

Beveridge Williams
development & environment consultants




Beveridge Williams
Melbourne Office
1 Glenferrie Road
Malvern 3144
PO Box 61
Malvern 3144
Tel: (03) 9524 8888
Fax: (03) 9524 8899
www.beveridgewilliams.com.au

PRELIMINARY CONTAMINATION ASSESSMENT

JUMBUNNA ROAD, KORUMBURRA

DOCUMENT CONTROL DATA

 Beveridge Williams Melbourne Office 1 Glenferrie Road Malvern 3144 PO Box 61 Malvern 3144 Tel: (03) 9524 8888 Fax: (03) 9524 8899 www.beveridgewilliams.com.au	Title	Preliminary Contamination Assessment
	Author	J.Raabe
	Checked	A.Mellett
	Project Manager	A.Mellett
	Synopsis	

Reference: L007074

Client: Kufner Textiles (Australia) P/L

Revision Table

Rev	Description	Date	Authorised
0	Preliminary Contamination Assessment, Jumbunna Road, Korumburra	31.05.2017	AM

Distribution Table

Date	Revision	Distribution
2.06.2017	0	Kufner Textiles (Australia) P/L
2.06.2017	0	Beveridge Williams

Copyright Notice

© Copyright – Beveridge Williams & Co P/L

Users of this document are reminded that it is subject to copyright. This document should not be reproduced, except in full and with the permission of Beveridge Williams & Co Pty Ltd.

CONTENTS

1	INTRODUCTION.....	1
2	SITE DETAILS	2
3	DESKTOP REVIEW.....	3
3.1	AERIAL PHOTOGRAPHS	3
3.2	WEBSITE INFORMATION	3
3.3	SEARCH OF NEARBY CERTIFICATES AND STATEMENTS OF ENVIRONMENTAL AUDIT AND EPA PRIORITY SITES REGISTER	4
3.4	GEOLOGY.....	4
3.5	POTENTIAL FOR CONTAMINATION	4
4	PRELIMINARY SOIL CONTAMINATION ASSESSMENT	5
4.1	ASSESSMENT GUIDELINES AND CRITERIA	5
4.1.1	NEPM (AMENDMENT 2013) ECOLOGICAL INVESTIGATION LEVELS CRITERIA DERIVATION.....	6
4.2	FIELD METHODOLOGY	6
4.3	SOIL SAMPLING STRATEGY.....	7
4.4	SOIL INVESTIGATION	7
4.4.1	FIELDWORK (23 FEBRUARY 2017).....	7
4.4.2	SOIL OBSERVATIONS	7
4.4.3	CONTAMINATION RANKING AND PID READINGS.....	8
4.5	SOIL CHEMICAL TESTING PROGRAM.....	8
4.6	SOIL CHEMICAL TESTING RESULTS.....	8
4.6.1	DEVELOPMENT AREA	8
4.6.2	FORMER RAILWAY TRACK AREA.....	9
5	QUALITY CONTROL.....	10
6	CONCLUSIONS AND RECOMMENDATIONS.....	11
6.1	OFFSITE SOIL REMOVAL AND SOIL IMPORTATION	11
7	LIMITATIONS.....	12

FIGURES

FIGURE 1 - BOREHOLE LOCATION PLAN

FIGURE 2 - GEOLOGICAL, TOPOGRAPHICAL AND SURFACE WATER PLAN

APPENDICES

APPENDIX A PLANNING PROPERTY REPORT

APPENDIX B AERIAL PHOTOGRAPHS

APPENDIX C SITE PHOTOGRAPHS

APPENDIX D TABULATED CHEMICAL TESTING DATA

APPENDIX E NATA LABORATORY CERTIFICATES OF ANALYSIS

LIST OF ABBREVIATIONS AND UNITS

ANZECC	Australia and New Zealand Environment and Conservation Council	PSH	Phase Separated Hydrocarbons
ARMCANZ	Agriculture and Resource Management Council of Australia and New Zealand	QA/QC	Quality Assurance/Quality Control
AST	Above-ground Storage Tank	RL	Reduced Level
BaP	Benzo(a)pyrene	RPD	Relative Percentage Difference
BTEX	Benzene, Toluene, Ethyl benzene & Xylene	SEPP	State Environment Protection Policy
CHC	Chlorinated hydrocarbons	SVOC	Semi Volatile Organic Compounds
COC	Chain of Custody	SWL	Standing Water Level
CUTEP	Clean Up to the Extent Practicable	TDS	Total Dissolved Solids
DNAPL	Dense Non-Aqueous Phase Liquid	TEQ	Toxicity Equivalent Quotient
DO	Dissolved Oxygen	TPH	Total Petroleum Hydrocarbons
EC	Electrical Conductivity	TRH	Total Recoverable Hydrocarbons
EIL	Environmental Investigation Level	UST	Underground Storage Tank
EPA	Victorian Environmental Protection Authority	VOC	Volatile Organic Compounds
GWDB	Groundwater Data Base	VVG	Visualising Victoria's Groundwater
HIL	Health Investigation Level	WMIS	Water Measurement Information System
HM	Heavy Metal	-	On tables is no data
HVO	Halogenated Volatile Organics		
LNAPL	Light Non-Aqueous Phase Liquid	Units	
LOR	Limit of Reporting	µg/kg	micrograms per kilogram (ppb)
MAH	Monocyclic Aromatic Hydrocarbons	µg/L	micrograms per litre
NATA	National Association of Testing Authorities	µs/cm	microseimens per centimetre
ND	Non Detect	mg/kg	milligrams per kilogram (ppm)
NEPM	National Environmental Protection Measure	mg/L	milligrams per litre
NHMRC	National Health and Medical Research Council	mBGL	Metres below ground level
NAPL	Non-Aqueous Phase Liquid	mTOC	Metres below top of casing
OCP	Organochlorine Pesticides	mAHD	Metres Australian Height Datum
OPP	Organophosphate Pesticides	ppb	parts per billion
PAH	Polycyclic Aromatic Hydrocarbons	ppm	parts per million
PCB	Polychlorinated biphenyl	Ha	Hectare
PID	Photo-ionisation detector		

1 INTRODUCTION

At the request of Kufner Textiles (Australia) P/L, Beveridge Williams & Co P/L (Beveridge Williams) conducted a Preliminary Contamination Assessment of the property shown in Figure 1, Jumbunna Road, Korumburra (referred to as “the site” in this report).

The purpose of the Preliminary Contamination Assessment was to identify if the site contained any significant contamination (from current or historical site and surrounding land uses) that may pose an adverse health risk to potential future users/occupants of the proposed residential development. In addition, soil testing data has also been compared against EPA Fill Criteria to determine requirements for offsite soil disposal (if required).

This report presents information on the site history, the results of a preliminary soil sampling and testing program, an evaluation of the chemical testing results with respect to relevant criteria and the extent and implications of testing results regarding the use of the site.

2 SITE DETAILS

Site details are presented in Table 2-1

Table 2-1: Summary of Site Details

Item		Site Details	Refer to
Site Address		Jumbunna Road, Korumburra VIC 3950	Figure 1
Site Area (ha)		Approximately ≈ 10.5 ha	
Zoning		General Residential Zone – Schedule 1 (GRZ1)	Appendix A
Municipality		South Gippsland Shire Council	
Current Use		Vacant – Farmland (Grazing)	Appendix C
Historic Site Use		Farmland and the former Korumburra Outtrim coal railway along the southern boundary	Appendix B
Surrounding land uses	North	Farmland and residential	Appendix B
	East	Farmland	
	South	Residential	
	West	Korumburra Secondary College	
Proposed Use		Residential, Plantation Reserve and Linear Park	-

3 DESKTOP REVIEW

The following sources of information were reviewed:

- Aerial photographs held by the Department of Transport, Planning and Local Infrastructure and Google Earth
- Nearby Certificates and Statements of Environmental Audit
- EPA Priority Sites Register
- Geology plans
- Website information

3.1 Aerial Photographs

Aerial photographs held by the Department of Transport, Planning and Local Infrastructure (DTPLI) from 1947, 1972, and 1982 were reviewed (Table 3-1). Aerial photograph from Google Earth taken in 2005 was also reviewed. A summary of the review findings is provided below. A copy of the aerial photographs reviewed is provided in Appendix B.

Table 3-1: Aerial Photograph Review

Year	Summary
1947	Majority of the site appears to be used as farming land (grazing) with the Outtrim Railway running along the southern boundary. There is sparse vegetation onsite, two dams (used for watering stock), and several small areas of soil disturbance onsite. Surrounding the site are several dairy farms.
1947 to 1972	The site remains vacant grazing land. The Outtrim railway is no longer clearly visible and has been covered by grass. Offsite immediately to the west Korumburra Secondary College has been constructed and to the north several houses have been built. Besides this no significant changes are noted.
1972 to 1982	No significant changes to the site were noted. Offsite another house is under construction and a large dam has been excavated to the north. To the east and south preparation works are being conducted for the construction of Sommers Crescent, Hillcrest water, Range Court and Rill Court. Besides this no significant changes to the surrounding area were observed.
1982 to Present	The growth of additional vegetation (mainly in the north east corner) and construction of cattle yards in the north west corner no other significant changes were noted. It was noted that a bus depot was located 100 metres northeast of the site. Besides these observations no significant changes to the surrounding area were noted.

Copies of the reviewed aerial photographs are presented in Appendix B.

3.2 Website Information

Information available on various websites revealed the following information:

- The Outtrim Railway located onsite was open on 7 May 1894 and was used for black coal transportation¹

¹ https://en.wikipedia.org/wiki/Outtrim_railway_line

- The Outtrim Railway onsite closed on 1 October 1953
- The railway subgrade comprised gravel and ashes (six inches deep)²

3.3 Search of Nearby Certificates and Statements of Environmental Audit and EPA Priority Sites Register

The site is not listed on the EPA Priority Sites Register. There are no EPA Priority Sites or sites with Certificates or Statements of Environmental Audit in the proximity of the site.

3.4 Geology

A review of the Department of State Development, Business and Innovation (DSDBI) GeoVic version 3³ geology plans indicate that the site is underlain by Cretaceous aged Wonthaggi Formation comprising of Fluvial: lithic sandstone, siltstone, minor conglomerate, coal.

3.5 Potential for Contamination

The site has been used for two distinct uses, farmland (Development Area) and the former coal railway along the south boundary (Former Railway Area):

Development Area – the main contaminants of concern associated with use of this portion of the site are heavy metals and possible historical use of herbicide/pesticides (organochlorine pesticides)

Former Railway Area – the main contaminants of concern associated with the railway constructed in the late 1800's and maintained up until 1953 are heavy metals and polycyclic aromatic hydrocarbons (PAH) with limited potential for hydrocarbon contamination due to lubricants/oils used by the locomotives.

² <http://www.victorianrailways.net/grades/outtrim/outtrim.html>

³ http://er-info.dpi.vic.gov.au/sd_weave/anonymous.html - (online) accessed January 2017

4 PRELIMINARY SOIL CONTAMINATION ASSESSMENT

4.1 Assessment Guidelines and Criteria

The Victorian State Environmental Protection Policy (SEPP), Prevention and Management of Contaminated Land (June 2002, updated September 2013) lists the beneficial uses for each segment of land to be protected.

Table 4-1: Protected Beneficial Uses of Land

Beneficial Use		Land Use						
		Parks and Reserves	Agricultural	Sensitive Use		Recreation / Open Space	Commercial	Industrial
				High density	Other			
Maintenance of ecosystems	Natural Ecosystems	√						
	Modified Ecosystems	√	√		√	√		
	Highly Modified Ecosystems		√	√	√	√	√	√
	Human Health	√	√	√	√	√	√	√
	Buildings and Structures	√	√	√	√	√	√	√
	Aesthetics	√		√	√	√	√	
	Production of food, flora and fibre	√	√		√			

Note: Table 4-1 is a reproduction of 'Table 1 – Protected Beneficial Uses of Land' from the State Environment Protection Policy (Prevention and Management of Contamination of Land), June 2002. The shading denotes the beneficial uses to be protected for the proposed site use.

- Maintenance of modified and highly modified ecosystems** – National Environment Protection (Assessment of Site Contamination) Amendment Measure 2013 (No.1) (NEPM (Amendment 2013)) - Ecological Investigation Levels (EIL). EPA Fill criteria (EPA Industrial Waste Resource Guidelines (IWRG) Publication No. 621 published by the Environment Protection Authority of Victoria, which lists the maximum concentrations of contaminants allowed in soil to be disposed of as Clean Fill, Category C and Category B Contaminated Soil) has been referenced also.
- Human health** – NEPM (Amendment 2013) Human Health Investigation Levels (HIL) for sensitive uses (low density residential, primary schools and child care, HIL A) and CRC Care 2011 Direct Contact HSL A have been referenced for the Development Area and NEPM (Amendment 2013) Human Health Investigation Levels (HIL) for public open space (HIL C) and CRC Care 2011 Direct Contact HSL C have been referenced for the Former Railway Area.

- **Buildings and structures** – Contamination must not cause the land to be corrosive to or adversely affect the integrity of structures or building materials.
- **Aesthetics** – Contamination must not cause the land to be offensive to the senses of human beings.
- **Production of food, flora and fibre** – Contamination of land must not adversely affect produce quality, flora and fibre yield or affect the level of any indicator in food, flora and fibre produced at the site (or that may be produced).

4.1.1 NEPM (Amendment 2013) Ecological Investigation Levels Criteria Derivation

The NEPM (Amendment 2013) states that *‘the EIL [criteria] takes into account the biological availability of the element in different soils and separate naturally occurring concentrations of a contaminant and the added contaminant in deriving EILs which are based on the ‘added risk approach’.* This approach assumes that the availability of the ambient background concentration (ABC, the soil concentration in a specified locality that is the sum of the naturally occurring background and the contaminant levels that have been introduced from diffuse or non-point sources by general anthropogenic activity not attributed to industrial, commercial, or agricultural activities) of a contaminant is zero or sufficiently close that it makes no practical difference. More importantly, it assumes that the background *‘has resulted in the biodiversity of ecosystems or serves to fulfil the needs for micronutrients for the organisms in the environment’.* Therefore, the approach views only the effect of added contaminants to the environment as adverse (for further information refer to Section 2.4, Schedule B5b). Thus, rather than having a single numerical limit for a contaminant, different soils will have different limits. The EIL derivation methodology generates, wherever possible, soil-specific EILs’.

Beveridge Williams considers that, any contamination identified on the site is unlikely to have been added within the last 2 years indicating that contamination would be “aged” (as defined by NEPM (Amendment 2013)). Therefore, Beveridge Williams has adopted the most conservative “aged” values listed in Appendix A of NEPM (Amendment 2013) Schedule B5a *“Guide on Ecological Risk Assessment”* for urban residential/public open space for reporting purposes.

4.2 Field Methodology

All fieldworks were carried out in generally accordance with Australian Standard (AS) 4482.1-2005 by a Beveridge Williams Environmental Professional who logged the soil samples generally in accordance with AS 1726-1993 and obtained disturbed soil samples at various locations.

The equipment used to recover the required soil samples was cleaned between each sample prior to each sample being taken in accordance with the following procedures:

- All adhered soil and/or other matter was removed by means of scrubbing and flushing with clean water
- The hand sampling equipment was then scrubbed in a phosphate free detergent solution before being rinsed copiously in clean water
- Disposable rubber nitrile gloves worn by the Environmental Professional were replaced prior to the recovery of each sample.

The soil samples were placed into acid-rinsed and solvent-washed screw top glass jars supplied by the analysing laboratory. The jars were tightly closed and kept on ice in a portable cooler until delivery to the laboratory under chain of custody procedures.

Each soil sample was assessed both visually and by odour for evidence of contamination with a ranking on a scale of 0 - 3 as follows:

- 0 No odour or visual evidence of contamination
- 1 Slight visual evidence of contamination and/or slight odour
- 2 Visual evidence of contamination and/or odour
- 3 Obvious visual evidence of contamination and/or strong odour.

A calibrated photoionization detector (PID) was used to screen for the presence of volatile organic compounds (VOCs) in all samples collected. During sampling an extra sample was collected and placed in a properly sealed snap lock plastic bag. The volume of soil used for obtaining PID readings was kept generally uniform for all samples tested. After approximately 15 minutes the plastic bag was pierced with the probe to obtain a PID reading.

All chemical testing was undertaken by the following NATA registered analytical laboratories:

- Primary testing laboratory - Ecowise Australia Pty Ltd (ALS Water Resources Group, ALSWRG)
- Secondary testing laboratory (for QA/QC purposes) - Envirolab Services Pty Ltd (Envirolab).

4.3 Soil Sampling Strategy

The following sampling works were carried out to supplement the desktop investigation and determine the risk of gross soil contamination.

4.4 Soil Investigation

4.4.1 Fieldwork (23 February 2017)

A total of 10 surface samples 170223-SS01 to 170223-SS10 and 10 test pits TP01 to TP10 were sampled manually at depths of ranging from 0.0 to 0.1 m and 0.05-0.15 m depth on 23 February 2017.

The locations of the samples are shown on Figure 1. Some of the samples within the Development Area targeted potential runoff zones from the Former Railway Area.

4.4.2 Soil Observations

4.4.2.1 Development Area

A natural or reworked natural brown/brown mottled orange silt and silty sand was found across the Development Area. This material is consistent with the Wonthaggi Formation found in the region.

4.4.2.2 Former Railway Area

A layer of grey/brown silty sand topsoil covered a layer of fill material that made the base of former railway track. This brown/black fill material was made up of ash/coal, fine to medium grained sands

and railway ballast up to 50 mm. It was also noted that the ash/coal content decreased with depth and the fill layer reached depths greater than 0.5 m in places.

4.4.3 Contamination Ranking and PID Readings

All soil samples were screened in the field with a photoionisation detector (PID). The PID response recorded for all samples ranged between 0.0 and 0.9 ppm. Given no odours or visual signs of contamination were noted during sampling, Beveridge Williams considers the low level PID responses to be of no concern.

4.5 Soil Chemical Testing Program

The chemical testing program for individual samples is detailed in Table 4-2.

Table 4-2: Soil Sample Chemical Testing Program

Sample Numbers	Testing Program
TP02/0.1, TP08/0.1	EPA 621 Clean Fill Screen ⁴
TP01/0.1, TP03/0.15, TP05/0.1, TP06/0.1, TP07/0.1, TP09/0.1, TP10/0.1	Heavy metals ⁵ and PAH
TP01/0.0, TP03/0.0, 170223-SS06	Heavy metals ³ , PAH and OCP
TP04/0.05	Heavy metals ³ , PAH and TRH
170223-SS01, 170223-SS02, 170223-SS03, 170223-SS04, 170223-SS05, 170223-SS07, 170223-SS08, 170223-SS09, 170223-SS10	Heavy metals ³ and OCP

4.6 Soil Chemical Testing Results

Beveridge William's tabulated chemical testing data and the NATA Laboratory Certificates of Analysis for soil samples are presented in Appendix D and Appendix E, respectively.

4.6.1 Development Area

None of the reported results exceeded the human health criteria (NEPM HIL A – amended 2013).

However, a single concentration of zinc in sample 170223-SS10 (110 mg/kg) exceeded the Ecological Investigation Levels (NEPM Amendment 2013 EIL (urban residential/public open space) – aged) of 70 mg/kg. Based on the location of the exceeding surface sample in close vicinity to the onsite galvanised stock yards, this concentration is not considered to be of concern as zinc is known to go partially into solution with repeated water contact.

All surface soils across the development area meet the EPA Fill Criteria.

⁴An EPA 621 screen consists of the following analytes: total metals (Sb, As, Ba, Be, B, Cd, Cr (III+VI), Cr (VI), Co, Cu, Pb, Mn, Hg, Mo, Se, Ag, Sn, V, Zn), total cyanide, total fluoride, speciated phenols (halogenated plus non-halogenated), MAH, PAH, TPH, PCB, CHC and OCP

⁵ Heavy metals: Al, Sb, As, Ba, Be, B, Cd, Cr (III+VI), Co, Cu, Fe, Pb, Mn, Hg, Mo, Ni, Se, Ag, Sr, Tl, Th, Sn, Ti, U, V, Zn

4.6.2 Former Railway Track Area

Test pit samples TP01/0.1 (360 mg/kg), TP07/0.1 (500mg/kg), TP08/0.1 (370 mg/kg) and TP10/0.1 (490 mg/kg) exceeded the open space human health criteria (NEPM HIL C – amended 2013) for arsenic (300 mg/kg) as well as residential land use (NEPM HIL A). Beveridge Williams recommends either remediation of the elevated arsenic concentrations or preparation of a soil management plan for the elevated arsenic concentrations prior to possible use of the area as a plantation reserve.

Test pit samples TP01/0.0, TP01/0.1, TP02/0.1, TP03/0.15, TP04/0.05, TP05/0.1, TP06/0.1, TP07/0.1, TP08/0.1, TP09/0.1 and TP10/0.1 all exceeded the Ecological Investigation Levels (NEPM Amendment 2013 EIL (urban residential/public open space) – aged) for arsenic and test pit samples TP02/0.1, TP04/0.05, TP05/0.1, TP07/0.1, TP08/0.1, TP09/0.1 and TP10/0.1 all exceeded the Ecological Investigation Levels (NEPM Amendment 2013 EIL (urban residential/public open space) – aged) for nickel. Therefore any propose plantings must be able to tolerate elevated arsenic and nickel concentrations.

The fill within the railway track area is considered to be EPA Category C Contaminated Soil which will be expensive to dispose of offsite (if offsite disposal is required) due to the anticipated soil volume.

OTHER REPORTED DETECTABLE CONCENTRATIONS

Some minor concentrations of TPH (C15 - C28, C29 - C36, C10 - C36 (sum of total)) and TRH (C16 - C34 and C10 - C40 (sum of total)) fractions were reported in samples TP02/0.1, TP04/0.05 AND TP08/0.1. No other detectable concentrations of TPH and TRH were reported in these samples.

5 QUALITY CONTROL

Secondary laboratory testing of a split sample (TP01/0.1A) was undertaken by Envirolab. Cadmium reported a Relative Percentage Difference (RPD) above 50%. As the reported concentration for cadmium was well below the adopted criteria, the chemical testing results from the original samples tested by ALSWRG are considered acceptable. The quality control data indicated an acceptable level of correlation between the results of ALSWRG and Envirolab.

As the chemical testing results from the original samples tested by ALSWRG are considered to be acceptable in terms of data quality. Beveridge Williams has adopted the primary reported analyte concentrations for all discussions and interpretations relating to the contamination assessment.

6 CONCLUSIONS AND RECOMMENDATIONS

It is recommended that a licensed surveyor prepare a plan defining the boundaries of the proposed development as described in the following sections. An indicative drawing is provided on Figure 1 showing the anticipated boundary between the proposed Development Area and the Former Railway Area which incorporates a plantation reserve as well as a linear park south of the former rail track area.

Development Area

A review of site history information indicated the potential for contamination in the Development Area as shown on Figure 1 to be low. Soil sampling and testing did not report any chemical concentrations above the adopted Human Health Criteria (NEPM HIL A) within the proposed Development Area and Beveridge Williams considers this portion of the site is suitable for residential development. It should be noted that sampling completed near the former railway line (but within the Development Area) did not report contamination.

Former Railway Area (Proposed Plantation Reserve)

A review of the site history indicated medium to high potential for contamination in the Former Railway Area, specifically the location of the track and subgrade. Soil sampling and testing within the former rail track area as shown on Figure 1 reported concentrations of arsenic above the Human Health Criteria (NEPM HIL C) for open space, including; parks, playgrounds, and footpaths. Anticipated remediation costs to remove the contamination are likely to be more than \$250,000 excluding GST. This portion of the site could be used as a vegetated plantation reserve providing hardy vegetation types are planted and a 250 mm thick clean soil layer meeting the EPA Fill Criteria is used to cover the former train track (which is approximately 3.5 m in width plus a suggested buffer of not less than 2 m either side). In addition, it is recommended that a Soil Management Plan be prepared for the proposed plantation reserve to manage the arsenic contamination and minimise long term human health and environmental risks.

Linear Park (South of Proposed Plantation Reserve)

Based on the test results and targeted sampling near drainage features, Beveridge Williams considers there is a very low risk of contaminated runoff from the former railway track area onto the proposed linear park.

6.1 Offsite Soil Removal and Soil Importation

Comparison of the soil testing results against the EPA Fill Criteria reveals the following indicative soil classifications.

Table 6-1: Soil Sample Chemical Testing Program

Site Areas	Indicative EPA Material Classification
Development Area	Meets EPA Fill Criteria
Former Railway Track Area	Likely to be EPA Category C Contaminated Soil

7 LIMITATIONS

Soil and rock formations are variable. The sample logs indicate the approximate subsurface conditions only at the specific test locations. Boundaries between zones on the logs are often not distinct, but rather are transitional and have been interpreted. The precision with which subsurface conditions are indicated depends largely on the frequency and method of sampling, and the uniformity of subsurface conditions.

Chemical conditions described in this report refer only to those conditions indicated by analysis of samples obtained at the points and under the circumstances noted in the report.

These conditions may differ due to the variability of contaminant concentrations in imported fill material or in natural soil as a consequence of activities on the site or adjacent sites. Where conditions encountered at the site or the proposed development differ significantly from those anticipated in this report, it is a condition of this report that Beveridge Williams & Co Pty Ltd be notified of the changes and provided with an opportunity to review the recommendations of this report.

BEVERIDGE WILLIAMS & CO PTY LTD

Approved for issue by



Andrew Mellett

Manager Environmental Division

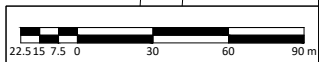
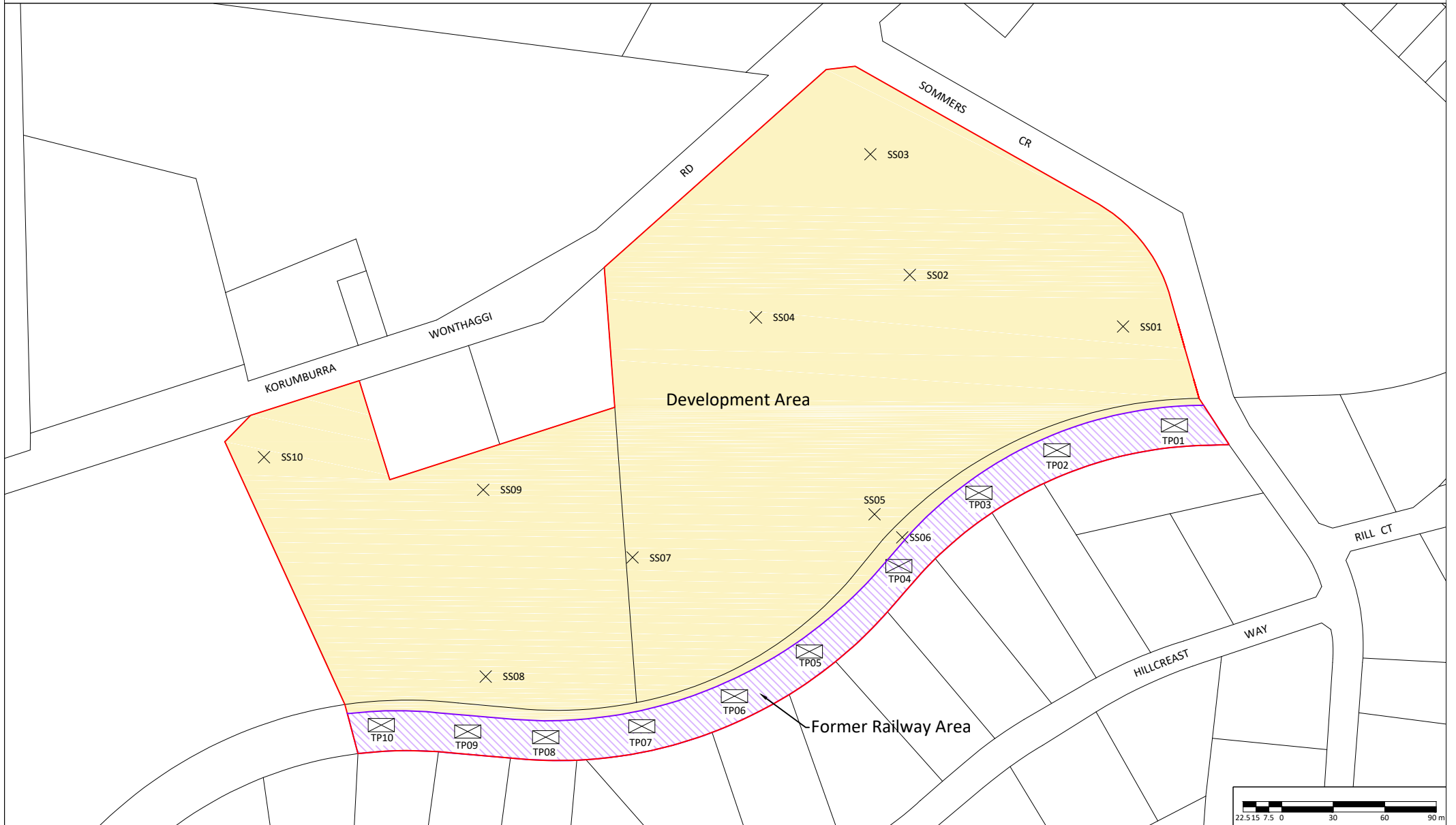
FIGURES

FIGURE 1 - BOREHOLE LOCATION PLAN

FIGURE 2 - GEOLOGICAL, TOPOGRAPHICAL AND SURFACE WATER PLAN

- Approximate Site Location
- SS01 Approximate Surface Sample Location
- TP01 Approximate Test Pit Location

- Former Railway Area
- Development Area



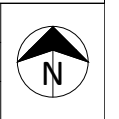
<small>© COPYRIGHT All rights reserved. Beveridge Williams & Co Pty Ltd has granted a licence to the principal to use this document for its intended purpose. No unauthorised copying is permitted.</small>			
Rev	Description	Date	By App.

