DWP

Stage 2 Site Contamination Assessment

Bushland Health

494 Wingham Road, Taree

Report No. RGS02310.1-AE_Rev 1

30 August 2024

REGIONAL GEOTECHNICAL SOLUTIONS

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Manning-Great Lakes
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RGS02310.1-AE_Rev 1

30 August 2024

DWP
16 Telford St
NEWCASTLE NSW 2300

Attention: Marly Swanson Wood

Dear Marly,

RE: Bushland Health – 494 Wingham Road, Taree

Stage 2 Site Contamination Assessment

As requested, Regional Geotechnical Solutions Pty Ltd (RGS) has undertaken a Stage 2 site contamination assessment for the proposed Bushland Health project located at 494 Wingham Taree, NSW.

The assessment found the site is suitable for the proposed residential landuse in its current state from a contamination perspective.

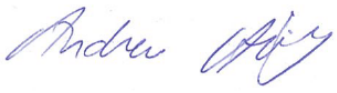
The work presented herein was reviewed by Dr David Tully CEnvP SC. A copy of Dr Tully's letter pertaining to the review is appended to the report.

If you have any questions regarding this project, or require any additional consultations, please contact the undersigned.

For and on behalf of

Regional Geotechnical Solutions Pty Ltd

Prepared by



Andrew Hills

Senior Environmental Engineer

Reviewed by

Steven Morton

Principal Geotechnical Engineer

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Note: Figures and Appendices from original 2021 version of report

Figures

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1 INTRODUCTION and BACKGROUND

1.1 General

Regional Geotechnical Solutions Pty Ltd (RGS) has undertaken a Stage 2 site contamination assessment for the proposed Bushland Health project to be located at 494 Wingham Road, Taree, NSW. The site location is shown on Figure 1.

The site occupies approximately 255, 701m^2 in area and is comprised of Lot 343 DP1118417.

It is understood that the proposed works involves a retirement village comprising:

- 207 villas and associated access roads
- Access roads off Marie Avenue and Wingham Road, with associated intersections
- Green space
- Community centre facilities
- Associated infrastructure including water, sewer and stormwater services.

1.2 Previous Assessment

A preliminary desktop study site contamination assessment has been undertaken by RGS (Ref: RGS02310.1-AB, dated 4 June 2020). The report made the following remarks and conclusions with respect to the contamination status of the site:

- *The investigation works undertaken were of limited scope and provide a preliminary assessment of identified Areas of Environmental Concern (AECs);*

- *AEC1 relates to soils in the vicinity of the former smash repair building. Some investigation of these soils was undertaken by Coffey Geosciences Pty Ltd (Coffey) in 2004 and did not reveal evidence of gross contamination in this vicinity;*

- *It appears that these investigations were limited to external areas only and did not include assessment of contamination within the footprint of the former automotive repair workshop. Use of lubricants and solvents in the workshop could have resulted in losses of these chemicals to the ground, notably via drains and sumps;*

- *It is therefore recommended that additional investigation is undertaken within AEC1 to fully assess this part of the site from a contamination perspective; and*

- *Assessment of the nature and extent of contamination within the other identified AECs is also recommended. In view of the potentially contaminating activities undertaken, it is considered likely that sampling from a series of shallow test pits at these localities would be appropriate to characterise these AECs.*

1.3 Objectives

The objectives of the Stage 2 site contamination assessment were to further assess the AEC's identified in the preliminary desktop study and provide an assessment of suitability of the site for future residential land use from a contamination perspective.

1.4 Scope of Works

In accordance with the relevant sections of the *National Environmental Protection (Assessment of Site Contamination) Measure 1999 (Amended 2013*), the assessment involved the following process:

- Site walkover to assess visible surface conditions and identify evidence of contamination described in the preliminary desktop study;
- Collection of 8 soil samples from within the former smash repair building footprint using hand tools;
- Collection of 6 additional soil samples from the other AECs identified by the preliminary RGS investigation (such as around existing structures, stockpiles and disturbed areas);
- Analysis of soil samples for a broad suite of common contaminants; and
- Evaluate the results against industry accepted criteria for the future residential land use.

1.5 Site Identification

General site information is provided below in Table 1. The site location is shown in Figure 1.

Table 1: Summary of Site Details

Site location:	494 Wingham Road, Taree
Approximate site area:	255,701m^2
Title Identification Details:	Lot 343 DP1118417
Current Ownership:	Bushland Health
Current Landuse:	Predominately grazing land with one single-storey residence
Proposed Landuse:	Residential retirement village
Adjoining Site Uses:	• Undeveloped land to the north; • Residential to the east and south; and • Rural residential and agriculture/grazing land to the west.
Government Area:	Midcoast Council

2 Site Description

2.1 Topography and Drainage

The site is situated within gently to moderately undulating terrain and bounded by Wingham Road to the south, Marie Avenue to the east, bushland to the north, and rural residential properties to the west. The northern part of the site slopes towards the east and north east at 2° to 3°. The central part of the site slopes towards south east at 3° to 5° and becomes gentle towards south at 1° to 2°.

The site is mainly vegetated with grass and sporadic distribution of large Eucalypt trees up to 25m in height with some smaller shrubs also present. Drainage is anticipated to be via overland flow into a number of farm dams located on the site.

The vast majority of the site is vacant and comprised of grazing land. There is an existing single storey brick house with a swimming pool, several sheds, old horse stables, storage sheds and shipping containers in the north eastern corner. A large farm shed of metal sheeting construction is also present in the south eastern part of the site. There are some gravel hard stand areas in the gap between the existing residences (between house No's. 490 and 496) in the southern part along Wingham Road. It is understood that the hard stand areas are associated with a smash repair business which was formerly located on this part of the property.

2.2 Geology

The Hastings 1:250,000 Geology map indicates the site is underlain by Lower Permian to Upper Carboniferous aged Giro Beds comprising pebbly mudstone, mudstone conglomerate, siltstone, shale, sandstone and limestone.

2.3 Hydrogeology

A groundwater bore search on the NSW Water Information website, http://waterinfo.nsw.gov.au/gw/ indicates that there is a licenced groundwater bore (with available work summary) located approximately 50m to the west of the south western site boundary as shown below.

Plate 1: *Approximate site boundary outlined in red. Nearest off-site licensed groundwater bore is located approximately 50m to the west of the south western site boundary.*

Groundwater bore GW300098 was drilled to a depth of 32.0m on 13 April 1994 for stock and domestic purposes with the driller's log indicating the subsurface profile to be composed of topsoil to 1.0m depth, underlain by brown shale, underlain by blue metal and shale until the depth of the bore at 32.0m below ground surface. Two water bearing zones were logged as being present from 19m to 20m and 28m to 29m respectively.

3 CONTAMINATION ASSESSMENT

3.1 Sampling Plan

To assess the former smash repairer footprint for future residential development, sampling was undertaken in accordance with NSW EPA *Sample Design Guidelines*, which specify a number of samples to be taken on a systematic grid basis, depending on the size of the site. For a site of 2,200m^2 (approximate area of the former smash repairer footprint), 8 sample locations were required which is considered practical for this area.

In addition, another 6 sample locations were planned to target the other AECs identified by the preliminary desktop study (such as around existing structures, stockpiles and disturbed areas).

3.2 Field Work

Field work for the contamination assessment was undertaken on 17 December 2020 by an Environmental Engineer from RGS and included:

- Site walkover to assess visible surface conditions and identify evidence of contamination described in the preliminary desktop study;
- Collection of 8 soil samples, designated SS1 to SS8, from within the former smash repair building footprint using hand tools;
- Collection of 6 additional soil samples, designated SS9 to SS11 and SP1 to SP3, from the other AECs identified by the preliminary desktop study (such as around existing structures, stockpiles and disturbed areas); and
- Collection of fragments of suspect asbestos cement sheeting, designated ACM1, piled up on ground surface at entrance to the shed located adjacent to the existing house in the northern part of the site.

Laboratory test results are presented in Appendix A and summarised in relevant sections of this report. Sample locations are shown on Figure 2 and Figure 3 for AEC 1 and the other AECs respectively. They were obtained on site by measurement relative to existing site features.

Soil samples were taken from fill and natural soils using disposable gloves and hand tools which were decontaminated between sampling points using Decon 90 detergent and deionised water. The samples were collected in acid-rinsed 250mL glass jars and placed in an ice-chilled cooler box.

3.3 Laboratory Analysis

Samples were transported under chain-of-custody conditions to ALS Laboratory Group, a NATA accredited specialist chemical testing laboratory, to be analysed for the following suite of contaminants;

- Total Recoverable Hydrocarbons (TRH);
- Polycyclic Aromatic Hydrocarbons (PAH);
- Benzene, toluene, ethylbenzene and xylene (BTEX) compounds;
- Organochlorine and Organophophorus Pesticides (OC/OPs);
- Heavy metals;
- Polychlorinated Biphenyls (PCB);
- Volatile Organic Compounds (VOC); and
- Asbestos.

The results are presented in Appendix B.

3.4 Data Quality Objectives

The Data Quality Objectives (DQOs) are presented in Table 2.

