov.au/your-environment/land-and-groundwater/~media/Files/land/docs/PSRaccessregister.pdf>
- Environment Protection Authority of Victoria issued certificates and statements of environmental audits. <http://www.epa.vic.gov.au/our-work/environmental-auditing/53v-reports-certificates-statements-of-environmental-audit>
- National Environment Protection Council 1999 (Amended) - National Environment Protection (Assessment of Site Contamination) Measure – Guideline on Investigation Levels for Soil and Groundwater.

- Standards Australia. 2005. AS 4482.1, Guide to the sampling and investigation of potentially contaminated soil, Part 1: Non-volatile compounds. Standards Association of Australia
- Standards Australia. 1999. AS4482.1, Guide to the sampling and investigation of potentially contaminated soil Part 2: Volatile substances. Standards Association of Australia
- Australian Soil Resource Information System (ASRIS), CSIRO Australia 2006, http://www.asris.csiro.au/index_ie.html#
- Department of Sustainability and Environment, Victoria's Planning Scheme, State Government of Victoria, <http://www.dpi.vic.gov.au/>
- Land Channel. Victorian Government Online Channel, State Government of Victoria, <http://www.land.vic.gov.au/land/lcnlc2.nsf/Home+Page/Land+Channel~Home+Page?open>
- http://www.water.vic.gov.au/_data/assets/pdf_file/0004/55183/Groundwater-Occurrence-Table.pdf
- GeoVic (http://er-info.dpi.vic.gov.au/sd_weave/registered.htm)
- API Publication 4709 September 2001

STATEMENT OF QUALIFICATIONS AND LIMITATIONS

In preparing this report, Environmental Site Assessments has relied on client/ third party information which was not verified by Environmental Site Assessments and Environmental Site Assessments does not accept responsibility for omissions or inaccuracies in the client/ third party information.

This report is based solely on the scope of work agreed between Environmental Site Assessments and its client and that scope of work may not be fully described in this report.

This report is based on the site conditions identified at the time of inspection. It is not possible to identify all contamination or potential contaminants in or under the surface of the site. Investigations undertaken in respect of this report may have been constrained by the particular site conditions, such as the location of buildings, services and vegetation. Further, changes that may have occurred after inspection.

As a result of these matters, not all relevant site history, contaminants or potential for contamination may have been identified in this report. No warranties express or implied, as to the accuracy or completeness of the matters contained within it are made.

Although normal standards of professional practice have been applied, the absence of any identified potential for air, soil or groundwater impacts on the subject property should not be interpreted as a conclusion that impacts do not exist on the site.

Subsurface conditions can vary across a particular site, which cannot be wholly defined by investigation. As a result, it is unlikely that the results and estimations presented in this report will reflect the extremes of conditions within the site. Subsurface conditions including impact concentrations can change in a limited period of time.

Any information provided may be based on "spot" tests. Conditions may vary between or beyond those locations from the interpreted conditions based on the actual data.

The analyses, evaluations, opinions and conclusions presented in this report are based on the information provided, and they could change if the information is in fact found to be unrepresentative of conditions between sampling and analysis locations.

The assessment and remediation of contamination is a developing science. Clean Up technology is constantly changing as scientific information on data collection, risk assessment, toxicology and remediation technologies are published. Further, opinions can vary as to the criterion for whether particular conditions constitute contamination, and if so how that contamination should be addressed or remediated. Different persons might reasonably or otherwise form opinions different to those of Environmental Site Assessments.

Use of the site for any purpose may require planning and other approvals and, in some cases, EPA and accredited site auditor approvals. Environmental Site Assessments offers no opinion as to the likelihood of obtaining any such approvals, or the conditions and obligations which such approvals may impose, which may include the requirement for significant environment works.

The ongoing use of the site or use of the site for a different purpose may require the owner/ user to manage and/ or remediate site conditions, such as contamination and other conditions, including but not limited to conditions referred to in this report.

This report is not intended to be used for the purposes of tendering, programming of works, refurbishment works or demolition works unless used in conjunction with a specification detailing the extent of the works. To ensure its contextual integrity, the report must be read in its entirety and should not be copied, distributed or referred to in part only.

Environmental Site Assessments makes no determination or recommendation regarding a decision whether to acquire or provide financing with respect to the site.

Appendix 1 – Basic and Planning Property Reports

Property Report from www.land.vic.gov.au on 20 May 2014 08:12 AM

Address: 321-399 IBBOTSON STREET ST LEONARDS 3223

Lot and Plan Number: This site has 2 parcels. See table below.

Standard Parcel Identifier (SPI): See table below.

Local Government (Council): GREATER GEELONG **Council Property Number:** 253654

Directory Reference: Melway 459 J9

Note: There are 2 properties identified for this site.

These can include units (or car spaces), shops, or part or whole floors of a building.

Dimensions for these individual properties are generally not available.

This property is in a designated bushfire prone area.

Special bushfire construction requirements apply. Planning provisions may apply.

Further information about the building control system and building in bushfire prone areas can be found in the Building Commission section of the Victorian Building Authority website www.vba.vic.gov.au

Parcel Details

Lot/Plan or Crown Description	SPI
Lot 1 TP804600	1\TP804600
Lot 2 TP804600	2\TP804600

State Electorates

Legislative Council: WESTERN VICTORIA (2005)

Legislative Assembly: BELLARINE (2001)

The following electorates using the 2013 boundaries will not apply until the election in November 2014

Legislative Council(2013): WESTERN VICTORIA (2013)

Legislative Assembly(2013): BELLARINE (2013)

Utilities

Regional Urban Water Business: Barwon Water

Rural Water Business: Southern Rural Water

Melbourne Water: outside drainage boundary

Power Distributor: POWERCOR (Information about [choosing an electricity retailer](#))

Planning Zone Summary

Planning Zone: FARMING ZONE (FZ)

SCHEDULE TO THE FARMING ZONE

Planning Overlay: None

Planning scheme data last updated on 15 May 2014.

A **planning scheme** sets out policies and requirements for the use, development and protection of land.

This report provides information about the zone and overlay provisions that apply to the selected land.

Information about the State, local, particular and general provisions of the local planning scheme that may affect the use of this land can be obtained by contacting the local council or by visiting [Planning Schemes Online](#)

This report is NOT a **Planning Certificate** issued pursuant to Section 199 of the Planning & Environment Act 1987.

It does not include information about exhibited planning scheme amendments, or zonings that may affect the land.

To obtain a Planning Certificate go to [Titles and Property Certificates](#)

The Planning Property Report includes separate maps of zones and overlays

For details of surrounding properties, use this service to get the Reports for properties of interest

To view planning zones, overlay and heritage information in an interactive format visit [Planning Maps Online](#)

For other information about planning in Victoria visit www.dpcd.vic.gov.au/planning

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Area Map



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Planning Property Report

from www.dtpli.vic.gov.au/planning on 20 May 2014 08:13 AM

Address: 321-399 IBBOTSON STREET ST LEONARDS 3223

Lot and Plan Number: Lot 1 TP804600

This property has a total of 2 parcels.

For full parcel details get the free Basic Property report at [Property Reports](#)

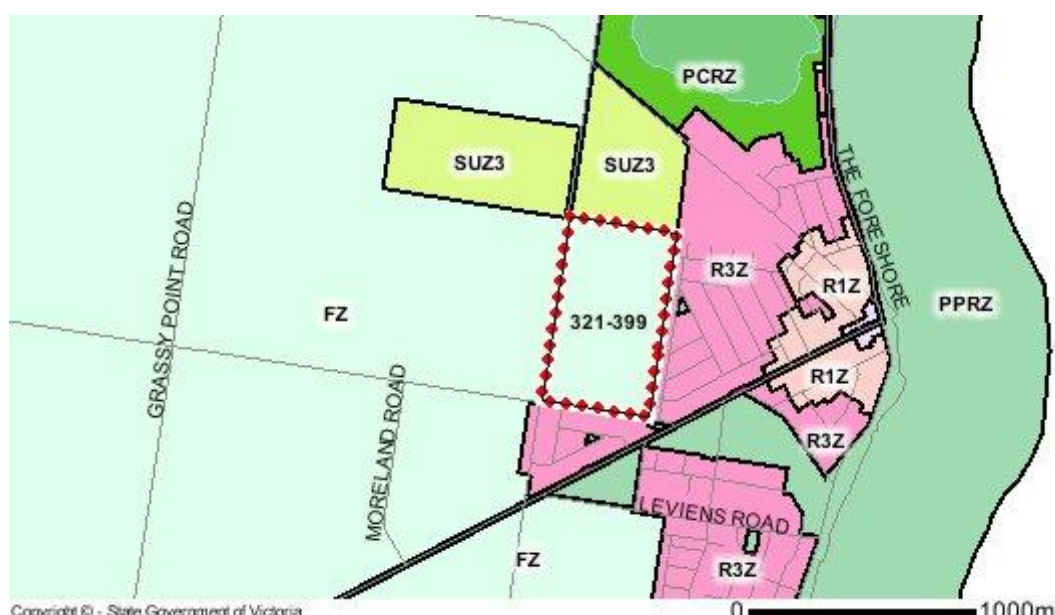
Local Government (Council): GREATER GEELONG **Council Property Number:** 253654

Directory Reference: Melway 459 J9

Planning Zone

[FARMING ZONE \(FZ\)](#)

[SCHEDULE TO THE FARMING ZONE](#)



Note: labels for zones may appear outside the actual zone - please compare the labels with the legend.

Zones Legend

ACZ - Activity Centre	IN1Z - Industrial 1	R1Z - Residential 1
B1Z - Commercial 1	IN2Z - Industrial 2	R2Z - Residential 2
B2Z - Commercial 1	IN3Z - Industrial 3	R3Z - Residential 3
B3Z - Commercial 2	LDRZ - Low Density Residential	RAZ - Rural Activity
B4Z - Commercial 2	MUZ - Mixed Use	RCZ - Rural Conservation
B5Z - Commercial 1	NRZ - Neighbourhood Residential	RDZ1 - Road - Category 1
C1Z - Commercial 1	PCRZ - Public Conservation & Resource	RDZ2 - Road - Category 2
C2Z - Commercial 2	PDZ - Priority Development	RGZ - Residential Growth
CA - Commonwealth Land	PPRZ - Public Park & Recreation	RLZ - Rural Living
CCZ - Capital City	PUZ1 - Public Use - Service & Utility	RUZ - Rural
CDZ - Comprehensive Development	PUZ2 - Public Use - Education	SUZ - Special Use
DZ - Dockland	PUZ3 - Public Use - Health Community	TZ - Township
ERZ - Environmental Rural	PUZ4 - Public Use - Transport	UFZ - Urban Floodway
FZ - Farming	PUZ5 - Public Use - Cemetery/Crematorium	UGZ - Urban Growth
GRZ - General Residential	PUZ6 - Public Use - Local Government	
GWAZ - Green Wedge A	PUZ7 - Public Use - Other Public Use	
GWZ - Green Wedge		-- Urban Growth Boundary

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Planning Overlay

None affecting this land - there are overlays in the vicinity

[DESIGN AND DEVELOPMENT OVERLAY \(DDO\)](#)

[DEVELOPMENT PLAN OVERLAY \(DPO\)](#)



Overlays Legend

Airport Environs	Erosion Management	Parking
City Link Project	Environmental Significance	Public Acquisition
Development Contributions Plan	Floodway	Restructure
Design & Development	Heritage	Road Closure
Design & Development Part	Incorporated Plan	Special Building
Development Plan	Land Subject to Inundation & Floodway	Significant Landscape
Environmental Audit	Melbourne Airport Environs 1	Salinity Management
	Melbourne Airport Environs 2	State Resource
	Neighbourhood Character	Vegetation Protection
		Bushfire Management - Wildfire Management

Note: due to overlaps some colours on the maps may not match those in the legend.

Further Planning Information

Planning scheme data last updated on 15 May 2014.

A **planning scheme** sets out policies and requirements for the use, development and protection of land.

This report provides information about the zone and overlay provisions that apply to the selected land.

Information about the State, local, particular and general provisions of the local planning scheme that may affect the use of this land can be obtained by contacting the local council or by visiting [Planning Schemes Online](#)

This report is NOT a **Planning Certificate** issued pursuant to Section 199 of the Planning & Environment Act 1987.

It does not include information about exhibited planning scheme amendments, or zonings that may affect the land.

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Appendix 2 – Title History

VOLUME 05863 FOLIO 416

Security no : 124050595671J
Produced 20/05/2014 12:11 pm

LAND DESCRIPTION

Lots 1 and 2 on Title Plan 804600F.
PARENT TITLE Volume 04803 Folio 413
Created by instrument 1528576 01/08/1933

REGISTERED PROPRIETOR

Estate Fee Simple
Sole Proprietor
COSTA PROPERTY NINE PTY LTD of LEVEL 1 2 MYERS STREET GEELONG VIC 3220
AJ568824G 27/03/2012

ENCUMBRANCES, CAVEATS AND NOTICES

Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section 24 Subdivision Act 1988 and any other encumbrances shown or entered on the plan set out under DIAGRAM LOCATION below.

DIAGRAM LOCATION

SEE TP804600F FOR FURTHER DETAILS AND BOUNDARIES

ACTIVITY IN THE LAST 125 DAYS

NIL

DOCUMENT END

HISTORICAL SEARCH STATEMENT

Land Victoria

Page 1 of 8

Produced 29/05/2014 11:30 AM

Volume 05863 Folio 416

Folio Creation: Created as paper folio continued as computer folio

Parent title Volume 04803 Folio 413

RECORD OF ALTS DEALINGS

Date Lodged for Registration	Date Recorded on Register	Dealing	Imaged	Dealing Type and Details
------------------------------	---------------------------	---------	--------	--------------------------

RECORD OF VOTS DEALINGS

Date Lodged for Registration	Date Recorded on Register	Dealing	Imaged
------------------------------	---------------------------	---------	--------

31/10/2001	07/05/2002	X851076A	Y
------------	------------	----------	---

APPLICATION TO REMOVE CAVEAT
REMOVED

08/04/2002	02/07/2002	AB199335X	Y
------------	------------	-----------	---

TRANSFER OF LAND BY ENDORSEMENT

FROM:

LOIS MARIE PARRY

GLEN RUSSELL PARRY

TO:

MACFARLANE FARMERS PTY LTD

JORDAN PARK PTY LTD

SCHOKMAN MANAGEMENT SERVICES PTY LTD

RESULTING PROPRIETORSHIP:

Estate Fee Simple

TENANTS IN COMMON

As to 1 of a total of 3 equal undivided shares

Sole Proprietor

MACFARLANE FARMERS PTY LTD of 114 YARRA ST. GEELONG 3220

As to 1 of a total of 3 equal undivided shares

Sole Proprietor

JORDAN PARK PTY LTD of 2 MYERS ST. GEELONG 3220

As to 1 of a total of 3 equal undivided shares

Sole Proprietor

SCHOKMAN MANAGEMENT SERVICES PTY LTD of 37 THE ESPLANADE CORIO

3214

AB199335X 08/04/2002

08/04/2002	02/07/2002	AB199336V	Y
------------	------------	-----------	---

MORTGAGE OF LAND

MORTGAGE AB199336V 08/04/2002

NATIONAL AUSTRALIA BANK LIMITED

11/09/2007	11/09/2007	AF330235Q	Y
------------	------------	-----------	---

DISCHARGE OF MORTGAGE

MORTGAGE(S) REMOVED

AB199336V

12/09/2007	12/09/2007	AF334488M	Y
------------	------------	-----------	---

HISTORICAL SEARCH STATEMENT

Land Victoria

Page 2 of 8

RECTIFICATION-PROPRIETOR NAME/ADDRESS

RESULTING PROPRIETORSHIP:

Estate Fee Simple

TENANTS IN COMMON

As to 1 of a total of 3 equal undivided shares

Sole Proprietor

MACFARLANE FARMERS PTY LTD of 114 YARRA STREET GEELONG VIC 3220

As to 1 of a total of 3 equal undivided shares

Sole Proprietor

JORDON PARK PTY LTD of 2 MYERS STREET GEELONG VIC 3220

As to 1 of a total of 3 equal undivided shares

Sole Proprietor

SCHOKMAN MANAGEMENT SERVICES PTY LTD of 37 THE ESPLANADE CORIO VIC 3214

AB199335X 08/04/2002

22/07/2008	22/07/2008	AF982490J	Y
------------	------------	-----------	---

TRANSFER OF LAND BY ENDORSEMENT

FROM:

MACFARLANE FARMERS PTY LTD

JORDON PARK PTY LTD

SCHOKMAN MANAGEMENT SERVICES PTY LTD

TO:

JORDON PARK PTY LTD

SCHOKMAN MANAGEMENT SERVICES PTY LTD

RESULTING PROPRIETORSHIP:

Estate Fee Simple

TENANTS IN COMMON

As to 1 of a total of 2 equal undivided shares

Sole Proprietor

JORDON PARK PTY LTD of 2 MYERS STREET GEELONG VIC 3220

As to 1 of a total of 2 equal undivided shares

Sole Proprietor

SCHOKMAN MANAGEMENT SERVICES PTY LTD of 37 THE ESPLANADE NORTH SHORE VIC 3214

AF982490J 22/07/2008

22/07/2008	22/07/2008	AF982491G	Y
------------	------------	-----------	---

MORTGAGE OF LAND

MORTGAGE AF982491G 22/07/2008

NATIONAL AUSTRALIA BANK LTD

As to the interest of JORDON PARK PTY LTD

22/07/2008	22/07/2008	AF982492E	Y
------------	------------	-----------	---

MORTGAGE OF LAND

MORTGAGE AF982492E 22/07/2008

NATIONAL AUSTRALIA BANK LTD

As to the interest of SCHOKMAN MANAGEMENT SERVICES PTY LTD

27/03/2012	27/03/2012	AJ568822L	Y
------------	------------	-----------	---

DISCHARGE OF MORTGAGE

AFFECTED ENCUMBRANCE(S) AND REMOVED MORTGAGE(S)

MORTGAGE AF982491G

27/03/2012	27/03/2012	AJ568823J	Y
------------	------------	-----------	---

DISCHARGE OF MORTGAGE

AFFECTED ENCUMBRANCE(S) AND REMOVED MORTGAGE(S)

MORTGAGE AF982492E

HISTORICAL SEARCH STATEMENT

Land Victoria

Page 3 of 8

27/03/2012 27/03/2012 AJ568824G Y

TRANSFER OF LAND BY ENDORSEMENT

FROM:

JORDON PARK PTY LTD
SCHOKMAN MANAGEMENT SERVICES PTY LTD

TO:

COSTA PROPERTY NINE PTY LTD

RESULTING PROPRIETORSHIP:

Estate Fee Simple

Sole Proprietor

COSTA PROPERTY NINE PTY LTD of LEVEL 1 2 MYERS STREET GEELONG VIC
3220
AJ568824G 27/03/2012

STATEMENT END

VOTS Snapshot

Volume 05863 Folio 416
124001469527R
Produced 07/05/2002 11:43 am

LAND DESCRIPTION

Lots 1 and 2 on Title Plan 804600F (formerly known as part of Lot 2 on Plan of Subdivision 004328, part of Lot 3 on Plan of Subdivision 004328).

PARENT TITLE Volume 04803 Folio 413

Created by instrument 1528576 01/08/1933

REGISTERED PROPRIETOR

Estate Fee Simple

TENANTS IN COMMON

As to 1 of a total of 2 equal undivided shares

Sole Proprietor

LOIS MARIE PARRY of 54 LAKEVIEW CR. ST. LEONARDS 3223

As to 1 of a total of 2 equal undivided shares

Sole Proprietor

GLEN RUSSELL PARRY of 27 NEWTON AV. BELL POST HILL 3215

R307407G 22/04/1991

ENCUMBRANCES, CAVEATS AND NOTICES

Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section 24 Subdivision Act 1988 and any other encumbrances shown or entered on the plan set out under DIAGRAM LOCATION below.

DIAGRAM LOCATION

SEE DIAGRAM ON IMAGED FOLIO VOLUME 5863 FOLIO 416 FOR FURTHER DETAILS AND BOUNDARIES

Paper Title Images

5863/416 - Version 2, Date 26/01/2002



Entered in the Register Book

Vol. 5863

Folio 1172416

VICTORIA.

Certificate of Title,

UNDER THE "TRANSFER OF LAND ACT 1928."

PH

George Alexander Hood of Portarlington Farmer is-----
now the proprietor of an Estate in Fee-simple, subject to the Encumbrances
notified hereunder in All that piece of Land, delineated and coloured
red on the map in the margin containing Ninety-five acres Two roods and Twenty-seven
perches or thereabouts being part of Lots 2 and 3 on Plan of Subdivision No.4328----
lodged in the Office of Titles and being part of Crown Allotments B, C and D Section
Twenty-seven Parish of Paywit County of Grant-----

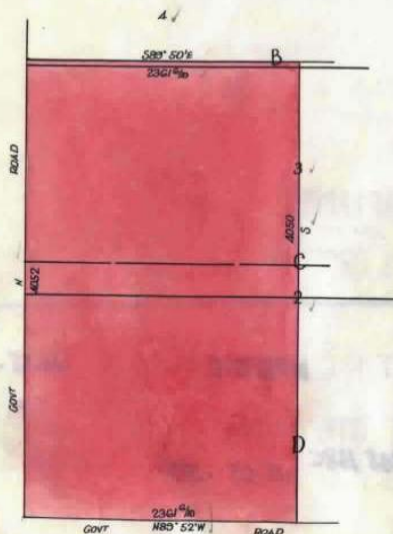
ORIGINAL CERTIFICATE.
Not to be dealt with outside the Titles Office.

Dated the First
thousand nine hundred and thirty-three.

day of August One

J. M. Lennan
Assistant Registrar of Titles.

ENCUMBRANCES REFERRED TO.



T05863-416-1-6

The Measurements are in links

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FULLY CONVERTED TITLE

Vol. 4803 Fol. 960413

Transfer. 1528576

Application.

Red Ink No. 3886299

George Alexander Hood died
on 5th December 1914 Probate of his Will
has been granted to Teresa Veronica Hood
of Portarlington Widow

Dated 21st October 1940 *Thompson*
Assistant Registrar of Titles

MORTGAGED
Eustace Edmund Wilson registered
on 23rd April 1940 numbered 799662

Dated 23rd April 1940 *Thompson*
Assistant Registrar of Titles

Red Ink No. 4436730 *WV*

Teresa Veronica Hood died
on 8th January 1940 Probate of her Will
has been granted to Eustace Edmund Wilson of 51 Yarra Street
Gylong Solicitor and Edna Lincoln of Portarlington
Married Woman

Dated 27th March 1947 *W.P. Fitzgerald*
Assistant Registrar of Titles

Gordon Alexander Hood of St Leonards Carrier is
now the proprietor of the within described estate by
transfer registered on 23rd April 1947
and numbered 2069713 *W.P. Fitzgerald*
Assistant Registrar of Titles

Red Ink No. 5044694

Gordon Alexander Hood died
on 13th March 1950 Probate of his Will
has been granted to THE EQUITY TRUSTEES EXECUTORS
AND AGENCY COMPANY LIMITED
of 472 Bourke Street Melbourne

Dated 20 April 1951 *R. Newson*
Assistant Registrar of Titles

James Nathaniel Rugby of St. Leonards Fisherman is
now the proprietor of the within described estate by
transfer registered on 10 July 1951
and numbered 2400808 *R. Newson*

Dated 8-5-53 Assistant Registrar of Titles

BASIL DUDLEY PARRY of St. Leonards Cartage Contractor
is now the proprietor
Registered 27th November 1964
No. C94295



CREATION OF EASEMENT

Registered 5th September 1984
No. L244627T



BASIL DUDLEY PARRY DIED ON 2/8/90 PROBATE
OF HIS WILL HAS BEEN GRANTED TO ISABEL ELIZA
ALLEN
REGISTERED 22/4/91
R307405N
PROPRIETORS
TENANTS IN COMMON IN EQUAL SHARES
LOIS MARIE PARRY OF 54 LAKEVIEW CR. ST. LEONARDS
& GLEN RUSSELL PARRY OF 27 NEWTON AVE.
BELL POST HILL
REGISTERED 22/4/91
R307407G



CAVEAT
CAVEATOR: GRENFOLD PTY LIMITED
CAPACITY: SEE CAVEAT
LODGED BY: MALLESON'S STEPHEN JACQUES
NOTICE TO LEVEL 28, 525 COLLINS ST
MELBOURNE 3000
W733184S 18/04/00



CAVEAT LAPSED
X251076A
13 DEC 2001



CAVEAT NO. W796707U LODGED 22.05.2000



CAVEAT WITHDRAWN
W 805138C 25.05.2000



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FULLY CONVERTED TITLE

SCALE 1:8000

Volume 5863 Folio 416

LENGTHS ARE IN METRES

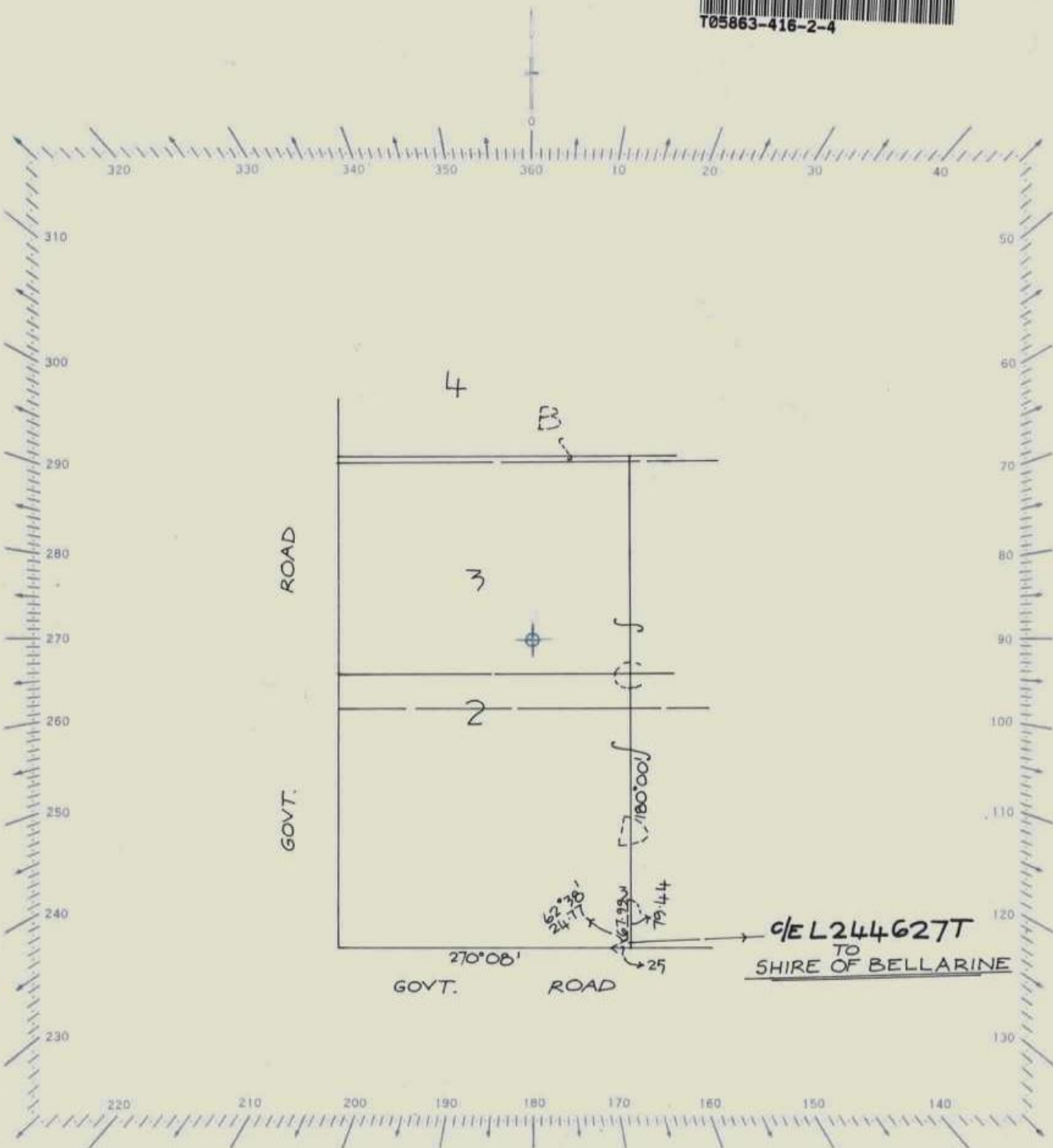


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HISTORICAL SEARCH STATEMENT

Land Victoria

Page 1 of 5

Produced 20/05/2014 12:20 PM

Volume 04803 Folio 413
Folio Creation: Details Unknown
Parent title Volume 04070 Folio 891

STATEMENT END

Paper Title Images

4803/413 - Version 0, Date 06/01/2000

Entered in the Register Book



Vol. 4803 Fol. 960413

VICTORIA.

Certificate of Title,

UNDER THE "TRANSFER OF LAND ACT 1915."