Project Name	Preliminary Contamination Assessment - Jumbunna Road, Korumburra
Drawing Title	Sample Location Plan
Client	Kufner Textiles (Australia) P/L

Drawn Date	J.RAABE 24/04/2017
Approved Date	A.MELLETT 24/04/2017
Image Source	-

BW Beveridge Williams
 development & environment consultants
 1 Glenferrie Road
 Malvern VIC 3144
 Ph : 03 9524 8888
 Fax : 03 9524 8899
 www.beveridgewilliams.com.au

Project Ref.	Figure No.	Rev.
L007074	01	0
<small>Drawing Ref. KUFNER TEXTILES ENV/DO/PLANS/L007074 - PLAN.DWG</small>		



APPENDIX A PLANNING PROPERTY REPORT

Planning Property Report

from www.dtpli.vic.gov.au/planning on 15 February 2017 11:59 AM

Address: JUMBUNNA ROAD KORUMBURRA 3950

Lot and Plan Number: Lot 4 LP135303

This property has a total of 3 parcels.

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

Local Government (Council): SOUTH GIPPSLAND **Council Property Number:** 185643

Directory Reference: VicRoads 709 M10

See next page for planning information

Copyright © - State Government of Victoria

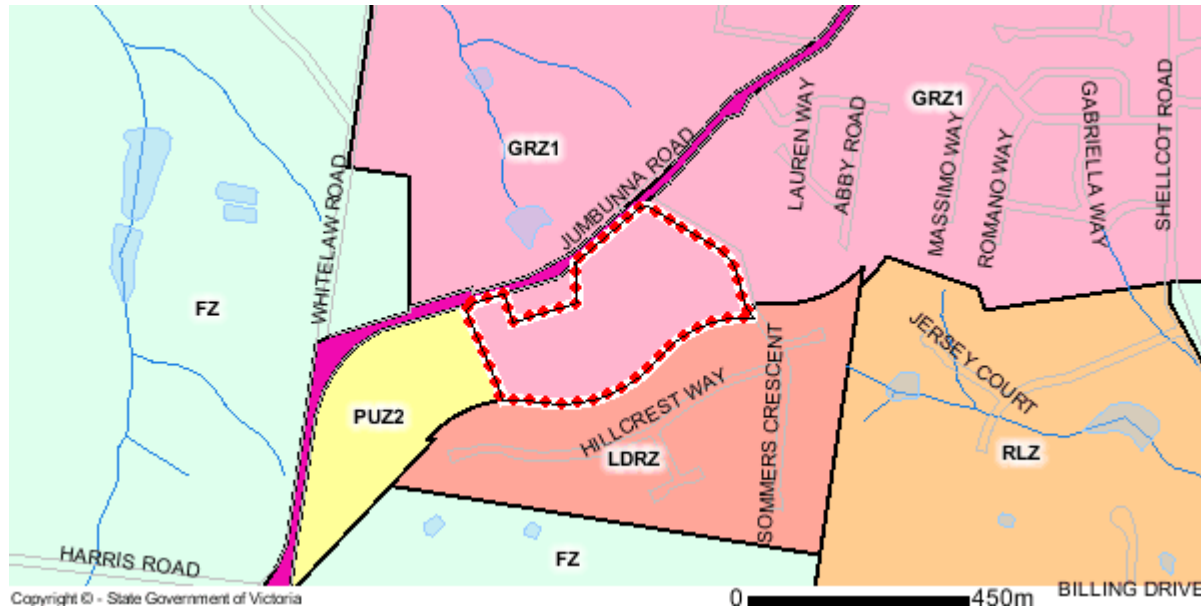
Disclaimer: This content is provided for information purposes only. No claim is made as to the accuracy or authenticity of the content. The Victorian Government does not accept any liability to any person for the information provided.

Read the full disclaimer at www.land.vic.gov.au/home/copyright-and-disclaimer

Planning Zone

GENERAL RESIDENTIAL ZONE - SCHEDULE 1 (GRZ1)

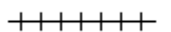
SCHEDULE TO THE GENERAL RESIDENTIAL ZONE - SCHEDULE 1



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

Zones Legend

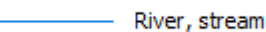
ACZ - Activity Centre	IN1Z - Industrial 1	R1Z - General Residential
B1Z - Commercial 1	IN2Z - Industrial 2	R2Z - General Residential
B2Z - Commercial 1	IN3Z - Industrial 3	R3Z - General Residential
B3Z - Commercial 2	LDRZ - Low Density Residential	RAZ - Rural Activity
B4Z - Commercial 2	MUZ - Mixed Use	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	Urban Growth Boundary
GWAZ - Green Wedge A	PUZ7 - Public Use - Other Public Use	
GWZ - Green Wedge	PZ - Port	



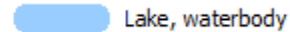
Railway



Tram



River, stream



Lake, waterbody

Copyright © - State Government of Victoria

Disclaimer: This content is provided for information purposes only. No claim is made as to the accuracy or authenticity of the content. The Victorian Government does not accept any liability to any person for the information provided.

Read the full disclaimer at www.land.vic.gov.au/home/copyright-and-disclaimer

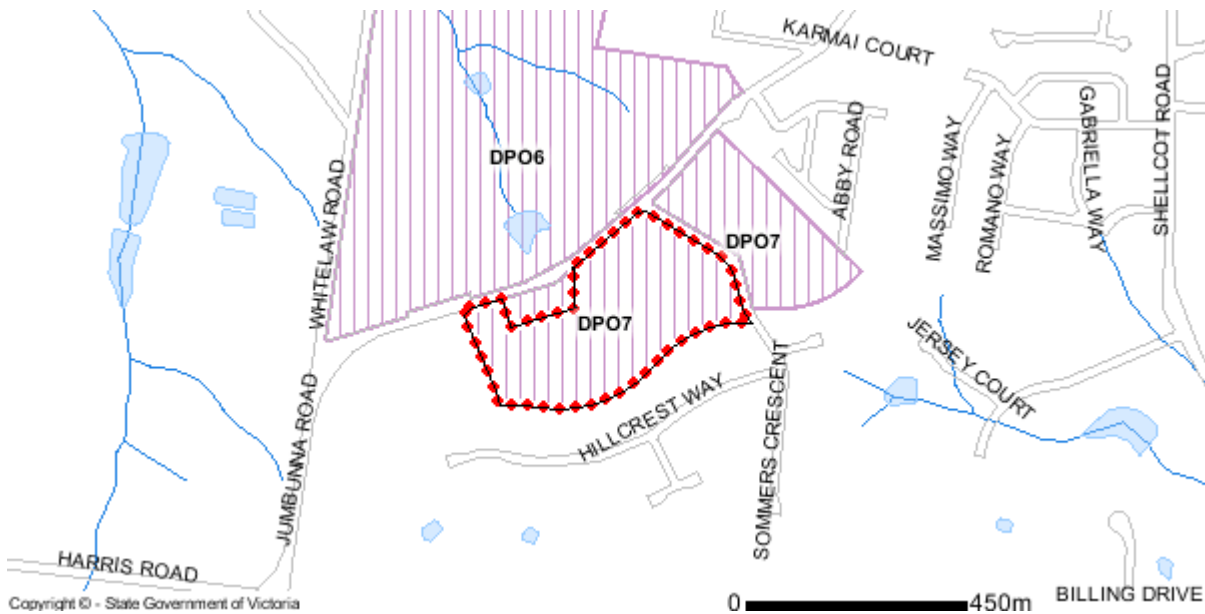


Environment,
Land, Water
and Planning

Planning Overlay

DEVELOPMENT PLAN OVERLAY (DPO)

DEVELOPMENT PLAN OVERLAY - SCHEDULE 7 (DPO7)



OTHER OVERLAYS

Other overlays in the vicinity not directly affecting this land

ENVIRONMENTAL SIGNIFICANCE OVERLAY (ESO)



Copyright © - State Government of Victoria

Disclaimer: This content is provided for information purposes only. No claim is made as to the accuracy or authenticity of the content. The Victorian Government does not accept any liability to any person for the information provided.

Read the full disclaimer at www.land.vic.gov.au/home/copyright-and-disclaimer



Environment,
Land, Water
and Planning

Planning Overlays Legend

Overlays Legend

 AEO - Airport Environs	 LSIO - Land Subject to Inundation
 BMO - Bushfire Management (also WMO)	 MAEO1 - Melbourne Airport Environs 1
 CLPO - City Link Project	 MAEO2 - Melbourne Airport Environs 2
 DCPO - Development Contributions Plan	 NCO - Neighbourhood Character
 DDO - Design & Development	 PD - Parking
 DDOPT - Design & Development Part	 PAO - Public Acquisition
 DPO - Development Plan	 RO - Restructure
 EAO - Environmental Audit	 RCO - Road Closure
 EMO - Erosion Management	 SBO - Special Building
 ESO - Environmental Significance	 SLO - Significant Landscape
 FO - Floodway	 SMO - Salinity Management
 HO - Heritage	 SRD - State Resource
 IPO - Incorporated Plan	 VPD - Vegetation Protection
 Railway	 Tram
 River, stream	 Lake, waterbody

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 9 February 2017.

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](#)

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.delwp.vic.gov.au/planning

Copyright © - State Government of Victoria

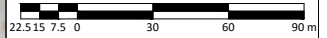
Disclaimer: This content is provided for information purposes only. No claim is made as to the accuracy or authenticity of the content. The Victorian Government does not accept any liability to any person for the information provided.

Read the full disclaimer at www.land.vic.gov.au/home/copyright-and-disclaimer

APPENDIX B AERIAL PHOTOGRAPHS



Approximate Site Location



© COPYRIGHT All rights reserved. Beveridge Williams & Co Pty Ltd has granted a licence to the principal to use this document for its intended purpose. No unauthorised copying is permitted.			
Rev	Description	Date	By App.

Project Name	Preliminary Contamination Assessment - Jumbunna Road, Korumburra
Drawing Title	Aerial Photograph 2005
Client	Kufner Textiles (Australia) P/L

Drawn	J.RAABE
Date	03.04.2017
Approved	A.MELLETT
Date	24.04.2017
Image Source	NEARMAP

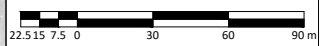
BW Beveridge Williams
 development & environment consultants
 1 Glenferrie Road
 Malvern VIC 3144
 Ph : 03 9524 8888
 Fax : 03 9524 8899
 www.beveridgewilliams.com.au

Scale	1:3,000 @ A4
Project Ref.	L007074
Appendix # No.	1 of 4
Rev.	0
Drawing Ref.	KUFNER TEXTILES JUMBUNNA RD KORUMBURRA_ENV/00/PLANS/L007074 - PLAN.DWG





Approximate Site Location



© COPYRIGHT All rights reserved. Beveridge Williams & Co Pty Ltd has granted a licence to the principal to use this document for its intended purpose. No unauthorised copying is permitted.	
Rev	Description
Date	By
App.	

Project Name	Preliminary Contamination Assessment - Jumbunna Road, Korumburra
Drawing Title	Aerial Photograph 1982
Client	Kufner Textiles (Australia) P/L

Drawn Date	J.RAABE 03.04.2017
Approved Date	A.MELLETT 24.04.2017
Image Source	DTPLI

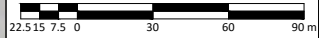
BW Beveridge Williams
development & environment consultants
1 Glenferrie Road
Malvern VIC 3144
Ph : 03 9524 8888
Fax : 03 9524 8899
www.beveridgewilliams.com.au

Scale	1:3,000 @ A4
Project Ref.	L007074
Appendix B No.	2 of 4
Rev.	0
Drawing Ref.	KUFNER TEXTILES (AUSTRALIA) P/L - JUMBUNNA RD KORUMBURRA_ENV/00/PLANS/L007074 - PLAN.DWG





Approximate Site Location



© COPYRIGHT All rights reserved. Beveridge Williams & Co Pty Ltd has granted a licence to the principal to use this document for its intended purpose. No unauthorised copying is permitted.	
Rev	Description
Date	By
App.	

Project Name	Preliminary Contamination Assessment - Jumbunna Road, Korumburra
Drawing Title	Aerial Photograph 1972
Client	Kufner Textiles (Australia) P/L

Drawn Date	J. RAABE 03.04.2017
Approved Date	A. MELLETT 24.04.2017
Image Source	DTPLI

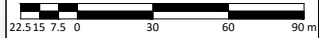
BW Beveridge Williams
development & environment consultants
1 Glenferrie Road
Malvern VIC 3144
Ph : 03 9524 8888
Fax : 03 9524 8899
www.beveridgewilliams.com.au

Scale	1:3,000 @ A4
Project Ref.	L007074
Appendix B No.	3 of 4
Rev.	0
Drawing Ref.	KUFNER TEXTILES (AUST) JUMBUNNA RD KORUMBURRA_ENV\00\PLANS\L007074 - PLAN.DWG





Approximate Site Location



© COPYRIGHT All rights reserved. Beveridge Williams & Co Pty Ltd has granted a licence to the principal to use this document for its intended purpose. No unauthorised copying is permitted.			
Rev	Description	Date	By App.

Project Name	Preliminary Contamination Assessment - Jumbunna Road, Korumburra
Drawing Title	Aerial Photograph 1947
Client	Kufner Textiles (Australia) P/L

Drawn Date	J.RAABE 03.04.2017
Approved Date	A.MELLETT 24.04.2017
Image Source	DTPLI

BW Beveridge Williams
development & environment consultants
1 Glenferrie Road
Malvern VIC 3144
Ph : 03 9524 8888
Fax: 03 9524 8899
www.beveridgewilliams.com.au

Scale	1:3,000 @ A4
Project Ref.	L007074
Appendix # No.	4 of 4
Rev.	0
Drawing Ref.	KUFNER TEXTILES JUMBUNNA RD KORUMBURRA_ENV\00\PLANS\L007074 - PLAN.DWG



APPENDIX C SITE PHOTOGRAPHS



Photograph 1: The site generally had a good grass covering, growing within a silt or silty sand topsoil. With the site topography surface water runoff would drain the site to the northwest. Preferred runoff paths, natural or manmade, were evident cross the site. Samples were taken within these preferential flow paths as these locations are where contaminants are likely to accumulate.



Photograph 2: The location of the former railway embankment is still clearly evident today. A cut and fill approach was used to construct the embankment, thus it is expected that material used to build up sections of the former railway embankment was from onsite and not imported materials.



Photograph 3: Additional photo of the former railway's path across the site.



Photograph 4: Testpit samples taken along the former railway. Imported railway ballast and fill materials, including ash and coal, were present within all samples taken along the former railway embankment. This was used as the foundations of the railway's track and was found at depths greater than 0.5 meters. Refusal on rock prevented the determination of the exact depth of the railway ballast and fill material layer.

APPENDIX D TABULATED CHEMICAL TESTING DATA

Table 01
Chemical Testing Results
Development Area
Soil



	Heavy Metals																									
	Aluminium	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Chromium (hexavalent)	Chromium (III-VI)	Cobalt	Copper	Iron	Lead	Manganese	Mercury	Molybdenum	Nickel	Selenium	Silver	Tin	Vanadium	Zinc				
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg				
EQL	5	5	5	5	5	10	0.2	1	5	5	10	5	5	5	0.05	5	5	3	5	5	5	5				
NEPM Amendment 2013 EIL (urban residential/public open space) - aged			100						190		60		1100				30					70				
NEPM Amendment 2013 EIL (urban residential/public open space) - fresh			50						75		30		270				10					25				
NEPM Amendment 2013 HIL/HSL A			100		60	4500	20	100		100	6000		300	3800	40		400	200				7400				
NEPM Amendment 2013 HIL/HSL B			500		90	40000	150	500		600	30000		1200	14000	120		1200	1400				60000				
NEPM Amendment 2013 HIL/HSL C			300		90	20000	90	300		300	17000		600	19000	80		1200	700				30000				
NEPM Amendment 2013 HIL/HSL D			3000		500	300000	900	3600		4000	240000		1500	60000	730		6000	10000				400000				
USEPA - Region 3,6,9 - Residential Soil	77000	31	0.39	15000	160	16000	70	0.29		23	3100	55000	400	1800	10	390	1500	390	390	47000		23000				
EPA IWRG 621 Category B Upper Limit			2000			400	2000			20000		6000		300	4000	12000	200	720				140000				
EPA IWRG 621 Category C Upper Limit			500			100	500			5000		1500		75	1000	3000	50	180	500			35000				
EPA IWRG 621 Fill Material Upper Limit			20			3	1			100		300		1	40	60	10	10	50			200				
Field ID	Sampled Date-Time	LocCode	Sample Depth Range		8800	<5	<5	54	<5	<10	<0.2	-	<5	<5	5	7800	9	32	<0.05	<5	<5	<3	<5	<5	19	18
170223-SS01	23/02/2017	170223-SS01	0.0 - 0.1		9000	<5	<5	63	<5	<10	<0.2	-	<5	<5	6	8800	7	370	<0.05	<5	<5	<3	<5	<5	18	20
170223-SS02	23/02/2017	170223-SS02	0.0 - 0.1		10,000	<5	<5	68	<5	<10	<0.2	-	6	<5	8	11,000	9	530	<0.05	<5	<5	<3	<5	<5	23	29
170223-SS03	23/02/2017	170223-SS03	0.0 - 0.1		8100	<5	6	56	<5	<10	<0.2	-	<5	<5	10	7800	24	150	<0.05	<5	<5	<3	<5	<5	15	42
170223-SS04	23/02/2017	170223-SS04	0.0 - 0.1		8800	<5	9	83	<5	<10	<0.2	-	<5	<5	8	8300	8	280	<0.05	<5	<5	<3	<5	<5	17	31
170223-SS05	23/02/2017	170223-SS05	0.0 - 0.1		9100	<5	12	99	<5	<10	<0.2	-	7	<5	12	13,000	12	200	<0.05	<5	<5	<3	<5	<5	23	52
170223-SS06	23/02/2017	170223-SS06	0.0 - 0.1		9200	<5	6	70	<5	<10	<0.2	-	<5	<5	7	9200	9	270	<0.05	<5	<5	<3	<5	<5	19	25
170223-SS07	23/02/2017	170223-SS07	0.0 - 0.1		13,000	<5	5	210	<5	<10	<0.2	-	7	9	19	23,000	13	200	<0.05	<5	7	<3	<5	<5	32	57
170223-SS08	23/02/2017	170223-SS08	0.0 - 0.1		9700	<5	<5	76	<5	<10	<0.2	-	6	7	8	10,000	11	320	<0.05	<5	<5	<3	<5	<5	22	26
170223-SS09	23/02/2017	170223-SS09	0.0 - 0.1		11,000	<5	<5	74	<5	<10	<0.2	-	14	8	13	19,000	10	170	<0.05	<5	<5	<3	<5	<5	25	110
170223-SS10	23/02/2017	170223-SS10	0.0 - 0.1																							

Table 01
Chemical Testing Results
Development Area
Soil



		PAH																				
		Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	BaP TEQ (half LOR)	BaP TEQ (LOR)	Carcinogenic PAHs (as BaP TEQ)	PAHs (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	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	
EQL		0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	
NEPM Amendment 2013 EIL (urban residential/public open space) - aged																						
NEPM Amendment 2013 EIL (urban residential/public open space) - fresh																						
NEPM Amendment 2013 HIL/HSL A																				3	300	
NEPM Amendment 2013 HIL/HSL B																				4	400	
NEPM Amendment 2013 HIL/HSL C																				3	300	
NEPM Amendment 2013 HIL/HSL D																				40	4000	
USEPA - Region 3,6,9 - Residential Soil		3400		17000	0.15	0.015	0.15		1.5	15	0.015	2300	2300	0.15	3.6		1700					
EPA IWRG 621 Category B Upper Limit						20															400	
EPA IWRG 621 Category C Upper Limit						5															100	
EPA IWRG 621 Fill Material Upper Limit						1															20	
Field ID	Sampled Date-Time	LocCode	Sample Depth Range																			
170223-SS01	23/02/2017	170223-SS01	0.0 - 0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
170223-SS02	23/02/2017	170223-SS02	0.0 - 0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
170223-SS03	23/02/2017	170223-SS03	0.0 - 0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
170223-SS04	23/02/2017	170223-SS04	0.0 - 0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
170223-SS05	23/02/2017	170223-SS05	0.0 - 0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
170223-SS06	23/02/2017	170223-SS06	0.0 - 0.1	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	0.2	0.5	<0.1	<0.2
170223-SS07	23/02/2017	170223-SS07	0.0 - 0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
170223-SS08	23/02/2017	170223-SS08	0.0 - 0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
170223-SS09	23/02/2017	170223-SS09	0.0 - 0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
170223-SS10	23/02/2017	170223-SS10	0.0 - 0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Table 02
Chemical Testing Results
Former Railway Area
Soil



Heavy Metals																									
	Aluminium	Antimony	Arsenic	Barium	Beryllium	Boron	Cadmium	Chromium (hexavalent)	Chromium (III+VI)	Cobalt	Copper	Iron	Lead	Manganese	Mercury	Molybdenum	Nickel	Selenium	Silver	Tin	Vanadium	Zinc			
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg			
EOL	5	5	5	5	5	10	0.2	1	5	5	5	10	5	5	0.05	5	5	3	5	5	5	5			
NEPM Amendment 2013 EIL (urban residential/public open space) - aged			100						190		60		1100				30					70			
NEPM Amendment 2013 EIL (urban residential/public open space) - fresh			50						75		30		270				10					25			
NEPM Amendment 2013 HIL/HSL A			100		60	4500	20	100		100	6000		300	3800	40		400	200				7400			
NEPM Amendment 2013 HIL/HSL B			500		90	40000	150	500		600	30000		1200	14000	120		1200	1400				60000			
NEPM Amendment 2013 HIL/HSL C			300		90	20000	90	300		300	17000		600	19000	80		1200	700				30000			
NEPM Amendment 2013 HIL/HSL D			3000		500	300000	900	3600		4000	240000		1500	60000	730		6000	10000				400000			
USEPA - Region 3,6,9 - Residential Soil	77000	31	0.39	15000	160	16000	70	0.29		23	3100	55000	400	1800	10	390	1500	390	390	47000		23000			
EPA IWRG 621 Category B Upper Limit			2000				400	2000			20000		6000		300	4000	12000	200	720			140000			
EPA IWRG 621 Category C Upper Limit			500				100	500			5000		1500		75	1000	3000	50	180	500		35000			
EPA IWRG 621 Fill Material Upper Limit			20				3	1			100		300		1	40	60	10	10	50		200			
Field ID	Sampled Date-Time	LocCode	Sample Depth Range																						
TP01/0.0	23/02/2017	TP01	0.0 - 0.1	10,000	<5	110	89	<5	<10	<0.2	-	11	6	17	15,000	18	720	<0.05	<5	14	<3	<5	5	23	55
TP01/0.1	23/02/2017	TP01	0.1 - 0.2	11,000	<5	360	93	<5	<10	<0.2	-	15	8	32	17,000	19	470	<0.05	<5	28	<3	<5	10	18	34
TP02/0.1	23/02/2017	TP02	0.1 - 0.2	-	<5	240	110	<5	<10	<0.2	<1	21	8	35	-	22	340	0.06	<5	31	<3	<5	6	24	43
TP03/0.0	23/02/2017	TP03	0.0 - 0.1	15,000	<5	38	160	<5	<10	<0.2	-	9	6	18	12,000	15	250	0.05	<5	11	<3	<5	<5	20	40
TP03/0.15	23/02/2017	TP03	0.15 - 0.25	13,000	<5	130	130	<5	<10	<0.2	-	14	6	22	17,000	18	230	<0.05	<5	18	<3	<5	<5	33	38
TP04/0.05	23/02/2017	TP04	0.05 - 0.15	12,000	<5	230	140	<5	<10	<0.2	-	39	11	33	30,000	41	660	0.05	<5	66	<3	<5	15	28	48
TP05/0.1	23/02/2017	TP05	0.1 - 0.2	9600	<5	160	110	<5	<10	<0.2	-	27	7	25	16,000	17	200	<0.05	<5	39	<3	<5	6	22	32
TP06/0.1	23/02/2017	TP06	0.1 - 0.2	33,000	<5	260	300	<5	49	<0.2	-	18	8	31	43,000	17	1800	0.06	<5	24	<3	<5	7	34	24
TP07/0.1	23/02/2017	TP07	0.1 - 0.2	16,000	5	500	95	<5	<10	<0.2	-	63	15	40	34,000	18	380	<0.05	<5	120	<3	<5	10	34	46
TP08/0.1	23/02/2017	TP08	0.1 - 0.2	-	<5	370	170	<5	<10	<0.2	<1	42	11	41	-	34	490	<0.05	<5	75	<3	<5	8	24	46
TP09/0.1	23/02/2017	TP09	0.1 - 0.2	11,000	<5	200	140	<5	<10	<0.2	-	23	10	47	38,000	14	1400	<0.05	<5	54	<3	<5	7	23	39
TP10/0.1	23/02/2017	TP10	0.1 - 0.2	11,000	<5	490	150	<5	<10	<0.2	-	13	10	54	22,000	15	440	0.08	<5	35	<3	<5	6	19	39

Table 02
Chemical Testing Results
Former Railway Area
Soil



		PAH																			
		Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(e)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	Phenanthrene	Pyrene	BaP TEQ (half LOR)	BaP TEQ (LOR)	Carcinogenic PAHs (as B(a)P TEQ)	PAHs (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	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL		0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1
NEPM Amendment 2013 EIL (urban residential/public open space) - aged															170						
NEPM Amendment 2013 EIL (urban residential/public open space) - fresh															170						
NEPM Amendment 2013 HIL/HSL A															3					3	300
NEPM Amendment 2013 HIL/HSL B															3					4	400
NEPM Amendment 2013 HIL/HSL C																				3	300
NEPM Amendment 2013 HIL/HSL D																				40	4000
USEPA - Region 3,6,9 - Residential Soil		3400		17000	0.15	0.015	0.15		1.5	15	0.015	2300	2300	0.15	3.6		1700				
EPA IWRG 621 Category B Upper Limit						20															400
EPA IWRG 621 Category C Upper Limit						5															100
EPA IWRG 621 Fill Material Upper Limit						1															20
Field ID	Sampled Date-Time	LocCode	Sample Depth Range																		
TP01/0.0	23/02/2017	TP01	0.0 - 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	0.2	<0.1	<0.1
TP01/0.1	23/02/2017	TP01	0.1 - 0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	0.2	<0.1	<0.1
TP02/0.1	23/02/2017	TP02	0.1 - 0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	0.2	<0.1	<0.1
TP03/0.0	23/02/2017	TP03	0.0 - 0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	0.2	<0.1	<0.1
TP03/0.15	23/02/2017	TP03	0.15 - 0.25	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	0.2	<0.1	<0.1
TP04/0.05	23/02/2017	TP04	0.05 - 0.15	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	0.2	<0.1	<0.1
TP05/0.1	23/02/2017	TP05	0.1 - 0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	0.2	<0.1	<0.1
TP06/0.1	23/02/2017	TP06	0.1 - 0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	0.2	<0.1	<0.1
TP07/0.1	23/02/2017	TP07	0.1 - 0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	0.2	<0.1	<0.1
TP08/0.1	23/02/2017	TP08	0.1 - 0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	0.2	<0.1	<0.1
TP09/0.1	23/02/2017	TP09	0.1 - 0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	0.2	<0.1	<0.1
TP10/0.1	23/02/2017	TP10	0.1 - 0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	0.2	<0.1	<0.1

Table 02
Chemical Testing Results
Former Railway Area
Soil



	Organochlorine Pesticides																												
	Aldrin	Aldrin + Dieldrin	β-BHC	Dieldrin	γ-BHC	δ-BHC	β-BHC (Lindane)	Chlordane	Chlordane (cis)	Chlordane (trans)	γ-4-DDE	DDD	DDT	DDT+DDE+DDD	Endosulfan	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	Heptachlor	Heptachlor epoxide	Heptachlor (including its epoxide)	Hexachlorobenzene	Methoxychlor	Oxychlorane	Organochlorine pesticide	Other organochlorine pesticides
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
NEPM Amendment 2013 EIL (urban residential/public open space) - aged														180															
NEPM Amendment 2013 EIL (urban residential/public open space) - fresh														180															
NEPM Amendment 2013 HIL/HSL A		6						50						240	270				10			6				10	300		
NEPM Amendment 2013 HIL/HSL B		10						90						600	400				20			10				15	500		
NEPM Amendment 2013 HIL/HSL C		10						70						400	340				20			10				10	400		
NEPM Amendment 2013 HIL/HSL D		45						530						3600	2000				100			50				80	2500		
USEPA - Region 3,6,9 - Residential Soil	0.029		0.077	0.03	0.27		0.52					1.4	2	1.7		370				18			0.11	0.053		0.3	310		
EPA IWRG 621 Category B Upper Limit		4.8						16						50								4.8							50
EPA IWRG 621 Category C Upper Limit		1.2						4						50								1.2							10
EPA IWRG 621 Fill Material Upper Limit																												1	

