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Stage 1 and 2 Environmental Site Assessment:
Proposed Seniors Living -
83 Booralie Road, Terrey Hills, NSW.

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May 2015

martens consulting engineers

ENVIRONMENTAL

WATER

WASTEWATER

GEOTECHNICAL

CIVIL

PROJECT MANAGEMENT

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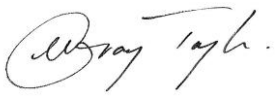
Ben McGiffin Gray Taylor	Gray Taylor Andrew Norris	Gray Taylor	

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All enquiries regarding this project are to be directed to the Project Manager.

Contents

1 Introduction

1.1 Overview

This report prepared by Martens and Associates (MA), on behalf of the client documents a Stage 1 and 2 Environmental Site Assessment (ESA) completed for 83 Booralie Road, Terrey Hills, NSW ('The Site'). This assessment was first completed in February 2013 for the previous seniors living DA submission and has been updated to reflect the new DA development and new policies and regulations that have come into force since February 2013.

1.2 Objectives

Investigation objectives include:

- Identification of historic and current potentially contaminating site activities.
- Evaluation of potential areas of environmental concern (AEC) and associated chemicals of concern (COC).
- Execute a programme of soil sampling and laboratory analysis to determine site contamination.
- Prepare site environmental assessment report.

1.3 Scope of Works

The scope of works includes:

- Walkover inspection to identify areas of potential contamination.
- Review available Warringah Council site development consents.
- Review of 7 historic aerial photographs and WorkCover NSW search to assess past site and surrounding land use patterns.
- Review NSW OEH (formerly NSW EPA) notices under the Contaminated Land Management Act (1997).
- Preliminary intrusive soil investigation and laboratory analysis.

- Prepare an ESA report in general accordance with the relevant sections of ASC NEPM (1999, amended 2013), NSW OEH (2011) DEC (2006) and NSW EPA (1994).

1.4 Reference Guidelines

This assessment is prepared in general accordance with the following guidelines:

- ASC NEPM (1999, amended 2013) National Environmental Protection Measure.
- CRC CARE (2011) Health screening levels for petroleum hydrocarbons in soil and groundwater: summary, Technical Report No. 10, CRC for Contamination Assessment and Remediation of the Environment.
- NEPC (1999 amended 2013) National Environmental Protection Measures, (NEPM, 1999 amended 2013).
- NSW DEC (2006) 2nd Ed. Contaminated Sites: Guidelines for the NSW Site Auditor Scheme.
- NSW DECC (2009) Waste Classification Guidelines – Part 1: Classifying Waste.
- NSW EPA (1995) Sampling Design Guidelines.
- NSW EPA (1994) Guidelines for Assessing Service Station Sites.
- NSW OEH (2011) Contaminated Sites: Guidelines for Consultants Reporting on Contaminated Sites, 2nd Edition.

1.5 Abbreviations

ACM - Asbestos containing material

AEC – Area of environmental concern

ASC NEPM – Assessment of Site Contamination - National Environmental Protection Measure (1999 amended 2013).

BH - Borehole

BTEX – Benzene, toluene, ethyl benzene and xylenes

COPC – Contaminants of primary concern

CSM – Conceptual site model

DA/BA – Development application / building approval

DEC – NSW Department of Environment and Conservation

DECC – Department of Environment and Climate Change

DQI – Data quality indicators

DQO – Data quality objectives

DP – Deposited plan

EAC – Ecological assessment criteria

EIL – Ecological investigation level

EPA – NSW Environmental Protection Authority

ESA – Environmental site assessment

ESL – Ecological screening level

GIL – Groundwater investigation level

HIL – Health investigation level

HM – Heavy metals

HSL – Health screening level

LGA – Local government area

LOR - Limit of reporting

MA – Martens & Associates Pty Ltd

mAHD – metres, Australian Height Datum

mbgl – metres below ground level

NATA – National Association of Testing Authorities

NEPC – National Environmental Protection Council

OCP – Organochloride pesticides

OEH – NSW Office of Environment and Heritage

OPP – Organophosphate pesticides

PACM – Potential asbestos containing material

PAH – Polycyclic aromatic hydrocarbons

PID – photoionisation detector

PPM – Parts per million

PVC – Polyvinyl chloride

QA/QC – Quality assurance / quality control

RAP – Remediation action plan

RPD – Relative percentage difference

SAC – Site assessment criteria

SOP – Standard operating procedure

TB – Trip blank

TP - Testpit

TRH – Total recoverable hydrocarbons

TS – Trip spike

UST – Underground storage tank

VHC – Volatile halogenated compounds

VOC – Volatile organic compounds

2 Site Background Information

2.1 Location and Setting

Site information is summarised in Table 1.

Table 1: Site background information

Site address	83 Booralie Road, Terry Hills
Lot and DP (Title Information)	Lot 51, DP651176
LGA	Warringah Council
Zoning	Rural Residential
Site area	Approximately 1.95 ha
Current land use	Rural residential
Proposed land use	Senior housing development
Surrounding land uses	Residential allotments to the east and rural residential allotment to the north, south and west.
Topography	Majority of the site has a southerly aspect with slopes approximately <10° towards Neverfail Creek which dissects the southern portion of the site. Site portion south of Neverfail Creek has a northerly aspect with slopes approximately <5° towards Neverfail Creek. All overland flow drains to Neverfail Creek.
Geology	Hawkesbury Sandstone, consisting of medium to coarse grained quartz sandstone with minor shale and laminate lenses.
Sensitive receptors	Nearest environmental receptor is Neverfail Creek.

Site location is shown in Figure 1 and site features relevant to the investigation are shown Attachment A.

Figure 1: Subject site location outlined in black. (NSW LPI SIX Viewer 2012)

2.2 Hydrogeology

Review of NSW Natural Resources Atlas indicated seven groundwater bores (with available information (February 2013)) within 1.0 km of the site (Table 2).

Table 2: Available hydrogeological information

Groundwater Bore Identification	Distance / Orientation From Site	Depth To Groundwater (mBGL)	Intended Use	Water Bearing Zone Substrate
GW020300	200 m / E	30.40	General use	Sandstone
GW105402	50 m / SE	70.10	Domestic	Sandstone
GW16926	50 m / NW	15.80	General use	Sandstone
GW108073	50 m / W	98.0	Domestic	Sandstone
GW108555	250 m / E	78.0	Domestic	Sandstone
GW108565	500 m / W	73.0	Domestic	Sandstone
GW19625	100 m / NE	26.2	General use	Sandstone

3 Site Condition History Review

3.1 Site Walkover

A site inspection was conducted on 19 October 2012 and 19 November 2014 with results summarised in Table 3. At the time of the inspection on 19 November the site was vacant and the previous tenants and their associated belongings had been removed.

Table 3: Site walkover inspection summary

	Site Inspection 19 October 2012	Site Inspection 19 November 2014
Site Observations	The site comprises of two separate residential properties with large grassed areas. Kierans Creek runs through the southern portion of the site.	
	Two residential building are described as follows: o Northern residence - single story fibro cottage with attached metal roof car port and two metal storage sheds. o Southern residence - single story fibro and weatherboard cottage with fibro roof and a metal shed.	
	Chemicals observed onsite including: o Pool chlorine o 'Splash and Dash" outdoor cleaner o Synthetic grass adhesive (which contains 75% hydrocarbons) o Petrol and diesel jerry cans o Motor oil o Propane and oxygen tanks as part of a welding set up o Paints and paint thinners o Motor oil and lubricants	All previous chemicals observed on site had been removed.
	Incinerator with evidence of refuse burning.	Previous incinerator area had been removed.
	Metal storage sheds to the site's north contain motor bikes, lawnmowers and large collection of tools. Evidence that mechanical repairs of equipment take place on site.	Metal storage sheds empty however still evidence that mechanical repairs of equipment had taken place on site. PACM stockpiled adjacent to northern dwelling.
	Soil staining associated with spilled fuels and grass adhesive noted.	Soil staining associated with spilled fuels in similar area noted. No evidence of spilled adhesive.

[redacted]	Anecdotal evidence from northern residence tenant indicated a history of semitrailers dumping soil stockpiles across the grassed area of the site. Recently (3-5 months ago) stockpiles have been spread out across the field increasing the natural surface level by up to 300mm.	
	Anecdotal evidence from the southern residence tenant indicated a history of illegal dumping in the southern portions of the site.	
	Area along eastern boundary, northern embankment of Neverfail Creek and north of southern dwelling contains stockpiles of dumped soil waste, builder's material, trees, steel and concrete.	Area along eastern boundary, northern embankment of Neverfail Creek and north of southern dwelling contains stockpiles of dumped soil waste, builder's material, trees, steel and concrete. Additional stockpiles east of northern dwelling and along western boundary between dwellings. Stockpiles contained dumped soil waste, builder's material and vegetation. Earthworks along western boundary to form access road for neighbouring site. Stockpiles along boundary contained organic material. Large sandstone boulders had been dumped on northern embankment of Neverfail Creek.

Specific site areas of concern locations are outlined in Section 4.

3.2 Historical Site Records Review

Information derived from review of historical site records is presented in Table 4.

Table 4: Site history information

Information Source	Available Information
NSW WorkCover Dangerous Goods Register Database	No records of UST or AST as dangerous goods on the Chemical Information Database (SCID) or microfiche records (See Attachment E).
NSW OEH Records	No notices for the site or areas surrounding the site under the Contaminated Land Management Act (1997) or the Environmentally Hazardous Chemicals Act (1985).
Warringah Council DA/BA/CC Records	Council has recent development proposals DA2011/0554 and DA2002/1387 with no detailed information available. A council rate check in 1962 shows the site consisted of multiple lots however limited information is available regarding any previous site

Information Source	Available Information
	subdivision. DA2013/0796 Construction of a seniors housing development and strata subdivision.

3.3 Review of Selected Aerial Photographs

Results of a review of selected recent and historical site aerial photographs (Attachment G) are summarised in Table 5.

Table 5: Observations from selected aerial photographs

Year	Site	Surrounding Land Use	Reference
1930	Entire site is covered in native vegetation. Evidence of an unsealed track running through the middle of the site.	Surrounding land is undeveloped and covered in native vegetation.	Sydney Run 12, Photo: FS6 Scale: Unknown
1955	Majority of the site has been cleared with rural residential dwellings occurring across the site.	Rural residential development to the west and north. Agricultural developments and land clearing to the east and south.	Broken Bay Run 11, Photo 5011 Scale: Unknown
1978	Middle of the site has been cleared with rural residential dwellings positioned similar to present day. Storage containers or sheds line the western boundary.	Major residential development to the east. Agricultural development (chicken sheds) to the immediate west with continued agricultural development further west.	Cumberland Run 8, Photo 2710 1:16,000
2002	Western boundary is now clear with an increase in site natural vegetation. No change to rural residential dwellings.	Agricultural developments (chicken sheds) to the west have been cleared leaving a grass paddock. Continued residential development in all directions.	Sydney Run 5, Photo 2302 1:25000
2009	Minor vegetation clearing in the middle of site. No change to rural residential dwellings.	Little change from 2002.	Google Maps
2012	Little change from 2009	Little change from 2009.	Nearmap
2014	Little change from 2012.	Minor earthworks adjacent to south western boundary. Little change from 2012.	Nearmap

4 Areas of Environmental Concern and Chemicals of Concern

Based on site history review and site walkover observations, AEC and associated COC are presented in Table 6. A site plan showing specific AEC locations is available in Attachment A.

Table 6: Areas of Environmental Concern and Chemicals of Concern

AEC	Potential Contaminating Activity	COC	Likelihood of Contamination
Location A	Storage of liquid pool chlorine containers with fuel storage cans observed.	TPH, BTEX, PAH and heavy metals.	Medium
Location B and C	Storage of outdoor cleaner 'Splash N Dash' and empty oil containers.	BTEX, PAH and heavy metals.	Low
Location D	Storage of synthetic grass adhesive.	BTEX, PAH, and heavy metals.	Medium
Location E	Shed containing motor bikes, welding equipment and other mechanical equipment.	TPH, BTEX, PAH and heavy metals.	Medium
Location F	Storage of empty drums of grass adhesive with evidence of spillage (soil staining).	BTEX, PAH, and heavy metals.	High
Location G	Shed with storage of tools, paints, motor oils and lubricants.	TPH, BTEX, PAH and heavy metals.	Medium
Location H	Evidence of mechanical repairs.	TPH, BTEX, PAH and heavy metals.	Medium
Location I	Storage of fuel in jerry cans with evidence of spillage (soil staining).	TPH, BTEX, PAH and heavy metals .	High

AEC	Potential Contaminating Activity	COC	Likelihood of Contamination
Entire site	Importation of fill material of unknown origin and quality.	TPH, BTEX, OCP, OPP, heavy metals, asbestos.	Medium
Stockpiles	Contain soil and material from unknown origin and quality.	TPH, BTEX, OCP, OPP, heavy metals, asbestos.	Medium
Southern residential development	Asbestos roof.	Asbestos.	Low
Southern residential development	Anecdotal evidence of illegal dumping of material of unknown origin.	TPH, PAH, BTEX, OCP, OPP, heavy metals, asbestos.	Medium

With the exception of Locations F and I (storage of fuels and adhesives) the identified AECs are considered to be low to medium risk of contamination based on site history review and walkovers.

4.1 Sensitive Receptors and Exposure Pathways

Table 7 provides a summary of identified sensitive receptors and potential exposure pathways connecting receptors to identified COPC outlined in Table 6.

Table 7: Potential receptors and exposure pathways.

Receptor	Pathway
Human Receptors: o Future site occupants. o Site visitors. o Site workers during any future construction works. o Surrounding offsite occupants.	o Dermal contact. o Ingestion of potentially contaminated soil. o Inhalation of airborne contaminants. o Migration of pollutants via airborne and groundwater.
Environmental Receptors o Dams and unnamed creek in north eastern corner of site. o Existing vegetated areas across the site. o Vegetated or landscaped areas of any future site design plans.	o Migration of contaminated runoff. o Direct contact with site flora.

4.2 Data Gaps

Based on identified AECs, COPC and potential pathways to receptors, intrusive investigations were recommended to characterise potential adverse environmental risks which may impact the proposed development.

5 Field and Laboratory Investigations

5.1 Field Programme

Soils were sampled concurrent with a geotechnical investigation on 19 October 2012. AEC and COC identified were utilised to develop a field investigation programme to detail prevailing site contamination condition. Intrusive investigation included 29 borehole and test pit locations across the site. Sampling was completed in accordance with the sampling design requirements outlined in NSW EPA (1995).

5.2 Investigation Constraints

Site investigation constraints included:

- Limited access inside/beneath dwellings.
- Limited access inside/beneath sheds.

To fully assess site contamination status and address data gaps in the CMS, further soil investigation will be required following demolition of structures.

5.3 Sampling Methodology and Quality Assurance / Quality Control

Sampling methods are discussed in Table 8.

Table 8: Soil sampling methods

Type	Number of Locations	Equipment	Description
Borehole	8	Solid flight hydraulic auger / hand auger	Soils were collected at a range of depths, generally 0.1, 0.5, 1.0 and then at 0.5m intervals (as required to characterise contamination).
Stockpile	6	Spade	Soil samples collected directly from the centre of the stockpile.
Surface	21	Spade	Soil samples collected from 0.0 - 0.2m.

Soil samples were selected for laboratory analysis based on likely zones of contamination and/or visual and olfactory evidence of contamination.

Sample depths were generally designed to provide information on the contamination status of shallow soils by identifying above ground potential contamination activities. Deeper soil samples were recovered to assess the vertical extent of contamination or where visual or olfactory evidence of contamination was observed.

Sampling locations are distributed to assess particular areas of concern (AOCs and stockpiles).

Soil sampling methodology (Table 9) was completed to meet data quality objectives

Table 9: Soil sampling methodology

Activity	Detail / Comments
Soil logging	Boreholes were logged by an environmental engineer in accordance with MA SOP.
Soil sampling	Soil sampling was completed by the supervising environmental engineer. Each sample was placed into a laboratory-supplied, acid-rinsed 250mL glass jar, labelled with a unique identification number and no headspace to limit volatile loss. A clean pair of disposable gloves was used when handling each sample.
QA / QC sampling	Duplicate samples were collected at a rate of approximately 1 in 10 samples for intra-laboratory analysis.
Sample handling and transportation	Sample collection, storage and transport were conducted according to Martens and Associates SOP. Collected samples were placed into ice chilled cooler-boxes. Samples were dispatched to NATA-accredited laboratories under chain of custody documentation within holding times.
Decontamination of sampling equipment	Sampling equipment was decontaminated between sampling locations by pressurised water spray with a solution of Decon-90™, a phosphate-free detergent, followed by rinsing with potable water.

A review of QA/QC procedure has been completed and is presented in the data validation report (Attachment E). The report concludes that data is suitable for the purposes of the assessment.

5.4 Laboratory Analytical Suite

Laboratory analysis was carried out by Envirolab Pty Ltd a NATA accredited laboratory. Laboratory analytical documentation is presented in Attachment C.

35 primary soil samples were selected for a suite of laboratory analyses (Table 10) based on COC identified in Table 10.

Six fibrous cement sheeting material samples, one trip blank and one trip spike were also analysed.

Table 10: Summary of primary soil laboratory analyses

COC	Number of Samples Analysed
BTEX	35
TRH	35
PAH	35
Heavy metals[1]	35
OCP / OPP	35
PCB	35
Asbestos in soil	9

Notes:

[1] Heavy metals – arsenic, cadmium, chromium, copper, lead, mercury, nickel, zinc.

6 Site Assessment Criteria

6.1 Overview

The Site Assessment Criteria (SAC) adopted for this ESA has been derived from ASC NEPM (1999, amended 2013) and other guidelines as outlined in Section 1.4.

Guideline values for individual contaminants analysed for this assessment are presented in tables below and laboratory tables in Attachment B. Envirolab were able to update the majority of the previous laboratory results to reflect the new NEPM guidelines and associated HILs and TRH fractions for reporting purposes. Where this wasn't possible previously used guidelines were adopted.

Table 11 summarises the applicability of the SAC adopted for this investigation.

Table 11: Summary of SAC.

SAC	Applicability
Health Investigation Levels (HIL)	Based on preliminary plans for future residential site use, HIL – A Residential with soil access (ASC NEPM, 1999, amended 2013) have been adopted. Where laboratory soil fraction analysis was not possible on previous laboratory analysis results the adopted HIL for BTEX and TRH is derived from NSW EPA (1994).
Health Screening Levels (HSL) for petroleum hydrocarbons	HSL A - low density residential for sand (ASC NEPM, 1999, amended 2013) has been adopted for soil criteria. Soil HSL provide a preliminary assessment of human risk via inhalation of vapours from potential contamination. For this purpose HSL A criteria are considered appropriate. An assessment of soil vapour is outside the scope works.
Direct contact petroleum hydrocarbon HSL	Direct contact HSL have been adopted from CRC CARE (2011) and provide assessment criteria for human health risk where direct contact with TPH contaminated soil is likely.

SAC	Applicability
Ecological Assessment Criteria (EAC)	A preliminary assessment of ecological risk has been undertaken with reference to Ecological Investigation Levels (EIL) and Ecological Screening Levels (ESL). EIL/ESL apply principally to contamination contained in the top 2m of soil. EILs for aged contamination have been calculated based on ASC NEPM (1999, amended 2013) methodology. ESLs for coarse grained soils in urban residential and open spaces (ASC NEPM, 1999, amended 2013) have been adopted based on proposed future site use and fill material.
Management limits for TPH	Limited to petroleum hydrocarbon compounds. Maximum TPH values that should remain in a site following health, ecological and groundwater criteria limits.
Asbestos in soil	Based on the screening nature of this assessment the 'presence/absence' of asbestos in soil has been adopted as the SAC.
Waste classification	Criteria outlined in NSW DECCW (2009) Waste Classification Guidelines have been adopted for waste classification purposes.
Groundwater Investigation Levels (GILs)	An assessment of groundwater investigation levels is outside the scope works.

6.2 Guideline Values for Contaminant Assessment

Guideline values used in this assessment are presented below.

6.2.1 Health Investigation levels for Soil Assessment

Table 12: Adopted health investigation levels for soil (HIL) and laboratory detection levels (LOR).

Contaminant of Primary Concern	Adopted HIL (mg/kg)	LOR (mg/kg)
Benzo(a)pyrene TEQ[1]	3	0.5
Arsenic (total)	100	4.0
Cadmium	20	0.4
Chromium (VI)	100	1.0
Copper	6,000	1.0
Lead	300	1.0
Mercury	40	0.1

Contaminant of Primary Concern	Adopted HIL (mg/kg)	LOR (mg/kg)
Nickel	400	1.0
Zinc	7,400	1.0
Vinyl Chloride	0.03	1.0
Total PAH	300	<2.55
Aldrin + Dieldrin	6	0.2
Chlordane	50	0.1
DDT+DDD+DDE	240	0.3
Heptachlor	6	0.1
PCB (total)	[1]	<0.7
Asbestos in soil	0.01% w/w[2] bonded 0.001% w/w[2] friable asbestos No visible asbestos on soil surface	0.01% w/w

Notes:
[1] Benzo(a)pyrene TEQ – HIL is based on 8 carcinogenic PAHs and their potency relative to Benzo(a)pyrene as outlined in the NEPM (1999, amended).
[2] W/W – Weight for weight, e.g. 0.1g/kg would equal 0.01% w/w.

6.2.2 Health Screening Levels for Petroleum Hydrocarbon Compounds

Table 13: Residential soil HSLs for vapour intrusion in sand (mg/kg).

	0m – <1m	1m – <2m	2m – <4m	4m+	Soil Saturation Concentration (Csat)[1]
Toluene	160	220	310	540	560
Ethylbenzene	55	NL	NL	NL	64
Xylenes	40	60	95	170	300
Naphthalene	3	NL	NL	NL	9
Benzene	0.5	0.5	0.5	0.5	360
F1 (C_6 – C_{10})	45	70	110	200	950
F2 (C_{10} – C_{16})	110	240	440	NL	560

Notes:
[1] The soil saturation concentration (Csat) is defined as the soil concentration at which the porewater phase cannot dissolve any more of an individual chemical. The soil vapour that is in equilibrium with the porewater will be at its maximum. If the derived soil HSL exceeds Csat, a soil vapour source concentration for a petroleum mixture could not exceed a level that would result in the maximum vapour risk for the

given scenario. For these scenarios, no HSL is presented and the HSL is shown as 'not limiting' or NL (ASC NEPM, 1999 amended 2013).

Table 14: Direct contact TPH health screening levels (HSL) and laboratory LOR.

Contaminant of Primary Concern	Soil Criteria (mg/kg)	LOR (mg/kg)
TPH (C_6-C_{10})	5,600	25
TPH(C_{10}–C_{16})	4,200	50
TPH (C_{16}-C_{34})	5,800	100
TPH (C_{34} – C_{40})	8,100	100
Benzene	140	0.2
Toluene	21,000	0.5
Ethyl benzene	5,900	1
Naphthalene	2,200	1
Xylene (total)	17,000	3

6.2.3 Ecological Screening Levels for Petroleum Hydrocarbon Compounds

Table 15: TPH and BTEX ecological screening levels (ESL) (for coarse grained soil) and LOR.

