

Appendix B

Laboratory Results (Phase 2 Investigation)

Nos. 389-389A Gosbrook Road & Nos. 2-4 Send Road,
Caversham
Reading
Berkshire
RG4 8EH

Project Reference J163A

Sackedgate Limited
26 Reading Road
Burghfield Common
Reading
RG7 3QA



Attention : Julian Puzyna
Date : 22nd December, 2022
Your reference : J163
Our reference : Test Report 22/20491 Batch 1
Location : Send Road, Caversham, Reading
Date samples received : 12th December, 2022
Status : Final Report
Issue : 1

Ten samples were received for analysis on 12th December, 2022 of which ten were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Authorised By:



Phil Sommerton BSc

Senior Project Manager

Please include all sections of this report if it is reproduced

Element Materials Technology

Client Name: Sackedgate Limited
Reference: J163
Location: Send Road, Caversham, Reading
Contact: Julian Puzyna
EMT Job No: 22/20491

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	1-2	3-4	5-6	7-9	10-11	12-14	15,18-19	16-17	20-21	22-23	Please see attached notes for all abbreviations and acronyms		
Sample ID	WS1	WS1	BH1	BH2	WS3	WS3	WS4	WS4	HD1	HD2			
Depth	0.30	0.80	0.60	0.50	0.60	2.80	1.70	0.40	0.50	0.30			
COC No / misc													
Containers	J B	J B	J B	V J B	J B	V J B	V J B	J B	J B	J B			
Sample Date	07/12/2022	07/12/2022	07/12/2022	07/12/2022	07/12/2022	07/12/2022	07/12/2022	07/12/2022	07/12/2022	07/12/2022			
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil			
Batch Number	1	1	1	1	1	1	1	1	1	1			
Date of Receipt	12/12/2022	12/12/2022	12/12/2022	12/12/2022	12/12/2022	12/12/2022	12/12/2022	12/12/2022	12/12/2022	12/12/2022	LOD/LOR	Units	Method No.
Arsenic #	18.3	15.8	25.0	17.2	32.4	19.3	34.0	25.1	23.6	26.2	<0.5	mg/kg	TM30/PM15
Cadmium #	0.3	<0.1	0.1	0.4	1.8	<0.1	<0.1	0.2	0.9	0.5	<0.1	mg/kg	TM30/PM15
Chromium #	53.8	72.6	59.5	63.6	55.0	46.6	45.8	47.4	183.7	65.7	<0.5	mg/kg	TM30/PM15
Copper #	43	16	31	44	115	7	7	50	106	40	<1	mg/kg	TM30/PM15
Lead #	152	35	160	177	421	7	13	98	239	114	<5	mg/kg	TM30/PM15
Mercury #	0.3	<0.1	0.2	0.4	1.3	<0.1	<0.1	0.6	0.3	0.2	<0.1	mg/kg	TM30/PM15
Nickel #	37.0	21.0	34.9	32.1	45.4	15.6	22.3	33.7	36.2	36.2	<0.7	mg/kg	TM30/PM15
Vanadium	47	43	61	47	63	39	54	56	51	59	<1	mg/kg	TM30/PM15
Zinc #	263	69	148	189	1085	34	55	130	521	258	<5	mg/kg	TM30/PM15
PAH MS													
Naphthalene #	0.11	<0.04	0.08	<0.04	0.20	<0.04	<0.04	<0.04	0.13	<0.04	<0.04	mg/kg	TM4/PM8
Acenaphthylene	0.41	<0.03	0.57	0.16	0.50	<0.03	<0.03	<0.03	0.60	0.20	<0.03	mg/kg	TM4/PM8
Acenaphthene #	<0.05	<0.05	<0.05	<0.05	0.09	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	mg/kg	TM4/PM8
Fluorene #	0.06	<0.04	0.05	<0.04	0.20	<0.04	<0.04	<0.04	0.06	<0.04	<0.04	mg/kg	TM4/PM8
Phenanthrene #	1.26	<0.03	0.74	0.16	4.96	<0.03	<0.03	0.05	1.30	0.17	<0.03	mg/kg	TM4/PM8
Anthracene #	0.32	<0.04	0.45	0.12	0.42	<0.04	<0.04	<0.04	0.37	0.10	<0.04	mg/kg	TM4/PM8
Fluoranthene #	2.97	0.04	3.38	0.61	7.42	<0.03	<0.03	0.15	3.76	0.52	<0.03	mg/kg	TM4/PM8
Pyrene #	2.56	0.05	3.15	0.53	5.74	<0.03	<0.03	0.13	3.50	0.48	<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene #	1.41	<0.06	1.82	0.46	2.03	<0.06	<0.06	0.11	2.40	0.54	<0.06	mg/kg	TM4/PM8
Chrysene #	1.59	0.04	2.13	0.56	3.36	<0.02	<0.02	0.10	2.90	0.59	<0.02	mg/kg	TM4/PM8
Benzo(b)fluoranthene #	3.12	<0.07	4.49	1.31	5.25	<0.07	<0.07	0.18	7.90	2.04	<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene #	1.62	<0.04	2.36	0.71	2.55	<0.04	<0.04	<0.04	4.10	1.06	<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene #	1.28	<0.04	1.96	0.68	2.18	<0.04	<0.04	0.08	3.95	1.24	<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene #	0.22	<0.04	0.42	0.13	0.35	<0.04	<0.04	<0.04	0.54	0.16	<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene #	0.99	<0.04	1.71	0.56	1.67	<0.04	<0.04	0.06	3.59	1.14	<0.04	mg/kg	TM4/PM8
PAH 16 Total	17.9	<0.6	23.3	6.0	36.9	<0.6	<0.6	0.9	35.1	8.2	<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	2.25	<0.05	3.23	0.94	3.78	<0.05	<0.05	0.13	5.69	1.47	<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	0.87	<0.02	1.26	0.37	1.47	<0.02	<0.02	0.05	2.21	0.57	<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	91	89	93	92	93	95	92	90	91	105	<0	%	TM4/PM8
VOC TICs	-	-	-	ND	-	ND	ND	-	-	-		None	TM15/PM10
EPH >C8-C10 #	<5	<5	<5	<5	<5	<5	<5	<5	7	17	<5	mg/kg	TM5/PM8
EPH >C10-C12 #	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	mg/kg	TM5/PM8
EPH >C12-C16 #	<10	<10	<10	<10	<10	<10	<10	<10	19	<10	<10	mg/kg	TM5/PM8
EPH >C16-C21 #	55	<10	24	22	80	<10	<10	<10	117	20	<10	mg/kg	TM5/PM8
EPH >C21-C40	180	<10	75	124	280	<10	<10	63	638	183	<10	mg/kg	TM5/PM8
EPH >C8-C40	235	<30	99	146	360	<30	<30	63	781	220	<30	mg/kg	TM5/PM8
Natural Moisture Content	26.9	4.3	19.7	20.1	12.9	14.8	11.7	25.5	17.8	15.2	<0.1	%	PM4/PM0
Hexavalent Chromium #	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	mg/kg	TM38/PM20
Chromium III	53.8	72.6	59.5	63.6	55.0	46.6	45.8	47.4	183.7	65.7	<0.5	mg/kg	NONE/NONE

Element Materials Technology

Client Name: Sackedgate Limited
Reference: J163
Location: Send Road, Caversham, Reading
Contact: Julian Puzyna
EMT Job No: 22/20491

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

[illegible]

Element Materials Technology

Client Name: Sackedgate Limited
Reference: J163
Location: Send Road, Caversham, Reading
Contact: Julian Puzyna
EMT Job No: 22/20491