Field ID	Sampled Date-Time	LocCode	Sample Depth Range	Aldrin	Aldrin + Dieldrin	β-BHC	Dieldrin	γ-BHC	δ-BHC	β-BHC (Lindane)	Chlordane	Chlordane (cis)	Chlordane (trans)	γ-4-DDE	DDD	DDT	DDT+DDE+DDD	Endosulfan	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	Heptachlor	Heptachlor epoxide	Heptachlor (including its epoxide)	Hexachlorobenzene	Methoxychlor	Oxychlorane	Organochlorine pesticide	Other organochlorine pesticides	
TP01/0.0	23/02/2017	TP01	0.0 - 0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
TP01/0.1	23/02/2017	TP01	0.1 - 0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP02/0.1	23/02/2017	TP02	0.1 - 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	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
TP03/0.0	23/02/2017	TP03	0.0 - 0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
TP03/0.15	23/02/2017	TP03	0.15 - 0.25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP04/0.05	23/02/2017	TP04	0.05 - 0.15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP05/0.1	23/02/2017	TP05	0.1 - 0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP06/0.1	23/02/2017	TP06	0.1 - 0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP07/0.1	23/02/2017	TP07	0.1 - 0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP08/0.1	23/02/2017	TP08	0.1 - 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	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
TP09/0.1	23/02/2017	TP09	0.1 - 0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP10/0.1	23/02/2017	TP10	0.1 - 0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 02
Chemical Testing Results
Former Railway Area
Soil



	TPH					TRH							BTEX					MAH									
	C6 - C9	C10 - C14	C15 - C28	C29 - C36	C10 - C36 (sum of total)	C6 - C10	C6 - C10 less BTEX (F1)	C10 - C16	C10 - C16 less Naphthalene (F2)	C16 - C34	C34 - C40	C10 - C40 (sum of total)	Benzene	Ethylbenzene	Toluene	Total BTEX	Xylyne (m & p)	Xylyne (o)	Xylyne Total	1,2,4-trimethylbenzene	Isopropylbenzene	Styrene	MAH (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	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg				
EQL	20	20	50	50		20	20	20	20	50	50	50	0.5	0.5	0.5	1	1	0.5	1	0.5	0.5	0.5	0.5				
NEPM Amendment 2013 EIL (urban residential/public open space) - aged																											
NEPM Amendment 2013 EIL (urban residential/public open space) - fresh																											
NEPM Amendment 2013 HIL/HSL A							45	110	110				0.5	55	160					40							
NEPM Amendment 2013 HIL/HSL B							45	240	110				0.5	55	160					40							
NEPM Amendment 2013 HIL/HSL C								440					NL	NL													
NEPM Amendment 2013 HIL/HSL D							250 260						3	NL						230							
USEPA - Region 3,6,9 - Residential Soil													1.1	5.4	5000				690	630	62	2100	6300				
EPA IWRG 621 Category B Upper Limit	2600				40000								16										240				
EPA IWRG 621 Category C Upper Limit	650				10000								4										70				
EPA IWRG 621 Fill Material Upper Limit	100				1000								1										7				
Field ID	Sampled Date-Time	LocCode	Sample Depth Range																								
TP01/0.0	23/02/2017	TP01	0.0 - 0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
TP01/0.1	23/02/2017	TP01	0.1 - 0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
TP02/0.1	23/02/2017	TP02	0.1 - 0.2	<20	<20	<50	58	93	<20	<20	<20	<20	73	<50	73	<0.5	<0.5	<0.5	<1	<1	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<4.5
TP03/0.0	23/02/2017	TP03	0.0 - 0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
TP03/0.15	23/02/2017	TP03	0.15 - 0.25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
TP04/0.05	23/02/2017	TP04	0.05 - 0.15	<20	<20	<50	61	96	<20	<20	<20	<20	90	<50	90	-	-	-	-	-	-	-	-				
TP05/0.1	23/02/2017	TP05	0.1 - 0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
TP06/0.1	23/02/2017	TP06	0.1 - 0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
TP07/0.1	23/02/2017	TP07	0.1 - 0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
TP08/0.1	23/02/2017	TP08	0.1 - 0.2	<20	<20	50	76	136	<20	<20	<20	<20	110	<50	110	<0.5	<0.5	<0.5	<1	<1	<0.5	<1	<0.5	<0.5	<0.5	<4.5	
TP09/0.1	23/02/2017	TP09	0.1 - 0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					
TP10/0.1	23/02/2017	TP10	0.1 - 0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-					

Table 02
Chemical Testing Results
Former Railway Area
Soil



Halogenated Volatile Organics																					
	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,1-dichloroethene	1,1-dichloropropene	1,2,3-trichloropropane	1,2-dibromo-3-chloropropane	1,2-dibromoethane (EDB)	1,2-dichloroethane (1,2-DCA)	1,2-dichloroethene [cis]	1,2-dichloroethene [trans]	1,2-dichloropropane	1,3-dichloropropane	2,2-dichloropropane	p-chlorotoluene	m-chlorotoluene	1,3-dichloropropene [cis]	1,3-dichloropropene [trans]	
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
NEPM Amendment 2013 EIL (urban residential/public open space) - aged																					
NEPM Amendment 2013 EIL (urban residential/public open space) - fresh																					
NEPM Amendment 2013 HIL/HSL A																					
NEPM Amendment 2013 HIL/HSL B																					
NEPM Amendment 2013 HIL/HSL C																					
NEPM Amendment 2013 HIL/HSL D																					
USEPA - Region 3,6,9 - Residential Soil	1.9	8700	0.56	1.1	3.3	240		0.005	0.0054	0.034	0.43	160	150	0.94	1600		1600	1600			
EPA IWRG 621 Category B Upper Limit																					
EPA IWRG 621 Category C Upper Limit																					
EPA IWRG 621 Fill Material Upper Limit																					

Field ID	Sampled Date-Time	LocCode	Sample Depth Range	1,1,1,2-tetrachloroethane	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	1,1,2-trichloroethane	1,1-dichloroethane	1,1-dichloroethene	1,1-dichloropropene	1,2,3-trichloropropane	1,2-dibromo-3-chloropropane	1,2-dibromoethane (EDB)	1,2-dichloroethane (1,2-DCA)	1,2-dichloroethene [cis]	1,2-dichloroethene [trans]	1,2-dichloropropane	1,3-dichloropropane	2,2-dichloropropane	p-chlorotoluene	m-chlorotoluene	1,3-dichloropropene [cis]	1,3-dichloropropene [trans]
TP01/0.0	23/02/2017	TP01	0.0 - 0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP01/0.1	23/02/2017	TP01	0.1 - 0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP02/0.1	23/02/2017	TP02	0.1 - 0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP03/0.0	23/02/2017	TP03	0.0 - 0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP03/0.15	23/02/2017	TP03	0.15 - 0.25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP04/0.05	23/02/2017	TP04	0.05 - 0.15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP05/0.1	23/02/2017	TP05	0.1 - 0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP06/0.1	23/02/2017	TP06	0.1 - 0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP07/0.1	23/02/2017	TP07	0.1 - 0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP08/0.1	23/02/2017	TP08	0.1 - 0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
TP09/0.1	23/02/2017	TP09	0.1 - 0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP10/0.1	23/02/2017	TP10	0.1 - 0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 02
Chemical Testing Results
Former Railway Area
Soil



	Halogenated Volatile Organics														
	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	Carbon tetrachloride	Chlorobenzene	Chlorodibromomethane	Chloroform	Dibromomethane	Dichloromethane	Trichloroethene (TCE)	Tetrachloroethene (PCE)	Trihalomethanes	Trichlorofluoromethane	Vinyl chloride
EQL	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1	0.5	0.5	mg/kg	2	1
NEPM Amendment 2013 EIL (urban residential/public open space) - aged															
NEPM Amendment 2013 EIL (urban residential/public open space) - fresh															
NEPM Amendment 2013 HIL/HSL A															
NEPM Amendment 2013 HIL/HSL B															
NEPM Amendment 2013 HIL/HSL C															
NEPM Amendment 2013 HIL/HSL D															
USEPA - Region 3,6,9 - Residential Soil	300	160	0.27	62	0.61	290	0.68	0.29	25	11	0.91	0.55		790	0.06
EPA IWRG 621 Category B Upper Limit															4.8
EPA IWRG 621 Category C Upper Limit															1.2
EPA IWRG 621 Fill Material Upper Limit															

Field ID	Sampled Date-Time	LocCode	Sample Depth Range	Bromobenzene	Bromochloromethane	Bromodichloromethane	Bromoform	Carbon tetrachloride	Chlorobenzene	Chlorodibromomethane	Chloroform	Dibromomethane	Dichloromethane	Trichloroethene (TCE)	Tetrachloroethene (PCE)	Trihalomethanes	Trichlorofluoromethane	Vinyl chloride
TP01/0.0	23/02/2017	TP01	0.0 - 0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP01/0.1	23/02/2017	TP01	0.1 - 0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP02/0.1	23/02/2017	TP02	0.1 - 0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<2	<2	<1
TP03/0.0	23/02/2017	TP03	0.0 - 0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP03/0.15	23/02/2017	TP03	0.15 - 0.25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP04/0.05	23/02/2017	TP04	0.05 - 0.15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP05/0.1	23/02/2017	TP05	0.1 - 0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP06/0.1	23/02/2017	TP06	0.1 - 0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP07/0.1	23/02/2017	TP07	0.1 - 0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP08/0.1	23/02/2017	TP08	0.1 - 0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1	<0.5	<0.5	<2	<2	<1
TP09/0.1	23/02/2017	TP09	0.1 - 0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP10/0.1	23/02/2017	TP10	0.1 - 0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 02
Chemical Testing Results
Former Railway Area
Soil



Chlorinated Hydrocarbons																			
	1,2,3,4-tetrachlorobenzene	1,2,3,5-tetrachlorobenzene	1,2,3-trichlorobenzene	1,2,4,5-tetrachlorobenzene	1,2,4-trichlorobenzene	1,2-dichlorobenzene	1,3,5-Trichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	2-chloronaphthalene	Benzal Chloride	Benzotrifluoride	Benzyl chloride	Hexachlorobutadiene	Hexachlorocyclopentadiene	Hexachloroethane	Pentachlorobenzene	Chlorinated hydrocarbons	Other chlorinated hydrocarbons
	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
NEPM Amendment 2013 EIL (urban residential/public open space) - aged																			
NEPM Amendment 2013 EIL (urban residential/public open space) - fresh																			
NEPM Amendment 2013 HIL/HSL A																			
NEPM Amendment 2013 HIL/HSL B																			
NEPM Amendment 2013 HIL/HSL C																			
NEPM Amendment 2013 HIL/HSL D																			
USEPA - Region 3,6,9 - Residential Soil			49	18	22	1900			2.4	6300		0.049	1	6.2	370	12	49		
EPA IWRG 621 Category B Upper Limit														11					50
EPA IWRG 621 Category C Upper Limit														2.8					10
EPA IWRG 621 Fill Material Upper Limit																		1	

Field ID	Sampled Date-Time	LocCode	Sample Depth Range																	
TP01/0.0	23/02/2017	TP01	0.0 - 0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP01/0.1	23/02/2017	TP01	0.1 - 0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP02/0.1	23/02/2017	TP02	0.1 - 0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<3.1
TP03/0.0	23/02/2017	TP03	0.0 - 0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP03/0.15	23/02/2017	TP03	0.15 - 0.25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP04/0.05	23/02/2017	TP04	0.05 - 0.15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP05/0.1	23/02/2017	TP05	0.1 - 0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP06/0.1	23/02/2017	TP06	0.1 - 0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP07/0.1	23/02/2017	TP07	0.1 - 0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP08/0.1	23/02/2017	TP08	0.1 - 0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<3.1	<3
TP09/0.1	23/02/2017	TP09	0.1 - 0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP10/0.1	23/02/2017	TP10	0.1 - 0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 02
Chemical Testing Results
Former Railway Area
Soil



	Halogenated Phenols											Non Halogenated Phenols												
	2,3,4,5-tetrachlorophenol	2,3,4,6-tetrachlorophenol	2,3,5,6-tetrachlorophenol	2,4,5-trichlorophenol	2,4,6-trichlorophenol	2,4-dichlorophenol	2,6-dichlorophenol	2-chlorophenol	4-chloro-3-methylphenol	Pentachlorophenol	Phenols (Total Halogenated)	2,4-dimethylphenol	2,4-dinitrophenol	4,6-dinitro-2-methylphenol	Phenol	Cresol Total	2-nitrophenol	4-nitrophenol	4,6-Dinitro-o-cyclohexyl phenol	Dinoseb	Phenols (Total Non Halogenated)			
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	30	10	0.5	1	0.5	0.5	30	10	30			
NEPM Amendment 2013 EIL (urban residential/public open space) - aged																								
NEPM Amendment 2013 EIL (urban residential/public open space) - fresh																								
NEPM Amendment 2013 HIL/HSL A											100				3000	400								
NEPM Amendment 2013 HIL/HSL B											130				45000	4700								
NEPM Amendment 2013 HIL/HSL C											120				40000	4000								
NEPM Amendment 2013 HIL/HSL D											660				240000	25000								
USEPA - Region 3,6,9 - Residential Soil		1800		6100	44	180			390	6100	0.89								120	61				
EPA IWRG 621 Category B Upper Limit												320									2200			
EPA IWRG 621 Category C Upper Limit												10									560			
EPA IWRG 621 Fill Material Upper Limit												1									60			
Field ID	Sampled Date-Time	LocCode	Sample Depth Range	2,3,4,5-tetrachlorophenol	2,3,4,6-tetrachlorophenol	2,3,5,6-tetrachlorophenol	2,4,5-trichlorophenol	2,4,6-trichlorophenol	2,4-dichlorophenol	2,6-dichlorophenol	2-chlorophenol	4-chloro-3-methylphenol	Pentachlorophenol	Phenols (Total Halogenated)	2,4-dimethylphenol	2,4-dinitrophenol	4,6-dinitro-2-methylphenol	Phenol	Cresol Total	2-nitrophenol	4-nitrophenol	4,6-Dinitro-o-cyclohexyl phenol	Dinoseb	Phenols (Total Non Halogenated)
TP01/0.0	23/02/2017	TP01	0.0 - 0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP01/0.1	23/02/2017	TP01	0.1 - 0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP02/0.1	23/02/2017	TP02	0.1 - 0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<30	<10	<0.5	<1	<0.5	<0.5	<30	<10	<30
TP03/0.0	23/02/2017	TP03	0.0 - 0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP03/0.15	23/02/2017	TP03	0.15 - 0.25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP04/0.05	23/02/2017	TP04	0.05 - 0.15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP05/0.1	23/02/2017	TP05	0.1 - 0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP06/0.1	23/02/2017	TP06	0.1 - 0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP07/0.1	23/02/2017	TP07	0.1 - 0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP08/0.1	23/02/2017	TP08	0.1 - 0.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<30	<10	<0.5	<1	<0.5	<0.5	<30	<10	<30
TP09/0.1	23/02/2017	TP09	0.1 - 0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TP10/0.1	23/02/2017	TP10	0.1 - 0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 02
Chemical Testing Results
Former Railway Area
Soil



	Polychlorinated Biphenyls							Inorganics		
	Aroclor 1016	Aroclor 1221	Aroclor 1232	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	PCBs (sum of total)	Cyanide Total	Fluoride
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	5	100
NEPM Amendment 2013 EIL (urban residential/public open space) - aged										
NEPM Amendment 2013 EIL (urban residential/public open space) - fresh										
NEPM Amendment 2013 HIL/HSL A								1		
NEPM Amendment 2013 HIL/HSL B								1		
NEPM Amendment 2013 HIL/HSL C								1		
NEPM Amendment 2013 HIL/HSL D								7		
USEPA - Region 3,6,9 - Residential Soil	3.9	0.14	0.14	0.22	0.22	0.22	0.22		1600	3100
EPA IWRG 621 Category B Upper Limit								0	10000	40000
EPA IWRG 621 Category C Upper Limit								0	2500	10000
EPA IWRG 621 Fill Material Upper Limit								2	50	450
Field ID	Sampled Date-Time	LocCode	Sample Depth Range							
TP01/0.0	23/02/2017	TP01	0.0 - 0.1	-	-	-	-	-	-	-
TP01/0.1	23/02/2017	TP01	0.1 - 0.2	-	-	-	-	-	-	-
TP02/0.1	23/02/2017	TP02	0.1 - 0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	240
TP03/0.0	23/02/2017	TP03	0.0 - 0.1	-	-	-	-	-	-	-
TP03/0.15	23/02/2017	TP03	0.15 - 0.25	-	-	-	-	-	-	-
TP04/0.05	23/02/2017	TP04	0.05 - 0.15	-	-	-	-	-	-	-
TP05/0.1	23/02/2017	TP05	0.1 - 0.2	-	-	-	-	-	-	-
TP06/0.1	23/02/2017	TP06	0.1 - 0.2	-	-	-	-	-	-	-
TP07/0.1	23/02/2017	TP07	0.1 - 0.2	-	-	-	-	-	-	-
TP08/0.1	23/02/2017	TP08	0.1 - 0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	200
TP09/0.1	23/02/2017	TP09	0.1 - 0.2	-	-	-	-	-	-	-
TP10/0.1	23/02/2017	TP10	0.1 - 0.2	-	-	-	-	-	-	-

Table 03
Chemical Testing Results
QAQC Samples
(Duplicate and Split Samples)



SDG	17-11063	17-11063	RPD	17-11063	17-11063	RPD	17-11063	ENVIROLAB 2017-02-23	RPD			
Field ID	TP01/0.1	170223-D01		170223-SS07	170223-S-D02		TP01/0.1	TP01/0.1A				
Sampled Date/Time	23/02/2017	23/02/2017		23/02/2017	23/02/2017		23/02/2017	23/02/2017				
Chem_Group	ChemName	Units	EQL									
Heavy Metals	Aluminium	mg/kg	5	11000.0	7400.0	39	9200.0	9400.0	2	11000.0	-	-
	Antimony	mg/kg	5 (Primary): 7 (Interlab)	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<7.0	0
	Arsenic	mg/kg	5 (Primary): 4 (Interlab)	360.0	340.0	6	6.0	6.0	0	360.0	330.0	9
	Barium	mg/kg	5 (Primary): 1 (Interlab)	93.0	75.0	21	70.0	73.0	4	93.0	72.0	25
	Beryllium	mg/kg	5 (Primary): 1 (Interlab)	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<1.0	0
	Boron	mg/kg	10 (Primary): 3 (Interlab)	<10.0	<10.0	0	<10.0	<10.0	0	<10.0	8.0	0
	Cadmium	mg/kg	0.2 (Primary): 0.4 (Interlab)	<0.2	<0.2	0	<0.2	<0.2	0	<0.2	1.0	133
	Chromium (III+VI)	mg/kg	5 (Primary): 1 (Interlab)	15.0	11.0	31	<5.0	<5.0	0	15.0	12.0	22
	Cobalt	mg/kg	5 (Primary): 1 (Interlab)	8.0	6.0	29	<5.0	<5.0	0	8.0	7.0	13
	Copper	mg/kg	5 (Primary): 1 (Interlab)	32.0	30.0	6	7.0	8.0	13	32.0	34.0	6
	Iron	mg/kg	10	17000.0	17000.0	0	9200.0	8700.0	6	17000.0	-	-
	Lead	mg/kg	5 (Primary): 1 (Interlab)	19.0	27.0	35	9.0	9.0	0	19.0	16.0	17
	Manganese	mg/kg	5 (Primary): 1 (Interlab)	470.0	440.0	7	270.0	290.0	7	470.0	440.0	7
	Mercury	mg/kg	0.05 (Primary): 0.1 (Interlab)	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.1	0
	Molybdenum	mg/kg	5 (Primary): 1 (Interlab)	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<1.0	0
	Nickel	mg/kg	5 (Primary): 1 (Interlab)	28.0	16.0	55	<5.0	<5.0	0	28.0	23.0	20
	Selenium	mg/kg	3 (Primary): 2 (Interlab)	<3.0	<3.0	0	<3.0	<3.0	0	<3.0	<2.0	0
	Silver	mg/kg	5 (Primary): 1 (Interlab)	<5.0	<5.0	0	<5.0	<5.0	0	<5.0	<1.0	0
	Tin	mg/kg	5 (Primary): 1 (Interlab)	10.0	13.0	26	<5.0	<5.0	0	10.0	11.0	10
	Vanadium	mg/kg	5 (Primary): 1 (Interlab)	18.0	17.0	6	19.0	20.0	5	18.0	18.0	0
Zinc	mg/kg	5 (Primary): 1 (Interlab)	34.0	32.0	6	25.0	26.0	4	34.0	31.0	9	
PAH	Acenaphthene	mg/kg	0.1	<0.1	0	-	-	-	<0.1	<0.1	0	
	Acenaphthylene	mg/kg	0.1	<0.1	0	-	-	-	<0.1	<0.1	0	
	Anthracene	mg/kg	0.1	<0.1	0	-	-	-	<0.1	<0.1	0	
	Benzo(a)anthracene	mg/kg	0.1	<0.1	0	-	-	-	<0.1	<0.1	0	
	Benzo(a)pyrene	mg/kg	0.1 (Primary): 0.05 (Interlab)	<0.1	<0.1	0	-	-	<0.1	<0.05	0	
	Benzo(b)fluoranthene	mg/kg	0.1	<0.1	0	-	-	-	<0.1	-	-	
	Benzo(g,h,i)perylene	mg/kg	0.1	<0.1	0	-	-	-	<0.1	<0.1	0	
	Benzo(k)fluoranthene	mg/kg	0.1	<0.1	0	-	-	-	<0.1	-	-	
	Chrysene	mg/kg	0.1	<0.1	0	-	-	-	<0.1	<0.1	0	
	Dibenz(a,h)anthracene	mg/kg	0.1	<0.1	0	-	-	-	<0.1	<0.1	0	
	Fluoranthene	mg/kg	0.1	<0.1	0	-	-	-	<0.1	<0.1	0	
	Fluorene	mg/kg	0.1	<0.1	0	-	-	-	<0.1	<0.1	0	
	Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	<0.1	0	-	-	-	<0.1	<0.1	0	
	Naphthalene	mg/kg	0.1 (Primary): 1 (Interlab)	<0.1	<0.1	0	-	-	<0.1	<0.1	0	
	Phenanthrene	mg/kg	0.1	<0.1	0	-	-	-	<0.1	<0.1	0	
	Pyrene	mg/kg	0.1	<0.1	0	-	-	-	<0.1	<0.1	0	
	BaP TEQ (half LOR)	mg/kg	0.1	0.1	0	-	-	-	0.1	-	-	
	BaP TEQ (LOR)	mg/kg	0.2	0.2	0	-	-	-	0.2	-	-	
	Carcinogenic PAHs (as B(a)P TEQ)	mg/kg	0.1	<0.1	0	-	-	-	<0.1	-	-	
	PAHs (sum of total)	mg/kg	0.1 (Primary): 0.05 (Interlab)	<0.1	<0.1	0	-	-	<0.1	<0.05	0	
Organochlorine Pesticides	Aldrin	mg/kg	0.05	-	-	-	<0.05	<0.05	0	-	-	
	Aldrin + Dieldrin	mg/kg	0.05	-	-	-	<0.05	<0.05	0	-	-	
	a-BHC	mg/kg	0.05	-	-	-	<0.05	<0.05	0	-	-	
	Dieldrin	mg/kg	0.05	-	-	-	<0.05	<0.05	0	-	-	
	b-BHC	mg/kg	0.05	-	-	-	<0.05	<0.05	0	-	-	
	d-BHC	mg/kg	0.05	-	-	-	<0.05	<0.05	0	-	-	
	g-BHC (Lindane)	mg/kg	0.05	-	-	-	<0.05	<0.05	0	-	-	
	Chlordane	mg/kg	0.05	-	-	-	<0.05	<0.05	0	-	-	
	Chlordane (cis)	mg/kg	0.05	-	-	-	<0.05	<0.05	0	-	-	
	Chlordane (trans)	mg/kg	0.05	-	-	-	<0.05	<0.05	0	-	-	
	4,4-DDE	mg/kg	0.05	-	-	-	<0.05	<0.05	0	-	-	
	DDD	mg/kg	0.05	-	-	-	<0.05	<0.05	0	-	-	
	DDT	mg/kg	0.05	-	-	-	<0.05	<0.05	0	-	-	
	DDT+DDE+DDD	mg/kg	0.05	-	-	-	<0.05	<0.05	0	-	-	
	Endosulfan	mg/kg	0.05	-	-	-	<0.05	<0.05	0	-	-	
	Endosulfan I	mg/kg	0.05	-	-	-	<0.05	<0.05	0	-	-	
	Endosulfan II	mg/kg	0.05	-	-	-	<0.05	<0.05	0	-	-	
	Endosulfan sulphate	mg/kg	0.05	-	-	-	<0.05	<0.05	0	-	-	
	Endrin	mg/kg	0.05	-	-	-	<0.05	<0.05	0	-	-	
	Endrin aldehyde	mg/kg	0.05	-	-	-	<0.05	<0.05	0	-	-	
Endrin ketone	mg/kg	0.05	-	-	-	<0.05	<0.05	0	-	-		
Heptachlor	mg/kg	0.05	-	-	-	<0.05	<0.05	0	-	-		
Heptachlor epoxide	mg/kg	0.05	-	-	-	<0.05	<0.05	0	-	-		
Hexachlorobenzene	mg/kg	0.05	-	-	-	<0.05	<0.05	0	-	-		
Methoxychlor	mg/kg	0.05	-	-	-	<0.05	<0.05	0	-	-		
Oxychlorane	mg/kg	0.05	-	-	-	<0.05	<0.05	0	-	-		

*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: 50 (1-10 x EQL); 50 (10-30 x EQL); 50 (> 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

APPENDIX E NATA LABORATORY CERTIFICATES OF ANALYSIS

17-11063



Chain of Custody Form

Job number	L007074	Page	1 of 2
Laboratory	ALS Water Resources Group		
Client	Kufner Textiles (Australia) P/L		
Quote number	2013-146A LTP		
Project	Preliminary Contamination Assessment		
Project Manager	A.Mellett		
Location	Jumbunna Road, Korumburra		
Sampled by	J.Raabe, A.Mellett		

Sample ID	Date sampled	Matrix	No. of containers	Testing required							
				A-S-BEV-W5	Heavy Metals (24)	OCP	TRH	PAH			
TP01/0.0	23.2.17	S	1		X	X			X		
TP01/0.1			2		X	X			X		
TP02/0.1			2	X		X	X			X	
TP03/0.0			1			X	X	X		X	
TP03/0.15			1				X	X		X	
TP04/0.05			2				X	X	X	X	
170223-D01			1				X	X		X	
TP05/0.1			1				X	X		X	
TP06/0.1			2				X	X		X	
TP06/0.4			1				X	X		X	
TP07/0.1	1				X	X		X			
TP08/0.1	2			X							
TP09/0.1	2				X	X		X			
TP10/0.1	2				X	X		X			

CONTAMINATION RISK: High Medium Low

Notes
 Matrix: S = Soil GW = Groundwater W = Water R = Rinsate Soluble Heavy Metals: Ag, As, B, Ba, Be, Cd, Co, Cr, Cu, Hg, Mn, Mo, Ni, Pb, Sb, Se, Sn, V, Zn
 Soil: A-S-BEV-W1 (HM/OCP) A-S-BEV-W2 (HM/PAH) A-S-BEV-W3 (HM/PAH/OCP) A-S-BEV-W4 (HM/TPH/PAH) A-S-BEV-W5 (EPA 621 w/ extra metals)
 Water: A-W-BEV-W1 (EPA Table 2, TDS, pH, anions/cations, low level: PAH, OCP, TPH) A--BWANZLL (ANZECC screen, low level metals & organics)

Turnaround time 24hr 48hr 72hr Standard Comments:

From	Company	Date	Received by	Company	Date	Time
J.Raabe	Beveridge Williams	23/2/17	Guy Hill	ALS Searesby	23/2/17	1530
			Melhorn	ALS	24/2/17	1045

14°C

Quality control	Initial
Sample preservation	Appropriate sample containers used, refrigerated or chilled samples supplied to laboratory
Sample holding times	Tests conducted within specified holding times
Final certificates	Re-testing of results as requested. Tests conducted and reported as per CoC form.

JR
JR
JR

Job number		L007074	Page	2 of 2
Laboratory		ALS Water Resources Group		
Client	Kufner Textiles (Australia) P/L		Quote number	2013-146A LTP
Project	Preliminary Contamination Assessment		Project Manager	A.Mellett
Location	Jumbunna Road, Korumburra		Sampled by	J.Raabe, A.Mellett

Sample ID	Date sampled	Matrix	No. of containers	Testing required							
				A-S-BEV-W5	Heavy Metals (24)	OCP	TRH	PAH			
170223-SS01	23.2.17	S	1		XX	XX					
170223-SS02	↓	↓	↓		XX	XX					
170223-SS03					XX	XX					
170223-SS04					XX	XX					
170223-SS05					XX	XX					
170223-SS06					XX	XX			X		
170223-SS07					XX	XX					
170223-SS08					XX	XX					
170223-SS09					XX	XX					
170223-SS10					XX	XX					
170223-S-D02				↓	↓	↓		XX	XX		
170223-S-RB01											

CONTAMINATION RISK: High Medium Low

Notes
 Matrix: S = Soil GW = Groundwater W = Water R = Rinsate Soluble Heavy Metals: Ag, As, B, Ba, Be, Cd, Co, Cr, Cu, Hg, Mn, Mo, Ni, Pb, Se, Sn, V, Zn
 Soil: A-S-BEV-W1 (HM/OCP) A-S-BEV-W2 (HM/PAH) A-S-BEV-W3 (HM/PAH/OCP) A-S-BEV-W4 (HM/TPH/PAH) A-S-BEV-W5 (EPA 621 w/ extra metals)
 Water: A-W-BEV-W1 (EPA Table 2, TDS, pH, anions/cations, low level: PAH, OCP, TPH) A--BWANZLL (ANZECC screen, low level metals & organics)

Turnaround time 24hr 48hr 72hr Standard Comments:

Chain of Custody						
From	Company	Date	Received by	Company	Date	Time
J.Raabe	Beveridge Williams	23/02/17	Guy Hill	ALS SCORBY	23/2/17	1530

Quality control		Initial
Sample preservation	Appropriate sample containers used, refrigerated or chilled samples supplied to laboratory	J.R
Sample holding times	Tests conducted within specified holding times	JR
Final certificates	Re-testing of results as requested. Tests conducted and reported as per CoC form.	JR

CERTIFICATE OF ANALYSIS

Batch No: 17-11063	<i>Page</i> Page 1 of 37	
<i>Final Report</i> 612262	<i>Laboratory</i> Scoresby Laboratory	
<i>Client:</i> Beveridge Williams & Co Pty Ltd	<i>Address</i> Caribbean Business Park, 22 Dalmore Drive, Scoresby, VIC 3179	
<i>Contact:</i> Andrew Mellett	<i>Phone</i> 03 8756 8000	
<i>Address:</i> PO Box 61 MALVERN VIC 3144	<i>Fax</i> 03 9763 1862	
	<i>Contact:</i> Trang Phan Client Manager Le-Trang.Phan@alsglobal.com	
<i>Client Program Ref:</i> L007074	<i>Date Sampled:</i> 23-Feb-2017	
<i>ALS Program Ref:</i> BEWILL	<i>Date Samples Received:</i> 24-Feb-2017	
<i>PO No:</i> Not Available	<i>Date Issued:</i> 02-Mar-2017	

The sample(s) referred to in this report were analysed by the following method(s) under NATA Accreditation No. 992.
The hash (#) below indicates methods not covered by NATA accreditation in the performance of this service.