George Alexander Hood ✓ and Joseph Latrobe Hood ✓ both of Portarlington Farmers - - -

are now the proprietors as tenants in common in equal shares - - - - -

~~now the proprietors~~ of an Estate in Fee-simple, subject to the Encumbrances - - -

notified hereunder in All that piece of Land, delineated and coloured - - -

red on the map in the margin containing Two hundred and six acres One rood and - - - - -

-being part of Lots 2 and 3 on Plan of Subdivision No. 4328 lodged in the Office of Titles and - - - - -

Seven perches or thereabouts/being part of Crown Allotments B, C and D Section - - - - -

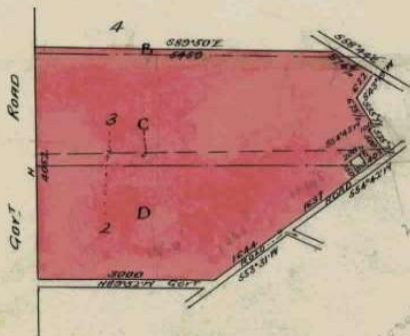
Twenty-seven Parish of Paywit County of Grant - - - - -

Dated the Twenty-first
thousand nine hundred and twenty-three.

day of May One

Assistant Registrar of Titles.

ENCUMBRANCES REFERRED TO.



T04803-413-1-8

The Measurements are in links.

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WARNING
This document provides an image of a cancelled folio of the Register. It is not a statement
from the register of subsisting information in relation to the land to which it refers.

ORIGINAL CERTIFICATE.
Not to be dealt with outside the Titles Office.

Vol. 4070 Fol. 813891 Transfer. 1105499 Application

Nature of Instrument.	Time of its Production for Registration.	To whom given.	Number or Symbol thereon.
TRANSFER as to part to <i>The Minister of the Crown administering the Education Acts.</i> registered on <i>13 March 1924</i> and numbered <i>1109053</i>. CANCELLED as to part See Certificate of Title Vol. 4825 Fol. 964875 <i>M. J. Pearson</i> Assistant Registrar of Titles			
<i>Red Ink No. 3172191.</i> <i>Joseph Latrobe Hood died on 30th December 1929. Probate of his Will has been granted to Mary Hood of Portarlington Widow.</i> DATED 11th December 1930. <i>A. J. Goose</i> Assistant Registrar of Titles.			
TRANSFER AS TO PART to <i>Arthur Blanche</i> on <i>28 January 1931</i> registered numbered <i>1474574</i> CANCELLED AS TO PART See Certificate of Title Vol. 5723 Fol. 1144579 <i>J. M. Rae</i> Assistant Registrar of Titles			
TRANSFER AS TO PART to <i>Mary Hood</i> on <i>13 June 1933</i> registered numbered <i>1520755</i> CANCELLED AS TO PART See Certificate of Title Vol. 5863 Fol. 1172415 <i>J. M. Lennan</i> Assistant Registrar of Titles			
TRANSFER AS TO PART to <i>George Alexander Hood</i> on <i>1st August 1933</i> registered numbered <i>1528576</i> CANCELLED AS TO PART See Certificate of Title Vol. 5863 Fol. 1172416 <i>J. M. Lennan</i> Assistant Registrar of Titles			
TRANSFER AS TO BALANCE to <i>Ellan Vannin Stent</i> on <i>21st September 1933</i> registered numbered <i>1532364</i> CANCELLED See Certificate of Title Vol. 5863 Fol. 1172420 <i>J. M. Lennan</i> Assistant Registrar of Titles			

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SCALE 10 Chains to one inch

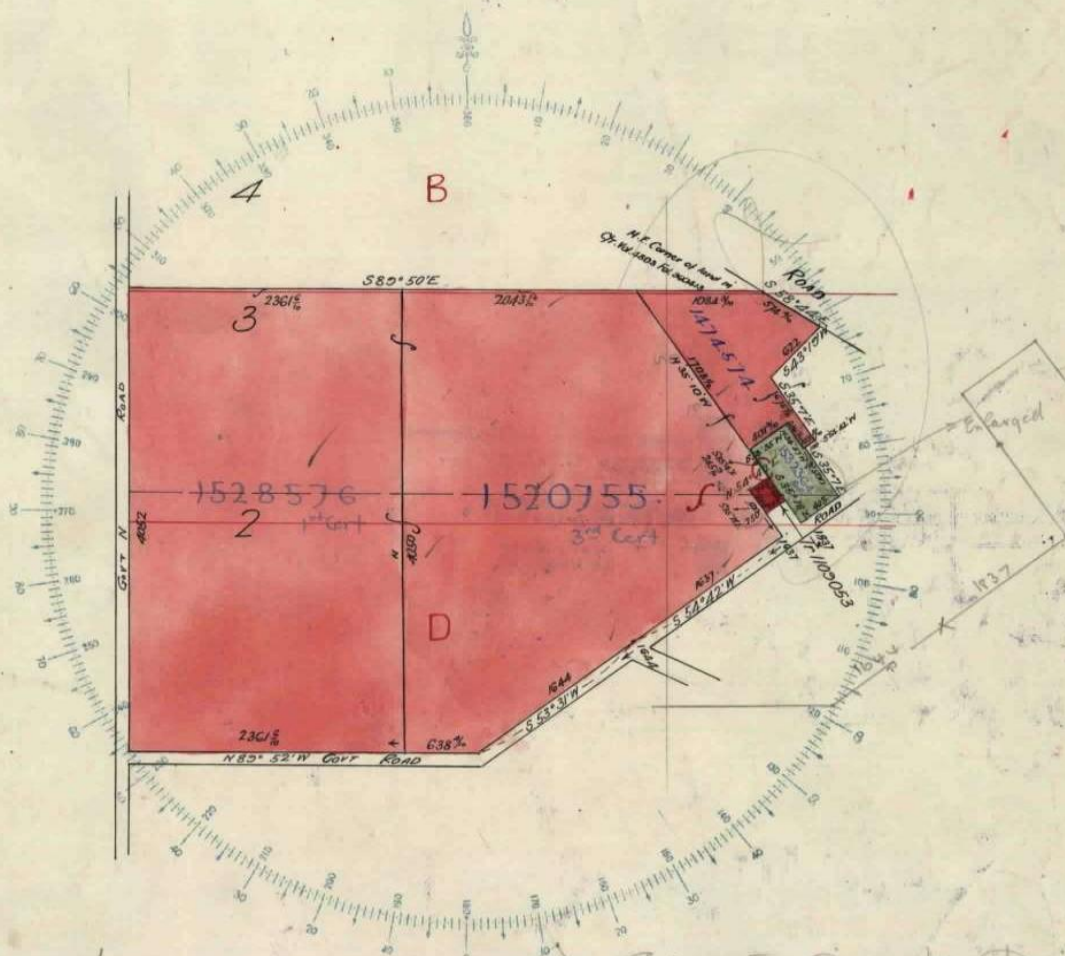
Vol 4803 fol 960413



104803-413-2-6

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95 8755
668

11-1-34
0-2-0
3-0-1
95-2-27
110-2-22
20-1-0
95-2-18

2043
1361
4404
10843
14859

23616
635
5000

Adopt size for Diagram

95-2-27
0-2-0
3-0-1
95-2-27
110-2-22
20-1-0
95-2-18

26.3.24

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Natural Resources and Environment
NATIONAL PARKS • RESERVE • STATE • ADMINISTRATION • ACT 1974

HISTORICAL SEARCH STATEMENT

Land Victoria

Page 1 of 3

Produced 20/05/2014 12:33 PM

Volume 04070 Folio 891
Folio Creation: Details Unknown
Parent title Volume 03475 Folio 999

STATEMENT END

Paper Title Images

4070/891 - Version 0, Date 18/11/1999

Entered in the Register Book,

Vol. 4070 Fol. 813891



VICTORIA.

Certificate of Title,

UNDER THE "TRANSFER OF LAND ACT 1915."

Claude William Hamilton of "Lilliesleaf" Macedon and Walter John Carre Riddell of "Cavers Carre" Glenhuntly Road Elsternwick both Gentlemen are now joint proprietors -----

Now the proprietors of an Estate in Fee-simple, subject to the Encumbrances notified hereunder in All that piece of Land, delineated and coloured

red on the map in the margin being part of Lots 2 and 3 on Plan of Subdivision----

No. 4328 lodged in the Office of Titles, and being part of Crown Allotments -----

B, C and D Section Twenty-seven Parish of Paywit County of Grant -----

*Area 206 1/7
No. 1105499*

Dated the Twenty-first
thousand nine hundred and seventeen.

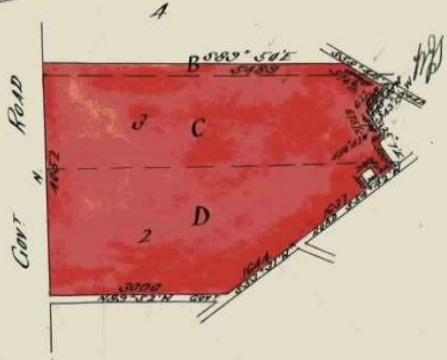
day of September

One

Assistant Registrar of Titles.

ENCUMBRANCES REFERRED TO.

RECTIFIED BY DIRECTION No. 4678 TO AMEND
ERRORS DUE TO MISDESCRIPTION OF BOUNDARIES.
Assistant Registrar of Titles. DATE 15.7.1920



T04070-891-1-2

CANCELLED

PLAN AMENDED
NO DEALING TO BE DONE
PLAN IS AMENDED ON DEPOSIT
APPN 41853

The Measurements are in feet

ORIGINAL CERTIFICATE.
Not to be dealt with outside the Titles Office.

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HISTORICAL SEARCH STATEMENT

Land Victoria

Page 1 of 3

Produced 20/05/2014 12:52 PM

Volume 03475 Folio 999
Folio Creation: Details Unknown
Parent title Volume 02907 Folio 278

STATEMENT END

Paper Title Images

3475/999 - Version 0, Date 26/02/2000

Entered in the Register Book,

Vol. 3475 Vol. 694999



VICTORIA.

Certificate of Title,

UNDER THE "TRANSFER OF LAND ACT 1890."



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ORIGINAL CERTIFICATE.
Not to be dealt with outside the Titles Office.

grazier
David Morrison of *St Leonards*
Grazier is
now the proprietor of an Estate in Fee-simple, subject to the Encumbrances
notified hereunder in All that piece of Land, delineated and coloured
red on the map in the margin containing
two hundred and six acres one rood and ten
perches or thereabouts being part of lot 2 and 3
on plan of subdivision N° 4338 lodged in the
Office of Titles and being part of Crown allotments
B, C and D section twentyseven parish of Payport
County of Grant.
Dated the *Eighteenth* day of *January*. One
thousand nine hundred and eleven *M. J. R.*

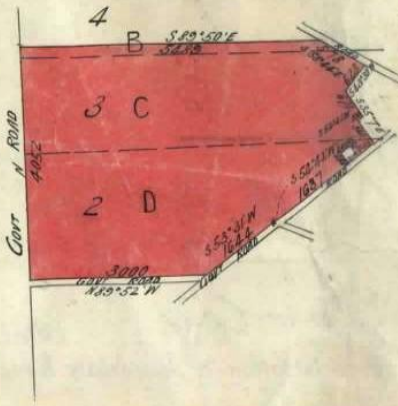
CANCELLED



Assistant Registrar of Titles.
ENCUMBRANCES REFERRED TO.

*Special railway condition
contained in grant to George
Ward Cole.*

A. J. H. 1859



E. H.
The Measurements are in *links*



T03475-999-1-9

Red Ink No. 1810914. George Booley died
22nd day of June 1916 Letters of administration of his estate have
been granted to the undersigned by the Supreme Court of Victoria.
JAMES H. BOOLEY, TRUSTEE, EXECUTOR AND AGENCY COMPANY OF AUSTRALASIA LIMITED OF 113 QUEEN STREET MELBOURNE
Dated the 31st day of January 1917.
J. H. BOOLEY
Assistant Registrar of Titles.

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WARNING

4070 F. 813891

HISTORICAL SEARCH STATEMENT

Land Victoria

Page 1 of 5

Produced 20/05/2014 12:57 PM

Volume 02907 Folio 278
Folio Creation: Details Unknown
Parent title Volume 02870 Folio 957

STATEMENT END

Paper Title Images

2907/278 - Version 0, Date 31/03/2000

Entered in the Register Book



Vol. 2907 Fol. 581278

VICTORIA.

Certificate of Title,

UNDER THE "TRANSFER OF LAND ACT 1890."



George

George Alexander Hood and *Joseph Latrobe Hood* both of *Portarlington* Farmers are

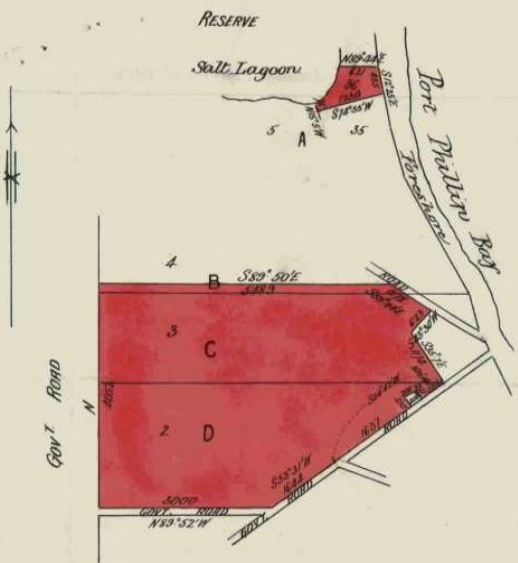
now the proprietors of an Estate in Fee-simple, subject to the Encumbrances notified hereunder in All those pieces of Land, delineated and colored red on the Map in the margin, containing Two hundred and ten acres three roods and sixteen perches or thereabouts being Lots 2, 3 and 36 on plan of Subdivision N: 4328 lodged in the Office of Titles and being part of Crown allotments A, B, C and D Section Twenty-seven Parish of Paywit County of Grant

ORIGINAL CERTIFICATE.
Not to be dealt with outside the Titles Office.

Dated the Thirteenth-day of November One thousand nine hundred and two

M. Pyrie
Assistant Registrar of Titles.

ENCUMBRANCES REFERRED TO.



CANCELLED

The Measurements are in feet.



T02907-278-1-1

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WARNING
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Vol. 2870 Fol. 973957. Transfer 463492. Application

Nature of Instrument.	Day and Hour of its Production.	Names of the Parties to it.	Number or Symbol thereon.
Transfer as to part CANCELLED AS TO THE LAND IN CERTIFICATE OF TITLE. Vol 2927 Fol 585201 AREA 4 AC. <i>Edward J. Prince</i> ASST REGISTR. OF TITLES.	The 30th April 1903 at 10.9 a.m.	George Alexander Hood and Joseph Latrobe Hood to George Rigby <i>Edward J. Prince</i> Assistant Registrar of Titles.	471011
Transfer as to part CANCELLED AS TO THE LAND IN CERTIFICATE OF TITLE. Vol 3475 Fol 694999 area 206 ac 1 Rds. 10 per <i>M. L. Prince</i> Asst. Regr. of Titles	The 18th January 1911 at 4 p.m.	George Alexander Hood and Joseph Latrobe Hood to David Morrison <i>M. L. Prince</i> Assistant Registrar of Titles.	640937
Transfer as to balance CANCELLED see Certificate of Title. Vol 3700 Fol 739919	18th June 1913 at 10.56 a.m.	George Alexander Hood and Joseph Latrobe Hood to Varilla Holden <i>J. H. Bryce</i> Assistant Registrar of Titles.	716773
		Assistant Registrar of Titles.	
		Assistant Registrar of Titles.	
		Assistant Registrar of Titles.	

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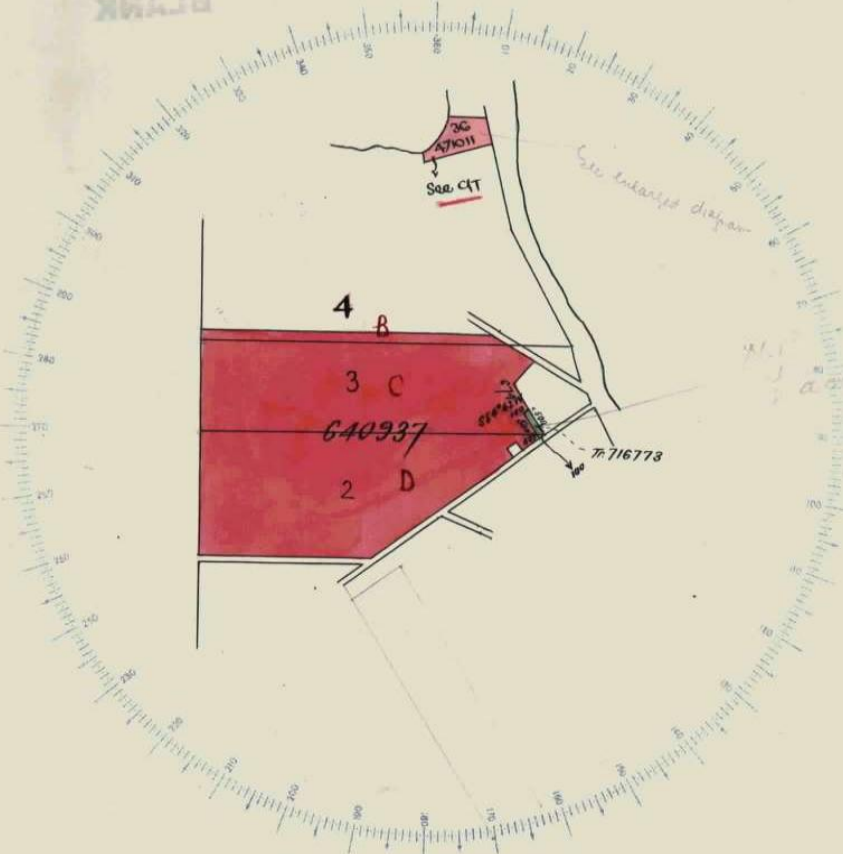
Titles Office Record of Subdivision

SCALE

✓ 20 Chs. to one inch

Register Book Vol 2907 fol. - 278.

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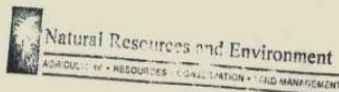
WARNING
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T02907-278-2-0

Encl. Bill 6/5/03

Division of Land Management



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HISTORICAL SEARCH STATEMENT

Land Victoria

Page 1 of 9

Produced 20/05/2014 01:02 PM

Volume 02870 Folio 957
Folio Creation: Details Unknown

STATEMENT END

Paper Title Images

2870/957 - Version 0, Date 30/03/2000

Entered in the Register Book



VICTORIA.

Vol 2870 Fol. 573957

CANCELLED

26802

Certificate of Title.

UNDER THE "TRANSFER OF LAND ACT 1890."

William George Sharp of City Road South Melbourne in the County of Bourke Timber Merchant is

now the proprietor of an Estate in Fee-simple, subject to the Encumbrances notified hereunder in All those pieces of Land, delineated and colored red on the Map in the margin, containing Seven hundred and fifty six acres and eighteen perches or thereabouts being Crown allotments A and B Section Twenty and part of Crown Allotments A, B, C, and D Section Twenty seven and part of Crown allotment B Section Thirty four Parish of Payquit County of Grant.

Dated the nineteenth day of August One thousand nine hundred and two.

Edward Davis

Assistant Registrar of Titles.

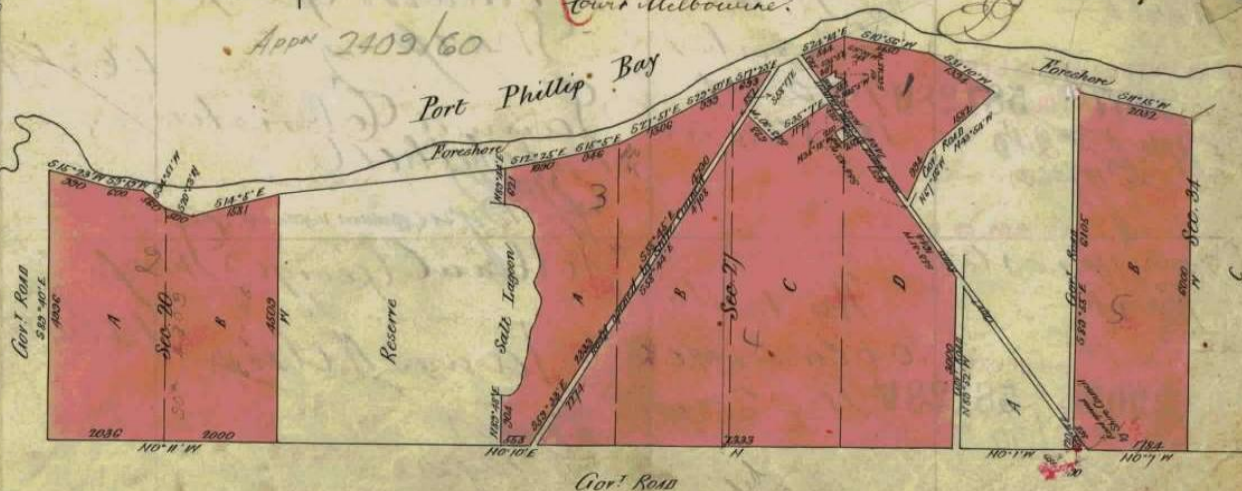
ENCUMBRANCES REFERRED TO.

The rights of creditors under the Insolvency of Margaret Morrison Ward-Gale of St. Vincents Bay Street Brighton Spinster an Insolvent the above named William George Sharp being Trustee under such Insolvency under the order of the Master of the Court Melbourne.



T02870-957-1-3

Appn 2409/60



City Road

The Measurements are in links.

ORIGINAL CERTIFICATE.
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Vol. Fol. Transfer Application 33235.

Nature of Instrument.	Day and Hour of its Production.	Names of the Parties to it.	Number or Symbol thereon.
Transfer as to part CANCELLED AS TO THE LAND IN CERTIFICATE OF TITLE VOL. 2896 FOL. 579104 M ^{rs} Byrne ASSISTANT REGISTRAR OF TITLES.	The 23 rd September 1902 at 10.4 am	William George Sharp to George Patterson M ^{rs} Byrne Assistant Registrar of Titles.	461206
Transfer as to part CANCELLED AS TO THE LAND IN CERTIFICATE OF TITLE VOL. 2901 FOL. 580136 AREA 47 AC 0 RDS PER Edward Daniel ASSIST. REGISTR. OF TITLES	The 29 th September 1902 at 1.5 pm	William George Sharp to William Byaithwaite Edward Daniel Assistant Registrar of Titles.	461494
Transfer as to part CANCELLED AS TO THE LAND IN CERTIFICATE OF TITLE VOL. 2907 FOL. 581278 AREA 210 AC 3 RDS 16 PER M ^{rs} Byrne ASSIST. REGISTR. OF TITLES	The 13 th of November 1902 at 11.32 am	William George Sharp to George Alexander Hood and Joseph Hood M ^{rs} Byrne Assistant Registrar of Titles.	463492
Transfer as to part CANCELLED AS TO THE LAND IN CERTIFICATE OF TITLE VOL. 2907 FOL. 581279 AREA 95 AC 3 RDS 20 PER M ^{rs} Byrne ASSIST. REGISTR. OF TITLES	The 13 th November 1902 at 11.32 am	William George Sharp to Charles William & Co M ^{rs} Byrne Assistant Registrar of Titles.	463493
Transfer as to part CANCELLED AS TO THE LAND IN CERTIFICATE OF TITLE VOL. 2907 FOL. 581280 AREA 3 AC 1 RDS 2 1/2 PER M ^{rs} Byrne ASSIST. REGISTR. OF TITLES	The 13 th November 1902 at 11.32 am	William George Sharp to Samuel Christie Mitchell M ^{rs} Byrne Assistant Registrar of Titles.	463494
Transfer as to part CANCELLED AS TO THE LAND IN CERTIFICATE OF TITLE VOL. 2907 FOL. 581281 AREA 66 AC 1 RDS 1 1/2 PER M ^{rs} Byrne ASSIST. REGISTR. OF TITLES	The 13 th November 1902 at 11.32 am	William George Sharp to James Wilson M ^{rs} Byrne Assistant Registrar of Titles.	463495

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Titles Office Record of Subdivision

SCALE

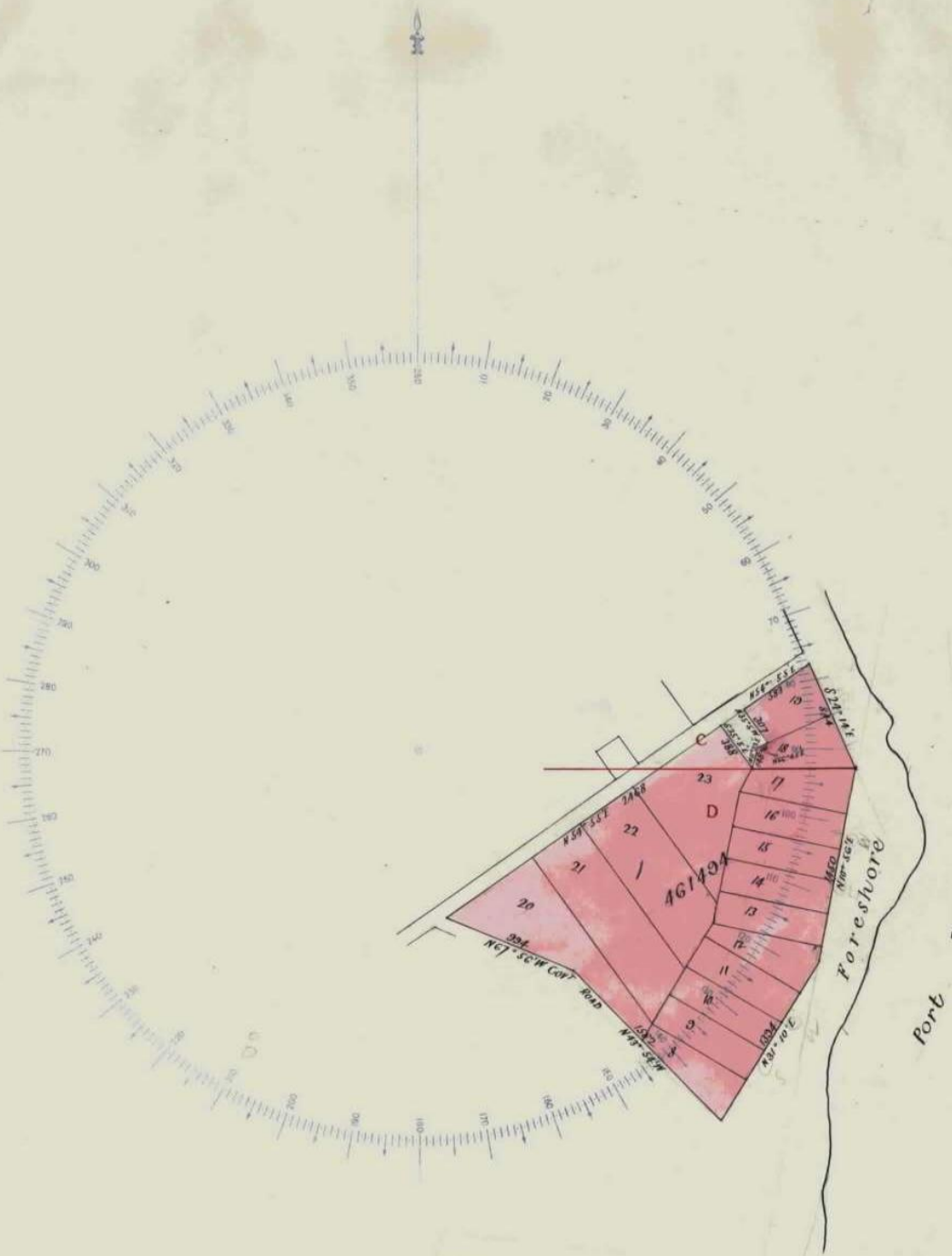
8 Chains to one inch

Register Book Vol. 2870 fol. 573967

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Phillip
Kag



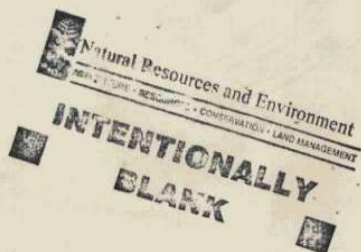
Sheet 2

LP. 4328.

Original

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This is the Sheet marked *H* referred to in the Certificate of Title entered in the Register Book Vol. 2870 Fol.

M. Byrne

Assistant Registrar of Titles.

Nature of Instrument.	Day and Hour of its Production.	Names of the Parties to it.	Number or Symbol thereon.
Transfer of part	The 13th	William George Sharp	✓
	to	George Rigby	463496
	1902 at	<i>M. Byrne</i>	
	11.32am	Assistant Registrar of Titles.	