VOC Report : Solid

EMT Sample No.	7-9	12-14	15,18-19								Please see attached notes for all abbreviations and acronyms		
Sample ID	BH2	WS3	WS4										
Depth	0.50	2.80	1.70										
COC No / misc													
Containers	V J B	V J B	V J B										
Sample Date	07/12/2022	07/12/2022	07/12/2022										
Sample Type	Soil	Soil	Soil										
Batch Number	1	1	1								LOD/LOR	Units	Method No.
Date of Receipt	12/12/2022	12/12/2022	12/12/2022										
VOC MS													
Dichlorodifluoromethane	<2	<2	<2								<2	ug/kg	TM15/PM10
Methyl Tertiary Butyl Ether #	<2	<2	<2								<2	ug/kg	TM15/PM10
Chloromethane #	<3	<3	<3								<3	ug/kg	TM15/PM10
Vinyl Chloride	<2	<2	<2								<2	ug/kg	TM15_A/PM10
Bromomethane	<1	<1	<1								<1	ug/kg	TM15/PM10
Chloroethane #	<2	<2	<2								<2	ug/kg	TM15/PM10
Trichlorofluoromethane #	<2	<2	<2								<2	ug/kg	TM15/PM10
1,1-Dichloroethene (1,1 DCE) #	<6	<6	<6								<6	ug/kg	TM15/PM10
Dichloromethane (DCM) #	<7	<7	<7								<7	ug/kg	TM15/PM10
trans-1-2-Dichloroethene #	<3	<3	<3								<3	ug/kg	TM15/PM10
1,1-Dichloroethane #	<3	<3	<3								<3	ug/kg	TM15/PM10
cis-1-2-Dichloroethene #	<3	<3	<3								<3	ug/kg	TM15/PM10
2,2-Dichloropropane	<4	<4	<4								<4	ug/kg	TM15/PM10
Bromochloromethane #	<3	<3	<3								<3	ug/kg	TM15/PM10
Chloroform #	<3	<3	<3								<3	ug/kg	TM15/PM10
1,1,1-Trichloroethane #	<3	<3	<3								<3	ug/kg	TM15/PM10
1,1-Dichloropropene #	<3	<3	<3								<3	ug/kg	TM15/PM10
Carbon tetrachloride #	<4	<4	<4								<4	ug/kg	TM15/PM10
1,2-Dichloroethane #	<4	<4	<4								<4	ug/kg	TM15/PM10
Benzene #	<3	<3	<3								<3	ug/kg	TM15/PM10
Trichloroethene (TCE) #	<3	<3	<3								<3	ug/kg	TM15/PM10
1,2-Dichloropropane #	<6	<6	<6								<6	ug/kg	TM15/PM10
Dibromomethane #	<3	<3	<3								<3	ug/kg	TM15/PM10
Bromodichloromethane #	<3	<3	<3								<3	ug/kg	TM15/PM10
cis-1-3-Dichloropropene	<4	<4	<4								<4	ug/kg	TM15/PM10
Toluene #	8	<3	<3								<3	ug/kg	TM15/PM10
trans-1-3-Dichloropropene	<3	<3	<3								<3	ug/kg	TM15/PM10
1,1,2-Trichloroethane #	<3	<3	<3								<3	ug/kg	TM15/PM10
Tetrachloroethene (PCE) #	<3	<3	<3								<3	ug/kg	TM15/PM10
1,3-Dichloropropane #	<3	<3	<3								<3	ug/kg	TM15/PM10
Dibromochloromethane #	<3	<3	<3								<3	ug/kg	TM15/PM10
1,2-Dibromoethane #	<3	<3	<3								<3	ug/kg	TM15/PM10
Chlorobenzene #	<3	<3	<3								<3	ug/kg	TM15/PM10
1,1,1,2-Tetrachloroethane #	<3	<3	<3								<3	ug/kg	TM15/PM10
Ethylbenzene #	<3	<3	<3								<3	ug/kg	TM15/PM10
m/p-Xylene #	<5	<5	<5								<5	ug/kg	TM15/PM10
o-Xylene #	<3	<3	<3								<3	ug/kg	TM15/PM10
Styrene	<3	<3	<3								<3	ug/kg	TM15_A/PM10
Bromoform	<3	<3	<3								<3	ug/kg	TM15/PM10
Isopropylbenzene #	<3	<3	<3								<3	ug/kg	TM15/PM10
1,1,2,2-Tetrachloroethane #	<3	<3	<3								<3	ug/kg	TM15/PM10
Bromobenzene	<2	<2	<2								<2	ug/kg	TM15/PM10
1,2,3-Trichloropropane #	<4	<4	<4								<4	ug/kg	TM15/PM10
Propylbenzene #	<4	<4	<4								<4	ug/kg	TM15/PM10
2-Chlorotoluene	<3	<3	<3								<3	ug/kg	TM15/PM10
1,3,5-Trimethylbenzene #	<3	<3	<3								<3	ug/kg	TM15/PM10
4-Chlorotoluene	<3	<3	<3								<3	ug/kg	TM15/PM10
tert-Butylbenzene #	<5	<5	<5								<5	ug/kg	TM15/PM10
1,2,4-Trimethylbenzene #	7	<6	<6								<6	ug/kg	TM15/PM10
sec-Butylbenzene #	<4	<4	<4								<4	ug/kg	TM15/PM10
4-Isopropyltoluene	<4	<4	<4								<4	ug/kg	TM15/PM10
1,3-Dichlorobenzene #	<4	<4	<4								<4	ug/kg	TM15/PM10
1,4-Dichlorobenzene #	<4	<4	<4								<4	ug/kg	TM15/PM10
n-Butylbenzene	<4	<4	<4								<4	ug/kg	TM15/PM10
1,2-Dichlorobenzene #	<4	<4	<4								<4	ug/kg	TM15/PM10
1,2-Dibromo-3-chloropropane	<4	<4	<4								<4	ug/kg	TM15/PM10
1,2,4-Trichlorobenzene	<7	<7	<7								<7	ug/kg	TM15/PM10
Hexachlorobutadiene	<4	<4	<4								<4	ug/kg	TM15/PM10
Naphthalene	<27	<27	<27								<27	ug/kg	TM15/PM10
1,2,3-Trichlorobenzene	<7	<7	<7								<7	ug/kg	TM15/PM10
Surrogate Recovery Toluene D8	92	111	94								<0	%	TM15/PM10
Surrogate Recovery 4-Bromofluorobenzene	72	92	88								<0	%	TM15/PM10

Client Name: Sackedgate Limited
Reference: J163
Location: Send Road, Caversham, Reading
Contact: Julian Puzyra

Note:

Asbestos Screen analysis is carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Detailed Gravimetric Quantification and PCOM Fibre Analysis is carried out in accordance with our documented in-house methods PM042 and TM131 and HSG 248 using Stereo and Polarised Light Microscopy and Phase Contrast Optical Microscopy (PCOM). Asbestos sub-samples are retained for not less than 6 months from the date of analysis unless specifically requested.

The LOQ of the Asbestos Quantification is 0.001% dry fibre of dry mass of sample.

Where the sample is not taken by a Element Materials Technology consultant, Element Materials Technology cannot be responsible for inaccurate or unrepresentative sampling.

Where trace asbestos is reported the amount of asbestos will be <0.1%.

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analyst Name	Date Of Analysis	Analysis	Result
22/20491	1	WS1	0.30	2	Simon Postlewhite	22/12/2022	General Description (Bulk Analysis)	Brown soil/stones
					Simon Postlewhite	22/12/2022	Asbestos Fibres	NAD
					Simon Postlewhite	22/12/2022	Asbestos ACM	NAD
					Simon Postlewhite	22/12/2022	Asbestos Type	NAD
22/20491	1	WS1	0.80	4	Simon Postlewhite	22/12/2022	General Description (Bulk Analysis)	Brown soil/stones
					Simon Postlewhite	22/12/2022	Asbestos Fibres	NAD
					Simon Postlewhite	22/12/2022	Asbestos ACM	NAD
					Simon Postlewhite	22/12/2022	Asbestos Type	NAD
22/20491	1	BH1	0.60	6	Simon Postlewhite	22/12/2022	General Description (Bulk Analysis)	Brown soil/stones
					Simon Postlewhite	22/12/2022	Asbestos Fibres	NAD
					Simon Postlewhite	22/12/2022	Asbestos ACM	NAD
					Simon Postlewhite	22/12/2022	Asbestos Type	NAD
22/20491	1	BH2	0.50	9	Simon Postlewhite	22/12/2022	General Description (Bulk Analysis)	Brown soil/stones
					Simon Postlewhite	22/12/2022	Asbestos Fibres	NAD
					Simon Postlewhite	22/12/2022	Asbestos ACM	NAD
					Simon Postlewhite	22/12/2022	Asbestos Type	NAD
22/20491	1	WS3	0.60	11	Simon Postlewhite	22/12/2022	General Description (Bulk Analysis)	Brown soil/stones
					Simon Postlewhite	22/12/2022	Asbestos Fibres	NAD
					Simon Postlewhite	22/12/2022	Asbestos ACM	NAD
					Simon Postlewhite	22/12/2022	Asbestos Type	NAD
22/20491	1	WS3	2.80	14	Simon Postlewhite	22/12/2022	General Description (Bulk Analysis)	Brown soil/stones
					Simon Postlewhite	22/12/2022	Asbestos Fibres	NAD
					Simon Postlewhite	22/12/2022	Asbestos ACM	NAD
					Simon Postlewhite	22/12/2022	Asbestos Type	NAD
22/20491	1	WS4	0.40	17	Simon Postlewhite	22/12/2022	General Description (Bulk Analysis)	Brown soil/stones
					Simon Postlewhite	22/12/2022	Asbestos Fibres	NAD
					Simon Postlewhite	22/12/2022	Asbestos ACM	NAD
					Simon Postlewhite	22/12/2022	Asbestos Type	NAD
22/20491	1	WS4	1.70	19	Simon Postlewhite	22/12/2022	General Description (Bulk Analysis)	Brown soil/stones
					Simon Postlewhite	22/12/2022	Asbestos Fibres	NAD
					Simon Postlewhite	22/12/2022	Asbestos ACM	NAD
					Simon Postlewhite	22/12/2022	Asbestos Type	NAD