Contaminant of Primary Concern	Soil Criteria (mg/kg)	LOR (mg/kg)
F1 (C_6-C_{10})	180	25
F2 (C_{10}–C_{16})	120	50
F3 (C_{16}-C_{34})	300	100
F4 (C_{34} – C_{40})	2,800	100
Benzene	50	0.2
Toluene	85	0.5
Ethyl benzene	70	1
Xylene (total)	105	3
Benzo(a)pyrene	0.7	0.1

6.2.4 Ecological Investigation Levels for Aged Arsenic, Fresh DDT and Fresh Naphthalene in Soils

Table 16: Arsenic, DDT and naphthalene ecological investigation levels (EIL) and LOR.

Contaminant of Primary Concern	Soil Criteria (mg/kg)	LOR (mg/kg)
Arsenic	100	<4.0
DDT	180	<0.1
Napthalene	170	<1.0

6.2.5 Management Limits for TPH fractions F1 – F4 in Coarse Soil

Table 17: Management limits for TPH fractions F1-F4 and LOR.

Contaminant of Primary Concern	Soil Criteria (mg/kg)	LOR (mg/kg)
F1 C_6-C_{10}	700	<25
F2 > C_{10}–C_{16}	1,000	<50
F3 > C_{16}-C_{34}	2,500	<100
F4 > C_{34} – C_{40}	10,000	<100

7 Results

7.1 Field Observations

7.1.1 Soil / Rock Profile

A summary of observations during intrusive investigation is presented in Table 18 with detailed borehole logs presented in Attachment D.

Table 18: Summary of site subsurface conditions

Lithology [1]	Depth Range (mBGL) [2]
Fill: silty gravely sand / clays	0.0 – 0.2 / 0.9 (variable)
Natural sands	0.0 / 0.2 – 1.4 (variable)
Sandstone: Extremely weak (EW)	0.9 – 2.2 (variable)
Sandstone: Weak (W)	2.0 – 5.5 (variable)

Notes:
[1] For detailed material description see borehole logs.
[2] Indicative depth range; may vary across site.

7.1.2 Stockpiles

A summary of site stockpiles is provided in Table 19.

Table 19: Description of site stockpiles

Stockpile ID	Description	Approximate Volume (m^3)	Sample ID
SP1	Builders fill, rubble, bricks, concrete, sandy clay, EW sandstone	4	3558/SP1
SP2	EW sandstone boulders, soil material	15	3558/SP2
SP3	Sandy Clay/ EW sandstone	10	3558/SP3
SP4	Builders rubble, concrete, fibrous material, silty sands	12	3558/SP4A 3558/SP4B
SP5	Builders rubble, tiles, timber, glass, silty sands	20	3558/SP5
SP6[1]	Sand, builder's fill, rubble, bricks, PACM	8	Not sampled
SP7[1]	Sand, builder's fill, rubble, bricks, PACM, organics	10	Not sampled

NOTES: [1] Stockpile observed during site walkover 19 November 2014

7.1.3 Groundwater

Table 20 provides a summary of site groundwater encountered during subsurface investigation.

Table 20: Groundwater summary

Testing Location	Depth of Groundwater (mbgl)
BH1	2.15
BH2	2.25
BH3	2.64
BH4	2.30
BH5	2.70

Groundwater monitoring wells were installed at BH3, BH4 and BH5 as part of the geotechnical investigation. Analysis of groundwater for contamination was not part of the scope of this assessment.

7.2 Laboratory Analytical Results

7.2.1 Soil Analytical Results for Hotspot/Stockpile Samples

Comparison of hotspot/stockpile samples laboratory results with the relevant SAC is available in the laboratory tables in Attachment F. A summary of results is presented in Table 10.

Table 21: Summary of soil laboratory results.

Analyte	Results Compared to SAC
Heavy Metals	HILs Lead was detected in1 sample over the adopted SAC of 300 mg/kg. **3558/G (780 mg/kg)** All other results below SAC.
TPH/BTEX	HILs TRH C_{16} – C_{36} was detected in 1 sample over the adopted SAC (NSW EPA 1994) of 1,000 mg/kg. **3558/I (2,250 mg/kg)** ESL Toulene and total xylene was detected in 1 sample over the adopted SAC of 85mg/kg and 105mg/kg respectively. **3558/F (Toulene 98 mg/kg and total xylene 200 mg/kg)** Benzo(a)pyrene was detected in 1 sample over the adopted SAC of 0.7mg/kg. **3558/SP4A (0.88 mg/kg)** F1 – C_6 – C_{16} was detected in 1 sample over the adopted SAC of 180 mg/kg. **3558/F (230 mg/kg)** F3 – C_{16} – C_{34} was detected in 1 sample over the adopted SAC of 300 mg/kg. **3558/A (3,800 mg/kg)**
OCP/OPP	HILs All results below SAC.
PCB	HILs All results below SAC.

Analyte	Results Compared to SAC
PAH	HILs All results below SAC. ESL All results below SAC.
Asbestos in soil	All soil samples reported negative for asbestos in soil detection.

7.2.2 Material Analytical Results

A positive identification of asbestos was made in material samples **3558/ASB1**, **3558/ASB2**, **3558/ASB4**, **3558/ASB5** and **3558/ASB6.**

8 Conclusions and Recommendations

Identified SAC exceedances and the positive identification of ACM cement sheeting pose a risk to human and environmental receptors identified in the preliminary CSM. A remediation action plan (RAP) will be required to address these contamination risks.

Identified soil/fill contamination is localised to identified hotspots and stockpiles. A RAP including asbestos management advice is to be prepared and implemented to guide removal of identified contamination and waste.

It is recommended that following demolition of existing site structures (dwellings and sheds) and removal of identified non soil stockpile waste (builder's rubble, demolition waste etc.), that additional soil testing be conducted to confirm contamination status of soils beneath structures and to validate removal of known contaminated material and an amendment to this report be prepared to address identified investigation constraints (Section 4.2) and data gaps within the CSM.

We consider that the site can be made suitable for proposed residential development provided that known contamination is remediated and validated appropriately. A likely remediation strategy would involve offsite disposal of soils and material stockpiles and excavation and offsite disposal of identified soil staining.

Prior to any soil or ACM material being removed from site, a formal waste classification assessment in accordance with NSW DECCW Waste Classification Guidelines (2009) will be required.

9 Limitations

This Stage 1 and 2 contamination assessment was undertaken in accordance with current industry standards.

It is important to note that no land contamination study can be considered to be a complete and exhaustive characterisation of a site nor can it be guaranteed that any assessment shall identify and characterise all areas of potential contamination or all past potentially contaminating land-uses. This is particularly the case where areas of the site are covered by structures (dwellings and sheds). Therefore, this report should not be read as a guarantee that only contamination identified shall be found on the site. Should material be exposed in future which appears to be contaminated, additional testing may be required to determine the implications for the site.

Martens & Associates Pty Ltd has undertaken this assessment for the purposes of assessing potential site contamination. No reliance on this report should be made for any other investigation or proposal. Martens & Associates accepts no responsibility, and provides no guarantee regarding the characteristics of areas of the site not specifically studied in this investigation.

10 References

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SIX Viewer Maps, NSW LPI, 2014.

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11 Attachment A – Site Plans

KEY

BH108 - BOREHOLE

GMB101 - GROUND WATER MONITORING BORE

3558/SP4A

- MATERIAL SAMPLE (ASBESTOS PRESENT)

W S E N

0 10 20 30 40 50

UNITS - METRES

Martens & Associates Pty Ltd ABN 85 070 240 890		Environment | Water | Wastewater | Geotechnical | Civil | Management			
Drawn:	BM	SITE TESTING PLAN	Drawing No./ID: SK001		
Approved:	GT				
Date:	08.12.2014				
Scale @A3:	NA	Suite 201, Level 2, George Street, Hornsby, NSW 2077 Australia Phone: (02) 9476 9999 Fax: (02) 9476 8767 Email: mail@martens.com.au Internet: http://www.martens.com.au	Project: P1404413	File: JD03V01	Revision: A

martens

INITIAL

SURFACE SAMPLE

LABORATORY RESULTS ABOVE ADOPTED GUIDELINES

0 10 20 30 40 50

UNITS - METRES

Martens & Associates Pty Ltd ABN 85 070 240 890		**Environment | Water | Wastewater | Geotechnical | Civil | Management**			
Drawn:	BM	**Testing Plan for NW site area**	Drawing No./ID: **SK002**		
Approved:	GT				
Date:	08.12.2014				
Scale @A4:	NA	Suite 201, 20 George Street, Hornsby, NSW 2077 Australia Phone: (02) 9476 9999 Fax: (02) 9476 8767 Email: mail@martens.com.au Internet: http://www.martens.com.au	Project: P1404413	File: JD03V01	Revision: A

12 Attachment B – Laboratory Summary Tables

	BTEX							TPH									
	Benzene	Ethylbenzene	Toluene	Xylene (m & p)	Xylene (o)	Xylene Total	F1 - C6-C10	F2 - C10-C16	F3 - C16-C34	F4 - C34-C40	C6 - C9	C10 - C14	C15 - C28	C29-C36	+C10 - C36 (Sum of total)	C6-C10
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.2	1	0.5	2	1		25	50	100	100	25	50	100	100		25
HSL-A	100	4,500	14,000			12,000		3,300	4,500	6,300						4,400
NEPM 2013 Table 1A(3) Res A/B Soil HSL for Vapour Intrusion, Sand																
0-1m	0.5	55	160			40	45	110								
1-2m	0.5	NL	220			60	70	240								
2-4m	0.5	NL	310			95	110	440								
>4m	0.5	NL	540			170	200	NL								
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																
0-2m	50	70	85			105	180	120	300	2,800						

LocCode	Sample_Depth_Range	Sampled_Date-Time	Matrix_Description															
3558/1	0.1	18/10/2012		<0.2	<1	<0.5	<2	<1	<3	<25	<50	<100	<100	<25	<50	<100	<100	<250	<25
3558/10	0.1	18/10/2012		<0.2	<1	<0.5	<2	<1	<3	<25	<50	<100	<100	<25	<50	<100	<100	<250	<25
3558/11	0.1	18/10/2012		<0.2	<1	<0.5	<2	<1	<3	<25	<50	<100	<100	<25	<50	<100	<100	<250	<25
3558/12	0.1	18/10/2012		<0.2	<1	<0.5	<2	<1	<3	<25	<50	<100	<100	<25	<50	<100	<100	<250	<25
3558/13	0.1	18/10/2012		<0.2	<1	<0.5	<2	<1	<3	<25	<50	<100	<100	<25	<50	<100	<100	<250	<25
3558/14	0.1	18/10/2012		<0.2	<1	<0.5	<2	<1	<3	<25	<50	<100	<100	<25	<50	<100	<100	<250	<25
3558/15	0.1	18/10/2012		<0.2	<1	<0.5	<2	<1	<3	<25	<50	<100	<100	<25	<50	<100	<100	<250	<25
3558/16	0.1	18/10/2012		<0.2	<1	<0.5	<2	<1	<3	<25	<50	<100	<100	<25	<50	<100	<100	<250	<25
3558/17	0.1	18/10/2012		<0.2	<1	<0.5	<2	<1	<3	<25	<50	<100	<100	<25	<50	<100	<100	<250	<25
3558/18	0.1	18/10/2012		<0.2	<1	<0.5	<2	<1	<3	<25	<50	<100	<100	<25	<50	<100	<100	<250	<25
3558/19	0.1	18/10/2012		<0.2	<1	<0.5	<2	<1	<3	<25	<50	130	<100	<25	<50	<100	170	245	<25
3558/2	0.1	18/10/2012		<0.2	<1	<0.5	<2	<1	<3	<25	<50	<100	<100	<25	<50	<100	<100	<250	<25
3558/20	0.1	18/10/2012		<0.2	<1	<0.5	<2	<1	<3	<25	<50	<100	<100	<25	<50	<100	<100	<250	<25
3558/3	0.2	18/10/2012		<0.2	<1	<0.5	<2	<1	<3	<25	<50	<100	<100	<25	<50	<100	<100	<250	<25
3558/4	0.1	18/10/2012		<0.2	<1	<0.5	<2	<1	<3	<25	<50	<100	<100	<25	<50	<100	<100	<250	<25
3558/5	0.1	18/10/2012		<0.2	<1	<0.5	<2	<1	<3	<25	<50	<100	<100	<25	<50	<100	<100	<250	<25
3558/7	0.1	18/10/2012		<0.2	<1	<0.5	<2	<1	<3	<25	<50	<100	<100	<25	<50	<100	<100	<250	<25
3558/8	0.1	18/10/2012		<0.2	<1	<0.5	<2	<1	<3	<25	<50	110	<100	<25	<50	<100	<100	<250	<25
3558/9	0.1	18/10/2012		<0.2	<1	<0.5	<2	<1	<3	<25	<50	<100	<100	<25	<50	<100	<100	<250	<25
3558/A	0.1	18/10/2012		<0.2	<1	<0.5	<2	<1	<3	<25	<50	3,800	860	<25	<50	1,900	2,500	4,425	<25
3558/B	0.1	18/10/2012		<0.2	<1	<0.5	<2	<1	<3	<25	-	-	-	<25	<50	<100	150	225	<25
3558/C	0.1	18/10/2012		<0.2	<1	<0.5	<2	<1	<3	<25	<50	120	130	<25	<50	<100	130	205	<25
3558/D	0.1	18/10/2012		<0.2	<1	<0.5	<2	<1	<3	<25	<50	<100	<100	<25	<50	<100	<100	<250	<25
3558/E	0.1	18/10/2012		<0.2	<1	<0.5	<2	<1	<3	<25	<50	<100	<100	<25	<50	<100	<100	<250	<25
3558/F	0.1	18/10/2012		<0.2	27	98	170	30	200	230	<50	<100	<100	380	<50	<100	<100	<250	560
3558/G	0.1	18/10/2012		<0.2	<1	<0.5	<2	<1	<3	<25	-	-	-	<25	<50	590	620	1,235	<25
3558/H	0.1	18/10/2012		<0.2	<1	<0.5	<2	<1	<3	<25	-	-	-	<25	<50	<100	<100	<250	<25
3558/I	0.1	18/10/2012		<0.2	<1	<0.5	3	4	7	<25	-	-	-	<25	310	1,700	240	2,250	<25
3558/SP1		18/10/2012		<0.2	<1	<0.5	<2	<1	<3	<25	<50	<100	<100	<25	<50	<100	<100	<250	<25
3558/SP2		18/10/2012		<0.2	<1	<0.5	<2	<1	<3	<25	<50	<100	<100	<25	<50	<100	<100	<250	<25
3558/SP3		18/10/2012		<0.2	<1	<0.5	<2	<1	<3	<25	<50	<100	<100	<25	<50	<100	<100	<250	<25
3558/SP4A		18/10/2012		<0.2	<1	<0.5	<2	<1	<3	<25	<50	220	<100	<25	<50	140	130	295	<25
3558/SP4B		18/10/2012		<0.2	<1	<0.5	<2	<1	<3	<25	<50	<100	<100	<25	<50	<100	<100	<250	<25
3558/SP5		18/10/2012		<0.2	<1	<0.5	<2	<1	<3	<25	<50	110	<100	<25	<50	<100	120	195	<25

Statistical Summary

Number of Results	34	34	34	34	34	34	34	30	30	30	34	34	34	34	34	34	
Number of Detects	0	1	1	2	2	2	1	0	6	2	1	1	4	8	8	1	
Minimum Concentration	<0.2	<1	<0.5	<2	<1	<3	<25	<50	<100	<100	<25	<50	<100	<100	195	<25	
Minimum Detect	ND	27	98	3	4	7	230	ND	110	130	380	310	140	120	195	560	
Maximum Concentration	<0.2	27	98	170	30	200	230	<50	3800	860	380	310	1900	2500	4425	560	
Maximum Detect	ND	27	98	170	30	200	230	ND	3800	860	380	310	1900	2500	4425	560	
Average Concentration	0.1	1.3	3.1	6	1.5	7.5	19	25	190	80	23	33	171	158	363	29	
Median Concentration	0.1	0.5	0.25	1	0.5	1.5	12.5	25	50	50	12.5	25	50	50	125	12.5	
Standard Deviation	0	4.5	17	29	5.1	34	37	0	683	148	63	49	424	427	824	94	
Number of Guideline Exceedances	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	
Number of Guideline Exceedances(Detects Only)	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	

		Metals							PAH/Phenols																
	Lead	Lead	Arsenic	Cadmium	Chromium (III+VI)	Copper	Mercury	Nickel	Zinc	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a) pyrene	Benzo(b)&(k)fluoranthene	Benzo(g,h,i)perylene	Chrysene	Dibenz(a,h)anthracene	Carcinogenic PAHs (as B(a)P TPE)	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Naphthalene	PAHs (Sum of total)	Phenanthrene	Pyrene
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	1	4	0.4	1	1	0.1	1	1	0.1	0.1	0.1	0.1	0.1	0.05	0.2	0.1	0.1	0.1	0.5	0.1	0.1	0.1	0.1		0.1	0.1
NEPM 2013 Table 1A(1) HILs Res A Soil	300	100	20		6,000	40	400	7,400											3					300		
NEPM 2013 Table 1B(6) ESLs for Urban Res, Coarse Soil																										
0-2m														0.7												

LocCode	Sample_Depth_Range	Sampled_Date-Time	Matrix_Description																							
3558/1	0.1	18/10/2012		58	<4	<0.5	13	38	0.1	4	100	<0.1	<0.1	<0.1	<0.1	<0.05	<0.2	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	0	<0.1	<0.1
3558/10	0.1	18/10/2012		7	<4	<0.5	4	1	<0.1	<1	5	<0.1	<0.1	<0.1	<0.1	<0.05	<0.2	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	0	<0.1	<0.1
3558/11	0.1	18/10/2012		43	<4	<0.5	10	70	<0.1	4	210	<0.1	<0.1	<0.1	<0.1	<0.05	<0.2	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	0	<0.1	<0.1
3558/12	0.1	18/10/2012		14	<4	<0.5	11	5	<0.1	1	46	<0.1	<0.1	<0.1	<0.1	<0.05	<0.2	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	0	<0.1	<0.1
3558/13	0.1	18/10/2012		7	<4	<0.5	10	<1	0.1	1	4	<0.1	<0.1	<0.1	<0.1	<0.05	<0.2	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	0	<0.1	<0.1
3558/14	0.1	18/10/2012		6	<4	<0.5	9	1	<0.1	<1	13	<0.1	<0.1	<0.1	<0.1	<0.05	<0.2	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	0	<0.1	<0.1
3558/15	0.1	18/10/2012		10	<4	<0.5	8	5	<0.1	1	25	<0.1	<0.1	<0.1	<0.1	<0.05	<0.2	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	0	<0.1	<0.1
3558/16	0.1	18/10/2012		22	<4	<0.5	11	17	<0.1	2	150	<0.1	<0.1	<0.1	<0.1	<0.05	<0.2	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	0	<0.1	<0.1
3558/17	0.1	18/10/2012		11	<4	<0.5	10	12	<0.1	1	48	<0.1	<0.1	<0.1	<0.1	<0.05	<0.2	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	0	<0.1	<0.1
3558/18	0.1	18/10/2012		14	<4	<0.5	19	14	<0.1	12	60	<0.1	<0.1	<0.1	<0.1	<0.05	<0.2	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	0	<0.1	<0.1
3558/19	0.1	18/10/2012		34	<4	<0.5	20	14	<0.1	4	160	<0.1	<0.1	<0.1	<0.1	0.06	<0.2	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	0.17	<0.1	0.1
3558/2	0.1	18/10/2012		11	<4	<0.5	14	18	<0.1	2	210	<0.1	<0.1	<0.1	<0.1	<0.05	<0.2	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	0	<0.1	<0.1
3558/20	0.1	18/10/2012		36	<4	<0.5	12	32	<0.1	3	160	<0.1	<0.1	<0.1	<0.1	<0.05	<0.2	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	0	<0.1	<0.1
3558/3	0.2	18/10/2012		11	<4	<0.5	9	4	<0.1	1	27	<0.1	<0.1	<0.1	<0.1	<0.05	<0.2	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	0	<0.1	<0.1
3558/4	0.1	18/10/2012		8	<4	<0.5	14	4	<0.1	1	26	<0.1	<0.1	<0.1	<0.1	<0.05	<0.2	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	0	<0.1	<0.1
3558/5	0.1	18/10/2012		110	<4	<0.5	9	6	<0.1	2	51	<0.1	<0.1	<0.1	0.1	0.1	0.2	<0.1	0.1	<0.1	<0.5	0.3	<0.1	<0.1	<0.1	1.4	0.2	0.3
3558/7	0.1	18/10/2012		58	<4	<0.5	11	24	0.1	8	170	<0.1	<0.1	<0.1	0.1	0.1	<0.2	<0.1	0.1	<0.1	<0.5	0.3	<0.1	<0.1	<0.1	1.1	0.1	0.3
3558/8	0.1	18/10/2012		9	<4	<0.5	9	2	<0.1	1	14	<0.1	<0.1	<0.1	<0.1	<0.05	<0.2	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	0	<0.1	<0.1
3558/9	0.1	18/10/2012		33	<4	<0.5	9	5	<0.1	1	43	<0.1	<0.1	<0.1	<0.1	<0.05	<0.2	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	0	<0.1	<0.1
3558/A	0.1	18/10/2012		55	<4	<0.5	17	31	1.6	3	270	<0.1	<0.1	<0.1	<0.1	<0.05	<0.2	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	0	<0.1	<0.1
3558/B	0.1	18/10/2012		40	<4	<0.5	13	20	<0.1	4	310	<0.1	<0.1	<0.1	<0.1	<0.05	<0.2	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	0	<0.1	<0.1
3558/C	0.1	18/10/2012		9	<4	<0.5	7	4	<0.1	1	59	<0.1	<0.1	<0.1	<0.1	<0.05	<0.2	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	0	<0.1	<0.1
3558/D	0.1	18/10/2012		4	<4	<0.5	4	12	<0.1	10	59	<0.1	<0.1	<0.1	<0.1	<0.05	<0.2	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	0	<0.1	<0.1
3558/E	0.1	18/10/2012		14	<4	<0.5	10	14	<0.1	6	130	<0.1	<0.1	<0.1	<0.1	0.07	<0.2	<0.1	<0.1	<0.1	<0.5	0.1	<0.1	<0.1	<0.1	0.3	<0.1	0.1
3558/F	0.1	18/10/2012		27	<4	<0.5	22	14	<0.1	9	160	<0.1	<0.1	<0.1	<0.1	<0.05	<0.2	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	0.12	0.1	<0.1
3558/G	0.1	18/10/2012		780	7	4.5	66	440	0.1	41	1,300	<0.1	<0.1	<0.1	<0.1	<0.05	<0.2	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	0	<0.1	<0.1
3558/H	0.1	18/10/2012		47	<4	<0.5	14	73	<0.1	9	150	<0.1	<0.1	<0.1	<0.1	<0.05	<0.2	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	0	<0.1	<0.1
3558/I	0.1	18/10/2012		260	12	<0.5	58	64	<0.1	8	450	<0.1	<0.1	<0.1	<0.1	<0.05	<0.2	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	0.1	0.3	<0.1	0.2
3558/SP1		18/10/2012		6	<4	<0.5	9	2	<0.1	4	5	<0.1	<0.1	<0.1	<0.1	<0.05	<0.2	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	0	<0.1	<0.1
3558/SP2		18/10/2012		8	<4	<0.5	34	<1	<0.1	1	6	<0.1	<0.1	<0.1	<0.1	<0.05	<0.2	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	0	<0.1	<0.1
3558/SP3		18/10/2012		7	<4	<0.5	8	<1	<0.1	<1	4	<0.1	<0.1	<0.1	<0.1	<0.05	<0.2	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	0	<0.1	<0.1
3558/SP4A		18/10/2012		21	<4	<0.5	9	10	<0.1	4	34	<0.1	0.2	0.3	0.8	0.88	1	0.5	0.8	0.1	1.2	1.7	<0.1	0.5	<0.1	10	1.2	1.7
3558/SP4B		18/10/2012		6	<4	<0.5	10	3	<0.1	<1	34	<0.1	<0.1	<0.1	<0.1	<0.05	<0.2	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	0	<0.1	<0.1
3558/SP5		18/10/2012		77	<4	0.6	9	69	<0.1	3	280	<0.1	<0.1	<0.1	<0.1	<0.05	<0.2	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	0	<0.1	<0.1