Analysis	Method	Laboratory	Analysis	Method	Laboratory	Analysis	Method	Laboratory
BTEXN	CM047	Scoresby	CHC	CM045	Scoresby	Cyanide	WK026SF	Scoresby
Total Fluoride	WK040T	Scoresby	HVOL	CM047	Scoresby	MAH	CM051 & CM047	Scoresby
MS Total Metals	WG020B	Scoresby	OCP	WP068A	Scoresby	PAH	WP075B	Scoresby
PCB	WP066	Scoresby	Phenols(Halo)	WP075A	Scoresby	Phenols(NonHalo)	WP075A	Scoresby
Total Cr 6+ DA	EG048G	Scoresby	TRH F2	# WP071	Scoresby	TRH & TPH (>C10)	WP071	Scoresby
TRH (C6-C10) & F1	CM047 (F1 not NATA)	Scoresby						

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

Signatories

These results have been electronically signed by the authorised signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11

Name	Title	Name	Title
Chatura Perera	Team Leader Nutrients	Hoa Nguyen	Analyst
Hao Zhang	Team Leader Organics	John Earl	Team Leader Metals



LOR = Limit of reporting. When a reported LOR is higher than the standard LOR, this may be due to high moisture content, insufficient sample or matrix interference.
 CAS Number = Chemistry Abstract Services Number. The analytical procedures in this report (including in house methods) are developed from internationally recognised procedures such as those published by USEPA, APHA and NEPM.

				Sample No.	5110970	5110971	5110972	5110973	5110974	5110975
				Client Sample ID	TP01/0.0	TP01/0.1	TP02/0.1	TP03/0.0	TP03/0.15	TP04/0.05
				Sample Date	23/02/17	23/02/17	23/02/17	23/02/17	23/02/17	23/02/17
				Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Analysis	Analyte	CAS #	LOR							
BTEXN	Benzene	71-43-2	<0.5	mg/kg			<0.5			
BTEXN	Toluene	108-88-3	<0.5	mg/kg			<0.5			
BTEXN	Ethyl Benzene	100-41-4	<0.5	mg/kg			<0.5			
BTEXN	Xylene - m&p	108-38-3 /	<1	mg/kg			<1			
BTEXN	Xylene - O	95-47-6	<0.5	mg/kg			<0.5			
BTEXN	Total Xylenes	1330-20-7	<1	mg/kg			<1			
BTEXN	BTEX (Sum)	BTEX	<1	mg/kg			<1			
Analysis	Analyte	CAS #	LOR							
CHC	1,2,3,4-Tetrachlorobenzene	634-66-2	<0.1	mg/kg			<0.1			
CHC	1,2,3,5-Tetrachlorobenzene	634-90-2	<0.1	mg/kg			<0.1			
CHC	1,2,3-Trichlorobenzene	87-61-6	<0.1	mg/kg			<0.1			
CHC	1,2,4,5-Tetrachlorobenzene	95-94-3	<0.1	mg/kg			<0.1			
CHC	1,2,4-Trichlorobenzene	120-82-1	<0.1	mg/kg			<0.1			
CHC	1,2-Dichlorobenzene	95-50-1	<0.1	mg/kg			<0.1			
CHC	1,3,5-Trichlorobenzene	108-70-3	<0.1	mg/kg			<0.1			
CHC	1,3-Dichlorobenzene	541-73-1	<0.1	mg/kg			<0.1			
CHC	1,4-Dichlorobenzene	106-46-7	<0.1	mg/kg			<0.1			
CHC	2-Chloronaphthalene	91-58-7	<0.1	mg/kg			<0.1			
CHC	Benzal Chloride	98-87-3	<0.1	mg/kg			<0.1			
CHC	Benzotrichloride	98-07-7	<0.1	mg/kg			<0.1			
CHC	Benzylchloride	100-44-7	<0.1	mg/kg			<0.1			
CHC	Hexachloroethane	67-72-1	<0.1	mg/kg			<0.1			
CHC	Hexachlorobutadiene	87-68-3	<0.1	mg/kg			<0.1			
CHC	Hexachlorocyclopentadiene	77-47-4	<0.1	mg/kg			<0.1			
CHC	Pentachlorobenzene	608-93-5	<0.1	mg/kg			<0.1			
Analysis	Analyte	CAS #	LOR							
HVOL	1,1,1,2-Tetrachloroethane	630-20-6	<0.5	mg/kg			<0.5			
HVOL	1,1,2,2-Tetrachloroethane	79-34-5	<0.5	mg/kg			<0.5			
HVOL	1,1- Dichloroethane	75-34-3	<0.5	mg/kg			<0.5			

Samples not collected by ALS and are tested as received.

A blank space indicates no test performed. Soil results expressed in mg/kg dry weight unless specified otherwise. Microbiological testing was commenced on the day of receipt and within 24 hours of sampling unless otherwise stated. MM524: Plate count results <10 per mL and >300 per mL are deemed as approximate. MM526: Plate count results <2,500 per mL and >250,000 per mL are deemed as approximate. Calculated results are based on raw data.



				Sample No.	5110970	5110971	5110972	5110973	5110974	5110975
				Client Sample ID	TP01/0.0	TP01/0.1	TP02/0.1	TP03/0.0	TP03/0.15	TP04/0.05
				Sample Date	23/02/17	23/02/17	23/02/17	23/02/17	23/02/17	23/02/17
				Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Analysis	Analyte	CAS #	LOR							
HVOL	1,1-Dichloroethene	75-35-4	<0.5	mg/kg			<0.5			
HVOL	1,1-Dichloropropene	563-58-6	<0.5	mg/kg			<0.5			
HVOL	1,2,3-Trichloropropane	96-18-4	<0.5	mg/kg			<0.5			
HVOL	1,2-Dibromo-3-Chloropropane	96-12-8	<0.5	mg/kg			<0.5			
HVOL	1,2-Dichloroethene [cis]	540-59-0(cis)	<0.5	mg/kg			<0.5			
HVOL	1,2-Dichloroethene [trans]	540-59-0(trans)	<0.5	mg/kg			<0.5			
HVOL	1,2-Dichloroethane	107-06-2	<0.5	mg/kg			<0.5			
HVOL	1,2-Dichloropropane	78-87-5	<0.5	mg/kg			<0.5			
HVOL	1,3-Dichloropropane	142-28-9	<0.5	mg/kg			<0.5			
HVOL	1,3-Dichloropropene [cis]	10061-01-5	<0.5	mg/kg			<0.5			
HVOL	1,3-Dichloropropene [trans]	10061-02-6	<0.5	mg/kg			<0.5			
HVOL	2,2-Dichloropropane	594-20-7	<0.5	mg/kg			<0.5			
HVOL	2-Chlorotoluene	95-49-8	<0.5	mg/kg			<0.5			
HVOL	4-Chlorotoluene	106-43-4	<0.5	mg/kg			<0.5			
HVOL	Bromochloromethane	74-97-5	<0.5	mg/kg			<0.5			
HVOL	Bromodichloromethane	75-27-4	<0.5	mg/kg			<0.5			
HVOL	Bromobenzene	108-86-1	<0.5	mg/kg			<0.5			
HVOL	Bromoform (Tribromomethane)	75-25-2	<0.5	mg/kg			<0.5			
HVOL	Carbon Tetrachloride	56-23-5	<0.5	mg/kg			<0.5			
HVOL	Chloroform (Trichloromethane)	67-66-3	<0.5	mg/kg			<0.5			
HVOL	Chlorobenzene	108-90-7	<0.5	mg/kg			<0.5			
HVOL	Dibromochloromethane	124-48-1	<0.5	mg/kg			<0.5			
HVOL	Dibromomethane	74-95-3	<0.5	mg/kg			<0.5			
HVOL	1,2-Dibromoethane	106-93-4	<0.5	mg/kg			<0.5			
HVOL	Dichloromethane	75-09-2	<1	mg/kg			<1			
HVOL	Trichlorofluoromethane (CFC11)	75-69-4	<2	mg/kg			<2			
HVOL	Tetrachloroethene	127-18-4	<0.5	mg/kg			<0.5			
HVOL	Vinyl Chloride (Monomer)	75-01-4	<1	mg/kg			<1			
HVOL	1,1,1-Trichloroethane	71-55-6	<0.5	mg/kg			<0.5			
HVOL	1,1,2-Trichloroethane	79-00-5	<0.5	mg/kg			<0.5			
HVOL	Trichloroethene	79-01-6	<0.5	mg/kg			<0.5			

Samples not collected by ALS and are tested as received.

A blank space indicates no test performed. Soil results expressed in mg/kg dry weight unless specified otherwise. Microbiological testing was commenced on the day of receipt and within 24 hours of sampling unless otherwise stated. MM524: Plate count results <10 per mL and >300 per mL are deemed as approximate. MM526: Plate count results <2,500 per mL and >250,000 per mL are deemed as approximate. Calculated results are based on raw data.



					Sample No.	5110970	5110971	5110972	5110973	5110974	5110975
					Client Sample ID	TP01/0.0	TP01/0.1	TP02/0.1	TP03/0.0	TP03/0.15	TP04/0.05
					Sample Date	23/02/17	23/02/17	23/02/17	23/02/17	23/02/17	23/02/17
					Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
MAH	Styrene	100-42-5	<0.5	mg/kg				<0.5			
MAH	Cumene	98-82-8	<0.5	mg/kg				<0.5			
MAH	1,2,4-Trimethylbenzene	95-63-6	<0.5	mg/kg				<0.5			
Analysis	Analyte	CAS #	LOR								
OCP	BHC (alpha isomer)	319-84-6	<0.05	mg/kg	<0.05			<0.05	<0.05		
OCP	a-Endosulphan	959-98-8	<0.05	mg/kg	<0.05			<0.05	<0.05		
OCP	Aldrin	309-00-2	<0.05	mg/kg	<0.05			<0.05	<0.05		
OCP	BHC (beta isomer)	319-85-7	<0.05	mg/kg	<0.05			<0.05	<0.05		
OCP	b-Endosulphan	33213-65-9	<0.05	mg/kg	<0.05			<0.05	<0.05		
OCP	Chlordane	57-74-9	<0.05	mg/kg	<0.05			<0.05	<0.05		
OCP	cis-Chlordane	5103-71-9	<0.05	mg/kg	<0.05			<0.05	<0.05		
OCP	trans-Chlordane	5103-74-2	<0.05	mg/kg	<0.05			<0.05	<0.05		
OCP	BHC (delta isomer)	319-86-8	<0.05	mg/kg	<0.05			<0.05	<0.05		
OCP	DDD	72-54-8	<0.05	mg/kg	<0.05			<0.05	<0.05		
OCP	DDE	72-55-9	<0.05	mg/kg	<0.05			<0.05	<0.05		
OCP	DDT	50-29-3	<0.05	mg/kg	<0.05			<0.05	<0.05		
OCP	Dieldrin	60-57-1	<0.05	mg/kg	<0.05			<0.05	<0.05		
OCP	Sum of alpha-, beta- and Endosulphan	115-29-7	<0.05	mg/kg	<0.05			<0.05	<0.05		
OCP	Endosulfan Sulfate	1031-07-8	<0.05	mg/kg	<0.05			<0.05	<0.05		
OCP	Endrin	72-20-8	<0.05	mg/kg	<0.05			<0.05	<0.05		
OCP	Endrin Aldehyde	7421-93-4	<0.05	mg/kg	<0.05			<0.05	<0.05		
OCP	Endrin Ketone	53494-70-5	<0.05	mg/kg	<0.05			<0.05	<0.05		
OCP	Hexachlorobenzene	118-74-1	<0.05	mg/kg	<0.05			<0.05	<0.05		
OCP	Heptachlor Epoxide	1024-57-3	<0.05	mg/kg	<0.05			<0.05	<0.05		
OCP	Heptachlor	76-44-8	<0.05	mg/kg	<0.05			<0.05	<0.05		
OCP	BHC (gamma isomer) [Lindane]	58-89-9	<0.05	mg/kg	<0.05			<0.05	<0.05		
OCP	Methoxychlor	72-43-5	<0.05	mg/kg	<0.05			<0.05	<0.05		
OCP	Oxychlordane	27304-13-8	<0.05	mg/kg	<0.05			<0.05	<0.05		
OCP	Sum of DDD, DDE and DDT	DDT+DDE+DD	<0.05	mg/kg	<0.05			<0.05	<0.05		
OCP	Sum of Aldrin and Dieldrin	309-00-2 +	<0.05	mg/kg	<0.05			<0.05	<0.05		
Analysis	Analyte	CAS #	LOR								
PAH	Acenaphthene	83-32-9	<0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

Samples not collected by ALS and are tested as received.

A blank space indicates no test performed. Soil results expressed in mg/kg dry weight unless specified otherwise. Microbiological testing was commenced on the day of receipt and within 24 hours of sampling unless otherwise stated. MM524: Plate count results <10 per mL and >300 per mL are deemed as approximate. MM526: Plate count results <2,500 per mL and >250,000 per mL are deemed as approximate. Calculated results are based on raw data.



					Sample No.	5110970	5110971	5110972	5110973	5110974	5110975
					Client Sample ID	TP01/0.0	TP01/0.1	TP02/0.1	TP03/0.0	TP03/0.15	TP04/0.05
					Sample Date	23/02/17	23/02/17	23/02/17	23/02/17	23/02/17	23/02/17
					Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
PAH	Acenaphthylene	208-96-8	<0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
PAH	Anthracene	120-12-7	<0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
PAH	Benz(a)anthracene	56-55-3	<0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
PAH	Benzo(a)pyrene	50-32-8	<0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
PAH	Benzo(b)fluoranthene	205-99-2	<0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
PAH	Benzo(g,h,i)perylene	191-24-2	<0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
PAH	Benzo(k)fluoranthene	207-08-9	<0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
PAH	Chrysene	218-01-9	<0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
PAH	Dibenz(a,h)anthracene	53-70-3	<0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
PAH	Fluoranthene	206-44-0	<0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
PAH	Fluorene	86-73-7	<0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
PAH	Indeno(1,2,3-cd)pyrene	193-39-5	<0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
PAH	Naphthalene	91-20-3	<0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
PAH	Phenanthrene	85-01-8	<0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
PAH	Pyrene	129-00-0	<0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
PAH	Total PAH	TOTALPAH	<0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
PAH	BaP TEQ (zero)	BaP_TEQ_0xE	<0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
PAH	BaP TEQ (half LOR)	BaP_TEQ_0.5x	<0.1	mg/kg	0.1	0.1	0.1	0.1	0.1	0.1	0.1
PAH	BaP TEQ (LOR)	BaP_TEQ_1.0x	0.2	mg/kg	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Analysis	Analyte	CAS #	LOR								
PCB	Aroclor 1016	12674-11-2	<0.1	mg/kg			<0.1				
PCB	Aroclor 1221	11104-28-2	<0.1	mg/kg			<0.1				
PCB	Aroclor 1232	11141-16-5	<0.1	mg/kg			<0.1				
PCB	Aroclor 1242	53469-21-9	<0.1	mg/kg			<0.1				
PCB	Aroclor 1248	12672-29-6	<0.1	mg/kg			<0.1				
PCB	Aroclor 1254	11097-69-1	<0.1	mg/kg			<0.1				
PCB	Aroclor 1260	11096-82-5	<0.1	mg/kg			<0.1				
PCB	Total PCBs	1336-36-3	<0.1	mg/kg			<0.1				
Analysis	Analyte	CAS #	LOR								
Phenols(Halo)	4-Chloro-3-Methylphenol	59-50-7	<0.5	mg/kg			<0.5				
Phenols(Halo)	2-Chlorophenol	95-57-8	<0.5	mg/kg			<0.5				
Phenols(Halo)	2,4-Dichlorophenol	120-83-2	<0.5	mg/kg			<0.5				

Samples not collected by ALS and are tested as received.

A blank space indicates no test performed. Soil results expressed in mg/kg dry weight unless specified otherwise. Microbiological testing was commenced on the day of receipt and within 24 hours of sampling unless otherwise stated. MM524: Plate count results <10 per mL and >300 per mL are deemed as approximate. MM526: Plate count results <2,500 per mL and >250,000 per mL are deemed as approximate. Calculated results are based on raw data.



				Sample No.	5110970	5110971	5110972	5110973	5110974	5110975
				Client Sample ID	TP01/0.0	TP01/0.1	TP02/0.1	TP03/0.0	TP03/0.15	TP04/0.05
				Sample Date	23/02/17	23/02/17	23/02/17	23/02/17	23/02/17	23/02/17
				Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Phenols(Halo)	2,6-Dichlorophenol	87-65-0	<0.5	mg/kg			<0.5			
Phenols(Halo)	Pentachlorophenol	87-86-5	<0.5	mg/kg			<0.5			
Phenols(Halo)	2,3,4,5-Tetrachlorophenol	4901-51-3	<0.5	mg/kg			<0.5			
Phenols(Halo)	2,3,4,6-Tetrachlorophenol	58-90-2	<0.5	mg/kg			<0.5			
Phenols(Halo)	2,3,5,6-Tetrachlorophenol	935-95-5	<0.5	mg/kg			<0.5			
Phenols(Halo)	2,4,5-Trichlorophenol	95-95-4	<0.5	mg/kg			<0.5			
Phenols(Halo)	2,4,6-Trichlorophenol	88-06-2	<0.5	mg/kg			<0.5			
Phenols(Halo)	Total Phenols (Halogenated)	64743-03-9(Hal	<0.5	mg/kg			<0.5			
Analysis	Analyte	CAS #	LOR							
Phenols(NonHalo)	Phenol	108-95-2	<0.5	mg/kg			<0.5			
Phenols(NonHalo)	Total Cresols	1319-77-3	<1	mg/kg			<1			
Phenols(NonHalo)	2,4-Dimethylphenol	105-67-9	<0.5	mg/kg			<0.5			
Phenols(NonHalo)	2,4-Dinitrophenol	51-28-5	<30	mg/kg			<30			
Phenols(NonHalo)	2-Methyl-4,6-Dinitrophenol	534-52-1	<10	mg/kg			<10			
Phenols(NonHalo)	2-Nitrophenol	88-75-5	<0.5	mg/kg			<0.5			
Phenols(NonHalo)	4-Nitrophenol	100-02-7	<0.5	mg/kg			<0.5			
Phenols(NonHalo)	2-Cyclohexyl-4,6-Dinitrophenol	131-89-5	<30	mg/kg			<30			
Phenols(NonHalo)	Dinoseb	88-85-7	<10	mg/kg			<10			
Phenols(NonHalo)	Total Phenols (non Halogenated)	64743-03-9(Non	<30	mg/kg			<30			
Analysis	Analyte	CAS #	LOR							
Total Fluoride	Total Fluoride, as F	16984-48-8	<100	mg/kg			240			
Cyanide	Cyanide, as CN	57-12-5	<5	mg/kg			<5			
Total Cr 6+ DA	Hexavalent Chromium (Total) Soil DA	18540-29-9	<1	mg/kg			<1			
Analysis	Analyte	CAS #	LOR							
MS Total Metals	Aluminium	7429-90-5	<5	mg/kg	10000	11000		15000	13000	12000
MS Total Metals	Antimony	7440-36-0	<5	mg/kg	<5	<5	<5	<5	<5	<5
MS Total Metals	Arsenic	7440-38-2	<5	mg/kg	110	360	240	38	130	230
MS Total Metals	Barium	7440-39-3	<5	mg/kg	89	93	110	160	130	140
MS Total Metals	Beryllium	7440-41-7	<5	mg/kg	<5	<5	<5	<5	<5	<5
MS Total Metals	Boron	7440-42-8	<10	mg/kg	<10	<10	<10	<10	<10	<10
MS Total Metals	Cadmium	7440-43-9	<0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
MS Total Metals	Chromium	7440-47-3	<5	mg/kg	11	15	21	9	14	39
MS Total Metals	Cobalt	7440-48-4	<5	mg/kg	6	8	8	6	6	11

Samples not collected by ALS and are tested as received.

A blank space indicates no test performed. Soil results expressed in mg/kg dry weight unless specified otherwise. Microbiological testing was commenced on the day of receipt and within 24 hours of sampling unless otherwise stated. MM524: Plate count results <10 per mL and >300 per mL are deemed as approximate. MM526: Plate count results <2,500 per mL and >250,000 per mL are deemed as approximate. Calculated results are based on raw data.



					Sample No.	5110970	5110971	5110972	5110973	5110974	5110975
					Client Sample ID	TP01/0.0	TP01/0.1	TP02/0.1	TP03/0.0	TP03/0.15	TP04/0.05
					Sample Date	23/02/17	23/02/17	23/02/17	23/02/17	23/02/17	23/02/17
					Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
MS Total Metals	Copper	7440-50-8	<5	mg/kg		17	32	35	18	22	33
MS Total Metals	Iron	7439-89-6	<10	mg/kg		15000	17000		12000	17000	30000
MS Total Metals	Lead	7439-92-1	<5	mg/kg		18	19	22	15	18	41
MS Total Metals	Manganese	7439-96-5	<5	mg/kg		720	470	340	250	230	660
MS Total Metals	Mercury	7439-97-6	<0.05	mg/kg		<0.05	<0.05	0.06	0.05	<0.05	0.05
MS Total Metals	Molybdenum	7439-98-7	<5	mg/kg		<5	<5	<5	<5	<5	<5
MS Total Metals	Nickel	7440-02-0	<5	mg/kg		14	28	31	11	18	66
MS Total Metals	Selenium	7782-49-2	<3	mg/kg		<3	<3	<3	<3	<3	<3
MS Total Metals	Silver	7440-22-4	<5	mg/kg		<5	<5	<5	<5	<5	<5
MS Total Metals	Tin	7440-31-5	<5	mg/kg		5	10	6	<5	<5	15
MS Total Metals	Vanadium	7440-62-2	<5	mg/kg		23	18	24	20	33	28
MS Total Metals	Zinc	7440-66-6	<5	mg/kg		55	34	43	40	38	48
Analysis	Analyte	CAS #	LOR								
TRH (C6-C10) &	TPHC6-C9	C6-C9	<20	mg/kg				<20			<20
TRH (C6-C10) &	TRHC6-C10	C6-C10	<20	mg/kg				<20			<20
TRH (C6-C10) &	TRHC6-C10 minus BTEX	F1-BTEX	<20	mg/kg				<20			<20
Analysis	Analyte	CAS #	LOR								
TRH F2	TRH>C10-C16 minus Naphthalene	F2-NAPHTHAL	<20	mg/kg				<20			<20
TRH & TPH	TPH C10-C14	C10-C14	<20	mg/kg				<20			<20
TRH & TPH	TPH C15-C28	C15-C28	<50	mg/kg				<50			<50
TRH & TPH	TPH C29-C36	C29-C36	<50	mg/kg				58			61
TRH & TPH	TRH>C10-C16	C10-C16	<20	mg/kg				<20			<20
TRH & TPH	TRH>C16-C34	C16-C34	<50	mg/kg				73			90
TRH & TPH	TRH>C34-C40	C34-C40	<50	mg/kg				<50			<50
TRH & TPH	Sum of TRH>C10-C40	C10-C40	<50	mg/kg				73			90

Samples not collected by ALS and are tested as received.

A blank space indicates no test performed. Soil results expressed in mg/kg dry weight unless specified otherwise. Microbiological testing was commenced on the day of receipt and within 24 hours of sampling unless otherwise stated. MM524: Plate count results <10 per mL and >300 per mL are deemed as approximate. MM526: Plate count results <2,500 per mL and >250,000 per mL are deemed as approximate. Calculated results are based on raw data.



LOR = Limit of reporting. When a reported LOR is higher than the standard LOR, this may be due to high moisture content, insufficient sample or matrix interference.
 CAS Number = Chemistry Abstract Services Number. The analytical procedures in this report (including in house methods) are developed from internationally recognised procedures such as those published by USEPA, APHA and NEPM.

				Sample No.	5110976	5110977	5110978	5110980	5110981	5110982
				Client Sample ID	170223-D01	TP05/0.1	TP06/0.1	TP07/0.1	TP08/0.1	TP09/0.1
				Sample Date	23/02/17	23/02/17	23/02/17	23/02/17	23/02/17	23/02/17
				Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Analysis	Analyte	CAS #	LOR							
BTEXN	Benzene	71-43-2	<0.5 mg/kg						<0.5	
BTEXN	Toluene	108-88-3	<0.5 mg/kg						<0.5	
BTEXN	Ethyl Benzene	100-41-4	<0.5 mg/kg						<0.5	
BTEXN	Xylene - m&p	108-38-3 /	<1 mg/kg						<1	
BTEXN	Xylene - O	95-47-6	<0.5 mg/kg						<0.5	
BTEXN	Total Xylenes	1330-20-7	<1 mg/kg						<1	
BTEXN	BTEX (Sum)	BTEX	<1 mg/kg						<1	
Analysis	Analyte	CAS #	LOR							
CHC	1,2,3,4-Tetrachlorobenzene	634-66-2	<0.1 mg/kg						<0.1	
CHC	1,2,3,5-Tetrachlorobenzene	634-90-2	<0.1 mg/kg						<0.1	
CHC	1,2,3-Trichlorobenzene	87-61-6	<0.1 mg/kg						<0.1	
CHC	1,2,4,5-Tetrachlorobenzene	95-94-3	<0.1 mg/kg						<0.1	
CHC	1,2,4-Trichlorobenzene	120-82-1	<0.1 mg/kg						<0.1	
CHC	1,2-Dichlorobenzene	95-50-1	<0.1 mg/kg						<0.1	
CHC	1,3,5-Trichlorobenzene	108-70-3	<0.1 mg/kg						<0.1	
CHC	1,3-Dichlorobenzene	541-73-1	<0.1 mg/kg						<0.1	
CHC	1,4-Dichlorobenzene	106-46-7	<0.1 mg/kg						<0.1	
CHC	2-Chloronaphthalene	91-58-7	<0.1 mg/kg						<0.1	
CHC	Benzal Chloride	98-87-3	<0.1 mg/kg						<0.1	
CHC	Benzotrichloride	98-07-7	<0.1 mg/kg						<0.1	
CHC	Benzylchloride	100-44-7	<0.1 mg/kg						<0.1	
CHC	Hexachloroethane	67-72-1	<0.1 mg/kg						<0.1	
CHC	Hexachlorobutadiene	87-68-3	<0.1 mg/kg						<0.1	
CHC	Hexachlorocyclopentadiene	77-47-4	<0.1 mg/kg						<0.1	
CHC	Pentachlorobenzene	608-93-5	<0.1 mg/kg						<0.1	
Analysis	Analyte	CAS #	LOR							
HVOL	1,1,1,2-Tetrachloroethane	630-20-6	<0.5 mg/kg						<0.5	
HVOL	1,1,2,2-Tetrachloroethane	79-34-5	<0.5 mg/kg						<0.5	
HVOL	1,1- Dichloroethane	75-34-3	<0.5 mg/kg						<0.5	

Samples not collected by ALS and are tested as received.

A blank space indicates no test performed. Soil results expressed in mg/kg dry weight unless specified otherwise. Microbiological testing was commenced on the day of receipt and within 24 hours of sampling unless otherwise stated. MM524: Plate count results <10 per mL and >300 per mL are deemed as approximate. MM526: Plate count results <2,500 per mL and >250,000 per mL are deemed as approximate. Calculated results are based on raw data.