Client Name: Sackedgate Limited
Reference: J163
Location: Send Road, Caversham
Contact: Julian Puzyna

[illegible]

Client Name: Sackedgate Limited

Reference: J163

Location: Send Road, Caversham, Reading

Contact: Julian Puzyna

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 22/20491

SOILS and ASH

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary. Asbestos samples are retained for 6 months.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C. Ash samples are dried at 37°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

STACK EMISSIONS

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation for Dioxins and Furans and Dioxin like PCBs has been performed on XAD-2 Resin, only samples which use this resin will be within our MCERTS scope.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

Laboratory records are kept for a period of no less than 6 years.

REPORTS FROM THE SOUTH AFRICA LABORATORY

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

Measurement Uncertainty

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

Customer Provided Information

Sample ID and depth is information provided by the customer.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above calibration range, the result should be considered the minimum value. The actual result could be significantly higher.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

EMT Job No: 22/20491

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465:1993(E) and BS1377-2:1990.	PM0	No preparation is required.			AR	
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM5	Modified 8015B v2:1996 method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) within the range C8-C40 by GCFID. For waters the solvent extracts dissolved phase plus a sheen if present.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM5	Modified 8015B v2:1996 method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) within the range C8-C40 by GCFID. For waters the solvent extracts dissolved phase plus a sheen if present.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM15	Modified USEPA 8260B v2:1996. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes
TM15	Modified USEPA 8260B v2:1996. Quantitative Determination of Volatile Organic Compounds (VOCs) by Headspace GC-MS.	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.	Yes		AR	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP 6010B, Rev.2, Dec.1996; Modified EPA Method 3050B, Rev.2, Dec.1996	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.			AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP 6010B, Rev.2, Dec.1996; Modified EPA Method 3050B, Rev.2, Dec.1996	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes		AD	Yes
TM38	Soluble Ion analysis using Discrete Analyser. Modified US EPA methods: Chloride 325.2 (1978), Sulphate 375.4 (Rev.2 1993), o-Phosphate 365.2 (Rev.2 1993), TON 353.1 (Rev.2 1993), Nitrite 354.1 (1971), Hex Cr 7196A (1992), NH4+ 350.1 (Rev.2 1993) – All anions comparable to BS ISO 15923-1: 2013	PM20	Extraction of dried and ground or as received samples with deionised water in a 2:1 water to solid ratio using a reciprocal shaker for all analytes except hexavalent chromium. Extraction of as received sample using 10:1 ratio of 0.2M sodium hydroxide to soil for hexavalent chromium using a reciprocal shaker.	Yes		AR	Yes

EMT Job No: 22/20491

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM65	Asbestos Bulk Identification method based on HSG 248 Second edition (2021)	PM42	Modified SCA Blue Book V.12 draft 2017 and WM3 1st Edition v1.1:2018. Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	
TM73	Modified US EPA methods 150.1 (1982) and 9045D Rev. 4 - 2004) and BS1377-3:1990. Determination of pH by Metrohm automated probe analyser.	PM11	Extraction of as received solid samples using one part solid to 2.5 parts deionised water.	Yes		AR	No
TM89	Modified USEPA method OIA-1667 (1999). Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide, Sulphide and Thiocyanate analysis.	Yes		AR	Yes
NONE	No Method Code	NONE	No Method Code			AD	Yes
TM15_A	Modified USEPA 8260B v2:1996. Quantitative Determination of Volatile Organic Compounds, Vinyl Chloride & Styrene by Headspace GC-MS.	PM10	Modified US EPA method 5021A v2:2014. Preparation of solid and liquid samples for GC headspace analysis.			AR	Yes

Sackedgate Limited
26 Reading Road
Burghfield Common
Reading
RG7 3QA



Attention : Julian Puzyna
Date : 11th January, 2023
Your reference : J163 (batch 2)
Our reference : Test Report 22/21218 Batch 1
Location : Send Road, Caversham, Reading
Date samples received : 23rd December, 2022
Status : Final Report
Issue : 1

Five samples were received for analysis on 23rd December, 2022 of which five were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

Authorised By:



Phil Sommerton BSc

Senior Project Manager

Please include all sections of this report if it is reproduced

Element Materials Technology

Client Name: Sackedgate Limited
Reference: J163 (batch 2)
Location: Send Road, Caversham, Reading
Contact: Julian Puzyna
EMT Job No: 22/21218

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	1-2	3-4	5-6	7-8	9-10						Please see attached notes for all abbreviations and acronyms		
Sample ID	HD3	WS5	WS5	BH3	BH3								
Depth	0.50	0.40	1.80	0.10	0.60								
COC No / misc													
Containers	J B	J B	J B	J B	J B								
Sample Date	19/12/2022	19/12/2022	19/12/2022	19/12/2022	19/12/2022								
Sample Type	Clay	Clay	Clayey Sand	Clay	Clay								
Batch Number	1	1	1	1	1								
Date of Receipt	23/12/2022	23/12/2022	23/12/2022	23/12/2022	23/12/2022						LOD/LOR	Units	Method No.
Arsenic #	21.2	27.0	20.2	27.5	33.4						<0.5	mg/kg	TM30/PM15
Cadmium #	0.8	0.2	<0.1	0.7	<0.1						<0.1	mg/kg	TM30/PM15
Chromium #	123.1	92.6	95.6	113.4	75.5						<0.5	mg/kg	TM30/PM15
Copper #	71	30	8	54	28						<1	mg/kg	TM30/PM15
Lead #	355	60	<5	170	28						<5	mg/kg	TM30/PM15
Mercury #	0.5	0.3	<0.1	0.6	0.1						<0.1	mg/kg	TM30/PM15
Nickel #	32.5	36.8	16.2	44.7	50.1						<0.7	mg/kg	TM30/PM15
Selenium #	2	1	<1	<1	2						<1	mg/kg	TM30/PM15
Total Sulphate as SO4 #	682	492	611	629	352						<50	mg/kg	TM50/PM29
PAH MS													
Naphthalene #	0.09	<0.04	<0.04	0.06	<0.04						<0.04	mg/kg	TM4/PM8
Acenaphthylene	0.34	0.05	<0.03	0.20	<0.03						<0.03	mg/kg	TM4/PM8
Acenaphthene #	<0.05	<0.05	<0.05	<0.05	<0.05						<0.05	mg/kg	TM4/PM8
Fluorene #	0.07	<0.04	<0.04	<0.04	<0.04						<0.04	mg/kg	TM4/PM8
Phenanthrene #	1.58	0.31	<0.03	0.77	<0.03						<0.03	mg/kg	TM4/PM8
Anthracene #	0.25	<0.04	<0.04	0.20	<0.04						<0.04	mg/kg	TM4/PM8
Fluoranthene #	4.12	0.58	<0.03	2.85	<0.03						<0.03	mg/kg	TM4/PM8
Pyrene #	3.31	0.46	<0.03	2.68	<0.03						<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene #	1.56	0.27	<0.06	1.34	<0.06						<0.06	mg/kg	TM4/PM8
Chrysene #	1.90	0.31	<0.02	1.45	<0.02						<0.02	mg/kg	TM4/PM8
Benzo(k)fluoranthene #	3.09	0.50	<0.07	2.85	<0.07						<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene #	1.59	0.25	<0.04	1.64	<0.04						<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene #	1.45	0.20	<0.04	1.31	<0.04						<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene #	0.26	<0.04	<0.04	0.23	<0.04						<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene #	1.14	0.16	<0.04	1.09	<0.04						<0.04	mg/kg	TM4/PM8
PAH 16 Total	20.8	3.1	<0.6	16.7	<0.6						<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	2.22	0.36	<0.05	2.05	<0.05						<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	0.87	0.14	<0.02	0.80	<0.02						<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	107	105	83	84	83						<0	%	TM4/PM8
EPH >C8-C10 #	<5	<5	<5	<5	<5						<5	mg/kg	TM5/PM8
EPH >C10-C12 #	<10	<10	<10	<10	<10						<10	mg/kg	TM5/PM8
EPH >C12-C16 #	<10	<10	<10	<10	<10						<10	mg/kg	TM5/PM8
EPH >C16-C21 #	69	33	<10	54	<10						<10	mg/kg	TM5/PM8
EPH >C21-C35 #	310	158	<10	203	<10						<10	mg/kg	TM5/PM8
EPH >C8-C35 #	379	191	<30	257	<30						<30	mg/kg	TM5/PM8
Phenol #	<0.01	<0.01	<0.01	<0.01	<0.01						<0.01	mg/kg	TM26/PM21B
Natural Moisture Content	22.5	23.8	8.7	26.3	24.4						<0.1	%	PM4/PM0
Hexavalent Chromium #	<0.3	<0.3	<0.3	<0.3	<0.3						<0.3	mg/kg	TM38/PM20