Statistical Summary

Number of Results	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34
Number of Detects	34	2	2	34	31	5	30	34	0	1	1	3	5	2	1	3	1	1	4	0	1	1	34	4	6	
Minimum Concentration	4	<4	<0.5	4	<1	<0.1	<1	4	<0.1	<0.1	<0.1	<0.1	<0.05	<0.2	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	0	<0.1	<0.1	
Minimum Detect	4	7	0.6	4	1	0.1	1	4	ND	0.2	0.3	0.1	0.06	0.2	0.5	0.1	0.1	1.2	0.1	ND	0.5	0.1	0.12	0.1	0.1	
Maximum Concentration	780	12	4.5	66	440	1.6	41	1300	<0.1	0.2	0.3	0.8	0.88	1	0.5	0.8	0.1	1.2	1.7	<0.1	0.5	0.1	10	1.2	1.7	
Maximum Detect	780	12	4.5	66	440	1.6	41	1300	ND	0.2	0.3	0.8	0.88	1	0.5	0.8	0.1	1.2	1.7	ND	0.5	0.1	10	1.2	1.7	
Average Concentration	55	2.4	0.39	15	30	0.1	4.5	140	0.05	0.054	0.057	0.075	0.057	0.13	0.063	0.075	0.051	0.28	0.11	0.05	0.063	0.051	0.39	0.091	0.12	
Median Concentration	14	2	0.25	10	12	0.05	2.5	59	0.05	0.05	0.05	0.05	0.025	0.1	0.05	0.05	0.05	0.25	0.05	0.05	0.05	0.05	0	0.05	0.05	
Standard Deviation	136	1.9	0.73	13	75	0.27	7.2	231	0	0.026	0.043	0.13	0.15	0.15	0.077	0.13	0.0086	0.16	0.29	0	0.077	0.0086	1.7	0.2	0.29	
Number of Guideline Exceedances	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Number of Guideline Exceedances(Detects Only)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

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				Organochlorine Pesticides																				Organophosphorous Pesticides							
				4,4-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	Chlordane (cis)	Chlordane (trans)	d-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Methoxychlor	Bromophos-ethyl	Chlorpyrifos	Chlorpyrifos-methyl	Diazinon	Dimethoate	Ethion	Fenitrothion	Ronnel
				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				0.1	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	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
NEPM 2013 Table 1A(1) HILs Res A Soil							6							240					10			6		300		160						
LocCode	Sample_Depth_Range	Sampled_Date-Time	Matrix_Description																													
3558/1	0.1	18/10/2012		<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.3	<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
3558/10	0.1	18/10/2012		<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.3	<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
3558/11	0.1	18/10/2012		0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<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	<0.1	<0.1
3558/12	0.1	18/10/2012		<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.3	<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
3558/13	0.1	18/10/2012		<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.3	<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
3558/14	0.1	18/10/2012		<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.3	<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
3558/15	0.1	18/10/2012		<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.3	<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
3558/16	0.1	18/10/2012		<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.3	<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
3558/17	0.1	18/10/2012		<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.3	<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
3558/18	0.1	18/10/2012		<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.3	<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
3558/19	0.1	18/10/2012		<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.3	<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
3558/2	0.1	18/10/2012		<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.3	<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
3558/20	0.1	18/10/2012		<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.3	<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
3558/3	0.2	18/10/2012		<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.3	<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
3558/4	0.1	18/10/2012		<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.3	<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
3558/5	0.1	18/10/2012		<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.3	<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
3558/7	0.1	18/10/2012		<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.3	<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
3558/8	0.1	18/10/2012		<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.3	<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
3558/9	0.1	18/10/2012		<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.3	<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
3558/A	0.1	18/10/2012		<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.3	<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
3558/B	0.1	18/10/2012		<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.3	<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
3558/C	0.1	18/10/2012		<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.3	<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
3558/D	0.1	18/10/2012		<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.3	<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
3558/E	0.1	18/10/2012		<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.3	<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
3558/F	0.1	18/10/2012		<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.3	<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
3558/G	0.1	18/10/2012		<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.5	<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
3558/H	0.1	18/10/2012		<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.3	<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
3558/I	0.1	18/10/2012		<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.3	<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
3558/SP1		18/10/2012		<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.3	<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
3558/SP2		18/10/2012		<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.3	<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
3558/SP3		18/10/2012		<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.3	<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
3558/SP4A		18/10/2012		<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.3	<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
3558/SP4B		18/10/2012		<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.3	<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
3558/SP5		18/10/2012		<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.3	<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

Statistical Summary

Number of Results				34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34
Number of Detects				1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minimum Concentration				<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<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	<0.1
Minimum Detect				0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration				<0.5	<0.5	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.5	<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
Maximum Detect				0.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration				0.057	0.056	0.056	0.11	0.056	0.056	0.056	0.056	0.056	0.056	0.17	0.056	0.056	0.056	0.056	0.056	0.056	0.056	0.056	0.056	0.056	0.056	0.056	0.056	0.056	0.056	0.056	0.056
Median Concentration				0.05	0.05	0.05	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.15	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
Standard Deviation				0.035	0.034	0.034	0.069	0.034	0.034	0.034	0.034	0.034	0.034	0.1	0.034	0.034	0.034	0.034	0.034	0.034	0.034	0.034	0.034	0.034	0.034	0.034	0.034	0.034	0.034	0.034	0.034
Number of Guideline Exceedances				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

		Halogenated Benzenes	Polychlorinated Biphenyls						
		Hexachlorobenzene	Arochlor 1016	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260
		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
NEPM 2013 Table 1A(1) HILs Res A Soil		10							
LocCode	Sample_Depth_Range	Sampled_Date-Time	Matrix_Description						
3558/1	0.1	18/10/2012		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
3558/10	0.1	18/10/2012		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
3558/11	0.1	18/10/2012		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
3558/12	0.1	18/10/2012		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
3558/13	0.1	18/10/2012		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
3558/14	0.1	18/10/2012		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
3558/15	0.1	18/10/2012		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
3558/16	0.1	18/10/2012		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
3558/17	0.1	18/10/2012		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
3558/18	0.1	18/10/2012		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
3558/19	0.1	18/10/2012		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
3558/2	0.1	18/10/2012		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
3558/20	0.1	18/10/2012		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
3558/3	0.2	18/10/2012		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
3558/4	0.1	18/10/2012		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
3558/5	0.1	18/10/2012		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
3558/7	0.1	18/10/2012		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
3558/8	0.1	18/10/2012		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
3558/9	0.1	18/10/2012		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
3558/A	0.1	18/10/2012		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
3558/B	0.1	18/10/2012		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
3558/C	0.1	18/10/2012		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
3558/D	0.1	18/10/2012		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
3558/E	0.1	18/10/2012		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
3558/F	0.1	18/10/2012		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
3558/G	0.1	18/10/2012		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3558/H	0.1	18/10/2012		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
3558/I	0.1	18/10/2012		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
3558/SP1		18/10/2012		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
3558/SP2		18/10/2012		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
3558/SP3		18/10/2012		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
3558/SP4A		18/10/2012		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
3558/SP4B		18/10/2012		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
3558/SP5		18/10/2012		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

Statistical Summary

Number of Results	34	34	34	34	34	34	34	34
Number of Detects	0	0	0	0	0	0	0	0
Minimum Concentration	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Minimum Detect	ND	ND	ND	ND	ND	ND	ND	ND
Maximum Concentration	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Maximum Detect	ND	ND	ND	ND	ND	ND	ND	ND
Average Concentration	0.056	0.056	0.056	0.056	0.056	0.056	0.056	0.056
Median Concentration	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Standard Deviation	0.034	0.034	0.034	0.034	0.034	0.034	0.034	0.034
Number of Guideline Exceedances	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)	0	0	0	0	0	0	0	0

13 Attachment C - Laboratory Analytical Certificates and Chain of Custody Documentation

Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
enquiries@envirolabservices.com.au
www.envirolabservices.com.au

CERTIFICATE OF ANALYSIS 80539

Client:
Martens & Associates Pty Ltd
6/37 Leighton Place
Hornsby
NSW 2077

Attention: Ben McGiffin

Sample log in details:

Your Reference:	**P123558-Terry Hills**
No. of samples:	69 Soils, 3 Waters, 6 Materials
Date samples received / completed instructions received	19/10/2012 / 22/10/2012

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:	29/10/12 / 29/10/12
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. **Tests not covered by NATA are denoted with *.**

Results Approved By:

Nancy Zhang
Chemist

Priya Samarawickrama
Senior Chemist

Lulu Guo
Approved Signatory

Alex MacLean
Chemist

ACCREDITED FOR TECHNICAL COMPETENCE

vTRH & BTEX in Soil						
Our Reference:	UNITS	80539-1	80539-6	80539-11	80539-16	80539-21
Your Reference	----------	3558/1	3558/2	3558/3	3558/4	3558/5
Depth	----------	0.1	0.1	0.2	0.1	0.1
Date Sampled		18/10/2012	18/10/2012	18/10/2012	18/10/2012	18/10/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Date analysed	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
vTRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	102	93	107	99	114

vTRH & BTEX in Soil						
Our Reference:	UNITS	80539-27	80539-31	80539-35	80539-39	80539-40
Your Reference	----------	3558/DUP4	3558/7	3558/8	3558/9	3558/10
Depth	----------	-	0.1	0.1	-	-
Date Sampled		18/10/2012	18/10/2012	18/10/2012	18/10/2012	18/10/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Date analysed	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
vTRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	114	112	103	105	117

vTRH & BTEX in Soil						
Our Reference:	UNITS	80539-41	80539-42	80539-43	80539-44	80539-45
Your Reference	----------	3558/11	3558/12	3558/13	3558/14	3558/15
Depth	----------	-	-	-	-	-
Date Sampled		18/10/2012	18/10/2012	18/10/2012	18/10/2012	18/10/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Date analysed	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
vTRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	114	86	114	101	112

vTRH & BTEX in Soil						
Our Reference:	UNITS	80539-46	80539-47	80539-48	80539-49	80539-50
Your Reference	----------	3558/16	3558/17	3558/18	3558/19	3558/20
Depth	----------	-	-	-	-	-
Date Sampled		18/10/2012	18/10/2012	18/10/2012	18/10/2012	18/10/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Date analysed	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
vTRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	117	99	116	90	93

vTRH & BTEX in Soil						
Our Reference:	UNITS	80539-51	80539-52	80539-53	80539-54	80539-55
Your Reference	----------	3558/A	3558/B	3558/C	3558/D	3558/E
Depth	----------	-	-	-	-	-
Date Sampled		18/10/2012	18/10/2012	18/10/2012	18/10/2012	18/10/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Date analysed	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
vTRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	95	100	98	91	94

vTRH & BTEX in Soil						
Our Reference:	UNITS	80539-56	80539-57	80539-58	80539-59	80539-60
Your Reference	----------	3558/F	3558/G	3558/H	3558/I	3558/SP1
Depth	----------	-	-	-	-	-
Date Sampled		18/10/2012	18/10/2012	18/10/2012	18/10/2012	18/10/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Date analysed	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
vTRH C_6 - C_9	mg/kg	380	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	98	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	27	<1	<1	<1	<1
m+p-xylene	mg/kg	170	<2	<2	3	<2
o-Xylene	mg/kg	30	<1	<1	4	<1
Surrogate aaa-Trifluorotoluene	%	95	96	96	94	97

vTRH & BTEX in Soil						
Our Reference:	UNITS	80539-61	80539-62	80539-63	80539-64	80539-65
Your Reference	----------	3558/SP2	3558/SP3	3558/SP4A	3558/SP4B	3558/SP5
Depth	----------	-	-	-	-	-
Date Sampled		18/10/2012	18/10/2012	18/10/2012	18/10/2012	18/10/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Date analysed	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
vTRH C_6 - C_9	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
Surrogate aaa-Trifluorotoluene	%	88	96	91	101	95

vTRH & BTEX in Soil			
Our Reference:	UNITS	80539-69	80539-70
Your Reference	----------	MA Trip Blank	MA Trip Spike
Depth	----------	-	-
Date Sampled		18/10/2012	18/10/2012
Type of sample		Soil	Soil
Date extracted	-	24/10/2012	24/10/2012
Date analysed	-	24/10/2012	24/10/2012
vTRH C_6 - C_9	mg/kg	<25	[NA]
Benzene	mg/kg	<0.2	91%
Toluene	mg/kg	<0.5	97%
Ethylbenzene	mg/kg	<1	99%
m+p-xylene	mg/kg	<2	100%
o-Xylene	mg/kg	<1	101%
Surrogate aaa-Trifluorotoluene	%	104	97

sTRH in Soil (C10-C36)						
Our Reference:	UNITS	80539-1	80539-6	80539-11	80539-16	80539-21
Your Reference	----------	3558/1	3558/2	3558/3	3558/4	3558/5
Depth	----------	0.1	0.1	0.2	0.1	0.1
Date Sampled		18/10/2012	18/10/2012	18/10/2012	18/10/2012	18/10/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Date analysed	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
TRHC$_{10}$ - C$_{14}$	mg/kg	<50	<50	<50	<50	<50
TRHC$_{15}$ - C$_{28}$	mg/kg	<100	<100	<100	<100	<100
TRHC$_{29}$ - C$_{36}$	mg/kg	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	88	83	90	86	86

sTRH in Soil (C10-C36)						
Our Reference:	UNITS	80539-27	80539-31	80539-35	80539-39	80539-40
Your Reference	----------	3558/DUP4	3558/7	3558/8	3558/9	3558/10
Depth	----------	-	0.1	0.1	-	-
Date Sampled		18/10/2012	18/10/2012	18/10/2012	18/10/2012	18/10/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Date analysed	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
TRHC$_{10}$ - C$_{14}$	mg/kg	<50	<50	<50	<50	<50
TRHC$_{15}$ - C$_{28}$	mg/kg	<100	<100	<100	<100	<100
TRHC$_{29}$ - C$_{36}$	mg/kg	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	107	86	90	88	88

sTRH in Soil (C10-C36)						
Our Reference:	UNITS	80539-41	80539-42	80539-43	80539-44	80539-45
Your Reference	----------	3558/11	3558/12	3558/13	3558/14	3558/15
Depth	----------	-	-	-	-	-
Date Sampled		18/10/2012	18/10/2012	18/10/2012	18/10/2012	18/10/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Date analysed	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
TRHC$_{10}$ - C$_{14}$	mg/kg	<50	<50	<50	<50	<50
TRHC$_{15}$ - C$_{28}$	mg/kg	<100	<100	<100	<100	<100
TRHC$_{29}$ - C$_{36}$	mg/kg	<100	<100	<100	<100	<100
Surrogate o-Terphenyl	%	76	87	88	85	72

sTRH in Soil (C10-C36)						
Our Reference:	UNITS	80539-46	80539-47	80539-48	80539-49	80539-50
Your Reference	----------	3558/16	3558/17	3558/18	3558/19	3558/20
Depth	----------	-	-	-	-	-
Date Sampled		18/10/2012	18/10/2012	18/10/2012	18/10/2012	18/10/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Date analysed	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
TRHC$_{10}$ - C$_{14}$	mg/kg	<50	<50	<50	<50	<50
TRHC$_{15}$ - C$_{28}$	mg/kg	<100	<100	<100	<100	<100
TRHC$_{29}$ - C$_{36}$	mg/kg	<100	<100	<100	170	<100
Surrogate o-Terphenyl	%	87	89	92	92	87

sTRH in Soil (C10-C36)						
Our Reference:	UNITS	80539-51	80539-52	80539-53	80539-54	80539-55
Your Reference	----------	3558/A	3558/B	3558/C	3558/D	3558/E
Depth	----------	-	-	-	-	-
Date Sampled		18/10/2012	18/10/2012	18/10/2012	18/10/2012	18/10/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Date analysed	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
TRHC$_{10}$ - C$_{14}$	mg/kg	<50	<50	<50	<50	<50
TRHC$_{15}$ - C$_{28}$	mg/kg	1,900	<100	<100	<100	<100
TRHC$_{29}$ - C$_{36}$	mg/kg	2,500	150	130	<100	<100
Surrogate o-Terphenyl	%	#	94	87	86	83

sTRH in Soil (C10-C36)						
Our Reference:	UNITS	80539-56	80539-57	80539-58	80539-59	80539-60
Your Reference	----------	3558/F	3558/G	3558/H	3558/I	3558/SP1
Depth	----------	-	-	-	-	-
Date Sampled		18/10/2012	18/10/2012	18/10/2012	18/10/2012	18/10/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Date analysed	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
TRHC$_{10}$ - C$_{14}$	mg/kg	<50	<50	<50	310	<50
TRHC$_{15}$ - C$_{28}$	mg/kg	<100	590	<100	1,700	<100
TRHC$_{29}$ - C$_{36}$	mg/kg	<100	620	<100	240	<100
Surrogate o-Terphenyl	%	89	106	96	#	81

sTRH in Soil (C10-C36)						
Our Reference:	UNITS	80539-61	80539-62	80539-63	80539-64	80539-65
Your Reference	----------	3558/SP2	3558/SP3	3558/SP4A	3558/SP4B	3558/SP5
Depth	----------	-	-	-	-	-
Date Sampled		18/10/2012	18/10/2012	18/10/2012	18/10/2012	18/10/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Date analysed	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
TRHC$_{10}$ - C$_{14}$	mg/kg	<50	<50	<50	<50	<50
TRHC$_{15}$ - C$_{28}$	mg/kg	<100	<100	140	<100	<100
TRHC$_{29}$ - C$_{36}$	mg/kg	<100	<100	130	<100	120
Surrogate o-Terphenyl	%	78	86	95	81	81

sTRH in Soil (C10-C36)		
Our Reference:	UNITS	80539-69
Your Reference	----------	MA Trip Blank
Depth	----------	-
Date Sampled		18/10/2012
Type of sample		Soil
Date extracted	-	24/10/2012
Date analysed	-	24/10/2012
TRHC$_{10}$ - C$_{14}$	mg/kg	<50
TRHC$_{15}$ - C$_{28}$	mg/kg	<100
TRHC$_{29}$ - C$_{36}$	mg/kg	<100
Surrogate o-Terphenyl	%	85

PAHs in Soil						
Our Reference:	UNITS	80539-1	80539-6	80539-11	80539-16	80539-21
Your Reference	----------	3558/1	3558/2	3558/3	3558/4	3558/5
Depth	----------	0.1	0.1	0.2	0.1	0.1
Date Sampled		18/10/2012	18/10/2012	18/10/2012	18/10/2012	18/10/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Date analysed	-	25/10/2012	25/10/2012	25/10/2012	25/10/2012	25/10/2012
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.2
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.3
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.3
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.1
Benzo(b+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	0.13
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate p-Terphenyl-d_{14}	%	97	89	99	95	97

PAHs in Soil						
Our Reference:	UNITS	80539-27	80539-31	80539-35	80539-39	80539-40
Your Reference	----------	3558/DUP4	3558/7	3558/8	3558/9	3558/10
Depth	----------	-	0.1	0.1	-	-
Date Sampled		18/10/2012	18/10/2012	18/10/2012	18/10/2012	18/10/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Date analysed	-	25/10/2012	25/10/2012	25/10/2012	25/10/2012	25/10/2012
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.5	0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.8	0.3	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.8	0.3	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.3	0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.3	0.1	<0.1	<0.1	<0.1
Benzo(b+k)fluoranthene	mg/kg	0.6	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	0.35	0.12	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	0.2	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	0.2	<0.1	<0.1	<0.1	<0.1
Surrogate p-Terphenyl-d_{14}	%	117	96	98	97	95

PAHs in Soil						
Our Reference:	UNITS	80539-41	80539-42	80539-43	80539-44	80539-45
Your Reference	----------	3558/11	3558/12	3558/13	3558/14	3558/15
Depth	----------	-	-	-	-	-
Date Sampled		18/10/2012	18/10/2012	18/10/2012	18/10/2012	18/10/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Date analysed	-	25/10/2012	25/10/2012	25/10/2012	25/10/2012	25/10/2012
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate p-Terphenyl-d_{14}	%	84	96	97	97	81

PAHs in Soil						
Our Reference:	UNITS	80539-46	80539-47	80539-48	80539-49	80539-50
Your Reference	----------	3558/16	3558/17	3558/18	3558/19	3558/20
Depth	----------	-	-	-	-	-
Date Sampled		18/10/2012	18/10/2012	18/10/2012	18/10/2012	18/10/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Date analysed	-	25/10/2012	25/10/2012	25/10/2012	25/10/2012	25/10/2012
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	0.06	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate p-Terphenyl-d_{14}	%	99	98	96	93	96

PAHs in Soil						
Our Reference:	UNITS	80539-51	80539-52	80539-53	80539-54	80539-55
Your Reference	----------	3558/A	3558/B	3558/C	3558/D	3558/E
Depth	----------	-	-	-	-	-
Date Sampled		18/10/2012	18/10/2012	18/10/2012	18/10/2012	18/10/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Date analysed	-	25/10/2012	25/10/2012	25/10/2012	25/10/2012	25/10/2012
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	0.07
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate p-Terphenyl-d_{14}	%	86	97	101	97	96

PAHs in Soil						
Our Reference:	UNITS	80539-56	80539-57	80539-58	80539-59	80539-60
Your Reference	----------	3558/F	3558/G	3558/H	3558/I	3558/SP1
Depth	----------	-	-	-	-	-
Date Sampled		18/10/2012	18/10/2012	18/10/2012	18/10/2012	18/10/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Date analysed	-	25/10/2012	25/10/2012	25/10/2012	25/10/2012	25/10/2012
Naphthalene	mg/kg	<0.1	<0.1	<0.1	0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	0.2	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate p-Terphenyl-d_{14}	%	97	95	103	103	99