CANCELLED AS TO THE LAND IN CERTIFICATE OF TITLE, VOL. 2907 FOL. 581282

AREA 100 AC 100 RDB 300 PER

M. Byrne

ASST. REGISTR. OF TITLES

Transfer of part	The 22nd	William George Sharp	✓
	November 1902	to	
	at 10.37am	Caroline Harriet	463266
		Kanton	
		<i>M. Byrne</i>	
		Assistant Registrar of Titles.	

CANCELLED AS TO THE LAND IN CERTIFICATE OF TITLE, VOL. 2907 FOL. 581283

AREA 100 AC 100 RDB 27 PER

M. Byrne

ASST. REGISTR. OF TITLES

By order of the Registrar of Titles dated 16th August 1972.
the within described land became vested in
JAMES NATHANIEL RIGBY (EXECUTOR
OF THE WILL OF GEORGE RIGBY, (DECEASED).
Entered - 4 SEP 1972
No. 8939 FOL. 764
CANCELLED SEE Vol. 8939 FOL. 764



CANCELLED

Assistant Registrar of Titles.

Assistant Registrar of Titles.

Assistant Registrar of Titles.

Assistant Registrar of Titles.



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This endorsement must be made on the separate

[illegible]

Titles Office Record of Subdivision

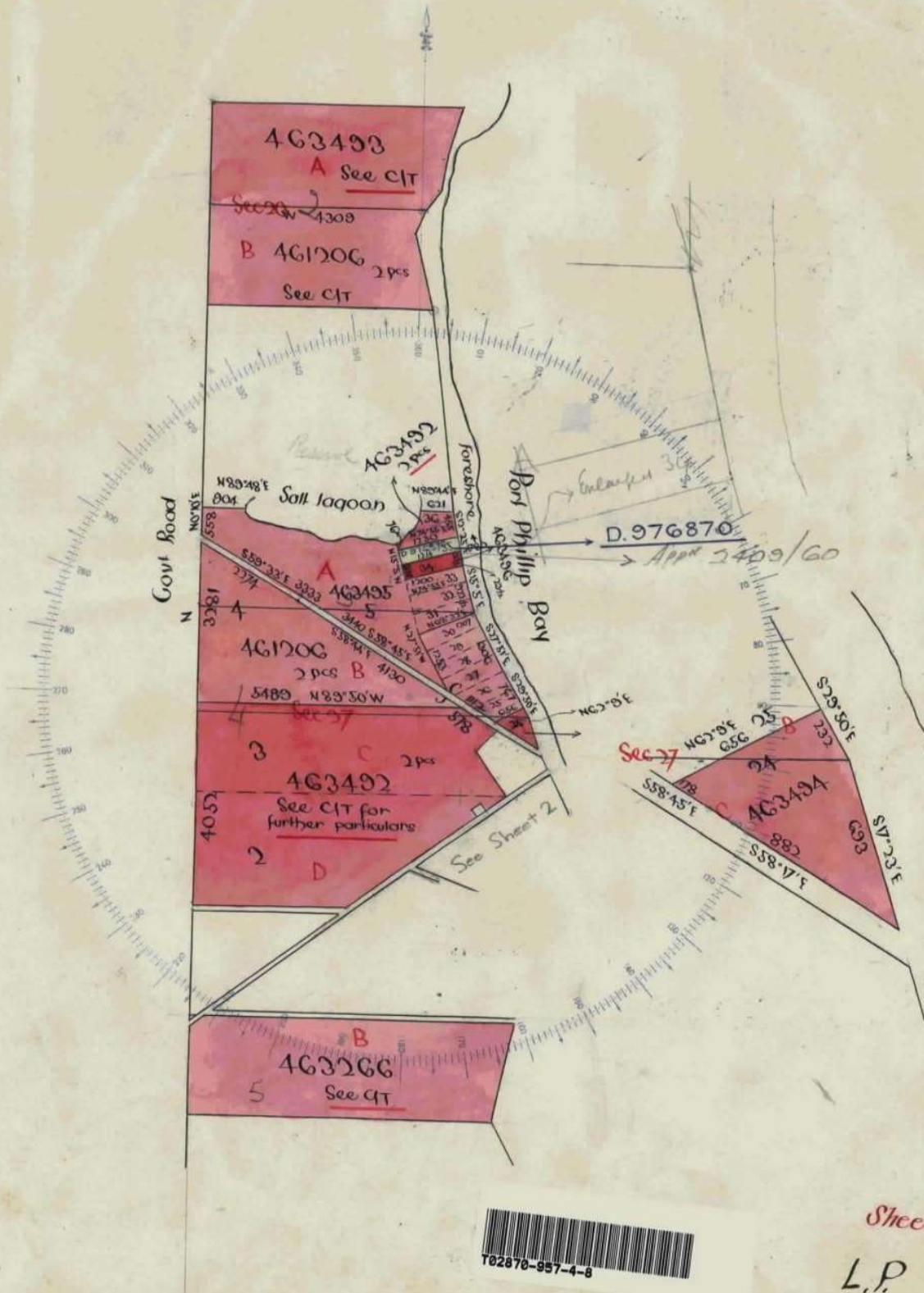
SCALE

200 ft. to one inch

Register Book Vol. 2870 fol. -957

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Sheet No 1.

L.P.

4328

Ed. Bill
20/9/02

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ATTN: JIMMY
Natural Resources and Environment
VIC. - RESOU. MGT. - DE. JIMMY
VIC.

Imaged Document Cover Sheet

The document following this cover sheet is an imaged document supplied by LANDATA®, Land Victoria.

Document Type	plan
Document Identification	TP804600F
Number of Pages (excluding this cover sheet)	1
Document Assembled	20/05/2014 12:12

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The document is invalid if this cover sheet is removed or altered.

TITLE PLAN		EDITION 1	TP 804600F
Location of Land Parish: PAYWIT Township: Section: 27 Crown Allotment: B (PT), C (PT), D (PT) Crown Portion: Last Plan Reference: LP 4328 Derived From: VOL 5863 FOL 416 Depth Limitation: NIL		Notations ANY REFERENCE TO MAP IN THE TEXT MEANS THE DIAGRAM SHOWN ON THIS TITLE PLAN	
Description of Land / Easement Information E-1 = EASEMENT TO SHIRE OF BELLARINE CREATED BY C/E L244627T			THIS PLAN HAS BEEN PREPARED FOR THE LAND REGISTRY, LAND VICTORIA, FOR TITLE DIAGRAM PURPOSES AS PART OF THE LAND TITLES AUTOMATION PROJECT COMPILED: 11/07/2000 VERIFIED: C.L.

TOTAL AREA = 38.72 ha

TABLE OF PARCEL IDENTIFIERS	
WARNING: Where multiple parcels are referred to or shown on this Title Plan this does not imply separately disposable parcels under Section 8A of the Sale of Land Act 1962	
PARCEL 1 = LOT 2 (PT) ON LP 4328	
PARCEL 2 = LOT 3 (PT) ON LP 4328	

LENGTHS ARE IN METRES	Metres = 0.3048 x Feet Metres = 0.201168 x Links		Sheet 1 of 1 sheets
-----------------------	---	--	---------------------

VOLUME 05863 FOLIO 416

Security no : 124050595671J
Produced 20/05/2014 12:11 pm

LAND DESCRIPTION

Lots 1 and 2 on Title Plan 804600F.
PARENT TITLE Volume 04803 Folio 413
Created by instrument 1528576 01/08/1933

REGISTERED PROPRIETOR

Estate Fee Simple
Sole Proprietor
COSTA PROPERTY NINE PTY LTD of LEVEL 1 2 MYERS STREET GEELONG VIC 3220
AJ568824G 27/03/2012

ENCUMBRANCES, CAVEATS AND NOTICES

Any encumbrances created by Section 98 Transfer of Land Act 1958 or Section 24 Subdivision Act 1988 and any other encumbrances shown or entered on the plan set out under DIAGRAM LOCATION below.

DIAGRAM LOCATION

SEE TP804600F FOR FURTHER DETAILS AND BOUNDARIES

ACTIVITY IN THE LAST 125 DAYS

NIL

DOCUMENT END

HISTORICAL SEARCH STATEMENT

Land Victoria

Page 1 of 5

Produced 20/05/2014 12:20 PM

Volume 04803 Folio 413
Folio Creation: Details Unknown
Parent title Volume 04070 Folio 891

STATEMENT END

Paper Title Images

4803/413 - Version 0, Date 06/01/2000

Entered in the Register Book



Vol. 4803 Fol. 960413

VICTORIA.

Certificate of Title,

CANCELLED

UNDER THE "TRANSFER OF LAND ACT 1915."

George Alexander Hood and Joseph Latrobe Hood both of Portarlington Farmers - - -

are now the proprietors as tenants in common in equal shares - - -

~~now the proprietors~~ of an Estate in Fee-simple, subject to the Encumbrances - - -

notified hereunder in All that piece of Land, delineated and coloured - - -

red on the map in the margin containing Two hundred and six acres One rood and - - -

-being part of Lots 2 and 3 on Plan of Subdivision No. 4328 lodged in the Office of Titles and - - -

Seven perches or thereabouts/being part of Crown Allotments B, C and D Section - - -

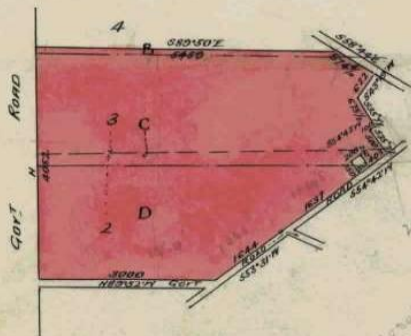
Twenty-seven Parish of Paywit County of Grant - - -

Dated the Twenty-first
thousand nine hundred and twenty-three.

day of May One

Assistant Registrar of Titles.

ENCUMBRANCES REFERRED TO.



T04803-413-1-8

XXI / 250

The Measurements are in links.

ORIGINAL CERTIFICATE.
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Vol. 4070 Fol. 813891 Transfer. 1105499 Application

Nature of Instrument.	Time of its Production for Registration.	To whom given.	Number or Symbol thereon.
TRANSFER as to part to <i>The Minister of the Crown administering the Education Acts.</i> registered on <i>13 March 1924</i> and numbered <i>1109053</i>. CANCELLED as to part See Certificate of Title Vol. 4825 Fol. 964875 <i>M. J. Pearson</i> Assistant Registrar of Titles			
<i>Red Ink No. 3172191.</i> <i>Joseph Latrobe Hood died on 30th December 1929. Probate of his Will has been granted to Mary Hood of Portarlington Widow.</i> DATED 11th December 1930. <i>A. J. Goose</i> Assistant Registrar of Titles.			
TRANSFER AS TO PART to <i>Arthur Blanche</i> on <i>28 January 1931</i> registered numbered <i>1474574</i> CANCELLED AS TO PART See Certificate of Title Vol. 5723 Fol. 1144579 <i>J. M. Rae</i> Assistant Registrar of Titles			
TRANSFER AS TO PART to <i>Mary Hood</i> on <i>13 June 1933</i> registered numbered <i>1520755</i> CANCELLED AS TO PART See Certificate of Title Vol. 5863 Fol. 1172415 <i>J. M. Lennan</i> Assistant Registrar of Titles			
TRANSFER AS TO PART to <i>George Alexander Hood</i> on <i>1st August 1933</i> registered numbered <i>1528576</i> CANCELLED AS TO PART See Certificate of Title Vol. 5863 Fol. 1172416 <i>J. M. Lennan</i> Assistant Registrar of Titles			
TRANSFER AS TO BALANCE to <i>Ellan Vannin Stent</i> on <i>21st September 1933</i> registered numbered <i>1532364</i> CANCELLED See Certificate of Title Vol. 5863 Fol. 1172420 <i>J. M. Lennan</i> Assistant Registrar of Titles			

CANCELLED

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SCALE 10 Chains to one inch

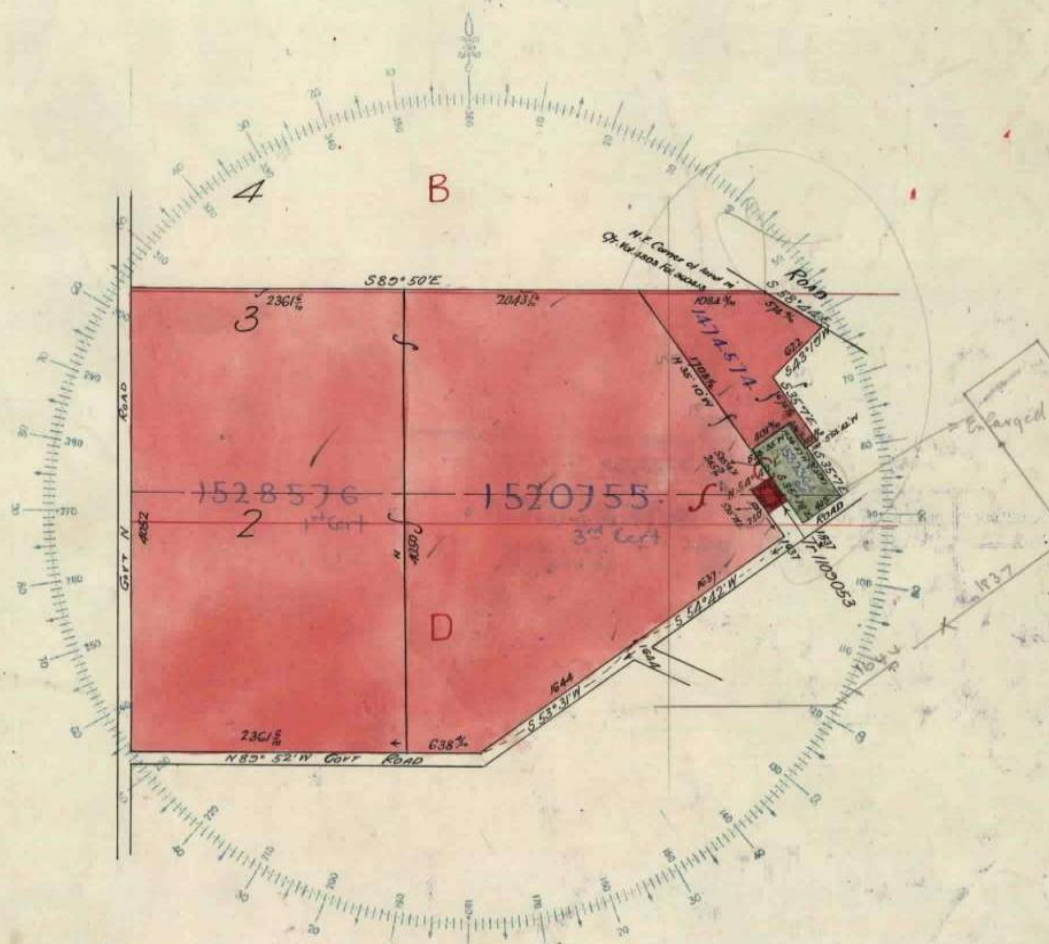
Vol 4803 fol 960413



104803-413-2-6

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Adopt size for Diagram

11-1-34
0-2-1
75-2-27
110-2-22
20-1-0
95-2-18

2043
1361
4404
1084
1459

23616
635
5000

95-2-27
11-1-34
75-2-27
30-1-0
206-1-0

26.3.24

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HISTORICAL SEARCH STATEMENT

Land Victoria

Page 1 of 3

Produced 20/05/2014 12:33 PM

Volume 04070 Folio 891
Folio Creation: Details Unknown
Parent title Volume 03475 Folio 999

STATEMENT END

Paper Title Images

4070/891 - Version 0, Date 18/11/1999

Entered in the Register Book,

Vol. 4070 Fol. 813891



VICTORIA.

Certificate of Title,

UNDER THE "TRANSFER OF LAND ACT 1915."

Claude William Hamilton of "Lilliesleaf" Macedon and Walter John Carre Riddell of "Cavers Carre" Glenhuntly Road Elsternwick both Gentlemen are now joint proprietors -----

Now the proprietors of an Estate in Fee-simple, subject to the Encumbrances notified hereunder in All that piece of Land, delineated and coloured

red on the map in the margin being part of Lots 2 and 3 on Plan of Subdivision----

No. 4328 lodged in the Office of Titles, and being part of Crown Allotments -----

B, C and D Section Twenty-seven Parish of Paywit County of Grant -----

*Area 206 1/7
No. 1105499*

Dated the Twenty-first
thousand nine hundred and seventeen.

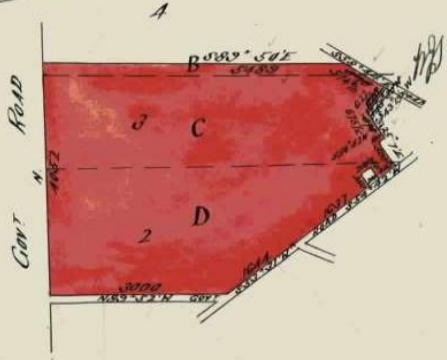
day of September

One

Assistant Registrar of Titles.

ENCUMBRANCES REFERRED TO.

RECTIFIED BY DIRECTION No. 4678 TO AMEND
ERRORS DUE TO MISDESCRIPTION OF BOUNDARIES.
Assistant Registrar of Titles. DATE 15.7.1920



T04070-891-1-2

CANCELLED

PLAN AMENDED
NO DEALING TO BE DONE
PLAN IS AMENDED ON DEPOSIT
APPN 41853

The Measurements are in feet

ORIGINAL CERTIFICATE.
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HISTORICAL SEARCH STATEMENT

Land Victoria

Page 1 of 3

Produced 20/05/2014 12:52 PM

Volume 03475 Folio 999
Folio Creation: Details Unknown
Parent title Volume 02907 Folio 278

STATEMENT END

Paper Title Images

3475/999 - Version 0, Date 26/02/2000

Entered in the Register Book,

Vol. 3475 Vol. 694999



Certificate of Title,

UNDER THE "TRANSFER OF LAND ACT 1890."

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ORIGINAL CERTIFICATE.
Not to be dealt with outside the Titles Office.

grazier
David Morrison of *St Leonards*
Grazier is
now the proprietor of an Estate in Fee-simple, subject to the Encumbrances
notified hereunder in All that piece of Land, delineated and coloured
red on the map in the margin containing
two hundred and six acres one rood and ten
perches or thereabouts being part of lot 2 and 3
on plan of subdivision N° 4338 lodged in the
Office of Titles and being part of Crown allotments
B, C and D section twentyseven parish of Payport
County of Grant.
Dated the *Eighteenth* day of *January*. One
thousand nine hundred and eleven

CANCELLED

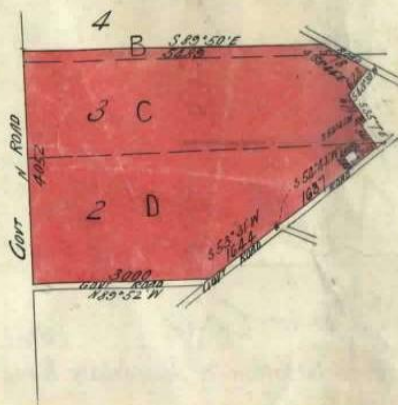


Assistant Registrar of Titles.

ENCUMBRANCES REFERRED TO.

*Special railway condition
contained in grant to George
Ward Cole.*

A. Hector Esq. 4/18/59



E. H. L.
The Measurements are in *links*



Vol. 2907 Fol. 581278 Transfer 640937 Application

Nature of Instrument.	Day and Hour of its Production.	Names of the Parties to it.	Number or Symbol thereon.
<i>DISCHARGED</i> <i>J. F. Holoubek</i> <i>ASSISTANT REGISTRAR OF TITLES.</i> <i>28th March 1912</i>	<i>The 9th March 1911</i> <i>at 11.45 am</i>	<i>David Morrison</i> <i>to</i> <i>James Morrison</i> <i>J. F. Holoubek</i> <i>Assistant Registrar of Titles.</i>	<i>29/240</i>

up *Alexander Tyson of St. Leonards Farmer is now the proprietor of the within-described estate and land pursuant to a transfer from the within named David Morrison registered on the 28th day of March 1912 at 3.43 o'clock in the afternoon and numbered 679583.*

J. F. Holoubek
Assistant Registrar of Titles.

<i>Mortgage</i>	<i>The 28th March 1912</i> <i>at 3.43 pm.</i>	<i>Alexander Tyson</i> <i>to</i> <i>Claude William Hamilton,</i> <i>and Walter John Carne</i> <i>Riddell</i> <i>J. F. Holoubek</i> <i>Assistant Registrar of Titles.</i>	<i>305564</i>
-----------------	--	--	---------------

<i>The 4th April 1912</i> <i>at 12.12 pm.</i>	<i>Alexander Tyson</i> <i>to</i> <i>David Morrison</i> <i>J. F. Holoubek</i> <i>Assistant Registrar of Titles.</i>
--	--

George Booley of Hesham Gentleman now the proprietor of the within-described estate and land pursuant to a transfer from the above named Alexander Tyson registered on the 6th day of March 1915 at 11.30 after noon and numbered 766533.

John E. Kay
Assistant Registrar of Titles.

Red Ink No 1810914. George Booley died 22nd June 1916 Letters of administration of his estate have

Dated the 31st day of January 1917.

J. F. Holoubek
Assistant Registrar of Titles.

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Vol. 4070 Fol. 813891

Transfer
Cancelled see
Certificate of Title

305564
Claude William Hamilton and Walter John Carne Riddell
21st September 1917
1917 Carne, Riddell

HISTORICAL SEARCH STATEMENT

Land Victoria

Page 1 of 5

Produced 20/05/2014 12:57 PM

Volume 02907 Folio 278
Folio Creation: Details Unknown
Parent title Volume 02870 Folio 957

STATEMENT END

Paper Title Images

2907/278 - Version 0, Date 31/03/2000

Entered in the Register Book



Vol. 2907 Fol. 581278

VICTORIA.

Certificate of Title,

UNDER THE "TRANSFER OF LAND ACT 1890."



George

George Alexander Hood and *Joseph Latrobe Hood* both of *Portarlington* Farmers are

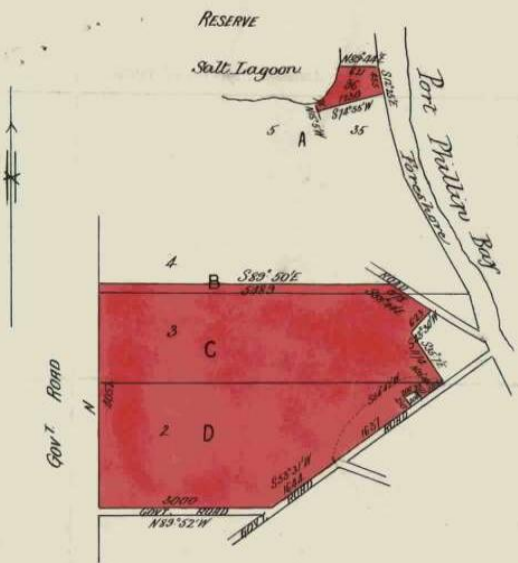
now the proprietors of an Estate in Fee-simple, subject to the Encumbrances notified hereunder in All those pieces of Land, delineated and colored red on the Map in the margin, containing Two hundred and ten acres three roods and sixteen perches or thereabouts being Lots 2, 3 and 36 on plan of Subdivision N: 4328 lodged in the Office of Titles and being part of Crown allotments A, B, C and D Section Twenty-seven Parish of Paywit County of Grant

ORIGINAL CERTIFICATE.
Not to be dealt with outside the Titles Office.

Dated the Thirteenth-day of November One thousand nine hundred and two

M. Pyrie
Assistant Registrar of Titles.

ENCUMBRANCES REFERRED TO.



CANCELLED

The Measurements are in feet.



T02907-278-1-1

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Vol. 2870 Fol. 973957. Transfer 463492. Application

Nature of Instrument.	Day and Hour of its Production.	Names of the Parties to it.	Number or Symbol thereon.
Transfer as to part CANCELLED AS TO THE LAND IN CERTIFICATE OF TITLE, Vol 2927 Fol 585201 AREA 4 AC. <i>Edward J. Prince</i> Asst. Regr. of Titles.	The 30th April 1903 at 10.9 a.m.	George Alexander Hood and Joseph Latrobe Hood to George Rigby <i>Edward J. Prince</i> Assistant Registrar of Titles.	471011
Transfer as to part CANCELLED AS TO THE LAND IN CERTIFICATE OF TITLE, Vol 3475 Fol 694999 area 206 ac 1 Rds. 10 per <i>M. L. King</i> Asst. Regr. of Titles.	The 18th January 1911 at 4 p.m.	George Alexander Hood and Joseph Latrobe Hood to David Morrison <i>M. L. King</i> Assistant Registrar of Titles.	640937
Transfer as to balance CANCELLED see Certificate of Title, Vol 3700 Fol 739919	18th June 1913 at 10.56 a.m.	George Alexander Hood and Joseph Latrobe Hood to Varilla Holden <i>J. H. Bryce</i> Assistant Registrar of Titles.	716773
		Assistant Registrar of Titles.	
		Assistant Registrar of Titles.	
		Assistant Registrar of Titles.	

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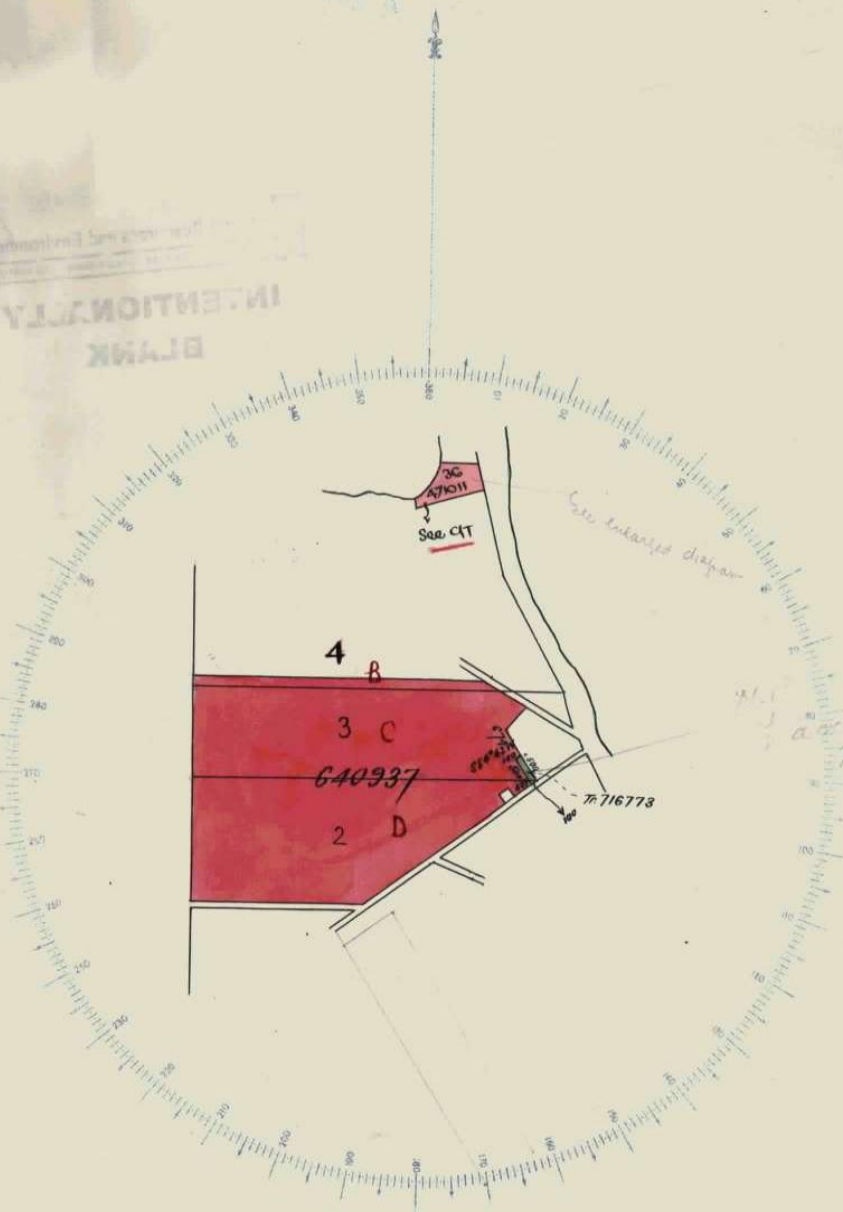
Titles Office Record of Subdivision

SCALE

✓ 20 Chs. to one inch

Register Book Vol 2907 fol. - 278.

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T02907-278-2-0

Encl. Bill 6/5/03

Division of Land Management



Natural Resources and Environment

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HISTORICAL SEARCH STATEMENT

Land Victoria

Page 1 of 9

Produced 20/05/2014 01:02 PM

Volume 02870 Folio 957
Folio Creation: Details Unknown

STATEMENT END

Paper Title Images

2870/957 - Version 0, Date 30/03/2000

Entered in the Register Book



VICTORIA.

Vol 2870 Fol. 573957

CANCELLED

26802

Certificate of Title.