Element Materials Technology

Client Name: Sackedgate Limited
Reference: J163 (batch 2)
Location: Send Road, Caversham, Reading
Contact: Julian Puzyna
EMT Job No: 22/21218

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

[illegible]

Client Name: Sackedgate Limited
Reference: J163 (batch 2)
Location: Send Road, Caversham, Reading
Contact: Julian Puzyna

Note:

Asbestos Screen analysis is carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Detailed Gravimetric Quantification and PCOM Fibre Analysis is carried out in accordance with our documented in-house methods PM042 and TM131 and HSG 248 using Stereo and Polarised Light Microscopy and Phase Contrast Optical Microscopy (PCOM). Asbestos sub-samples are retained for not less than 6 months from the date of analysis unless specifically requested.

The LOQ of the Asbestos Quantification is 0.001% dry fibre of dry mass of sample.

Where the sample is not taken by a Element Materials Technology consultant, Element Materials Technology cannot be responsible for inaccurate or unrepresentative sampling.

Where trace asbestos is reported the amount of asbestos will be <0.1%.

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analyst Name	Date Of Analysis	Analysis	Result
22/21218	1	HD3	0.50	2	Simon Postlewhite	10/01/2023	General Description (Bulk Analysis)	Brown soil/stones
					Simon Postlewhite	10/01/2023	Asbestos Fibres	NAD
					Simon Postlewhite	10/01/2023	Asbestos ACM	NAD
					Simon Postlewhite	10/01/2023	Asbestos Type	NAD
22/21218	1	WS5	0.40	4	Charlotte Taylor	10/01/2023	General Description (Bulk Analysis)	brown soil/stones
					Charlotte Taylor	10/01/2023	Asbestos Fibres	NAD
					Charlotte Taylor	10/01/2023	Asbestos ACM	NAD
					Charlotte Taylor	10/01/2023	Asbestos Type	NAD
22/21218	1	WS5	1.80	6	Simon Postlewhite	10/01/2023	General Description (Bulk Analysis)	Brown soil/stones
					Simon Postlewhite	10/01/2023	Asbestos Fibres	NAD
					Simon Postlewhite	10/01/2023	Asbestos ACM	NAD
					Simon Postlewhite	10/01/2023	Asbestos Type	NAD
22/21218	1	BH3	0.10	8	Simon Postlewhite	10/01/2023	General Description (Bulk Analysis)	Brown soil/stones
					Simon Postlewhite	10/01/2023	Asbestos Fibres	NAD
					Simon Postlewhite	10/01/2023	Asbestos ACM	NAD
					Simon Postlewhite	10/01/2023	Asbestos Type	NAD
22/21218	1	BH3	0.60	10	Charlotte Taylor	10/01/2023	General Description (Bulk Analysis)	brown soil/stones
					Charlotte Taylor	10/01/2023	Asbestos Fibres	NAD
					Charlotte Taylor	10/01/2023	Asbestos ACM	NAD
					Charlotte Taylor	10/01/2023	Asbestos Type	NAD

Client Name: Sackedgate Limited

Reference: J163 (batch 2)

Location: Send Road, Caversham, Reading

Contact: Julian Puzyna

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 22/21218

SOILS and ASH

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary. Asbestos samples are retained for 6 months.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C. Ash samples are dried at 37°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

STACK EMISSIONS

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation for Dioxins and Furans and Dioxin like PCBs has been performed on XAD-2 Resin, only samples which use this resin will be within our MCERTS scope.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a UKAS requirement for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

Laboratory records are kept for a period of no less than 6 years.

REPORTS FROM THE SOUTH AFRICA LABORATORY

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

Measurement Uncertainty

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

Customer Provided Information

Sample ID and depth is information provided by the customer.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above calibration range, the result should be considered the minimum value. The actual result could be significantly higher.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

EMT Job No: 22/21218

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465:1993(E) and BS1377-2:1990.	PM0	No preparation is required.			AR	
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM5	Modified 8015B v2:1996 method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) within the range C8-C40 by GCFID. For waters the solvent extracts dissolved phase plus a sheen if present.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
PM13	A visual examination of the solid sample is carried out to ascertain sample make up, colour and any other inclusions. This is not a geotechnical description.	PM0	No preparation is required.			AR	No
TM26	Determination of phenols by Reversed Phased High Performance Liquid Chromatography and Electro-Chemical Detection.	PM21B	As Received samples are extracted in Methanol: Water (60:40) by reciprocal shaker.	Yes		AR	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP 6010B, Rev.2, Dec.1996; Modified EPA Method 3050B, Rev.2, Dec.1996	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes		AD	Yes
TM38	Soluble Ion analysis using Discrete Analyser. Modified US EPA methods: Chloride 325.2 (1978), Sulphate 375.4 (Rev.2 1993), o-Phosphate 365.2 (Rev.2 1993), TON 353.1 (Rev.2 1993), Nitrite 354.1 (1971), Hex Cr 7196A (1992), NH4+ 350.1 (Rev.2 1993) – All anions comparable to BS ISO 15923-1: 2013l	PM20	Extraction of dried and ground or as received samples with deionised water in a 2:1 water to solid ratio using a reciprocal shaker for all analytes except hexavalent chromium. Extraction of as received sample using 10:1 ratio of 0.2M sodium hydroxide to soil for hexavalent chromium using a reciprocal shaker.	Yes		AR	Yes
TM50	Acid soluble sulphate (Total Sulphate) analysed by ICP-OES	PM29	A hot hydrochloric acid digest is performed on a dried and ground sample, and the resulting liquor is analysed.	Yes		AD	Yes
TM65	Asbestos Bulk Identification method based on HSG 248 Second edition (2021)	PM42	Modified SCA Blue Book V.12 draft 2017 and WM3 1st Edition v1.1:2018. Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	

EMT Job No: 22/21218

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM73	Modified US EPA methods 150.1 (1982) and 9045D Rev. 4 - 2004) and BS1377-3:1990. Determination of pH by Metrohm automated probe analyser.	PM11	Extraction of as received solid samples using one part solid to 2.5 parts deionised water.	Yes		AR	No
TM89	Modified USEPA method OIA-1667 (1999). Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide, Sulphide and Thiocyanate analysis.	Yes		AR	Yes

Appendix B

Laboratory Results

Nos. 389-389A Gosbrook Road & Nos. 2-4 Send Road,
Caversham
Reading
Berkshire
RG4 8EH