PAHs in Soil						
Our Reference:	UNITS	80539-61	80539-62	80539-63	80539-64	80539-65
Your Reference	----------	3558/SP2	3558/SP3	3558/SP4A	3558/SP4B	3558/SP5
Depth	----------	-	-	-	-	-
Date Sampled		18/10/2012	18/10/2012	18/10/2012	18/10/2012	18/10/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Date analysed	-	25/10/2012	25/10/2012	25/10/2012	25/10/2012	25/10/2012
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	0.2	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	1.2	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	0.3	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	1.7	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	1.7	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	0.8	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	0.8	<0.1	<0.1
Benzo(b+k)fluoranthene	mg/kg	<0.2	<0.2	1.3	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	0.88	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	0.5	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	0.5	<0.1	<0.1
Surrogate p-Terphenyl-d_{14}	%	99	101	91	98	94

Organochlorine Pesticides in soil						
Our Reference:	UNITS	80539-1	80539-6	80539-11	80539-16	80539-21
Your Reference	----------	3558/1	3558/2	3558/3	3558/4	3558/5
Depth	----------	0.1	0.1	0.2	0.1	0.1
Date Sampled		18/10/2012	18/10/2012	18/10/2012	18/10/2012	18/10/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Date analysed	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	90	88	98	93	89

Organochlorine Pesticides in soil						
Our Reference:	UNITS	80539-27	80539-31	80539-35	80539-39	80539-40
Your Reference	----------	3558/DUP4	3558/7	3558/8	3558/9	3558/10
Depth	----------	-	0.1	0.1	-	-
Date Sampled		18/10/2012	18/10/2012	18/10/2012	18/10/2012	18/10/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Date analysed	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	113	93	95	94	96

Organochlorine Pesticides in soil						
Our Reference:	UNITS	80539-41	80539-42	80539-43	80539-44	80539-45
Your Reference	----------	3558/11	3558/12	3558/13	3558/14	3558/15
Depth	----------	-	-	-	-	-
Date Sampled		18/10/2012	18/10/2012	18/10/2012	18/10/2012	18/10/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Date analysed	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	80	89	93	89	73

Organochlorine Pesticides in soil						
Our Reference:	UNITS	80539-46	80539-47	80539-48	80539-49	80539-50
Your Reference	----------	3558/16	3558/17	3558/18	3558/19	3558/20
Depth	----------	-	-	-	-	-
Date Sampled		18/10/2012	18/10/2012	18/10/2012	18/10/2012	18/10/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Date analysed	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	89	90	89	92	90

Organochlorine Pesticides in soil						
Our Reference:	UNITS	80539-51	80539-52	80539-53	80539-54	80539-55
Your Reference	----------	3558/A	3558/B	3558/C	3558/D	3558/E
Depth	----------	-	-	-	-	-
Date Sampled		18/10/2012	18/10/2012	18/10/2012	18/10/2012	18/10/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Date analysed	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	93	90	94	90	85

Organochlorine Pesticides in soil						
Our Reference:	UNITS	80539-56	80539-57	80539-58	80539-59	80539-60
Your Reference	----------	3558/F	3558/G	3558/H	3558/I	3558/SP1
Depth	----------	-	-	-	-	-
Date Sampled		18/10/2012	18/10/2012	18/10/2012	18/10/2012	18/10/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Date analysed	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
HCB	mg/kg	<0.1	<0.5	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.5	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.5	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.5	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.5	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.5	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.5	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.5	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.5	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.5	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.5	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.5	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.5	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.5	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.5	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.5	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.5	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.5	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.5	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.5	<0.1	<0.1	<0.1
Surrogate TCMX	%	91	121	85	84	91

Organochlorine Pesticides in soil						
Our Reference:	UNITS	80539-61	80539-62	80539-63	80539-64	80539-65
Your Reference	----------	3558/SP2	3558/SP3	3558/SP4A	3558/SP4B	3558/SP5
Depth	----------	-	-	-	-	-
Date Sampled		18/10/2012	18/10/2012	18/10/2012	18/10/2012	18/10/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Date analysed	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	93	91	92	85	90

Organophosphorus Pesticides						
Our Reference:	UNITS	80539-1	80539-6	80539-11	80539-16	80539-21
Your Reference	----------	3558/1	3558/2	3558/3	3558/4	3558/5
Depth	----------	0.1	0.1	0.2	0.1	0.1
Date Sampled		18/10/2012	18/10/2012	18/10/2012	18/10/2012	18/10/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Date analysed	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	90	88	98	93	89

Organophosphorus Pesticides						
Our Reference:	UNITS	80539-27	80539-31	80539-35	80539-39	80539-40
Your Reference	----------	3558/DUP4	3558/7	3558/8	3558/9	3558/10
Depth	----------	-	0.1	0.1	-	-
Date Sampled		18/10/2012	18/10/2012	18/10/2012	18/10/2012	18/10/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Date analysed	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	113	93	95	94	96

Organophosphorus Pesticides						
Our Reference:	UNITS	80539-41	80539-42	80539-43	80539-44	80539-45
Your Reference	----------	3558/11	3558/12	3558/13	3558/14	3558/15
Depth	----------	-	-	-	-	-
Date Sampled		18/10/2012	18/10/2012	18/10/2012	18/10/2012	18/10/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Date analysed	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	80	89	93	89	73

Organophosphorus Pesticides						
Our Reference:	UNITS	80539-46	80539-47	80539-48	80539-49	80539-50
Your Reference	----------	3558/16	3558/17	3558/18	3558/19	3558/20
Depth	----------	-	-	-	-	-
Date Sampled		18/10/2012	18/10/2012	18/10/2012	18/10/2012	18/10/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Date analysed	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	89	90	89	92	90

Organophosphorus Pesticides						
Our Reference:	UNITS	80539-51	80539-52	80539-53	80539-54	80539-55
Your Reference	----------	3558/A	3558/B	3558/C	3558/D	3558/E
Depth	----------	-	-	-	-	-
Date Sampled		18/10/2012	18/10/2012	18/10/2012	18/10/2012	18/10/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Date analysed	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	93	90	94	90	85

Organophosphorus Pesticides						
Our Reference:	UNITS	80539-56	80539-57	80539-58	80539-59	80539-60
Your Reference	----------	3558/F	3558/G	3558/H	3558/I	3558/SP1
Depth	----------	-	-	-	-	-
Date Sampled		18/10/2012	18/10/2012	18/10/2012	18/10/2012	18/10/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Date analysed	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Diazinon	mg/kg	<0.1	<0.5	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.5	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.5	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.5	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.5	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.5	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.5	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.5	<0.1	<0.1	<0.1
Surrogate TCMX	%	91	121	85	84	91

Organophosphorus Pesticides						
Our Reference:	UNITS	80539-61	80539-62	80539-63	80539-64	80539-65
Your Reference	----------	3558/SP2	3558/SP3	3558/SP4A	3558/SP4B	3558/SP5
Depth	----------	-	-	-	-	-
Date Sampled		18/10/2012	18/10/2012	18/10/2012	18/10/2012	18/10/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Date analysed	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	93	91	92	85	90

PCBs in Soil						
Our Reference:	UNITS	80539-1	80539-6	80539-11	80539-16	80539-21
Your Reference	----------	3558/1	3558/2	3558/3	3558/4	3558/5
Depth	----------	0.1	0.1	0.2	0.1	0.1
Date Sampled		18/10/2012	18/10/2012	18/10/2012	18/10/2012	18/10/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Date analysed	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Arochlor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	90	88	98	93	89

PCBs in Soil						
Our Reference:	UNITS	80539-27	80539-31	80539-35	80539-39	80539-40
Your Reference	----------	3558/DUP4	3558/7	3558/8	3558/9	3558/10
Depth	----------	-	0.1	0.1	-	-
Date Sampled		18/10/2012	18/10/2012	18/10/2012	18/10/2012	18/10/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Date analysed	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Arochlor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	113	93	95	94	96

PCBs in Soil						
Our Reference:	UNITS	80539-41	80539-42	80539-43	80539-44	80539-45
Your Reference	----------	3558/11	3558/12	3558/13	3558/14	3558/15
Depth	----------	-	-	-	-	-
Date Sampled		18/10/2012	18/10/2012	18/10/2012	18/10/2012	18/10/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Date analysed	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Arochlor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	80	89	93	89	73

PCBs in Soil						
Our Reference:	UNITS	80539-46	80539-47	80539-48	80539-49	80539-50
Your Reference	----------	3558/16	3558/17	3558/18	3558/19	3558/20
Depth	----------	-	-	-	-	-
Date Sampled		18/10/2012	18/10/2012	18/10/2012	18/10/2012	18/10/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Date analysed	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Arochlor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	89	90	89	92	90

PCBs in Soil						
Our Reference:	UNITS	80539-51	80539-52	80539-53	80539-54	80539-55
Your Reference	----------	3558/A	3558/B	3558/C	3558/D	3558/E
Depth	----------	-	-	-	-	-
Date Sampled		18/10/2012	18/10/2012	18/10/2012	18/10/2012	18/10/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Date analysed	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Arochlor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	93	90	94	90	85

PCBs in Soil						
Our Reference:	UNITS	80539-56	80539-57	80539-58	80539-59	80539-60
Your Reference	----------	3558/F	3558/G	3558/H	3558/I	3558/SP1
Depth	----------	-	-	-	-	-
Date Sampled		18/10/2012	18/10/2012	18/10/2012	18/10/2012	18/10/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Date analysed	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Arochlor 1016	mg/kg	<0.1	<0.5	<0.1	<0.1	<0.1
Arochlor 1221	mg/kg	<0.1	<0.5	<0.1	<0.1	<0.1
Arochlor 1232	mg/kg	<0.1	<0.5	<0.1	<0.1	<0.1
Arochlor 1242	mg/kg	<0.1	<0.5	<0.1	<0.1	<0.1
Arochlor 1248	mg/kg	<0.1	<0.5	<0.1	<0.1	<0.1
Arochlor 1254	mg/kg	<0.1	<0.5	<0.1	<0.1	<0.1
Arochlor 1260	mg/kg	<0.1	<0.5	<0.1	<0.1	<0.1
Surrogate TCLMX	%	91	121	85	84	91

PCBs in Soil						
Our Reference:	UNITS	80539-61	80539-62	80539-63	80539-64	80539-65
Your Reference	----------	3558/SP2	3558/SP3	3558/SP4A	3558/SP4B	3558/SP5
Depth	----------	-	-	-	-	-
Date Sampled		18/10/2012	18/10/2012	18/10/2012	18/10/2012	18/10/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Date analysed	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Arochlor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Arochlor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCLMX	%	93	91	92	85	90

Acid Extractable metals in soil						
Our Reference:	UNITS	80539-1	80539-6	80539-11	80539-12	80539-16
Your Reference	----------	3558/1	3558/2	3558/3	3558/DUP1	3558/4
Depth	----------	0.1	0.1	0.2	-	0.1
Date Sampled		18/10/2012	18/10/2012	18/10/2012	18/10/2012	18/10/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date digested	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Date analysed	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	mg/kg	13	14	9	9	14
Copper	mg/kg	38	18	4	6	4
Lead	mg/kg	58	11	11	13	8
Mercury	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	4	2	1	2	1
Zinc	mg/kg	100	210	27	36	26

Acid Extractable metals in soil						
Our Reference:	UNITS	80539-21	80539-22	80539-27	80539-31	80539-35
Your Reference	----------	3558/5	3558/DUP2	3558/DUP4	3558/7	3558/8
Depth	----------	0.1	-	-	0.1	0.1
Date Sampled		18/10/2012	18/10/2012	18/10/2012	18/10/2012	18/10/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date digested	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Date analysed	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	mg/kg	9	9	14	11	9
Copper	mg/kg	6	7	6	24	2
Lead	mg/kg	110	100	11	58	9
Mercury	mg/kg	<0.1	0.1	<0.1	0.1	<0.1
Nickel	mg/kg	2	2	2	8	1
Zinc	mg/kg	51	53	31	170	14

Acid Extractable metals in soil						
Our Reference:	UNITS	80539-39	80539-40	80539-41	80539-42	80539-43
Your Reference	----------	3558/9	3558/10	3558/11	3558/12	3558/13
Depth	----------	-	-	-	-	-
Date Sampled		18/10/2012	18/10/2012	18/10/2012	18/10/2012	18/10/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date digested	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Date analysed	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	mg/kg	9	4	10	11	10
Copper	mg/kg	5	1	70	5	<1
Lead	mg/kg	33	7	43	14	7
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	0.1
Nickel	mg/kg	1	<1	4	1	1
Zinc	mg/kg	43	5	210	46	4

Acid Extractable metals in soil						
Our Reference:	UNITS	80539-44	80539-45	80539-46	80539-47	80539-48
Your Reference	----------	3558/14	3558/15	3558/16	3558/17	3558/18
Depth	----------	-	-	-	-	-
Date Sampled		18/10/2012	18/10/2012	18/10/2012	18/10/2012	18/10/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date digested	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Date analysed	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	mg/kg	9	8	11	10	19
Copper	mg/kg	1	5	17	12	14
Lead	mg/kg	6	10	22	11	14
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	<1	1	2	1	12
Zinc	mg/kg	13	25	150	48	60

Acid Extractable metals in soil						
Our Reference:	UNITS	80539-49	80539-50	80539-51	80539-52	80539-53
Your Reference	----------	3558/19	3558/20	3558/A	3558/B	3558/C
Depth	----------	-	-	-	-	-
Date Sampled		18/10/2012	18/10/2012	18/10/2012	18/10/2012	18/10/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date digested	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Date analysed	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	mg/kg	20	12	17	13	7
Copper	mg/kg	14	32	31	20	4
Lead	mg/kg	34	36	55	40	9
Mercury	mg/kg	<0.1	<0.1	1.6	<0.1	<0.1
Nickel	mg/kg	4	3	3	4	1
Zinc	mg/kg	160	160	270	310	59

Acid Extractable metals in soil						
Our Reference:	UNITS	80539-54	80539-55	80539-56	80539-57	80539-58
Your Reference	----------	3558/D	3558/E	3558/F	3558/G	3558/H
Depth	----------	-	-	-	-	-
Date Sampled		18/10/2012	18/10/2012	18/10/2012	18/10/2012	18/10/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date digested	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Date analysed	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Arsenic	mg/kg	<4	<4	<4	7	<4
Cadmium	mg/kg	<0.5	<0.5	<0.5	4.5	<0.5
Chromium	mg/kg	4	10	22	66	14
Copper	mg/kg	12	14	14	440	73
Lead	mg/kg	4	14	27	780	47
Mercury	mg/kg	<0.1	<0.1	<0.1	0.1	<0.1
Nickel	mg/kg	10	6	9	41	9
Zinc	mg/kg	59	130	160	1,300	150

Acid Extractable metals in soil						
Our Reference:	UNITS	80539-59	80539-60	80539-61	80539-62	80539-63
Your Reference	----------	3558/I	3558/SP1	3558/SP2	3558/SP3	3558/SP4A
Depth	----------	-	-	-	-	-
Date Sampled		18/10/2012	18/10/2012	18/10/2012	18/10/2012	18/10/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date digested	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Date analysed	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Arsenic	mg/kg	12	<4	<4	<4	<4
Cadmium	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	mg/kg	58	9	34	8	9
Copper	mg/kg	64	2	<1	<1	10
Lead	mg/kg	260	6	8	7	21
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	8	4	1	<1	4
Zinc	mg/kg	450	5	6	4	34

Acid Extractable metals in soil						
Our Reference:	UNITS	80539-64	80539-65	80539-69	80539-79	80539-80
Your Reference	----------	3558/SP4B	3558/SP5	MA Trip Blank	3558/1 - Triplicate	3558/A - Triplicate
Depth	----------	-	-	-	0.1	-
Date Sampled		18/10/2012	18/10/2012	18/10/2012	18/10/2012	18/10/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date digested	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Date analysed	-	24/10/2012	24/10/2012	24/10/2012	24/10/2012	24/10/2012
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.5	0.6	<0.5	<0.5	<0.5
Chromium	mg/kg	10	9	2	16	18
Copper	mg/kg	3	69	<1	41	27
Lead	mg/kg	6	77	<1	66	45
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	0.9
Nickel	mg/kg	<1	3	<1	4	3
Zinc	mg/kg	34	280	1	130	220

Moisture						
Our Reference:	UNITS	80539-1	80539-6	80539-11	80539-12	80539-16
Your Reference	----------	3558/1	3558/2	3558/3	3558/DUP1	3558/4
Depth	----------	0.1	0.1	0.2	-	0.1
Date Sampled		18/10/2012	18/10/2012	18/10/2012	18/10/2012	18/10/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	24/10/12	24/10/12	24/10/12	24/10/12	24/10/12
Date analysed	-	25/10/12	25/10/12	25/10/12	25/10/12	25/10/12
Moisture	%	15	17	5.8	13	24

Moisture						
Our Reference:	UNITS	80539-21	80539-22	80539-27	80539-31	80539-35
Your Reference	----------	3558/5	3558/DUP2	3558/DUP4	3558/7	3558/8
Depth	----------	0.1	-	-	0.1	0.1
Date Sampled		18/10/2012	18/10/2012	18/10/2012	18/10/2012	18/10/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	24/10/12	24/10/12	24/10/12	24/10/12	24/10/12
Date analysed	-	25/10/12	25/10/12	25/10/12	25/10/12	25/10/12
Moisture	%	12	18	10	7.6	14

Moisture						
Our Reference:	UNITS	80539-39	80539-40	80539-41	80539-42	80539-43
Your Reference	----------	3558/9	3558/10	3558/11	3558/12	3558/13
Depth	----------	-	-	-	-	-
Date Sampled		18/10/2012	18/10/2012	18/10/2012	18/10/2012	18/10/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	24/10/12	24/10/12	24/10/12	24/10/12	24/10/12
Date analysed	-	25/10/12	25/10/12	25/10/12	25/10/12	25/10/12
Moisture	%	8.0	5.1	6.7	18	7.8

Moisture						
Our Reference:	UNITS	80539-44	80539-45	80539-46	80539-47	80539-48
Your Reference	----------	3558/14	3558/15	3558/16	3558/17	3558/18
Depth	----------	-	-	-	-	-
Date Sampled		18/10/2012	18/10/2012	18/10/2012	18/10/2012	18/10/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	24/10/12	24/10/12	24/10/12	24/10/12	24/10/12
Date analysed	-	25/10/12	25/10/12	25/10/12	25/10/12	25/10/12
Moisture	%	8.9	13	9.7	13	15

Moisture						
Our Reference:	UNITS	80539-49	80539-50	80539-51	80539-52	80539-53
Your Reference	----------	3558/19	3558/20	3558/A	3558/B	3558/C
Depth	----------	-	-	-	-	-
Date Sampled		18/10/2012	18/10/2012	18/10/2012	18/10/2012	18/10/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	24/10/12	24/10/12	24/10/12	24/10/12	24/10/12
Date analysed	-	25/10/12	25/10/12	25/10/12	25/10/12	25/10/12
Moisture	%	15	12	8.9	18	11

Moisture						
Our Reference:	UNITS	80539-54	80539-55	80539-56	80539-57	80539-58
Your Reference	----------	3558/D	3558/E	3558/F	3558/G	3558/H
Depth	----------	-	-	-	-	-
Date Sampled		18/10/2012	18/10/2012	18/10/2012	18/10/2012	18/10/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	24/10/12	24/10/12	24/10/12	24/10/12	24/10/12
Date analysed	-	25/10/12	25/10/12	25/10/12	25/10/12	25/10/12
Moisture	%	15	18	11	5.5	5.8

Moisture						
Our Reference:	UNITS	80539-59	80539-60	80539-61	80539-62	80539-63
Your Reference	----------	3558/I	3558/SP1	3558/SP2	3558/SP3	3558/SP4A
Depth	----------	-	-	-	-	-
Date Sampled		18/10/2012	18/10/2012	18/10/2012	18/10/2012	18/10/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	24/10/12	24/10/12	24/10/12	24/10/12	24/10/12
Date analysed	-	25/10/12	25/10/12	25/10/12	25/10/12	25/10/12
Moisture	%	32	7.8	16	8.5	6.1

Moisture				
Our Reference:	UNITS	80539-64	80539-65	80539-69
Your Reference	----------	3558/SP4B	3558/SP5	MA Trip Blank
Depth	----------	-	-	-
Date Sampled		18/10/2012	18/10/2012	18/10/2012
Type of sample		Soil	Soil	Soil
Date prepared	-	24/10/12	24/10/12	24/10/12
Date analysed	-	25/10/12	25/10/12	25/10/12
Moisture	%	6.6	9.8	7.4

Asbestos ID - soils						
Our Reference:	UNITS	80539-11	80539-21	80539-27	80539-60	80539-61
Your Reference	----------	3558/3	3558/5	3558/DUP4	3558/SP1	3558/SP2
Depth	----------	0.2	0.1	-	-	-
Date Sampled		18/10/2012	18/10/2012	18/10/2012	18/10/2012	18/10/2012
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	25/10/2012	25/10/2012	25/10/2012	25/10/2012	25/10/2012
Sample mass tested	g	Approx 45g	Approx 45g	Approx 45g	Approx 45g	Approx 45g
Sample Description	-	Dark brown fine-grained soil & rocks	Dark brown fine-grained soil & rocks	Dark brown fine-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg
Trace Analysis	-	No respirable fibres detected	No respirable fibres detected	No respirable fibres detected	No respirable fibres detected	No respirable fibres detected

Asbestos ID - soils					
Our Reference:	UNITS	80539-62	80539-63	80539-64	80539-65
Your Reference	----------	3558/SP3	3558/SP4A	3558/SP4B	3558/SP5
Depth	----------	-	-	-	-
Date Sampled		18/10/2012	18/10/2012	18/10/2012	18/10/2012
Type of sample		Soil	Soil	Soil	Soil
Date analysed	-	25/10/2012	25/10/2012	25/10/2012	25/10/2012
Sample mass tested	g	Approx 45g	Approx 45g	Approx 45g	Approx 45g
Sample Description	-	Brown coarse-grained soil & rocks	Dark brown fine-grained soil & rocks	Dark brown fine-grained soil & rocks	Dark brown fine-grained soil & rocks
Asbestos ID in soil	-	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg
Trace Analysis	-	No respirable fibres detected	No respirable fibres detected	No respirable fibres detected	No respirable fibres detected

Asbestos ID - materials						
Our Reference:	UNITS	80539-73	80539-74	80539-75	80539-76	80539-77
Your Reference	----------	3558/ASB1	3558/ASB2	3558/ASB3	3558/ASB4	3558/ASB5
Depth	----------	-	-	-	-	-
Date Sampled		18/10/2012	18/10/2012	18/10/2012	18/10/2012	18/10/2012
Type of sample		Material	Material	Material	Material	Material
Date analysed	-	25/10/2012	25/10/2012	25/10/2012	25/10/2012	25/10/2012
Mass / Dimension of Sample	-	46x27x5mm	106x51x4mm	33x22x5mm	57x17x4mm	109x53x5mm
Sample Description	-	Beige compressed fibre cement material	Beige compressed fibre cement material	Beige compressed cement material	Beige compressed fibre cement material	Beige compressed fibre cement material
Asbestos ID in materials	-	Chrysotile asbestos detected Amosite asbestos detected	Chrysotile asbestos detected Amosite asbestos detected Crocidolite asbestos detected	No asbestos detected	Chrysotile asbestos detected Amosite asbestos detected	Chrysotile asbestos detected Amosite asbestos detected

Asbestos ID - materials		
Our Reference:	UNITS	80539-78
Your Reference	----------	3558/ASB6
Depth	----------	-
Date Sampled		18/10/2012
Type of sample		Material
Date analysed	-	25/10/2012
Mass / Dimension of Sample	-	60x41x4mm
Sample Description	-	Beige compressed fibre cement material
Asbestos ID in materials	-	Chrysotile asbestos detected Amosite asbestos detected Crocidolite asbestos detected

Miscellaneous Inorganics				
Our Reference:	UNITS	80539-66	80539-67	80539-68
Your Reference	----------	3558/GWA	3558/GWB	3558/GWC
Depth	----------	-	-	-
Date Sampled		18/10/2012	18/10/2012	18/10/2012
Type of sample		Water	Water	Water
Date prepared	-	24/10/2012	24/10/2012	24/10/2012
Date analysed	-	24/10/2012	24/10/2012	24/10/2012
pH	pH Units	6.5	6.1	6.7
Chloride, Cl 1:5 soil:water	mg/kg	37	26	27
Sulphate, SO4 1:5 soil:water	mg/kg	22	34	57

Method ID	Methodology Summary
Org-016	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.
Org-003	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID.
Org-012 subset	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS.
Org-005	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.
Org-008	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.
Org-006	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD.
Metals-020 ICP-AES	Determination of various metals by ICP-AES.
Metals-021 CV-AAS	Determination of Mercury by Cold Vapour AAS.
Inorg-008	Moisture content determined by heating at 105 deg C for a minimum of 4 hours.
ASB-001	Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004.
Inorg-001	pH - Measured using pH meter and electrode in accordance with APHA 22nd ED, 4500-H+.
Inorg-081	Anions - a range of Anions are determined by Ion Chromatography, in accordance with APHA 22nd ED, 4110 -B.