Table 2 – Data Quality Objectives

DQO	Details of Process
State the Problem	A contamination assessment is required to further assess the AEC's identified in the preliminary desktop study and provide an assessment of suitability of the site for future residential land use from a contamination perspective.
Identify the Decision	The principal study question is: • What is the nature and extent of soil contamination within the identified AEC's?
Identify Inputs to the Decision	The primary inputs are: • Site walkover assessment; • Chemical analysis of materials within the identified AEC's; and • Results summary.
Define the Boundary of the Assessment	• The spatial boundaries are limited to the identified AEC's as shown on Figures 2 & 3; and • The investigation and screening levels for a residential land use scenario.
Develop a Decision Rule	The decision rules for the investigation are: • If concentrations of contaminants in soils within the identified AEC's exceed the adopted investigation and screening levels for a residential land use scenario, then further assessment and/or remediation may be required; Decision criteria for QA/QC measures are defined in Section 4.1. A decision on the acceptance of analytical data will be made on the basis of the data quality indicators (DQIs) in the context of precision, accuracy, representativeness, completeness and comparability (PARCC) parameters as follows: • **Precision:** NATA registered laboratories were used following NATA endorsed methods. An appropriate number of intra-laboratory samples will be collected and analysed (following ASC NEPM guidance), the results of which are required to be satisfactory; • **Accuracy:** The laboratory limit or reporting (LOR) is appropriate for the screening criteria utilised. NATA registered laboratories are to be used following NATA endorsed methods including appropriate method blanks, laboratory control samples,

	laboratory spikes and duplicates the results of which are required to be satisfactory. • **Representativeness –** The samples are to be received by the laboratories in good condition. The data obtained is required to be considered as being representative of the materials present in the identified AEC's. • **Completeness –** Experienced field staff are to be utilised to undertake the sampling and keep appropriate documentation. Samples are to be kept in proper custody between the field and during transit to the laboratory. The laboratories are to perform the tests requested. The data obtained from the field investigations is required to be relevant and usable; and • **Comparability –** Sample holding times are to be met and samples are to be properly and adequately preserved. Field sampling and handling procedures are to be followed. The data collected is considered to be comparable.
Specify Acceptable Limits on Decision Errors	• Acceptable limits for QA/QC measures are defined in Section 4.1; • Acceptable investigation and screening levels are those for a residential land use scenario; and • Specific limits are to be in accordance with the appropriate NSW EPA guidelines including indicators of data quality and standard procedures for field sampling and handling.
Optimise the Design for Obtaining Data	Based on the above steps of the DQO process. The design for obtaining the required data (i.e. proposed field and laboratory investigations) is presented in Section 3.

4 GUIDELINES AND ASSESSMENT CRITERIA

The assessment will be conducted in accordance with the requirements of a Contaminated Site Assessment as outlined in NSW EPA *Guidelines for Consultants Reporting on Contaminated Land (2020)*.

To evaluate results, and for guidance on assessment requirements, the assessment will adopt the guidelines provided in the *National Environment Protection (Assessment of Site Contamination) Measure (ASC NEPM 2013)*. The ASC NEPM document provides a range of guidelines for assessment of contaminants for various land use scenarios. It is understood that the future land use for the site is residential. As such, comparison with the ASC NEPM guideline Health Investigation Levels (HIL) for Residential A land use is considered appropriate for the site. In accordance with the NEPM guideline the following criteria will be adopted for this assessment:

- Health Investigation Levels (HILs) for residential 'A' land use (HIL-A) will be used to assess the potential human health impact of heavy metals and polycyclic aromatic hydrocarbons (PAHs);
- Health Screening Levels (HSLs) for coarse textured (sand) or fine textured (silt and clay) soils on a residential site will be adopted as appropriate for the soils encountered to assess the

potential human health impact of petroleum hydrocarbons and benzene, toluene, ethylbenzene and xylene (BTEX) compounds;

- Ecological Investigation Levels (EILs) for residential land use will be used for evaluation of the potential ecological / environmental impact of heavy metals and PAHs;
- Ecological Screening Levels (ESLs) for coarse textured (sand) soils or fine textured (silt and clay) soils on a residential land use site will be adopted as appropriate for the soils encountered, to assess the potential ecological / environmental impact of petroleum hydrocarbons and BTEX compounds.

In accordance with NEPM 2013, exceedance of the respective criteria does not necessarily deem that remediation or clean-up is required but is a trigger for further assessment of the extent of contamination and associated risks.

4.1 Quality Assurance / Quality Control

Samples were obtained using industry accepted protocols for sample treatment, preservation, and equipment decontamination.

One duplicate soil sample identified as D1 (duplicate of primary sample SS1) was submitted to the laboratory for analysis for quality control purposes. Comparison between the primary and duplicate samples are presented in the results summary tables in Appendix A.

The Relative Percent Differences (RPDs) were calculated for the duplicate sample and presented in the results summary table in Appendix A. The RPDs were within the control limit of 30% and indicated good correlation between the primary and duplicate samples.

In addition to the field quality control procedures, the laboratory conducted internal quality control testing including surrogates, blanks, and laboratory duplicate samples. The results are presented with the laboratory test results in Appendix A.

All laboratory quality control data is within acceptable limits for the tests carried out. Therefore, on the basis of the results of the field and laboratory quality control procedures and testing, the data is considered to reasonably represent the concentrations of contaminants in the soils at the sample locations at the time of sampling and the results can be adopted for this assessment.

5 RESULTS

5.1 Ground Conditions

The soil types recorded in surface samples are summarised below in Table 3.

Table 3: Summary of Subsurface Conditions (Near-surface Samples)

Sample ID	Location	Description
SS1, SS2, SS4, SS5	Former smash repair building footprint in the southern part of the site.	Fill – Gravelly CLAY, low plasticity, brown / dark brown / orange, gravel coarse grained, some sand, fine to coarse grained, lots of grass roots.
SS3, SS6 - SS8	Former smash repair building footprint in the southern part of the site.	Topsoil/Slopewash – Gravelly CLAY, medium plasticity, grey / orange / brown, gravel fine to medium grained, trace sand, fine to medium grained.
SS9	Unsealed ground surface from within the large shed in the south eastern part of the site.	Fill – Gravelly SAND, fine to coarse grained, brown / dark brown, gravel medium to coarse grained.
SS10 – SS11	Around shed and old horse stables near the existing house in the northern part of the site.	Topsoil – Silty CLAY, low plasticity, brown / dark brown, some sand, fine to medium grained, lots of grass roots.
SP1	Fill stockpile located to the north east of the existing house in the northern part of the site.	Fill (residual origin) – Sandy CLAY, medium to high plasticity, sand, fine to medium grained, some weathered rock present, trace roots.
SP2 – SP3	Fill stockpiles located to the west of the existing house in the northern part of the site.	Fill (anthropogenic materials) – Scrap wood and metal, furniture, carpet, glass, vegetation and general waste.
ACM1	Fragments piled up on ground surface at entrance to the shed located adjacent to the existing house in the northern part of the site.	Fibro-cement sheeting fragments.

5.2 Laboratory Test Results

An appraisal of the laboratory test results presented in Appendix A is provided below with reference to the adopted soil investigation and screening levels discussed in Section 4.

- Concentrations of heavy metals were either below the laboratory limit of reporting or below the adopted health investigation criteria for a Residential A site in each of the samples analysed;

- Concentrations of BTEX compounds, PAHs, PCBs and VOCs were below the laboratory limit of reporting in each of the samples analysed;
- Concentrations of C_6-C_{10} and C_{10}-C_{16} TRH hydrocarbons were below the laboratory limit of reporting in each of the samples analysed;
- Concentrations of C_{16}-C_{34} TRH hydrocarbons were either below the laboratory limit of reporting or below the adopted Ecological Screening Level (ESL) for a Residential A site in each of the samples that were analysed. Samples SS1, SS3 and SS5 collected from the former smash repairer footprint revealed C_{16}-C_{34} TRH concentrations above the laboratory detection limit but well below the adopted ESL;
- Concentrations of C_{34}-C_{40} TRH hydrocarbons were either below the laboratory limit of reporting or below the adopted Ecological Screening Level (ESL) for a Residential A site in each of the samples that were analysed. Samples SS1, SS3, SS4 and SS5 collected from the former smash repairer footprint, and SP2 and SP3 collected from small fill stockpiles at the rear of the house in the north eastern corner of the site, revealed C_{16}-C_{34} TRH concentrations above the laboratory detection limit but well below the adopted ESL;
- Concentrations of OC and OP pesticides were either below the laboratory limit of reporting or below the adopted health investigation criteria for a Residential A site in each of the samples that were analysed. Sample SS7 collected from the former smash repairer footprint revealed an OC pesticide concentration above the laboratory detection limit but well below the adopted health investigation criteria; and
- The ACM sample (ACM1) collected ground surface at entrance to the shed located adjacent to the existing house in the northern part of the site did not contain asbestos.

5.3 Assessment and Conclusions

A Stage 2 site contamination assessment was required to further assess the AEC's identified in the preliminary desktop study and provide an assessment of suitability of the site for future residential land use from a contamination perspective.

The identified AEC's were predominantly around former and existing structures including the previous smash repair business, houses, farm sheds and fill stockpiles.

Eight soil samples were collected from within the former smash repair building footprint and an additional six soil samples were collected from the other identified AECs (such as around existing structures, stockpiles and disturbed areas). One sample of fibro-cement sheeting suspected of being Asbestos Containing Material (ACM) was also collected from near the entrance to the shed located just to the north of the existing house in the north east corner of the site.

A comparison of the laboratory test results obtained were compared to the NEPM (2013) residential 'A' land use (HIL-A) guidelines criteria. The results revealed concentrations of the chemicals of concern were either below the laboratory limit of reporting, or below the adopted health investigation criteria for a Residential A site. The ACM sample did not contain asbestos.