Project Reference J163A

Sackedgate Limited
26 Reading Road
Burghfield Common
Reading
United Kingdom
RG7 3QA



4225



Attention : Julian Puzyna
Date : 21st March, 2024
Your reference : J163A
Our reference : Test Report 24/2707 Batch 1
Location : Send Road Reading
Date samples received : 16th February, 2024
Status : Final Report
Issue : 202403211241

Three samples were received for analysis on 16th February, 2024 of which three were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

The greenhouse gas emissions generated (in Carbon – Co2e) to obtain the results in this report are estimated as:

Scope 1&2 emissions - 7.747 kg of CO2

Scope 1&2&3 emissions - 18.308 kg of CO2

Authorised By:



Phil Sommerton BSc

Senior Project Manager

Please include all sections of this report if it is reproduced

Element Materials Technology

Client Name: Sackedgate Limited
Reference: J163A
Location: Send Road Reading
Contact: Julian Puzyna
EMT Job No: 24/2707

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	1-2	3-4	5-6								Please see attached notes for all abbreviations and acronyms		
Sample ID	Tyre 1	Tyre 2	Tyre 3										
Depth	0.20	0.20	0.20										
COC No / misc													
Containers	J B	J B	J B										
Sample Date	12/02/2024	12/02/2024	12/02/2024										
Sample Type	Soil	Soil	Soil										
Batch Number	1	1	1										
Date of Receipt	16/02/2024	16/02/2024	16/02/2024								LOD/LOR	Units	Method No.
Arsenic #	21.4	21.6	24.2								<0.5	mg/kg	TM30/PM15
Cadmium #	1.1	0.9	0.4								<0.1	mg/kg	TM30/PM15
Chromium #	80.8	92.7	94.1								<0.5	mg/kg	TM30/PM15
Copper #	44	53	44								<1	mg/kg	TM30/PM15
Lead #	153	224	511								<5	mg/kg	TM30/PM15
Mercury #	0.4	0.7	0.4								<0.1	mg/kg	TM30/PM15
Nickel #	30.9	31.5	32.2								<0.7	mg/kg	TM30/PM15
Vanadium	52	51	54								<1	mg/kg	TM30/PM15
Zinc #	341	407	215								<5	mg/kg	TM30/PM15
PAH MS													
Naphthalene #	0.09	0.07	<0.04								<0.04	mg/kg	TM4/PM8
Acenaphthylene	0.28	0.25	0.22								<0.03	mg/kg	TM4/PM8
Acenaphthene #	<0.05	<0.05	<0.05								<0.05	mg/kg	TM4/PM8
Fluorene #	0.11	0.06	0.06								<0.04	mg/kg	TM4/PM8
Phenanthrene #	1.68	1.34	0.91								<0.03	mg/kg	TM4/PM8
Anthracene #	0.27	0.26	0.28								<0.04	mg/kg	TM4/PM8
Fluoranthene #	3.37	2.59	2.45								<0.03	mg/kg	TM4/PM8
Pyrene #	2.75	2.16	2.04								<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene #	1.23	0.91	1.25								<0.06	mg/kg	TM4/PM8
Chrysene #	1.66	1.26	1.43								<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene #	2.79	2.26	2.79								<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene #	1.50	1.21	1.49								<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene #	1.07	0.93	1.12								<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene #	0.28	0.19	0.32								<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene #	1.06	0.94	1.11								<0.04	mg/kg	TM4/PM8
PAH 16 Total	18.1	14.4	15.5								<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	2.01	1.63	2.01								<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	0.78	0.63	0.78								<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	97	99	99								<0	%	TM4/PM8
EPH >C8-C10 #	<5	<5	<5								<5	mg/kg	TM5/PM8
EPH >C10-C12 #	<10	<10	<10								<10	mg/kg	TM5/PM8
EPH >C12-C16 #	<10	<10	<10								<10	mg/kg	TM5/PM8
EPH >C16-C21 #	34	44	25								<10	mg/kg	TM5/PM8
EPH >C21-C40	262	845	211								<10	mg/kg	TM5/PM8
EPH >C8-C40	296	889	236								<30	mg/kg	TM5/PM8
Natural Moisture Content	21.8	17.9	17.9								<0.1	%	PM4/PM0
Hexavalent Chromium #	<0.3	<0.3	<0.3								<0.3	mg/kg	TM38/PM20
Chromium III	80.8	92.7	94.1								<0.5	mg/kg	NONE/NONE
Total Cyanide #	<0.5	<0.5	<0.5								<0.5	mg/kg	TM89/PM45

Element Materials Technology

Client Name: Sackedgate Limited
Reference: J163A
Location: Send Road Reading
Contact: Julian Puzyna
EMT Job No: 24/2707

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

[illegible]

Client Name: Sackedgate Limited
Reference: J163A
Location: Send Road Reading
Contact: Julian Puzyna

Note:

Asbestos Screen analysis is carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Detailed Gravimetric Quantification and PCOM Fibre Analysis is carried out in accordance with our documented in-house methods PM042 and TM131 and HSG 248 using Stereo and Polarised Light Microscopy and Phase Contrast Optical Microscopy (PCOM). Asbestos sub-samples are retained for not less than 6 months from the date of analysis unless specifically requested.

The LOQ of the Asbestos Quantification is 0.001% dry fibre of dry mass of sample.

Where the sample is not taken by a Element Materials Technology consultant, Element Materials Technology cannot be responsible for inaccurate or unrepresentative sampling.

Where trace asbestos is reported the amount of asbestos will be <0.1%.

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analyst Name	Date Of Analysis	Analysis	Result
24/2707	1	Tyre 1	0.20	2	Charlotte Taylor	22/02/2024	General Description (Bulk Analysis)	brown soil/stones
					Charlotte Taylor	22/02/2024	Asbestos Fibres	Fibre Bundles
					Charlotte Taylor	22/02/2024	Asbestos ACM	NAD
					Charlotte Taylor	22/02/2024	Asbestos Type	Chrysotile
					Emily Anderton	13/03/2024	Total ACM Gravimetric Quantification (% Asb)	<0.001 (mass %)
					Emily Anderton	13/03/2024	Total Detailed Gravimetric Quantification (% Asb)	<0.001 (mass %)
					Emily Anderton	13/03/2024	Total Gravimetric Quantification (ACM + Detailed) (% Asb)	<0.001 (mass %)
					Emily Anderton	18/03/2024	Asbestos PCOM Quantification (Fibres)	<0.001 (mass %)
					Emily Anderton	18/03/2024	Asbestos Gravimetric & PCOM Total	<0.001 (mass %)
24/2707	1	Tyre 2	0.20	4	Mathew Day	22/02/2024	General Description (Bulk Analysis)	brown soil
					Mathew Day	22/02/2024	Asbestos Fibres	NAD
					Mathew Day	22/02/2024	Asbestos ACM	NAD
					Mathew Day	22/02/2024	Asbestos Type	NAD
24/2707	1	Tyre 3	0.20	6	Mathew Day	22/02/2024	General Description (Bulk Analysis)	brown soil
					Mathew Day	22/02/2024	Asbestos Fibres	NAD
					Mathew Day	22/02/2024	Asbestos ACM	NAD
					Mathew Day	22/02/2024	Asbestos Type	NAD

Client Name: Sackedgate Limited

Reference: J163A

Location: Send Road Reading

Contact: Julian Puzyna

[illegible]

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

It is a requirement under ISO 17025 that we inform clients if samples are deviating i.e. outside what is expected. A deviating sample indicates that the sample 'may' be compromised but not necessarily will be compromised. The result is still accredited and our analytical reports will still show accreditation on the relevant analytes.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 24/2707

SOILS and ASH

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary. Asbestos samples are retained for 6 months.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C. Ash samples are dried at 37°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

STACK EMISSIONS

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation for Dioxins and Furans and Dioxin like PCBs has been performed on XAD-2 Resin, only samples which use this resin will be within our MCERTS scope.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a requirement of our Accreditation Body for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

Laboratory records are kept for a period of no less than 6 years.

REPORTS FROM THE SOUTH AFRICA LABORATORY

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

Measurement Uncertainty

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

Customer Provided Information

Sample ID and depth is information provided by the customer.