QUALITY CONTROL vTRH & BTEX in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			24/10/2012	80539-1	24/10/2012 || 24/10/2012	LCS-5	24/10/2012
Date analysed	-			24/10/2012	80539-1	24/10/2012 || 24/10/2012	LCS-5	24/10/2012
vTRH C_6 - C_9	mg/kg	25	Org-016	<25	80539-1	<25 || <25	LCS-5	110%
Benzene	mg/kg	0.2	Org-016	<0.2	80539-1	<0.2 || <0.2	LCS-5	105%
Toluene	mg/kg	0.5	Org-016	<0.5	80539-1	<0.5 || <0.5	LCS-5	109%
Ethylbenzene	mg/kg	1	Org-016	<1	80539-1	<1 || <1	LCS-5	110%
m+p-xylene	mg/kg	2	Org-016	<2	80539-1	<2 || <2	LCS-5	113%
o-Xylene	mg/kg	1	Org-016	<1	80539-1	<1 || <1	LCS-5	105%
Surrogate aaa-Trifluorotoluene	%		Org-016	108	80539-1	102 || 110 || RPD: 8	LCS-5	106%
QUALITY CONTROL sTRH in Soil (C10-C36)	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			24/10/2012	80539-1	24/10/2012 || 24/10/2012	LCS-5	24/10/2012
Date analysed	-			24/10/2012	80539-1	24/10/2012 || 24/10/2012	LCS-5	24/10/2012
TRH C_{10} - C_{14}	mg/kg	50	Org-003	<50	80539-1	<50 || <50	LCS-5	108%
TRH C_{15} - C_{28}	mg/kg	100	Org-003	<100	80539-1	<100 || <100	LCS-5	106%
TRH C_{29} - C_{36}	mg/kg	100	Org-003	<100	80539-1	<100 || <100	LCS-5	82%
Surrogate o-Terphenyl	%		Org-003	94	80539-1	88 || 92 || RPD: 4	LCS-5	101%
QUALITY CONTROL PAHs in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			24/10/2012	80539-1	24/10/2012 || 24/10/2012	LCS-6	24/10/2012
Date analysed	-			25/10/2012	80539-1	25/10/2012 || 25/10/2012	LCS-6	25/10/2012
Naphthalene	mg/kg	0.1	Org-012 subset	<0.1	80539-1	<0.1 || <0.1	LCS-6	101%
Acenaphthylene	mg/kg	0.1	Org-012 subset	<0.1	80539-1	<0.1 || <0.1	[NR]	[NR]
Acenaphthene	mg/kg	0.1	Org-012 subset	<0.1	80539-1	<0.1 || <0.1	[NR]	[NR]
Fluorene	mg/kg	0.1	Org-012 subset	<0.1	80539-1	<0.1 || <0.1	LCS-6	105%
Phenanthrene	mg/kg	0.1	Org-012 subset	<0.1	80539-1	<0.1 || <0.1	LCS-6	109%
Anthracene	mg/kg	0.1	Org-012 subset	<0.1	80539-1	<0.1 || <0.1	[NR]	[NR]
Fluoranthene	mg/kg	0.1	Org-012 subset	<0.1	80539-1	<0.1 || <0.1	LCS-6	108%
Pyrene	mg/kg	0.1	Org-012 subset	<0.1	80539-1	<0.1 || <0.1	LCS-6	110%
Benzo(a)anthracene	mg/kg	0.1	Org-012 subset	<0.1	80539-1	<0.1 || <0.1	[NR]	[NR]
Chrysene	mg/kg	0.1	Org-012 subset	<0.1	80539-1	<0.1 || <0.1	LCS-6	100%

QUALITY CONTROL PAHs in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Benzo(b+k)fluoranthene	mg/kg	0.2	Org-012 subset	<0.2	80539-1	<0.2 || <0.2	[NR]	[NR]
Benzo(a)pyrene	mg/kg	0.05	Org-012 subset	<0.05	80539-1	<0.05 || <0.05	LCS-6	100%
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012 subset	<0.1	80539-1	<0.1 || <0.1	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012 subset	<0.1	80539-1	<0.1 || <0.1	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012 subset	<0.1	80539-1	<0.1 || <0.1	[NR]	[NR]
Surrogate p-Terphenyl-d_{14}	%		Org-012 subset	133	80539-1	97 || 99 || RPD: 2	LCS-6	94%
QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			24/10/2012	80539-1	24/10/2012 || 24/10/2012	LCS-5	24/10/2012
Date analysed	-			24/10/2012	80539-1	24/10/2012 || 24/10/2012	LCS-5	24/10/2012
HCB	mg/kg	0.1	Org-005	<0.1	80539-1	<0.1 || <0.1	[NR]	[NR]
alpha-BHC	mg/kg	0.1	Org-005	<0.1	80539-1	<0.1 || <0.1	LCS-5	89%
gamma-BHC	mg/kg	0.1	Org-005	<0.1	80539-1	<0.1 || <0.1	[NR]	[NR]
beta-BHC	mg/kg	0.1	Org-005	<0.1	80539-1	<0.1 || <0.1	LCS-5	88%
Heptachlor	mg/kg	0.1	Org-005	<0.1	80539-1	<0.1 || <0.1	LCS-5	89%
delta-BHC	mg/kg	0.1	Org-005	<0.1	80539-1	<0.1 || <0.1	[NR]	[NR]
Aldrin	mg/kg	0.1	Org-005	<0.1	80539-1	<0.1 || <0.1	LCS-5	92%
Heptachlor Epoxide	mg/kg	0.1	Org-005	<0.1	80539-1	<0.1 || <0.1	LCS-5	94%
gamma-Chlordane	mg/kg	0.1	Org-005	<0.1	80539-1	<0.1 || <0.1	[NR]	[NR]
alpha-chlordane	mg/kg	0.1	Org-005	<0.1	80539-1	<0.1 || <0.1	[NR]	[NR]
Endosulfan I	mg/kg	0.1	Org-005	<0.1	80539-1	<0.1 || <0.1	[NR]	[NR]
pp-DDE	mg/kg	0.1	Org-005	<0.1	80539-1	<0.1 || <0.1	LCS-5	93%
Dieldrin	mg/kg	0.1	Org-005	<0.1	80539-1	<0.1 || <0.1	LCS-5	96%
Endrin	mg/kg	0.1	Org-005	<0.1	80539-1	<0.1 || <0.1	LCS-5	97%
pp-DDD	mg/kg	0.1	Org-005	<0.1	80539-1	<0.1 || <0.1	LCS-5	93%
Endosulfan II	mg/kg	0.1	Org-005	<0.1	80539-1	<0.1 || <0.1	[NR]	[NR]
pp-DDT	mg/kg	0.1	Org-005	<0.1	80539-1	<0.1 || <0.1	[NR]	[NR]
Endrin Aldehyde	mg/kg	0.1	Org-005	<0.1	80539-1	<0.1 || <0.1	[NR]	[NR]
Endosulfan Sulphate	mg/kg	0.1	Org-005	<0.1	80539-1	<0.1 || <0.1	LCS-5	93%
Methoxychlor	mg/kg	0.1	Org-005	<0.1	80539-1	<0.1 || <0.1	[NR]	[NR]
Surrogate TCMX	%		Org-005	96	80539-1	90 || 98 || RPD: 9	LCS-5	92%

QUALITY CONTROL Organophosphorus Pesticides	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			24/10/2012	80539-1	24/10/2012 || 24/10/2012	LCS-5	24/10/2012
Date analysed	-			24/10/2012	80539-1	24/10/2012 || 24/10/2012	LCS-5	24/10/2012
Diazinon	mg/kg	0.1	Org-008	<0.1	80539-1	<0.1 || <0.1	[NR]	[NR]
Dimethoate	mg/kg	0.1	Org-008	<0.1	80539-1	<0.1 || <0.1	[NR]	[NR]
Chlorpyriphos-methyl	mg/kg	0.1	Org-008	<0.1	80539-1	<0.1 || <0.1	[NR]	[NR]
Ronnel	mg/kg	0.1	Org-008	<0.1	80539-1	<0.1 || <0.1	[NR]	[NR]
Chlorpyriphos	mg/kg	0.1	Org-008	<0.1	80539-1	<0.1 || <0.1	LCS-5	98%
Fenitrothion	mg/kg	0.1	Org-008	<0.1	80539-1	<0.1 || <0.1	LCS-5	96%
Bromophos-ethyl	mg/kg	0.1	Org-008	<0.1	80539-1	<0.1 || <0.1	[NR]	[NR]
Ethion	mg/kg	0.1	Org-008	<0.1	80539-1	<0.1 || <0.1	LCS-5	101%
Surrogate TCMX	%		Org-008	96	80539-1	90 || 98 || RPD: 9	LCS-5	94%

QUALITY CONTROL PCBs in Soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date extracted	-			24/10/2012	80539-1	24/10/2012 || 24/10/2012	LCS-5	24/10/2012
Date analysed	-			24/10/2012	80539-1	24/10/2012 || 24/10/2012	LCS-5	24/10/2012
Arochlor 1016	mg/kg	0.1	Org-006	<0.1	80539-1	<0.1 || <0.1	[NR]	[NR]
Arochlor 1221	mg/kg	0.1	Org-006	<0.1	80539-1	<0.1 || <0.1	[NR]	[NR]
Arochlor 1232	mg/kg	0.1	Org-006	<0.1	80539-1	<0.1 || <0.1	[NR]	[NR]
Arochlor 1242	mg/kg	0.1	Org-006	<0.1	80539-1	<0.1 || <0.1	[NR]	[NR]
Arochlor 1248	mg/kg	0.1	Org-006	<0.1	80539-1	<0.1 || <0.1	[NR]	[NR]
Arochlor 1254	mg/kg	0.1	Org-006	<0.1	80539-1	<0.1 || <0.1	LCS-5	100%
Arochlor 1260	mg/kg	0.1	Org-006	<0.1	80539-1	<0.1 || <0.1	[NR]	[NR]
Surrogate TCLMX	%		Org-006	96	80539-1	90 || 98 || RPD: 9	LCS-5	91%

QUALITY CONTROL Acid Extractable metals in soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base II Duplicate II %RPD	Spike Sm#	Spike % Recovery
Date digested	-			24/10/2012	80539-1	24/10/2012 || 24/10/2012	LCS-1	24/10/2012
Date analysed	-			24/10/2012	80539-1	24/10/2012 || 24/10/2012	LCS-1	24/10/2012
Arsenic	mg/kg	4	Metals-020 ICP-AES	<4	80539-1	<4 || <4	LCS-1	97%
Cadmium	mg/kg	0.5	Metals-020 ICP-AES	<0.5	80539-1	<0.5 || <0.5	LCS-1	94%
Chromium	mg/kg	1	Metals-020 ICP-AES	<1	80539-1	13 || 27 || RPD: 70	LCS-1	94%
Copper	mg/kg	1	Metals-020 ICP-AES	<1	80539-1	38 || 29 || RPD: 27	LCS-1	97%
Lead	mg/kg	1	Metals-020 ICP-AES	<1	80539-1	58 || 46 || RPD: 23	LCS-1	94%
Mercury	mg/kg	0.1	Metals-021 CV-AAS	<0.1	80539-1	0.1 || <0.1	LCS-1	94%

QUALITY CONTROL Acid Extractable metals in soil	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Nickel	mg/kg	1	Metals-020 ICP-AES	<1	80539-1	4 || 3 || RPD: 29	LCS-1	95%
Zinc	mg/kg	1	Metals-020 ICP-AES	<1	80539-1	100 || 79 || RPD: 23	LCS-1	96%

QUALITY CONTROL Moisture	UNITS	PQL	METHOD	Blank
Date prepared	-			[NT]
Date analysed	-			[NT]
Moisture	%	0.1	Inorg-008	[NT]

QUALITY CONTROL Asbestos ID - soils	UNITS	PQL	METHOD	Blank
Date analysed	-			[NT]

QUALITY CONTROL Asbestos ID - materials	UNITS	PQL	METHOD	Blank
Date analysed	-			[NT]

QUALITY CONTROL Miscellaneous Inorganics	UNITS	PQL	METHOD	Blank	Duplicate Sm#	Duplicate results Base ll Duplicate ll %RPD	Spike Sm#	Spike % Recovery
Date prepared	-			24/10/2012	[NT]	[NT]	LCS-1	24/10/2012
Date analysed	-			24/10/2012	[NT]	[NT]	LCS-1	24/10/2012
pH	pH Units		Inorg-001	[NT]	[NT]	[NT]	LCS-1	103%
Chloride, Cl 1:5 soil:water	mg/kg	2	Inorg-081	<2	[NT]	[NT]	LCS-1	96%
Sulphate, SO4 1:5 soil:water	mg/kg	2	Inorg-081	<2	[NT]	[NT]	LCS-1	104%

QUALITY CONTROL vTRH & BTEX in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	80539-41	24/10/2012 || 24/10/2012	LCS-6	24/10/2012
Date analysed	-	80539-41	24/10/2012 || 24/10/2012	LCS-6	25/10/2012
vTRH C_6 - C_9	mg/kg	80539-41	<25 || <25	LCS-6	106%
Benzene	mg/kg	80539-41	<0.2 || <0.2	LCS-6	96%
Toluene	mg/kg	80539-41	<0.5 || <0.5	LCS-6	97%
Ethylbenzene	mg/kg	80539-41	<1 || <1	LCS-6	110%
m+p-xylene	mg/kg	80539-41	<2 || <2	LCS-6	113%
o-Xylene	mg/kg	80539-41	<1 || <1	LCS-6	106%
Surrogate aaa-Trifluorotoluene	%	80539-41	114 || 106 || RPD: 7	LCS-6	99%

QUALITY CONTROL sTRH in Soil (C10-C36)	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	80539-41	24/10/2012 || 24/10/2012	LCS-6	24/10/2012
Date analysed	-	80539-41	24/10/2012 || 24/10/2012	LCS-6	24/10/2012
TRHC$_{10}$ - C$_{14}$	mg/kg	80539-41	<50 || <50	LCS-6	101%
TRHC$_{15}$ - C$_{28}$	mg/kg	80539-41	<100 || <100	LCS-6	108%
TRHC$_{29}$ - C$_{36}$	mg/kg	80539-41	<100 || <100	LCS-6	83%
Surrogate o-Terphenyl	%	80539-41	76 || 86 || RPD: 12	LCS-6	104%
QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	80539-41	24/10/2012 || 24/10/2012	LCS-8	24/10/2012
Date analysed	-	80539-41	25/10/2012 || 25/10/2012	LCS-8	24/10/2012
Naphthalene	mg/kg	80539-41	<0.1 || <0.1	LCS-8	105%
Acenaphthylene	mg/kg	80539-41	<0.1 || <0.1	[NR]	[NR]
Acenaphthene	mg/kg	80539-41	<0.1 || <0.1	[NR]	[NR]
Fluorene	mg/kg	80539-41	<0.1 || <0.1	LCS-8	109%
Phenanthrene	mg/kg	80539-41	<0.1 || <0.1	LCS-8	113%
Anthracene	mg/kg	80539-41	<0.1 || <0.1	[NR]	[NR]
Fluoranthene	mg/kg	80539-41	<0.1 || <0.1	LCS-8	111%
Pyrene	mg/kg	80539-41	<0.1 || <0.1	LCS-8	112%
Benzo(a)anthracene	mg/kg	80539-41	<0.1 || <0.1	[NR]	[NR]
Chrysene	mg/kg	80539-41	<0.1 || <0.1	LCS-8	103%
Benzo(b+k)fluoranthene	mg/kg	80539-41	<0.2 || <0.2	[NR]	[NR]
Benzo(a)pyrene	mg/kg	80539-41	<0.05 || <0.05	LCS-8	106%
Indeno(1,2,3-c,d)pyrene	mg/kg	80539-41	<0.1 || <0.1	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	80539-41	<0.1 || <0.1	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	80539-41	<0.1 || <0.1	[NR]	[NR]
Surrogate p-Terphenyl-d$_{14}$	%	80539-41	84 || 94 || RPD: 11	LCS-8	88%

QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	80539-41	24/10/2012 || 24/10/2012	LCS-6	24/10/2012
Date analysed	-	80539-41	24/10/2012 || 24/10/2012	LCS-6	24/10/2012
HCB	mg/kg	80539-41	<0.1 || <0.1	[NR]	[NR]
alpha-BHC	mg/kg	80539-41	<0.1 || <0.1	LCS-6	87%
gamma-BHC	mg/kg	80539-41	<0.1 || <0.1	[NR]	[NR]
beta-BHC	mg/kg	80539-41	<0.1 || <0.1	LCS-6	86%
Heptachlor	mg/kg	80539-41	<0.1 || <0.1	LCS-6	87%
delta-BHC	mg/kg	80539-41	<0.1 || <0.1	[NR]	[NR]
Aldrin	mg/kg	80539-41	<0.1 || <0.1	LCS-6	90%
Heptachlor Epoxide	mg/kg	80539-41	<0.1 || <0.1	LCS-6	92%
gamma-Chlordane	mg/kg	80539-41	<0.1 || <0.1	[NR]	[NR]
alpha-chlordane	mg/kg	80539-41	<0.1 || <0.1	[NR]	[NR]
Endosulfan I	mg/kg	80539-41	<0.1 || <0.1	[NR]	[NR]
pp-DDE	mg/kg	80539-41	0.1 || 0.1 || RPD: 0	LCS-6	91%
Dieldrin	mg/kg	80539-41	<0.1 || <0.1	LCS-6	94%
Endrin	mg/kg	80539-41	<0.1 || <0.1	LCS-6	95%
pp-DDD	mg/kg	80539-41	<0.1 || <0.1	LCS-6	91%
Endosulfan II	mg/kg	80539-41	<0.1 || <0.1	[NR]	[NR]
pp-DDT	mg/kg	80539-41	<0.1 || <0.1	[NR]	[NR]
Endrin Aldehyde	mg/kg	80539-41	<0.1 || <0.1	[NR]	[NR]
Endosulfan Sulphate	mg/kg	80539-41	<0.1 || <0.1	LCS-6	91%
Methoxychlor	mg/kg	80539-41	<0.1 || <0.1	[NR]	[NR]
Surrogate TCMX	%	80539-41	80 || 90 || RPD: 12	LCS-6	92%

QUALITY CONTROL Organophosphorus Pesticides	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	80539-41	24/10/2012 || 24/10/2012	LCS-6	24/10/2012
Date analysed	-	80539-41	24/10/2012 || 24/10/2012	LCS-6	24/10/2012
Diazinon	mg/kg	80539-41	<0.1 || <0.1	[NR]	[NR]
Dimethoate	mg/kg	80539-41	<0.1 || <0.1	[NR]	[NR]
Chlorpyriphos-methyl	mg/kg	80539-41	<0.1 || <0.1	[NR]	[NR]
Ronnel	mg/kg	80539-41	<0.1 || <0.1	[NR]	[NR]
Chlorpyriphos	mg/kg	80539-41	<0.1 || <0.1	LCS-6	100%
Fenitrothion	mg/kg	80539-41	<0.1 || <0.1	LCS-6	98%
Bromophos-ethyl	mg/kg	80539-41	<0.1 || <0.1	[NR]	[NR]
Ethion	mg/kg	80539-41	<0.1 || <0.1	LCS-6	102%
Surrogate TCMX	%	80539-41	80 || 90 || RPD: 12	LCS-6	96%
QUALITY CONTROL PCBs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	80539-41	24/10/2012 || 24/10/2012	LCS-6	24/10/2012
Date analysed	-	80539-41	24/10/2012 || 24/10/2012	LCS-6	24/10/2012
Arochlor 1016	mg/kg	80539-41	<0.1 || <0.1	[NR]	[NR]
Arochlor 1221	mg/kg	80539-41	<0.1 || <0.1	[NR]	[NR]
Arochlor 1232	mg/kg	80539-41	<0.1 || <0.1	[NR]	[NR]
Arochlor 1242	mg/kg	80539-41	<0.1 || <0.1	[NR]	[NR]
Arochlor 1248	mg/kg	80539-41	<0.1 || <0.1	[NR]	[NR]
Arochlor 1254	mg/kg	80539-41	<0.1 || <0.1	LCS-6	104%
Arochlor 1260	mg/kg	80539-41	<0.1 || <0.1	[NR]	[NR]
Surrogate TCLMX	%	80539-41	80 || 90 || RPD: 12	LCS-6	93%
QUALITY CONTROL Acid Extractable metals in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date digested	-	80539-41	24/10/2012 || 24/10/2012	LCS-2	24/10/2012
Date analysed	-	80539-41	24/10/2012 || 24/10/2012	LCS-2	24/10/2012
Arsenic	mg/kg	80539-41	<4 || <4	LCS-2	98%
Cadmium	mg/kg	80539-41	<0.5 || <0.5	LCS-2	97%
Chromium	mg/kg	80539-41	10 || 10 || RPD: 0	LCS-2	97%
Copper	mg/kg	80539-41	70 || 62 || RPD: 12	LCS-2	101%
Lead	mg/kg	80539-41	43 || 43 || RPD: 0	LCS-2	96%
Mercury	mg/kg	80539-41	<0.1 || <0.1	LCS-2	100%
Nickel	mg/kg	80539-41	4 || 4 || RPD: 0	LCS-2	98%
Zinc	mg/kg	80539-41	210 || 190 || RPD: 10	LCS-2	99%