It is recommended that any waste, stored and/or discarded materials, such as bricks, concrete, tiles, wood and vegetation, and fill stockpiles be removed and disposed of at a licenced landfill or recycling facility. Should the preference be for offsite disposal of any of the fill stockpiles, it is recommended that waste classification testing in accordance with NSW EPA (2014) Waste Classification Guidelines be undertaken by a suitably qualified and experienced environmental

consultant prior to transportation of the materials. A preliminary waste classification for the three stockpiles located around the existing residence in the northern part of the site as described herein, has been provided below in Section 5.4.

Should any fill materials be encountered that require removal off site it will require assessment for a *Resource Recovery Exemption under Part 9, Clauses 91 and 92 of the Protection of the Environment Operations (Waste) Regulation 2014* in accordance with the *Resource Recovery Order under Part 9, Clause 93 of the Protection of the Environment Operations (Waste) Regulation 2014 – the Excavated Natural Material (ENM) Order 2014*.

In addition, should any materials suspected of being contaminated (by way of visual or olfactory evidence) be encountered during development of the site, particularly in the vicinity of the former smash repair building, existing structures and fill stockpiles, it is recommended that advice from a suitably qualified and experienced environmental consultant be sought without delay.

Based on the results obtained in this and the previous investigation, the site is considered suitable for the proposed residential land use with regard to the presence of soil contamination, provided the recommendations and advice of this report are adopted, and site preparation works are conducted in accordance with appropriate site management protocols and legislative requirements.

5.4 Preliminary Waste Classification

Table 2 of the '*Waste Classification Guidelines (2014)*' nominates a suite of analytes to be tested (Column 1) and also provides the maximum concentration (CT1) allowable within the soil for classification without the need for additional toxicity characteristics leaching procedure (TCLP) testing for both general solid waste (Column 2) and restricted solid waste (Column 3) for each analyte. Should the CT1 values be exceeded, the guidelines provide a Specific Contaminant Concentration (SCC) value to allow further evaluation of contaminant concentrations in conjunction with TCLP testing.

The laboratory results indicate that three samples (SP1, SP2 and SP3), one each collected from the three stockpiles located to the north east and west of the existing house in the northern part of the site respectively, meet the requirements for **General Solid Waste** without TCLP testing.

It is recommended that further waste classification testing of the stockpiles or other materials requiring offsite disposal be undertaken following the demolition of the house. The testing should be undertaken prior to construction work commencing to prevent delays during the testing and reporting process.

6 LIMITATIONS

This report comprises the results of an investigation carried out for a specific purpose and client as defined in the document. The report should not be used by other parties or for purposes or projects other than those assumed and stated within the report, as it may not contain adequate or appropriate information for applications other than those assumed or advised at the time of its preparation. The contents of the report are for the sole use of the client and no responsibility or liability will be accepted to any third party. The report should not be reproduced either in part or in full, without the express permission of Regional Geotechnical Solutions Pty Ltd.

Contaminated site investigations are based on data collection, judgment, experience, and opinion. By nature, these investigations are less exact than other engineering disciplines. The findings presented in this report and used as the basis for the recommendations presented herein were obtained using normal, industry accepted practises and standards. To our knowledge, they represent a reasonable interpretation of the general condition of the site. Under no circumstances, however, can it be considered that these findings represent the actual state of the site at all points.

Recommendations regarding ground conditions referred to in this report are estimates based on the information available at the time of its writing. Estimates are influenced and limited by the fieldwork method and testing carried out in the site investigation, and other relevant information as has been made available. In cases where information has been provided to Regional Geotechnical Solutions for the purposes of preparing this report it has been assumed that the information is accurate and appropriate for such use. No responsibility is accepted by Regional Geotechnical Solutions for inaccuracies within any data supplied by others.

If site conditions encountered during construction vary significantly from those discussed in this report, Regional Geotechnical Solutions Pty Ltd should be contacted for further advice.

This report alone should not be used by contractors as the basis for preparation of tender documents or project estimates. Contractors using this report as a basis for preparation of tender documents should avail themselves of all relevant background information regarding the site before deciding on selection of construction materials and equipment.

If you have any questions regarding this project, or require any additional consultations, please contact the undersigned.