UNDER THE "TRANSFER OF LAND ACT 1890."

William George Sharp of City Road South Melbourne in the County of Bourke Timber Merchant is

now the proprietor of an Estate in Fee-simple, subject to the Encumbrances notified hereunder in All those pieces of Land, delineated and colored red on the Map in the margin, containing Seven hundred and fifty six acres and eighteen perches or thereabouts being Crown allotments A and B Section Twenty and part of Crown Allotments A, B, C, and D Section Twenty seven and part of Crown allotment B Section Thirty four Parish of Payquit County of Grant.

Dated the nineteenth day of August One thousand nine hundred and two.

Edward Davis

Assistant Registrar of Titles.

ENCUMBRANCES REFERRED TO.

The rights of creditors under the Insolvency of Margaret Morrison Ward-Gale of St Vincents Bay Street Brighton Spinners an Insolvent the above named William George Sharp being Trustee under such Insolvency under the order of the Master of the Court Melbourne.

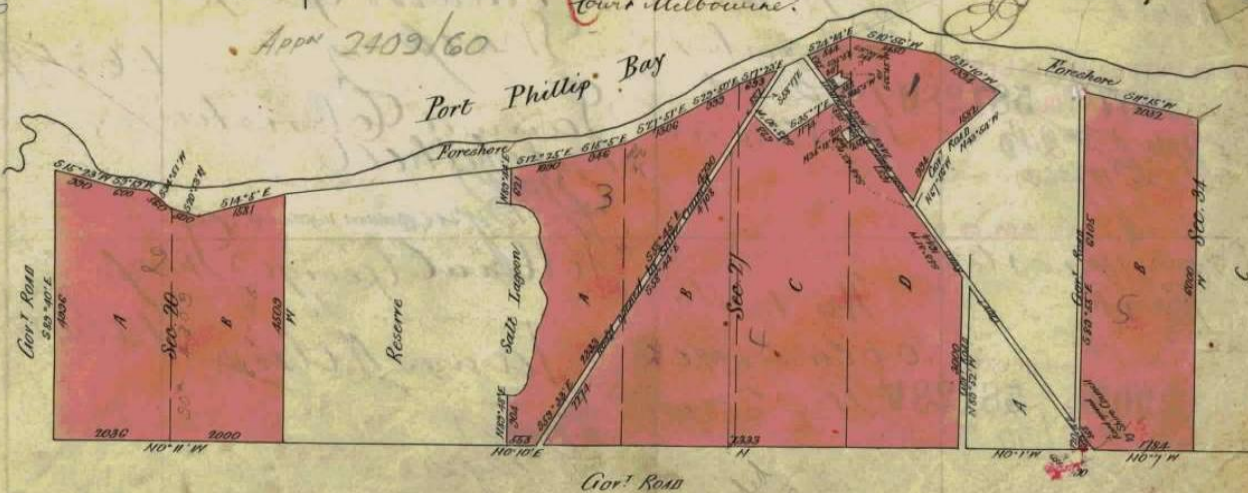


T02870-957-1-3

ORIGINAL CERTIFICATE.
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The Measurements are in links.

Vol. Fol. Transfer Application 33235.

Nature of Instrument.	Day and Hour of its Production.	Names of the Parties to it.	Number or Symbol thereon.
Transfer as to part CANCELLED AS TO THE LAND IN CERTIFICATE OF TITLE VOL. 2896 FOL. 579104 M ^{rs} Byrne ASSISTANT REGISTRAR OF TITLES.	The 23 rd September 1902 at 10.4 am	William George Sharp to George Patterson M ^{rs} Byrne Assistant Registrar of Titles.	461206
Transfer as to part CANCELLED AS TO THE LAND IN CERTIFICATE OF TITLE VOL. 2901 FOL. 580136 AREA 47 AC 0 RDS PER Edward Daniel ASSIST. REGISTR. OF TITLES	The 29 th September 1902 at 1.5 pm	William George Sharp to William Byaithwaite Edward Daniel Assistant Registrar of Titles.	461494
Transfer as to part CANCELLED AS TO THE LAND IN CERTIFICATE OF TITLE VOL. 2907 FOL. 581278 AREA 210 AC 3 RDS 16 PER M ^{rs} Byrne ASSIST. REGISTR. OF TITLES	The 13 th of November 1902 at 11.32 am	William George Sharp to George Alexander Hood and Joseph Hood M ^{rs} Byrne Assistant Registrar of Titles.	463492
Transfer as to part CANCELLED AS TO THE LAND IN CERTIFICATE OF TITLE VOL. 2907 FOL. 581279 AREA 95 AC 3 RDS 20 PER M ^{rs} Byrne ASSIST. REGISTR. OF TITLES	The 13 th November 1902 at 11.32 am	William George Sharp to Charles William & Co M ^{rs} Byrne Assistant Registrar of Titles.	463493
Transfer as to part CANCELLED AS TO THE LAND IN CERTIFICATE OF TITLE VOL. 2907 FOL. 581280 AREA 3 AC 1 RDS 2 1/2 PER M ^{rs} Byrne ASSIST. REGISTR. OF TITLES	The 13 th November 1902 at 11.32 am	William George Sharp to Samuel Christie Mitchell M ^{rs} Byrne Assistant Registrar of Titles.	463494
Transfer as to part CANCELLED AS TO THE LAND IN CERTIFICATE OF TITLE VOL. 2907 FOL. 581281 AREA 66 AC 1 RDS 1 1/2 PER M ^{rs} Byrne ASSIST. REGISTR. OF TITLES	The 13 th November 1902 at 11.32 am	William George Sharp to James Wilson M ^{rs} Byrne Assistant Registrar of Titles.	463495

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Titles Office Record of Subdivision

SCALE

8 Chains to one inch

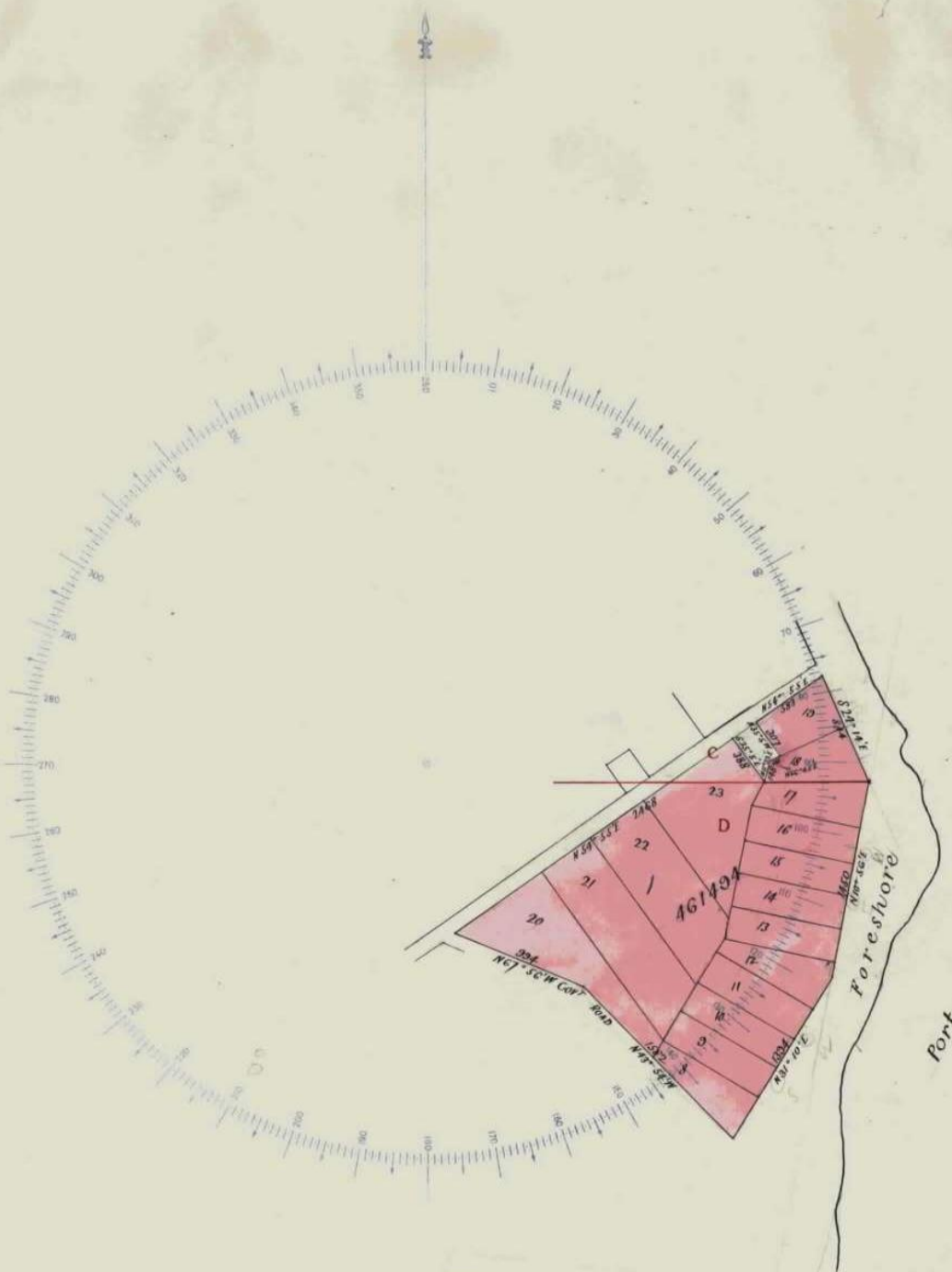
Register Book Vol. 2870 fol. 573967

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T02870-957-2-1

Sheet 2

LP. 4328.

W. H. 11/02

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This is the Sheet marked *H* referred to in the Certificate of Title entered in the Register Book Vol. 2870 Fol.

M. Byrne

Assistant Registrar of Titles.

Nature of Instrument.	Day and Hour of its Production.	Names of the Parties to it.	Number or Symbol thereon.
Transfer of part	The 13th	William George Sharp	✓
	to	George Rigby	463496
	1902 at	<i>M. Byrne</i>	
	11.32am	Assistant Registrar of Titles.	

CANCELLED AS TO THE LAND IN CERTIFICATE OF TITLE, VOL. 2907 FOL. 581282

AREA 100 AC 100 RDB 300 PER

M. Byrne

ASST. REGISTR. OF TITLES

Transfer of part	The 22nd	William George Sharp	✓
	November 1902	to	
	at 10.37am	Caroline Harriet	463266
		Kanton	
		<i>M. Byrne</i>	
		Assistant Registrar of Titles.	

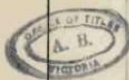
CANCELLED AS TO THE LAND IN CERTIFICATE OF TITLE, VOL. 2907 FOL. 581283

AREA 100 AC 100 RDB 27 PER

M. Byrne

ASST. REGISTR. OF TITLES

By order of the Registrar of Titles dated 16th August 1972.
the within described land became vested in
JAMES NATHANIEL RIGBY (EXECUTOR
OF THE WILL OF GEORGE RIGBY, (DECEASED).
Entered - 4 SEP 1972
No. 8939 FOL. 764
CANCELLED SEE Vol. 8939 FOL. 764



CANCELLED

Assistant Registrar of Titles.

Assistant Registrar of Titles.

Assistant Registrar of Titles.

Assistant Registrar of Titles.



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[illegible]

Titles Office Record of Subdivision

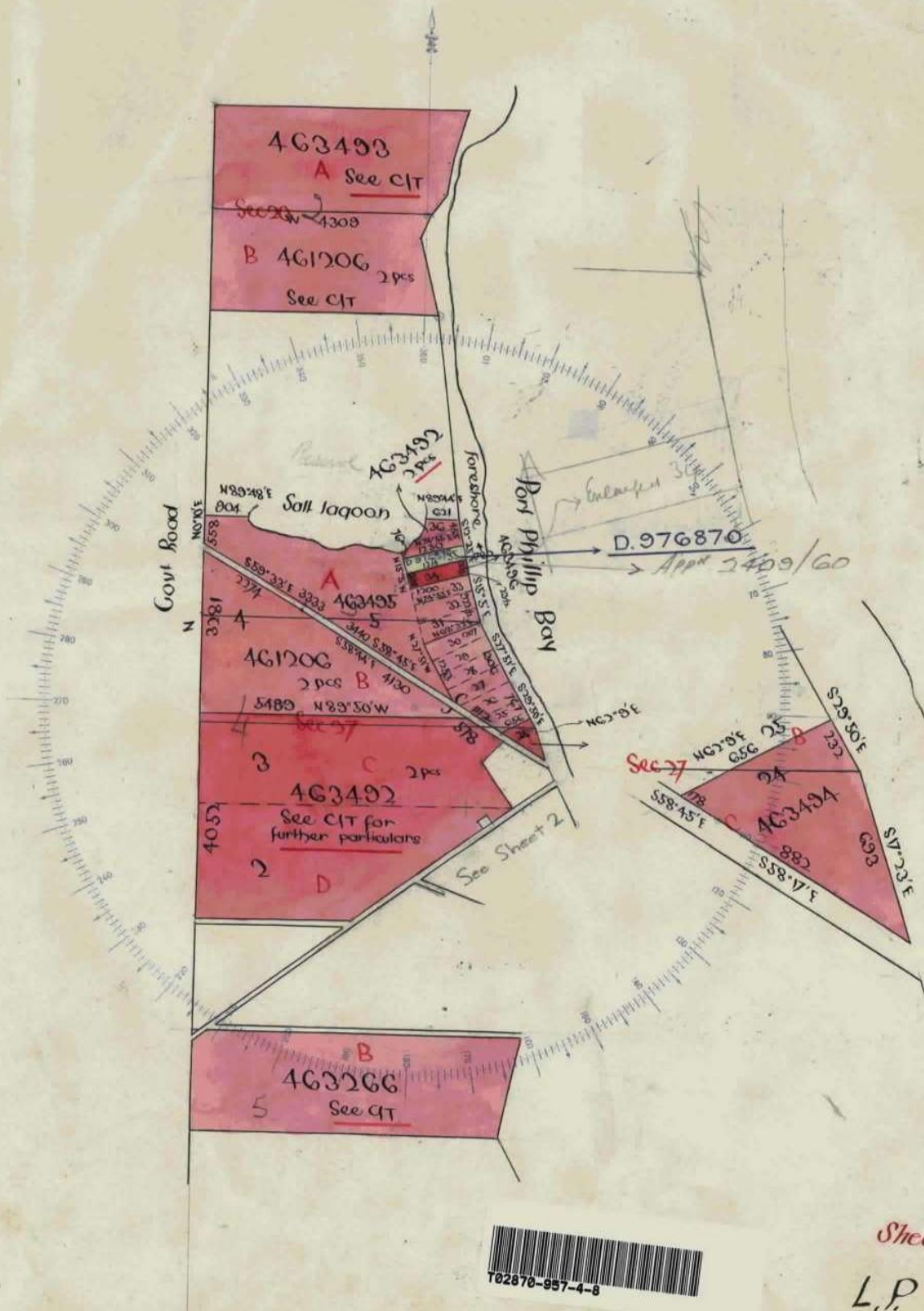
SCALE

200 ft. to one inch

Register Book Vol. 2870 fol. -957

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Sheet No. 1.

L.P.

4328

Ed. Hill
20/9/02

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ATTN: JIMMY
Natural Resources and Environment
VIC. - RESOU. MGT. - DE. JIMMY
VIC.

Appendix 3 – PID Calibration Sheet

Project Name	Ibbotson Street, St Leonards	Calibrated By	S.Lillas
Project Address	321-399 Ibbotson Street, St Leonards	Date	20.5.14

Sensor	Type	Serial Number	Span Gas	Concentration	Reading	
					Zero	Span
PID	10.6ev	1062P83010	Isobutylene	100ppm	0	100

Appendix 4 – Laboratory Chain of Custody Documents, Certificates of Analysis and QA/QC

#5

4854



CHAIN OF CUSTODY RECORD

Page 1 of 1

NOTES :

OS3009_R1 Issue Date: 13 August 2012 Page 1 of 1

✓ Pelinguishead by: Bharathi
21/5/14 14:00
Catherine
EFL/MS
21/5 3:24 pm

Certificate of Analysis

Environmental Site Assessments P/L
2 Homestead Crt
Highton
VIC 3216



NATA Accredited
Accreditation Number 1261
Site Number 1254

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

Attention: Seton Lillas

Report 419177-S
Client Reference IBBOTSON RD ST LEONARDS
Received Date May 21, 2014

Client Sample ID			SP10/0-0.15/S
Sample Matrix			Soil
Eurofins mgt Sample No.			M14-My18698
Date Sampled			May 20, 2014
Test/Reference	LOR	Unit	
Chromium (hexavalent)	1	mg/kg	< 1
Chromium (trivalent)	5	mg/kg	20
% Moisture	0.1	%	8.1
Heavy Metals			
Arsenic	2	mg/kg	8.3
Barium	10	mg/kg	30
Beryllium	2	mg/kg	< 2
Boron	10	mg/kg	< 10
Cadmium	0.4	mg/kg	< 0.4
Chromium	5	mg/kg	20
Cobalt	5	mg/kg	< 5
Copper	5	mg/kg	< 5
Lead	5	mg/kg	23
Manganese	5	mg/kg	110
Mercury	0.1	mg/kg	< 0.1
Nickel	5	mg/kg	8.5
Vanadium	10	mg/kg	30
Zinc	5	mg/kg	290

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
Chromium (hexavalent)	Melbourne	May 22, 2014	28 Day
- Method: APHA 3500-Cr Hexavalent Chromium- (Extraction:- USEPA3060)			
Heavy Metals	Melbourne	May 22, 2014	180 Day
- Method: USEPA 6010/6020 Heavy Metals			
% Moisture	Melbourne	May 22, 2014	14 Day
- Method: Method 102 - ANZECC - % Moisture			

Eurofins | mgt 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 PQLs are matrix dependant. Quoted PQLs 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 Acknowledgment.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

****NOTE:** pH duplicates are reported as a range NOT as RPD

UNITS

mg/kg: milligrams per Kilogram

ug/l: micrograms per litre

ppb: Parts per billion

org/100ml: Organisms per 100 millilitres

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

mg/l: milligrams per litre

ppm: Parts per million

%: Percentage

NTU: Units

TERMS

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery
CRM	Certified Reference Material - reported as percent recovery
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands. In the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
Batch Duplicate	A second piece of analysis from a sample outside of the clients batch of samples but run within the laboratory batch of analysis.
Batch SPIKE	Spike recovery reported on a sample from outside of the clients batch of samples but run within the laboratory batch of analysis.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
ASLP	Australian Standard Leaching Procedure (AS4439.3)
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 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, Toxophene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxophene 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 Arochlor 1260 in Matrix Spikes and LCS's.
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 RPD's 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								
Chromium (hexavalent)			mg/kg	< 1		1	Pass	
Method Blank								
Heavy Metals								
Arsenic			mg/kg	< 2		2	Pass	
Barium			mg/kg	< 10		10	Pass	
Beryllium			mg/kg	< 2		2	Pass	
Boron			mg/kg	< 10		10	Pass	
Cadmium			mg/kg	< 0.4		0.4	Pass	
Chromium			mg/kg	< 5		5	Pass	
Cobalt			mg/kg	< 5		5	Pass	
Copper			mg/kg	< 5		5	Pass	
Lead			mg/kg	< 5		5	Pass	
Manganese			mg/kg	< 5		5	Pass	
Mercury			mg/kg	< 0.1		0.1	Pass	
Nickel			mg/kg	< 5		5	Pass	
Vanadium			mg/kg	< 10		10	Pass	
Zinc			mg/kg	< 5		5	Pass	
LCS - % Recovery								
Chromium (hexavalent)			%	98		70-130	Pass	
LCS - % Recovery								
Heavy Metals								
Arsenic			%	90		80-120	Pass	
Barium			%	89		80-120	Pass	
Beryllium			%	86		80-120	Pass	
Boron			%	83		80-120	Pass	
Cadmium			%	84		80-120	Pass	
Chromium			%	91		80-120	Pass	
Cobalt			%	85		80-120	Pass	
Copper			%	91		80-120	Pass	
Lead			%	87		80-120	Pass	
Manganese			%	89		80-120	Pass	
Mercury			%	96		75-125	Pass	
Nickel			%	89		80-120	Pass	
Vanadium			%	88		80-120	Pass	
Zinc			%	94		80-120	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery								
				Result 1				
Chromium (hexavalent)	M14-My18721	NCP	%	100		70-130	Pass	
Spike - % Recovery								
				Result 1				
Arsenic	M14-My18721	NCP	%	83		75-125	Pass	
Barium	M14-My18720	NCP	%	102		75-125	Pass	
Beryllium	M14-My18720	NCP	%	104		75-125	Pass	
Boron	M14-My18721	NCP	%	104		75-125	Pass	
Cadmium	M14-My18721	NCP	%	106		75-125	Pass	
Chromium	M14-My18720	NCP	%	92		75-125	Pass	
Cobalt	M14-My18720	NCP	%	95		75-125	Pass	
Copper	M14-My18720	NCP	%	104		75-125	Pass	
Lead	M14-My18721	NCP	%	107		75-125	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Manganese	M14-My18740	NCP	%	100			75-125	Pass	
Mercury	M14-My16425	NCP	%	105			70-130	Pass	
Nickel	M14-My18720	NCP	%	89			75-125	Pass	
Vanadium	M14-My18720	NCP	%	96			75-125	Pass	
Zinc	M14-My19686	NCP	%	97			75-125	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
				Result 1	Result 2	RPD			
Chromium (hexavalent)	M14-My18721	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M14-My18720	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Barium	M14-My18720	NCP	mg/kg	27	23	17	30%	Pass	
Beryllium	M14-My18720	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Boron	M14-My18720	NCP	mg/kg	< 10	< 10	<1	30%	Pass	
Cadmium	M14-My18721	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M14-My18720	NCP	mg/kg	18	13	29	30%	Pass	
Cobalt	M14-My18720	NCP	mg/kg	5.0	< 5	100	30%	Fail	Q15
Copper	M14-My18720	NCP	mg/kg	17	7.6	78	30%	Fail	Q15
Lead	M14-My18721	NCP	mg/kg	< 5	< 5	<1	30%	Pass	
Manganese	M14-My18720	NCP	mg/kg	260	200	25	30%	Pass	
Mercury	M14-My16425	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	M14-My18720	NCP	mg/kg	22	15	38	30%	Fail	Q15
Vanadium	M14-My18720	NCP	mg/kg	15	10	38	30%	Fail	Q15
Zinc	M14-My19944	NCP	mg/kg	11	13	12	30%	Pass	

Comments

Sample Integrity

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

Qualifier Codes/Comments

Code	Description
Q15	The RPD reported passes Eurofins mgt's Acceptance Criteria as stipulated in SOP 05. Refer to Glossary Page of this report for further details

Authorised By

Andrew Thexton	Client Services
Emily Rosenberg	Senior Analyst-Metal (VIC)
Huong Le	Senior Analyst-Inorganic (VIC)



Glenn Jackson

Laboratory Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Uncertainty data is available on request

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.

COC received 20/05/14 10:48 R.T



CHAIN OF CUSTODY
ALS Laboratory: please tick

□ Sydney: 277 Woodpark Rd. Smithfield NSW 2176
Ph: 02 8784 8555 E:samples.sydney@alsenviro.com
□ Newcastle: 5 Rosegum Rd. Warabrook NSW 2304
Ph: 02 4988 9433 E:samples.newcastle@alsenviro.com

□ Brisbane: 32 Shand St. Stafford QLD 4053
Ph: 07 3243 7222 E:samples.brisbane@alsenviro.com
□ Townsville: 14-15 Desma Ct. Bohle QLD 4818
Ph: 07 4796 0600 E:townsville.environmental@alsenviro.com

□ Melbourne: 2-4 Westall Rd. Springvale VIC 3171 Ph: 03
8549 9600 E: samples.melbourne@alsenviro.com
□ Adelaide: 2-1 Burma Rd. Pooraka SA 5095
Ph: 08 8339 0890 E:adelaide@alsenviro.com

□ Perth: 10 Hod Way, Malaga WA 6090
Ph: 08 6209 7855 E: samples.perth@alsenviro.com
□ Launceston: 27 Wellington St. Launceston TAS 7250
Ph: 03 6331 2158 E: launceston@alsenviro.com

CLIENT: ENVIRONMENTAL SITE ASSESSMENTS		TURNAROUND REQUIREMENTS:		X	Standard TAT (List due date):		FOR LABORATORY USE ONLY: (Circle)	
OFFICE: PO BOX 3106 WAURN PONDS					Non Standard or urgent TAT (List due date):		Clarity Seal Intact: Yes NO N/A	
PROJECT: IBBOTSON STREET, ST LEONARDS		ALS QUOTE NO: MEBQ-159-13		COC SEQUENCE NUMBER (Circle)		8		
ORDER NUMBER:				COC: 1		Random Sample Temperature of Receipt:		
PROJECT MANAGER: Seton Lillas		CONTACT PH: 0433747187		OF: 2		Other comment: 21/5-21/5		
SAMPLER: As Above		SAMPLER MOBILE: As Above		RELINQUISHED BY:		RECEIVED BY:		RECEIVED BY: MANA
COC emailed to ALS? (YES / NO) YES		EDD FORMAT (or default):		DATE/TIME: 11.00 20.5.14		DATE/TIME:		DATE/TIME: 20/5, 14:00
Email Reports to (will default to PM if no other addresses are listed): seton@envirositeassessments.com								
Email Invoice to (will default to PM if no other addresses are listed): A/A								

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE ONLY		SAMPLE DETAILS MATRIX: Solid(S) Water(W)		CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES (NB: Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (filtered)										Additional Information	
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE(refer to codes below)	TOTAL BOTTLES	15 METALS	TPH C6-C9 & BTEX	NEPM SUITE	ESA-1								Forwarded to Secondary Lab Initials <u>Am</u> Date <u>21/5</u> Environmental Division Melbourne Work Order EM1404854  Telephone : + 61-3-8549 9600
1	FB/1	20.5.14 8.20	W		1	x											
2	TB/1	20.5.14 8.15	W		1		X										
3	SP1/0-0.15	20.5.14 8.25	S					X									
4	SP2/0-0.15	20.5.14 9.20	S			X											
5	SP3/0-0.15	20.5.14 8.30	S			X											
6	SP4/0-0.15	20.5.14 9.15	S			X											
7	SP5/0-0.15	20.5.14 8.35	S			X											
8	SP6/0-0.15	20.5.14 9.10	S					X									
9	SP7/0-0.15	20.5.14 8.40	S			X											
10	SP8/0-0.15	20.5.14 9.05	S						X								
11	SP9/0-0.15	20.5.14 9.00	S						X								
12	SP10/0-0.15	20.5.14 8.52	S			X											
TOTAL						7	1	2	2								

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/CO Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP = Airfreight Unpreserved Plastic
V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass;
Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag.

Cc received 20/05/14 10:48 27



CHAIN OF CUSTODY
ALS Laboratory: please tick

☐ Sydney: 277 Woodpark Rd, Smithfield NSW 2176
Ph: 02 8784 8555 E:samples.sydney@alsenviro.com
☐ Newcastle: 5 Rosegum Rd, Warabrook NSW 2304
Ph:02 4968 9433 E:samples.newcastle@alsenviro.com

☐ Brisbane: 32 Shand St, Stafford QLD 4053
Ph:07 3243 7222 E:samples.brisbane@alsenviro.com
☐ Townsville: 14-15 Desma Ct, Bohle QLD 4818
Ph:07 4786 0800 E:townsville.environmental@alsenviro.com

* Melbourne: 2-4 Westall Rd, Springvale VIC 3171 Ph:03
8548 9600 E: samples.melbourne@alsenviro.com
☐ Adelaide: 2-1 Burma Rd, Pooraka SA 5085
Ph: 08 8359 0890 E:adelaide@alsenviro.com

☐ Perth: 10 Hod Way, Malaga WA 6060
Ph: 08 9209 7655 E: samples.perth@alsenviro.com
☐ Launceston: 27 Wellington St, Launceston TAS 7250
Ph: 03 6331 2158 E:launceston@alsenviro.com

CLIENT: ENVIRONMENTAL SITE ASSESSMENTS		TURNAROUND REQUIREMENTS:		X		Standard TAT (List due date):		FOR LABORATORY USE ONLY (Circle) Disposed/sealed? ☒ Yes ☐ No Field/ Lab/ Bottle broken present? ☒ Yes ☐ No Random Sample (temperature of Recd): Other comment: 278-278	
OFFICE: PO BOX 3106 WAURN PONDS						Non Standard or urgent TAT (List due date):			
PROJECT: IBBOTSON STREET, ST LEONARDS		ALS QUOTE NO.: MEBQ-159-13		COC SEQUENCE NUMBER (Circle)		COC: 2			
ORDER NUMBER:				OF: 2					
PROJECT MANAGER: Seton Lillas		CONTACT PH: 0433747187		RELINQUISHED BY:		RECEIVED BY:		RELINQUISHED BY:	
SAMPLER: As Above		SAMPLER MOBILE: As Above		DATE/TIME: 11.00am 20.5.14		DATE/TIME:		DATE/TIME:	
COC emailed to ALS? (YES / NO) YES		EDD FORMAT (or default):						RECEIVED BY: MANN	
Email Reports to (will default to PM if no other addresses are listed): seton@envirositeassessments.com								DATE/TIME: 20/5 14:00	
Email Invoice to (will default to PM if no other addresses are listed): A/A									

COMMENTS/SPECIAL HANDLING/STORAGE OR DISPOSAL:

ALS USE ONLY		SAMPLE DETAILS MATRIX: Solid(S) Water(W)		CONTAINER INFORMATION		ANALYSIS REQUIRED including SUITES (NB: Suite Codes must be listed to attract suite price) Where Metals are required, specify Total (unfiltered bottle required) or Dissolved (field)										Additional Information			
LAB ID	SAMPLE ID	DATE / TIME	MATRIX	TYPE & PRESERVATIVE(refer to codes below)	TOTAL BOTTLES	15 METALS	TPH C6-C9 & BTEX	NEPM SUITE	ESA-1										
13	SP10/0-0.15/B	20.5.14 8.54	S			X													
14	RB/1	20.5.14 9.30	W			X													
TOTAL					2														

Water Container Codes: P = Unpreserved Plastic; N = Nitric Preserved Plastic; ORC = Nitric Preserved ORC; SH = Sodium Hydroxide/Cd Preserved; S = Sodium Hydroxide Preserved Plastic; AG = Amber Glass Unpreserved; AP = Airfreight Unpreserved Plastic;
 V = VOA Vial HCl Preserved; VB = VOA Vial Sodium Bisulphate Preserved; VS = VOA Vial Sulfuric Preserved; AV = Airfreight Unpreserved Vial SG = Sulfuric Preserved Amber Glass; H = HCl preserved Plastic; HS = HCl preserved Speciation bottle; SP = Sulfuric Preserved Plastic; F = Formaldehyde Preserved Glass;
 Z = Zinc Acetate Preserved Bottle; E = EDTA Preserved Bottles; ST = Sterile Bottle; ASS = Plastic Bag for Acid Sulphate Soils; B = Unpreserved Bag.