Age of Diesel

The age of release estimation is based on the nC17/pristane ratio only as prescribed by Christensen and Larsen (1993) and Kaplan, Galperin, Alimi et al., (1996).

Age estimation should be treated with caution as it can be influenced by site specific factors of which the laboratory are not aware.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above quantitative calibration range. The result should be considered the minimum value and is indicative only. The actual result could be significantly higher.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

EMT Job No: 24/2707

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465:1993(E) and BS1377-2:1990.	PM0	No preparation is required.			AR	
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM5	Modified 8015B v2:1996 method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) within the range C8-C40 by GCFID. For waters the solvent extracts dissolved phase plus a sheen if present.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM5	Modified 8015B v2:1996 method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) within the range C8-C40 by GCFID. For waters the solvent extracts dissolved phase plus a sheen if present.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP 6010B, Rev.2, Dec.1996; Modified EPA Method 3050B, Rev.2, Dec.1996	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.			AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP 6010B, Rev.2, Dec.1996; Modified EPA Method 3050B, Rev.2, Dec.1996	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes		AD	Yes
TM38	Soluble Ion analysis using Discrete Analyser. Modified US EPA methods: Chloride 325.2 (1978), Sulphate 375.4 (Rev.2 1993), o-Phosphate 365.2 (Rev.2 1993), TON 353.1 (Rev.2 1993), Nitrite 354.1 (1971), Hex Cr 7196A (1992), NH4+ 350.1 (Rev.2 1993) – All anions comparable to BS ISO 15923-1: 2013l	PM20	Extraction of dried and ground or as received samples with deionised water in a 2:1 water to solid ratio using a reciprocal shaker for all analytes except hexavalent chromium. Extraction of as received sample using 10:1 ratio of 0.2M sodium hydroxide to soil for hexavalent chromium using a reciprocal shaker.	Yes		AR	Yes
TM65	Asbestos Bulk Identification method based on HSG 248 Second edition (2021)	PM42	Modified SCA Blue Book V.12 draft 2017 and WM3 1st Edition v1.1:2018. Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	
TM73	Modified US EPA methods 150.1 (1982) and 9045D Rev. 4 - 2004) and BS1377-3:1990. Determination of pH by Metrohm automated probe analyser.	PM11	Extraction of as received solid samples using one part solid to 2.5 parts deionised water.	Yes		AR	No

EMT Job No: 24/2707

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM89	Modified USEPA method OIA-1667 (1999). Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide, Sulphide and Thiocyanate analysis.	Yes		AR	Yes
TM131	Quantification of Asbestos Fibres and ACM based on HSG 248 Second edition:2021, HSG 264 Second edition:2012, HSE Contract Research Report No.83/1996, MDHS 87:1998, WM3 1st Edition v1.1:2018	PM42	Modified SCA Blue Book V.12 draft 2017 and WM3 1st Edition v1.1:2018. Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	Yes
NONE	No Method Code	NONE	No Method Code			AD	Yes

Sackedgate Limited
26 Reading Road
Burghfield Common
Reading
United Kingdom
RG7 3QA



4225



Attention : Julian Puzyna
Date : 21st March, 2024
Your reference : J163A
Our reference : Test Report 24/3251 Batch 1
Location : Send Road/Gosbrook Road, Reading
Date samples received : 24th February, 2024
Status : Final Report
Issue : 202403211245

Three samples were received for analysis on 24th February, 2024 of which three were scheduled for analysis. Please find attached our Test Report which should be read with notes at the end of the report and should include all sections if reproduced. Interpretations and opinions are outside the scope of any accreditation, and all results relate only to samples supplied.

All analysis is carried out on as received samples and reported on a dry weight basis unless stated otherwise. Results are not surrogate corrected.

The greenhouse gas emissions generated (in Carbon – Co2e) to obtain the results in this report are estimated as:

Scope 1&2 emissions - 8.036 kg of CO2

Scope 1&2&3 emissions - 18.992 kg of CO2

Authorised By:



Phil Sommerton BSc

Senior Project Manager

Please include all sections of this report if it is reproduced

Element Materials Technology

Client Name: Sackedgate Limited
Reference: J163A
Location: Send Road/Gosbrook Road, Reading
Contact: Julian Puzyna
EMT Job No: 24/3251

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

EMT Sample No.	1-2	3-5	6-7							Please see attached notes for all abbreviations and acronyms		
Sample ID	PAINT SHOP 1	PAINT SHOP 2	GARDEN 1									
Depth	0.20	0.20	0.20									
COC No / misc												
Containers	J B	V J B	J B									
Sample Date	21/02/2024	21/02/2024	21/02/2024									
Sample Type	Soil	Soil	Soil									
Batch Number	1	1	1							LOD/LOR	Units	Method No.
Date of Receipt	24/02/2024	24/02/2024	24/02/2024									
Arsenic #	15.7	19.0	20.6							<0.5	mg/kg	TM30/PM15
Cadmium #	<0.1	<0.1	<0.1							<0.1	mg/kg	TM30/PM15
Chromium #	90.0	98.1	75.1							<0.5	mg/kg	TM30/PM15
Copper #	15	20	36							<1	mg/kg	TM30/PM15
Lead #	88	178	75							<5	mg/kg	TM30/PM15
Mercury #	<0.1	0.2	0.2							<0.1	mg/kg	TM30/PM15
Nickel #	21.5	23.4	31.4							<0.7	mg/kg	TM30/PM15
Vanadium	34	38	51							<1	mg/kg	TM30/PM15
Zinc #	78	79	126							<5	mg/kg	TM30/PM15
PAH MS												
Naphthalene #	<0.04	0.10	<0.04							<0.04	mg/kg	TM4/PM8
Acenaphthylene	0.09	0.09	<0.03							<0.03	mg/kg	TM4/PM8
Acenaphthene #	<0.05	<0.05	<0.05							<0.05	mg/kg	TM4/PM8
Fluorene #	<0.04	<0.04	<0.04							<0.04	mg/kg	TM4/PM8
Phenanthrene #	0.31	0.30	0.10							<0.03	mg/kg	TM4/PM8
Anthracene #	0.10	0.08	<0.04							<0.04	mg/kg	TM4/PM8
Fluoranthene #	0.88	0.73	0.43							<0.03	mg/kg	TM4/PM8
Pyrene #	0.76	0.67	0.37							<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene #	0.43	0.40	0.26							<0.06	mg/kg	TM4/PM8
Chrysene #	0.50	0.47	0.25							<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene #	0.86	0.83	0.41							<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene #	0.46	0.47	0.23							<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene #	0.33	0.37	0.15							<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene #	0.06	0.07	<0.04							<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene #	0.33	0.37	0.15							<0.04	mg/kg	TM4/PM8
PAH 16 Total	5.1	5.0	2.4							<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	0.62	0.60	0.30							<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	0.24	0.23	0.11							<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	98	94	96							<0	%	TM4/PM8
SVOC TICs	-	ND	-								None	TM16/PM8
EPH >C8-C10 #	<5	<5	<5							<5	mg/kg	TM5/PM8
EPH >C10-C12 #	<10	<10	<10							<10	mg/kg	TM5/PM8
EPH >C12-C16 #	<10	<10	<10							<10	mg/kg	TM5/PM8
EPH >C16-C21 #	36	32	<10							<10	mg/kg	TM5/PM8
EPH >C21-C40	145	153	93							<10	mg/kg	TM5/PM8
EPH >C8-C40	181	185	93							<30	mg/kg	TM5/PM8
Natural Moisture Content	15.2	15.4	22.9							<0.1	%	PM4/PM0
Hexavalent Chromium #	<0.3	<0.3	<0.3							<0.3	mg/kg	TM38/PM20
Chromium III	90.0	98.1	75.1							<0.5	mg/kg	NONE/NONE

Element Materials Technology

Client Name: Sackedgate Limited
Reference: J163A
Location: Send Road/Gosbrook Road, Reading
Contact: Julian Puzyna
EMT Job No: 24/3251

Report : Solid

Solids: V=60g VOC jar, J=250g glass jar, T=plastic tub

[illegible]

Element Materials Technology

Client Name: Sackedgate Limited
Reference: J163A
Location: Send Road/Gosbrook Road, Reading
Contact: Julian Puzyna
EMT Job No: 24/3251