				Sample No.	5110976	5110977	5110978	5110980	5110981	5110982
				Client Sample ID	170223-D01	TP05/0.1	TP06/0.1	TP07/0.1	TP08/0.1	TP09/0.1
				Sample Date	23/02/17	23/02/17	23/02/17	23/02/17	23/02/17	23/02/17
				Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Analysis	Analyte	CAS #	LOR							
HVOL	1,1-Dichloroethene	75-35-4	<0.5	mg/kg					<0.5	
HVOL	1,1-Dichloropropene	563-58-6	<0.5	mg/kg					<0.5	
HVOL	1,2,3-Trichloropropane	96-18-4	<0.5	mg/kg					<0.5	
HVOL	1,2-Dibromo-3-Chloropropane	96-12-8	<0.5	mg/kg					<0.5	
HVOL	1,2-Dichloroethene [cis]	540-59-0(cis)	<0.5	mg/kg					<0.5	
HVOL	1,2-Dichloroethene [trans]	540-59-0(trans)	<0.5	mg/kg					<0.5	
HVOL	1,2-Dichloroethane	107-06-2	<0.5	mg/kg					<0.5	
HVOL	1,2-Dichloropropane	78-87-5	<0.5	mg/kg					<0.5	
HVOL	1,3-Dichloropropane	142-28-9	<0.5	mg/kg					<0.5	
HVOL	1,3-Dichloropropene [cis]	10061-01-5	<0.5	mg/kg					<0.5	
HVOL	1,3-Dichloropropene [trans]	10061-02-6	<0.5	mg/kg					<0.5	
HVOL	2,2-Dichloropropane	594-20-7	<0.5	mg/kg					<0.5	
HVOL	2-Chlorotoluene	95-49-8	<0.5	mg/kg					<0.5	
HVOL	4-Chlorotoluene	106-43-4	<0.5	mg/kg					<0.5	
HVOL	Bromochloromethane	74-97-5	<0.5	mg/kg					<0.5	
HVOL	Bromodichloromethane	75-27-4	<0.5	mg/kg					<0.5	
HVOL	Bromobenzene	108-86-1	<0.5	mg/kg					<0.5	
HVOL	Bromoform (Tribromomethane)	75-25-2	<0.5	mg/kg					<0.5	
HVOL	Carbon Tetrachloride	56-23-5	<0.5	mg/kg					<0.5	
HVOL	Chloroform (Trichloromethane)	67-66-3	<0.5	mg/kg					<0.5	
HVOL	Chlorobenzene	108-90-7	<0.5	mg/kg					<0.5	
HVOL	Dibromochloromethane	124-48-1	<0.5	mg/kg					<0.5	
HVOL	Dibromomethane	74-95-3	<0.5	mg/kg					<0.5	
HVOL	1,2-Dibromoethane	106-93-4	<0.5	mg/kg					<0.5	
HVOL	Dichloromethane	75-09-2	<1	mg/kg					<1	
HVOL	Trichlorofluoromethane (CFC11)	75-69-4	<2	mg/kg					<2	
HVOL	Tetrachloroethene	127-18-4	<0.5	mg/kg					<0.5	
HVOL	Vinyl Chloride (Monomer)	75-01-4	<1	mg/kg					<1	
HVOL	1,1,1-Trichloroethane	71-55-6	<0.5	mg/kg					<0.5	
HVOL	1,1,2-Trichloroethane	79-00-5	<0.5	mg/kg					<0.5	
HVOL	Trichloroethene	79-01-6	<0.5	mg/kg					<0.5	

Samples not collected by ALS and are tested as received.

A blank space indicates no test performed. Soil results expressed in mg/kg dry weight unless specified otherwise. Microbiological testing was commenced on the day of receipt and within 24 hours of sampling unless otherwise stated. MM524: Plate count results <10 per mL and >300 per mL are deemed as approximate. MM526: Plate count results <2,500 per mL and >250,000 per mL are deemed as approximate. Calculated results are based on raw data.



					Sample No.	5110976	5110977	5110978	5110980	5110981	5110982
					Client Sample ID	170223-D01	TP05/0.1	TP06/0.1	TP07/0.1	TP08/0.1	TP09/0.1
					Sample Date	23/02/17	23/02/17	23/02/17	23/02/17	23/02/17	23/02/17
					Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
MAH	Styrene	100-42-5	<0.5	mg/kg						<0.5	
MAH	Cumene	98-82-8	<0.5	mg/kg						<0.5	
MAH	1,2,4-Trimethylbenzene	95-63-6	<0.5	mg/kg						<0.5	
Analysis	Analyte	CAS #	LOR								
OCP	BHC (alpha isomer)	319-84-6	<0.05	mg/kg						<0.05	
OCP	a-Endosulphan	959-98-8	<0.05	mg/kg						<0.05	
OCP	Aldrin	309-00-2	<0.05	mg/kg						<0.05	
OCP	BHC (beta isomer)	319-85-7	<0.05	mg/kg						<0.05	
OCP	b-Endosulphan	33213-65-9	<0.05	mg/kg						<0.05	
OCP	Chlordane	57-74-9	<0.05	mg/kg						<0.05	
OCP	cis-Chlordane	5103-71-9	<0.05	mg/kg						<0.05	
OCP	trans-Chlordane	5103-74-2	<0.05	mg/kg						<0.05	
OCP	BHC (delta isomer)	319-86-8	<0.05	mg/kg						<0.05	
OCP	DDD	72-54-8	<0.05	mg/kg						<0.05	
OCP	DDE	72-55-9	<0.05	mg/kg						<0.05	
OCP	DDT	50-29-3	<0.05	mg/kg						<0.05	
OCP	Dieldrin	60-57-1	<0.05	mg/kg						<0.05	
OCP	Sum of alpha-, beta- and Endosulphan	115-29-7	<0.05	mg/kg						<0.05	
OCP	Endosulfan Sulfate	1031-07-8	<0.05	mg/kg						<0.05	
OCP	Endrin	72-20-8	<0.05	mg/kg						<0.05	
OCP	Endrin Aldehyde	7421-93-4	<0.05	mg/kg						<0.05	
OCP	Endrin Ketone	53494-70-5	<0.05	mg/kg						<0.05	
OCP	Hexachlorobenzene	118-74-1	<0.05	mg/kg						<0.05	
OCP	Heptachlor Epoxide	1024-57-3	<0.05	mg/kg						<0.05	
OCP	Heptachlor	76-44-8	<0.05	mg/kg						<0.05	
OCP	BHC (gamma isomer) [Lindane]	58-89-9	<0.05	mg/kg						<0.05	
OCP	Methoxychlor	72-43-5	<0.05	mg/kg						<0.05	
OCP	Oxychlordane	27304-13-8	<0.05	mg/kg						<0.05	
OCP	Sum of DDD, DDE and DDT	DDT+DDE+DD	<0.05	mg/kg						<0.05	
OCP	Sum of Aldrin and Dieldrin	309-00-2 +	<0.05	mg/kg						<0.05	
Analysis	Analyte	CAS #	LOR								
PAH	Acenaphthene	83-32-9	<0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

Samples not collected by ALS and are tested as received.

A blank space indicates no test performed. Soil results expressed in mg/kg dry weight unless specified otherwise. Microbiological testing was commenced on the day of receipt and within 24 hours of sampling unless otherwise stated. MM524: Plate count results <10 per mL and >300 per mL are deemed as approximate. MM526: Plate count results <2,500 per mL and >250,000 per mL are deemed as approximate. Calculated results are based on raw data.



					Sample No.	5110976	5110977	5110978	5110980	5110981	5110982
					Client Sample ID	170223-D01	TP05/0.1	TP06/0.1	TP07/0.1	TP08/0.1	TP09/0.1
					Sample Date	23/02/17	23/02/17	23/02/17	23/02/17	23/02/17	23/02/17
					Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
PAH	Acenaphthylene	208-96-8	<0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
PAH	Anthracene	120-12-7	<0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
PAH	Benz(a)anthracene	56-55-3	<0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
PAH	Benzo(a)pyrene	50-32-8	<0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
PAH	Benzo(b)fluoranthene	205-99-2	<0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
PAH	Benzo(g,h,i)perylene	191-24-2	<0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
PAH	Benzo(k)fluoranthene	207-08-9	<0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
PAH	Chrysene	218-01-9	<0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
PAH	Dibenz(a,h)anthracene	53-70-3	<0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
PAH	Fluoranthene	206-44-0	<0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1
PAH	Fluorene	86-73-7	<0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
PAH	Indeno(1,2,3-cd)pyrene	193-39-5	<0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
PAH	Naphthalene	91-20-3	<0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
PAH	Phenanthrene	85-01-8	<0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
PAH	Pyrene	129-00-0	<0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
PAH	Total PAH	TOTALPAH	<0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1
PAH	BaP TEQ (zero)	BaP_TEQ_0xE	<0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
PAH	BaP TEQ (half LOR)	BaP_TEQ_0.5x	<0.1	mg/kg	0.1	0.1	0.1	0.1	0.1	0.1	0.1
PAH	BaP TEQ (LOR)	BaP_TEQ_1.0x	0.2	mg/kg	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Analysis	Analyte	CAS #	LOR								
PCB	Aroclor 1016	12674-11-2	<0.1	mg/kg						<0.1	
PCB	Aroclor 1221	11104-28-2	<0.1	mg/kg						<0.1	
PCB	Aroclor 1232	11141-16-5	<0.1	mg/kg						<0.1	
PCB	Aroclor 1242	53469-21-9	<0.1	mg/kg						<0.1	
PCB	Aroclor 1248	12672-29-6	<0.1	mg/kg						<0.1	
PCB	Aroclor 1254	11097-69-1	<0.1	mg/kg						<0.1	
PCB	Aroclor 1260	11096-82-5	<0.1	mg/kg						<0.1	
PCB	Total PCBs	1336-36-3	<0.1	mg/kg						<0.1	
Analysis	Analyte	CAS #	LOR								
Phenols(Halo)	4-Chloro-3-Methylphenol	59-50-7	<0.5	mg/kg						<0.5	
Phenols(Halo)	2-Chlorophenol	95-57-8	<0.5	mg/kg						<0.5	
Phenols(Halo)	2,4-Dichlorophenol	120-83-2	<0.5	mg/kg						<0.5	

Samples not collected by ALS and are tested as received.

A blank space indicates no test performed. Soil results expressed in mg/kg dry weight unless specified otherwise. Microbiological testing was commenced on the day of receipt and within 24 hours of sampling unless otherwise stated. MM524: Plate count results <10 per mL and >300 per mL are deemed as approximate. MM526: Plate count results <2,500 per mL and >250,000 per mL are deemed as approximate. Calculated results are based on raw data.



				Sample No.	5110976	5110977	5110978	5110980	5110981	5110982
				Client Sample ID	170223-D01	TP05/0.1	TP06/0.1	TP07/0.1	TP08/0.1	TP09/0.1
				Sample Date	23/02/17	23/02/17	23/02/17	23/02/17	23/02/17	23/02/17
				Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Phenols(Halo)	2,6-Dichlorophenol	87-65-0	<0.5	mg/kg					<0.5	
Phenols(Halo)	Pentachlorophenol	87-86-5	<0.5	mg/kg					<0.5	
Phenols(Halo)	2,3,4,5-Tetrachlorophenol	4901-51-3	<0.5	mg/kg					<0.5	
Phenols(Halo)	2,3,4,6-Tetrachlorophenol	58-90-2	<0.5	mg/kg					<0.5	
Phenols(Halo)	2,3,5,6-Tetrachlorophenol	935-95-5	<0.5	mg/kg					<0.5	
Phenols(Halo)	2,4,5-Trichlorophenol	95-95-4	<0.5	mg/kg					<0.5	
Phenols(Halo)	2,4,6-Trichlorophenol	88-06-2	<0.5	mg/kg					<0.5	
Phenols(Halo)	Total Phenols (Halogenated)	64743-03-9(Hal	<0.5	mg/kg					<0.5	
Analysis	Analyte	CAS #	LOR							
Phenols(NonHalo)	Phenol	108-95-2	<0.5	mg/kg					<0.5	
Phenols(NonHalo)	Total Cresols	1319-77-3	<1	mg/kg					<1	
Phenols(NonHalo)	2,4-Dimethylphenol	105-67-9	<0.5	mg/kg					<0.5	
Phenols(NonHalo)	2,4-Dinitrophenol	51-28-5	<30	mg/kg					<30	
Phenols(NonHalo)	2-Methyl-4,6-Dinitrophenol	534-52-1	<10	mg/kg					<10	
Phenols(NonHalo)	2-Nitrophenol	88-75-5	<0.5	mg/kg					<0.5	
Phenols(NonHalo)	4-Nitrophenol	100-02-7	<0.5	mg/kg					<0.5	
Phenols(NonHalo)	2-Cyclohexyl-4,6-Dinitrophenol	131-89-5	<30	mg/kg					<30	
Phenols(NonHalo)	Dinoseb	88-85-7	<10	mg/kg					<10	
Phenols(NonHalo)	Total Phenols (non Halogenated)	64743-03-9(Non	<30	mg/kg					<30	
Analysis	Analyte	CAS #	LOR							
Total Fluoride	Total Fluoride, as F	16984-48-8	<100	mg/kg					200	
Cyanide	Cyanide, as CN	57-12-5	<5	mg/kg					<5	
Total Cr 6+ DA	Hexavalent Chromium (Total) Soil DA	18540-29-9	<1	mg/kg					<1	
Analysis	Analyte	CAS #	LOR							
MS Total Metals	Aluminium	7429-90-5	<5	mg/kg	7400	9600	33000	16000		11000
MS Total Metals	Antimony	7440-36-0	<5	mg/kg	<5	<5	<5	5	<5	<5
MS Total Metals	Arsenic	7440-38-2	<5	mg/kg	340	160	260	500	370	200
MS Total Metals	Barium	7440-39-3	<5	mg/kg	75	110	300	95	170	140
MS Total Metals	Beryllium	7440-41-7	<5	mg/kg	<5	<5	<5	<5	<5	<5
MS Total Metals	Boron	7440-42-8	<10	mg/kg	<10	<10	49	<10	<10	<10
MS Total Metals	Cadmium	7440-43-9	<0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
MS Total Metals	Chromium	7440-47-3	<5	mg/kg	11	27	18	63	42	23
MS Total Metals	Cobalt	7440-48-4	<5	mg/kg	6	7	8	15	11	10

Samples not collected by ALS and are tested as received.

A blank space indicates no test performed. Soil results expressed in mg/kg dry weight unless specified otherwise. Microbiological testing was commenced on the day of receipt and within 24 hours of sampling unless otherwise stated. MM524: Plate count results <10 per mL and >300 per mL are deemed as approximate. MM526: Plate count results <2,500 per mL and >250,000 per mL are deemed as approximate. Calculated results are based on raw data.



					Sample No.	5110976	5110977	5110978	5110980	5110981	5110982
					Client Sample ID	170223-D01	TP05/0.1	TP06/0.1	TP07/0.1	TP08/0.1	TP09/0.1
					Sample Date	23/02/17	23/02/17	23/02/17	23/02/17	23/02/17	23/02/17
					Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
MS Total Metals	Copper	7440-50-8	<5	mg/kg	30	25	31	40	41	47	
MS Total Metals	Iron	7439-89-6	<10	mg/kg	17000	16000	43000	34000		38000	
MS Total Metals	Lead	7439-92-1	<5	mg/kg	27	17	17	18	34	14	
MS Total Metals	Manganese	7439-96-5	<5	mg/kg	440	200	1800	380	490	1400	
MS Total Metals	Mercury	7439-97-6	<0.05	mg/kg	<0.05	<0.05	0.06	<0.05	<0.05	<0.05	
MS Total Metals	Molybdenum	7439-98-7	<5	mg/kg	<5	<5	<5	<5	<5	<5	
MS Total Metals	Nickel	7440-02-0	<5	mg/kg	16	39	24	120	75	54	
MS Total Metals	Selenium	7782-49-2	<3	mg/kg	<3	<3	<3	<3	<3	<3	
MS Total Metals	Silver	7440-22-4	<5	mg/kg	<5	<5	<5	<5	<5	<5	
MS Total Metals	Tin	7440-31-5	<5	mg/kg	13	6	7	10	8	7	
MS Total Metals	Vanadium	7440-62-2	<5	mg/kg	17	22	34	34	24	23	
MS Total Metals	Zinc	7440-66-6	<5	mg/kg	32	32	24	46	46	39	
Analysis	Analyte	CAS #	LOR								
TRH (C6-C10) &	TPHC6-C9	C6-C9	<20	mg/kg					<20		
TRH (C6-C10) &	TRHC6-C10	C6-C10	<20	mg/kg					<20		
TRH (C6-C10) &	TRHC6-C10 minus BTEX	F1-BTEX	<20	mg/kg					<20		
Analysis	Analyte	CAS #	LOR								
TRH F2	TRH>C10-C16 minus Naphthalene	F2-NAPHTHAL	<20	mg/kg					<20		
TRH & TPH	TPH C10-C14	C10-C14	<20	mg/kg					<20		
TRH & TPH	TPH C15-C28	C15-C28	<50	mg/kg					50		
TRH & TPH	TPH C29-C36	C29-C36	<50	mg/kg					76		
TRH & TPH	TRH>C10-C16	C10-C16	<20	mg/kg					<20		
TRH & TPH	TRH>C16-C34	C16-C34	<50	mg/kg					110		
TRH & TPH	TRH>C34-C40	C34-C40	<50	mg/kg					<50		
TRH & TPH	Sum of TRH>C10-C40	C10-C40	<50	mg/kg					110		

Samples not collected by ALS and are tested as received.

A blank space indicates no test performed. Soil results expressed in mg/kg dry weight unless specified otherwise. Microbiological testing was commenced on the day of receipt and within 24 hours of sampling unless otherwise stated. MM524: Plate count results <10 per mL and >300 per mL are deemed as approximate. MM526: Plate count results <2,500 per mL and >250,000 per mL are deemed as approximate. Calculated results are based on raw data.



LOR = Limit of reporting. When a reported LOR is higher than the standard LOR, this may be due to high moisture content, insufficient sample or matrix interference.
 CAS Number = Chemistry Abstract Services Number. The analytical procedures in this report (including in house methods) are developed from internationally recognised procedures such as those published by USEPA, APHA and NEPM.

					Sample No.	5110983	5110984	5110985	5110986	5110987	5110988
					Client Sample ID	TP10/0.1	170223-SS01	170223-SS02	170223-SS03	170223-SS04	170223-SS05
					Sample Date	23/02/17	23/02/17	23/02/17	23/02/17	23/02/17	23/02/17
					Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Analysis	Analyte	CAS #	LOR								
OCP	BHC (alpha isomer)	319-84-6	<0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
OCP	a-Endosulphan	959-98-8	<0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
OCP	Aldrin	309-00-2	<0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
OCP	BHC (beta isomer)	319-85-7	<0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
OCP	b-Endosulphan	33213-65-9	<0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
OCP	Chlordane	57-74-9	<0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
OCP	cis-Chlordane	5103-71-9	<0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
OCP	trans-Chlordane	5103-74-2	<0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
OCP	BHC (delta isomer)	319-86-8	<0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
OCP	DDD	72-54-8	<0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
OCP	DDE	72-55-9	<0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
OCP	DDT	50-29-3	<0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
OCP	Dieldrin	60-57-1	<0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
OCP	Sum of alpha-, beta- and Endosulphan	115-29-7	<0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
OCP	Endosulfan Sulfate	1031-07-8	<0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
OCP	Endrin	72-20-8	<0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
OCP	Endrin Aldehyde	7421-93-4	<0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
OCP	Endrin Ketone	53494-70-5	<0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
OCP	Hexachlorobenzene	118-74-1	<0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
OCP	Heptachlor Epoxide	1024-57-3	<0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
OCP	Heptachlor	76-44-8	<0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
OCP	BHC (gamma isomer) [Lindane]	58-89-9	<0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
OCP	Methoxychlor	72-43-5	<0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
OCP	Oxychlordane	27304-13-8	<0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
OCP	Sum of DDD, DDE and DDT	DDT+DDE+DD	<0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
OCP	Sum of Aldrin and Dieldrin	309-00-2 +	<0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Analysis	Analyte	CAS #	LOR								
PAH	Acenaphthene	83-32-9	<0.1	mg/kg	<0.1						
PAH	Acenaphthylene	208-96-8	<0.1	mg/kg	<0.1						

Samples not collected by ALS and are tested as received.

A blank space indicates no test performed. Soil results expressed in mg/kg dry weight unless specified otherwise. Microbiological testing was commenced on the day of receipt and within 24 hours of sampling unless otherwise stated. MM524: Plate count results <10 per mL and >300 per mL are deemed as approximate. MM526: Plate count results <2,500 per mL and >250,000 per mL are deemed as approximate. Calculated results are based on raw data.



					Sample No.	5110983	5110984	5110985	5110986	5110987	5110988
					Client Sample ID	TP10/0.1	170223-SS01	170223-SS02	170223-SS03	170223-SS04	170223-SS05
					Sample Date	23/02/17	23/02/17	23/02/17	23/02/17	23/02/17	23/02/17
					Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
PAH	Anthracene	120-12-7	<0.1	mg/kg	<0.1						
PAH	Benz(a)anthracene	56-55-3	<0.1	mg/kg	<0.1						
PAH	Benzo(a)pyrene	50-32-8	<0.1	mg/kg	<0.1						
PAH	Benzo(b)fluoranthene	205-99-2	<0.1	mg/kg	<0.1						
PAH	Benzo(g,h,i)perylene	191-24-2	<0.1	mg/kg	<0.1						
PAH	Benzo(k)fluoranthene	207-08-9	<0.1	mg/kg	<0.1						
PAH	Chrysene	218-01-9	<0.1	mg/kg	<0.1						
PAH	Dibenz(a,h)anthracene	53-70-3	<0.1	mg/kg	<0.1						
PAH	Fluoranthene	206-44-0	<0.1	mg/kg	<0.1						
PAH	Fluorene	86-73-7	<0.1	mg/kg	<0.1						
PAH	Indeno(1,2,3-cd)pyrene	193-39-5	<0.1	mg/kg	<0.1						
PAH	Naphthalene	91-20-3	<0.1	mg/kg	<0.1						
PAH	Phenanthrene	85-01-8	<0.1	mg/kg	<0.1						
PAH	Pyrene	129-00-0	<0.1	mg/kg	<0.1						
PAH	Total PAH	TOTALPAH	<0.1	mg/kg	<0.1						
PAH	BaP TEQ (zero)	BaP_TEQ_0xE	<0.1	mg/kg	<0.1						
PAH	BaP TEQ (half LOR)	BaP_TEQ_0.5x	<0.1	mg/kg	0.1						
PAH	BaP TEQ (LOR)	BaP_TEQ_1.0x	0.2	mg/kg	0.2						
Analysis	Analyte	CAS #	LOR								
MS Total Metals	Aluminium	7429-90-5	<5	mg/kg	11000	8800	9000	10000	8100	8800	
MS Total Metals	Antimony	7440-36-0	<5	mg/kg	<5	<5	<5	<5	<5	<5	
MS Total Metals	Arsenic	7440-38-2	<5	mg/kg	490	<5	<5	<5	6	9	
MS Total Metals	Barium	7440-39-3	<5	mg/kg	150	54	63	68	56	83	
MS Total Metals	Beryllium	7440-41-7	<5	mg/kg	<5	<5	<5	<5	<5	<5	
MS Total Metals	Boron	7440-42-8	<10	mg/kg	<10	<10	<10	<10	<10	<10	
MS Total Metals	Cadmium	7440-43-9	<0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	
MS Total Metals	Chromium	7440-47-3	<5	mg/kg	13	<5	<5	6	<5	<5	
MS Total Metals	Cobalt	7440-48-4	<5	mg/kg	10	<5	<5	<5	<5	<5	
MS Total Metals	Copper	7440-50-8	<5	mg/kg	54	5	6	8	10	8	
MS Total Metals	Iron	7439-89-6	<10	mg/kg	22000	7800	8800	11000	7800	8300	
MS Total Metals	Lead	7439-92-1	<5	mg/kg	15	9	7	9	24	8	
MS Total Metals	Manganese	7439-96-5	<5	mg/kg	440	32	370	530	150	280	

Samples not collected by ALS and are tested as received.

A blank space indicates no test performed. Soil results expressed in mg/kg dry weight unless specified otherwise. Microbiological testing was commenced on the day of receipt and within 24 hours of sampling unless otherwise stated. MM524: Plate count results <10 per mL and >300 per mL are deemed as approximate. MM526: Plate count results <2,500 per mL and >250,000 per mL are deemed as approximate. Calculated results are based on raw data.



					Sample No.	5110983	5110984	5110985	5110986	5110987	5110988
					Client Sample ID	TP10/0.1	170223-SS01	170223-SS02	170223-SS03	170223-SS04	170223-SS05
					Sample Date	23/02/17	23/02/17	23/02/17	23/02/17	23/02/17	23/02/17
					Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
MS Total Metals	Mercury	7439-97-6	<0.05	mg/kg	0.08	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
MS Total Metals	Molybdenum	7439-98-7	<5	mg/kg	<5	<5	<5	<5	<5	<5	<5
MS Total Metals	Nickel	7440-02-0	<5	mg/kg	35	<5	<5	<5	<5	<5	<5
MS Total Metals	Selenium	7782-49-2	<3	mg/kg	<3	<3	<3	<3	<3	<3	<3
MS Total Metals	Silver	7440-22-4	<5	mg/kg	<5	<5	<5	<5	<5	<5	<5
MS Total Metals	Tin	7440-31-5	<5	mg/kg	6	<5	<5	<5	<5	<5	<5
MS Total Metals	Vanadium	7440-62-2	<5	mg/kg	19	19	18	23	15	17	
MS Total Metals	Zinc	7440-66-6	<5	mg/kg	39	18	20	29	42	31	

Samples not collected by ALS and are tested as received.

A blank space indicates no test performed. Soil results expressed in mg/kg dry weight unless specified otherwise. Microbiological testing was commenced on the day of receipt and within 24 hours of sampling unless otherwise stated. MM524: Plate count results <10 per mL and >300 per mL are deemed as approximate. MM526: Plate count results <2,500 per mL and >250,000 per mL are deemed as approximate. Calculated results are based on raw data.



LOR = Limit of reporting. When a reported LOR is higher than the standard LOR, this may be due to high moisture content, insufficient sample or matrix interference.
 CAS Number = Chemistry Abstract Services Number. The analytical procedures in this report (including in house methods) are developed from internationally recognised procedures such as those published by USEPA, APHA and NEPM.

					Sample No.	5110989	5110990	5110991	5110992	5110993	5110994
					Client Sample ID	170223-SS06	170223-SS07	170223-SS08	170223-SS09	170223-SS10	170223-S-D02
					Sample Date	23/02/17	23/02/17	23/02/17	23/02/17	23/02/17	23/02/17
					Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Analysis	Analyte	CAS #	LOR								
OCP	BHC (alpha isomer)	319-84-6	<0.05	mg/kg	<0.07	<0.05	<0.06	<0.05	<0.05	<0.06	<0.05
OCP	a-Endosulphan	959-98-8	<0.05	mg/kg	<0.07	<0.05	<0.06	<0.05	<0.05	<0.06	<0.05
OCP	Aldrin	309-00-2	<0.05	mg/kg	<0.07	<0.05	<0.06	<0.05	<0.05	<0.06	<0.05
OCP	BHC (beta isomer)	319-85-7	<0.05	mg/kg	<0.07	<0.05	<0.06	<0.05	<0.05	<0.06	<0.05
OCP	b-Endosulphan	33213-65-9	<0.05	mg/kg	<0.07	<0.05	<0.06	<0.05	<0.05	<0.06	<0.05
OCP	Chlordane	57-74-9	<0.05	mg/kg	<0.07	<0.05	<0.06	<0.05	<0.05	<0.06	<0.05
OCP	cis-Chlordane	5103-71-9	<0.05	mg/kg	<0.07	<0.05	<0.06	<0.05	<0.05	<0.06	<0.05
OCP	trans-Chlordane	5103-74-2	<0.05	mg/kg	<0.07	<0.05	<0.06	<0.05	<0.05	<0.06	<0.05
OCP	BHC (delta isomer)	319-86-8	<0.05	mg/kg	<0.07	<0.05	<0.06	<0.05	<0.05	<0.06	<0.05
OCP	DDD	72-54-8	<0.05	mg/kg	<0.07	<0.05	<0.06	<0.05	<0.05	<0.06	<0.05
OCP	DDE	72-55-9	<0.05	mg/kg	<0.07	<0.05	<0.06	<0.05	<0.05	<0.06	<0.05
OCP	DDT	50-29-3	<0.05	mg/kg	<0.07	<0.05	<0.06	<0.05	<0.05	<0.06	<0.05
OCP	Dieldrin	60-57-1	<0.05	mg/kg	<0.07	<0.05	<0.06	<0.05	<0.05	<0.06	<0.05
OCP	Sum of alpha-, beta- and Endosulphan	115-29-7	<0.05	mg/kg	<0.07	<0.05	<0.06	<0.05	<0.05	<0.06	<0.05
OCP	Endosulfan Sulfate	1031-07-8	<0.05	mg/kg	<0.07	<0.05	<0.06	<0.05	<0.05	<0.06	<0.05
OCP	Endrin	72-20-8	<0.05	mg/kg	<0.07	<0.05	<0.06	<0.05	<0.05	<0.06	<0.05
OCP	Endrin Aldehyde	7421-93-4	<0.05	mg/kg	<0.07	<0.05	<0.06	<0.05	<0.05	<0.06	<0.05
OCP	Endrin Ketone	53494-70-5	<0.05	mg/kg	<0.07	<0.05	<0.06	<0.05	<0.05	<0.06	<0.05
OCP	Hexachlorobenzene	118-74-1	<0.05	mg/kg	<0.07	<0.05	<0.06	<0.05	<0.05	<0.06	<0.05
OCP	Heptachlor Epoxide	1024-57-3	<0.05	mg/kg	<0.07	<0.05	<0.06	<0.05	<0.05	<0.06	<0.05
OCP	Heptachlor	76-44-8	<0.05	mg/kg	<0.07	<0.05	<0.06	<0.05	<0.05	<0.06	<0.05
OCP	BHC (gamma isomer) [Lindane]	58-89-9	<0.05	mg/kg	<0.07	<0.05	<0.06	<0.05	<0.05	<0.06	<0.05
OCP	Methoxychlor	72-43-5	<0.05	mg/kg	<0.07	<0.05	<0.06	<0.05	<0.05	<0.06	<0.05
OCP	Oxychlordane	27304-13-8	<0.05	mg/kg	<0.07	<0.05	<0.06	<0.05	<0.05	<0.06	<0.05
OCP	Sum of DDD, DDE and DDT	DDT+DDE+DD	<0.05	mg/kg	<0.07	<0.05	<0.06	<0.05	<0.05	<0.06	<0.05
OCP	Sum of Aldrin and Dieldrin	309-00-2 +	<0.05	mg/kg	<0.07	<0.05	<0.06	<0.05	<0.05	<0.06	<0.05
Analysis	Analyte	CAS #	LOR								
PAH	Acenaphthene	83-32-9	<0.1	mg/kg	<0.2 _{LORR}						
PAH	Acenaphthylene	208-96-8	<0.1	mg/kg	<0.2 _{LORR}						

Samples not collected by ALS and are tested as received.