CERTIFICATE OF ANALYSIS

Work Order	: EM1404854	Page	: 1 of 18
Client	: ENVIRONMENTAL SITE ASSESSMENTS PTY LTD	Laboratory	: Environmental Division Melbourne
Contact	: MR SETON LILLAS	Contact	: Carol Walsh
Address	: P.O. BOX 3106 WAURN PONDS VIC 3216	Address	: 4 Westall Rd Springvale VIC Australia 3171
E-mail	: seton@envirositeassessments.com	E-mail	: carol.walsh@alsglobal.com
Telephone	: ----	Telephone	: +61-3-8549 9608
Facsimile	: ----	Facsimile	: +61-3-8549 9601
Project	: IBBOTSON STREET ST LEONARDS	QC Level	: NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Order number	: ----		
C-O-C number	: ----	Date Samples Received	: 20-MAY-2014
Sampler	: SL	Issue Date	: 28-MAY-2014
Site	: ----		
Quote number	: MEBQ/159/13	No. of samples received	: 14
		No. of samples analysed	: 14

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits



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 sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

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

- **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.
- **EP202:** Particular samples required dilution due to matrix interferences. LOR values have been adjusted accordingly.
- **Herbicides (EP202)** conducted by ALS Sydney, NATA accreditation no. 825, site no 10911.



NATA Accredited Laboratory 825

Accredited for compliance with
ISO/IEC 17025.

Signatories

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

Signatories	Position	Accreditation Category
Christopher Lemaitre	Non-Metals Team Leader	Melbourne Inorganics
Dilani Fernando	Senior Inorganic Chemist	Melbourne Inorganics
Eric Chau	Metals Team Leader	Melbourne Inorganics
Nancy Wang	Senior Semivolatile Instrument Chemist	Melbourne Organics
Nikki Stepniewski	Senior Inorganic Instrument Chemist	Melbourne Inorganics
Phalak Inthaksone	Laboratory Manager - Organics	Sydney Organics
Xingbin Lin	Senior Organic Chemist	Melbourne Organics



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Client sample ID

Client sampling date / time

				SP1/0-0.15	SP2/0-0.15	SP3/0-0.15	SP4/0-0.15	SP5/0-0.15
				20-MAY-2014 08:25	20-MAY-2014 09:20	20-MAY-2014 08:30	20-MAY-2014 09:15	20-MAY-2014 08:35
Compound	CAS Number	LOR	Unit	EM1404854-003	EM1404854-004	EM1404854-005	EM1404854-006	EM1404854-007
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	15.5	13.5	14.5	31.9	31.5
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	13	24	17	24	13
Barium	7440-39-3	10	mg/kg	40	20	20	20	30
Beryllium	7440-41-7	1	mg/kg	<1	<1	<1	<1	<1
Boron	7440-42-8	50	mg/kg	<50	<50	<50	<50	<50
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	46	37	56	68	43
Cobalt	7440-48-4	2	mg/kg	5	<2	3	<2	3
Copper	7440-50-8	5	mg/kg	<5	<5	<5	<5	<5
Lead	7439-92-1	5	mg/kg	16	13	16	19	18
Manganese	7439-96-5	5	mg/kg	76	44	60	52	90
Nickel	7440-02-0	2	mg/kg	13	5	9	6	8
Selenium	7782-49-2	5	mg/kg	<5	<5	<5	<5	<5
Vanadium	7440-62-2	5	mg/kg	89	87	110	143	96
Zinc	7440-66-6	5	mg/kg	<5	5	7	5	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
EG048: Hexavalent Chromium (Alkaline Digest)								
Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	----	----	----	----
EK028SF: Weak Acid Dissociable CN by Segmented Flow Analyser								
Weak Acid Dissociable Cyanide	----	1	mg/kg	<1	----	----	----	----
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	----	----	----	----
EP068A: Organochlorine Pesticides (OC)								
Mirex	2385-85-5	0.05	mg/kg	<0.05	----	----	----	----
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	----	----	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	----	----	----	----
beta-BHC	319-85-7	0.05	mg/kg	<0.05	----	----	----	----
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	----	----	----	----
delta-BHC	319-86-8	0.05	mg/kg	<0.05	----	----	----	----
Heptachlor	76-44-8	0.05	mg/kg	<0.05	----	----	----	----
Aldrin	309-00-2	0.05	mg/kg	<0.05	----	----	----	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Client sample ID

Client sampling date / time

				SP1/0-0.15	SP2/0-0.15	SP3/0-0.15	SP4/0-0.15	SP5/0-0.15
				20-MAY-2014 08:25	20-MAY-2014 09:20	20-MAY-2014 08:30	20-MAY-2014 09:15	20-MAY-2014 08:35
Compound	CAS Number	LOR	Unit	EM1404854-003	EM1404854-004	EM1404854-005	EM1404854-006	EM1404854-007
EP068A: Organochlorine Pesticides (OC) - Continued								
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	----	----	----	----
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	----	----	----	----
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	----	----	----	----
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	----	----	----	----
Dieldrin	60-57-1	0.05	mg/kg	<0.05	----	----	----	----
4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	----	----	----	----
Endrin	72-20-8	0.05	mg/kg	<0.05	----	----	----	----
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	----	----	----	----
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	----	----	----	----
4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	----	----	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	----	----	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	----	----	----	----
4,4'-DDT	50-29-3	0.2	mg/kg	<0.2	----	----	----	----
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	----	----	----	----
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	----	----	----	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	<0.05	----	----	----	----
^ Sum of DDD + DDE + DDT	----	0.05	mg/kg	<0.05	----	----	----	----
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	----	----	----	----
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	----	----	----	----
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	----	----	----	----
Dimethoate	60-51-5	0.05	mg/kg	<0.05	----	----	----	----
Diazinon	333-41-5	0.05	mg/kg	<0.05	----	----	----	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	----	----	----	----
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	----	----	----	----
Malathion	121-75-5	0.05	mg/kg	<0.05	----	----	----	----
Fenthion	55-38-9	0.05	mg/kg	<0.05	----	----	----	----
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	----	----	----	----
Parathion	56-38-2	0.2	mg/kg	<0.2	----	----	----	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	----	----	----	----
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	----	----	----	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	----	----	----	----
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	----	----	----	----
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	----	----	----	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Client sample ID

Client sampling date / time

				SP1/0-0.15	SP2/0-0.15	SP3/0-0.15	SP4/0-0.15	SP5/0-0.15
				20-MAY-2014 08:25	20-MAY-2014 09:20	20-MAY-2014 08:30	20-MAY-2014 09:15	20-MAY-2014 08:35
Compound	CAS Number	LOR	Unit	EM1404854-003	EM1404854-004	EM1404854-005	EM1404854-006	EM1404854-007
EP068B: Organophosphorus Pesticides (OP) - Continued								
Ethion	563-12-2	0.05	mg/kg	<0.05	----	----	----	----
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	----	----	----	----
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	----	----	----	----
EP068C: Triazines								
Atrazine	1912-24-9	0.05	mg/kg	<0.05	----	----	----	----
EP068D: Pyrethroids								
Bifenthrin	82657-04-3	0.05	mg/kg	<0.05	----	----	----	----
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	<0.5	----	----	----	----
2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	----	----	----	----
2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	----	----	----	----
3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	----	----	----	----
2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	----	----	----	----
2,4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	----	----	----	----
2,4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	----	----	----	----
2,6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	----	----	----	----
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	----	----	----	----
2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	----	----	----	----
2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	----	----	----	----
Pentachlorophenol	87-86-5	2	mg/kg	<2	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	----	----	----	----
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	----	----	----	----
Acenaphthene	83-32-9	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)fluoranthene	205-99-2	0.5	mg/kg	<0.5	----	----	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	----	----	----	----

Sub-Matrix: SOIL (Matrix: SOIL)

Client sample ID

Client sampling date / time

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	SP1/0-0.15		SP2/0-0.15		SP3/0-0.15		SP4/0-0.15		SP5/0-0.15	
Client sampling date / time					20-MAY-2014 08:25		20-MAY-2014 09:20		20-MAY-2014 08:30		20-MAY-2014 09:15		20-MAY-2014 08:35	
Compound	CAS Number	LOR	Unit		EM1404854-003		EM1404854-004		EM1404854-005		EM1404854-006		EM1404854-007	
EP202A: Phenoxyacetic Acid Herbicides by LCMS - Continued														
4-Chlorophenoxy acetic acid	122-88-3	0.02	mg/kg		<0.04		----		----		----		----	
2.4-DB	94-82-6	0.02	mg/kg		<0.04		----		----		----		----	
Dicamba	1918-00-9	0.02	mg/kg		<0.04		----		----		----		----	
Mecoprop	93-65-2	0.02	mg/kg		<0.04		----		----		----		----	
MCPA	94-74-6	0.02	mg/kg		<0.04		----		----		----		----	
2.4-DP	120-36-5	0.02	mg/kg		<0.04		----		----		----		----	
2.4-D	94-75-7	0.02	mg/kg		<0.04		----		----		----		----	
Triclopyr	55335-06-3	0.02	mg/kg		<0.04		----		----		----		----	
2.4.5-TP (Silvex)	93-72-1	0.02	mg/kg		<0.04		----		----		----		----	
2.4.5-T	93-76-5	0.02	mg/kg		<0.04		----		----		----		----	
MCPB	94-81-5	0.02	mg/kg		<0.04		----		----		----		----	
Picloram	1918-02-1	0.02	mg/kg		<0.04		----		----		----		----	
Clopyralid	1702-17-6	0.02	mg/kg		<0.04		----		----		----		----	
Fluroxypyr	69377-81-7	0.02	mg/kg		<0.04		----		----		----		----	
EP066S: PCB Surrogate														
Decachlorobiphenyl	2051-24-3	0.1	%		67.2		----		----		----		----	
EP068S: Organochlorine Pesticide Surrogate														
Dibromo-DDE	21655-73-2	0.1	%		84.2		----		----		----		----	
EP068T: Organophosphorus Pesticide Surrogate														
DEF	78-48-8	0.1	%		83.0		----		----		----		----	
EP075(SIM)S: Phenolic Compound Surrogates														
Phenol-d6	13127-88-3	0.1	%		79.8		----		----		----		----	
2-Chlorophenol-D4	93951-73-6	0.1	%		88.7		----		----		----		----	
2.4.6-Tribromophenol	118-79-6	0.1	%		75.6		----		----		----		----	
EP075(SIM)T: PAH Surrogates														
2-Fluorobiphenyl	321-60-8	0.1	%		95.3		----		----		----		----	
Anthracene-d10	1719-06-8	0.1	%		105		----		----		----		----	
4-Terphenyl-d14	1718-51-0	0.1	%		96.3		----		----		----		----	
EP080S: TPH(V)/BTEX Surrogates														
1.2-Dichloroethane-D4	17060-07-0	0.1	%		124		----		----		----		----	
Toluene-D8	2037-26-5	0.1	%		96.4		----		----		----		----	
4-Bromofluorobenzene	460-00-4	0.1	%		85.5		----		----		----		----	
EP202S: Phenoxyacetic Acid Herbicide Surrogate														



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Client sample ID

Client sampling date / time

				SP1/0-0.15	SP2/0-0.15	SP3/0-0.15	SP4/0-0.15	SP5/0-0.15
				20-MAY-2014 08:25	20-MAY-2014 09:20	20-MAY-2014 08:30	20-MAY-2014 09:15	20-MAY-2014 08:35
Compound	CAS Number	LOR	Unit	EM1404854-003	EM1404854-004	EM1404854-005	EM1404854-006	EM1404854-007
EP202S: Phenoxyacetic Acid Herbicide Surrogate - Continued								
2,4-Dichlorophenyl Acetic Acid	19719-28-9	0.1	%	71.8	----	----	----	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Client sample ID

Client sampling date / time

				SP6/0-0.15	SP7/0-0.15	SP8/0-0.15	SP9/0-0.15	SP10/0-0.15
				20-MAY-2014 09:10	20-MAY-2014 08:40	20-MAY-2014 09:05	20-MAY-2014 09:00	20-MAY-2014 08:52
Compound	CAS Number	LOR	Unit	EM1404854-008	EM1404854-009	EM1404854-010	EM1404854-011	EM1404854-012
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	19.0	33.6	8.0	10.9	22.1
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	9	<5	<5	<5	<5
Barium	7440-39-3	10	mg/kg	20	20	----	----	30
Beryllium	7440-41-7	1	mg/kg	<1	<1	----	----	<1
Boron	7440-42-8	50	mg/kg	<50	<50	----	----	<50
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	49	20	7	16	21
Cobalt	7440-48-4	2	mg/kg	<2	2	----	----	4
Copper	7440-50-8	5	mg/kg	<5	<5	<5	35	<5
Lead	7439-92-1	5	mg/kg	15	10	5	<5	14
Manganese	7439-96-5	5	mg/kg	37	75	----	----	100
Nickel	7440-02-0	2	mg/kg	6	6	2	90	12
Selenium	7782-49-2	5	mg/kg	<5	<5	----	----	<5
Vanadium	7440-62-2	5	mg/kg	88	45	----	----	35
Zinc	7440-66-6	5	mg/kg	<5	<5	<5	79	186
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	----	----	----	----
EK028SF: Weak Acid Dissociable CN by Segmented Flow Analyser								
Weak Acid Dissociable Cyanide	----	1	mg/kg	<1	----	----	----	----
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	----	----	----	----
EP068A: Organochlorine Pesticides (OC)								
Mirex	2385-85-5	0.05	mg/kg	<0.05	----	----	----	----
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	----	----	----	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	----	----	----	----
beta-BHC	319-85-7	0.05	mg/kg	<0.05	----	----	----	----
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	----	----	----	----
delta-BHC	319-86-8	0.05	mg/kg	<0.05	----	----	----	----
Heptachlor	76-44-8	0.05	mg/kg	<0.05	----	----	----	----
Aldrin	309-00-2	0.05	mg/kg	<0.05	----	----	----	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Client sample ID

Client sampling date / time

				SP6/0-0.15	SP7/0-0.15	SP8/0-0.15	SP9/0-0.15	SP10/0-0.15
				20-MAY-2014 09:10	20-MAY-2014 08:40	20-MAY-2014 09:05	20-MAY-2014 09:00	20-MAY-2014 08:52
Compound	CAS Number	LOR	Unit	EM1404854-008	EM1404854-009	EM1404854-010	EM1404854-011	EM1404854-012
EP068A: Organochlorine Pesticides (OC) - Continued								
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	----	----	----	----
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	----	----	----	----
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	----	----	----	----
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	----	----	----	----
Dieldrin	60-57-1	0.05	mg/kg	<0.05	----	----	----	----
4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	----	----	----	----
Endrin	72-20-8	0.05	mg/kg	<0.05	----	----	----	----
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	----	----	----	----
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	----	----	----	----
4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	----	----	----	----
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	----	----	----	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	----	----	----	----
4,4'-DDT	50-29-3	0.2	mg/kg	<0.2	----	----	----	----
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	----	----	----	----
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	----	----	----	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	<0.05	----	----	----	----
^ Sum of DDD + DDE + DDT	----	0.05	mg/kg	<0.05	----	----	----	----
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	----	----	----	----
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	----	----	----	----
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	----	----	----	----
Dimethoate	60-51-5	0.05	mg/kg	<0.05	----	----	----	----
Diazinon	333-41-5	0.05	mg/kg	<0.05	----	----	----	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	----	----	----	----
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	----	----	----	----
Malathion	121-75-5	0.05	mg/kg	<0.05	----	----	----	----
Fenthion	55-38-9	0.05	mg/kg	<0.05	----	----	----	----
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	----	----	----	----
Parathion	56-38-2	0.2	mg/kg	<0.2	----	----	----	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	----	----	----	----
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	----	----	----	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	----	----	----	----
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	----	----	----	----
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	----	----	----	----



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Client sample ID

Client sampling date / time

				SP6/0-0.15	SP7/0-0.15	SP8/0-0.15	SP9/0-0.15	SP10/0-0.15
				20-MAY-2014 09:10	20-MAY-2014 08:40	20-MAY-2014 09:05	20-MAY-2014 09:00	20-MAY-2014 08:52
Compound	CAS Number	LOR	Unit	EM1404854-008	EM1404854-009	EM1404854-010	EM1404854-011	EM1404854-012
EP068B: Organophosphorus Pesticides (OP) - Continued								
Ethion	563-12-2	0.05	mg/kg	<0.05	----	----	----	----
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	----	----	----	----
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	----	----	----	----
EP068C: Triazines								
Atrazine	1912-24-9	0.05	mg/kg	<0.05	----	----	----	----
EP068D: Pyrethroids								
Bifenthrin	82657-04-3	0.05	mg/kg	<0.05	----	----	----	----
EP075(SIM)A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg	<0.5	----	----	----	----
2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	----	----	----	----
2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	----	----	----	----
3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	----	----	----	----
2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	----	----	----	----
2,4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	----	----	----	----
2,4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	----	----	----	----
2,6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	----	----	----	----
4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	----	----	----	----
2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	----	----	----	----
2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	----	----	----	----
Pentachlorophenol	87-86-5	2	mg/kg	<2	----	----	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	----	----	----	----
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	----	----	----	----
Acenaphthene	83-32-9	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)fluoranthene	205-99-2	0.5	mg/kg	<0.5	----	----	----	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	----	----	----	----

Sub-Matrix: SOIL (Matrix: SOIL)

Client sample ID

Client sampling date / time

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	SP6/0-0.15		SP7/0-0.15		SP8/0-0.15		SP9/0-0.15		SP10/0-0.15	
Client sampling date / time					20-MAY-2014 09:10	20-MAY-2014 08:40	20-MAY-2014 09:05	20-MAY-2014 09:00	20-MAY-2014 08:52					
Compound	CAS Number	LOR	Unit	EM1404854-008	EM1404854-009	EM1404854-010	EM1404854-011	EM1404854-012						
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued														
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	----	----	----	----	----					
EP080/071: Total Petroleum Hydrocarbons														
C6 - C9 Fraction	----	10	mg/kg	<10	----	<10	<10	<10	----					
C10 - C14 Fraction	----	50	mg/kg	<50	----	<50	<50	<50	----					
C15 - C28 Fraction	----	100	mg/kg	<100	----	<100	<100	<100	----					
C29 - C36 Fraction	----	100	mg/kg	<100	----	160	<100	<100	----					
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	----	160	<50	<50	----					
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013														
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	>C10_C16	50	mg/kg	<50	----	<50	<50	<50	----					
>C16 - C34 Fraction	----	100	mg/kg	<100	----	140	<100	<100	----					
>C34 - C40 Fraction	----	100	mg/kg	<100	----	<100	<100	<100	----					
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	----	140	<50	<50	----					
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	----	<50	<50	<50	----					
EP080: BTEXN														
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	----	----	----	----	----					
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	----	----	----	----	----					
^ Sum of BTEX	----	0.2	mg/kg	<0.2	----	----	----	----	----					
^ Total Xylenes	1330-20-7	0.5	mg/kg	<0.5	----	----	----	----	----					
Naphthalene	91-20-3	1	mg/kg	<1	----	----	----	----	----					
EP202A: Phenoxyacetic Acid Herbicides by LCMS														

Sub-Matrix: **SOIL** (Matrix: **SOIL**)

Client sample ID

Client sampling date / time

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	SP6/0-0.15	SP7/0-0.15	SP8/0-0.15	SP9/0-0.15	SP10/0-0.15
Client sampling date / time				20-MAY-2014 09:10	20-MAY-2014 08:40	20-MAY-2014 09:05	20-MAY-2014 09:00	20-MAY-2014 08:52	
Compound	CAS Number	LOR	Unit	EM1404854-008	EM1404854-009	EM1404854-010	EM1404854-011	EM1404854-012	
EP202A: Phenoxyacetic Acid Herbicides by LCMS - Continued									
4-Chlorophenoxy acetic acid	122-88-3	0.02	mg/kg	<0.04	----	----	----	----	
2.4-DB	94-82-6	0.02	mg/kg	<0.04	----	----	----	----	
Dicamba	1918-00-9	0.02	mg/kg	<0.04	----	----	----	----	
Mecoprop	93-65-2	0.02	mg/kg	<0.04	----	----	----	----	
MCPA	94-74-6	0.02	mg/kg	<0.04	----	----	----	----	
2.4-DP	120-36-5	0.02	mg/kg	<0.04	----	----	----	----	
2.4-D	94-75-7	0.02	mg/kg	<0.04	----	----	----	----	
Triclopyr	55335-06-3	0.02	mg/kg	<0.04	----	----	----	----	
2.4.5-TP (Silvex)	93-72-1	0.02	mg/kg	<0.04	----	----	----	----	
2.4.5-T	93-76-5	0.02	mg/kg	<0.04	----	----	----	----	
MCPB	94-81-5	0.02	mg/kg	<0.04	----	----	----	----	
Picloram	1918-02-1	0.02	mg/kg	<0.04	----	----	----	----	
Clopyralid	1702-17-6	0.02	mg/kg	<0.04	----	----	----	----	
Fluroxypyr	69377-81-7	0.02	mg/kg	<0.04	----	----	----	----	
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%	85.8	----	----	----	----	
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.1	%	106	----	----	----	----	
EP068T: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.1	%	106	----	----	----	----	
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.1	%	91.8	----	----	----	----	
2-Chlorophenol-D4	93951-73-6	0.1	%	92.8	----	----	----	----	
2.4.6-Tribromophenol	118-79-6	0.1	%	76.2	----	----	----	----	
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%	97.6	----	----	----	----	
Anthracene-d10	1719-06-8	0.1	%	107	----	----	----	----	
4-Terphenyl-d14	1718-51-0	0.1	%	98.2	----	----	----	----	
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.1	%	89.9	----	118	109	----	
Toluene-D8	2037-26-5	0.1	%	83.0	----	94.2	90.0	----	
4-Bromofluorobenzene	460-00-4	0.1	%	78.6	----	87.7	88.0	----	
EP202S: Phenoxyacetic Acid Herbicide Surrogate									



Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Client sample ID

Client sampling date / time

				SP6/0-0.15	SP7/0-0.15	SP8/0-0.15	SP9/0-0.15	SP10/0-0.15
				20-MAY-2014 09:10	20-MAY-2014 08:40	20-MAY-2014 09:05	20-MAY-2014 09:00	20-MAY-2014 08:52
Compound	CAS Number	LOR	Unit	EM1404854-008	EM1404854-009	EM1404854-010	EM1404854-011	EM1404854-012
EP202S: Phenoxyacetic Acid Herbicide Surrogate - Continued								
2,4-Dichlorophenyl Acetic Acid	19719-28-9	0.1	%	71.4	----	----	----	----



Analytical Results

Sub-Matrix: **SOIL** (Matrix: **SOIL**)

Client sample ID

SP10/0-0.15B	----	----	----	----
20-MAY-2014 08:54	----	----	----	----
EM1404854-013	----	----	----	----

Client sampling date / time

Compound	CAS Number	LOR	Unit					
----------	------------	-----	------	--	--	--	--	--

EA055: Moisture Content

Moisture Content (dried @ 103°C)	----	1.0	%	14.8	----	----	----	----
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EG005T: Total Metals by ICP-AES

Arsenic	7440-38-2	5	mg/kg	<5	----	----	----	----
Barium	7440-39-3	10	mg/kg	30	----	----	----	----
Beryllium	7440-41-7	1	mg/kg	<1	----	----	----	----
Boron	7440-42-8	50	mg/kg	<50	----	----	----	----
Cadmium	7440-43-9	1	mg/kg	<1	----	----	----	----
Chromium	7440-47-3	2	mg/kg	16	----	----	----	----
Cobalt	7440-48-4	2	mg/kg	3	----	----	----	----
Copper	7440-50-8	5	mg/kg	<5	----	----	----	----
Lead	7439-92-1	5	mg/kg	22	----	----	----	----
Manganese	7439-96-5	5	mg/kg	84	----	----	----	----
Nickel	7440-02-0	2	mg/kg	7	----	----	----	----
Selenium	7782-49-2	5	mg/kg	<5	----	----	----	----
Vanadium	7440-62-2	5	mg/kg	35	----	----	----	----
Zinc	7440-66-6	5	mg/kg	199	----	----	----	----

EG035T: Total Recoverable Mercury by FIMS

Mercury	7439-97-6	0.1	mg/kg	<0.1	----	----	----	----
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Analytical Results

Sub-Matrix: **WATER** (Matrix: **WATER**)

Client sample ID

Client sampling date / time

				FB/1	TB/1	RB/1	----	----
				20-MAY-2014 08:20	20-MAY-2014 08:15	20-MAY-2014 09:30	----	----
Compound	CAS Number	LOR	Unit	EM1404854-001	EM1404854-002	EM1404854-014	----	----
EG020T: Total Metals by ICP-MS								
Arsenic	7440-38-2	0.001	mg/L	<0.001	----	<0.001	----	----
Boron	7440-42-8	0.05	mg/L	<0.05	----	<0.05	----	----
Barium	7440-39-3	0.001	mg/L	<0.001	----	<0.001	----	----
Beryllium	7440-41-7	0.001	mg/L	<0.001	----	<0.001	----	----
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	----	<0.0001	----	----
Cobalt	7440-48-4	0.001	mg/L	<0.001	----	<0.001	----	----
Chromium	7440-47-3	0.001	mg/L	<0.001	----	<0.001	----	----
Copper	7440-50-8	0.001	mg/L	<0.001	----	<0.001	----	----
Manganese	7439-96-5	0.001	mg/L	<0.001	----	<0.001	----	----
Nickel	7440-02-0	0.001	mg/L	<0.001	----	<0.001	----	----
Lead	7439-92-1	0.001	mg/L	<0.001	----	<0.001	----	----
Selenium	7782-49-2	0.01	mg/L	<0.01	----	<0.01	----	----
Vanadium	7440-62-2	0.01	mg/L	<0.01	----	<0.01	----	----
Zinc	7440-66-6	0.005	mg/L	<0.005	----	<0.005	----	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.0001	mg/L	<0.0001	----	<0.0001	----	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	20	µg/L	----	<20	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013								
C6 - C10 Fraction	C6_C10	20	µg/L	----	<20	----	----	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	20	µg/L	----	<20	----	----	----
EP080: BTEXN								
Benzene	71-43-2	1	µg/L	----	<1	----	----	----
Toluene	108-88-3	2	µg/L	----	<2	----	----	----
Ethylbenzene	100-41-4	2	µg/L	----	<2	----	----	----
meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	----	<2	----	----	----
ortho-Xylene	95-47-6	2	µg/L	----	<2	----	----	----
^ Total Xylenes	1330-20-7	2	µg/L	----	<2	----	----	----
^ Sum of BTEX	----	1	µg/L	----	<1	----	----	----
Naphthalene	91-20-3	5	µg/L	----	<5	----	----	----
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	----	93.5	----	----	----
Toluene-D8	2037-26-5	0.1	%	----	95.1	----	----	----



Analytical Results

Sub-Matrix: WATER (Matrix: WATER)

Client sample ID

Client sampling date / time

				FB/1	TB/1	RB/1	----	----
				20-MAY-2014 08:20	20-MAY-2014 08:15	20-MAY-2014 09:30	----	----
Compound	CAS Number	LOR	Unit	EM1404854-001	EM1404854-002	EM1404854-014	----	----
EP080S: TPH(V)/BTEX Surrogates - Continued								
4-Bromofluorobenzene	460-00-4	0.1	%	----	116	----	----	----



Surrogate Control Limits

Sub-Matrix: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP066S: PCB Surrogate			
Decachlorobiphenyl	2051-24-3	36	140
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	38	128
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	33	139
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
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
EP202S: Phenoxyacetic Acid Herbicide Surrogate			
2,4-Dichlorophenyl Acetic Acid	19719-28-9	45	139

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

QUALITY CONTROL REPORT

Work Order	: EM1404854	Page	: 1 of 21
Client	: ENVIRONMENTAL SITE ASSESSMENTS PTY LTD	Laboratory	: Environmental Division Melbourne
Contact	: MR SETON LILLAS	Contact	: Carol Walsh
Address	: P.O. BOX 3106 WAURN PONDS VIC 3216	Address	: 4 Westall Rd Springvale VIC Australia 3171
E-mail	: seton@envirositeassessments.com	E-mail	: carol.walsh@alsglobal.com
Telephone	: ----	Telephone	: +61-3-8549 9608
Facsimile	: ----	Facsimile	: +61-3-8549 9601
Project	: IBBOTSON STREET ST LEONARDS	QC Level	: NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Site	: ----		
C-O-C number	: ----	Date Samples Received	: 20-MAY-2014
Sampler	: SL	Issue Date	: 28-MAY-2014
Order number	: ----		
Quote number	: MEBQ/159/13	No. of samples received	: 14
		No. of samples analysed	: 14

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits



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.