QUALITY CONTROL vTRH & BTEX in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	80539-51	24/10/2012 || 24/10/2012	80539-6	24/10/2012
Date analysed	-	80539-51	24/10/2012 || 24/10/2012	80539-6	24/10/2012
vTRH C_6 - C_9	mg/kg	80539-51	<25 || <25	80539-6	99%
Benzene	mg/kg	80539-51	<0.2 || <0.2	80539-6	93%
Toluene	mg/kg	80539-51	<0.5 || <0.5	80539-6	97%
Ethylbenzene	mg/kg	80539-51	<1 || <1	80539-6	99%
m+p-xylene	mg/kg	80539-51	<2 || <2	80539-6	102%
o-Xylene	mg/kg	80539-51	<1 || <1	80539-6	86%
Surrogate aaa-Trifluorotoluene	%	80539-51	95 || 111 || RPD: 16	80539-6	99%
QUALITY CONTROL sTRH in Soil (C10-C36)	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	80539-51	24/10/2012 || 24/10/2012	80539-6	24/10/2012
Date analysed	-	80539-51	24/10/2012 || 24/10/2012	80539-6	24/10/2012
TRH C_{10} - C_{14}	mg/kg	80539-51	<50 || <50	80539-6	107%
TRH C_{15} - C_{28}	mg/kg	80539-51	1900 || 1900 || RPD: 0	80539-6	106%
TRH C_{29} - C_{36}	mg/kg	80539-51	2500 || 2700 || RPD: 8	80539-6	82%
Surrogate o-Terphenyl	%	80539-51	# || #	80539-6	102%
QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	80539-51	24/10/2012 || 24/10/2012	80539-6	24/10/2012
Date analysed	-	80539-51	25/10/2012 || 25/10/2012	80539-6	25/10/2012
Naphthalene	mg/kg	80539-51	<0.1 || <0.1	80539-6	101%
Acenaphthylene	mg/kg	80539-51	<0.1 || <0.1	[NR]	[NR]
Acenaphthene	mg/kg	80539-51	<0.1 || <0.1	[NR]	[NR]
Fluorene	mg/kg	80539-51	<0.1 || <0.1	80539-6	104%
Phenanthrene	mg/kg	80539-51	<0.1 || <0.1	80539-6	109%
Anthracene	mg/kg	80539-51	<0.1 || <0.1	[NR]	[NR]
Fluoranthene	mg/kg	80539-51	<0.1 || <0.1	80539-6	108%
Pyrene	mg/kg	80539-51	<0.1 || <0.1	80539-6	110%
Benzo(a)anthracene	mg/kg	80539-51	<0.1 || <0.1	[NR]	[NR]
Chrysene	mg/kg	80539-51	<0.1 || <0.1	80539-6	99%
Benzo(b+k)fluoranthene	mg/kg	80539-51	<0.2 || <0.2	[NR]	[NR]
Benzo(a)pyrene	mg/kg	80539-51	<0.05 || <0.05	80539-6	102%
Indeno(1,2,3-c,d)pyrene	mg/kg	80539-51	<0.1 || <0.1	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	80539-51	<0.1 || <0.1	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	80539-51	<0.1 || <0.1	[NR]	[NR]
Surrogate p-Terphenyl-d_{14}	%	80539-51	86 || 93 || RPD: 8	80539-6	94%

QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	80539-51	24/10/2012 || 24/10/2012	80539-6	24/10/2012
Date analysed	-	80539-51	24/10/2012 || 24/10/2012	80539-6	24/10/2012
HCB	mg/kg	80539-51	<0.1 || <0.1	[NR]	[NR]
alpha-BHC	mg/kg	80539-51	<0.1 || <0.1	80539-6	94%
gamma-BHC	mg/kg	80539-51	<0.1 || <0.1	[NR]	[NR]
beta-BHC	mg/kg	80539-51	<0.1 || <0.1	80539-6	92%
Heptachlor	mg/kg	80539-51	<0.1 || <0.1	80539-6	93%
delta-BHC	mg/kg	80539-51	<0.1 || <0.1	[NR]	[NR]
Aldrin	mg/kg	80539-51	<0.1 || <0.1	80539-6	97%
Heptachlor Epoxide	mg/kg	80539-51	<0.1 || <0.1	80539-6	99%
gamma-Chlordane	mg/kg	80539-51	<0.1 || <0.1	[NR]	[NR]
alpha-chlordane	mg/kg	80539-51	<0.1 || <0.1	[NR]	[NR]
Endosulfan I	mg/kg	80539-51	<0.1 || <0.1	[NR]	[NR]
pp-DDE	mg/kg	80539-51	<0.1 || <0.1	80539-6	99%
Dieldrin	mg/kg	80539-51	<0.1 || <0.1	80539-6	101%
Endrin	mg/kg	80539-51	<0.1 || <0.1	80539-6	102%
pp-DDD	mg/kg	80539-51	<0.1 || <0.1	80539-6	97%
Endosulfan II	mg/kg	80539-51	<0.1 || <0.1	[NR]	[NR]
pp-DDT	mg/kg	80539-51	<0.1 || <0.1	[NR]	[NR]
Endrin Aldehyde	mg/kg	80539-51	<0.1 || <0.1	[NR]	[NR]
Endosulfan Sulphate	mg/kg	80539-51	<0.1 || <0.1	80539-6	98%
Methoxychlor	mg/kg	80539-51	<0.1 || <0.1	[NR]	[NR]
Surrogate TCMX	%	80539-51	93 || 93 || RPD: 0	80539-6	99%

QUALITY CONTROL Organophosphorus Pesticides	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	80539-51	24/10/2012 || 24/10/2012	80539-6	24/10/2012
Date analysed	-	80539-51	24/10/2012 || 24/10/2012	80539-6	24/10/2012
Diazinon	mg/kg	80539-51	<0.1 || <0.1	[NR]	[NR]
Dimethoate	mg/kg	80539-51	<0.1 || <0.1	[NR]	[NR]
Chlorpyriphos-methyl	mg/kg	80539-51	<0.1 || <0.1	[NR]	[NR]
Ronnel	mg/kg	80539-51	<0.1 || <0.1	[NR]	[NR]
Chlorpyriphos	mg/kg	80539-51	<0.1 || <0.1	80539-6	92%
Fenitrothion	mg/kg	80539-51	<0.1 || <0.1	80539-6	90%
Bromophos-ethyl	mg/kg	80539-51	<0.1 || <0.1	[NR]	[NR]
Ethion	mg/kg	80539-51	<0.1 || <0.1	80539-6	90%
Surrogate TCMX	%	80539-51	93 || 93 || RPD: 0	80539-6	95%
QUALITY CONTROL PCBs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	80539-51	24/10/2012 || 24/10/2012	80539-6	24/10/2012
Date analysed	-	80539-51	24/10/2012 || 24/10/2012	80539-6	24/10/2012
Arochlor 1016	mg/kg	80539-51	<0.1 || <0.1	[NR]	[NR]
Arochlor 1221	mg/kg	80539-51	<0.1 || <0.1	[NR]	[NR]
Arochlor 1232	mg/kg	80539-51	<0.1 || <0.1	[NR]	[NR]
Arochlor 1242	mg/kg	80539-51	<0.1 || <0.1	[NR]	[NR]
Arochlor 1248	mg/kg	80539-51	<0.1 || <0.1	[NR]	[NR]
Arochlor 1254	mg/kg	80539-51	<0.1 || <0.1	80539-6	100%
Arochlor 1260	mg/kg	80539-51	<0.1 || <0.1	[NR]	[NR]
Surrogate TCLMX	%	80539-51	93 || 93 || RPD: 0	80539-6	95%
QUALITY CONTROL Acid Extractable metals in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date digested	-	80539-51	24/10/2012 || 24/10/2012	LCS-3	24/10/2012
Date analysed	-	80539-51	24/10/2012 || 24/10/2012	LCS-3	24/10/2012
Arsenic	mg/kg	80539-51	<4 || <4	LCS-3	99%
Cadmium	mg/kg	80539-51	<0.5 || <0.5	LCS-3	95%
Chromium	mg/kg	80539-51	17 || 10 || RPD: 52	LCS-3	97%
Copper	mg/kg	80539-51	31 || 32 || RPD: 3	LCS-3	100%
Lead	mg/kg	80539-51	55 || 51 || RPD: 8	LCS-3	95%
Mercury	mg/kg	80539-51	1.6 || 1.1 || RPD: 37	LCS-3	94%
Nickel	mg/kg	80539-51	3 || 2 || RPD: 40	LCS-3	97%
Zinc	mg/kg	80539-51	270 || 260 || RPD: 4	LCS-3	99%

QUALITY CONTROL vTRH & BTEX in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	80539-60	24/10/2012 || 24/10/2012	80539-52	24/10/2012
Date analysed	-	80539-60	24/10/2012 || 24/10/2012	80539-52	25/10/2012
vTRH C_6 - C_9	mg/kg	80539-60	<25 || <25	80539-52	102%
Benzene	mg/kg	80539-60	<0.2 || <0.2	80539-52	91%
Toluene	mg/kg	80539-60	<0.5 || <0.5	80539-52	94%
Ethylbenzene	mg/kg	80539-60	<1 || <1	80539-52	105%
m+p-xylene	mg/kg	80539-60	<2 || <2	80539-52	109%
o-Xylene	mg/kg	80539-60	<1 || <1	80539-52	102%
Surrogate aaa-Trifluorotoluene	%	80539-60	97 || 100 || RPD: 3	80539-52	94%
QUALITY CONTROL sTRH in Soil (C10-C36)	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	80539-60	24/10/2012 || 24/10/2012	80539-52	24/10/2012
Date analysed	-	80539-60	24/10/2012 || 24/10/2012	80539-52	24/10/2012
TRH C_{10} - C_{14}	mg/kg	80539-60	<50 || <50	80539-52	86%
TRH C_{15} - C_{28}	mg/kg	80539-60	<100 || <100	80539-52	94%
TRH C_{29} - C_{36}	mg/kg	80539-60	<100 || <100	80539-52	75%
Surrogate o-Terphenyl	%	80539-60	81 || 88 || RPD: 8	80539-52	95%
QUALITY CONTROL PAHs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	80539-60	24/10/2012 || 24/10/2012	80539-52	24/10/2012
Date analysed	-	80539-60	25/10/2012 || 25/10/2012	80539-52	25/10/2012
Naphthalene	mg/kg	80539-60	<0.1 || <0.1	80539-52	106%
Acenaphthylene	mg/kg	80539-60	<0.1 || <0.1	[NR]	[NR]
Acenaphthene	mg/kg	80539-60	<0.1 || <0.1	[NR]	[NR]
Fluorene	mg/kg	80539-60	<0.1 || <0.1	80539-52	111%
Phenanthrene	mg/kg	80539-60	<0.1 || <0.1	80539-52	113%
Anthracene	mg/kg	80539-60	<0.1 || <0.1	[NR]	[NR]
Fluoranthene	mg/kg	80539-60	<0.1 || <0.1	80539-52	113%
Pyrene	mg/kg	80539-60	<0.1 || <0.1	80539-52	115%
Benzo(a)anthracene	mg/kg	80539-60	<0.1 || <0.1	[NR]	[NR]
Chrysene	mg/kg	80539-60	<0.1 || <0.1	80539-52	103%
Benzo(b+k)fluoranthene	mg/kg	80539-60	<0.2 || <0.2	[NR]	[NR]
Benzo(a)pyrene	mg/kg	80539-60	<0.05 || <0.05	80539-52	106%
Indeno(1,2,3-c,d)pyrene	mg/kg	80539-60	<0.1 || <0.1	[NR]	[NR]
Dibenzo(a,h)anthracene	mg/kg	80539-60	<0.1 || <0.1	[NR]	[NR]
Benzo(g,h,i)perylene	mg/kg	80539-60	<0.1 || <0.1	[NR]	[NR]
Surrogate p-Terphenyl-d_{14}	%	80539-60	99 || 104 || RPD: 5	80539-52	90%

QUALITY CONTROL Organochlorine Pesticides in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	80539-60	24/10/2012 || 24/10/2012	80539-52	24/10/2012
Date analysed	-	80539-60	24/10/2012 || 24/10/2012	80539-52	24/10/2012
HCB	mg/kg	80539-60	<0.1 || <0.1	[NR]	[NR]
alpha-BHC	mg/kg	80539-60	<0.1 || <0.1	80539-52	95%
gamma-BHC	mg/kg	80539-60	<0.1 || <0.1	[NR]	[NR]
beta-BHC	mg/kg	80539-60	<0.1 || <0.1	80539-52	91%
Heptachlor	mg/kg	80539-60	<0.1 || <0.1	80539-52	86%
delta-BHC	mg/kg	80539-60	<0.1 || <0.1	[NR]	[NR]
Aldrin	mg/kg	80539-60	<0.1 || <0.1	80539-52	96%
Heptachlor Epoxide	mg/kg	80539-60	<0.1 || <0.1	80539-52	98%
gamma-Chlordane	mg/kg	80539-60	<0.1 || <0.1	[NR]	[NR]
alpha-chlordane	mg/kg	80539-60	<0.1 || <0.1	[NR]	[NR]
Endosulfan I	mg/kg	80539-60	<0.1 || <0.1	[NR]	[NR]
pp-DDE	mg/kg	80539-60	<0.1 || <0.1	80539-52	96%
Dieldrin	mg/kg	80539-60	<0.1 || <0.1	80539-52	100%
Endrin	mg/kg	80539-60	<0.1 || <0.1	80539-52	98%
pp-DDD	mg/kg	80539-60	<0.1 || <0.1	80539-52	95%
Endosulfan II	mg/kg	80539-60	<0.1 || <0.1	[NR]	[NR]
pp-DDT	mg/kg	80539-60	<0.1 || <0.1	[NR]	[NR]
Endrin Aldehyde	mg/kg	80539-60	<0.1 || <0.1	[NR]	[NR]
Endosulfan Sulphate	mg/kg	80539-60	<0.1 || <0.1	80539-52	94%
Methoxychlor	mg/kg	80539-60	<0.1 || <0.1	[NR]	[NR]
Surrogate TCMX	%	80539-60	91 || 91 || RPD: 0	80539-52	95%

QUALITY CONTROL Organophosphorus Pesticides	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	80539-60	24/10/2012 || 24/10/2012	80539-52	24/10/2012
Date analysed	-	80539-60	24/10/2012 || 24/10/2012	80539-52	24/10/2012
Diazinon	mg/kg	80539-60	<0.1 || <0.1	[NR]	[NR]
Dimethoate	mg/kg	80539-60	<0.1 || <0.1	[NR]	[NR]
Chlorpyriphos-methyl	mg/kg	80539-60	<0.1 || <0.1	[NR]	[NR]
Ronnel	mg/kg	80539-60	<0.1 || <0.1	[NR]	[NR]
Chlorpyriphos	mg/kg	80539-60	<0.1 || <0.1	80539-52	101%
Fenitrothion	mg/kg	80539-60	<0.1 || <0.1	80539-52	97%
Bromophos-ethyl	mg/kg	80539-60	<0.1 || <0.1	[NR]	[NR]
Ethion	mg/kg	80539-60	<0.1 || <0.1	80539-52	103%
Surrogate TCMX	%	80539-60	91 || 91 || RPD: 0	80539-52	101%
QUALITY CONTROL PCBs in Soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date extracted	-	80539-60	24/10/2012 || 24/10/2012	80539-52	24/10/2012
Date analysed	-	80539-60	24/10/2012 || 24/10/2012	80539-52	24/10/2012
Arochlor 1016	mg/kg	80539-60	<0.1 || <0.1	[NR]	[NR]
Arochlor 1221	mg/kg	80539-60	<0.1 || <0.1	[NR]	[NR]
Arochlor 1232	mg/kg	80539-60	<0.1 || <0.1	[NR]	[NR]
Arochlor 1242	mg/kg	80539-60	<0.1 || <0.1	[NR]	[NR]
Arochlor 1248	mg/kg	80539-60	<0.1 || <0.1	[NR]	[NR]
Arochlor 1254	mg/kg	80539-60	<0.1 || <0.1	80539-52	93%
Arochlor 1260	mg/kg	80539-60	<0.1 || <0.1	[NR]	[NR]
Surrogate TCLMX	%	80539-60	91 || 91 || RPD: 0	80539-52	98%
QUALITY CONTROL Acid Extractable metals in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date digested	-	80539-60	24/10/2012 || 24/10/2012	80539-6	24/10/2012
Date analysed	-	80539-60	24/10/2012 || 24/10/2012	80539-6	24/10/2012
Arsenic	mg/kg	80539-60	<4 || <4	80539-6	95%
Cadmium	mg/kg	80539-60	<0.5 || <0.5	80539-6	91%
Chromium	mg/kg	80539-60	9 || 9 || RPD: 0	80539-6	86%
Copper	mg/kg	80539-60	2 || 2 || RPD: 0	80539-6	74%
Lead	mg/kg	80539-60	6 || 6 || RPD: 0	80539-6	101%
Mercury	mg/kg	80539-60	<0.1 || <0.1	80539-6	109%
Nickel	mg/kg	80539-60	4 || 3 || RPD: 29	80539-6	90%
Zinc	mg/kg	80539-60	5 || 7 || RPD: 33	80539-6	#

Client Reference: P123558-Terry Hills

QUALITY CONTROL Acid Extractable metals in soil	UNITS	Dup. Sm#	Duplicate Base + Duplicate + %RPD	Spike Sm#	Spike % Recovery
Date digested	-	[NT]	[NT]	80539-52	24/10/2012
Date analysed	-	[NT]	[NT]	80539-52	24/10/2012
Arsenic	mg/kg	[NT]	[NT]	80539-52	91%
Cadmium	mg/kg	[NT]	[NT]	80539-52	91%
Chromium	mg/kg	[NT]	[NT]	80539-52	94%
Copper	mg/kg	[NT]	[NT]	80539-52	92%
Lead	mg/kg	[NT]	[NT]	80539-52	100%
Mercury	mg/kg	[NT]	[NT]	80539-52	105%
Nickel	mg/kg	[NT]	[NT]	80539-52	86%
Zinc	mg/kg	[NT]	[NT]	80539-52	#

Report Comments:

Asbestos: A portion of the supplied sample was sub-sampled for asbestos analysis according to Envirolab procedures.

We cannot guarantee that this sub-sample is indicative of the entire sample.
Envirolab recommends supplying 40-50g of sample in its own container.

OC/OP/PCB's in soil:PQL has been raised due to interference from analytes(other than those being tested) in the sample/s.

Total Recoverable Hydrocarbons in soil:(SEMIVOLATILE) # Percent recovery is not possible to report as the high concentration of analytes in the sample/s have caused interference.

Acid Extractable Metals in Soil: The laboratory RPD acceptance criteriae has been exceeded for 80539-1 for Cr. Therefore a triplicate result has been issued as laboratory sample number 80539-79.

Acid Extractable Metals in Soil: The laboratory RPD acceptance criteriae has been exceeded for 80539-51 for Cr. Therefore a triplicate result has been issued as laboratory sample number 80539-80 and
Percent recovery is not possible to report due to the high concentration of the element/s in the sample/s. However an acceptable recovery was obtained for the LCS.

Asbestos ID was analysed by Approved Identifier: Alex Tam
Asbestos ID was authorised by Approved Signatory: Lulu Guo

INS: Insufficient sample for this test
NA: 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 batched of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Duplicates: <5xPQL - any RPD is acceptable; >5xPQL - 0-50% RPD is acceptable.
Matrix Spikes and LCS: Generally 70-130% for inorganics/metals; 60-140% for organics and 10-140% for SVOC and speciated phenols is acceptable.

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SOIL ANALYSIS CHAIN OF CUSTODY FORM

Project											
Name	P123558- Terry Hills										
Martens Contact Officer	Ben McGiffin				Contact Email	bmcgiffin@martens.com.au					
Sampling and Shipping	Sample Date	18/10/12	Dispatch Date	19/10/12	Turnaround Time	Standard					
	Our Reference	P1203558JC02V01			Shipping Method (X)	Hand		Post		Courier	X
	On Ice (X)	X	No Ice (X)		Other (X)						

Laboratory							
Name	Envirolab						
Sample Delivery Address	12 Ashley St, Chatswood						
Instructions							
Delivery Contact	Name	Aileen Hie	Phone	99106200	Fax	99106201	Email	ahie@envirolabservices.com.au
Please Send Report By (X)	Post		Fax		Email	X	Reporting Email Address	bmcgiffin@martens.com.au ; gtaylor@martens.com.au;

	Sample ID	Sample Type	Combo 6	Combo 6a	8 Heavy Metals	BTEX	TRH	pH	Sulphates	Chloride (1:5 Water Soluble)	Asbestos (material)	HOLD
1	3558/1/0.1	SOIL	X									X
2	3558/1/0.5	SOIL										X
3	3558/1/1.0	SOIL										X
4	3558/1/1.5	SOIL										X
5	3558/1/2.5	SOIL										
6	3558/2/0.1	SOIL	X									X
7	3558/2/0.5	SOIL										X
8	3558/2/1.0	SOIL										X
9	3558/2/1.5	SOIL										X
10	3558/2/2.5	SOIL										
11	3558/3/0.2	SOIL		X								
12	3558/Dup1	SOIL			X							X
13	3558/3/0.5	SOIL										

ENVIROLAB

~~Envirolab Services~~
~~12 Ashley St~~
~~Chatswood NSW 2067~~
~~Ph: (02) 9910 6200~~

Job No: 80539

Date Received: ~~19.10.2012~~ 22.10.2012.
~~Time Received: 14:45~~
Received by: DNA
Temp: Cool/Ambient
Cooling: Ice/Icepack
Security: Intact/Broken/None

NB: COC received on 22/10/2012.