A blank space indicates no test performed. Soil results expressed in mg/kg dry weight unless specified otherwise. Microbiological testing was commenced on the day of receipt and within 24 hours of sampling unless otherwise stated. MM524: Plate count results <10 per mL and >300 per mL are deemed as approximate. MM526: Plate count results <2,500 per mL and >250,000 per mL are deemed as approximate. Calculated results are based on raw data.



					Sample No.	5110989	5110990	5110991	5110992	5110993	5110994
					Client Sample ID	170223-SS06	170223-SS07	170223-SS08	170223-SS09	170223-SS10	170223-S-D02
					Sample Date	23/02/17	23/02/17	23/02/17	23/02/17	23/02/17	23/02/17
					Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
PAH	Anthracene	120-12-7	<0.1	mg/kg	<0.2 LORR						
PAH	Benz(a)anthracene	56-55-3	<0.1	mg/kg	<0.2 LORR						
PAH	Benzo(a)pyrene	50-32-8	<0.1	mg/kg	<0.2 LORR						
PAH	Benzo(b)fluoranthene	205-99-2	<0.1	mg/kg	<0.2 LORR						
PAH	Benzo(g,h,i)perylene	191-24-2	<0.1	mg/kg	<0.2 LORR						
PAH	Benzo(k)fluoranthene	207-08-9	<0.1	mg/kg	<0.2 LORR						
PAH	Chrysene	218-01-9	<0.1	mg/kg	<0.2 LORR						
PAH	Dibenz(a,h)anthracene	53-70-3	<0.1	mg/kg	<0.2 LORR						
PAH	Fluoranthene	206-44-0	<0.1	mg/kg	<0.2 LORR						
PAH	Fluorene	86-73-7	<0.1	mg/kg	<0.2 LORR						
PAH	Indeno(1,2,3-cd)pyrene	193-39-5	<0.1	mg/kg	<0.2 LORR						
PAH	Naphthalene	91-20-3	<0.1	mg/kg	<0.2 LORR						
PAH	Phenanthrene	85-01-8	<0.1	mg/kg	<0.2 LORR						
PAH	Pyrene	129-00-0	<0.1	mg/kg	<0.2 LORR						
PAH	Total PAH	TOTALPAH	<0.1	mg/kg	<0.2 LORR						
PAH	BaP TEQ (zero)	BaP_TEQ_0xE	<0.1	mg/kg	<0.1						
PAH	BaP TEQ (half LOR)	BaP_TEQ_0.5x	<0.1	mg/kg	0.2						
PAH	BaP TEQ (LOR)	BaP_TEQ_1.0x	0.2	mg/kg	0.5						
Analysis	Analyte	CAS #	LOR								
MS Total Metals	Aluminium	7429-90-5	<5	mg/kg	9100	9200	13000	9700	11000	9400	
MS Total Metals	Antimony	7440-36-0	<5	mg/kg	<5	<5	<5	<5	<5	<5	
MS Total Metals	Arsenic	7440-38-2	<5	mg/kg	12	6	5	<5	<5	6	
MS Total Metals	Barium	7440-39-3	<5	mg/kg	99	70	210	76	74	73	
MS Total Metals	Beryllium	7440-41-7	<5	mg/kg	<5	<5	<5	<5	<5	<5	
MS Total Metals	Boron	7440-42-8	<10	mg/kg	<10	<10	<10	<10	<10	<10	
MS Total Metals	Cadmium	7440-43-9	<0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	
MS Total Metals	Chromium	7440-47-3	<5	mg/kg	7	<5	7	6	14	<5	
MS Total Metals	Cobalt	7440-48-4	<5	mg/kg	<5	<5	9	7	8	<5	
MS Total Metals	Copper	7440-50-8	<5	mg/kg	12	7	19	8	13	8	
MS Total Metals	Iron	7439-89-6	<10	mg/kg	13000	9200	23000	10000	19000	8700	
MS Total Metals	Lead	7439-92-1	<5	mg/kg	12	9	13	11	10	9	
MS Total Metals	Manganese	7439-96-5	<5	mg/kg	200	270	200	320	170	290	

Samples not collected by ALS and are tested as received.

A blank space indicates no test performed. Soil results expressed in mg/kg dry weight unless specified otherwise. Microbiological testing was commenced on the day of receipt and within 24 hours of sampling unless otherwise stated. MM524: Plate count results <10 per mL and >300 per mL are deemed as approximate. MM526: Plate count results <2,500 per mL and >250,000 per mL are deemed as approximate. Calculated results are based on raw data.



					Sample No.	5110989	5110990	5110991	5110992	5110993	5110994
					Client Sample ID	170223-SS06	170223-SS07	170223-SS08	170223-SS09	170223-SS10	170223-S-D02
					Sample Date	23/02/17	23/02/17	23/02/17	23/02/17	23/02/17	23/02/17
					Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
MS Total Metals	Mercury	7439-97-6	<0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
MS Total Metals	Molybdenum	7439-98-7	<5	mg/kg	<5	<5	<5	<5	<5	<5	<5
MS Total Metals	Nickel	7440-02-0	<5	mg/kg	6	<5	7	<5	<5	16	<5
MS Total Metals	Selenium	7782-49-2	<3	mg/kg	<3	<3	<3	<3	<3	<3	<3
MS Total Metals	Silver	7440-22-4	<5	mg/kg	<5	<5	<5	<5	<5	<5	<5
MS Total Metals	Tin	7440-31-5	<5	mg/kg	<5	<5	<5	<5	<5	<5	<5
MS Total Metals	Vanadium	7440-62-2	<5	mg/kg	23	19	32	22	25	25	20
MS Total Metals	Zinc	7440-66-6	<5	mg/kg	52	25	57	26	110	110	26

LORR Limit of Reporting has been raised due to high moisture content, insufficient sample or matrix interference.

Samples not collected by ALS and are tested as received.

A blank space indicates no test performed. Soil results expressed in mg/kg dry weight unless specified otherwise. Microbiological testing was commenced on the day of receipt and within 24 hours of sampling unless otherwise stated. MM524: Plate count results <10 per mL and >300 per mL are deemed as approximate. MM526: Plate count results <2,500 per mL and >250,000 per mL are deemed as approximate. Calculated results are based on raw data.



QUALITY CONTROL - BLANKS

QC Blanks are an 'analyte free' matrix in which all applicable reagents have been added in the same proportion as in standard samples and are an internal monitor for laboratory contamination.

Lab Sample ID	Client Sample ID	Analysis	Analyte	Value	
5114155	QC - Blank	Total Fluoride	Total Fluoride, as F	mg/kg	<100
5118647	QC - Blank	Total Cr 6+ DA	Hexavalent Chromium (Total) Soil DA	mg/kg	<1
Lab Sample ID	Client Sample ID	Analysis	Analyte	Value	
5116816	QC - Blank	MS Total Metals	Aluminium	mg/kg	<5
5116816	QC - Blank	MS Total Metals	Antimony	mg/kg	<5
5116816	QC - Blank	MS Total Metals	Arsenic	mg/kg	<5
5116816	QC - Blank	MS Total Metals	Barium	mg/kg	<5
5116816	QC - Blank	MS Total Metals	Beryllium	mg/kg	<5
5116816	QC - Blank	MS Total Metals	Boron	mg/kg	<10
5116816	QC - Blank	MS Total Metals	Cadmium	mg/kg	<0.2
5116816	QC - Blank	MS Total Metals	Chromium	mg/kg	<5
5116816	QC - Blank	MS Total Metals	Cobalt	mg/kg	<5
5116816	QC - Blank	MS Total Metals	Copper	mg/kg	<5
5116816	QC - Blank	MS Total Metals	Iron	mg/kg	<10
5116816	QC - Blank	MS Total Metals	Lead	mg/kg	<5
5116816	QC - Blank	MS Total Metals	Manganese	mg/kg	<5
5116816	QC - Blank	MS Total Metals	Mercury	mg/kg	<0.05
5116816	QC - Blank	MS Total Metals	Molybdenum	mg/kg	<5
5116816	QC - Blank	MS Total Metals	Nickel	mg/kg	<5
5116816	QC - Blank	MS Total Metals	Selenium	mg/kg	<3
5116816	QC - Blank	MS Total Metals	Silver	mg/kg	<5
5116816	QC - Blank	MS Total Metals	Tin	mg/kg	<5
5116816	QC - Blank	MS Total Metals	Vanadium	mg/kg	<5
5116816	QC - Blank	MS Total Metals	Zinc	mg/kg	<5
Lab Sample ID	Client Sample ID	Analysis	Analyte	Value	
5117067	QC - Blank	MAH	Styrene	mg/kg	<0.5
5117067	QC - Blank	MAH	Cumene	mg/kg	<0.5
5117067	QC - Blank	MAH	1,2,4-Trimethylbenzene	mg/kg	<0.5
Lab Sample ID	Client Sample ID	Analysis	Analyte	Value	

Samples not collected by ALS and are tested as received.

A blank space indicates no test performed. Soil results expressed in mg/kg dry weight unless specified otherwise. Microbiological testing was commenced on the day of receipt and within 24 hours of sampling unless otherwise stated. MM524: Plate count results <10 per mL and >300 per mL are deemed as approximate. MM526: Plate count results <2,500 per mL and >250,000 per mL are deemed as approximate. Calculated results are based on raw data.



Lab Sample ID	Client Sample ID	Analysis	Analyte	Value
5116425	QC - Blank	BTEXN	Benzene	mg/kg <0.5
5116425	QC - Blank	BTEXN	Toluene	mg/kg <0.5
5116425	QC - Blank	BTEXN	Ethyl Benzene	mg/kg <0.5
5116425	QC - Blank	BTEXN	Xylene - m&p	mg/kg <1
5116425	QC - Blank	BTEXN	Xylene - O	mg/kg <0.5
5116425	QC - Blank	BTEXN	Total Xylenes	mg/kg <1
5116425	QC - Blank	BTEXN	BTEX (Sum)	mg/kg <1
5116430	QC - Blank	TRH (C6-C10) & F1	TPHC6-C9	mg/kg <20
5116430	QC - Blank	TRH (C6-C10) & F1	TRHC6-C10	mg/kg <20
5116430	QC - Blank	TRH (C6-C10) & F1	TRHC6-C10 minus BTEX	mg/kg <20
5116876	QC - Blank	TRH & TPH (>C10)	TPH C10-C14	mg/kg <20
5116876	QC - Blank	TRH & TPH (>C10)	TPH C15-C28	mg/kg <50
5116876	QC - Blank	TRH & TPH (>C10)	TPH C29-C36	mg/kg <50
5116876	QC - Blank	TRH & TPH (>C10)	TRH>C10-C16	mg/kg <20
5116876	QC - Blank	TRH & TPH (>C10)	TRH>C16-C34	mg/kg <50
5116876	QC - Blank	TRH & TPH (>C10)	TRH>C34-C40	mg/kg <50
5116876	QC - Blank	TRH & TPH (>C10)	Sum of TRH>C10-C40	mg/kg <50
5117214	QC - Blank	PAH	Acenaphthene	mg/kg <0.1
5117214	QC - Blank	PAH	Acenaphthylene	mg/kg <0.1
5117214	QC - Blank	PAH	Anthracene	mg/kg <0.1
5117214	QC - Blank	PAH	Benz(a)anthracene	mg/kg <0.1
5117214	QC - Blank	PAH	Benzo(a)pyrene	mg/kg <0.1
5117214	QC - Blank	PAH	Benzo(b)fluoranthene	mg/kg <0.1
5117214	QC - Blank	PAH	Benzo(g,h,i)perylene	mg/kg <0.1
5117214	QC - Blank	PAH	Benzo(k)fluoranthene	mg/kg <0.1
5117214	QC - Blank	PAH	Chrysene	mg/kg <0.1
5117214	QC - Blank	PAH	Dibenz(a,h)anthracene	mg/kg <0.1
5117214	QC - Blank	PAH	Fluoranthene	mg/kg <0.1
5117214	QC - Blank	PAH	Fluorene	mg/kg <0.1
5117214	QC - Blank	PAH	Indeno(1,2,3-cd)pyrene	mg/kg <0.1
5117214	QC - Blank	PAH	Naphthalene	mg/kg <0.1
5117214	QC - Blank	PAH	Phenanthrene	mg/kg <0.1

Samples not collected by ALS and are tested as received.

A blank space indicates no test performed. Soil results expressed in mg/kg dry weight unless specified otherwise. Microbiological testing was commenced on the day of receipt and within 24 hours of sampling unless otherwise stated. MM524: Plate count results <10 per mL and >300 per mL are deemed as approximate. MM526: Plate count results <2,500 per mL and >250,000 per mL are deemed as approximate. Calculated results are based on raw data.



Lab Sample ID	Client Sample ID	Analysis	Analyte	Value
5117214	QC - Blank	PAH	Pyrene	mg/kg <0.1
5117214	QC - Blank	PAH	Total PAH	mg/kg <0.1
5117214	QC - Blank	PAH	BaP TEQ (zero)	mg/kg <0.1
5117214	QC - Blank	PAH	BaP TEQ (half LOR)	mg/kg 0.1
5117214	QC - Blank	PAH	BaP TEQ (LOR)	mg/kg 0.2
5117927	QC - Blank	PAH	Acenaphthene	mg/kg <0.1
5117927	QC - Blank	PAH	Acenaphthylene	mg/kg <0.1
5117927	QC - Blank	PAH	Anthracene	mg/kg <0.1
5117927	QC - Blank	PAH	Benz(a)anthracene	mg/kg <0.1
5117927	QC - Blank	PAH	Benzo(a)pyrene	mg/kg <0.1
5117927	QC - Blank	PAH	Benzo(b)fluoranthene	mg/kg <0.1
5117927	QC - Blank	PAH	Benzo(g,h,i)perylene	mg/kg <0.1
5117927	QC - Blank	PAH	Benzo(k)fluoranthene	mg/kg <0.1
5117927	QC - Blank	PAH	Chrysene	mg/kg <0.1
5117927	QC - Blank	PAH	Dibenz(a,h)anthracene	mg/kg <0.1
5117927	QC - Blank	PAH	Fluoranthene	mg/kg <0.1
5117927	QC - Blank	PAH	Fluorene	mg/kg <0.1
5117927	QC - Blank	PAH	Indeno(1,2,3-cd)pyrene	mg/kg <0.1
5117927	QC - Blank	PAH	Naphthalene	mg/kg <0.1
5117927	QC - Blank	PAH	Phenanthrene	mg/kg <0.1
5117927	QC - Blank	PAH	Pyrene	mg/kg <0.1
5117927	QC - Blank	PAH	Total PAH	mg/kg <0.1
5117927	QC - Blank	PAH	BaP TEQ (zero)	mg/kg <0.1
5117927	QC - Blank	PAH	BaP TEQ (half LOR)	mg/kg 0.1
5117927	QC - Blank	PAH	BaP TEQ (LOR)	mg/kg 0.2
5117210	QC - Blank	OCP	BHC (alpha isomer)	mg/kg <0.05
5117210	QC - Blank	OCP	a-Endosulphan	mg/kg <0.05
5117210	QC - Blank	OCP	Aldrin	mg/kg <0.05
5117210	QC - Blank	OCP	BHC (beta isomer)	mg/kg <0.05
5117210	QC - Blank	OCP	b-Endosulphan	mg/kg <0.05
5117210	QC - Blank	OCP	Chlordane	mg/kg <0.05
5117210	QC - Blank	OCP	cis-Chlordane	mg/kg <0.05
5117210	QC - Blank	OCP	trans-Chlordane	mg/kg <0.05
5117210	QC - Blank	OCP	BHC (delta isomer)	mg/kg <0.05

Samples not collected by ALS and are tested as received.

A blank space indicates no test performed. Soil results expressed in mg/kg dry weight unless specified otherwise. Microbiological testing was commenced on the day of receipt and within 24 hours of sampling unless otherwise stated. MM524: Plate count results <10 per mL and >300 per mL are deemed as approximate. MM526: Plate count results <2,500 per mL and >250,000 per mL are deemed as approximate. Calculated results are based on raw data.



					Value
5117210	QC - Blank	OCP	DDD	mg/kg	<0.05
5117210	QC - Blank	OCP	DDE	mg/kg	<0.05
5117210	QC - Blank	OCP	DDT	mg/kg	<0.05
5117210	QC - Blank	OCP	Dieldrin	mg/kg	<0.05
5117210	QC - Blank	OCP	Sum of alpha-, beta- and Endosulphan	mg/kg	<0.05
5117210	QC - Blank	OCP	Endosulfan Sulfate	mg/kg	<0.05
5117210	QC - Blank	OCP	Endrin	mg/kg	<0.05
5117210	QC - Blank	OCP	Endrin Aldehyde	mg/kg	<0.05
5117210	QC - Blank	OCP	Endrin Ketone	mg/kg	<0.05
5117210	QC - Blank	OCP	Hexachlorobenzene	mg/kg	<0.05
5117210	QC - Blank	OCP	Heptachlor Epoxide	mg/kg	<0.05
5117210	QC - Blank	OCP	Heptachlor	mg/kg	<0.05
5117210	QC - Blank	OCP	BHC (gamma isomer) [Lindane]	mg/kg	<0.05
5117210	QC - Blank	OCP	Methoxychlor	mg/kg	<0.05
5117210	QC - Blank	OCP	Oxychlordane	mg/kg	<0.05
5117210	QC - Blank	OCP	Sum of DDD, DDE and DDT	mg/kg	<0.05
5117210	QC - Blank	OCP	Sum of Aldrin and Dieldrin	mg/kg	<0.05
5117242	QC - Blank	OCP	BHC (alpha isomer)	mg/kg	<0.05
5117242	QC - Blank	OCP	a-Endosulphan	mg/kg	<0.05
5117242	QC - Blank	OCP	Aldrin	mg/kg	<0.05
5117242	QC - Blank	OCP	BHC (beta isomer)	mg/kg	<0.05
5117242	QC - Blank	OCP	b-Endosulphan	mg/kg	<0.05
5117242	QC - Blank	OCP	Chlordane	mg/kg	<0.05
5117242	QC - Blank	OCP	cis-Chlordane	mg/kg	<0.05
5117242	QC - Blank	OCP	trans-Chlordane	mg/kg	<0.05
5117242	QC - Blank	OCP	BHC (delta isomer)	mg/kg	<0.05
5117242	QC - Blank	OCP	DDD	mg/kg	<0.05
5117242	QC - Blank	OCP	DDE	mg/kg	<0.05
5117242	QC - Blank	OCP	DDT	mg/kg	<0.05
5117242	QC - Blank	OCP	Dieldrin	mg/kg	<0.05
5117242	QC - Blank	OCP	Sum of alpha-, beta- and Endosulphan	mg/kg	<0.05
5117242	QC - Blank	OCP	Endosulfan Sulfate	mg/kg	<0.05
5117242	QC - Blank	OCP	Endrin	mg/kg	<0.05
5117242	QC - Blank	OCP	Endrin Aldehyde	mg/kg	<0.05
5117242	QC - Blank	OCP	Endrin Ketone	mg/kg	<0.05

Samples not collected by ALS and are tested as received.

A blank space indicates no test performed. Soil results expressed in mg/kg dry weight unless specified otherwise. Microbiological testing was commenced on the day of receipt and within 24 hours of sampling unless otherwise stated. MM524: Plate count results <10 per mL and >300 per mL are deemed as approximate. MM526: Plate count results <2,500 per mL and >250,000 per mL are deemed as approximate. Calculated results are based on raw data.



Lab Sample ID	Client Sample ID	Analysis	Analyte	Value
5117242	QC - Blank	OCP	Hexachlorobenzene	mg/kg <0.05
5117242	QC - Blank	OCP	Heptachlor Epoxide	mg/kg <0.05
5117242	QC - Blank	OCP	Heptachlor	mg/kg <0.05
5117242	QC - Blank	OCP	BHC (gamma isomer) [Lindane]	mg/kg <0.05
5117242	QC - Blank	OCP	Methoxychlor	mg/kg <0.05
5117242	QC - Blank	OCP	Oxychlorane	mg/kg <0.05
5117242	QC - Blank	OCP	Sum of DDD, DDE and DDT	mg/kg <0.05
5117242	QC - Blank	OCP	Sum of Aldrin and Dieldrin	mg/kg <0.05
5117244	QC - Blank	PCB	Aroclor 1016	mg/kg <0.1
5117244	QC - Blank	PCB	Aroclor 1221	mg/kg <0.1
5117244	QC - Blank	PCB	Aroclor 1232	mg/kg <0.1
5117244	QC - Blank	PCB	Aroclor 1242	mg/kg <0.1
5117244	QC - Blank	PCB	Aroclor 1248	mg/kg <0.1
5117244	QC - Blank	PCB	Aroclor 1254	mg/kg <0.1
5117244	QC - Blank	PCB	Aroclor 1260	mg/kg <0.1
5117244	QC - Blank	PCB	Total PCBs	mg/kg <0.1
5117232	QC - Blank	CHC	1,2,3,4-Tetrachlorobenzene	mg/kg <0.1
5117232	QC - Blank	CHC	1,2,3,5-Tetrachlorobenzene	mg/kg <0.1
5117232	QC - Blank	CHC	1,2,3-Trichlorobenzene	mg/kg <0.1
5117232	QC - Blank	CHC	1,2,4,5-Tetrachlorobenzene	mg/kg <0.1
5117232	QC - Blank	CHC	1,2,4-Trichlorobenzene	mg/kg <0.1
5117232	QC - Blank	CHC	1,2-Dichlorobenzene	mg/kg <0.1
5117232	QC - Blank	CHC	1,3,5-Trichlorobenzene	mg/kg <0.1
5117232	QC - Blank	CHC	1,3-Dichlorobenzene	mg/kg <0.1
5117232	QC - Blank	CHC	1,4-Dichlorobenzene	mg/kg <0.1
5117232	QC - Blank	CHC	2-Chloronaphthalene	mg/kg <0.1
5117232	QC - Blank	CHC	Benzal Chloride	mg/kg <0.1
5117232	QC - Blank	CHC	Benzotrichloride	mg/kg <0.1
5117232	QC - Blank	CHC	Benzylchloride	mg/kg <0.1
5117232	QC - Blank	CHC	Hexachloroethane	mg/kg <0.1
5117232	QC - Blank	CHC	Hexachlorobutadiene	mg/kg <0.1
5117232	QC - Blank	CHC	Hexachlorocyclopentadiene	mg/kg <0.1
5117232	QC - Blank	CHC	Pentachlorobenzene	mg/kg <0.1

Samples not collected by ALS and are tested as received.

A blank space indicates no test performed. Soil results expressed in mg/kg dry weight unless specified otherwise. Microbiological testing was commenced on the day of receipt and within 24 hours of sampling unless otherwise stated. MM524: Plate count results <10 per mL and >300 per mL are deemed as approximate. MM526: Plate count results <2,500 per mL and >250,000 per mL are deemed as approximate. Calculated results are based on raw data.



Lab Sample ID	Client Sample ID	Analysis	Analyte		Value
5117229	QC - Blank	Phenols(Halo)	4-Chloro-3-Methylphenol	mg/kg	<0.5
5117229	QC - Blank	Phenols(Halo)	2-Chlorophenol	mg/kg	<0.5
5117229	QC - Blank	Phenols(Halo)	2,4-Dichlorophenol	mg/kg	<0.5
5117229	QC - Blank	Phenols(Halo)	2,6-Dichlorophenol	mg/kg	<0.5
5117229	QC - Blank	Phenols(Halo)	Pentachlorophenol	mg/kg	<0.5
5117229	QC - Blank	Phenols(Halo)	2,3,4,5-Tetrachlorophenol	mg/kg	<0.5
5117229	QC - Blank	Phenols(Halo)	2,3,4,6-Tetrachlorophenol	mg/kg	<0.5
5117229	QC - Blank	Phenols(Halo)	2,3,5,6-Tetrachlorophenol	mg/kg	<0.5
5117229	QC - Blank	Phenols(Halo)	2,4,5-Trichlorophenol	mg/kg	<0.5
5117229	QC - Blank	Phenols(Halo)	2,4,6-Trichlorophenol	mg/kg	<0.5
5117229	QC - Blank	Phenols(Halo)	Total Phenols (Halogenated)	mg/kg	<0.5
Lab Sample ID	Client Sample ID	Analysis	Analyte		
5117226	QC - Blank	Phenols(NonHalo)	Phenol	mg/kg	<0.5
5117226	QC - Blank	Phenols(NonHalo)	Total Cresols	mg/kg	<1
5117226	QC - Blank	Phenols(NonHalo)	2,4-Dimethylphenol	mg/kg	<0.5
5117226	QC - Blank	Phenols(NonHalo)	2,4-Dinitrophenol	mg/kg	<30
5117226	QC - Blank	Phenols(NonHalo)	2-Methyl-4,6-Dinitrophenol	mg/kg	<10
5117226	QC - Blank	Phenols(NonHalo)	2-Nitrophenol	mg/kg	<0.5
5117226	QC - Blank	Phenols(NonHalo)	4-Nitrophenol	mg/kg	<0.5
5117226	QC - Blank	Phenols(NonHalo)	2-Cyclohexyl-4,6-Dinitrophenol	mg/kg	<30
5117226	QC - Blank	Phenols(NonHalo)	Dinoseb	mg/kg	<10
5117226	QC - Blank	Phenols(NonHalo)	Total Phenols (non Halogenated)	mg/kg	<30
Lab Sample ID	Client Sample ID	Analysis	Analyte		
5117062	QC - Blank	HVOL	1,1,1,2-Tetrachloroethane	mg/kg	<0.5
5117062	QC - Blank	HVOL	1,1,2,2-Tetrachloroethane	mg/kg	<0.5
5117062	QC - Blank	HVOL	1,1-Dichloroethane	mg/kg	<0.5
5117062	QC - Blank	HVOL	1,1-Dichloroethene	mg/kg	<0.5
5117062	QC - Blank	HVOL	1,1-Dichloropropene	mg/kg	<0.5
5117062	QC - Blank	HVOL	1,2,3-Trichloropropane	mg/kg	<0.5
5117062	QC - Blank	HVOL	1,2-Dibromo-3-Chloropropane	mg/kg	<0.5
5117062	QC - Blank	HVOL	1,2-Dichloroethene [cis]	mg/kg	<0.5
5117062	QC - Blank	HVOL	1,2-Dichloroethene [trans]	mg/kg	<0.5
5117062	QC - Blank	HVOL	1,2-Dichloroethane	mg/kg	<0.5
5117062	QC - Blank	HVOL	1,2-Dichloropropane	mg/kg	<0.5

Samples not collected by ALS and are tested as received.

A blank space indicates no test performed. Soil results expressed in mg/kg dry weight unless specified otherwise. Microbiological testing was commenced on the day of receipt and within 24 hours of sampling unless otherwise stated. MM524: Plate count results <10 per mL and >300 per mL are deemed as approximate. MM526: Plate count results <2,500 per mL and >250,000 per mL are deemed as approximate. Calculated results are based on raw data.



					Value
5117062	QC - Blank	HVOL	1,3-Dichloropropane	mg/kg	<0.5
5117062	QC - Blank	HVOL	1,3-Dichloropropene [cis]	mg/kg	<0.5
5117062	QC - Blank	HVOL	1,3-Dichloropropene [trans]	mg/kg	<0.5
5117062	QC - Blank	HVOL	2,2-Dichloropropane	mg/kg	<0.5
5117062	QC - Blank	HVOL	2-Chlorotoluene	mg/kg	<0.5
5117062	QC - Blank	HVOL	4-Chlorotoluene	mg/kg	<0.5
5117062	QC - Blank	HVOL	Bromochloromethane	mg/kg	<0.5
5117062	QC - Blank	HVOL	Bromodichloromethane	mg/kg	<0.5
5117062	QC - Blank	HVOL	Bromobenzene	mg/kg	<0.5
5117062	QC - Blank	HVOL	Bromoform (Tribromomethane)	mg/kg	<0.5
5117062	QC - Blank	HVOL	Carbon Tetrachloride	mg/kg	<0.5
5117062	QC - Blank	HVOL	Chloroform (Trichloromethane)	mg/kg	<0.5
5117062	QC - Blank	HVOL	Chlorobenzene	mg/kg	<0.5
5117062	QC - Blank	HVOL	Dibromochloromethane	mg/kg	<0.5
5117062	QC - Blank	HVOL	Dibromomethane	mg/kg	<0.5
5117062	QC - Blank	HVOL	1,2-Dibromoethane	mg/kg	<0.5
5117062	QC - Blank	HVOL	Dichloromethane	mg/kg	<1
5117062	QC - Blank	HVOL	Trichlorofluoromethane (CFC11)	mg/kg	<2
5117062	QC - Blank	HVOL	Tetrachloroethene	mg/kg	<0.5
5117062	QC - Blank	HVOL	Vinyl Chloride (Monomer)	mg/kg	<1
5117062	QC - Blank	HVOL	1,1,1-Trichloroethane	mg/kg	<0.5
5117062	QC - Blank	HVOL	1,1,2-Trichloroethane	mg/kg	<0.5
5117062	QC - Blank	HVOL	Trichloroethene	mg/kg	<0.5

QUALITY CONTROL - DUPLICATES

QC Data for duplicates is calculated on raw 'unrounded' values. Laboratory duplicates are randomly selected samples tested by the laboratory to maintain method precision and provide information on sample homogeneity.