For and on behalf of

Regional Geotechnical Solutions Pty Ltd

Prepared by

Andrew Hills

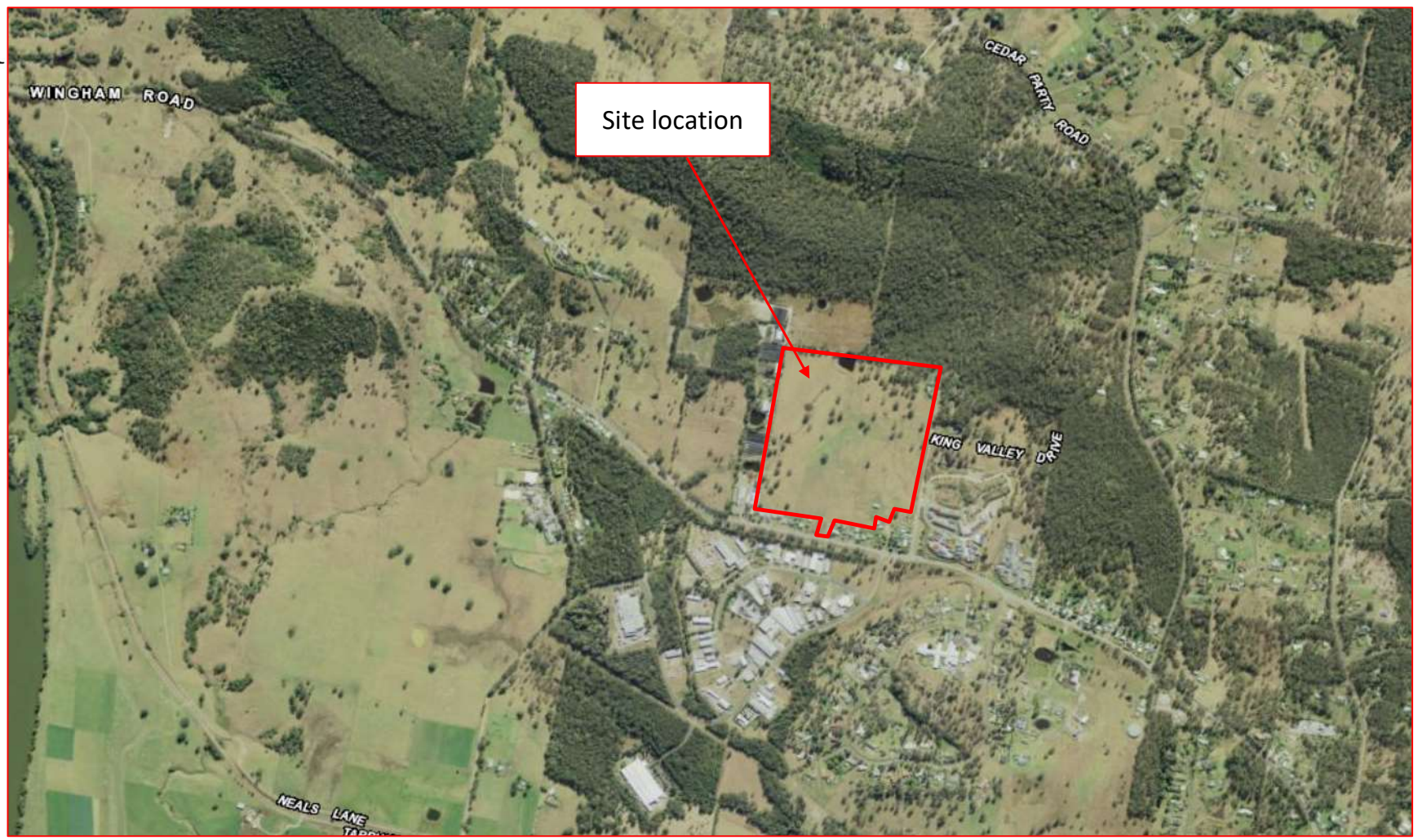
Senior Environmental Engineer

Reviewed by

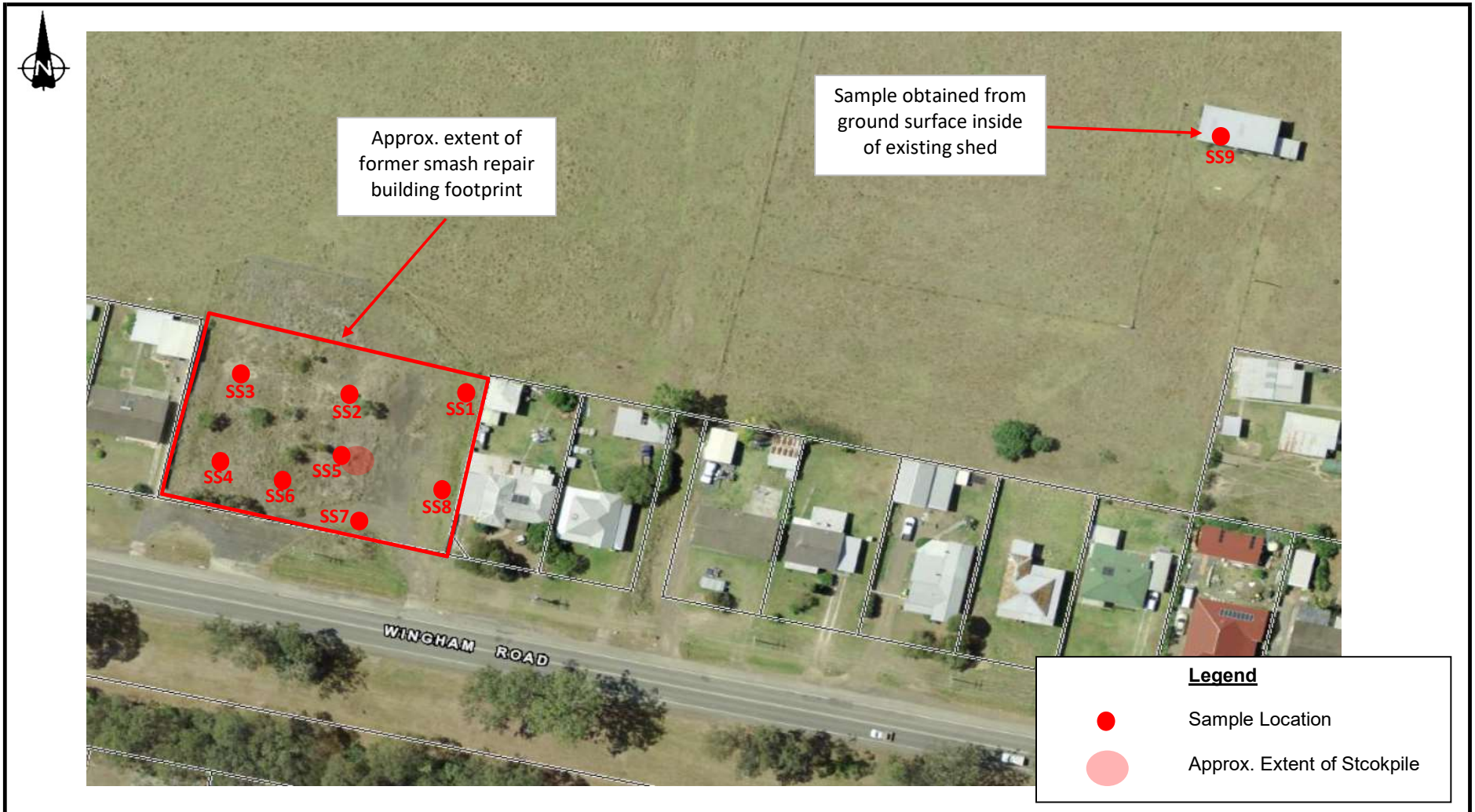
Steven Morton

Principal Geotechnical Engineer

Figures



REGIONAL GEOTECHNICAL SOLUTIONS	**Client:**	DWP	Job No. RGS02310.1
	Project:	Proposed Bushland Health Project 494 Wingham Road, Taree	Drawn By: APH Scale: As Shown Date: 6-Jan-21
	Title:	Site Location Plan	Drawing No. **Figure 1**



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Client:	DWP	Job No.	RGS02310.1
Project:	Proposed Bushland Health Project 494 Wingham Road, Taree	Drawn By:	APH
		Scale:	As Shown
		Date:	6-Jan-21
Title:	Sample Location Plan - Southern Area	Drawing No.	**Figure 2**

REGIONAL GEOTECHNICAL SOLUTIONS	**Client:**	DWP	Job No.	RGS02310.1
	Project:	Proposed Bushland Health Project 494 Wingham Road, Taree	Drawn By:	APH
			Scale:	As Shown
			Date:	6-Jan-21
	Title:	Sample Location Plan - Northern Area	Drawing No.	**Figure 3**

Appendix A

Laboratory Test Results

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Client: DWP
Job No. RGS02310.1
Project: Proposed Bushland Health Project
Location: 494 Wingham Road, Taree

Comparison of Contamination Analysis Results with Adopted Investigation Levels (Results in mg/kg)

SAMPLE	DEPTH (m)	MATERIAL	ASBESTOS	TOTAL RECOVERABLE HYDROCARBONS					PAH		Pesticides Total		BTEX		PCBs	VOCs	Heavy Metals							
				C6-C10	C10-C16	C16-C34	C34-C40	TOTAL 10-40	Total	b-a-p (TEQ)	OCP	OPP	Sum	Napthalene			As	Cd	Cr (total)#	Cu	Pb	Ni	Zn	Hg
SS1	0.0 - 0.2	Fill	No	<10	<50	240	440	680	<0.5	0.6	<0.05	<0.2	<0.2	<1	<0.1	<LOR	<5	<1	10	29	25	9	70	<0.1
SS2	0.0 - 0.2	Fill	No	<10	<50	<100	<100	<50	<0.5	0.6	<0.05	<0.2	<0.2	<1	<0.1	<LOR	<5	<1	6	<5	<5	3	22	<0.1
SS3	0.0 - 0.2	Slopewash	No	<10	<50	200	280	480	<0.5	0.6	<0.05	<0.2	<0.2	<1	<0.1	<LOR	<5	<1	12	6	12	<2	15	<0.1
SS4	0.0 - 0.2	Fill	No	<10	<50	<100	100	100	<0.5	0.6	<0.05	<0.2	<0.2	<1	<0.1	<LOR	<5	<1	5	26	14	6	56	<0.1
SS5	0.0 - 0.2	Fill	No	<10	<50	140	130	270	<0.5	0.6	<0.05	<0.2	<0.2	<1	<0.1	<LOR	12	<1	21	11	30	4	64	<0.1
SS6	0.0 - 0.2	Topsoil/Slopewash	No	<10	<50	<100	<100	<50	<0.5	0.6	<0.05	<0.2	<0.2	<1	<0.1	<LOR	8	<1	10	<5	12	<2	9	<0.1
SS7	0.0 - 0.2	Topsoil/Slopewash	No	<10	<50	<100	<100	<50	<0.5	0.6	2.6	<0.2	<0.2	<1	<0.1	<LOR	10	<1	18	20	112	6	112	<0.1
SS8	0.0 - 0.2	Topsoil/Slopewash	No	<10	<50	<100	<100	<50	<0.5	0.6	<0.05	<0.2	<0.2	<1	<0.1	<LOR	<5	<1	17	56	6	18	42	<0.1
SS9	0.0 - 0.2	Fill	No	<10	<50	<100	<100	<50	<0.5	0.6	<0.05	<0.2	<0.2	<1	<0.1	----	<5	<1	5	29	12	8	67	<0.1
SS10	0.0 - 0.2	Topsoil	No	<10	<50	<100	<100	<50	<0.5	0.6	<0.05	<0.2	<0.2	<1	<0.1	----	7	<1	15	6	18	6	29	<0.1
SS11	0.0 - 0.2	Topsoil	No	<10	<50	<100	<100	<50	<0.5	0.6	<0.05	<0.2	<0.2	<1	<0.1	----	<5	<1	9	16	21	6	70	<0.1
SP1	Stockpile	Fill	No	<10	<50	<100	<100	<50	<0.5	0.6	<0.05	<0.2	<0.2	<1	<0.1	----	9	<1	9	5	10	2	20	<0.1
SP2	Stockpile	Fill	No	<10	<50	<100	100	100	<0.5	0.6	<0.05	<0.2	<0.2	<1	<0.1	----	7	<1	19	14	28	11	123	<0.1
SP3	Stockpile	Fill	No	<10	<50	<100	120	120	<0.5	0.6	<0.05	<0.2	<0.2	<1	<0.1	----	<5	<1	14	16	12	7	75	<0.1
ACM1	Surface	Fibro-cement	No	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
D1 (duplicate of SS1)	0.0 - 0.2	Fill	----	----	----	----	----	----	----	----	----	----	----	----	----	----	<5	<1	9	31	27	9	70	<0.1
RINSATE 1 (mg/L)		Water	----	----	----	----	----	----	----	----	----	----	----	----	----	----	<0.001	<0.0001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.0001
D1 RPD%			----	----	----	----	----	----	----	----	----	----	----		----	----	0.0	0.0	10.5	6.7	7.7	0.0	0.0	0.0
CRITERIA (NEPM 2013)																								
Health Investigation Level (HIL):*	*0.001% (w/w)*	*NL*	*NL*	*NL*	*NL*	*NL*	*300*	*3*	*240*	*6*				*1*		*100*	*20*	*100#*	*600*	*300*	*400*	*7400*	*40*
*Health Screening Level (HSL)***		*50*	*280*	*NL*	*NL*	*NL*																		
*Ecological Screening Level (ESL)****		*180*	*120*	*1300*	*5600*	*NL*		*0.7*					*45-125*											
Ecological Investigation Level (EIL)@											*180*			*170*			*100*		*510*	*170*	*1100*	*210*	*390*	

CRITERIA:
* Health Based Investigation Levels for Residential A (NEPM 2013)
** Health Screening Level (F2) for residential land use and fine grained soil (clay), 0 - 1m depth
*** Ecological Screening Level for residential land use
@ Ecological Investigation Level - aged (>2 years) for residential landuse
# Chromium VI
Speciation testing confirmed only Chromium III present
<LOR - Below the laboratory limit of reporting

REGIONAL GEOTECHNICAL SOLUTIONS

Summary Table - Comparison of Contamination Analysis Results With Waste Classification Threshold Limits (Results in mg/kg)

Client: DWP
Job No. RGS02310.1
Project: Proposed Bushland Health Project
Location: 494 Wingham Road, Taree