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MARTENS & ASSOCIATES P/L
ABN 85 070 240 890 ACN 070 240 890

SOIL ANALYSIS CHAIN OF CUSTODY

	Sample ID	Sample Type	Combo 6	Combo 6a	8 Heavy Metals	BTEX	TRH	pH	Sulphates	Chloride (1:5 Water Soluble)	Asbestos (material)	HOLD
	3558/3/1.0	SOIL										X
14	3558/3/~~2.5~~ 1.3	SOIL										X
15	3558/4/0.1	SOIL	X									X
16	3558/4/0.5	SOIL										X
17	3558/4/1.0	SOIL										X
18	3558/4/1.5	SOIL										
19	3558/4/2.5	SOIL										
20	3558/5/0.1	SOIL		X								X
21	3558/Dup2	SOIL			X							X
22	3558/5/0.5	SOIL										X
23	3558/5/1.0	SOIL										X
24	3558/5/1.5	SOIL										
25	3558/6/0.2	SOIL										X
26	3558/Dup4	SOIL		X								X
27	3558/6/0.5	SOIL										X
28	3558/6/1.0	SOIL										
29	3558/6/1.5	SOIL										X
30	3558/7/0.1	SOIL	x									X
31	3558/7/0.5	SOIL										X
32	3558/7/1.0	SOIL										
33	3558/7/1.5	SOIL										X
34	3558/8/0.1	SOIL	x									X
35	3558/8/0.5	SOIL										X
36	3558/8/1.0	SOIL										
37	3558/8/1.3	SOIL										
38	3558/9	SOIL	X									
39	3558/10	SOIL	X									
40	3558/11	SOIL	X									
41	3558/12	SOIL	X									
42	3558/13	SOIL	X									
43	3558/14	SOIL	X									
44	3558/15	SOIL	X									
45												

SOIL ANALYSIS CHAIN OF CUSTODY

	Sample ID	Sample Type	Combo 6	Combo 6a	8 Heavy Metals	BTEX	TRH	pH	Sulphates	Chloride (1:5 Water Soluble)	Asbestos (material)	HOLD
46	3558/16	SOIL	X									
47	3558/17	SOIL	X									
48	3558/18	SOIL	X									
49	3558/19	SOIL	X									
50	3558/20	SOIL	X									
51	3558/A	SOIL	X									
52	3558/B	SOIL	X									
53	3558/C	SOIL	X									
54	3558/D	SOIL	X									
55	3558/E	SOIL	X									
56	3558/F	SOIL	X									
57	3558/G	SOIL	X									
58	3558/H	SOIL	X									
59	3558/I	SOIL	X									
60	3558/SP1	SOIL		X								
61	3558/SP2	SOIL		X								
62	3558/SP3	SOIL		X								
63	3558/SP4A	SOIL		X								
64	3558/SP4B	SOIL		X								
65	3558/SP5	SOIL		X								
	3558/ASB1	MATERIAL									X	
	3558/ASB2	MATERIAL									X	
	3558/ASB3	MATERIAL									X	
not received	3558/ASB4	MATERIAL									X	
	3558/ASB5	MATERIAL									X	
	3558/ASB6	MATERIAL									X	
66	3558/GWA BH3	WATER						X	X	X		
67	3558/GWB 4	WATER						X	X	X		
68	3558/GWC 5	WATER						X	X	X		
69	MA Trip blank	SOIL			X	X	X					
70	MA Trip Spike	SOIL				X						

Extra Samples
71. 3558/S/2.5
72. 3558/DUP3

SOIL ANALYSIS CHAIN OF CUSTODY

Sample ID	Sample Type	Combo 6	Combo 6a	8 Heavy Metals	BTEX	TRH	pH	Sulphates	Chloride (1:5 Water Soluble)	Asbestos (material)	HOLD

Notes

14 Attachment D – Borehole Logs

CLIENT	**Bayview Links Pty Ltd**	**COMMENCED**	18.10.2012	**COMPLETED**	18.10.2012	**REF**	**BH101**
PROJECT	**Geotechnical and Contamination Assessment**	**LOGGED**	BM/GL	**CHECKED**	GT	**Sheet**	**1 of 1**
SITE	**83 Booralie Road, Terry Hills, NSW**	**GEOLOGY**	Sandstone	**VEGETATION**	Grass	**PROJECT NO.**	P1203558
EQUIPMENT	Hydraulic Auger	**EASTING**	NA	**RL SURFACE**	197mAHD		
EXCAVATION DIMENSIONS	100mmØ X 4.0m depth	**NORTHING**	NA	**ASPECT**	South	**SLOPE**	<5%

EXCAVATION DATA						MATERIAL DATA				SAMPLING & TESTING			
METHOD	SUPPORT	WATER	MOISTURE	DEPTH (M)	PENETRATION RESISTANCE (L M H R)	GRAPHIC LOG	CLASSIFICATION	DESCRIPTION OF STRATA Soil type, texture, structure, mottling, colour, plasticity, rocks, oxidation, particle characteristics, organics, secondary and minor components, fill, contamination, odour.	CONSISTENCY	DENSITY INDEX	TYPE	DEPTH (M)	RESULTS AND ADDITIONAL OBSERVATIONS
V	Nil	N	D	0.1			SM	TOP SOIL - SILTY SAND - Light brown, organics present.		L	E	0.1	3558/1/ 0.1
V	Nil	N	D	0.6			SP	GRAVELLY SAND - Red/brown, ferruginised iron stone inclusions, gravels (5-20mm, 20%). Grading to		L-MD	E	0.5	3558/1/ 0.5
V	Nil	N	D	1.0			EW	EXTREMELY WEAK SANDSTONE - Ferruginised iron stone inclusive.			E	1.0	3558/1/ 1.0
V	Nil	N	M	1.2			EW	EXTREMELY WEAK SANDSTONE - Light brown, moist.			E	1.5	3558/1/ 1.5
		2.15		2.0									
V	Nil	Y	W	3.0			W	WEAK SANDSTONE - Light brown, saturated.			E	2.5	3558/1/ 2.5
				4.0				Borehole terminated at 4.0m on weak sandstone.					
				5.0									
				6.0									
				7.0									
				8.0									
				9.0									

EQUIPMENT / METHOD
N Natural exposure
X Existing excavation
BH Backhoe bucket
HA Hand auger
E Excavator
CC Concrete Corer
V V-Bit
TC Tungsten Carbide Bit
S Spade

SUPPORT
SH Shoring
SC Shotcrete
RB Rock Bolts
Nil No support

WATER
N None observed
X Not measured
Water level
Water outflow
Water inflow

MOISTURE
D Dry
M Moist
W Wet
Wp Plastic limit
Wl Liquid limit

PENETRATION
L Low
M Moderate
H High
R Refusal

CONSISTENCY
VS Very Soft
S Soft
F Firm
St Stiff
VSt Very Stiff
H Hard
F Friable

DENSITY
VL Very Loose
L Loose
MD Medium Dense
D Dense
VD Very Dense

SAMPLING & TESTING
A Auger sample
B Bulk sample
U Undisturbed sample
D Disturbed sample
M Moisture content
Ux Tube sample (x mm)
E Environmental sample

pp Pocket penetrometer
S Standard penetration test
VS Vane shear
DCP Dynamic cone penetrometer
FD Field density
WS Water sample
PID Photo Ionization Detector

CLASSIFICATION SYMBOLS AND SOIL DESCRIPTION
Y USCS
N Agricultural

EXCAVATION LOG TO BE READ IN CONJUNCTION WITH ACCOMPANYING REPORT NOTES AND ABBREVIATIONS

Quality Sheet No. 4

martens

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Engineering Log - Borehole

CLIENT	**Bayview Links Pty Ltd**	**COMMENCED**	18.10.2012	**COMPLETED**	18.10.2012	**REF**	**BH102**
PROJECT	**Geotechnical and Contamination Assessment**	**LOGGED**	BM	**CHECKED**	GT	**Sheet**	**1 of 1**
SITE	**83 Booralie Road, Terry Hills, NSW**	**GEOLOGY**	Sandstone	**VEGETATION**	Grass	**PROJECT NO.**	P1203558
EQUIPMENT	Hydraulic Auger	**EASTING**	NA	**RL SURFACE**	196mAHD		
EXCAVATION DIMENSIONS	100mmØ X 3.0m depth	**NORTHING**	NA	**ASPECT**	South	**SLOPE**	<5%

EXCAVATION DATA						MATERIAL DATA				SAMPLING & TESTING			
METHOD	SUPPORT	WATER	MOISTURE	DEPTH (M)	PENETRATION RESISTANCE (L M H R)	GRAPHIC LOG	CLASSIFICATION	DESCRIPTION OF STRATA Soil type, texture, structure, mottling, colour, plasticity, rocks, oxidation, particle characteristics, organics, secondary and minor components, fill, contamination, odour.	CONSISTENCY	DENSITY INDEX	TYPE	DEPTH (M)	RESULTS AND ADDITIONAL OBSERVATIONS
V	Nil	N	D	0.1			SM	TOP SOIL - SILTY SAND - Light brown, organics present.		L	E	0.1	3558/2/ 0.1
V	Nil	N	D	0.8			SP	GRAVELLY SAND - Red/brown, ferruginised iron stone inclusions, gravels (5-40mm, 40%).		MD	E	0.5	3558/2/ 0.5
V	Nil	N	D	1.0 1.9			SP	SAND - Light brown, medium to large grained. Grading to		MD-D	E E	1.0 1.5	3558/2/ 1.0 3558/2/ 1.5
V	Nil	2.25 N	D	2.0 3.0			W	WEAK SANDSTONE - Light brown/white, fine grained sand.			E	2.5	3558/2/ 2.5
				4.0 5.0 6.0 7.0 8.0 9.0				V Bit refusal at 3.0m on weak sandstone.					

EQUIPMENT / METHOD
N Natural exposure
X Existing excavation
BH Backhoe bucket
HA Hand auger
E Excavator
CC Concrete Corer
V V-Bit
TC Tungsten Carbide Bit
S Spade

SUPPORT
SH Shoring
SC Shotcrete
RB Rock Bolts
Nil No support

WATER
N None observed
X Not measured
Water level
Water outflow
Water inflow

MOISTURE
D Dry
M Moist
W Wet
Wp Plastic limit
Wl Liquid limit

PENETRATION
L Low
M Moderate
H High
R Refusal

CONSISTENCY
VS Very Soft
S Soft
F Firm
St Stiff
VSt Very Stiff
H Hard
F Friable

DENSITY
VL Very Loose
L Loose
MD Medium Dense
D Dense
VD Very Dense

SAMPLING & TESTING
A Auger sample
B Bulk sample
U Undisturbed sample
D Disturbed sample
M Moisture content
Ux Tube sample (x mm)
E Environmental sample

pp Pocket penetrometer
S Standard penetration test
VS Vane shear
DCP Dynamic cone penetrometer
FD Field density
WS Water sample
PID Photo Ionization Detector

CLASSIFICATION SYMBOLS AND SOIL DESCRIPTION
Y USCS
N Agricultural

EXCAVATION LOG TO BE READ IN CONJUNCTION WITH ACCOMPANYING REPORT NOTES AND ABBREVIATIONS

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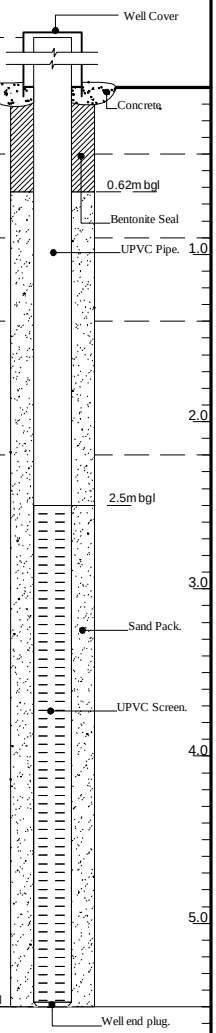
Engineering Log - Borehole

CLIENT	**Bayview Links Pty Ltd**	**COMMENCED**	18.10.2012	**COMPLETED**	18.10.2012	**REF**	**BH103**
PROJECT	**Geotechnical and Contamination Assessment**	**LOGGED**	BM/GL	**CHECKED**	GT	**Sheet**	**1 of 1**
SITE	**83 Booralie Road, Terry Hills, NSW**	**GEOLOGY**	Sandstone	**VEGETATION**	Grass	**PROJECT NO.**	P1203558
EQUIPMENT	Hydraulic Auger	**EASTING**	NA	**RL SURFACE**	195mAHD		
EXCAVATION DIMENSIONS	100mmØ X 5.5m depth	**NORTHING**	NA	**ASPECT**	South	**SLOPE**	<5%

EXCAVATION DATA						MATERIAL DATA				SAMPLING & TESTING			
METHOD	SUPPORT	WATER	MOISTURE	DEPTH (M)	PENETRATION RESISTANCE (L M H R)	GRAPHIC LOG	CLASSIFICATION	DESCRIPTION OF STRATA Soil type, texture, structure, mottling, colour, plasticity, rocks, oxidation, particle characteristics, organics, secondary and minor components, fill, contamination, odour.	CONSISTENCY	DENSITY INDEX	TYPE	DEPTH (M)	WATER WELL DETAILS
V	Nil	N	D	0.4			XX SC	FILL - SILTY CLAYEY SAND - Gravels (5-10mm, 10%), extremely weathered sandstone gravels.		L-MD	E	0.1	3558/3/ 0.1 + DUP 1
V	Nil	N	D	0.9			SM	SILTY SAND - With minor gravels (5-10mm, 5-10%).		MD	E	0.5	3558/3/ 0.5
V	Nil	N	D	1.0 1.4			SP	SAND - Fine to medium grained, ferruginised iron stone inclusion, minor fines, minor gravels (5-10mm, 5-10%).		MD	E	1.0	3558/3/ 1.0
V	Nil	N	M	2.0 2.2			W	WEAK SANDSTONE - Red/brown, ferruginised iron stone inclusions.					
V	Nil	N	M	3.0 4.0 5.0 5.5			W	WEAK SANDSTONE - Light brown grey, becoming saturated with depth.			E	2.5	3558/3/ 2.5
				6.0 7.0 8.0 9.0				Borehole terminated at 5.5m in weak sandstone.					



EQUIPMENT / METHOD
N Natural exposure
X Existing excavation
BH Backhoe bucket
HA Hand auger
E Excavator
CC Concrete Corer
V V-Bit
TC Tungsten Carbide Bit
S Spade

SUPPORT
SH Shoring
SC Shotcrete
RB Rock Bolts
Nil No support

WATER
N None observed
X Not measured
Water level
Water outflow
Water inflow

MOISTURE
D Dry
M Moist
W Wet
Wp Plastic limit
Wl Liquid limit

PENETRATION
L Low
M Moderate
H High
R Refusal

CONSISTENCY
VS Very Soft
S Soft
F Firm
St Stiff
VSt Very Stiff
H Hard
F Friable

DENSITY
VL Very Loose
L Loose
MD Medium Dense
D Dense
VD Very Dense

SAMPLING & TESTING
A Auger sample
B Bulk sample
U Undisturbed sample
D Disturbed sample
M Moisture content
Ux Tube sample (x mm)
E Environmental sample

pp Pocket penetrometer
S Standard penetration test
VS Vane shear
DCP Dynamic cone penetrometer
FD Field density
WS Water sample
PID Photo Ionization Detector

CLASSIFICATION SYMBOLS AND SOIL DESCRIPTION
Y USCS
N Agricultural

EXCAVATION LOG TO BE READ IN CONJUNCTION WITH ACCOMPANYING REPORT NOTES AND ABBREVIATIONS

Quality Sheet No. 4

martens

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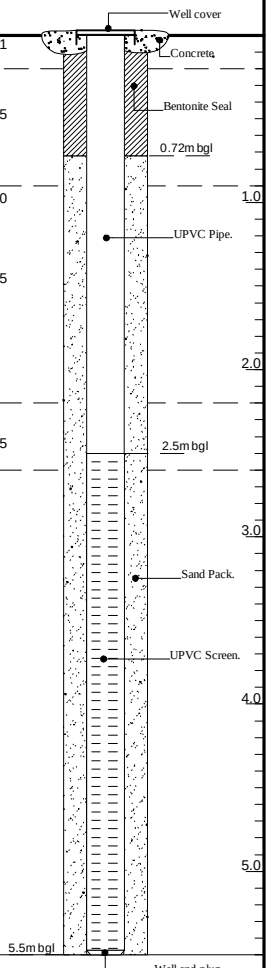
mail@martens.com.au WEB: http://www.martens.com.au

Engineering Log - Borehole

CLIENT	**Bayview Links Pty Ltd**	**COMMENCED**	18.10.2012	**COMPLETED**	18.10.2012	**REF**	**BH104**
PROJECT	**Geotechnical and Contamination Assessment**	**LOGGED**	BM/GL	**CHECKED**	GT	**Sheet**	**1 of 1**
SITE	**83 Booralie Road, Terry Hills, NSW**	**GEOLOGY**	Sandstone	**VEGETATION**	Grass	**PROJECT NO.**	P1203558
EQUIPMENT	Hydraulic Auger	**EASTING**	NA	**RL SURFACE**	194mAHD		
EXCAVATION DIMENSIONS	100mmØ X 5.5m depth	**NORTHING**	NA	**ASPECT**	South	**SLOPE**	<5%

EXCAVATION DATA						MATERIAL DATA				SAMPLING & TESTING		
METHOD	SUPPORT	WATER	MOISTURE	DEPTH (M)	PENETRATION RESISTANCE (L M H R)	GRAPHIC LOG	CLASSIFICATION	DESCRIPTION OF STRATA Soil type, texture, structure, mottling, colour, plasticity, rocks, oxidation, particle characteristics, organics, secondary and minor components, fill, contamination, odour.	CONSISTENCY	DENSITY INDEX	TYPE	DEPTH (M)	WATER WELL DETAILS
V	Nil	N	D	0.2			XX SC	FILL - SILTY CLAYEY SAND - Gravels (5-10mm, 10%), extremely weathered sandstone gravels.		L- MD	E	0.1	3558/4/ 0.1
V	Nil	N	D	0.9			SM	SILTY SAND - With minor gravels (5-10mm, 5-10%).		MD	E	0.5	3558/4/ 0.5
V	Nil	N	D	1.0 2.0			SP	EXTREMELY WEAK SANDSTONE - Light grey, with orange mottles.			E E	1.0 1.5	3558/4/ 1.0 3558/4/ 1.5
V	Nil	2.3 Y	W	2.2 2.6			W	WEAK SANDSTONE - Grey/orange. Grading to			E	2.5	3558/4/ 2.5
V	Nil	Y	W	3.0 4.0 5.0 5.5			W	WEAK SANDSTONE - Saturated.					
				6.0 7.0 8.0 9.0				Borehole terminated at 5.5m on sandstone.					



EQUIPMENT / METHOD
N Natural exposure
X Existing excavation
BH Backhoe bucket
HA Hand auger
E Excavator
CC Concrete Corer
V V-Bit
TC Tungsten Carbide Bit
S Spade

SUPPORT
SH Shoring
SC Shotcrete
RB Rock Bolts
Nil No support

WATER
N None observed
X Not measured
Water level
Water outflow
Water inflow

MOISTURE
D Dry
M Moist
W Wet
Wp Plastic limit
Wl Liquid limit

PENETRATION
L Low
M Moderate
H High
R Refusal

CONSISTENCY
VS Very Soft
S Soft
F Firm
St Stiff
VSt Very Stiff
H Hard
F Friable

DENSITY
VL Very Loose
L Loose
MD Medium Dense
D Dense
VD Very Dense

SAMPLING & TESTING
A Auger sample
B Bulk sample
U Undisturbed sample
D Disturbed sample
M Moisture content
Ux Tube sample (x mm)
E Environmental sample

pp Pocket penetrometer
S Standard penetration test
VS Vane shear
DCP Dynamic cone penetrometer
FD Field density
WS Water sample
PID Photo Ionization Detector

CLASSIFICATION SYMBOLS AND SOIL DESCRIPTION
Y USCS
N Agricultural

EXCAVATION LOG TO BE READ IN CONJUNCTION WITH ACCOMPANYING REPORT NOTES AND ABBREVIATIONS

Quality Sheet No. 4

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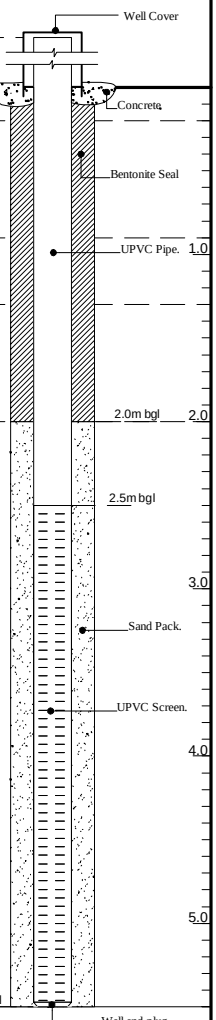
Engineering Log - Borehole

CLIENT	**Bayview Links Pty Ltd**	**COMMENCED**	18.10.2012	**COMPLETED**	18.10.2012	**REF**	**BH105**
PROJECT	**Geotechnical and Contamination Assessment**	**LOGGED**	BM/GL	**CHECKED**	GT	**Sheet**	**1 of 1**
SITE	**83 Booralie Road, Terry Hills, NSW**	**GEOLOGY**	Sandstone	**VEGETATION**	Grass	**PROJECT NO.**	P1203558
EQUIPMENT	Hydraulic Auger	**EASTING**	NA	**RL SURFACE**	193mAHD		
EXCAVATION DIMENSIONS	100mmØ X 5.5m depth	**NORTHING**	NA	**ASPECT**	South	**SLOPE**	<5%

EXCAVATION DATA						MATERIAL DATA				SAMPLING & TESTING		
METHOD	SUPPORT	WATER	MOISTURE	DEPTH (M)	PENETRATION RESISTANCE (L M H R)	GRAPHIC LOG	CLASSIFICATION	DESCRIPTION OF STRATA Soil type, texture, structure, mottling, colour, plasticity, rocks, oxidation, particle characteristics, organics, secondary and minor components, fill, contamination, odour.	CONSISTENCY	DENSITY INDEX	TYPE	DEPTH (M)	WATER WELL DETAILS
V	Nil	N	D	0.2		XX CL		FILL - SILTY CLAY - Gravels (5-20mm, 10%).			E	0.1	3558/5/ 0.1 + DUP 2 + TRIP 1
V	Nil	N	D	0.9		CL		CLAY - Possible fill (?), extremely weathered sandstone, gravels.			E B	0.5 0.5-0.6	3558/5/ 0.5 3558/5/ 0.5-0.6
V	Nil	N	D	1.0 1.3		SM		SILTY SAND - Dark brown/black, minor gravels.			E	1.0	3558/5/ 1.0
V	Nil	N	D	2.0		CL		CLAY - Light brown, with minor sand and gravel. Grading to			E B	1.5 1.5-1.6	3558/5/ 1.5 3558/5/ 1.5-1.6
V	Nil	Y	M	3.0 4.0 5.0 5.5		EW		EXTREMELY WEAK SANDSTONE - Light grey/orange, becoming saturated at 3.4m.					
				6.0 7.0 8.0 9.0				Borehole terminated at 5.5m on sandstone.					