RPD = Relative Percentage Difference for duplicate determinations. RPD's that fall outside the general acceptance criteria will be attributed to non-homogeneity of samples or results of low magnitudes.

Samples not collected by ALS and are tested as received.

A blank space indicates no test performed. Soil results expressed in mg/kg dry weight unless specified otherwise. Microbiological testing was commenced on the day of receipt and within 24 hours of sampling unless otherwise stated. MM524: Plate count results <10 per mL and >300 per mL are deemed as approximate. MM526: Plate count results <2,500 per mL and >250,000 per mL are deemed as approximate. Calculated results are based on raw data.



Lab Sample ID	Client Sample ID	Analysis	Analyte		Sample Value	Duplicate Value	% RPD
5117118	NCP	Total Fluoride	Total Fluoride, as F	mg/kg	580	640	10.3
5118042	TP02/0.1	Cyanide	Cyanide, as CN	mg/kg	<5	<5	0
5118043	NCP	Cyanide	Cyanide, as CN	mg/kg	<5	<5	0
Lab Sample ID	Client Sample ID	Analysis	Analyte				
5116819	NCP	MS Total Metals	Aluminium	mg/kg	13000	13000	2.3
5116819	NCP	MS Total Metals	Antimony	mg/kg	<5	<5	0
5116819	NCP	MS Total Metals	Arsenic	mg/kg	9	9	1.2
5116819	NCP	MS Total Metals	Barium	mg/kg	86	88	2.2
5116819	NCP	MS Total Metals	Beryllium	mg/kg	<5	<5	0
5116819	NCP	MS Total Metals	Boron	mg/kg	<10	<10	0
5116819	NCP	MS Total Metals	Cadmium	mg/kg	<0.2	<0.2	0
5116819	NCP	MS Total Metals	Chromium	mg/kg	28	29	2.6
5116819	NCP	MS Total Metals	Cobalt	mg/kg	10	10	2.5
5116819	NCP	MS Total Metals	Copper	mg/kg	8	8	2.5
5116819	NCP	MS Total Metals	Iron	mg/kg	15000	16000	3.6
5116819	NCP	MS Total Metals	Lead	mg/kg	19	20	3.9
5116819	NCP	MS Total Metals	Manganese	mg/kg	240	250	2.7
5116819	NCP	MS Total Metals	Mercury	mg/kg	<0.05	<0.05	0
5116819	NCP	MS Total Metals	Molybdenum	mg/kg	<5	<5	0
5116819	NCP	MS Total Metals	Nickel	mg/kg	17	17	2.1
5116819	NCP	MS Total Metals	Selenium	mg/kg	<3	<3	0
5116819	NCP	MS Total Metals	Silver	mg/kg	<5	<5	0
5116819	NCP	MS Total Metals	Tin	mg/kg	<5	<5	0
5116819	NCP	MS Total Metals	Vanadium	mg/kg	45	46	2.9
5116819	NCP	MS Total Metals	Zinc	mg/kg	23	23	1.8
Lab Sample ID	Client Sample ID	Analysis	Analyte				
5116422	NCP	BTEXN	Benzene	mg/kg	<0.5	<0.5	0
5116422	NCP	BTEXN	Toluene	mg/kg	<0.5	<0.5	0
5116422	NCP	BTEXN	Ethyl Benzene	mg/kg	<0.5	<0.5	0
5116422	NCP	BTEXN	Xylene - m&p	mg/kg	<1	<1	0
5116422	NCP	BTEXN	Xylene - O	mg/kg	<0.5	<0.5	0
5116422	NCP	BTEXN	Total Xylenes	mg/kg	<1	<1	0
5116422	NCP	BTEXN	BTEX (Sum)	mg/kg	<1	<1	0
Lab Sample ID	Client Sample ID	Analysis	Analyte				

Samples not collected by ALS and are tested as received.

A blank space indicates no test performed. Soil results expressed in mg/kg dry weight unless specified otherwise. Microbiological testing was commenced on the day of receipt and within 24 hours of sampling unless otherwise stated. MM524: Plate count results <10 per mL and >300 per mL are deemed as approximate. MM526: Plate count results <2,500 per mL and >250,000 per mL are deemed as approximate. Calculated results are based on raw data.



					Sample Value	Duplicate Value	% RPD
5116426	NCP	TRH (C6-C10) & F1	TPHC6-C9	mg/kg	<20	<20	0
5116426	NCP	TRH (C6-C10) & F1	TRHC6-C10	mg/kg	<20	<20	0
5116426	NCP	TRH (C6-C10) & F1	TRHC6-C10 minus BTEX	mg/kg	<20	<20	0
5116429	NCP	TRH (C6-C10) & F1	TPHC6-C9	mg/kg	<20	<20	0
5116429	NCP	TRH (C6-C10) & F1	TRHC6-C10	mg/kg	<20	<20	0
5116429	NCP	TRH (C6-C10) & F1	TRHC6-C10 minus BTEX	mg/kg	<20	<20	0
Lab Sample ID	Client Sample ID	Analysis	Analyte				
5116872	NCP	TRH & TPH (>C10)	TPH C10-C14	mg/kg	<20	<20	0
5116872	NCP	TRH & TPH (>C10)	TPH C15-C28	mg/kg	<50	<50	0
5116872	NCP	TRH & TPH (>C10)	TPH C29-C36	mg/kg	<50	<50	0
5116872	NCP	TRH & TPH (>C10)	TRH>C10-C16	mg/kg	<20	<20	0
5116872	NCP	TRH & TPH (>C10)	TRH>C16-C34	mg/kg	<50	<50	0
5116872	NCP	TRH & TPH (>C10)	TRH>C34-C40	mg/kg	<50	<50	0
5116872	NCP	TRH & TPH (>C10)	Sum of TRH>C10-C40	mg/kg	<50	<50	0
Lab Sample ID	Client Sample ID	Analysis	Analyte				
5117213	NCP	PAH	Acenaphthene	mg/kg	<0.1	<0.1	0
5117213	NCP	PAH	Acenaphthylene	mg/kg	<0.1	<0.1	0
5117213	NCP	PAH	Anthracene	mg/kg	<0.1	<0.1	0
5117213	NCP	PAH	Benz(a)anthracene	mg/kg	<0.1	<0.1	0
5117213	NCP	PAH	Benzo(a)pyrene	mg/kg	<0.1	<0.1	0
5117213	NCP	PAH	Benzo(b)fluoranthene	mg/kg	<0.1	<0.1	0
5117213	NCP	PAH	Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	0
5117213	NCP	PAH	Benzo(k)fluoranthene	mg/kg	<0.1	<0.1	0
5117213	NCP	PAH	Chrysene	mg/kg	<0.1	<0.1	0
5117213	NCP	PAH	Dibenz(a,h)anthracene	mg/kg	<0.1	<0.1	0
5117213	NCP	PAH	Fluoranthene	mg/kg	<0.1	<0.1	0
5117213	NCP	PAH	Fluorene	mg/kg	<0.1	<0.1	0
5117213	NCP	PAH	Indeno(1,2,3-cd)pyrene	mg/kg	<0.1	<0.1	0
5117213	NCP	PAH	Naphthalene	mg/kg	<0.1	<0.1	0
5117213	NCP	PAH	Phenanthrene	mg/kg	<0.1	<0.1	0
5117213	NCP	PAH	Pyrene	mg/kg	<0.1	<0.1	0
5117213	NCP	PAH	Total PAH	mg/kg	<0.1	<0.1	0
5117213	NCP	PAH	BaP TEQ (zero)	mg/kg	<0.1	<0.1	0
5117213	NCP	PAH	BaP TEQ (half LOR)	mg/kg	0.1	0.1	0.0
5117213	NCP	PAH	BaP TEQ (LOR)	mg/kg	0.2	0.2	0.0

Samples not collected by ALS and are tested as received.

A blank space indicates no test performed. Soil results expressed in mg/kg dry weight unless specified otherwise. Microbiological testing was commenced on the day of receipt and within 24 hours of sampling unless otherwise stated. MM524: Plate count results <10 per mL and >300 per mL are deemed as approximate. MM526: Plate count results <2,500 per mL and >250,000 per mL are deemed as approximate. Calculated results are based on raw data.



					Sample Value	Duplicate Value	% RPD
5117233	NCP	PAH	Acenaphthene	mg/kg	<0.1	<0.1	0
5117233	NCP	PAH	Acenaphthylene	mg/kg	<0.1	<0.1	0
5117233	NCP	PAH	Anthracene	mg/kg	<0.1	<0.1	0
5117233	NCP	PAH	Benz(a)anthracene	mg/kg	<0.1	<0.1	0
5117233	NCP	PAH	Benzo(a)pyrene	mg/kg	<0.1	<0.1	0
5117233	NCP	PAH	Benzo(b)fluoranthene	mg/kg	<0.1	<0.1	0
5117233	NCP	PAH	Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	0
5117233	NCP	PAH	Benzo(k)fluoranthene	mg/kg	<0.1	<0.1	0
5117233	NCP	PAH	Chrysene	mg/kg	<0.1	<0.1	0
5117233	NCP	PAH	Dibenz(a,h)anthracene	mg/kg	<0.1	<0.1	0
5117233	NCP	PAH	Fluoranthene	mg/kg	<0.1	<0.1	0
5117233	NCP	PAH	Fluorene	mg/kg	<0.1	<0.1	0
5117233	NCP	PAH	Indeno(1,2,3-cd)pyrene	mg/kg	<0.1	<0.1	0
5117233	NCP	PAH	Naphthalene	mg/kg	<0.1	<0.1	0
5117233	NCP	PAH	Phenanthrene	mg/kg	<0.1	<0.1	0
5117233	NCP	PAH	Pyrene	mg/kg	<0.1	<0.1	0
5117233	NCP	PAH	Total PAH	mg/kg	<0.1	<0.1	0
5117233	NCP	PAH	BaP TEQ (zero)	mg/kg	<0.1	<0.1	0
5117233	NCP	PAH	BaP TEQ (half LOR)	mg/kg	0.1	0.1	0.0
5117233	NCP	PAH	BaP TEQ (LOR)	mg/kg	0.2	0.2	0.0
5117924	NCP	PAH	Acenaphthene	mg/kg	<0.2 LORR	<0.2 LORR	0
5117924	NCP	PAH	Acenaphthylene	mg/kg	<0.2 LORR	<0.2 LORR	0
5117924	NCP	PAH	Anthracene	mg/kg	<0.2 LORR	<0.2 LORR	0
5117924	NCP	PAH	Benz(a)anthracene	mg/kg	<0.2 LORR	<0.2 LORR	0
5117924	NCP	PAH	Benzo(a)pyrene	mg/kg	<0.2 LORR	<0.2 LORR	0
5117924	NCP	PAH	Benzo(b)fluoranthene	mg/kg	<0.2 LORR	<0.2 LORR	0
5117924	NCP	PAH	Benzo(g,h,i)perylene	mg/kg	<0.2 LORR	<0.2 LORR	0
5117924	NCP	PAH	Benzo(k)fluoranthene	mg/kg	<0.2 LORR	<0.2 LORR	0
5117924	NCP	PAH	Chrysene	mg/kg	<0.2 LORR	<0.2 LORR	0
5117924	NCP	PAH	Dibenz(a,h)anthracene	mg/kg	<0.2 LORR	<0.2 LORR	0
5117924	NCP	PAH	Fluoranthene	mg/kg	<0.2 LORR	<0.2 LORR	0
5117924	NCP	PAH	Fluorene	mg/kg	<0.2 LORR	<0.2 LORR	0
5117924	NCP	PAH	Indeno(1,2,3-cd)pyrene	mg/kg	<0.2 LORR	<0.2 LORR	0
5117924	NCP	PAH	Naphthalene	mg/kg	<0.2 LORR	<0.2 LORR	0
5117924	NCP	PAH	Phenanthrene	mg/kg	<0.2 LORR	<0.2 LORR	0

Samples not collected by ALS and are tested as received.

A blank space indicates no test performed. Soil results expressed in mg/kg dry weight unless specified otherwise. Microbiological testing was commenced on the day of receipt and within 24 hours of sampling unless otherwise stated. MM524: Plate count results <10 per mL and >300 per mL are deemed as approximate. MM526: Plate count results <2,500 per mL and >250,000 per mL are deemed as approximate. Calculated results are based on raw data.



Lab Sample ID	Client Sample ID	Analysis	Analyte	mg/kg	Sample Value	Duplicate Value	% RPD
5117924	NCP	PAH	Pyrene	mg/kg	<0.2 LORR	<0.2 LORR	0
5117924	NCP	PAH	Total PAH	mg/kg	<0.2 LORR	<0.2 LORR	0
5117208	170223-SS01	OCP	BHC (alpha isomer)	mg/kg	<0.05	<0.05	0
5117208	170223-SS01	OCP	a-Endosulphan	mg/kg	<0.05	<0.05	0
5117208	170223-SS01	OCP	Aldrin	mg/kg	<0.05	<0.05	0
5117208	170223-SS01	OCP	BHC (beta isomer)	mg/kg	<0.05	<0.05	0
5117208	170223-SS01	OCP	b-Endosulphan	mg/kg	<0.05	<0.05	0
5117208	170223-SS01	OCP	Chlordane	mg/kg	<0.05	<0.05	0
5117208	170223-SS01	OCP	cis-Chlordane	mg/kg	<0.05	<0.05	0
5117208	170223-SS01	OCP	trans-Chlordane	mg/kg	<0.05	<0.05	0
5117208	170223-SS01	OCP	BHC (delta isomer)	mg/kg	<0.05	<0.05	0
5117208	170223-SS01	OCP	DDD	mg/kg	<0.05	<0.05	0
5117208	170223-SS01	OCP	DDE	mg/kg	<0.05	<0.05	0
5117208	170223-SS01	OCP	DDT	mg/kg	<0.05	<0.05	0
5117208	170223-SS01	OCP	Dieldrin	mg/kg	<0.05	<0.05	0
5117208	170223-SS01	OCP	Sum of alpha-, beta- and Endosulphan	mg/kg	<0.05	<0.05	0
5117208	170223-SS01	OCP	Endosulfan Sulfate	mg/kg	<0.05	<0.05	0
5117208	170223-SS01	OCP	Endrin	mg/kg	<0.05	<0.05	0
5117208	170223-SS01	OCP	Endrin Aldehyde	mg/kg	<0.05	<0.05	0
5117208	170223-SS01	OCP	Endrin Ketone	mg/kg	<0.05	<0.05	0
5117208	170223-SS01	OCP	Hexachlorobenzene	mg/kg	<0.05	<0.05	0
5117208	170223-SS01	OCP	Heptachlor Epoxide	mg/kg	<0.05	<0.05	0
5117208	170223-SS01	OCP	Heptachlor	mg/kg	<0.05	<0.05	0
5117208	170223-SS01	OCP	BHC (gamma isomer) [Lindane]	mg/kg	<0.05	<0.05	0
5117208	170223-SS01	OCP	Methoxychlor	mg/kg	<0.05	<0.05	0
5117208	170223-SS01	OCP	Oxychlordane	mg/kg	<0.05	<0.05	0
5117208	170223-SS01	OCP	Sum of DDD, DDE and DDT	mg/kg	<0.05	<0.05	0
5117208	170223-SS01	OCP	Sum of Aldrin and Dieldrin	mg/kg	<0.05	<0.05	0
5117238	NCP	OCP	BHC (alpha isomer)	mg/kg	<0.05	<0.05	0
5117238	NCP	OCP	a-Endosulphan	mg/kg	<0.05	<0.05	0
5117238	NCP	OCP	Aldrin	mg/kg	<0.05	<0.05	0
5117238	NCP	OCP	BHC (beta isomer)	mg/kg	<0.05	<0.05	0
5117238	NCP	OCP	b-Endosulphan	mg/kg	<0.05	<0.05	0
5117238	NCP	OCP	Chlordane	mg/kg	<0.05	<0.05	0

Samples not collected by ALS and are tested as received.

A blank space indicates no test performed. Soil results expressed in mg/kg dry weight unless specified otherwise. Microbiological testing was commenced on the day of receipt and within 24 hours of sampling unless otherwise stated. MM524: Plate count results <10 per mL and >300 per mL are deemed as approximate. MM526: Plate count results <2,500 per mL and >250,000 per mL are deemed as approximate. Calculated results are based on raw data.



					Sample Value	Duplicate Value	% RPD
5117238	NCP	OCP	cis-Chlordane	mg/kg	<0.05	<0.05	0
5117238	NCP	OCP	trans-Chlordane	mg/kg	<0.05	<0.05	0
5117238	NCP	OCP	BHC (delta isomer)	mg/kg	<0.05	<0.05	0
5117238	NCP	OCP	DDD	mg/kg	<0.05	<0.05	0
5117238	NCP	OCP	DDE	mg/kg	<0.05	<0.05	0
5117238	NCP	OCP	DDT	mg/kg	<0.05	<0.05	0
5117238	NCP	OCP	Dieldrin	mg/kg	<0.05	<0.05	0
5117238	NCP	OCP	Sum of alpha-, beta- and Endosulphan	mg/kg	<0.05	<0.05	0
5117238	NCP	OCP	Endosulfan Sulfate	mg/kg	<0.05	<0.05	0
5117238	NCP	OCP	Endrin	mg/kg	<0.05	<0.05	0
5117238	NCP	OCP	Endrin Aldehyde	mg/kg	<0.05	<0.05	0
5117238	NCP	OCP	Endrin Ketone	mg/kg	<0.05	<0.05	0
5117238	NCP	OCP	Hexachlorobenzene	mg/kg	<0.05	<0.05	0
5117238	NCP	OCP	Heptachlor Epoxide	mg/kg	<0.05	<0.05	0
5117238	NCP	OCP	Heptachlor	mg/kg	<0.05	<0.05	0
5117238	NCP	OCP	BHC (gamma isomer) [Lindane]	mg/kg	<0.05	<0.05	0
5117238	NCP	OCP	Methoxychlor	mg/kg	<0.05	<0.05	0
5117238	NCP	OCP	Oxychlordane	mg/kg	<0.05	<0.05	0
5117238	NCP	OCP	Sum of DDD, DDE and DDT	mg/kg	<0.05	<0.05	0
5117238	NCP	OCP	Sum of Aldrin and Dieldrin	mg/kg	<0.05	<0.05	0
Lab Sample ID	Client Sample ID	Analysis	Analyte				
5117231	NCP	CHC	1,2,3,4-Tetrachlorobenzene	mg/kg	<0.1	<0.1	0
5117231	NCP	CHC	1,2,3,5-Tetrachlorobenzene	mg/kg	<0.1	<0.1	0
5117231	NCP	CHC	1,2,3-Trichlorobenzene	mg/kg	<0.1	<0.1	0
5117231	NCP	CHC	1,2,4,5-Tetrachlorobenzene	mg/kg	<0.1	<0.1	0
5117231	NCP	CHC	1,2,4-Trichlorobenzene	mg/kg	<0.1	<0.1	0
5117231	NCP	CHC	1,2-Dichlorobenzene	mg/kg	<0.1	<0.1	0
5117231	NCP	CHC	1,3,5-Trichlorobenzene	mg/kg	<0.1	<0.1	0
5117231	NCP	CHC	1,3-Dichlorobenzene	mg/kg	<0.1	<0.1	0
5117231	NCP	CHC	1,4-Dichlorobenzene	mg/kg	<0.1	<0.1	0
5117231	NCP	CHC	2-Chloronaphthalene	mg/kg	<0.1	<0.1	0
5117231	NCP	CHC	Benzal Chloride	mg/kg	<0.1	<0.1	0
5117231	NCP	CHC	Benzotrichloride	mg/kg	<0.1	<0.1	0
5117231	NCP	CHC	Benzylchloride	mg/kg	<0.1	<0.1	0
5117231	NCP	CHC	Hexachloroethane	mg/kg	<0.1	<0.1	0

Samples not collected by ALS and are tested as received.

A blank space indicates no test performed. Soil results expressed in mg/kg dry weight unless specified otherwise. Microbiological testing was commenced on the day of receipt and within 24 hours of sampling unless otherwise stated. MM524: Plate count results <10 per mL and >300 per mL are deemed as approximate. MM526: Plate count results <2,500 per mL and >250,000 per mL are deemed as approximate. Calculated results are based on raw data.



Lab Sample ID	Client Sample ID	Analysis	Analyte	mg/kg	Sample Value	Duplicate Value	% RPD
5117231	NCP	CHC	Hexachlorobutadiene	mg/kg	<0.1	<0.1	0
5117231	NCP	CHC	Hexachlorocyclopentadiene	mg/kg	<0.1	<0.1	0
5117231	NCP	CHC	Pentachlorobenzene	mg/kg	<0.1	<0.1	0
5117228	NCP	Phenols(Halo)	4-Chloro-3-Methylphenol	mg/kg	<0.5	<0.5	0
5117228	NCP	Phenols(Halo)	2-Chlorophenol	mg/kg	<0.5	<0.5	0
5117228	NCP	Phenols(Halo)	2,4-Dichlorophenol	mg/kg	<0.5	<0.5	0
5117228	NCP	Phenols(Halo)	2,6-Dichlorophenol	mg/kg	<0.5	<0.5	0
5117228	NCP	Phenols(Halo)	Pentachlorophenol	mg/kg	<0.5	<0.5	0
5117228	NCP	Phenols(Halo)	2,3,4,5-Tetrachlorophenol	mg/kg	<0.5	<0.5	0
5117228	NCP	Phenols(Halo)	2,3,4,6-Tetrachlorophenol	mg/kg	<0.5	<0.5	0
5117228	NCP	Phenols(Halo)	2,3,5,6-Tetrachlorophenol	mg/kg	<0.5	<0.5	0
5117228	NCP	Phenols(Halo)	2,4,5-Trichlorophenol	mg/kg	<0.5	<0.5	0
5117228	NCP	Phenols(Halo)	2,4,6-Trichlorophenol	mg/kg	<0.5	<0.5	0
5117228	NCP	Phenols(Halo)	Total Phenols (Halogenated)	mg/kg	<0.5	<0.5	0
5117225	NCP	Phenols(NonHalo)	Phenol	mg/kg	<0.5	<0.5	0
5117225	NCP	Phenols(NonHalo)	Total Cresols	mg/kg	<1	<1	0
5117225	NCP	Phenols(NonHalo)	2,4-Dimethylphenol	mg/kg	<0.5	<0.5	0
5117225	NCP	Phenols(NonHalo)	2,4-Dinitrophenol	mg/kg	<30	<30	0
5117225	NCP	Phenols(NonHalo)	2-Methyl-4,6-Dinitrophenol	mg/kg	<10	<10	0
5117225	NCP	Phenols(NonHalo)	2-Nitrophenol	mg/kg	<0.5	<0.5	0
5117225	NCP	Phenols(NonHalo)	4-Nitrophenol	mg/kg	<0.5	<0.5	0
5117225	NCP	Phenols(NonHalo)	2-Cyclohexyl-4,6-Dinitrophenol	mg/kg	<30	<30	0
5117225	NCP	Phenols(NonHalo)	Dinoseb	mg/kg	<10	<10	0
5117225	NCP	Phenols(NonHalo)	Total Phenols (non Halogenated)	mg/kg	<30	<30	0

QUALITY CONTROL - SPIKES

QC Data for spikes is calculated on raw 'unrounded' values. Laboratory spikes are randomly selected samples in which the analytes in question have been artificially introduced and recovered via standard analysis and are used to provide information on potential matrix effects on analyte recoveries.

Spike recoveries that fall outside the general acceptance criteria will be attributed to sample matrix interference or results of high magnitudes.

NCP: Non-Customer Parent (sample quality is representative of the analytical batch but the sample that was QC tested belongs to a customer not pertaining to the report.)

Samples not collected by ALS and are tested as received.

A blank space indicates no test performed. Soil results expressed in mg/kg dry weight unless specified otherwise. Microbiological testing was commenced on the day of receipt and within 24 hours of sampling unless otherwise stated. MM524: Plate count results <10 per mL and >300 per mL are deemed as approximate. MM526: Plate count results <2,500 per mL and >250,000 per mL are deemed as approximate. Calculated results are based on raw data.



Lab Sample ID	Client Sample ID	Analysis	Analyte		Sample Value	Expected Value	% Recovery
5117117	NCP	Total Fluoride	Total Fluoride, as F	mg/kg	580	680	88.9
5118041	TP02/0.1	Cyanide	Cyanide, as CN	mg/kg	<5	20	94.4
5116820	NCP	MS Total Metals	Antimony	mg/kg	<5	100	105
5116820	NCP	MS Total Metals	Arsenic	mg/kg	9	110	82.5
5116820	NCP	MS Total Metals	Barium	mg/kg	86	170	106
5116820	NCP	MS Total Metals	Cadmium	mg/kg	<0.2	100	101
5116820	NCP	MS Total Metals	Chromium	mg/kg	28	120	82.4
5116820	NCP	MS Total Metals	Lead	mg/kg	19	120	88.6
5116820	NCP	MS Total Metals	Manganese	mg/kg	240	310	108
5116820	NCP	MS Total Metals	Mercury	mg/kg	<0.05	1.0	99.2
5116820	NCP	MS Total Metals	Molybdenum	mg/kg	<5	100	96.5
5116820	NCP	MS Total Metals	Selenium	mg/kg	<3	100	93.5
5116820	NCP	MS Total Metals	Tin	mg/kg	<5	100	100
5116820	NCP	MS Total Metals	Zinc	mg/kg	23	120	84.8
5117065	NCP	MAH	Styrene	mg/kg	<0.5	4.6	72.0
5117065	NCP	MAH	Cumene	mg/kg	<0.5	4.6	75.7
5117065	NCP	MAH	1,2,4-Trimethylbenzene	mg/kg	<0.5	4.6	79.9
5116423	NCP	BTEXN	Benzene	mg/kg	<0.5	4.6	94.1
5116423	NCP	BTEXN	Toluene	mg/kg	<0.5	4.6	91.9
5116423	NCP	BTEXN	Ethyl Benzene	mg/kg	<0.5	4.6	83.0
5116423	NCP	BTEXN	Xylene - m&p	mg/kg	<1	9.3	87.1
5116423	NCP	BTEXN	Xylene - O	mg/kg	<0.5	4.6	85.1
5116428	NCP	TRH (C6-C10) & F1	TPHC6-C9	mg/kg	<20	120	116
5116428	NCP	TRH (C6-C10) & F1	TRHC6-C10	mg/kg	<20	120	109
5116873	NCP	TRH & TPH (>C10)	TPH C15-C28	mg/kg	<50	830	118
5116873	NCP	TRH & TPH (>C10)	TRH>C16-C34	mg/kg	<50	840	120
5117234	NCP	PAH	Acenaphthene	mg/kg	<0.1	1.4	93.8
5117234	NCP	PAH	Acenaphthylene	mg/kg	<0.1	1.4	104

Samples not collected by ALS and are tested as received.

A blank space indicates no test performed. Soil results expressed in mg/kg dry weight unless specified otherwise. Microbiological testing was commenced on the day of receipt and within 24 hours of sampling unless otherwise stated. MM524: Plate count results <10 per mL and >300 per mL are deemed as approximate. MM526: Plate count results <2,500 per mL and >250,000 per mL are deemed as approximate. Calculated results are based on raw data.



					Sample Value	Expected Value	% Recovery
5117234	NCP	PAH	Anthracene	mg/kg	<0.1	1.4	106
5117234	NCP	PAH	Benz(a)anthracene	mg/kg	<0.1	1.4	106
5117234	NCP	PAH	Benzo(a)pyrene	mg/kg	<0.1	1.4	98.2
5117234	NCP	PAH	Benzo(b)fluoranthene	mg/kg	<0.1	1.4	103
5117234	NCP	PAH	Benzo(g,h,i)perylene	mg/kg	<0.1	1.4	94.6
5117234	NCP	PAH	Benzo(k)fluoranthene	mg/kg	<0.1	1.4	96.2
5117234	NCP	PAH	Chrysene	mg/kg	<0.1	1.4	98.0
5117234	NCP	PAH	Dibenz(a,h)anthracene	mg/kg	<0.1	1.4	140
5117234	NCP	PAH	Fluoranthene	mg/kg	<0.1	1.4	108
5117234	NCP	PAH	Fluorene	mg/kg	<0.1	1.4	102
5117234	NCP	PAH	Indeno(1,2,3-cd)pyrene	mg/kg	<0.1	1.4	94.2
5117234	NCP	PAH	Naphthalene	mg/kg	<0.1	1.4	100
5117234	NCP	PAH	Phenanthrene	mg/kg	<0.1	1.4	104
5117234	NCP	PAH	Pyrene	mg/kg	<0.1	1.4	108
5117926	NCP	PAH	Acenaphthene	mg/kg	<0.1	1.4	78.4
5117926	NCP	PAH	Acenaphthylene	mg/kg	<0.1	1.4	85.8
5117926	NCP	PAH	Anthracene	mg/kg	<0.1	1.4	90.0
5117926	NCP	PAH	Benz(a)anthracene	mg/kg	<0.1	1.4	89.0
5117926	NCP	PAH	Benzo(a)pyrene	mg/kg	<0.1	1.4	86.0
5117926	NCP	PAH	Benzo(b)fluoranthene	mg/kg	<0.1	1.4	88.4
5117926	NCP	PAH	Benzo(g,h,i)perylene	mg/kg	<0.1	1.4	86.2
5117926	NCP	PAH	Benzo(k)fluoranthene	mg/kg	<0.1	1.4	88.6
5117926	NCP	PAH	Chrysene	mg/kg	<0.1	1.4	86.6
5117926	NCP	PAH	Dibenz(a,h)anthracene	mg/kg	<0.1	1.4	130
5117926	NCP	PAH	Fluoranthene	mg/kg	<0.1	1.4	94.2
5117926	NCP	PAH	Fluorene	mg/kg	<0.1	1.4	83.4
5117926	NCP	PAH	Indeno(1,2,3-cd)pyrene	mg/kg	<0.1	1.4	81.2
5117926	NCP	PAH	Naphthalene	mg/kg	<0.1	1.4	86.8
5117926	NCP	PAH	Phenanthrene	mg/kg	<0.1	1.4	89.0
5117926	NCP	PAH	Pyrene	mg/kg	<0.1	1.4	95.2
Lab Sample ID	Client Sample ID	Analysis	Analyte				
5117209	170223-SS06	OCP	BHC (alpha isomer)	mg/kg	<0.07	1.9	102
5117209	170223-SS06	OCP	a-Endosulphan	mg/kg	<0.07	1.9	94.0
5117209	170223-SS06	OCP	Aldrin	mg/kg	<0.07	1.9	113
5117209	170223-SS06	OCP	BHC (beta isomer)	mg/kg	<0.07	1.9	95.0

Samples not collected by ALS and are tested as received.