SAMPLE	MATERIAL	DEPTH	TOTAL PETROLEUM HYDROCARBONS					PAH	PCBs (Total)	OC/OP Pesticides	HEAVY METALS									
		(m)	C6-C9	C10-C14	C15-C28	C29-C36	TOTAL				Arsenic	TCLP	Cadmium	TCLP	Nickel	TCLP	Lead	TCLP	Mercury	TCLP
SP1	Fill	Stockpile	<10	<50	<100	<100	<50	<0.5	<0.1	<0.05	9		<1		2		10		<0.1	
SP2	Fill	Stockpile	<10	<50	<100	<100	<50	<0.5	<0.1	<0.05	7		<1		11		28		<0.1	
SP3	Fill	Stockpile	<10	<50	<100	100	100	<0.5	<0.1	<0.05	<5		<1		7		12		<0.1	
THRESHOLD LIMITS																				
GENERAL SOLID WASTE		*CT1*									*100*		*20*		*40*		*100*		*4*	
		SCC1	*650*				*10000*	*200*	*<50*	*250*	*500*		*100*		*1050*		*1500*		*50*	
		TCLP1									*5*		*1*		*2*		*5*		*0.2*	
RESTRICTED SOLID WASTE		*CT2*									*400*		*80*		*160*		*400*		*16*	
		SCC2	*2600*				*40000*	*800*	*<50*	*1000*	*2000*		*400*		*4200*		*6000*		*200*	
		TCLP2									*20*		*4*		*8*		*20*		*0.8*	

NOTES

CT	Contaminant Threshold (without TCLP)
SCC	Specific Contaminant Concentrations (used with TCLP)
TCLP	Toxicity Characteristics Leaching Procedure (used with SCC)
Shaded	Exceeds General Solid Waste Threshold = Restricted Solid Waste
BOLD and Shaded	Exceeds Restricted Solid Waste Threshold = Hazardous Waste

CRITERIA:

Waste Classification - Classifying Waste, Part 1 (*NSW EPA 2014*)

ALS Environmental

CERTIFICATE OF ANALYSIS

Work Order	: **ES2045157**	Page	: 1 of 23
Client	: **REGIONAL GEOTECHNICAL SOLUTION**	Laboratory	: Environmental Division Sydney
Contact	: Andrew Hills	Contact	: Customer Services ES
Address	: 44 BENT STREET WINGHAM NSW, AUSTRALIA 2429	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
Telephone	: +61 02 6553 5641	Telephone	: +61-2-8784 8555
Project	: RGS02310.1 BUSHLAND HEALTH	Date Samples Received	: 18-Dec-2020 11:25
Order number	: ----	Date Analysis Commenced	: 19-Dec-2020
C-O-C number	: ----	Issue Date	: 30-Dec-2020 15:19
Sampler	: ----		
Site	: 494 Wingham Road, Taree		
Quote number	: EN/222		
No. of samples received	: 17		
No. of samples analysed	: 17		

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

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

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Descriptive Results
- Surrogate Control Limits

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

Signatories

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

Signatories	*Position*	*Accreditation Category*
Alana Smylie	Asbestos Identifier	Newcastle - Asbestos, Mayfield West, NSW
Aleksandar Vujkovic	Laboratory Technician	Newcastle - Inorganics, Mayfield West, NSW
Alex Rossi	Organic Chemist	Sydney Inorganics, Smithfield, NSW
Alex Rossi	Organic Chemist	Sydney Organics, Smithfield, NSW
Ankit Joshi	Inorganic Chemist	Sydney Inorganics, Smithfield, NSW
Celine Conceicao	Senior Spectroscopist	Sydney Inorganics, Smithfield, NSW
Dian Dao	Senior Chemist - Inorganics	Sydney Inorganics, Smithfield, NSW
Edwandy Fadjar	Organic Coordinator	Sydney Organics, Smithfield, NSW
Sanjeshni Jyoti	Senior Chemist Volatiles	Sydney Organics, Smithfield, NSW

General Comments

The analytical procedures used by ALS have been developed from established internationally recognised procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are fully validated and are often at the client request.

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

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

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

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

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

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

- Benzo(a)pyrene Toxicity Equivalent Quotient (TEQ) per the NEPM (2013) is the sum total of the concentration of the eight carcinogenic PAHs multiplied by their Toxicity Equivalence Factor (TEF) relative to Benzo(a)pyrene. TEF values are provided in brackets as follows: Benz(a)anthracene (0.1), Chrysene (0.01), Benzo(b+j) & Benzo(k)fluoranthene (0.1), Benzo(a)pyrene (1.0), Indeno(1.2.3.cd)pyrene (0.1), Dibenz(a.h)anthracene (1.0), Benzo(g.h.i)perylene (0.01). Less than LOR results for 'TEQ Zero' are treated as zero, for 'TEQ 1/2LOR' are treated as half the reported LOR, and for 'TEQ LOR' are treated as being equal to the reported LOR. Note: TEQ 1/2LOR and TEQ LOR will calculate as 0.6mg/Kg and 1.2mg/Kg respectively for samples with non-detects for all of the eight TEQ PAHs.
- EA200: Asbestos Identification Samples were analysed by Polarised Light Microscopy including dispersion staining.
- EP080: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- EP068: Where reported, Total Chlordane (sum) is the sum of the reported concentrations of cis-Chlordane and trans-Chlordane at or above the LOR.
- EP068: Where reported, Total OCP is the sum of the reported concentrations of all Organochlorine Pesticides at or above LOR.
- EP074: Where reported, Total Trihalomethanes is the sum of the reported concentrations of all Trihalomethanes at or above the LOR.
- EP074: Where reported, Total Xylenes is the sum of the reported concentrations of m&p-Xylene and o-Xylene at or above the LOR.
- EP074: Where reported, Sum of chlorinated hydrocarbons includes carbon tetrachloride, chlorobenzene, chloroform, 1,2-dichlorobenzene, 1,4-dichlorobenzene, 1,2-dichloroethane, 1,1-dichloroethene, cis-1,2-dichlorothene, trans-1,2-dichlorothene, 1,1,1,2-tetrachloroethane, 1,1,2,2-tetrachloroethane, 1,2,4-trichlorobenzene, 1,1,1-trichloroethane, 1,1,2-trichloroethane, trichloroethene, vinyl chloride, hexachlorobutadiene and methylene chloride.
- EP074: Where reported, Total Trimethylbenzenes is the sum of the reported concentrations of 1.2.3-Trimethylbenzene, 1.2.4-Trimethylbenzene and 1.3.5-Trimethylbenzene at or above the LOR.
- EP075(SIM): Where reported, Total Cresol is the sum of the reported concentrations of 2-Methylphenol and 3- & 4-Methylphenol at or above the LOR.
- **EA200 Legend**
- EA200 'Am' Amosite (brown asbestos)
- EA200 'Cr' Crocidolite (blue asbestos)
- EA200 'Ch' Chrysotile (white asbestos)
- EA200: 'UMF' Unknown Mineral Fibres. "-" indicates fibres detected may or may not be asbestos fibres. Confirmation by alternative techniques is recommended.
- EA200 'Trace' - Asbestos fibres ("Free Fibres") detected by trace analysis per AS4964. The result can be interpreted that the sample contains detectable 'respirable' asbestos fibres
- EA200: For samples larger than 30g, the <2mm fraction may be sub-sampled prior to trace analysis as outlined in ISO23909:2008(E) Sect 6.3.2-2
- ED007 and ED008: When Exchangeable Al is reported from these methods, it should be noted that Rayment & Lyons (2011) suggests Exchange Acidity by 1M KCl - Method 15G1 (ED005) is a more suitable method for the determination of exchange acidity (H+ + Al3+).
- EA200: 'Yes' - Asbestos detected by polarised light microscopy including dispersion staining.
- EA200: 'No*' - No asbestos found, at the reporting limit of 0.1g/kg, by polarised light microscopy including dispersion staining. Asbestos material was detected and positively identified at concentrations estimated to be below 0.1g/kg.

- EA200: 'No' - No asbestos found at the reporting limit 0.1g/kg, by polarised light microscopy including dispersion staining.
- EA200: N/A - Not Applicable

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	SS1	SS2	SS3	SS4	SS5
			Sampling date / time	17-Dec-2020 00:00	17-Dec-2020 00:00	17-Dec-2020 00:00	17-Dec-2020 00:00	17-Dec-2020 00:00
Compound	CAS Number	LOR	Unit	ES2045157-001	ES2045157-002	ES2045157-003	ES2045157-004	ES2045157-005
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	13.6	9.6	29.6	16.6	11.0
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Asbestos Detected	1332-21-4	0.1	g/kg	No	No	No	No	No
Asbestos (Trace)	1332-21-4	5	Fibres	No	No	No	No	No
Asbestos Type	1332-21-4	-	--	-	-	-	-	-
Synthetic Mineral Fibre	----	0.1	g/kg	No	No	No	No	No
Organic Fibre	----	0.1	g/kg	No	Yes	No	No	No
Sample weight (dry)	----	0.01	g	347	566	437	441	460
APPROVED IDENTIFIER:	----	-	--	A. SMYLIE	A. SMYLIE	A. SMYLIE	A. SMYLIE	A. SMYLIE
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	<5	<5	<5	12
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	10	6	12	5	21
Copper	7440-50-8	5	mg/kg	29	<5	6	26	11
Lead	7439-92-1	5	mg/kg	25	<5	12	14	30
Nickel	7440-02-0	2	mg/kg	9	3	<2	6	4
Zinc	7440-66-6	5	mg/kg	70	22	15	56	64
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
^ Total Chlordane (sum)	----	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	SS1	SS2	SS3	SS4	SS5
			Sampling date / time	17-Dec-2020 00:00	17-Dec-2020 00:00	17-Dec-2020 00:00	17-Dec-2020 00:00	17-Dec-2020 00:00
Compound	CAS Number	LOR	Unit	ES2045157-001	ES2045157-002	ES2045157-003	ES2045157-004	ES2045157-005
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EP074A: Monocyclic Aromatic Hydrocarbons								