Key :
Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
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
RPD = Relative Percentage Difference
= Indicates failed QC



NATA Accredited
Laboratory 825

Accredited for
compliance with
ISO/IEC 17025.

Signatories

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

<i>Signatories</i>	<i>Position</i>	<i>Accreditation Category</i>
Christopher Lemaitre	Non-Metals Team Leader	Melbourne Inorganics
Dilani Fernando	Senior Inorganic Chemist	Melbourne Inorganics
Eric Chau	Metals Team Leader	Melbourne Inorganics
Nancy Wang	Senior Semivolatile Instrument Chemist	Melbourne Organics
Nikki Stepniewski	Senior Inorganic Instrument Chemist	Melbourne Inorganics
Phalak Inthaksone	Laboratory Manager - Organics	Sydney Organics
Xingbin Lin	Senior Organic Chemist	Melbourne Organics



Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR:- No Limit; Result between 10 and 20 times LOR:- 0% - 50%; Result > 20 times LOR:- 0% - 20%.

Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EA055: Moisture Content (QC Lot: 3451998)									
EM1404824-001	Anonymous	EA055-103: Moisture Content (dried @ 103°C)	----	1.0	%	1.2	<1.0	14.5	No Limit
EM1404854-012	SP10/0-0.15	EA055-103: Moisture Content (dried @ 103°C)	----	1.0	%	22.1	21.6	2.4	0% - 20%
EG005T: Total Metals by ICP-AES (QC Lot: 3451299)									
EM1404835-001	Anonymous	EG005T: Beryllium	7440-41-7	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Barium	7440-39-3	10	mg/kg	40	40	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	17	21	21.9	0% - 50%
		EG005T: Cobalt	7440-48-4	2	mg/kg	13	16	15.3	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	70	81	14.4	0% - 20%
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	16	21	27.6	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Manganese	7439-96-5	5	mg/kg	226	260	14.0	0% - 20%
		EG005T: Selenium	7782-49-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Vanadium	7440-62-2	5	mg/kg	26	31	18.1	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	72	57	23.8	0% - 50%
		EG005T: Boron	7440-42-8	50	mg/kg	<50	<50	0.0	No Limit
EM1404835-012	Anonymous	EG005T: Beryllium	7440-41-7	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Barium	7440-39-3	10	mg/kg	80	80	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	24	26	5.9	0% - 50%
		EG005T: Cobalt	7440-48-4	2	mg/kg	10	11	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	62	66	5.6	0% - 20%
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	17	18	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	10	10	0.0	No Limit
		EG005T: Manganese	7439-96-5	5	mg/kg	201	214	6.6	0% - 20%
		EG005T: Selenium	7782-49-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Vanadium	7440-62-2	5	mg/kg	44	32	31.8	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	33	36	10.5	No Limit
		EG005T: Boron	7440-42-8	50	mg/kg	<50	<50	0.0	No Limit
EG005T: Total Metals by ICP-AES (QC Lot: 3451301)									
EM1404854-010	SP8/0-0.15	EG005T: Beryllium	7440-41-7	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Barium	7440-39-3	10	mg/kg	20	10	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	7	7	0.0	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EG005T: Total Metals by ICP-AES (QC Lot: 3451301) - continued									
EM1404854-010	SP8/0-0.15	EG005T: Cobalt	7440-48-4	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	2	2	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	5	<5	0.0	No Limit
		EG005T: Manganese	7439-96-5	5	mg/kg	21	21	0.0	No Limit
		EG005T: Selenium	7782-49-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Vanadium	7440-62-2	5	mg/kg	19	16	15.7	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Boron	7440-42-8	50	mg/kg	<50	<50	0.0	No Limit
EM1404883-006	Anonymous	EG005T: Beryllium	7440-41-7	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Barium	7440-39-3	10	mg/kg	20	20	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	5	4	0.0	No Limit
		EG005T: Cobalt	7440-48-4	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	2	<2	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	14	11	19.0	No Limit
		EG005T: Manganese	7439-96-5	5	mg/kg	56	68	18.0	0% - 50%
		EG005T: Selenium	7782-49-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Vanadium	7440-62-2	5	mg/kg	15	13	13.8	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	17	12	31.3	No Limit
		EG005T: Boron	7440-42-8	50	mg/kg	<50	<50	0.0	No Limit
		EG035T: Total Recoverable Mercury by FIMS (QC Lot: 3451300)							
EM1404835-001	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EM1404835-012	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 3451302)									
EM1404854-010	SP8/0-0.15	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EM1404883-006	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EG048: Hexavalent Chromium (Alkaline Digest) (QC Lot: 3451741)									
EM1404648-026	Anonymous	EG048: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EM1404835-012	Anonymous	EG048: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EK028SF: Weak Acid Dissociable CN by Segmented Flow Analyser (QC Lot: 3454216)									
EM1404854-003	SP1/0-0.15	EK028SF: Weak Acid Dissociable Cyanide	----	1	mg/kg	<1	<1	0.0	No Limit
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 3454203)									
EM1404854-003	SP1/0-0.15	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP068A: Organochlorine Pesticides (OC) (QC Lot: 3454202)									
EM1404854-003	SP1/0-0.15	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP068A: Organochlorine Pesticides (OC) (QC Lot: 3454202) - continued									
EM1404854-003	SP1/0-0.15	EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4,4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4,4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4,4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.0	No Limit		
EP068A: Organochlorine Pesticides (OC) (QC Lot: 3454204)									
EM1404854-003	SP1/0-0.15	EP068-Mirex: Mirex	2385-85-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 3454202)									
EM1404854-003	SP1/0-0.15	EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 3454202) - continued									
EM1404854-003	SP1/0-0.15	EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EP068C: Triazines (QC Lot: 3454202)									
EM1404854-003	SP1/0-0.15	EP068: Atrazine	1912-24-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
EP068D: Pyrethroids (QC Lot: 3454202)									
EM1404854-003	SP1/0-0.15	EP068: Bifenthrin	82657-04-3	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
EP075(SIM)A: Phenolic Compounds (QC Lot: 3451145)									
EM1404854-003	SP1/0-0.15	EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2,4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2,4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2,6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.0	No Limit
		EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	0.0	No Limit
EM1404883-007	Anonymous	EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2,4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2,4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2,6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.0	No Limit
		EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	0.0	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 3451145)									
EM1404854-003	SP1/0-0.15	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report							
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)		
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 3451145) - continued											
EM1404854-003	SP1/0-0.15	EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
EM1404883-007	Anonymous	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Benzo(b+j)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075(SIM): Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3451144)									
		EM1404854-003	SP1/0-0.15	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
				EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
EP071: C10 - C14 Fraction	----			50	mg/kg	<50	<50	0.0	No Limit		
EP071: C10 - C36 Fraction (sum)	----			50	mg/kg	<50	<50	0.0	No Limit		
EM1404883-007	Anonymous	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit		
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit		
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit		
		EP071: C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	0.0	No Limit		
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3451430)											
EM1404854-003	SP1/0-0.15	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit		
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 (QC Lot: 3451144)											
EM1404854-003	SP1/0-0.15	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit		
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit		
		EP071: >C10 - C16 Fraction	>C10_C16	50	mg/kg	<50	<50	0.0	No Limit		



Sub-Matrix: SOIL				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 (QC Lot: 3451144) - continued									
EM1404854-003	SP1/0-0.15	EP071: >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	0.0	No Limit
EM1404883-007	Anonymous	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	>C10_C16	50	mg/kg	<50	<50	0.0	No Limit
		EP071: >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 (QC Lot: 3451430)									
EM1404854-003	SP1/0-0.15	EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	0.0	No Limit
EP080: BTEXN (QC Lot: 3451430)									
EM1404854-003	SP1/0-0.15	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
			106-42-3						
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
EP202A: Phenoxyacetic Acid Herbicides by LCMS (QC Lot: 3456077)									
EP1403778-001	Anonymous	EP202: 4-Chlorophenoxy acetic acid	122-88-3	0.02	mg/kg	<0.04	<0.04	0.0	No Limit
		EP202: 2,4-DB	94-82-6	0.02	mg/kg	<0.04	<0.04	0.0	No Limit
		EP202: Dicamba	1918-00-9	0.02	mg/kg	<0.04	<0.04	0.0	No Limit
		EP202: Mecoprop	93-65-2	0.02	mg/kg	<0.04	<0.04	0.0	No Limit
		EP202: MCPA	94-74-6	0.02	mg/kg	<0.04	<0.04	0.0	No Limit
		EP202: 2,4-DP	120-36-5	0.02	mg/kg	<0.04	<0.04	0.0	No Limit
		EP202: 2,4-D	94-75-7	0.02	mg/kg	<0.04	<0.04	0.0	No Limit
		EP202: Triclopyr	55335-06-3	0.02	mg/kg	<0.04	<0.04	0.0	No Limit
		EP202: 2,4,5-TP (Silvex)	93-72-1	0.02	mg/kg	<0.04	<0.04	0.0	No Limit
		EP202: 2,4,5-T	93-76-5	0.02	mg/kg	<0.04	<0.04	0.0	No Limit
		EP202: MCPB	94-81-5	0.02	mg/kg	<0.04	<0.04	0.0	No Limit
		EP202: Picloram	1918-02-1	0.02	mg/kg	<0.04	<0.04	0.0	No Limit
		EP202: Clopyralid	1702-17-6	0.02	mg/kg	<0.04	<0.04	0.0	No Limit
		EP202: Fluroxypyr	69377-81-7	0.02	mg/kg	<0.04	<0.04	0.0	No Limit
Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EG020T: Total Metals by ICP-MS (QC Lot: 3451296)									
EM1404830-018	Anonymous	EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	0.0002	0.0001	0.0	No Limit
		EG020A-T: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Barium	7440-39-3	0.001	mg/L	0.006	0.006	0.0	No Limit
		EG020A-T: Chromium	7440-47-3	0.001	mg/L	0.002	0.003	34.9	No Limit
		EG020A-T: Cobalt	7440-48-4	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Copper	7440-50-8	0.001	mg/L	0.006	0.006	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EG020T: Total Metals by ICP-MS (QC Lot: 3451296) - continued									
EM1404830-018	Anonymous	EG020A-T: Lead	7439-92-1	0.001	mg/L	0.007	0.008	0.0	No Limit
		EG020A-T: Manganese	7439-96-5	0.001	mg/L	0.024	0.025	0.0	0% - 20%
		EG020A-T: Nickel	7440-02-0	0.001	mg/L	0.004	0.004	0.0	No Limit
		EG020A-T: Zinc	7440-66-6	0.005	mg/L	0.020	0.021	8.1	No Limit
		EG020A-T: Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	0.0	No Limit
		EG020A-T: Vanadium	7440-62-2	0.01	mg/L	<0.01	<0.01	0.0	No Limit
		EG020A-T: Boron	7440-42-8	0.05	mg/L	<0.05	<0.05	0.0	No Limit
EM1404849-003	Anonymous	EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
		EG020A-T: Arsenic	7440-38-2	0.001	mg/L	0.002	0.002	0.0	No Limit
		EG020A-T: Beryllium	7440-41-7	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Barium	7440-39-3	0.001	mg/L	0.006	0.005	0.0	No Limit
		EG020A-T: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Cobalt	7440-48-4	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Manganese	7439-96-5	0.001	mg/L	0.026	0.026	0.0	0% - 20%
		EG020A-T: Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Zinc	7440-66-6	0.005	mg/L	0.007	0.007	0.0	No Limit
		EG020A-T: Selenium	7782-49-2	0.01	mg/L	<0.01	<0.01	0.0	No Limit
		EG020A-T: Vanadium	7440-62-2	0.01	mg/L	<0.01	<0.01	0.0	No Limit
		EG020A-T: Boron	7440-42-8	0.05	mg/L	0.07	0.07	0.0	No Limit
		EG035T: Total Recoverable Mercury by FIMS (QC Lot: 3450971)							
EM1404832-001	Anonymous	EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EM1404867-001	Anonymous	EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 3454451)									
EM1404822-001	Anonymous	EP080: C6 - C9 Fraction	----	20	µg/L	30	20	39.3	No Limit
EM1404934-006	Anonymous	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 (QC Lot: 3454451)									
EM1404822-001	Anonymous	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	20	<20	0.0	No Limit
EM1404934-006	Anonymous	EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	<20	0.0	No Limit
EP080: BTEXN (QC Lot: 3454451)									
EM1404822-001	Anonymous	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3	2	µg/L	<2	<2	0.0	No Limit
			106-42-3						
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.0	No Limit
EM1404934-006	Anonymous	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit



Sub-Matrix: WATER				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP080: BTEXN (QC Lot: 3454451) - continued									
EM1404934-006	Anonymous	EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3	2	µg/L	<2	<2	0.0	No Limit
			106-42-3						
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.0	No Limit

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Spike (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Method Blank (MB) Report

Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Recovery Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EG005T: Total Metals by ICP-AES (QCLot: 3451299)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	21.7 mg/kg	98.8	79	113
EG005T: Barium	7440-39-3	10	mg/kg	<10	143 mg/kg	97.1	92	116
EG005T: Beryllium	7440-41-7	1	mg/kg	<1	5.63 mg/kg	100	77	125
EG005T: Boron	7440-42-8	50	mg/kg	<50	33.2 mg/kg	91.9	84	124
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	4.64 mg/kg	109	87	115
EG005T: Chromium	7440-47-3	2	mg/kg	<2	43.9 mg/kg	100	89	113
EG005T: Cobalt	7440-48-4	2	mg/kg	<2	16.0 mg/kg	97.2	81	117
EG005T: Copper	7440-50-8	5	mg/kg	<5	32.0 mg/kg	96.6	90	116
EG005T: Lead	7439-92-1	5	mg/kg	<5	40.0 mg/kg	98.7	85	107
EG005T: Manganese	7439-96-5	5	mg/kg	<5	130 mg/kg	100	87	113
EG005T: Nickel	7440-02-0	2	mg/kg	<2	55.0 mg/kg	92.8	89	111
EG005T: Selenium	7782-49-2	5	mg/kg	<5	5.37 mg/kg	102	93	109
EG005T: Vanadium	7440-62-2	5	mg/kg	<5	29.6 mg/kg	102	81	117
EG005T: Zinc	7440-66-6	5	mg/kg	<5	60.8 mg/kg	102	89	111
EG005T: Total Metals by ICP-AES (QCLot: 3451301)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	21.7 mg/kg	103	79	113
EG005T: Barium	7440-39-3	10	mg/kg	<10	143 mg/kg	96.8	92	116
EG005T: Beryllium	7440-41-7	1	mg/kg	<1	5.63 mg/kg	97.2	77	125
EG005T: Boron	7440-42-8	50	mg/kg	<50	33.2 mg/kg	87.3	84	124
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	4.64 mg/kg	108	87	115
EG005T: Chromium	7440-47-3	2	mg/kg	<2	43.9 mg/kg	101	89	113
EG005T: Cobalt	7440-48-4	2	mg/kg	<2	16.0 mg/kg	105	81	117
EG005T: Copper	7440-50-8	5	mg/kg	<5	32.0 mg/kg	99.3	90	116
EG005T: Lead	7439-92-1	5	mg/kg	<5	40.0 mg/kg	101	85	107
EG005T: Manganese	7439-96-5	5	mg/kg	<5	130 mg/kg	103	87	113
EG005T: Nickel	7440-02-0	2	mg/kg	<2	55.0 mg/kg	99.9	89	111
EG005T: Selenium	7782-49-2	5	mg/kg	<5	5.37 mg/kg	99.5	93	109
EG005T: Vanadium	7440-62-2	5	mg/kg	<5	29.6 mg/kg	102	81	117
EG005T: Zinc	7440-66-6	5	mg/kg	<5	60.8 mg/kg	99.9	89	111
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3451300)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	2.57 mg/kg	97.3	85	103
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3451302)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	2.57 mg/kg	96.1	85	103
EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 3451741)								



Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
Method: Compound	CAS Number	LOR	Unit		Spike	Spike Recovery (%)	Recovery Limits (%)	
				Concentration	LCS	Low	High	
EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 3451741) - continued								
EG048: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	40 mg/kg	96.5	72	116
EK028SF: Weak Acid Dissociable CN by Segmented Flow Analyser (QCLot: 3454216)								
EK028SF: Weak Acid Dissociable Cyanide	----	1	mg/kg	<1	20 mg/kg	101	86	118
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 3454203)								
EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	0.11 mg/kg	82.0	55	135
EP068A: Organochlorine Pesticides (OC) (QCLot: 3454202)								
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	72.1	48	126
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	72.7	47	125
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	83.2	47	131
EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	81.4	48	126
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	82.0	51	127
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	75.2	48	124
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	77.2	54	124
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	78.7	55	127
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	78.8	54	126
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	128	55	129
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	78.9	54	126
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	81.6	51	129
EP068: 4,4`-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	79.8	53	127
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	83.8	30.7	137
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	79.7	53	129
EP068: 4,4`-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	79.2	53	131
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	68.6	42	132
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	79.8	43	133
EP068: 4,4`-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	88.7	37	137
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	82.8	50	134
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	88.0	33	137
EP068A: Organochlorine Pesticides (OC) (QCLot: 3454204)								
EP068-Mirex: Mirex	2385-85-5	0.05	mg/kg	<0.05	0.5 mg/kg	70.0	70	130
EP068B: Organophosphorus Pesticides (OP) (QCLot: 3454202)								
EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	0.5 mg/kg	70.4	26.6	129
EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	78.7	28.9	143
EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	0.5 mg/kg	81.4	33	171
EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	0.5 mg/kg	84.0	28	154
EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	0.5 mg/kg	83.3	53	129
EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	0.5 mg/kg	81.6	51	127
EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	0.5 mg/kg	84.9	46	130
EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	0.5 mg/kg	84.0	40	136



Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Recovery Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP068B: Organophosphorus Pesticides (OP) (QCLot: 3454202) - continued								
EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	0.5 mg/kg	80.9	55	129
EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	0.5 mg/kg	82.0	54	128
EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	0.5 mg/kg	81.4	52	130
EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	0.5 mg/kg	80.6	52	130
EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	0.5 mg/kg	83.1	37	157
EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	0.5 mg/kg	81.9	55	133
EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	0.5 mg/kg	84.8	32	138
EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	0.5 mg/kg	81.3	53	129
EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	0.5 mg/kg	83.0	49	133
EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	0.5 mg/kg	80.2	49	131
EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	0.5 mg/kg	93.4	14.4	162
EP068C: Triazines (QCLot: 3454202)								
EP068: Atrazine	1912-24-9	0.05	mg/kg	<0.05	0.5 mg/kg	85.5	50	128
EP068D: Pyrethroids (QCLot: 3454202)								
EP068: Bifenthrin	82657-04-3	0.05	mg/kg	<0.05	0.5 mg/kg	83.2	57	129
EP075(SIM)A: Phenolic Compounds (QCLot: 3451145)								
EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	10 mg/kg	101	62	124
EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	10 mg/kg	99.6	66	123
EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	10 mg/kg	94.6	68	126
EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1.0	mg/kg	<1	20 mg/kg	93.6	69	125
EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	10 mg/kg	99.9	59	127
EP075(SIM): 2,4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	10 mg/kg	99.1	67	127
EP075(SIM): 2,4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	10 mg/kg	104	67	127
EP075(SIM): 2,6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	10 mg/kg	85.6	70	126
EP075(SIM): 4-Chloro-3-Methylphenol	59-50-7	0.5	mg/kg	<0.5	10 mg/kg	108	62	124
EP075(SIM): 2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	10 mg/kg	93.6	59	124
EP075(SIM): 2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	10 mg/kg	89.3	60	124
EP075(SIM): Pentachlorophenol	87-86-5	2.0	mg/kg	<2	10 mg/kg	89.0	15.6	124
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3451145)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	10 mg/kg	92.6	73	124
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	10 mg/kg	92.6	65	127
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	10 mg/kg	93.3	73	123
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	10 mg/kg	95.5	66	130
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	10 mg/kg	92.3	74	124
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	10 mg/kg	92.8	71	123
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	10 mg/kg	91.9	72	126
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	10 mg/kg	93.3	73	125
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	10 mg/kg	92.9	71	127



Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%) LCS	Recovery Limits (%) Low High	
Method: Compound	CAS Number	LOR	Unit	Result				
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3451145) - continued								
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	10 mg/kg	90.8	72	130
EP075(SIM): Benzo(b+j)fluoranthene	205-99-2	0.5	mg/kg	<0.5	10 mg/kg	93.3	65	131
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	10 mg/kg	93.0	70	130
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	10 mg/kg	92.0	68	128
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	10 mg/kg	92.0	66	126
EP075(SIM): Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	10 mg/kg	93.2	67	125
EP075(SIM): Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	10 mg/kg	93.3	63	127
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3451144)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	640 mg/kg	101	72	130
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	2045 mg/kg	100	77	123
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	785 mg/kg	103	75	119
EP071: C10 - C36 Fraction (sum)	----	50	mg/kg	<50	----	----	----	----
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3451430)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	36 mg/kg	111	68	129
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 (QCLot: 3451144)								
EP071: >C10 - C16 Fraction	>C10_C16	50	mg/kg	<50	1074 mg/kg	99.7	75	123
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	2345 mg/kg	102	77	127
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	221 mg/kg	110	43	123
EP071: >C10 - C40 Fraction (sum)	----	100	mg/kg	<100	----	----	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 (QCLot: 3451430)								
EP080: C6 - C10 Fraction	C6_C10	10	mg/kg	<10	45 mg/kg	108	66	132
EP080: BTEXN (QCLot: 3451430)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	2 mg/kg	107	74	124
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	2 mg/kg	108	74	130
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	2 mg/kg	102	71	127
EP080: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	4 mg/kg	108	71	133
	106-42-3							
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	2 mg/kg	106	74	130
EP080: Naphthalene	91-20-3	1	mg/kg	<1	0.5 mg/kg	97.1	68	132
EP202A: Phenoxyacetic Acid Herbicides by LCMS (QCLot: 3456077)								
EP202: 4-Chlorophenoxy acetic acid	122-88-3	0.02	mg/kg	<0.02	0.1 mg/kg	56.6	54.4	136
EP202: 2,4-DB	94-82-6	0.02	mg/kg	<0.02	0.1 mg/kg	60.6	45.5	144
EP202: Dicamba	1918-00-9	0.02	mg/kg	<0.02	0.1 mg/kg	63.2	51.7	146
EP202: Mecoprop	93-65-2	0.02	mg/kg	<0.02	0.1 mg/kg	70.7	60	140
EP202: MCPA	94-74-6	0.02	mg/kg	<0.02	0.1 mg/kg	60.2	56.8	143
EP202: 2,4-DP	120-36-5	0.02	mg/kg	<0.02	0.1 mg/kg	57.5	50	141
EP202: 2,4-D	94-75-7	0.02	mg/kg	<0.02	0.1 mg/kg	74.8	68.5	139
EP202: Triclopyr	55335-06-3	0.02	mg/kg	<0.02	0.1 mg/kg	65.9	50.8	145



Sub-Matrix: SOIL				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
Method: Compound	CAS Number	LOR	Unit		Spike	Spike Recovery (%)	Recovery Limits (%)	
					Concentration	LCS	Low	High
EP202A: Phenoxyacetic Acid Herbicides by LCMS (QCLot: 3456077) - continued								
EP202: 2.4.5-TP (Silvex)	93-72-1	0.02	mg/kg	<0.02	0.1 mg/kg	57.4	40.8	135
EP202: 2.4.5-T	93-76-5	0.02	mg/kg	<0.02	0.1 mg/kg	71.3	57.4	142
EP202: MCPB	94-81-5	0.02	mg/kg	<0.02	0.1 mg/kg	61.2	38.9	147
EP202: Picloram	1918-02-1	0.02	mg/kg	<0.02	0.1 mg/kg	64.4	48.7	138
EP202: Clopyralid	1702-17-6	0.02	mg/kg	<0.02	0.1 mg/kg	64.0	59.4	149
EP202: Fluroxypyr	69377-81-7	0.02	mg/kg	<0.02	0.1 mg/kg	63.9	53.2	145

Sub-Matrix: WATER				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report				
Method: Compound	CAS Number	LOR	Unit		Result	Spike	Spike Recovery (%)	Recovery Limits (%)	
						Concentration	LCS	Low	High
EG020T: Total Metals by ICP-MS (QCLot: 3451296)									
EG020A-T: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	102	97	113	
EG020A-T: Beryllium	7440-41-7	0.001	mg/L	<0.001	0.1 mg/L	96.4	89	113	
EG020A-T: Barium	7440-39-3	0.001	mg/L	<0.001	0.1 mg/L	104	91	111	
EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1 mg/L	100	90	110	
EG020A-T: Chromium	7440-47-3	0.001	mg/L	<0.001	0.1 mg/L	99.9	89	113	
EG020A-T: Cobalt	7440-48-4	0.001	mg/L	<0.001	0.1 mg/L	104	91	113	
EG020A-T: Copper	7440-50-8	0.001	mg/L	<0.001	0.1 mg/L	99.2	90	112	
EG020A-T: Lead	7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	103	91	113	
EG020A-T: Manganese	7439-96-5	0.001	mg/L	<0.001	0.1 mg/L	100	90	112	
EG020A-T: Nickel	7440-02-0	0.001	mg/L	<0.001	0.1 mg/L	104	90	114	
EG020A-T: Selenium	7782-49-2	0.01	mg/L	<0.01	0.1 mg/L	95.8	86	112	
EG020A-T: Vanadium	7440-62-2	0.01	mg/L	<0.01	0.1 mg/L	98.3	90	114	
EG020A-T: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	100	89	109	
EG020A-T: Boron	7440-42-8	0.05	mg/L	<0.05	0.1 mg/L	95.4	88	120	
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3450971)									
EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.0100 mg/L	99.5	87	113	
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3454451)									
EP080: C6 - C9 Fraction	----	20	µg/L	<20	360 µg/L	87.6	67	127	
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 (QCLot: 3454451)									
EP080: C6 - C10 Fraction	C6_C10	20	µg/L	<20	450 µg/L	85.1	65	125	
EP080: BTEXN (QCLot: 3454451)									
EP080: Benzene	71-43-2	1	µg/L	<1	20 µg/L	83.6	76	120	
EP080: Toluene	108-88-3	2	µg/L	<2	20 µg/L	91.6	76	124	
EP080: Ethylbenzene	100-41-4	2	µg/L	<2	20 µg/L	89.7	72	124	
EP080: meta- & para-Xylene	108-38-3	2	µg/L	<2	40 µg/L	94.6	72	130	
	106-42-3								
EP080: ortho-Xylene	95-47-6	2	µg/L	<2	20 µg/L	94.6	75	127	
EP080: Naphthalene	91-20-3	5	µg/L	<5	5 µg/L	86.6	71	129	