EQUIPMENT / METHOD
N Natural exposure
X Existing excavation
BH Backhoe bucket
HA Hand auger
E Excavator
CC Concrete Corer
V V-Bit
TC Tungsten Carbide Bit
S Spade

SUPPORT
SH Shoring
SC Shotcrete
RB Rock Bolts
Nil No support

WATER
N None observed
X Not measured
Water level
Water outflow
Water inflow

MOISTURE
D Dry
M Moist
W Wet
Wp Plastic limit
Wl Liquid limit

PENETRATION
L Low
M Moderate
H High
R Refusal

CONSISTENCY
VS Very Soft
S Soft
F Firm
St Stiff
VSt Very Stiff
H Hard
F Friable

DENSITY
VL Very Loose
L Loose
MD Medium Dense
D Dense
VD Very Dense

SAMPLING & TESTING
A Auger sample
B Bulk sample
U Undisturbed sample
D Disturbed sample
M Moisture content
Ux Tube sample (x mm)
E Environmental sample

pp Pocket penetrometer
S Standard penetration test
VS Vane shear
DCP Dynamic cone penetrometer
FD Field density
WS Water sample
PID Photo Ionization Detector

CLASSIFICATION SYMBOLS AND SOIL DESCRIPTION
Y USCS
N Agricultural

EXCAVATION LOG TO BE READ IN CONJUNCTION WITH ACCOMPANYING REPORT NOTES AND ABBREVIATIONS

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Engineering Log - Borehole

Quality Sheet No. 4

CLIENT	**Bayview Links Pty Ltd**	**COMMENCED**	18.10.2012	**COMPLETED**	18.10.2012	**REF**	**BH106**
PROJECT	**Geotechnical and Contamination Assessment**	**LOGGED**	BM/GL	**CHECKED**	GT	**Sheet**	**1 of 1**
SITE	**83 Booralie Road, Terry Hills, NSW**	**GEOLOGY**	Sandstone	**VEGETATION**	Grass	**PROJECT NO.**	P1203558
EQUIPMENT	Hydraulic Auger	**EASTING**	NA	**RL SURFACE**	191mAHD		
EXCAVATION DIMENSIONS	100mmØ X 4.0m depth	**NORTHING**	NA	**ASPECT**	South	**SLOPE**	<5%

EXCAVATION DATA						MATERIAL DATA					SAMPLING & TESTING		
METHOD	SUPPORT	WATER	MOISTURE	DEPTH (M)	PENETRATION RESISTANCE (L M H R)	GRAPHIC LOG	CLASSIFICATION	DESCRIPTION OF STRATA Soil type, texture, structure, mottling, colour, plasticity, rocks, oxidation, particle characteristics, organics, secondary and minor components, fill, contamination, odour.	CONSISTENCY	DENSITY INDEX	TYPE	DEPTH (M)	RESULTS AND ADDITIONAL OBSERVATIONS
V	Nil	N	D	0.2		XX	CL	FILL - SILTY CLAY - Gravels (5-20mm, 10%).			E	0.2	3558/6/ 0.2 + DUP 4 + TRIP 2
V	Nil	N	D	0.9			SP	FILL (?) - SILTY GRAVELY SAND - Light brown, plastics inclusions (wiring).			E	0.5	3558/6/ 0.5
V	Nil	N	D	1.0 1.4			EW	EXTREMELY WEAK SANDSTONE - Light brown. Grading to			E	1.0	3558/6/ 1.0 1.0
V	Nil	N	D	2.0 2.2			EW	EXTREMELY WEAK SANDSTONE - Grey, with orange mottles, stiff, clay like properties.			E B	1.5 1.5	3558/6/ 1.5 3558/6/ 1.5 2.0
V	Nil	N	D	3.0 4.0			S	STRONG SANDSTONE - Grey.			B B	3.0-3.1 3.8-4.0	3558/6/ 3.0-3.1 3.0 3558/6/ 3.8-4.0 4.0
				5.0				Borehole terminated at 4.0m on sandstone.					5.0
				6.0									6.0
				7.0									7.0
				8.0									8.0
				9.0									9.0

EQUIPMENT / METHOD
N Natural exposure
X Existing excavation
BH Backhoe bucket
HA Hand auger
E Excavator
CC Concrete Corer
V V-Bit
TC Tungsten Carbide Bit
S Spade

SUPPORT
SH Shoring
SC Shotcrete
RB Rock Bolts
Nil No support

WATER
N None observed
X Not measured
Water level
Water outflow
Water inflow

MOISTURE
D Dry
M Moist
W Wet
Wp Plastic limit
Wl Liquid limit

PENETRATION
L Low
M Moderate
H High
R Refusal

CONSISTENCY
VS Very Soft
S Soft
F Firm
St Stiff
VSt Very Stiff
H Hard
F Friable

DENSITY
VL Very Loose
L Loose
MD Medium Dense
D Dense
VD Very Dense

SAMPLING & TESTING
A Auger sample
B Bulk sample
U Undisturbed sample
D Disturbed sample
M Moisture content
Ux Tube sample (x mm)
E Environmental sample

pp Pocket penetrometer
S Standard penetration test
VS Vane shear
DCP Dynamic cone penetrometer
FD Field density
WS Water sample
PID Photo Ionization Detector

CLASSIFICATION SYMBOLS AND SOIL DESCRIPTION
Y USCS
N Agricultural

EXCAVATION LOG TO BE READ IN CONJUNCTION WITH ACCOMPANYING REPORT NOTES AND ABBREVIATIONS

martens

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Engineering Log - Borehole

CLIENT	**Bayview Links Pty Ltd**	**COMMENCED**	18.10.2012	**COMPLETED**	18.10.2012	**REF**	**BH107**
PROJECT	**Geotechnical and Contamination Assessment**	**LOGGED**	BM/GL	**CHECKED**	GT	**Sheet**	**1 of 1**
SITE	**83 Booralie Road, Terry Hills, NSW**	**GEOLOGY**	Sandstone	**VEGETATION**	Grass	**PROJECT NO.**	P1203558
EQUIPMENT	Hand Auger	**EASTING**	NA	**RL SURFACE**	191mAHD		
EXCAVATION DIMENSIONS	70mmØ X 1.2m depth	**NORTHING**	NA	**ASPECT**	South	**SLOPE**	<5%

EXCAVATION DATA						MATERIAL DATA				SAMPLING & TESTING			
METHOD	SUPPORT	WATER	MOISTURE	DEPTH (M)	PENETRATION RESISTANCE (L M H R)	GRAPHIC LOG	CLASSIFICATION	DESCRIPTION OF STRATA Soil type, texture, structure, mottling, colour, plasticity, rocks, oxidation, particle characteristics, organics, secondary and minor components, fill, contamination, odour.	CONSISTENCY	DENSITY INDEX	TYPE	DEPTH (M)	RESULTS AND ADDITIONAL OBSERVATIONS
HA	Nil	N	D	0.2			SM	TOP SOIL - SILTY SAND - Light brown.		L	E	0.1	3558/7/ 0.1 + DUP 3
HA	Nil	N	D	1.0			SP	SAND - Light brown, fine grained, with minor clay.		L	E E	0.5 1.0	3558/7/ 0.5 3558/7/ 1.0
HA	Nil	N	D	1.2 2.0			EW	EXTREMELY WEAK SANDSTONE - Light grey, with orange mottles, sandy clay properties.			E B	1.5 1.5-1.6	3558/7/ 1.5 3558/7/ 1.5-1.6
				3.0 4.0 5.0 6.0 7.0 8.0 9.0				Borehole terminated at 2.0m on extremely weak sandstone.					

EQUIPMENT / METHOD
N Natural exposure
X Existing excavation
BH Backhoe bucket
HA Hand auger
E Excavator
CC Concrete Corer
V V-Bit
TC Tungsten Carbide Bit
S Spade

SUPPORT
SH Shoring
SC Shotcrete
RB Rock Bolts
Nil No support

WATER
N None observed
X Not measured
Water level
Water outflow
Water inflow

MOISTURE
D Dry
M Moist
W Wet
Wp Plastic limit
Wl Liquid limit

PENETRATION
L Low
M Moderate
H High
R Refusal

CONSISTENCY
VS Very Soft
S Soft
F Firm
St Stiff
VSt Very Stiff
H Hard
F Friable

DENSITY
VL Very Loose
L Loose
MD Medium Dense
D Dense
VD Very Dense

SAMPLING & TESTING
A Auger sample
B Bulk sample
U Undisturbed sample
D Disturbed sample
M Moisture content
Ux Tube sample (x mm)
E Environmental sample

pp Pocket penetrometer
S Standard penetration test
VS Vane shear
DCP Dynamic cone penetrometer
FD Field density
WS Water sample
PID Photo Ionization Detector

CLASSIFICATION SYMBOLS AND SOIL DESCRIPTION
Y USCS
N Agricultural

EXCAVATION LOG TO BE READ IN CONJUNCTION WITH ACCOMPANYING REPORT NOTES AND ABBREVIATIONS

Quality Sheet No. 4

martens

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Engineering Log - Borehole

CLIENT	**Bayview Links Pty Ltd**	**COMMENCED**	18.10.2012	**COMPLETED**	18.10.2012	**REF**	**BH108**
PROJECT	**Geotechnical and Contamination Assessment**	**LOGGED**	BM/GL	**CHECKED**	GT	**Sheet**	**1 of 1**
SITE	**83 Booralie Road, Terry Hills, NSW**	**GEOLOGY**	Sandstone	**VEGETATION**	Grass	**PROJECT NO.**	P1203558
EQUIPMENT	Hand Auger	**EASTING**	NA	**RL SURFACE**	191mAHD		
EXCAVATION DIMENSIONS	70mmØ X 1.4m depth	**NORTHING**	NA	**ASPECT**	South	**SLOPE**	<5%

EXCAVATION DATA						MATERIAL DATA				SAMPLING & TESTING			
METHOD	SUPPORT	WATER	MOISTURE	DEPTH (M)	PENETRATION RESISTANCE (L M H R)	GRAPHIC LOG	CLASSIFICATION	DESCRIPTION OF STRATA Soil type, texture, structure, mottling, colour, plasticity, rocks, oxidation, particle characteristics, organics, secondary and minor components, fill, contamination, odour.	CONSISTENCY	DENSITY INDEX	TYPE	DEPTH (M)	RESULTS AND ADDITIONAL OBSERVATIONS
HA	Nil	N	D	0.3			SM	SILTY SAND - Light brown, fine grained.			E	0.1	3558/8/ 0.1
HA	Nil	N	D	1.0			SP	SAND - Light brown/brown, minor fines, fine to medium grained.			E E	0.5 1.0	3558/8/ 0.5 3558/8/ 1.0
				1.4				Borehole terminated at 1.4m on extremely weak sandstone.					
				2.0									
				3.0									
				4.0									
				5.0									
				6.0									
				7.0									
				8.0									
				9.0									

EQUIPMENT / METHOD
N Natural exposure
X Existing excavation
BH Backhoe bucket
HA Hand auger
E Excavator
CC Concrete Corer
V V-Bit
TC Tungsten Carbide Bit
S Spade

SUPPORT
SH Shoring
SC Shotcrete
RB Rock Bolts
Nil No support

WATER
N None observed
X Not measured
Water level
Water outflow
Water inflow

MOISTURE
D Dry
M Moist
W Wet
Wp Plastic limit
Wl Liquid limit

PENETRATION
L Low
M Moderate
H High
R Refusal

CONSISTENCY
VS Very Soft
S Soft
F Firm
St Stiff
VSt Very Stiff
H Hard
F Friable

DENSITY
VL Very Loose
L Loose
MD Medium Dense
D Dense
VD Very Dense

SAMPLING & TESTING
A Auger sample
B Bulk sample
U Undisturbed sample
D Disturbed sample
M Moisture content
Ux Tube sample (x mm)
E Environmental sample

pp Pocket penetrometer
S Standard penetration test
VS Vane shear
DCP Dynamic cone penetrometer
FD Field density
WS Water sample
PID Photo Ionization Detector

CLASSIFICATION SYMBOLS AND SOIL DESCRIPTION
Y USCS
N Agricultural

EXCAVATION LOG TO BE READ IN CONJUNCTION WITH ACCOMPANYING REPORT NOTES AND ABBREVIATIONS

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Engineering Log - Borehole

Quality Sheet No. 4

15 Attachment E – Data Validation Report

DATA VALIDATION REPORT - STAGE 1 and 2 ESA: 83 Booralie Road, Terry Hills

1. Sample Handling

	Yes	No (Comments below)
a. Were sample holding times met?	✓	
b. Were samples in proper custody between the field and reaching the laboratory?	✓	
c. Were the samples properly and adequately preserved?	✓	
d. Were the samples received by the laboratory in good condition?	✓	

COMMENTS

Sample handling is:

- ✓ Satisfactory
- Partially Satisfactory
- Unsatisfactory

DATA VALIDATION REPORT - STAGE 1 and 2 ESA: 83 Booralie Road, Terry Hills

2. Precision / Accuracy Statement

	Yes	No (Comments below)
a. Was a NATA registered laboratory used?	✓	
b. Did the laboratory perform the requested tests?	✓	
c. Were laboratory methods adopted NATA endorsed?	✓	
d. Were appropriate test procedures followed?	✓	
e. Were reporting limits satisfactory?	✓	
f. Was the NATA Seal on the reports?	✓	
g. Were reports signed by an authorised person?	✓	

COMMENTS

Precision / Accuracy of the Laboratory Report:

✓ Satisfactory

Partially Satisfactory

Unsatisfactory

DATA VALIDATION REPORT - STAGE 1 and 2 ESA: 83 Booralie Road, Terry Hills

3. Field Quality Assurance / Quality Control (QA/QC)

	Media	Number
a. Number of Primary Samples analysed *(does not include duplicates)*	Soil:	35
	Water:	-
b. Number of days of sampling		1

c. Number and Type of QA/QC Samples analysed	Soil	Water
Intra-Laboratory Field Duplicates	2	
Inter-Laboratory Field triplicates		
Trip Blanks	1	
Wash Blanks		
Other (Field Blanks, Spikes,Trip Blanks, etc.)	1	

Field Duplicates

	Yes	No (Comments below)
Adequate Numbers of intra-laboratory field duplicates analysed?	✓	
Adequate Numbers of inter-laboratory field duplicates analysed?	✓	
Were RPDs within Control Limits?		
i. Organics (+ 50%)	✓	
ii. Metals / Inorganics (+ 50%)	✓	
iii. Nutrients (+ 50%)	N/A	

COMMENTS

.

RPD for nickel is greater than 50% for 3558/Dup 1 (67%) however the concentration levels are less than 5 times the LOR and is therefore considered and acceptable result.

DATA VALIDATION REPORT - STAGE 1 and 2 ESA: 83 Booralie Road, Terry Hills

Trip Blank / Wash Blanks

	Yes	No (Comments below)
Were Adequate Numbers of trip blanks analysed?	✓	
Were Adequate Numbers of wash blanks analysed?	✓	
Were the Trip Blanks free of contaminants?	✓	
Were the Wash Blanks free of contaminants?	✓	
(If no, comment whether the contaminants present are also detected in the samples and whether they are common laboratory chemicals.)		

COMMENTS

Trip Spikes

	Yes	No (Comments below)
Were adequate numbers of Trip Spikes analysed?	✓	
Were the Trip Spike results within control limits?	✓	

COMMENTS

Field QA/QC:	✓	Satisfactory
		Partially Satisfactory
		Unsatisfactory

DATA VALIDATION REPORT - STAGE 1 and 2 ESA: 83 Booralie Road, Terry Hills

3. Summary of Quality Assurance / Quality Control (QA/QC)

QA/QC Type	Satisfactory	Partially Satisfactory	Unsatisfactory
Sample handling	✓		
Precision / Accuracy of the Laboratory Report	✓		
Field QA / QC	✓		
Laboratory Internal QA / QC	✓		

4. **Data** Usability

1. Data directly usable ✓

2. Data usable with the following corrections/modifications
(see comment below)

3. Data not usable.

COMMENTS

16 Attachment F – NSW WorkCover Dangerous Goods Register Search Documents

WorkCover NSW
92-100 Donnison Street, Gosford, NSW 2250
Locked Bag 2906, Lisarow, NSW 2252
T 02 4321 5000 F 02 4325 4145
WorkCover Assistance Service 13 10 50
DX 731 Sydney workcover.nsw.gov.au

Our Ref: D12/153601
Your Ref: Gray Taylor

24 October 2012

Attention: Gray Taylor
Martens & Associates
Unit 6, 37 Leighton Place
Hornsby NSW 2077

BY: .....

RECEIVED
25 OCT 2012

Dear Mr Taylor,

RE SITE: 83 Booralie Rd Terrey Hills NSW

I refer to your site search request received by WorkCover NSW on 16 October 2012 requesting information on licences to keep dangerous goods for the above site.

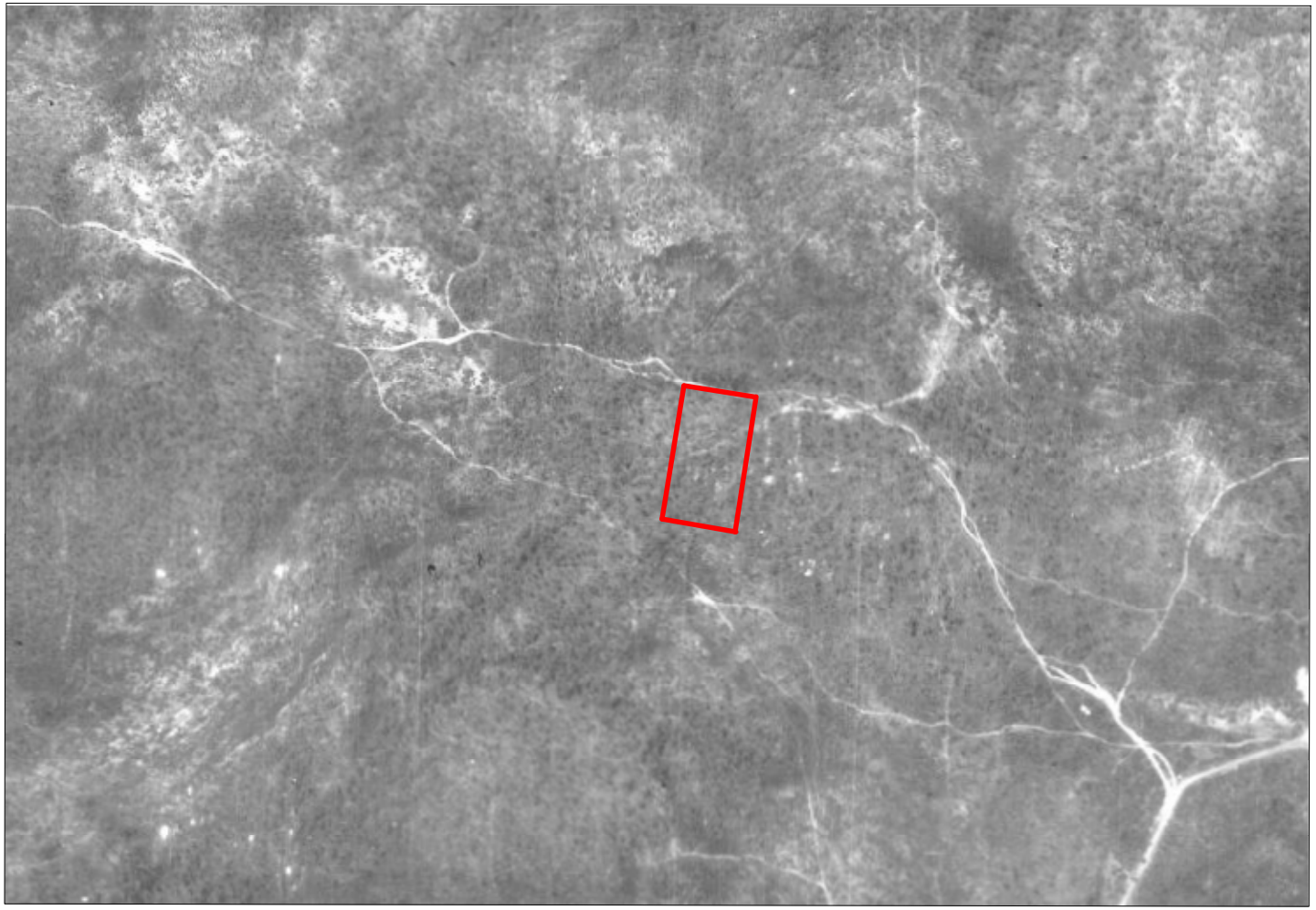
A search of the Stored Chemical Information Database (SCID) and the microfiche records held by WorkCover NSW has not located any records pertaining to the above mentioned premises.

If you have any further queries please contact the Dangerous Goods Licensing Team on (02) 4321 5500.

Yours Sincerely

Brent Jones
Senior Licensing Officer
Dangerous Goods Team

17 Attachment G – Historic Aerials



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APPROXIMATE SITE BOUNDARY

AERIAL SOURCE: NSW DEPT LANDS

Martens & Associates Pty Ltd ABN 85 070 240 890		**Environment | Water | Wastewater | Geotechnical | Civil | Management**	
Drawn:	BM	**83 Booralie Road, Terry Hills** **1930 AERIAL**	Drawing No.: **P1404413JD01V01**
Approved:	GT		
Date:	01.11.2014		
Scale @A4:	NA	Suite 201, Level 2, 20 George Street, Hornsby, NSW 2077 Australia Phone: (02) 9476 9999 Fax: (02) 9476 8767 Email: mail@martens.com.au Internet: http://www.martens.com.au	Job No.: P1404413

martens

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APPROXIMATE SITE BOUNDARY

AERIAL SOURCE: NSW DEPT LANDS

Martens & Associates Pty Ltd ABN 85 070 240 890		**Environment | Water | Wastewater | Geotechnical | Civil | Management**	
Drawn:	BM	**83 Booralie Road, Terry Hills** **1955 AERIAL**	Drawing No.: **P1404413JD01V01**
Approved:	GT		
Date:	01.11.14		
Scale @A4:	NA	Suite 201, Level 2, 20 George Street, Hornsby, NSW 2077 Australia Phone: (02) 9476 9999 Fax: (02) 9476 8767 Email: mail@martens.com.au Internet: http://www.martens.com.au	Job No.: P1203558

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APPROXIMATE SITE BOUNDARY

AERIAL SOURCE: NSW DEPT LANDS

Martens & Associates Pty Ltd ABN 85 070 240 890		**Environment | Water | Wastewater | Geotechnical | Civil | Management**	
Drawn:	BM	**83 Booralie Road, Terry Hills** **1978 AERIAL**	Drawing No.: **P1404413JD01V01**
Approved:	GT		
Date:	01.11.14		
Scale @A4:	NA	Suite 201, Level 2, 20 George Street, Hornsby, NSW 2077 Australia Phone: (02) 9476 9999 Fax: (02) 9476 8767 Email: mail@martens.com.au Internet: http://www.martens.com.au	Job No.: P1404413

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APPROXIMATE SITE BOUNDARY

AERIAL SOURCE: NSW DEPT LANDS

Martens & Associates Pty Ltd ABN 85 070 240 890		**Environment | Water | Wastewater | Geotechnical | Civil | Management**	
Drawn:	BM	**83 Booralie Road, Terry Hills** **2002 AERIAL**	Drawing No.: **P1404413JD01V01**
Approved:	GT		
Date:	01.11.14		
Scale @A4:	NA	Suite 201, Level 2, 20 George Street, Hornsby, NSW 2077 Australia Phone: (02) 9476 9999 Fax: (02) 9476 8767 Email: mail@martens.com.au Internet: http://www.martens.com.au	Job No.: P1404413

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APPROXIMATE SITE BOUNDARY

AERIAL SOURCE: GOOGLE MAPS

Martens & Associates Pty Ltd ABN 85 070 240 890		**Environment | Water | Wastewater | Geotechnical | Civil | Management**	
Drawn:	BM	**83 Booralie Road, Terry Hills** **2012 AERIAL**	Drawing No.: **P1404413JD01V01**
Approved:	GT		
Date:	01.11.14		
Scale @A4:	NA	Suite 201, Level 2, 20 George Street, Hornsby, NSW 2077 Australia Phone: (02) 9476 9999 Fax: (02) 9476 8767 Email: mail@martens.com.au Internet: http://www.martens.com.au	Job No.: P1404413

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APPROXIMATE SITE BOUNDARY

AERIAL SOURCE: GOOGLE MAPS

Martens & Associates Pty Ltd ABN 85 070 240 890		**Environment | Water | Wastewater | Geotechnical | Civil | Management**	
Drawn:	BM	**83 Booralie Road, Terry Hills** **2014 AERIAL**	Drawing No.: **P1404413JD01V01**
Approved:	GT		
Date:	01.11.14		
Scale @A4:	NA	Suite 201, Level 2, 20 George Street, Hornsby, NSW 2077 Australia Phone: (02) 9476 9999 Fax: (02) 9476 8767 Email: mail@martens.com.au Internet: http://www.martens.com.au	Job No.: P1404413

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