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	SS1	SS2	SS3	SS4	SS5
			Sampling date / time	17-Dec-2020 00:00	17-Dec-2020 00:00	17-Dec-2020 00:00	17-Dec-2020 00:00	17-Dec-2020 00:00
Compound	CAS Number	LOR	Unit	ES2045157-001	ES2045157-002	ES2045157-003	ES2045157-004	ES2045157-005
				Result	Result	Result	Result	Result
EP074A: Monocyclic Aromatic Hydrocarbons - Continued								
Styrene	100-42-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Isopropylbenzene	98-82-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
n-Propylbenzene	103-65-1	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
1.3.5-Trimethylbenzene	108-67-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
sec-Butylbenzene	135-98-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
1.2.4-Trimethylbenzene	95-63-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
tert-Butylbenzene	98-06-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
p-Isopropyltoluene	99-87-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
n-Butylbenzene	104-51-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
EP074B: Oxygenated Compounds								
Vinyl Acetate	108-05-4	5	mg/kg	<5	<5	<5	<5	<5
2-Butanone (MEK)	78-93-3	5	mg/kg	<5	<5	<5	<5	<5
4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	<5	<5	<5	<5	<5
2-Hexanone (MBK)	591-78-6	5	mg/kg	<5	<5	<5	<5	<5
EP074C: Sulfonated Compounds								
Carbon disulfide	75-15-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
EP074D: Fumigants								
2.2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
1.2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
EP074E: Halogenated Aliphatic Compounds								
Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	<5	<5	<5	<5
Chloromethane	74-87-3	5	mg/kg	<5	<5	<5	<5	<5
Vinyl chloride	75-01-4	5	mg/kg	<5	<5	<5	<5	<5
Bromomethane	74-83-9	5	mg/kg	<5	<5	<5	<5	<5
Chloroethane	75-00-3	5	mg/kg	<5	<5	<5	<5	<5
Trichlorofluoromethane	75-69-4	5	mg/kg	<5	<5	<5	<5	<5
1.1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Iodomethane	74-88-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
1.1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	SS1	SS2	SS3	SS4	SS5
			Sampling date / time	17-Dec-2020 00:00	17-Dec-2020 00:00	17-Dec-2020 00:00	17-Dec-2020 00:00	17-Dec-2020 00:00
Compound	CAS Number	LOR	Unit	ES2045157-001	ES2045157-002	ES2045157-003	ES2045157-004	ES2045157-005
				Result	Result	Result	Result	Result
EP074E: Halogenated Aliphatic Compounds - Continued								
1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
1.1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
1.2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Trichloroethene	79-01-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromomethane	74-95-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
1.3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
EP074F: Halogenated Aromatic Compounds								
Chlorobenzene	108-90-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Bromobenzene	108-86-1	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
2-Chlorotoluene	95-49-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
4-Chlorotoluene	106-43-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
EP074G: Trihalomethanes								
Chloroform	67-66-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	75-25-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	SS1	SS2	SS3	SS4	SS5
			Sampling date / time	17-Dec-2020 00:00	17-Dec-2020 00:00	17-Dec-2020 00:00	17-Dec-2020 00:00	17-Dec-2020 00:00
Compound	CAS Number	LOR	Unit	ES2045157-001	ES2045157-002	ES2045157-003	ES2045157-004	ES2045157-005
				Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	**0.6**	**0.6**	**0.6**	**0.6**	**0.6**
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	**1.2**	**1.2**	**1.2**	**1.2**	**1.2**
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg	<100	<100	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg	**330**	<100	**260**	**110**	**130**
^ C10 - C36 Fraction (sum)	----	50	mg/kg	**330**	<50	**260**	**110**	**130**
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	<10	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg	<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg	**240**	<100	**200**	<100	**140**
>C34 - C40 Fraction	----	100	mg/kg	**440**	<100	**280**	**100**	**130**
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	**680**	<50	**480**	**100**	**270**
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	<50	<50	<50	<50

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	SS1	SS2	SS3	SS4	SS5
			Sampling date / time	17-Dec-2020 00:00	17-Dec-2020 00:00	17-Dec-2020 00:00	17-Dec-2020 00:00	17-Dec-2020 00:00
Compound	CAS Number	LOR	Unit	ES2045157-001	ES2045157-002	ES2045157-003	ES2045157-004	ES2045157-005
				Result	Result	Result	Result	Result
EP080: BTEXN								
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
^ Total Xylenes	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	<1	<1
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	**98.2**	**123**	**96.1**	**114**	**103**
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	**102**	**97.9**	**81.6**	**95.4**	**88.5**
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	**64.1**	**66.0**	**53.5**	**79.0**	**68.2**
EP074S: VOC Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.5	%	**104**	**92.4**	**88.3**	**101**	**94.3**
Toluene-D8	2037-26-5	0.5	%	**116**	**107**	**92.2**	**115**	**111**
4-Bromofluorobenzene	460-00-4	0.5	%	**116**	**99.5**	**87.5**	**112**	**105**
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	**89.0**	**92.4**	**96.8**	**93.4**	**92.4**
2-Chlorophenol-D4	93951-73-6	0.5	%	**86.0**	**86.9**	**90.2**	**86.3**	**84.2**
2.4.6-Tribromophenol	118-79-6	0.5	%	**66.2**	**66.1**	**68.3**	**71.1**	**66.9**
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	**93.2**	**93.0**	**95.4**	**92.4**	**92.1**
Anthracene-d10	1719-06-8	0.5	%	**93.7**	**97.2**	**101**	**96.6**	**96.0**
4-Terphenyl-d14	1718-51-0	0.5	%	**81.9**	**83.7**	**86.5**	**82.7**	**81.8**
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	**108**	**95.8**	**77.9**	**105**	**97.4**
Toluene-D8	2037-26-5	0.2	%	**114**	**100**	**85.8**	**114**	**104**
4-Bromofluorobenzene	460-00-4	0.2	%	**118**	**101**	**90.5**	**114**	**105**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	SS6	SS7	SS8	SS9	SS10
			Sampling date / time	17-Dec-2020 00:00	17-Dec-2020 00:00	17-Dec-2020 00:00	17-Dec-2020 00:00	17-Dec-2020 00:00
Compound	CAS Number	LOR	Unit	ES2045157-006	ES2045157-007	ES2045157-008	ES2045157-009	ES2045157-010
				Result	Result	Result	Result	Result
EA001: pH in soil using 0.01M CaCl extract								
pH (CaCl2)	----	0.1	pH Unit	----	5.7	----	----	----
EA002: pH 1:5 (Soils)								
pH Value	----	0.1	pH Unit	----	6.5	----	----	----
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	18.4	24.2	11.3	4.9	19.4
EA150: Soil Classification based on Particle Size								
Clay (<2 µm)	----	1	%	----	20	----	----	----
EA152: Soil Particle Density								
Soil Particle Density (Clay/Silt/Sand)	----	0.01	g/cm3	----	2.50	----	----	----
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Asbestos Detected	1332-21-4	0.1	g/kg	No	No	No	No	No
Asbestos (Trace)	1332-21-4	5	Fibres	No	No	No	No	No
Asbestos Type	1332-21-4	-	--	-	-	-	-	-
Synthetic Mineral Fibre	----	0.1	g/kg	No	No	No	No	No
Organic Fibre	----	0.1	g/kg	No	No	No	No	No
Sample weight (dry)	----	0.01	g	482	370	495	529	346
APPROVED IDENTIFIER:	----	-	--	A. SMYLIE	A. SMYLIE	A. SMYLIE	A. SMYLIE	A. SMYLIE
ED007: Exchangeable Cations								
Exchangeable Calcium	----	0.1	meq/100g	----	9.8	----	----	----
Exchangeable Magnesium	----	0.1	meq/100g	----	3.2	----	----	----
Exchangeable Potassium	----	0.1	meq/100g	----	0.2	----	----	----
Exchangeable Sodium	----	0.1	meq/100g	----	0.4	----	----	----
Cation Exchange Capacity	----	0.1	meq/100g	----	13.7	----	----	----
Exchangeable Sodium Percent	----	0.1	%	----	3.0	----	----	----
EG005(ED093)T: Total Metals by ICP-AES								
Iron	7439-89-6	0.005	%	----	5.81	----	----	----
Arsenic	7440-38-2	5	mg/kg	8	10	<5	<5	7
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	10	18	17	5	15
Copper	7440-50-8	5	mg/kg	<5	20	56	29	6
Lead	7439-92-1	5	mg/kg	12	112	6	12	18
Nickel	7440-02-0	2	mg/kg	<2	6	18	8	6
Zinc	7440-66-6	5	mg/kg	9	112	42	67	29
EG035T: Total Recoverable Mercury by FIMS								