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: SOIL				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Recovery Limits (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG005T: Total Metals by ICP-AES (QCLot: 3451299)							
EM1404835-002	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	93.1	80	116
		EG005T: Barium	7440-39-3	50 mg/kg	101	71	133
		EG005T: Beryllium	7440-41-7	50 mg/kg	104	84	122
		EG005T: Cadmium	7440-43-9	50 mg/kg	94.6	85	115
		EG005T: Chromium	7440-47-3	50 mg/kg	99.8	79	119
		EG005T: Copper	7440-50-8	50 mg/kg	103	83	119
		EG005T: Lead	7439-92-1	50 mg/kg	92.7	79	117
		EG005T: Manganese	7439-96-5	50 mg/kg	101	68	134
		EG005T: Nickel	7440-02-0	50 mg/kg	93.6	79	117
		EG005T: Selenium	7782-49-2	50 mg/kg	92.7	82	112
		EG005T: Vanadium	7440-62-2	50 mg/kg	97.3	78	122
		EG005T: Zinc	7440-66-6	50 mg/kg	92.0	75	121
EG005T: Total Metals by ICP-AES (QCLot: 3451301)							
EM1404854-011	SP9/0-0.15	EG005T: Arsenic	7440-38-2	50 mg/kg	91.5	80	116
		EG005T: Barium	7440-39-3	50 mg/kg	107	71	133
		EG005T: Beryllium	7440-41-7	50 mg/kg	101	84	122
		EG005T: Cadmium	7440-43-9	50 mg/kg	92.8	85	115
		EG005T: Chromium	7440-47-3	50 mg/kg	94.5	79	119
		EG005T: Copper	7440-50-8	50 mg/kg	108	83	119
		EG005T: Lead	7439-92-1	50 mg/kg	89.2	79	117
		EG005T: Manganese	7439-96-5	50 mg/kg	# Not Determined	68	134
		EG005T: Nickel	7440-02-0	50 mg/kg	107	79	117
		EG005T: Selenium	7782-49-2	50 mg/kg	98.5	82	112
		EG005T: Vanadium	7440-62-2	50 mg/kg	101	78	122
		EG005T: Zinc	7440-66-6	50 mg/kg	102	75	121
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3451300)							
EM1404835-002	Anonymous	EG035T: Mercury	7439-97-6	5.0 mg/kg	92.2	76	116
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3451302)							
EM1404854-011	SP9/0-0.15	EG035T: Mercury	7439-97-6	5.0 mg/kg	92.2	76	116
EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 3451741)							
EM1404648-039	Anonymous	EG048: Hexavalent Chromium	18540-29-9	40 mg/kg	83.4	58	114
EK028SF: Weak Acid Dissociable CN by Segmented Flow Analyser (QCLot: 3454216)							

Sub-Matrix: SOIL				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Recovery Limits (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EK028SF: Weak Acid Dissociable CN by Segmented Flow Analyser (QCLot: 3454216) - continued							
EM1404854-008	SP6/0-0.15	EK028SF: Weak Acid Dissociable Cyanide	----	20 mg/kg	93.6	70	130
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 3454203)							
EM1404854-003	SP1/0-0.15	EP066: Total Polychlorinated biphenyls	----	0.11 mg/kg	71.3	44	144
EP068A: Organochlorine Pesticides (OC) (QCLot: 3454202)							
EM1404854-008	SP6/0-0.15	EP068: gamma-BHC	58-89-9	0.5 mg/kg	55.6	22.5	129
		EP068: Heptachlor	76-44-8	0.5 mg/kg	51.0	16.8	133
		EP068: Aldrin	309-00-2	0.5 mg/kg	82.4	23	133
		EP068: Dieldrin	60-57-1	0.5 mg/kg	94.1	43	135
		EP068: Endrin	72-20-8	0.5 mg/kg	104	21.1	155
		EP068: 4,4'-DDT	50-29-3	0.5 mg/kg	29.8	21.8	142
EP068B: Organophosphorus Pesticides (OP) (QCLot: 3454202)							
EM1404854-008	SP6/0-0.15	EP068: Diazinon	333-41-5	0.5 mg/kg	99.2	47	131
		EP068: Chlorpyrifos-methyl	5598-13-0	0.5 mg/kg	101	41	125
		EP068: Pirimphos-ethyl	23505-41-1	0.5 mg/kg	104	46	128
		EP068: Bromophos-ethyl	4824-78-6	0.5 mg/kg	106	47	127
		EP068: Prothiofos	34643-46-4	0.5 mg/kg	95.6	42	124
EP075(SIM)A: Phenolic Compounds (QCLot: 3451145)							
EM1404883-001	Anonymous	EP075(SIM): Phenol	108-95-2	10 mg/kg	102	58	122
		EP075(SIM): 2-Chlorophenol	95-57-8	10 mg/kg	96.6	63	105
		EP075(SIM): 2-Nitrophenol	88-75-5	10 mg/kg	104	49	137
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	10 mg/kg	114	57	117
		EP075(SIM): Pentachlorophenol	87-86-5	10 mg/kg	97.4	10	134
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3451145)							
EM1404883-001	Anonymous	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	100	71	121
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	104	62	136
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3451144)							
EM1404854-008	SP6/0-0.15	EP071: C10 - C14 Fraction	----	640 mg/kg	97.7	71	131
		EP071: C15 - C28 Fraction	----	2045 mg/kg	97.1	72	126
		EP071: C29 - C36 Fraction	----	785 mg/kg	97.2	74	122
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3451430)							
EM1404854-008	SP6/0-0.15	EP080: C6 - C9 Fraction	----	28 mg/kg	93.9	42	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 (QCLot: 3451144)							
EM1404854-008	SP6/0-0.15	EP071: >C10 - C16 Fraction	>C10_C16	1074 mg/kg	97.0	73	123
		EP071: >C16 - C34 Fraction	----	2345 mg/kg	98.0	75	129
		EP071: >C34 - C40 Fraction	----	221 mg/kg	95.2	54	124
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 (QCLot: 3451430)							



Sub-Matrix: SOIL				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Recovery Limits (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 (QCLot: 3451430) - continued							
EM1404854-008	SP6/0-0.15	EP080: C6 - C10 Fraction	C6_C10	33 mg/kg	95.8	39	129
EP080: BTEXN (QCLot: 3451430)							
EM1404854-008	SP6/0-0.15	EP080: Benzene	71-43-2	2 mg/kg	122	50	136
		EP080: Toluene	108-88-3	2 mg/kg	110	56	139
EP202A: Phenoxyacetic Acid Herbicides by LCMS (QCLot: 3456077)							
EP1403778-001	Anonymous	EP202: Mecoprop	93-65-2	0.1 mg/kg	70.4	60	140
		EP202: MCPA	94-74-6	0.1 mg/kg	64.8	57	143
		EP202: 2,4-D	94-75-7	0.1 mg/kg	76.0	68	139
		EP202: Triclopyr	55335-06-3	0.1 mg/kg	70.3	51	145
		EP202: 2,4,5-T	93-76-5	0.1 mg/kg	70.1	57	142
		EP202: Picloram	1918-02-1	0.1 mg/kg	65.5	49	138
		EP202: Clopyralid	1702-17-6	0.1 mg/kg	60.9	59	149
Sub-Matrix: WATER				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Recovery Limits (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG020T: Total Metals by ICP-MS (QCLot: 3451296)							
EM1404830-018	Anonymous	EG020A-T: Arsenic	7440-38-2	1 mg/L	103	84	116
		EG020A-T: Beryllium	7440-41-7	1 mg/L	95.8	83	119
		EG020A-T: Barium	7440-39-3	1 mg/L	97.0	80	114
		EG020A-T: Cadmium	7440-43-9	0.25 mg/L	109	73	131
		EG020A-T: Chromium	7440-47-3	1 mg/L	103	79	119
		EG020A-T: Cobalt	7440-48-4	1 mg/L	96.1	84	116
		EG020A-T: Copper	7440-50-8	1 mg/L	95.2	78	116
		EG020A-T: Lead	7439-92-1	1 mg/L	100	81	121
		EG020A-T: Manganese	7439-96-5	1 mg/L	97.4	65	127
		EG020A-T: Nickel	7440-02-0	1 mg/L	101	78	116
		EG020A-T: Vanadium	7440-62-2	1 mg/L	99.6	79	119
		EG020A-T: Zinc	7440-66-6	1 mg/L	95.3	72	118
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3450971)							
EM1404832-002	Anonymous	EG035T: Mercury	7439-97-6	0.0100 mg/L	94.0	70	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3454451)							
EM1404822-002	Anonymous	EP080: C6 - C9 Fraction	----	280 µg/L	98.1	43	125
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 (QCLot: 3454451)							
EM1404822-002	Anonymous	EP080: C6 - C10 Fraction	C6_C10	330 µg/L	94.0	44	122
EP080: BTEXN (QCLot: 3454451)							
EM1404822-002	Anonymous	EP080: Benzene	71-43-2	20 µg/L	109	68	130
		EP080: Toluene	108-88-3	20 µg/L	113	72	132



Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

The quality control term Matrix Spike (MS) and Matrix Spike Duplicate (MSD) refers to intralaboratory split samples spiked with a representative set of target analytes. The purpose of these QC parameters are to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **SOIL**

Sub-Matrix: SOIL				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
				Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
					MS	MSD	Low	High	Value	Control Limit
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number							
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3451144)										
EM1404854-008	SP6/0-0.15	EP071: C10 - C14 Fraction	----	640 mg/kg	97.7	----	71	131	----	----
		EP071: C15 - C28 Fraction	----	2045 mg/kg	97.1	----	72	126	----	----
		EP071: C29 - C36 Fraction	----	785 mg/kg	97.2	----	74	122	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 (QCLot: 3451144)										
EM1404854-008	SP6/0-0.15	EP071: >C10 - C16 Fraction	>C10_C16	1074 mg/kg	97.0	----	73	123	----	----
		EP071: >C16 - C34 Fraction	----	2345 mg/kg	98.0	----	75	129	----	----
		EP071: >C34 - C40 Fraction	----	221 mg/kg	95.2	----	54	124	----	----
EP075(SIM)A: Phenolic Compounds (QCLot: 3451145)										
EM1404883-001	Anonymous	EP075(SIM): Phenol	108-95-2	10 mg/kg	102	----	58	122	----	----
		EP075(SIM): 2-Chlorophenol	95-57-8	10 mg/kg	96.6	----	63	105	----	----
		EP075(SIM): 2-Nitrophenol	88-75-5	10 mg/kg	104	----	49	137	----	----
		EP075(SIM): 4-Chloro-3-methylphenol	59-50-7	10 mg/kg	114	----	57	117	----	----
		EP075(SIM): Pentachlorophenol	87-86-5	10 mg/kg	97.4	----	10	134	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 3451145)										
EM1404883-001	Anonymous	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	100	----	71	121	----	----
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	104	----	62	136	----	----
EG005T: Total Metals by ICP-AES (QCLot: 3451299)										
EM1404835-002	Anonymous	EG005T: Arsenic	7440-38-2	50 mg/kg	93.1	----	80	116	----	----
		EG005T: Barium	7440-39-3	50 mg/kg	101	----	71	133	----	----
		EG005T: Beryllium	7440-41-7	50 mg/kg	104	----	84	122	----	----
		EG005T: Cadmium	7440-43-9	50 mg/kg	94.6	----	85	115	----	----
		EG005T: Chromium	7440-47-3	50 mg/kg	99.8	----	79	119	----	----
		EG005T: Copper	7440-50-8	50 mg/kg	103	----	83	119	----	----
		EG005T: Lead	7439-92-1	50 mg/kg	92.7	----	79	117	----	----
		EG005T: Manganese	7439-96-5	50 mg/kg	101	----	68	134	----	----
		EG005T: Nickel	7440-02-0	50 mg/kg	93.6	----	79	117	----	----
		EG005T: Selenium	7782-49-2	50 mg/kg	92.7	----	82	112	----	----
		EG005T: Vanadium	7440-62-2	50 mg/kg	97.3	----	78	122	----	----
		EG005T: Zinc	7440-66-6	50 mg/kg	92.0	----	75	121	----	----
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3451300)										
EM1404835-002	Anonymous	EG035T: Mercury	7439-97-6	5.0 mg/kg	92.2	----	76	116	----	----
EG005T: Total Metals by ICP-AES (QCLot: 3451301)										
EM1404854-011	SP9/0-0.15	EG005T: Arsenic	7440-38-2	50 mg/kg	91.5	----	80	116	----	----
		EG005T: Barium	7440-39-3	50 mg/kg	107	----	71	133	----	----

Sub-Matrix: SOIL				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
				Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number		MS	MSD	Low	High	Value	Control Limit
EG005T: Total Metals by ICP-AES (QCLot: 3451301) - continued										
EM1404854-011	SP9/0-0.15	EG005T: Beryllium	7440-41-7	50 mg/kg	101	----	84	122	----	----
		EG005T: Cadmium	7440-43-9	50 mg/kg	92.8	----	85	115	----	----
		EG005T: Chromium	7440-47-3	50 mg/kg	94.5	----	79	119	----	----
		EG005T: Copper	7440-50-8	50 mg/kg	108	----	83	119	----	----
		EG005T: Lead	7439-92-1	50 mg/kg	89.2	----	79	117	----	----
		EG005T: Manganese	7439-96-5	50 mg/kg	# Not Determined	----	68	134	----	----
		EG005T: Nickel	7440-02-0	50 mg/kg	107	----	79	117	----	----
		EG005T: Selenium	7782-49-2	50 mg/kg	98.5	----	82	112	----	----
		EG005T: Vanadium	7440-62-2	50 mg/kg	101	----	78	122	----	----
EG005T: Zinc	7440-66-6	50 mg/kg	102	----	75	121	----	----		
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3451302)										
EM1404854-011	SP9/0-0.15	EG035T: Mercury	7439-97-6	5.0 mg/kg	92.2	----	76	116	----	----
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3451430)										
EM1404854-008	SP6/0-0.15	EP080: C6 - C9 Fraction	----	28 mg/kg	93.9	----	42	131	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 (QCLot: 3451430)										
EM1404854-008	SP6/0-0.15	EP080: C6 - C10 Fraction	C6_C10	33 mg/kg	95.8	----	39	129	----	----
EP080: BTEXN (QCLot: 3451430)										
EM1404854-008	SP6/0-0.15	EP080: Benzene	71-43-2	2 mg/kg	122	----	50	136	----	----
		EP080: Toluene	108-88-3	2 mg/kg	110	----	56	139	----	----
EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 3451741)										
EM1404648-039	Anonymous	EG048: Hexavalent Chromium	18540-29-9	40 mg/kg	83.4	----	58	114	----	----
EP068A: Organochlorine Pesticides (OC) (QCLot: 3454202)										
EM1404854-008	SP6/0-0.15	EP068: gamma-BHC	58-89-9	0.5 mg/kg	55.6	----	22.5	129	----	----
		EP068: Heptachlor	76-44-8	0.5 mg/kg	51.0	----	16.8	133	----	----
		EP068: Aldrin	309-00-2	0.5 mg/kg	82.4	----	23	133	----	----
		EP068: Dieldrin	60-57-1	0.5 mg/kg	94.1	----	43	135	----	----
		EP068: Endrin	72-20-8	0.5 mg/kg	104	----	21.1	155	----	----
		EP068: 4,4'-DDT	50-29-3	0.5 mg/kg	29.8	----	21.8	142	----	----
EP068B: Organophosphorus Pesticides (OP) (QCLot: 3454202)										
EM1404854-008	SP6/0-0.15	EP068: Diazinon	333-41-5	0.5 mg/kg	99.2	----	47	131	----	----
		EP068: Chlorpyrifos-methyl	5598-13-0	0.5 mg/kg	101	----	41	125	----	----
		EP068: Pirimphos-ethyl	23505-41-1	0.5 mg/kg	104	----	46	128	----	----
		EP068: Bromophos-ethyl	4824-78-6	0.5 mg/kg	106	----	47	127	----	----
		EP068: Prothiofos	34643-46-4	0.5 mg/kg	95.6	----	42	124	----	----
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 3454203)										
EM1404854-003	SP1/0-0.15	EP066: Total Polychlorinated biphenyls	----	0.11 mg/kg	71.3	----	44	144	----	----
EK028SF: Weak Acid Dissociable CN by Segmented Flow Analyser (QCLot: 3454216)										



Sub-Matrix: SOIL				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
				Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
					MS	MSD	Low	High	Value	Control Limit
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number							
EK028SF: Weak Acid Dissociable CN by Segmented Flow Analyser (QCLot: 3454216) - continued										
EM1404854-008	SP6/0-0.15	EK028SF: Weak Acid Dissociable Cyanide	----	20 mg/kg	93.6	----	70	130	----	----
EP202A: Phenoxyacetic Acid Herbicides by LCMS (QCLot: 3456077)										
EP1403778-001	Anonymous	EP202: Mecoprop	93-65-2	0.1 mg/kg	70.4	----	60	140	----	----
		EP202: MCPA	94-74-6	0.1 mg/kg	64.8	----	57	143	----	----
		EP202: 2,4-D	94-75-7	0.1 mg/kg	76.0	----	68	139	----	----
		EP202: Triclopyr	55335-06-3	0.1 mg/kg	70.3	----	51	145	----	----
		EP202: 2,4,5-T	93-76-5	0.1 mg/kg	70.1	----	57	142	----	----
		EP202: Picloram	1918-02-1	0.1 mg/kg	65.5	----	49	138	----	----
		EP202: Clopyralid	1702-17-6	0.1 mg/kg	60.9	----	59	149	----	----

Sub-Matrix: WATER				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
				Spike Concentration	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number		MS	MSD	Low	High	Value	Control Limit
EG035T: Total Recoverable Mercury by FIMS (QCLot: 3450971)										
EM1404832-002	Anonymous	EG035T: Mercury	7439-97-6	0.0100 mg/L	94.0	----	70	130	----	----
EG020T: Total Metals by ICP-MS (QCLot: 3451296)										
EM1404830-018	Anonymous	EG020A-T: Arsenic	7440-38-2	1 mg/L	103	----	84	116	----	----
		EG020A-T: Beryllium	7440-41-7	1 mg/L	95.8	----	83	119	----	----
		EG020A-T: Barium	7440-39-3	1 mg/L	97.0	----	80	114	----	----
		EG020A-T: Cadmium	7440-43-9	0.25 mg/L	109	----	73	131	----	----
		EG020A-T: Chromium	7440-47-3	1 mg/L	103	----	79	119	----	----
		EG020A-T: Cobalt	7440-48-4	1 mg/L	96.1	----	84	116	----	----
		EG020A-T: Copper	7440-50-8	1 mg/L	95.2	----	78	116	----	----
		EG020A-T: Lead	7439-92-1	1 mg/L	100	----	81	121	----	----
		EG020A-T: Manganese	7439-96-5	1 mg/L	97.4	----	65	127	----	----
		EG020A-T: Nickel	7440-02-0	1 mg/L	101	----	78	116	----	----
		EG020A-T: Vanadium	7440-62-2	1 mg/L	99.6	----	79	119	----	----
		EG020A-T: Zinc	7440-66-6	1 mg/L	95.3	----	72	118	----	----
EP080/071: Total Petroleum Hydrocarbons (QCLot: 3454451)										
EM1404822-002	Anonymous	EP080: C6 - C9 Fraction	----	280 µg/L	98.1	----	43	125	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 (QCLot: 3454451)										
EM1404822-002	Anonymous	EP080: C6 - C10 Fraction	C6_C10	330 µg/L	94.0	----	44	122	----	----
EP080: BTEXN (QCLot: 3454451)										
EM1404822-002	Anonymous	EP080: Benzene	71-43-2	20 µg/L	109	----	68	130	----	----
		EP080: Toluene	108-88-3	20 µg/L	113	----	72	132	----	----

INTERPRETIVE QUALITY CONTROL REPORT

Work Order	: EM1404854	Page	: 1 of 10
Client	: ENVIRONMENTAL SITE ASSESSMENTS PTY LTD	Laboratory	: Environmental Division Melbourne
Contact	: MR SETON LILLAS	Contact	: Carol Walsh
Address	: P.O. BOX 3106 WAURN PONDS VIC 3216	Address	: 4 Westall Rd Springvale VIC Australia 3171
E-mail	: seton@envirositeassessments.com	E-mail	: carol.walsh@alsglobal.com
Telephone	: ----	Telephone	: +61-3-8549 9608
Facsimile	: ----	Facsimile	: +61-3-8549 9601
Project	: IBBOTSON STREET ST LEONARDS	QC Level	: NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Site	: ----	Date Samples Received	: 20-MAY-2014
C-O-C number	: ----	Issue Date	: 28-MAY-2014
Sampler	: SL	No. of samples received	: 14
Order number	: ----	No. of samples analysed	: 14
Quote number	: MEBQ/159/13		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Interpretive Quality Control Report contains the following information:

- Analysis Holding Time Compliance
- Quality Control Parameter Frequency Compliance
- Brief Method Summaries
- Summary of Outliers



Analysis Holding Time Compliance

This report summarizes extraction / preparation and analysis times and compares each with recommended holding times (USEPA SW 846, APHA, AS and NEPM) based on the sample container provided. Dates reported represent first date of extraction or analysis and preclude subsequent dilutions and reruns. A listing of breaches (if any) is provided herein.

Holding time for leachate methods (e.g. TCLP) vary according to the analytes reported. Assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These are: organics 14 days, mercury 28 days & other metals 180 days. A recorded breach does not guarantee a breach for all non-volatile parameters.

Holding times for VOC in soils vary according to analytes of interest. Vinyl Chloride and Styrene holding time is 7 days; others 14 days. A recorded breach does not guarantee a breach for all VOC analytes and should be verified in case the reported breach is a false positive or Vinyl Chloride and Styrene are not key analytes of interest/concern.

Matrix: **SOIL**

Evaluation: * = Holding time breach ; ✓ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis			
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EA055: Moisture Content								
Soil Glass Jar - Unpreserved (EA055-103) SP1/0-0.15, SP2/0-0.15, SP3/0-0.15, SP4/0-0.15, SP5/0-0.15, SP6/0-0.15, SP7/0-0.15, SP8/0-0.15, SP9/0-0.15, SP10/0-0.15, SP10/0-0.15B	20-MAY-2014	----	----	----	22-MAY-2014	03-JUN-2014	✓	
EG005T: Total Metals by ICP-AES								
Soil Glass Jar - Unpreserved (EG005T) SP1/0-0.15, SP2/0-0.15, SP3/0-0.15, SP4/0-0.15, SP5/0-0.15, SP6/0-0.15, SP7/0-0.15, SP8/0-0.15, SP9/0-0.15, SP10/0-0.15, SP10/0-0.15B	20-MAY-2014	22-MAY-2014	16-NOV-2014	✓	23-MAY-2014	16-NOV-2014	✓	
EG035T: Total Recoverable Mercury by FIMS								
Soil Glass Jar - Unpreserved (EG035T) SP1/0-0.15, SP2/0-0.15, SP3/0-0.15, SP4/0-0.15, SP5/0-0.15, SP6/0-0.15, SP7/0-0.15, SP8/0-0.15, SP9/0-0.15, SP10/0-0.15, SP10/0-0.15B	20-MAY-2014	22-MAY-2014	17-JUN-2014	✓	23-MAY-2014	17-JUN-2014	✓	
EG048: Hexavalent Chromium (Alkaline Digest)								
Soil Glass Jar - Unpreserved (EG048) SP1/0-0.15, SP6/0-0.15	20-MAY-2014	22-MAY-2014	17-JUN-2014	✓	26-MAY-2014	29-MAY-2014	✓	
EK028SF: Weak Acid Dissociable CN by Segmented Flow Analyser								
Soil Glass Jar - Unpreserved (EK028SF) SP1/0-0.15, SP6/0-0.15	20-MAY-2014	23-MAY-2014	03-JUN-2014	✓	26-MAY-2014	06-JUN-2014	✓	
EP066: Polychlorinated Biphenyls (PCB)								
Soil Glass Jar - Unpreserved (EP066) SP1/0-0.15, SP6/0-0.15	20-MAY-2014	23-MAY-2014	03-JUN-2014	✓	27-MAY-2014	02-JUL-2014	✓	



Matrix: **SOIL**

Evaluation: * = Holding time breach ; ✓ = Within holding time.

Method		Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP068A: Organochlorine Pesticides (OC)								
Soil Glass Jar - Unpreserved (EP068) SP1/0-0.15,	SP6/0-0.15	20-MAY-2014	23-MAY-2014	03-JUN-2014	✓	27-MAY-2014	02-JUL-2014	✓
EP068B: Organophosphorus Pesticides (OP)								
Soil Glass Jar - Unpreserved (EP068) SP1/0-0.15,	SP6/0-0.15	20-MAY-2014	23-MAY-2014	03-JUN-2014	✓	27-MAY-2014	02-JUL-2014	✓
EP068D: Pyrethroids								
Soil Glass Jar - Unpreserved (EP068) SP1/0-0.15,	SP6/0-0.15	20-MAY-2014	23-MAY-2014	03-JUN-2014	✓	27-MAY-2014	02-JUL-2014	✓
EP068C: Triazines								
Soil Glass Jar - Unpreserved (EP068) SP1/0-0.15,	SP6/0-0.15	20-MAY-2014	23-MAY-2014	03-JUN-2014	✓	27-MAY-2014	02-JUL-2014	✓
EP068A: Organochlorine Pesticides (OC)								
Soil Glass Jar - Unpreserved (EP068-Mirex) SP1/0-0.15,	SP6/0-0.15	20-MAY-2014	23-MAY-2014	03-JUN-2014	✓	27-MAY-2014	02-JUL-2014	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013								
Soil Glass Jar - Unpreserved (EP071) SP1/0-0.15, SP8/0-0.15,	SP6/0-0.15, SP9/0-0.15	20-MAY-2014	22-MAY-2014	03-JUN-2014	✓	23-MAY-2014	01-JUL-2014	✓
EP075(SIM)A: Phenolic Compounds								
Soil Glass Jar - Unpreserved (EP075(SIM)) SP1/0-0.15,	SP6/0-0.15	20-MAY-2014	22-MAY-2014	03-JUN-2014	✓	23-MAY-2014	01-JUL-2014	✓
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Soil Glass Jar - Unpreserved (EP075(SIM)) SP1/0-0.15,	SP6/0-0.15	20-MAY-2014	22-MAY-2014	03-JUN-2014	✓	23-MAY-2014	01-JUL-2014	✓
EP080: BTEXN								
Soil Glass Jar - Unpreserved (EP080) SP1/0-0.15,	SP6/0-0.15	20-MAY-2014	22-MAY-2014	03-JUN-2014	✓	23-MAY-2014	03-JUN-2014	✓
EP080/071: Total Petroleum Hydrocarbons								
Soil Glass Jar - Unpreserved (EP080) SP1/0-0.15, SP8/0-0.15,	SP6/0-0.15, SP9/0-0.15	20-MAY-2014	22-MAY-2014	03-JUN-2014	✓	23-MAY-2014	03-JUN-2014	✓
EP202A: Phenoxyacetic Acid Herbicides by LCMS								
Soil Glass Jar - Unpreserved (EP202) SP1/0-0.15,	SP6/0-0.15	20-MAY-2014	27-MAY-2014	03-JUN-2014	✓	27-MAY-2014	06-JUL-2014	✓

Matrix: **WATER**

Evaluation: * = Holding time breach ; ✓ = Within holding time.

Method		Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EG020T: Total Metals by ICP-MS								
Clear Plastic Bottle - Nitric Acid; Unfiltered (EG020A-T)								
FB/1,	RB/1	20-MAY-2014	22-MAY-2014	16-NOV-2014	✓	25-MAY-2014	16-NOV-2014	✓

Page : 4 of 10
 Work Order : EM1404854
 Client : ENVIRONMENTAL SITE ASSESSMENTS PTY LTD
 Project : IBBOTSON STREET ST LEONARDS



Matrix: **WATER**

Evaluation: * = Holding time breach ; ✓ = Within holding time.