SVOC Report : Solid

EMT Sample No.	3-5												
Sample ID	PAINT SHOP 2												
Depth	0.20												
COC No / misc													
Containers	V J B												
Sample Date	21/02/2024												
Sample Type	Soil												
Batch Number	1												
Date of Receipt	24/02/2024												
Please see attached notes for all abbreviations and acronyms											LOD/LOR	Units	Method No.
SVOC MS													
Phenols													
2-Chlorophenol #	<10										<10	ug/kg	TM16/PM8
2-Methylphenol	<10										<10	ug/kg	TM16/PM8
2-Nitrophenol	<10										<10	ug/kg	TM16/PM8
2,4-Dichlorophenol #	<10										<10	ug/kg	TM16/PM8
2,4-Dimethylphenol	<10										<10	ug/kg	TM16/PM8
2,4,5-Trichlorophenol	<10										<10	ug/kg	TM16/PM8
2,4,6-Trichlorophenol	<10										<10	ug/kg	TM16/PM8
4-Chloro-3-methylphenol	<10										<10	ug/kg	TM16/PM8
4-Methylphenol	<10										<10	ug/kg	TM16/PM8
4-Nitrophenol	<10										<10	ug/kg	TM16/PM8
Pentachlorophenol	<10										<10	ug/kg	TM16/PM8
Phenol #	<10										<10	ug/kg	TM16/PM8
PAHs													
2-Chloronaphthalene #	<10										<10	ug/kg	TM16/PM8
2-Methylnaphthalene #	90										<10	ug/kg	TM16/PM8
Phthalates													
Bis(2-ethylhexyl) phthalate	171										<100	ug/kg	TM16/PM8
Butylbenzyl phthalate	<100										<100	ug/kg	TM16/PM8
Di-n-butyl phthalate	<100										<100	ug/kg	TM16/PM8
Di-n-Octyl phthalate	<100										<100	ug/kg	TM16/PM8
Diethyl phthalate	<100										<100	ug/kg	TM16/PM8
Dimethyl phthalate #	<100										<100	ug/kg	TM16/PM8
Other SVOCs													
1,2-Dichlorobenzene	<10										<10	ug/kg	TM16/PM8
1,2,4-Trichlorobenzene #	<10										<10	ug/kg	TM16/PM8
1,3-Dichlorobenzene	<10										<10	ug/kg	TM16/PM8
1,4-Dichlorobenzene	<10										<10	ug/kg	TM16/PM8
2-Nitroaniline	<10										<10	ug/kg	TM16/PM8
2,4-Dinitrotoluene	<10										<10	ug/kg	TM16/PM8
2,6-Dinitrotoluene	<10										<10	ug/kg	TM16/PM8
3-Nitroaniline	<10										<10	ug/kg	TM16/PM8
4-Bromophenylphenylether #	<10										<10	ug/kg	TM16/PM8
4-Chloroaniline	<10										<10	ug/kg	TM16/PM8
4-Chlorophenylphenylether	<10										<10	ug/kg	TM16/PM8
4-Nitroaniline	<10										<10	ug/kg	TM16/PM8
Azobenzene	<10										<10	ug/kg	TM16/PM8
Bis(2-chloroethoxy)methane	<10										<10	ug/kg	TM16/PM8
Bis(2-chloroethyl)ether	<10										<10	ug/kg	TM16/PM8
Carbazole	20										<10	ug/kg	TM16/PM8
Dibenzofuran #	17										<10	ug/kg	TM16/PM8
Hexachlorobenzene	<10										<10	ug/kg	TM16/PM8
Hexachlorobutadiene #	<10										<10	ug/kg	TM16/PM8
Hexachlorocyclopentadiene	<10										<10	ug/kg	TM16/PM8
Hexachloroethane	<10										<10	ug/kg	TM16/PM8
Isophorone #	<10										<10	ug/kg	TM16/PM8
N-nitrosodi-n-propylamine #	<10										<10	ug/kg	TM16/PM8
Nitrobenzene #	<10										<10	ug/kg	TM16/PM8
Surrogate Recovery 2-Fluorobiphenyl	108										<0	%	TM16/PM8
Surrogate Recovery p-Terphenyl-d14	102										<0	%	TM16/PM8

Client Name: Sackedgate Limited
Reference: J163A
Location: Send Road/Gosbrook Road, Reading
Contact: Julian Puzyna

Note:

Asbestos Screen analysis is carried out in accordance with our documented in-house methods PM042 and TM065 and HSG 248 by Stereo and Polarised Light Microscopy using Dispersion Staining Techniques and is covered by our UKAS accreditation. Detailed Gravimetric Quantification and PCOM Fibre Analysis is carried out in accordance with our documented in-house methods PM042 and TM131 and HSG 248 using Stereo and Polarised Light Microscopy and Phase Contrast Optical Microscopy (PCOM). Asbestos sub-samples are retained for not less than 6 months from the date of analysis unless specifically requested.

The LOQ of the Asbestos Quantification is 0.001% dry fibre of dry mass of sample.

Where the sample is not taken by a Element Materials Technology consultant, Element Materials Technology cannot be responsible for inaccurate or unrepresentative sampling.

Where trace asbestos is reported the amount of asbestos will be <0.1%.

EMT Job No.	Batch	Sample ID	Depth	EMT Sample No.	Analyst Name	Date Of Analysis	Analysis	Result
24/3251	1	PAINT SHOP 1	0.20	2	Mathew Day	29/02/2024	General Description (Bulk Analysis)	brown soil, stones, grit, cement debris
					Mathew Day	29/02/2024	Asbestos Fibres	NAD
					Mathew Day	29/02/2024	Asbestos ACM	NAD
					Mathew Day	29/02/2024	Asbestos Type	NAD
24/3251	1	PAINT SHOP 2	0.20	5	Charlotte Taylor	29/02/2024	General Description (Bulk Analysis)	brown soil/stones
					Charlotte Taylor	29/02/2024	Asbestos Fibres	NAD
					Charlotte Taylor	29/02/2024	Asbestos ACM	NAD
					Charlotte Taylor	29/02/2024	Asbestos Type	NAD
24/3251	1	GARDEN 1	0.20	7	Mathew Day	29/02/2024	General Description (Bulk Analysis)	brown soil
					Mathew Day	29/02/2024	Asbestos Fibres	Fibre Bundles
					Mathew Day	29/02/2024	Asbestos ACM	NAD
					Mathew Day	29/02/2024	Asbestos Type	Chrysotile
					Emily Anderton	13/03/2024	Total ACM Gravimetric Quantification (% Asb)	<0.001 (mass %)
					Emily Anderton	13/03/2024	Total Detailed Gravimetric Quantification (% Asb)	<0.001 (mass %)
					Emily Anderton	13/03/2024	Total Gravimetric Quantification (ACM + Detailed) (% Asb)	<0.001 (mass %)
					Emily Anderton	18/03/2024	Asbestos PCOM Quantification (Fibres)	<0.001 (mass %)
					Emily Anderton	18/03/2024	Asbestos Gravimetric & PCOM Total	<0.001 (mass %)

Client Name:	Sackedgate Limited
Reference:	J163A
Location:	Send Road/Gosbrook Road, Reading
Contact:	Julian Puzyna

Please note that only samples that are deviating are mentioned in this report. If no samples are listed it is because none were deviating. Only analyses which are accredited are recorded as deviating if set criteria are not met.

It is a requirement under ISO 17025 that we inform clients if samples are deviating i.e. outside what is expected. A deviating sample indicates that the sample 'may' be compromised but not necessarily will be compromised. The result is still accredited and our analytical reports will still show accreditation on the relevant analytes.

NOTES TO ACCOMPANY ALL SCHEDULES AND REPORTS

EMT Job No.: 24/3251

SOILS and ASH

Please note we are only MCERTS accredited (UK soils only) for sand, loam and clay and any other matrix is outside our scope of accreditation.

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation has been performed on clay, sand and loam, only samples that are predominantly these matrices, or combinations of them will be within our MCERTS scope. If samples are not one of a combination of the above matrices they will not be marked as MCERTS accredited.

It is assumed that you have taken representative samples on site and require analysis on a representative subsample. Stones will generally be included unless we are requested to remove them.