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	SS6	SS7	SS8	SS9	SS10
			Sampling date / time	17-Dec-2020 00:00	17-Dec-2020 00:00	17-Dec-2020 00:00	17-Dec-2020 00:00	17-Dec-2020 00:00
Compound	CAS Number	LOR	Unit	ES2045157-006	ES2045157-007	ES2045157-008	ES2045157-009	ES2045157-010
				Result	Result	Result	Result	Result
EG035T: Total Recoverable Mercury by FIMS - Continued								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EP004: Organic Matter								
Total Organic Carbon	----	0.5	%	----	**2.4**	----	----	----
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
^ Total Chlordane (sum)	----	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg	<0.05	**2.60**	<0.05	<0.05	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	<0.05	**2.60**	<0.05	<0.05	<0.05
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	SS6	SS7	SS8	SS9	SS10
			Sampling date / time	17-Dec-2020 00:00	17-Dec-2020 00:00	17-Dec-2020 00:00	17-Dec-2020 00:00	17-Dec-2020 00:00
Compound	CAS Number	LOR	Unit	ES2045157-006	ES2045157-007	ES2045157-008	ES2045157-009	ES2045157-010
				Result	Result	Result	Result	Result
EP068B: Organophosphorus Pesticides (OP) - Continued								
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
EP074A: Monocyclic Aromatic Hydrocarbons								
Styrene	100-42-5	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Isopropylbenzene	98-82-8	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
n-Propylbenzene	103-65-1	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
1.3.5-Trimethylbenzene	108-67-8	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
sec-Butylbenzene	135-98-8	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
1.2.4-Trimethylbenzene	95-63-6	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
tert-Butylbenzene	98-06-6	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
p-Isopropyltoluene	99-87-6	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
n-Butylbenzene	104-51-8	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
EP074B: Oxygenated Compounds								
Vinyl Acetate	108-05-4	5	mg/kg	<5	<5	<5	----	----
2-Butanone (MEK)	78-93-3	5	mg/kg	<5	<5	<5	----	----
4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	<5	<5	<5	----	----
2-Hexanone (MBK)	591-78-6	5	mg/kg	<5	<5	<5	----	----
EP074C: Sulfonated Compounds								

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	SS6	SS7	SS8	SS9	SS10
			Sampling date / time	17-Dec-2020 00:00	17-Dec-2020 00:00	17-Dec-2020 00:00	17-Dec-2020 00:00	17-Dec-2020 00:00
Compound	CAS Number	LOR	Unit	ES2045157-006	ES2045157-007	ES2045157-008	ES2045157-009	ES2045157-010
				Result	Result	Result	Result	Result
EP074C: Sulfonated Compounds - Continued								
Carbon disulfide	75-15-0	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
EP074D: Fumigants								
2.2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
1.2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
cis-1.3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
trans-1.3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
1.2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
EP074E: Halogenated Aliphatic Compounds								
Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	<5	<5	----	----
Chloromethane	74-87-3	5	mg/kg	<5	<5	<5	----	----
Vinyl chloride	75-01-4	5	mg/kg	<5	<5	<5	----	----
Bromomethane	74-83-9	5	mg/kg	<5	<5	<5	----	----
Chloroethane	75-00-3	5	mg/kg	<5	<5	<5	----	----
Trichlorofluoromethane	75-69-4	5	mg/kg	<5	<5	<5	----	----
1.1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Iodomethane	74-88-4	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
trans-1.2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
1.1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
cis-1.2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
1.1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
1.2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Trichloroethene	79-01-6	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Dibromomethane	74-95-3	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
1.3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	<0.5	<0.5	----	----
Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	<0.5	<0.5	----	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	SS6	SS7	SS8	SS9	SS10
				Sampling date / time	17-Dec-2020 00:00	17-Dec-2020 00:00	17-Dec-2020 00:00	17-Dec-2020 00:00	17-Dec-2020 00:00
Compound	CAS Number	LOR	Unit		ES2045157-006	ES2045157-007	ES2045157-008	ES2045157-009	ES2045157-010
					Result	Result	Result	Result	Result
EP074E: Halogenated Aliphatic Compounds - Continued									
1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Hexachlorobutadiene	87-68-3	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
EP074F: Halogenated Aromatic Compounds									
Chlorobenzene	108-90-7	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Bromobenzene	108-86-1	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
2-Chlorotoluene	95-49-8	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
4-Chlorotoluene	106-43-4	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
1.3-Dichlorobenzene	541-73-1	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
1.4-Dichlorobenzene	106-46-7	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
1.2-Dichlorobenzene	95-50-1	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
EP074G: Trihalomethanes									
Chloroform	67-66-3	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Bromodichloromethane	75-27-4	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Dibromochloromethane	124-48-1	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
Bromoform	75-25-2	0.5	mg/kg		<0.5	<0.5	<0.5	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	SS6	SS7	SS8	SS9	SS10
				Sampling date / time	17-Dec-2020 00:00	17-Dec-2020 00:00	17-Dec-2020 00:00	17-Dec-2020 00:00	17-Dec-2020 00:00
Compound	CAS Number	LOR	Unit		ES2045157-006	ES2045157-007	ES2045157-008	ES2045157-009	ES2045157-010
					Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg		**0.6**	**0.6**	**0.6**	**0.6**	**0.6**
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg		**1.2**	**1.2**	**1.2**	**1.2**	**1.2**
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg		<50	<50	<50	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions									
C6 - C10 Fraction	C6_C10	10	mg/kg		<10	<10	<10	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg		<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		<50	<50	<50	<50	<50
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg		<50	<50	<50	<50	<50
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
^ Total Xylenes	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Naphthalene	91-20-3	1	mg/kg		<1	<1	<1	<1	<1
EP066S: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		**98.1**	**94.8**	**98.5**	**105**	**94.3**
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.05	%		**92.0**	**106**	**86.7**	**89.4**	**87.1**
EP068T: Organophosphorus Pesticide Surrogate									

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Sample ID	SS6	SS7	SS8	SS9	SS10
				Sampling date / time	17-Dec-2020 00:00	17-Dec-2020 00:00	17-Dec-2020 00:00	17-Dec-2020 00:00	17-Dec-2020 00:00
Compound	CAS Number	LOR	Unit		ES2045157-006	ES2045157-007	ES2045157-008	ES2045157-009	ES2045157-010
					Result	Result	Result	Result	Result
EP068T: Organophosphorus Pesticide Surrogate - Continued									
DEF	78-48-8	0.05	%		68.7	112	65.7	71.8	76.3
EP074S: VOC Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.5	%		84.6	86.2	95.4	----	----
Toluene-D8	2037-26-5	0.5	%		103	106	116	----	----
4-Bromofluorobenzene	460-00-4	0.5	%		98.4	96.8	106	----	----
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.5	%		92.5	92.5	86.7	86.1	92.7
2-Chlorophenol-D4	93951-73-6	0.5	%		88.0	84.7	82.6	82.7	88.8
2.4.6-Tribromophenol	118-79-6	0.5	%		64.3	67.7	58.4	60.0	50.8
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.5	%		91.6	91.5	88.8	90.7	93.2
Anthracene-d10	1719-06-8	0.5	%		96.4	94.1	93.0	95.3	96.9
4-Terphenyl-d14	1718-51-0	0.5	%		82.3	80.2	84.4	81.6	83.9
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.2	%		87.2	89.1	98.7	77.1	77.6
Toluene-D8	2037-26-5	0.2	%		96.3	99.3	108	77.9	80.4
4-Bromofluorobenzene	460-00-4	0.2	%		100	99.9	110	86.8	81.4

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	SS11	SP1	SP2	SP3	D1
			Sampling date / time	17-Dec-2020 00:00	17-Dec-2020 00:00	17-Dec-2020 00:00	17-Dec-2020 00:00	17-Dec-2020 00:00
Compound	CAS Number	LOR	Unit	ES2045157-011	ES2045157-012	ES2045157-013	ES2045157-014	ES2045157-015
				Result	Result	Result	Result	Result
EA055: Moisture Content (Dried @ 105-110°C)								
Moisture Content	----	1.0	%	27.4	11.1	31.0	35.8	13.8
EA200: AS 4964 - 2004 Identification of Asbestos in Soils								
Asbestos Detected	1332-21-4	0.1	g/kg	No	No	No	No	----
Asbestos (Trace)	1332-21-4	5	Fibres	No	No	No	No	----
Asbestos Type	1332-21-4	-	--	-	-	-	-	----
Synthetic Mineral Fibre	----	0.1	g/kg	No	No	No	No	----
Organic Fibre	----	0.1	g/kg	No	No	No	No	----
Sample weight (dry)	----	0.01	g	292	473	292	175	----
APPROVED IDENTIFIER:	----	-	--	A. SMYLIE	A. SMYLIE	A. SMYLIE	A. SMYLIE	----
EG005(ED093)T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	9	7	<5	<5
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg	9	9	19	14	9
Copper	7440-50-8	5	mg/kg	16	5	14	16	31
Lead	7439-92-1	5	mg/kg	21	10	28	12	27
Nickel	7440-02-0	2	mg/kg	6	2	11	7	9
Zinc	7440-66-6	5	mg/kg	70	20	123	75	70
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	----
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
^ Total Chlordane (sum)	----	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	SS11	SP1	SP2	SP3	D1
			Sampling date / time	17-Dec-2020 00:00	17-Dec-2020 00:00	17-Dec-2020 00:00	17-Dec-2020 00:00	17-Dec-2020 00:00
Compound	CAS Number	LOR	Unit	ES2045157-011	ES2045157-012	ES2045157-013	ES2045157-014	ES2045157-015
				Result	Result	Result	Result	Result
EP068A: Organochlorine Pesticides (OC) - Continued								
Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
^ Endosulfan (sum)	115-29-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	----
Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	----
^ Sum of Aldrin + Dieldrin	309-00-2/60-57-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
^ Sum of DDD + DDE + DDT	72-54-8/72-55-9/50-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
EP068B: Organophosphorus Pesticides (OP)								
Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	----
Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	----
Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	----
Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons								