Method	Sample Date	Extraction / Preparation			Analysis		
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EG035T: Total Recoverable Mercury by FIMS							
Clear Plastic Bottle - Nitric Acid; Unfiltered (EG035T) FB/1, RB/1	20-MAY-2014	----	----	----	22-MAY-2014	17-JUN-2014	✓
EP080: BTEXN							
Amber VOC Vial - Sulfuric Acid (EP080) TB/1	20-MAY-2014	26-MAY-2014	03-JUN-2014	✓	26-MAY-2014	03-JUN-2014	✓
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013							
Amber VOC Vial - Sulfuric Acid (EP080) TB/1	20-MAY-2014	26-MAY-2014	03-JUN-2014	✓	26-MAY-2014	03-JUN-2014	✓



Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(where) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **SOIL**

Evaluation: ✖ = Quality Control frequency not within specification ; ✔ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Moisture Content	EA055-103	2	20	10.0	10.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
PAH/Phenols (SIM)	EP075(SIM)	2	14	14.3	10.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Pesticides (Mirex) by GCMS	EP068-Mirex	1	2	50.0	10.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Pesticides by GCMS	EP068	1	2	50.0	10.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Phenoxyacetic Acid Herbicides (LCMS - Standard DL)	EP202	1	3	33.3	10.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Polychlorinated Biphenyls (PCB)	EP066	1	2	50.0	10.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Hexavalent Chromium by Alkaline Digestion	EG048	2	16	12.5	10.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	4	33	12.1	10.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	4	36	11.1	10.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	2	15	13.3	10.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	1	4	25.0	10.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
WAD Cyanide by Segmented Flow Analyser	EK028SF	1	2	50.0	10.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Laboratory Control Samples (LCS)							
PAH/Phenols (SIM)	EP075(SIM)	1	14	7.1	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Pesticides (Mirex) by GCMS	EP068-Mirex	1	2	50.0	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Pesticides by GCMS	EP068	1	2	50.0	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Phenoxyacetic Acid Herbicides (LCMS - Standard DL)	EP202	1	3	33.3	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Polychlorinated Biphenyls (PCB)	EP066	1	2	50.0	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Hexavalent Chromium by Alkaline Digestion	EG048	1	16	6.3	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	2	33	6.1	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	2	36	5.6	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	1	15	6.7	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	1	4	25.0	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
WAD Cyanide by Segmented Flow Analyser	EK028SF	1	2	50.0	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Method Blanks (MB)							
PAH/Phenols (SIM)	EP075(SIM)	1	14	7.1	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Pesticides (Mirex) by GCMS	EP068-Mirex	1	2	50.0	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Pesticides by GCMS	EP068	1	2	50.0	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Phenoxyacetic Acid Herbicides (LCMS - Standard DL)	EP202	1	3	33.3	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Polychlorinated Biphenyls (PCB)	EP066	1	2	50.0	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Hexavalent Chromium by Alkaline Digestion	EG048	1	16	6.3	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	2	33	6.1	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	2	36	5.6	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	1	15	6.7	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	1	4	25.0	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
WAD Cyanide by Segmented Flow Analyser	EK028SF	1	2	50.0	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement



Matrix: **SOIL** Evaluation: * = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Matrix Spikes (MS)							
PAH/Phenols (SIM)	EP075(SIM)	1	14	7.1	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Pesticides by GCMS	EP068	1	2	50.0	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Phenoxyacetic Acid Herbicides (LCMS - Standard DL)	EP202	1	3	33.3	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Polychlorinated Biphenyls (PCB)	EP066	1	2	50.0	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Hexavalent Chromium by Alkaline Digestion	EG048	1	16	6.3	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	2	33	6.1	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	2	36	5.6	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	1	15	6.7	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	1	4	25.0	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
WAD Cyanide by Segmented Flow Analyser	EK028SF	1	2	50.0	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement

Matrix: **WATER** Evaluation: * = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
Total Mercury by FIMS	EG035T	2	10	20.0	10.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-MS - Suite A	EG020A-T	2	18	11.1	10.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	2	20	10.0	10.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Laboratory Control Samples (LCS)							
Total Mercury by FIMS	EG035T	1	10	10.0	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-MS - Suite A	EG020A-T	1	18	5.6	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	1	20	5.0	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Method Blanks (MB)							
Total Mercury by FIMS	EG035T	1	10	10.0	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-MS - Suite A	EG020A-T	1	18	5.6	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	1	20	5.0	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Matrix Spikes (MS)							
Total Mercury by FIMS	EG035T	1	10	10.0	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-MS - Suite A	EG020A-T	1	18	5.6	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	1	20	5.0	5.0	✓	NEPM 2013 Schedule B(3) and ALS QCS3 requirement



Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Moisture Content	EA055-103	SOIL	A gravimetric procedure based on weight loss over a 12 hour drying period at 103-105 degrees C. This method is compliant with NEPM (2013) Schedule B(3) Section 7.1 and Table 1 (14 day holding time).
Total Metals by ICP-AES	EG005T	SOIL	(APHA 21st ed., 3120; USEPA SW 846 - 6010) (ICPAES) Metals are determined following an appropriate acid digestion of the soil. The ICPAES technique ionises samples in a plasma, emitting a characteristic spectrum based on metals present. Intensities at selected wavelengths are compared against those of matrix matched standards. This method is compliant with NEPM (2013) Schedule B(3)
Total Mercury by FIMS	EG035T	SOIL	AS 3550, APHA 21st ed., 3112 Hg - B (Flow-injection (SnCl ₂)(Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. Mercury in solids are determined following an appropriate acid digestion. Ionic mercury is reduced online to atomic mercury vapour by SnCl ₂ which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM (2013) Schedule B(3)
Total Hexavalent Chromium by Alkaline Digestion	EG048	SOIL	USEPA SW846, Method 3060A. Hexavalent chromium is extracted by alkaline digestion. The digest is determined by UV-VIS spectrophotometer following pH adjustment and colour development using dephenylcarbazine. Each run of samples is measured against a five-point calibration curve. This method is compliant with NEPM (2013) Schedule B(3)
WAD Cyanide by Segmented Flow Analyser	EK028SF	SOIL	APHA 4500-CN-O. Caustic leachates of soil samples are introduced into an automated segmented flow analyser. Hydrogen cyanide is liberated from a slightly acidified (pH 4.5) and is dialysed. Tight cyanide complexes that would not be amenable to oxidation by chlorine are not converted. Iron cyanide complexes are precipitated with zinc acetate. Liberated HCN diffuses through a membrane into a stream of sodium hydroxide where it is carried as CN- The cyanide in caustic solution is buffered to pH 5.2 and further converted to cyanogen chloride by reaction with chloramine-T. Cyanogen chloride subsequently reacts with 4-pyridine carboxylic and 1,3 - dimethylbarbituric acids to give a red colour complex. This colour is measured at 600 nm. This method is compliant with NEPM (2013) Schedule B(3)
Polychlorinated Biphenyls (PCB)	EP066	SOIL	(USEPA SW 846 - 8270B) Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (2013) Schedule B(3) (Method 504)
Pesticides by GCMS	EP068	SOIL	(USEPA SW 846 - 8270B) Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This technique is compliant with NEPM (2013) Schedule B(3) (Method 504,505)
Pesticides (Mirex) by GCMS	EP068-Mirex	SOIL	(USEPA SW 846 - 8270B) Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This technique is compliant with NEPM (2013) Schedule B(3) (Method 504,505)
TPH - Semivolatile Fraction	EP071	SOIL	(USEPA SW 846 - 8015A) Sample extracts are analysed by Capillary GC/FID and quantified against alkane standards over the range C10 - C36. This method is compliant with the QC requirements of NEPM (2013) Schedule B(3).



Analytical Methods	Method	Matrix	Method Descriptions
PAH/Phenols (SIM)	EP075(SIM)	SOIL	(USEPA SW 846 - 8270B) Extracts are analysed by Capillary GC/MS in Selective Ion Mode (SIM) and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (2013) Schedule B(3) (Method 502 and 507)
TPH Volatiles/BTEX	EP080	SOIL	(USEPA SW 846 - 8260B) Extracts are analysed by Purge and Trap, Capillary GC/MS. Quantification is by comparison against an established 5 point calibration curve. This method is compliant with the QC requirements of NEPM (2013) Schedule B(3)
Phenoxyacetic Acid Herbicides (LCMS - Standard DL)	EP202	SOIL	In-House, LCMS (Electrospray in negative mode). Residues of acid herbicides are extracted from soil samples under the alkaline condition. An aliquot of the alkaline aqueous phase is taken and acidified before a SPE cleanup. After eluting off from the SPE cartridge, residues of acid herbicides are dissolved in HPLC mobile phase prior to instrument analysis.
Total Metals by ICP-MS - Suite A	EG020A-T	WATER	(APHA 21st ed., 3125; USEPA SW846 - 6020, ALS QWI-EN/EG020): The ICPMS technique utilizes a highly efficient argon plasma to ionize selected elements. Ions are then passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to their measurement by a discrete dynode ion detector.
Total Mercury by FIMS	EG035T	WATER	AS 3550, APHA 21st ed. 3112 Hg - B (Flow-injection (SnCl ₂)(Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the unfiltered sample. The ionic mercury is reduced online to atomic mercury vapour by SnCl ₂ which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM (2013) Schedule B(3)
TPH Volatiles/BTEX	EP080	WATER	USEPA SW 846 - 8260B Water samples are directly purged prior to analysis by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. Alternatively, a sample is equilibrated in a headspace vial and a portion of the headspace determined by GCMS analysis. This method is compliant with the QC requirements of NEPM (2013) Schedule B(3)

Preparation Methods	Method	Matrix	Method Descriptions
NaOH leach for CN in Soils	CN-PR	SOIL	In-house, APHA 4500 CN. Samples are extracted by end-over-end tumbling with NaOH.
Alkaline digestion for Hexavalent Chromium	EG048PR	SOIL	USEPA SW846, Method 3060A.
Hot Block Digest for metals in soils sediments and sludges	EN69	SOIL	USEPA 200.2 Mod. Hot Block Acid Digestion 1.0g of sample is heated with Nitric and Hydrochloric acids, then cooled. Peroxide is added and samples heated and cooled again before being filtered and bulked to volume for analysis. Digest is appropriate for determination of selected metals in sludge, sediments, and soils. This method is compliant with NEPM (2013) Schedule B(3) (Method 202)
Extraction for Phenoxy Acid Herbicides in Soils.	EP202-PR	SOIL	In-House: Alkaline extract followed by SPE clean up of acidified portion of the sample extract.
Methanolic Extraction of Soils for Purge and Trap	ORG16	SOIL	(USEPA SW 846 - 5030A) 5g of solid is shaken with surrogate and 10mL methanol prior to analysis by Purge and Trap - GC/MS.
Tumbler Extraction of Solids (Option A - Concentrating)	ORG17A	SOIL	In-house, Mechanical agitation (tumbler). 20g of sample, Na ₂ SO ₄ and surrogate are extracted with 150mL 1:1 DCM/Acetone by end over end tumble. The solvent is decanted, dehydrated and concentrated (by KD) to the desired volume for analysis.
Tumbler Extraction of Solids (Option B - Non-concentrating)	ORG17B	SOIL	In-house, Mechanical agitation (tumbler). 10g of sample, Na ₂ SO ₄ and surrogate are extracted with 20mL 1:1 DCM/Acetone by end over end tumble. The solvent is transferred directly to a GC vial for analysis.



Preparation Methods	Method	Matrix	Method Descriptions
Digestion for Total Recoverable Metals	EN25	WATER	USEPA SW846-3005 Method 3005 is a Nitric/Hydrochloric acid digestion procedure used to prepare surface and ground water samples for analysis by ICPAES or ICPMS. This method is compliant with NEPM (2013) Schedule B(3)



Summary of Outliers

Outliers : Quality Control Samples

The following report highlights outliers flagged in the Quality Control (QC) Report. Surrogate recovery limits are static and based on USEPA SW846 or ALS-QWI/EN/38 (in the absence of specific USEPA limits). This report displays QC Outliers (breaches) only.

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: SOIL

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Matrix Spike (MS) Recoveries							
EG005T: Total Metals by ICP-AES	EM1404854-011	SP9/0-0.15	Manganese	7439-96-5	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.

- For all matrices, no Method Blank value outliers occur.
- For all matrices, no Duplicate outliers occur.
- For all matrices, no Laboratory Control outliers occur.

Regular Sample Surrogates

- For all regular sample matrices, no surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

This report displays Holding Time breaches only. Only the respective Extraction / Preparation and/or Analysis component is/are displayed.

- No Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

The following report highlights breaches in the Frequency of Quality Control Samples.

- No Quality Control Sample Frequency Outliers exist.

Appendix 5 – Comparison Tables

				BTEX						Cyanides	Halogenated Benzenes	Halogenated Phenols							
				Benzene	Ethylbenzene	Toluene	Total BTEX	Xylene (m & p)	Xylene (o)	Xylene Total	Cyanide (WAD)	Hexachlorobenzene	2,4,5-trichlorophenol	2,4,6-trichlorophenol	2,4-dichlorophenol	2,6-dichlorophenol	2-chlorophenol	Pentachlorophenol	2,4,5-Trichlorophenoxy Acetic Acid
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL				0.2	0.5	0.5	0.2	0.5	0.5	0.5	1	0.05	0.5	0.5	0.5	0.5	0.5	2	0.02
NEPM 2013 Residential A Soil												10						100	600
LocCode	Field_ID	Sample_Depth_Range	Sampled_Date-Time																
SP1	SP1/0-0.15	0-0.15	20/05/2014	<0.2	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<1	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.04
SP2	SP2/0-0.15	0-0.15	20/05/2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SP3	SP3/0-0.15	0-0.15	20/05/2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SP4	SP4/0-0.15	0-0.15	20/05/2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SP5	SP5/0-0.15	0-0.15	20/05/2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SP6	SP6/0-0.15	0-0.15	20/05/2014	<0.2	<0.5	<0.5	<0.2	<0.5	<0.5	<0.5	<1	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.04
SP7	SP7/0-0.15	0-0.15	20/05/2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SP8	SP8/0-0.15	0-0.15	20/05/2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SP9	SP9/0-0.15	0-0.15	20/05/2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SP10	SP10/0-0.15	0-0.15	20/05/2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SP10	SP10/0-0.15/S	0-0.15	20/05/2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SP10	SP10/0-0.15B	0-0.15	20/05/2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

				Herbicides										Inorganics		Lead						
				2,4,5-TP (Silvex)	Hedonal	2,4-dichlorophenoxybutanoic acid	2,4-Dichlorprop	4-Chlorophenoxy acetic acid	Atrazine	Clopyralid	Dicamba	Fluroxypyr	2-Methyl-4-chlorophenoxyacetic acid	2-Methyl-4-Chlorophenoxy Butanoic Acid	Mecoprop	Triclopyr	Moisture	Moisture Content (dried @ 103°C)	Lead	Arsenic	Barium	Beryllium
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	%	%	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL				0.02	0.02	0.02	0.02	0.02	0.05	0.02	0.02	0.02	0.02	0.02	0.02	1		5	2	10	1	10
NEPM 2013 Residential A Soil				900					320				600	600	600			300	100		60	4500

LocCode	Field_ID	Sample_Depth_Range	Sampled_Date-Time																			
SP1	SP1/0-0.15	0-0.15	20/05/2014	<0.04	<0.04	<0.04	<0.04	<0.04	<0.05	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	15.5	-	16	13	40	<1	<50
SP2	SP2/0-0.15	0-0.15	20/05/2014	-	-	-	-	-	-	-	-	-	-	-	-	13.5	-	13	24	20	<1	<50
SP3	SP3/0-0.15	0-0.15	20/05/2014	-	-	-	-	-	-	-	-	-	-	-	-	14.5	-	16	17	20	<1	<50
SP4	SP4/0-0.15	0-0.15	20/05/2014	-	-	-	-	-	-	-	-	-	-	-	-	31.9	-	19	24	20	<1	<50
SP5	SP5/0-0.15	0-0.15	20/05/2014	-	-	-	-	-	-	-	-	-	-	-	-	31.5	-	18	13	30	<1	<50
SP6	SP6/0-0.15	0-0.15	20/05/2014	<0.04	<0.04	<0.04	<0.04	<0.04	<0.05	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	19	-	15	9	20	<1	<50
SP7	SP7/0-0.15	0-0.15	20/05/2014	-	-	-	-	-	-	-	-	-	-	-	-	33.6	-	10	<5	20	<1	<50
SP8	SP8/0-0.15	0-0.15	20/05/2014	-	-	-	-	-	-	-	-	-	-	-	-	8	-	5	<5	-	-	-
SP9	SP9/0-0.15	0-0.15	20/05/2014	-	-	-	-	-	-	-	-	-	-	-	-	10.9	-	<5	<5	-	-	-
SP10	SP10/0-0.15	0-0.15	20/05/2014	-	-	-	-	-	-	-	-	-	-	-	-	22.1	-	14	<5	30	<1	<50
SP10	SP10/0-0.15/S	0-0.15	20/05/2014	-	-	-	-	-	-	-	-	-	-	-	-	-	8.1	23	8.3	30	<2	<10
SP10	SP10/0-0.15B	0-0.15	20/05/2014	-	-	-	-	-	-	-	-	-	-	-	-	14.8	-	22	<5	30	<1	<50

				Metals																			
				Cadmium	Chromium (hexavalent)	Chromium (III+VI)	Chromium (Trivalent)	Cobalt	Copper	Manganese	Mercury	Nickel	Selenium	Vanadium	Zinc	4,4-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	Chlordane (cis)	Chlordane (trans)	d-BHC
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL				0.4	0.5	2		2	5	5	0.1	2	5	5	5	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
NEPM 2013 Residential A Soil				20	100			100	6000	3800	40	400	200		7400				6				

LocCode	Field ID	Sample Depth Range	Sampled Date-Time																				
SP1	SP1/0-0.15	0-0.15	20/05/2014	<1	<0.5	46	-	5	<5	76	<0.1	13	<5	89	<5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SP2	SP2/0-0.15	0-0.15	20/05/2014	<1	-	37	-	<2	<5	44	<0.1	5	<5	87	5	-	-	-	-	-	-	-	-
SP3	SP3/0-0.15	0-0.15	20/05/2014	<1	-	56	-	3	<5	60	<0.1	9	<5	110	7	-	-	-	-	-	-	-	-
SP4	SP4/0-0.15	0-0.15	20/05/2014	<1	-	68	-	<2	<5	52	<0.1	6	<5	143	5	-	-	-	-	-	-	-	-
SP5	SP5/0-0.15	0-0.15	20/05/2014	<1	-	43	-	3	<5	90	<0.1	8	<5	96	7	-	-	-	-	-	-	-	-
SP6	SP6/0-0.15	0-0.15	20/05/2014	<1	<0.5	49	-	<2	<5	37	<0.1	6	<5	88	<5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
SP7	SP7/0-0.15	0-0.15	20/05/2014	<1	-	20	-	2	<5	75	<0.1	6	<5	45	<5	-	-	-	-	-	-	-	-
SP8	SP8/0-0.15	0-0.15	20/05/2014	<1	-	7	-	-	<5	-	<0.1	2	-	-	<5	-	-	-	-	-	-	-	-
SP9	SP9/0-0.15	0-0.15	20/05/2014	<1	-	16	-	-	35	-	<0.1	90	-	-	79	-	-	-	-	-	-	-	-
SP10	SP10/0-0.15	0-0.15	20/05/2014	<1	-	21	-	4	<5	100	<0.1	12	<5	35	186	-	-	-	-	-	-	-	-
SP10	SP10/0-0.15/S	0-0.15	20/05/2014	<0.4	<1	20	20	<5	<5	110	<0.1	8.5	-	30	290	-	-	-	-	-	-	-	-
SP10	SP10/0-0.15B	0-0.15	20/05/2014	<1	-	16	-	3	<5	84	<0.1	7	<5	35	199	-	-	-	-	-	-	-	-

				Organochlorine Pesticides																			
				DDD	DDT	DDT+DDE+DDD	Dieldrin	Endosulfan	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor							
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	
EQL				0.05	0.2	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.2	0.05	0.05	0.05	0.05	0.05
NEPM 2013 Residential A Soil						240		270				10				6		300					160
LocCode	Field_ID	Sample_Depth_Range	Sampled_Date-Time																				
SP1	SP1/0-0.15	0-0.15	20/05/2014	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	
SP2	SP2/0-0.15	0-0.15	20/05/2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
SP3	SP3/0-0.15	0-0.15	20/05/2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
SP4	SP4/0-0.15	0-0.15	20/05/2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
SP5	SP5/0-0.15	0-0.15	20/05/2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
SP6	SP6/0-0.15	0-0.15	20/05/2014	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.05	<0.05	<0.05	<0.05	<0.05	
SP7	SP7/0-0.15	0-0.15	20/05/2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
SP8	SP8/0-0.15	0-0.15	20/05/2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
SP9	SP9/0-0.15	0-0.15	20/05/2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
SP10	SP10/0-0.15	0-0.15	20/05/2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
SP10	SP10/0-0.15/S	0-0.15	20/05/2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
SP10	SP10/0-0.15B	0-0.15	20/05/2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

				Organophosphorous Pesticides																			
				Chlorpyrifos-methyl	Diazinon	Dichlorvos	Dimethoate	Ethion	Fenthion	Malathion	Methyl parathion	Monocrotophos	Prothiofos	2,4-dimethylphenol	2-methylphenol	2-nitrophenol	3-&4-methylphenol	4-chloro-3-methylphenol	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL				0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.2	0.2	0.05	0.5	0.5	0.5	1	0.5	0.5	0.5	0.5	0.5	0.5
NEPM 2013 Residential A Soil																							
LocCode	Field ID	Sample Depth Range	Sampled Date-Time	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.05	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SP1	SP1/0-0.15	0-0.15	20/05/2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SP2	SP2/0-0.15	0-0.15	20/05/2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SP3	SP3/0-0.15	0-0.15	20/05/2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SP4	SP4/0-0.15	0-0.15	20/05/2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SP5	SP5/0-0.15	0-0.15	20/05/2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SP6	SP6/0-0.15	0-0.15	20/05/2014	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.2	<0.2	<0.05	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SP7	SP7/0-0.15	0-0.15	20/05/2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SP8	SP8/0-0.15	0-0.15	20/05/2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SP9	SP9/0-0.15	0-0.15	20/05/2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SP10	SP10/0-0.15	0-0.15	20/05/2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SP10	SP10/0-0.15/S	0-0.15	20/05/2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SP10	SP10/0-0.15B	0-0.15	20/05/2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

				PAH/Phenols														Pesticides					
				Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Carcinogenic PAHs as B(a)P TPE	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	PAHs (Sum of total)	Phenanthrene	Phenol	Picloram	Pyrene	Bifenthrin	Demeton-S-methyl	Fenamiphos	Mirex	Parathion
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL				0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.02	0.5	0.05	0.05	0.05	0.05	0.2
NEPM 2013 Residential A Soil						3								300		3000	4500		600			10	
LocCode	Field ID	Sample Depth Range	Sampled Date-Time																				
SP1	SP1/0-0.15	0-0.15	20/05/2014	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.04	<0.5	<0.05	<0.05	<0.05	<0.05	<0.2
SP2	SP2/0-0.15	0-0.15	20/05/2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SP3	SP3/0-0.15	0-0.15	20/05/2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SP4	SP4/0-0.15	0-0.15	20/05/2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SP5	SP5/0-0.15	0-0.15	20/05/2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SP6	SP6/0-0.15	0-0.15	20/05/2014	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.04	<0.5	<0.05	<0.05	<0.05	<0.05	<0.2
SP7	SP7/0-0.15	0-0.15	20/05/2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SP8	SP8/0-0.15	0-0.15	20/05/2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SP9	SP9/0-0.15	0-0.15	20/05/2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SP10	SP10/0-0.15	0-0.15	20/05/2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SP10	SP10/0-0.15/S	0-0.15	20/05/2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SP10	SP10/0-0.15B	0-0.15	20/05/2014	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

	Pirimphos-ethyl	Polychlorinated Biphenyls PCBs (Sum of total)	TRH									
			C6-C10	>C10-C16	>C16-C34	>C34-C40	>C10 - C40 (Sum of total)	C6 - C9	C10 - C14	C15 - C28	C29-C36	+C10 - C36 (Sum of total)
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.05	0.1	10	50	100	100	50	10	50	100	100	50
NEPM 2013 Residential A Soil		1										

LocCode	Field ID	Sample Depth Range	Sampled Date-Time											
SP1	SP1/0-0.15	0-0.15	20/05/2014	<0.05	<0.1	<10	<50	<100	<100	<50	<10	<50	<100	<100
SP2	SP2/0-0.15	0-0.15	20/05/2014	-	-	-	-	-	-	-	-	-	-	-
SP3	SP3/0-0.15	0-0.15	20/05/2014	-	-	-	-	-	-	-	-	-	-	-
SP4	SP4/0-0.15	0-0.15	20/05/2014	-	-	-	-	-	-	-	-	-	-	-
SP5	SP5/0-0.15	0-0.15	20/05/2014	-	-	-	-	-	-	-	-	-	-	-
SP6	SP6/0-0.15	0-0.15	20/05/2014	<0.05	<0.1	<10	<50	<100	<100	<50	<10	<50	<100	<100
SP7	SP7/0-0.15	0-0.15	20/05/2014	-	-	-	-	-	-	-	-	-	-	-
SP8	SP8/0-0.15	0-0.15	20/05/2014	-	-	<10	<50	140	<100	140	<10	<50	<100	160
SP9	SP9/0-0.15	0-0.15	20/05/2014	-	-	<10	<50	<100	<100	<50	<10	<50	<100	<100
SP10	SP10/0-0.15	0-0.15	20/05/2014	-	-	-	-	-	-	-	-	-	-	-
SP10	SP10/0-0.15/S	0-0.15	20/05/2014	-	-	-	-	-	-	-	-	-	-	-
SP10	SP10/0-0.15B	0-0.15	20/05/2014	-	-	-	-	-	-	-	-	-	-	-

Field Blanks (WATER)
Filter: SDG in('ALSE-Melbourne 20-M

SDG	ALSE-Melbourne 20-May-14	ALSE-Melbourne 20-May-14	ALSE-Melbourne 20-May-14
Field_ID	FB/1	RB/1	TB/1
Sampled_Date-Time	20/05/2014 8:20	20/05/2014 9:30	20/05/2014 8:15
Sample_Type	Field_B	Rinsate	Trip_B

Chem_Group	ChemName	Units	EQL			
BTEX	Benzene	µg/L	1			<1
	Ethylbenzene	µg/L	2			<2
	Toluene	µg/L	2			<2
	Total BTEX	mg/l	0.001			<0.001
	Xylene (m & p)	µg/L	2			<2
	Xylene (o)	µg/L	2			<2
	Xylene Total	µg/L	2			<2
	F1 C6-C10	µg/L	20			<20
Lead	Lead	mg/l	0.001	<0.001	<0.001	
Metals	Arsenic	mg/l	0.001	<0.001	<0.001	
	Barium	mg/l	0.001	<0.001	<0.001	
	Beryllium	mg/l	0.001	<0.001	<0.001	
	Boron	mg/l	0.05	<0.05	<0.05	
	Cadmium	mg/l	0.0001	<0.0001	<0.0001	
	Chromium (III+VI)	mg/l	0.001	<0.001	<0.001	
	Cobalt	mg/l	0.001	<0.001	<0.001	
	Copper	mg/l	0.001	<0.001	<0.001	
	Manganese	mg/l	0.001	<0.001	<0.001	
	Mercury	mg/l	0.0001	<0.0001	<0.0001	
	Nickel	mg/l	0.001	<0.001	<0.001	
	Selenium	mg/l	0.01	<0.01	<0.01	
	Vanadium	mg/l	0.01	<0.01	<0.01	
	Zinc	mg/l	0.005	<0.005	<0.005	
PAH/Phenols	Naphthalene	µg/L	5			<5
TPH	C6 - C9	µg/L	20			<20
	C6-C10	mg/l	0.02			<0.02

Field Duplicates (SOIL)
Filter: SDG in('ALSE-M

SDG	ALSE-Melbourne 20-May-14	ALSE-Melbourne 20-May-14		ALSE-Melbourne 20-May-14	Interlab_D
Field_ID	SP10/0-0.15	SP10/0-0.15B	RPD	SP10/0-0.15	SP10/0-0.15/S
Sampled_Date-Time	20/05/2014 8:52	20/05/2014 8:52		20/05/2014 8:52	20/05/2014 8:52

Chem_Grd	ChemNam	Units	EQL						
Inorganics	Moisture	%	1	22.1	14.8	40	22.1		
Lead	Lead	mg/kg	5	14.0	22.0	44	14.0	23.0	49
Metals	Arsenic	mg/kg	5 (Primary): 2 (Interlab)	<5.0	<5.0	0	<5.0	8.3	50
	Barium	mg/kg	10	30.0	30.0	0	30.0	30.0	0
	Beryllium	mg/kg	1 (Primary): 2 (Interlab)	<1.0	<1.0	0	<1.0	<2.0	0
	Boron	mg/kg	50 (Primary): 10 (Interlab)	<50.0	<50.0	0	<50.0	<10.0	0
	Cadmium	mg/kg	1 (Primary): 0.4 (Interlab)	<1.0	<1.0	0	<1.0	<0.4	0
	Chromium	mg/kg	2 (Primary): 5 (Interlab)	21.0	16.0	27	21.0	20.0	5
	Cobalt	mg/kg	2 (Primary): 5 (Interlab)	4.0	3.0	29	4.0	<5.0	0
	Copper	mg/kg	5	<5.0	<5.0	0	<5.0	<5.0	0
	Manganese	mg/kg	5	100.0	84.0	17	100.0	110.0	10
	Mercury	mg/kg	0.1	<0.1	<0.1	0	<0.1	<0.1	0
	Nickel	mg/kg	2 (Primary): 5 (Interlab)	12.0	7.0	53	12.0	8.5	34
	Selenium	mg/kg	5	<5.0	<5.0	0	<5.0		
	Vanadium	mg/kg	5 (Primary): 10 (Interlab)	35.0	35.0	0	35.0	30.0	15
	Zinc	mg/kg	5	186.0	199.0	7	186.0	290.0	44

*RPDs have only been considered where a concentration is greater than 1 times the EQL.

**High RPDs are in bold (Acceptable RPDs for each EQL multiplier range are: 80 (1-10 x EQL); 50 (10-30 x EQL); 30 (> 30 x EQL))

***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methods in the row header relate to those used in the primary laboratory