A blank space indicates no test performed. Soil results expressed in mg/kg dry weight unless specified otherwise. Microbiological testing was commenced on the day of receipt and within 24 hours of sampling unless otherwise stated. MM524: Plate count results <10 per mL and >300 per mL are deemed as approximate. MM526: Plate count results <2,500 per mL and >250,000 per mL are deemed as approximate. Calculated results are based on raw data.



					Sample Value	Expected Value	% Recovery
5117209	170223-SS06	OCP	b-Endosulphan	mg/kg	<0.07	1.9	85.0
5117209	170223-SS06	OCP	Chlordane	mg/kg	<0.07	3.7	104
5117209	170223-SS06	OCP	cis-Chlordane	mg/kg	<0.07	1.9	104
5117209	170223-SS06	OCP	trans-Chlordane	mg/kg	<0.07	1.9	105
5117209	170223-SS06	OCP	BHC (delta isomer)	mg/kg	<0.07	1.9	110
5117209	170223-SS06	OCP	DDD	mg/kg	<0.07	1.9	131
5117209	170223-SS06	OCP	DDE	mg/kg	<0.07	1.9	107
5117209	170223-SS06	OCP	Dieldrin	mg/kg	<0.07	1.9	86.0
5117209	170223-SS06	OCP	Endosulfan Sulfate	mg/kg	<0.07	1.9	77.0
5117209	170223-SS06	OCP	Endrin	mg/kg	<0.07	1.9	57.0
5117209	170223-SS06	OCP	Endrin Aldehyde	mg/kg	<0.07	1.9	96.0
5117209	170223-SS06	OCP	Endrin Ketone	mg/kg	<0.07	1.9	57.0
5117209	170223-SS06	OCP	Hexachlorobenzene	mg/kg	<0.07	1.9	98.0
5117209	170223-SS06	OCP	Heptachlor Epoxide	mg/kg	<0.07	1.9	109
5117209	170223-SS06	OCP	Heptachlor	mg/kg	<0.07	1.9	53.0
5117209	170223-SS06	OCP	BHC (gamma isomer) [Lindane]	mg/kg	<0.07	1.9	91.0
5117239	NCP	OCP	BHC (alpha isomer)	mg/kg	<0.05	1.4	100
5117239	NCP	OCP	a-Endosulphan	mg/kg	<0.05	1.4	115
5117239	NCP	OCP	Aldrin	mg/kg	<0.05	1.4	126
5117239	NCP	OCP	BHC (beta isomer)	mg/kg	<0.05	1.4	101
5117239	NCP	OCP	b-Endosulphan	mg/kg	<0.05	1.4	98.2
5117239	NCP	OCP	Chlordane	mg/kg	<0.05	2.7	114
5117239	NCP	OCP	cis-Chlordane	mg/kg	<0.05	1.4	106
5117239	NCP	OCP	trans-Chlordane	mg/kg	<0.05	1.4	106
5117239	NCP	OCP	BHC (delta isomer)	mg/kg	<0.05	1.4	109
5117239	NCP	OCP	DDD	mg/kg	<0.05	1.4	112
5117239	NCP	OCP	DDE	mg/kg	<0.05	1.4	97.2
5117239	NCP	OCP	Dieldrin	mg/kg	<0.05	1.4	97.0
5117239	NCP	OCP	Endosulfan Sulfate	mg/kg	<0.05	1.4	88.0
5117239	NCP	OCP	Endrin	mg/kg	<0.05	1.4	89.8
5117239	NCP	OCP	Endrin Aldehyde	mg/kg	<0.05	1.4	97.8
5117239	NCP	OCP	Endrin Ketone	mg/kg	<0.05	1.4	87.4
5117239	NCP	OCP	Hexachlorobenzene	mg/kg	<0.05	1.4	98.2
5117239	NCP	OCP	Heptachlor Epoxide	mg/kg	<0.05	1.4	102
5117239	NCP	OCP	Heptachlor	mg/kg	<0.05	1.4	96.2

Samples not collected by ALS and are tested as received.

A blank space indicates no test performed. Soil results expressed in mg/kg dry weight unless specified otherwise. Microbiological testing was commenced on the day of receipt and within 24 hours of sampling unless otherwise stated. MM524: Plate count results <10 per mL and >300 per mL are deemed as approximate. MM526: Plate count results <2,500 per mL and >250,000 per mL are deemed as approximate. Calculated results are based on raw data.



					Sample Value	Expected Value	% Recovery
5117239	NCP	OCP	BHC (gamma isomer) [Lindane]	mg/kg	<0.05	1.4	98.6
Lab Sample ID	Client Sample ID	Analysis	Analyte				
5117243	NCP	PCB	Aroclor 1016	mg/kg	<0.2	2.8	92.5
5117243	NCP	PCB	Aroclor 1260	mg/kg	<0.2	2.6	105
Lab Sample ID	Client Sample ID	Analysis	Analyte				
5117230	NCP	CHC	1,2,3,4-Tetrachlorobenzene	mg/kg	<0.2	1.2	82.0
5117230	NCP	CHC	1,2,3-Trichlorobenzene	mg/kg	<0.2	1.2	92.0
5117230	NCP	CHC	1,2,4,5-Tetrachlorobenzene	mg/kg	<0.2	2.5	74.5
5117230	NCP	CHC	1,2,4-Trichlorobenzene	mg/kg	<0.2	1.2	89.0
5117230	NCP	CHC	1,2-Dichlorobenzene	mg/kg	<0.2	1.2	117
5117230	NCP	CHC	1,3,5-Trichlorobenzene	mg/kg	<0.2	1.2	94.0
5117230	NCP	CHC	1,3-Dichlorobenzene	mg/kg	<0.2	1.2	74.0
5117230	NCP	CHC	1,4-Dichlorobenzene	mg/kg	<0.2	1.2	118
5117230	NCP	CHC	2-Chloronaphthalene	mg/kg	<0.2	1.2	93.0
5117230	NCP	CHC	Benzal Chloride	mg/kg	<0.2	1.2	100
5117230	NCP	CHC	Hexachlorobutadiene	mg/kg	<0.2	1.2	92.0
5117230	NCP	CHC	Pentachlorobenzene	mg/kg	<0.2	1.2	84.0
Lab Sample ID	Client Sample ID	Analysis	Analyte				
5117227	NCP	Phenols(Halo)	4-Chloro-3-Methylphenol	mg/kg	<1	1.5	85.0
5117227	NCP	Phenols(Halo)	2-Chlorophenol	mg/kg	<1	1.5	86.0
5117227	NCP	Phenols(Halo)	2,4-Dichlorophenol	mg/kg	<1	1.5	83.0
5117227	NCP	Phenols(Halo)	2,6-Dichlorophenol	mg/kg	<1	1.5	87.0
5117227	NCP	Phenols(Halo)	2,3,4,6-Tetrachlorophenol	mg/kg	<1	3.1	65.5
5117227	NCP	Phenols(Halo)	2,4,5-Trichlorophenol	mg/kg	<1	1.5	98.0
5117227	NCP	Phenols(Halo)	2,4,6-Trichlorophenol	mg/kg	<1	1.5	71.0
Lab Sample ID	Client Sample ID	Analysis	Analyte				
5117224	NCP	Phenols(NonHalo)	Phenol	mg/kg	<1	1.5	98.0
5117224	NCP	Phenols(NonHalo)	Total Cresols	mg/kg	<2	4.6	73.0
5117224	NCP	Phenols(NonHalo)	2,4-Dimethylphenol	mg/kg	<1	1.5	100
5117224	NCP	Phenols(NonHalo)	2-Nitrophenol	mg/kg	<1	1.5	70.0
Lab Sample ID	Client Sample ID	Analysis	Analyte				
5117060	NCP	HVOL	1,1,1,2-Tetrachloroethane	mg/kg	<0.5	4.6	76.9
5117060	NCP	HVOL	1,1,2,2-Tetrachloroethane	mg/kg	<0.5	4.6	103
5117060	NCP	HVOL	1,1-Dichloroethane	mg/kg	<0.5	4.6	87.7
5117060	NCP	HVOL	1,1-Dichloroethene	mg/kg	<0.5	4.6	78.7

Samples not collected by ALS and are tested as received.

A blank space indicates no test performed. Soil results expressed in mg/kg dry weight unless specified otherwise. Microbiological testing was commenced on the day of receipt and within 24 hours of sampling unless otherwise stated. MM524: Plate count results <10 per mL and >300 per mL are deemed as approximate. MM526: Plate count results <2,500 per mL and >250,000 per mL are deemed as approximate. Calculated results are based on raw data.



					Sample Value	Expected Value	% Recovery
5117060	NCP	HVOL	1,1-Dichloropropene	mg/kg	<0.5	4.6	84.0
5117060	NCP	HVOL	1,2,3-Trichloropropane	mg/kg	<0.5	4.6	101
5117060	NCP	HVOL	1,2-Dibromo-3-Chloropropane	mg/kg	<0.5	4.6	78.2
5117060	NCP	HVOL	1,2-Dichloroethene [cis]	mg/kg	<0.5	4.6	82.7
5117060	NCP	HVOL	1,2-Dichloroethene [trans]	mg/kg	<0.5	4.6	94.9
5117060	NCP	HVOL	1,2-Dichloroethane	mg/kg	<0.5	4.6	99.8
5117060	NCP	HVOL	1,2-Dichloropropane	mg/kg	<0.5	4.6	95.3
5117060	NCP	HVOL	1,3-Dichloropropane	mg/kg	<0.5	4.6	96.9
5117060	NCP	HVOL	1,3-Dichloropropene [cis]	mg/kg	<0.5	4.6	70.5
5117060	NCP	HVOL	2-Chlorotoluene	mg/kg	<0.5	4.6	85.2
5117060	NCP	HVOL	4-Chlorotoluene	mg/kg	<0.5	4.6	84.2
5117060	NCP	HVOL	Bromochloromethane	mg/kg	<0.5	4.6	92.8
5117060	NCP	HVOL	Bromodichloromethane	mg/kg	<0.5	4.6	85.6
5117060	NCP	HVOL	Bromobenzene	mg/kg	<0.5	4.6	86.3
5117060	NCP	HVOL	Bromoform (Tribromomethane)	mg/kg	<0.5	4.6	75.8
5117060	NCP	HVOL	Carbon Tetrachloride	mg/kg	<0.5	4.6	74.5
5117060	NCP	HVOL	Chloroform (Trichloromethane)	mg/kg	<0.5	4.6	94.3
5117060	NCP	HVOL	Chlorobenzene	mg/kg	<0.5	4.6	88.6
5117060	NCP	HVOL	Dibromochloromethane	mg/kg	<0.5	4.6	73.1
5117060	NCP	HVOL	Dibromomethane	mg/kg	<0.5	4.6	99.5
5117060	NCP	HVOL	1,2-Dibromoethane	mg/kg	<0.5	4.6	86.4
5117060	NCP	HVOL	Dichloromethane	mg/kg	<1	4.6	101
5117060	NCP	HVOL	Trichlorofluoromethane (CFC11)	mg/kg	<2	4.6	75.4
5117060	NCP	HVOL	Tetrachloroethene	mg/kg	<0.5	4.6	84.1
5117060	NCP	HVOL	1,1,1-Trichloroethane	mg/kg	<0.5	4.6	79.7
5117060	NCP	HVOL	1,1,2-Trichloroethane	mg/kg	<0.5	4.6	93.7
5117060	NCP	HVOL	Trichloroethene	mg/kg	<0.5	4.6	93.3

Samples not collected by ALS and are tested as received.

A blank space indicates no test performed. Soil results expressed in mg/kg dry weight unless specified otherwise. Microbiological testing was commenced on the day of receipt and within 24 hours of sampling unless otherwise stated. MM524: Plate count results <10 per mL and >300 per mL are deemed as approximate. MM526: Plate count results <2,500 per mL and >250,000 per mL are deemed as approximate. Calculated results are based on raw data.

Client		Kufner Textiles (Australia) P/L		Job number	L007074	Page	1	of	1
Project		Preliminary Contamination Assessment		Laboratory	Envirolab				
Location		Jumbunna Road, Korumburra		Quote number	M15-001				
Sample ID		Date sampled	Matrix	No. of containers	Testing required				
					Heavy Metals	OCF	PAH	TRH	
TP01/0.1A		23.2.17	S	1	X	X	X	X	
170223-SS07A		23.02.17	S	1					

ENVIROLAB
Envirolab Services
14 Dalmore Drive
Caribbean Park
Scoresby VIC 3179
Ph: (03) 9753 2500

Job No: 0206
Date Received: 23/2/17
Time Received: 15:25
Received by: PA
Temp: Cool/Ambient
Cooling: Ice/Icepack
Security: Intact/Broken/None

CONTAMINATION RISK: High Medium Low

Notes

Matrix: S = Soil GW = Groundwater W = Water R = Rinsate
Soil: BW-1 (IWRG621: MAH/VCH/TRH/PAH/OC/PCB/Cr6+/CN(total)/F(total)/Metals*)
Water: BW-1W (IWRG621: MAH/VCH/TRH/LL-PAH/LL-OC/PCB/Cr6+/CN(total)/F(total)/Metals* (to be filtered to 0.1 ug), ion balance, pH, TDS)
Soluble Heavy Metals*: Ag, As, B, Ba, Be, Cd, Co, Cr, Cu, Hg, Mn, Mo, Ni, Pb, Sb, Se, Sn, V, Zn

Turnaround time 24hr 48hr 72hr Standard **Comments:**

Chain of Custody

From	Company	Date	Received by	Company	Date	Time
J.Raabe	Beveridge Williams	23/02/2017	A. MATTHEWICK	GLS	23/2/17	15:25

Quality control

		Initial
Sample preservation	Appropriate sample containers used, refrigerated or chilled samples supplied to laboratory	J.R
Sample holding times	Tests conducted within specified holding times	J.R
Final certificates	Re-testing of results as requested. Tests conducted and reported as per CoC form.	J.R



1 Dalmore Drive, Scoresby, Victoria 3179
tel: +61 3 9763 2500

email: melbourne@envirolab.com.au
envirolab.com.au

Envirolab Services Pty Ltd - Melbourne | ABN 37 112 535 645 - 002

CERTIFICATE OF ANALYSIS

10206

Client:

Beveridge Williams
1 Glenferrie Road
Malvern
VIC 3144

Attention: A. Mellett

Sample log in details:

Your Reference:	<u>L007074 Jumbunna Road, Korumburra</u>
No. of samples:	2 Soil
Date samples received / completed instructions received	23/02/2017 / 23/02/2017

Analysis Details:

Please refer to the following pages for results, methodology summary and quality control data. Samples were analysed as received from the client. Results relate specifically to the samples as received. Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Please refer to the last page of this report for any comments relating to the results.

Report Details:

Date results requested by: / Issue Date: 2/03/17 / 2/03/17
Date of Preliminary Report: Not Issued

NATA accreditation number 2901. This document shall not be reproduced except in full.

Accredited for compliance with ISO/IEC 17025 - Testing **Tests not covered by NATA are denoted with *.**

Results Approved By:

Chris De Luca
Senior Chemist

Envirolab Reference: 10206
Revision No: R 00



Metals in soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ----- -----	10206-1 TP01/0.1A 23/02/2017 Soil
Date digested	-	27/02/2017
Date analysed	-	27/02/2017
Antimony	mg/kg	<7
Arsenic	mg/kg	330
Barium	mg/kg	72
Beryllium	mg/kg	<1
Boron	mg/kg	8
Cadmium	mg/kg	1
Chromium	mg/kg	12
Cobalt	mg/kg	7
Copper	mg/kg	34
Lead	mg/kg	16
Manganese	mg/kg	440
Mercury	mg/kg	<0.1
Molybdenum	mg/kg	<1
Nickel	mg/kg	23
Selenium	mg/kg	<2
Silver	mg/kg	<1
Tin	mg/kg	11
Vanadium	mg/kg	18
Zinc	mg/kg	31

PAHs in Soil Our Reference: Your Reference Date Sampled Type of sample	UNITS ----- -----	10206-1 TP01/0.1A 23/02/2017 Soil
Date extracted	-	24/02/2017
Date analysed	-	27/02/2017
Acenaphthene	mg/kg	<0.1
Acenaphthylene	mg/kg	<0.1
Anthracene	mg/kg	<0.1
Benzo(a)anthracene	mg/kg	<0.1
Benzo(a)pyrene	mg/kg	<0.05
Benzo(b,j&k)fluoranthene	mg/kg	<0.2
Benzo(g,h,i)perylene	mg/kg	<0.1
Chrysene	mg/kg	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1
Fluoranthene	mg/kg	<0.1
Fluorene	mg/kg	<0.1
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1
Naphthalene	mg/kg	<0.1
Phenanthrene	mg/kg	<0.1
Pyrene	mg/kg	<0.1
Total +ve PAH's	mg/kg	<0.05
Benzo(a)pyrene TEQ calc (Zero)	mg/kg	<0.5
Surrogate p-Terphenyl-d14	%	94

OCP in Soil	UNITS	10206-1
Our Reference:	-----	TP01/0.1A
Your Reference	-----	23/02/2017
Date Sampled		Soil
Type of sample		
Date extracted	-	24/02/2017
Date analysed	-	27/02/2017
Aldrin	mg/kg	<0.1
Dieldrin	mg/kg	<0.1
alpha-BHC	mg/kg	<0.1
beta-BHC	mg/kg	<0.1
delta-BHC	mg/kg	<0.1
gamma-BHC	mg/kg	<0.1
alpha-chlordane	mg/kg	<0.1
gamma-Chlordane	mg/kg	<0.1
pp-DDD	mg/kg	<0.1
pp-DDE	mg/kg	<0.1
pp-DDT	mg/kg	<0.1
Endosulfan I	mg/kg	<0.1
Endosulfan II	mg/kg	<0.1
Endosulfan Sulphate	mg/kg	<0.1
Endrin	mg/kg	<0.1
Endrin Aldehyde	mg/kg	<0.1
Heptachlor	mg/kg	<0.1
Heptachlor Epoxide	mg/kg	<0.1
Hexachlorobenzene	mg/kg	<0.1
Methoxychlor	mg/kg	<0.1
Surrogate p-Terphenyl-d14	%	94

TRHSoilC6-C40NEPM		
Our Reference:	UNITS	10206-1
Your Reference	-----	TP01/0.1A
Date Sampled	-----	23/02/2017
Type of sample		Soil
Date extracted	-	24/02/2017
Date analysed	-	28/02/2017
vTRHC ₆ - C ₉	mg/kg	<25
TRHC ₁₀ - C ₁₄	mg/kg	<50
TRHC ₁₅ - C ₂₈	mg/kg	<100
TRHC ₂₉ - C ₃₆	mg/kg	<100
vTRHC ₆ - C ₁₀	mg/kg	<25
vTRHC ₆ - C ₁₀ F1	mg/kg	<25
TRH>C ₁₀ -C ₁₆	mg/kg	<50
TRH>C ₁₆ -C ₃₄	mg/kg	<100
TRH>C ₃₄ -C ₄₀	mg/kg	<100
TRH>C ₁₀ - C ₁₆ less Naphthalene (F2)	mg/kg	<50
Surrogate o-Terphenyl	%	84

BTEXNinSoilNEPM		
Our Reference:	UNITS	10206-1
Your Reference	-----	TP01/0.1A
Date Sampled	-----	23/02/2017
Type of sample		Soil
Date extracted	-	24/02/2017
Date analysed	-	28/02/2017
Benzene	mg/kg	<0.2
Ethylbenzene	mg/kg	<1
Toluene	mg/kg	<0.5
m+p-xylene	mg/kg	<2
o-Xylene	mg/kg	<1
Naphthalene	mg/kg	<1
Surrogate aaa-Trifluorotoluene	%	101

Moisture		
Our Reference:	UNITS	10206-1
Your Reference	-----	TP01/0.1A
Date Sampled	-----	23/02/2017
Type of sample		Soil
Date prepared	-	24/02/2017
Date analysed	-	27/02/2017
Moisture	%	16

MethodID	Methodology Summary
Metals-020 ICP-AES	Determination of various metals by ICP-AES.
Metals-021 CV-AAS	Determination of Mercury by Cold Vapour AAS.
Org-012	<p>Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013.</p> <p>For soil results:-</p> <ol style="list-style-type: none"> 1. 'TEQ PQL' values are assuming all contributing PAHs reported as <PQL are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present. 2. 'TEQ zero' values are assuming all contributing PAHs reported as <PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL. 3. 'TEQ half PQL' values are assuming all contributing PAHs reported as <PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above. <p>Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PAHs" is simply a sum of the positive individual PAHs.</p>
Org-012	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS.
Org-016	<p>Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.</p> <p>Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.</p>
Org-003	<p>Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID.</p> <p>F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.</p> <p>Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).</p>
Org-014	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Inorg-008	Moisture content determined by heating at 105 deg C for a minimum of 12 hours.

QUALITY CONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
Metals in soil						Base II Duplicate II %RPD		
Date digested	-			27/02/2017	[NT]	[NT]	LCS-1	27/02/2017
Date analysed	-			27/02/2017	[NT]	[NT]	LCS-1	27/02/2017
Antimony	mg/kg	7	Metals-020 ICP-AES	<7	[NT]	[NT]	LCS-1	103%
Arsenic	mg/kg	4	Metals-020 ICP-AES	<4	[NT]	[NT]	LCS-1	101%
Barium	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	LCS-1	106%
Beryllium	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	LCS-1	115%
Boron	mg/kg	3	Metals-020 ICP-AES	<3	[NT]	[NT]	LCS-1	109%
Cadmium	mg/kg	0.4	Metals-020 ICP-AES	<0.4	[NT]	[NT]	LCS-1	102%
Chromium	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	LCS-1	105%
Cobalt	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	LCS-1	99%
Copper	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	LCS-1	103%
Lead	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	LCS-1	101%
Manganese	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	LCS-1	107%
Mercury	mg/kg	0.1	Metals-021 CV-AAS	<0.1	[NT]	[NT]	LCS-1	116%
Molybdenum	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	LCS-1	108%
Nickel	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	LCS-1	103%
Selenium	mg/kg	2	Metals-020 ICP-AES	<2	[NT]	[NT]	LCS-1	101%
Silver	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	LCS-1	107%
Tin	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	LCS-1	102%
Vanadium	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	LCS-1	101%
Zinc	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	LCS-1	104%

QUALITYCONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
PAHs in Soil						Base II Duplicate II %RPD		
Date extracted	-			24/02/2017	[NT]	[NT]	LCS-1	24/02/2017
Date analysed	-			27/02/2017	[NT]	[NT]	LCS-1	27/02/2017
Acenaphthene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NR]	[NR]
Acenaphthylene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	LCS-1	86%
Anthracene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NR]	[NR]
Benzo(a)anthracene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NR]	[NR]
Benzo(a)pyrene	mg/kg	0.05	Org-012	<0.05	[NT]	[NT]	LCS-1	80%
Benzo(b,j&k)fluoranthene	mg/kg	0.2	Org-012	<0.2	[NT]	[NT]	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NR]	[NR]
Chrysene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	LCS-1	104%
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NR]	[NR]
Fluoranthene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	LCS-1	96%
Fluorene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	LCS-1	88%
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NR]	[NR]
Naphthalene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	LCS-1	94%
Phenanthrene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	LCS-1	98%
Pyrene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	LCS-1	98%
Surrogate p-Terphenyl-d14	%		Org-012	104	[NT]	[NT]	LCS-1	102%

QUALITYCONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
OCP in Soil						Base II Duplicate II %RPD		
Date extracted	-			24/02/2017	[NT]	[NT]	LCS-1	24/02/2017
Date analysed	-			27/02/2017	[NT]	[NT]	LCS-1	27/02/2017
Aldrin	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	LCS-1	92%
Dieldrin	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	LCS-1	98%
alpha-BHC	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	LCS-1	96%
beta-BHC	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	LCS-1	92%
delta-BHC	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NR]	[NR]
gamma-BHC	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NR]	[NR]
alpha-chlordane	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NR]	[NR]
gamma-Chlordane	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	LCS-1	92%
pp-DDD	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	LCS-1	106%
pp-DDE	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	LCS-1	94%
pp-DDT	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NR]	[NR]
Endosulfan I	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NR]	[NR]
Endosulfan II	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NR]	[NR]
Endosulfan Sulphate	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	LCS-1	104%
Endrin	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	LCS-1	82%
Endrin Aldehyde	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NR]	[NR]
Heptachlor	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	LCS-1	88%
Heptachlor Epoxide	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	LCS-1	88%
Hexachlorobenzene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NR]	[NR]
Methoxychlor	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NR]	[NR]
Surrogate p-Terphenyl-d14	%		Org-012	104	[NT]	[NT]	LCS-1	102%

QUALITYCONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
TRHSoilC6-C40NEPM						Base II Duplicate II%RPD		
Date extracted	-			24/02/2017	[NT]	[NT]	LCS-1	24/02/2017
Date analysed	-			28/02/2017	[NT]	[NT]	LCS-1	28/02/2017
vTRHC ₆ - C ₉	mg/kg	25	Org-016	<25	[NT]	[NT]	LCS-1	101%
TRHC ₁₀ - C ₁₄	mg/kg	50	Org-003	<50	[NT]	[NT]	LCS-1	115%
TRHC ₁₅ - C ₂₈	mg/kg	100	Org-003	<100	[NT]	[NT]	LCS-1	116%
TRHC ₂₉ - C ₃₆	mg/kg	100	Org-003	<100	[NT]	[NT]	LCS-1	107%
vTRHC ₆ - C ₁₀	mg/kg	25	Org-016	<25	[NT]	[NT]	LCS-1	101%
vTRHC ₆ - C ₁₀ F1	mg/kg	25	Org-016	[NT]	[NT]	[NT]	[NR]	[NR]
TRH>C ₁₀ -C ₁₆	mg/kg	50	Org-003	<50	[NT]	[NT]	LCS-1	115%
TRH>C ₁₆ -C ₃₄	mg/kg	100	Org-003	<100	[NT]	[NT]	LCS-1	116%
TRH>C ₃₄ -C ₄₀	mg/kg	100	Org-003	<100	[NT]	[NT]	LCS-1	107%
Surrogate o-Terphenyl	%		Org-003	89	[NT]	[NT]	LCS-1	115%
QUALITYCONTROL	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results	Spike Sm#	Spike % Recovery
BTEXNinSoilNEPM						Base II Duplicate II%RPD		
Date extracted	-			24/02/2017	[NT]	[NT]	LCS-1	24/02/2017
Date analysed	-			28/02/2017	[NT]	[NT]	LCS-1	28/02/2017
Benzene	mg/kg	0.2	Org-016	<0.2	[NT]	[NT]	LCS-1	95%
Ethylbenzene	mg/kg	1	Org-016	<1	[NT]	[NT]	LCS-1	101%
Toluene	mg/kg	0.5	Org-016	<0.5	[NT]	[NT]	LCS-1	99%
m+p-xylene	mg/kg	2	Org-016	<2	[NT]	[NT]	LCS-1	106%
o-Xylene	mg/kg	1	Org-016	<1	[NT]	[NT]	LCS-1	102%
Naphthalene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NR]	[NR]
Surrogate aaa-Trifluorotoluene	%		Org-016	108	[NT]	[NT]	LCS-1	107%
QUALITYCONTROL	UNITS	PQL	METHOD	Blank				
Moisture								
Date prepared	-			[NT]				
Date analysed	-			[NT]				
Moisture	%	0.1	Inorg-008	[NT]				

Report Comments:

Asbestos ID was analysed by Approved Identifier: Not applicable for this job
Asbestos ID was authorised by Approved Signatory: Not applicable for this job

INS: Insufficient sample for this test
NR: Test not required
<: Less than

PQL: Practical Quantitation Limit
RPD: Relative Percent Difference
>: Greater than

NT: Not tested
NA: Test not required
LCS: Laboratory Control Sample

Quality Control Definitions

Blank: This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.

Duplicate: This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.

Matrix Spike: A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.

LCS (Laboratory Control Sample): This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.

Surrogate Spike: Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: <5xPQL - any RPD is acceptable; >5xPQL - 0-50% RPD is acceptable.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals; 60-140% for organics (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Measurement Uncertainty estimates are available for most tests upon request.