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	SS11	SP1	SP2	SP3	D1
			Sampling date / time	17-Dec-2020 00:00	17-Dec-2020 00:00	17-Dec-2020 00:00	17-Dec-2020 00:00	17-Dec-2020 00:00
Compound	CAS Number	LOR	Unit	ES2045157-011	ES2045157-012	ES2045157-013	ES2045157-014	ES2045157-015
				Result	Result	Result	Result	Result
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued								
Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Benzo(b+j)fluoranthene	205-99-2 205-82-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
^ Benzo(a)pyrene TEQ (zero)	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
^ Benzo(a)pyrene TEQ (half LOR)	----	0.5	mg/kg	**0.6**	**0.6**	**0.6**	**0.6**	----
^ Benzo(a)pyrene TEQ (LOR)	----	0.5	mg/kg	**1.2**	**1.2**	**1.2**	**1.2**	----
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	<10	<10	<10	<10	----
C10 - C14 Fraction	----	50	mg/kg	<50	<50	<50	<50	----
C15 - C28 Fraction	----	100	mg/kg	<100	<100	<100	<100	----
C29 - C36 Fraction	----	100	mg/kg	<100	<100	<100	**100**	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	<50	**100**	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions								
C6 - C10 Fraction	C6_C10	10	mg/kg	<10	<10	<10	<10	----
^ C6 - C10 Fraction minus BTEX (F1)	C6_C10-BTEX	10	mg/kg	<10	<10	<10	<10	----
>C10 - C16 Fraction	----	50	mg/kg	<50	<50	<50	<50	----
>C16 - C34 Fraction	----	100	mg/kg	<100	<100	<100	<100	----
>C34 - C40 Fraction	----	100	mg/kg	<100	<100	**100**	**120**	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	**100**	**120**	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Sample ID	SS11	SP1	SP2	SP3	D1
			Sampling date / time	17-Dec-2020 00:00	17-Dec-2020 00:00	17-Dec-2020 00:00	17-Dec-2020 00:00	17-Dec-2020 00:00
Compound	CAS Number	LOR	Unit	ES2045157-011	ES2045157-012	ES2045157-013	ES2045157-014	ES2045157-015
				Result	Result	Result	Result	Result
EP080/071: Total Recoverable Hydrocarbons - NEPM 2013 Fractions - Continued								
^ >C10 - C16 Fraction minus Naphthalene (F2)	----	50	mg/kg	<50	<50	<50	<50	----
EP080: BTEXN								
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	----
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
^ Sum of BTEX	----	0.2	mg/kg	<0.2	<0.2	<0.2	<0.2	----
^ Total Xylenes	----	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
Naphthalene	91-20-3	1	mg/kg	<1	<1	<1	<1	----
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	**91.9**	**96.4**	**93.9**	**81.4**	----
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.05	%	**81.2**	**88.0**	**87.2**	**74.1**	----
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.05	%	**114**	**76.8**	**123**	**98.1**	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.5	%	**89.5**	**93.4**	**85.6**	**88.5**	----
2-Chlorophenol-D4	93951-73-6	0.5	%	**86.6**	**90.0**	**84.0**	**86.6**	----
2.4.6-Tribromophenol	118-79-6	0.5	%	**56.5**	**63.8**	**71.8**	**70.3**	----
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.5	%	**90.3**	**97.4**	**90.2**	**89.2**	----
Anthracene-d10	1719-06-8	0.5	%	**91.9**	**100**	**92.6**	**92.9**	----
4-Terphenyl-d14	1718-51-0	0.5	%	**81.3**	**85.4**	**82.7**	**80.2**	----
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.2	%	**74.6**	**98.1**	**77.9**	**77.7**	----
Toluene-D8	2037-26-5	0.2	%	**75.1**	**99.9**	**79.1**	**79.8**	----
4-Bromofluorobenzene	460-00-4	0.2	%	**85.1**	**108**	**84.2**	**83.0**	----

Analytical Results

Sub-Matrix: **SOLID** (Matrix: **SOLID**)			Sample ID	**ACM1**	**----**	**----**	**----**	**----**
			Sampling date / time	17-Dec-2020 00:00	----	----	----	----
Compound	*CAS Number*	*LOR*	*Unit*	**ES2045157-016**	**--------**	**--------**	**--------**	**--------**
				Result	----	----	----	----
EA200: AS 4964 - 2004 Identification of Asbestos in bulk samples								
Asbestos Detected	1332-21-4	0.1	g/kg	**No**	**----**	**----**	**----**	**----**
Asbestos Type	1332-21-4	-	--	**-**	**----**	**----**	**----**	**----**
Asbestos (Trace)	1332-21-4	5	Fibres	**No**	**----**	**----**	**----**	**----**
Sample weight (dry)	----	0.01	g	**114**	**----**	**----**	**----**	**----**
Synthetic Mineral Fibre	----	0.1	g/kg	**No**	**----**	**----**	**----**	**----**
Organic Fibre	----	0.1	g/kg	**Yes**	**----**	**----**	**----**	**----**
APPROVED IDENTIFIER:	----	-	--	**B.SCHRADER**	**----**	**----**	**----**	**----**

Analytical Results

Sub-Matrix: WATER (Matrix: WATER)				Sample ID	RINSATE 1	----	----	----	----
				Sampling date / time	17-Dec-2020 00:00	----	----	----	----
Compound	CAS Number	LOR	Unit		ES2045157-017	--------	--------	--------	--------
					Result	----	----	----	----
EG020T: Total Metals by ICP-MS									
Arsenic	7440-38-2	0.001	mg/L		<0.001	----	----	----	----
Cadmium	7440-43-9	0.0001	mg/L		<0.0001	----	----	----	----
Chromium	7440-47-3	0.001	mg/L		<0.001	----	----	----	----
Copper	7440-50-8	0.001	mg/L		<0.001	----	----	----	----
Nickel	7440-02-0	0.001	mg/L		<0.001	----	----	----	----
Lead	7439-92-1	0.001	mg/L		<0.001	----	----	----	----
Zinc	7440-66-6	0.005	mg/L		<0.005	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L		<0.0001	----	----	----	----

Analytical Results

Descriptive Results

Sub-Matrix: **SOIL**

Method: Compound	Sample ID - Sampling date / time	Analytical Results
EA200: AS 4964 - 2004 Identification of Asbestos in Soils		
EA200: Description	SS1 - 17-Dec-2020 00:00	Mid brown soil.
EA200: Description	SS2 - 17-Dec-2020 00:00	Mid brown soil.
EA200: Description	SS3 - 17-Dec-2020 00:00	Mid brown soil.
EA200: Description	SS4 - 17-Dec-2020 00:00	Mid brown soil.
EA200: Description	SS5 - 17-Dec-2020 00:00	Mid brown soil.
EA200: Description	SS6 - 17-Dec-2020 00:00	Mid brown soil.
EA200: Description	SS7 - 17-Dec-2020 00:00	Mid brown soil.
EA200: Description	SS8 - 17-Dec-2020 00:00	Mid brown soil.
EA200: Description	SS9 - 17-Dec-2020 00:00	Mid brown soil.
EA200: Description	SS10 - 17-Dec-2020 00:00	Mid brown soil.
EA200: Description	SS11 - 17-Dec-2020 00:00	Mid brown soil.
EA200: Description	SP1 - 17-Dec-2020 00:00	Mid brown soil.
EA200: Description	SP2 - 17-Dec-2020 00:00	Mid brown soil.
EA200: Description	SP3 - 17-Dec-2020 00:00	Mid brown soil.

Sub-Matrix: **SOLID**

Method: Compound	Sample ID - Sampling date / time	Analytical Results
EA200: AS 4964 - 2004 Identification of Asbestos in bulk samples		
EA200: Description	ACM1 - 17-Dec-2020 00:00	Several pieces of cement sheeting.

Surrogate Control Limits

Sub-Matrix: **SOIL**

Compound	CAS Number	Recovery Limits (%) Low	High
EP066S: PCB Surrogate			
Decachlorobiphenyl	2051-24-3	39	149
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	49	147
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	35	143
EP074S: VOC Surrogates			
1.2-Dichloroethane-D4	17060-07-0	64	130
Toluene-D8	2037-26-5	66	136
4-Bromofluorobenzene	460-00-4	60	122
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	63	123
2-Chlorophenol-D4	93951-73-6	66	122
2.4.6-Tribromophenol	118-79-6	40	138
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	70	122
Anthracene-d10	1719-06-8	66	128
4-Terphenyl-d14	1718-51-0	65	129
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	73	133
Toluene-D8	2037-26-5	74	132
4-Bromofluorobenzene	460-00-4	72	130

Appendix B

Letter from Dr David Tully CEnvP SC

Contaminated Land Solutions

11 January 2021

Ref: 0093.L02

Regional Geotechnical Solutions Pty Ltd
44 Brent Street
Wingham
NSW 2429

For the attention of Andrew Hills

Dear Andrew,

RE: Report Review Stage 2 Site Contamination Assessment – 494 Wingham Road, Taree, NSW

I, Dr David Tully of Contaminated Land Solutions Pty Ltd, am a Certified Environmental Practitioner Site Contamination Specialist (General Certified Environmental Practitioner certification no. 1138 and Site Contamination Specialist certification no. SC40084).

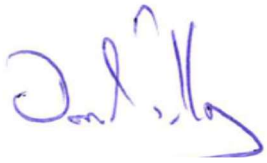
I confirm I have reviewed Regional Geotechnical Solutions report entitled "*Stage 2 Site Contamination Assessment –494 Wingham Road, Taree, NSW*" (Ref: RGS02310.1-AE), dated 11 January 2021 and a copy of which I have retained.

I can confirm that on the basis of the information contained within the report, I support the conclusions and recommendations provided therein.

Should the client, regulator or local authority have any queries regarding the report review, I can be contacted by e-mail via david.tully@contaminatedlandsolutions.com.au. Specific queries regarding the content of the report should be addressed to Andrew Hills at Regional Geotechnical Solutions.

For and on behalf of

Contaminated Land Solutions Pty Ltd



Dr David Tully CEnvP SC
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Contaminated Land Solutions Pty Ltd

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