All samples will be discarded one month after the date of reporting, unless we are instructed to the contrary. Asbestos samples are retained for 6 months.

If you have not already done so, please send us a purchase order if this is required by your company.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

All analysis is reported on a dry weight basis unless stated otherwise. Limits of detection for analyses carried out on as received samples are not moisture content corrected. Results are not surrogate corrected. Samples are dried at 35°C ±5°C unless otherwise stated. Moisture content for CEN Leachate tests are dried at 105°C ±5°C. Ash samples are dried at 37°C ±5°C.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

Where a CEN 10:1 ZERO Headspace VOC test has been carried out, a 10:1 ratio of water to wet (as received) soil has been used.

% Asbestos in Asbestos Containing Materials (ACMs) is determined by reference to HSG 264 The Survey Guide - Appendix 2 : ACMs in buildings listed in order of ease of fibre release.

Sufficient amount of sample must be received to carry out the testing specified. Where an insufficient amount of sample has been received the testing may not meet the requirements of our accredited methods, as such accreditation may be removed.

Negative Neutralization Potential (NP) values are obtained when the volume of NaOH (0.1N) titrated (pH 8.3) is greater than the volume of HCl (1N) to reduce the pH of the sample to 2.0 - 2.5. Any negative NP values are corrected to 0.

The calculation of Pyrite content assumes that all oxidisable sulphides present in the sample are pyrite. This may not be the case. The calculation may be an overestimate when other sulphides such as Barite (Barium Sulphate) are present.

WATERS

Please note we are not a UK Drinking Water Inspectorate (DWI) Approved Laboratory .

ISO17025 accreditation applies to surface water and groundwater and usually one other matrix which is analysis specific, any other liquids are outside our scope of accreditation.

As surface waters require different sample preparation to groundwaters the laboratory must be informed of the water type when submitting samples.

Where Mineral Oil or Fats, Oils and Grease is quoted, this refers to Total Aliphatics C10-C40.

STACK EMISSIONS

Where an MCERTS report has been requested, you will be notified within 48 hours of any samples that have been identified as being outside our MCERTS scope. As validation for Dioxins and Furans and Dioxin like PCBs has been performed on XAD-2 Resin, only samples which use this resin will be within our MCERTS scope.

Where appropriate please make sure that our detection limits are suitable for your needs, if they are not, please notify us immediately.

DEVIATING SAMPLES

All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. The temperature of sample receipt is recorded on the confirmation schedules in order that the client can make an informed decision as to whether testing should still be undertaken.

SURROGATES

Surrogate compounds are added during the preparation process to monitor recovery of analytes. However low recovery in soils is often due to peat, clay or other organic rich matrices. For waters this can be due to oxidants, surfactants, organic rich sediments or remediation fluids. Acceptable limits for most organic methods are 70 - 130% and for VOCs are 50 - 150%. When surrogate recoveries are outside the performance criteria but the associated AQC passes this is assumed to be due to matrix effect. Results are not surrogate corrected.

DILUTIONS

A dilution suffix indicates a dilution has been performed and the reported result takes this into account. No further calculation is required.

BLANKS

Where analytes have been found in the blank, the sample will be treated in accordance with our laboratory procedure for dealing with contaminated blanks.

NOTE

Data is only reported if the laboratory is confident that the data is a true reflection of the samples analysed. Data is only reported as accredited when all the requirements of our Quality System have been met. In certain circumstances where all the requirements of the Quality System have not been met, for instance if the associated AQC has failed, the reason is fully investigated and documented. The sample data is then evaluated alongside the other quality control checks performed during analysis to determine its suitability. Following this evaluation, provided the sample results have not been effected, the data is reported but accreditation is removed. It is a requirement of our Accreditation Body for data not reported as accredited to be considered indicative only, but this does not mean the data is not valid.

Where possible, and if requested, samples will be re-extracted and a revised report issued with accredited results. Please do not hesitate to contact the laboratory if further details are required of the circumstances which have led to the removal of accreditation.

Laboratory records are kept for a period of no less than 6 years.

REPORTS FROM THE SOUTH AFRICA LABORATORY

Any method number not prefixed with SA has been undertaken in our UK laboratory unless reported as subcontracted.

Measurement Uncertainty

Measurement uncertainty defines the range of values that could reasonably be attributed to the measured quantity. This range of values has not been included within the reported results. Uncertainty expressed as a percentage can be provided upon request.

Customer Provided Information

Sample ID and depth is information provided by the customer.

Age of Diesel

The age of release estimation is based on the nC17/pristane ratio only as prescribed by Christensen and Larsen (1993) and Kaplan, Galperin, Alimi et al., (1996).

Age estimation should be treated with caution as it can be influenced by site specific factors of which the laboratory are not aware.

ABBREVIATIONS and ACRONYMS USED

#	ISO17025 (UKAS Ref No. 4225) accredited - UK.
SA	ISO17025 (SANAS Ref No.T0729) accredited - South Africa
B	Indicates analyte found in associated method blank.
DR	Dilution required.
M	MCERTS accredited.
NA	Not applicable
NAD	No Asbestos Detected.
ND	None Detected (usually refers to VOC and/SVOC TICs).
NDP	No Determination Possible
SS	Calibrated against a single substance
SV	Surrogate recovery outside performance criteria. This may be due to a matrix effect.
W	Results expressed on as received basis.
+	AQC failure, accreditation has been removed from this result, if appropriate, see 'Note' on previous page.
>>	Results above quantitative calibration range. The result should be considered the minimum value and is indicative only. The actual result could be significantly higher.
*	Analysis subcontracted to an Element Materials Technology approved laboratory.
AD	Samples are dried at 35°C ±5°C
CO	Suspected carry over
LOD/LOR	Limit of Detection (Limit of Reporting) in line with ISO 17025 and MCERTS
ME	Matrix Effect
NFD	No Fibres Detected
BS	AQC Sample
LB	Blank Sample
N	Client Sample
TB	Trip Blank Sample
OC	Outside Calibration Range

EMT Job No: 24/3251

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/S ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
PM4	Gravimetric measurement of Natural Moisture Content and % Moisture Content at either 35°C or 105°C. Calculation based on ISO 11465:1993(E) and BS1377-2:1990.	PM0	No preparation is required.			AR	
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM4	Modified USEPA 8270D v5:2014 method for the solvent extraction and determination of PAHs by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM5	Modified 8015B v2:1996 method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) within the range C8-C40 by GCFID. For waters the solvent extracts dissolved phase plus a sheen if present.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM5	Modified 8015B v2:1996 method for the determination of solvent Extractable Petroleum Hydrocarbons (EPH) within the range C8-C40 by GCFID. For waters the solvent extracts dissolved phase plus a sheen if present.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM16	Modified USEPA 8270D v5:2014. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.			AR	Yes
TM16	Modified USEPA 8270D v5:2014. Quantitative determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS.	PM8	End over end extraction of solid samples for organic analysis. The solvent mix varies depending on analysis required.	Yes		AR	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP 6010B, Rev.2, Dec.1996; Modified EPA Method 3050B, Rev.2, Dec.1996	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.			AD	Yes
TM30	Determination of Trace Metals by ICP-OES (Inductively Coupled Plasma – Optical Emission Spectrometry): WATERS by Modified USEPA Method 200.7, Rev. 4.4, 1994; Modified EPA Method 6010B, Rev.2, Dec 1996; Modified BS EN ISO 11885:2009: SOILS by Modified USEP 6010B, Rev.2, Dec.1996; Modified EPA Method 3050B, Rev.2, Dec.1996	PM15	Acid digestion of dried and ground solid samples using Aqua Regia refluxed at 112.5 °C. Samples containing asbestos are not dried and ground.	Yes		AD	Yes
TM38	Soluble Ion analysis using Discrete Analyser. Modified US EPA methods: Chloride 325.2 (1978), Sulphate 375.4 (Rev.2 1993), o-Phosphate 365.2 (Rev.2 1993), TON 353.1 (Rev.2 1993), Nitrite 354.1 (1971), Hex Cr 7196A (1992), NH4+ 350.1 (Rev.2 1993) – All anions comparable to BS ISO 15923-1: 2013	PM20	Extraction of dried and ground or as received samples with deionised water in a 2:1 water to solid ratio using a reciprocal shaker for all analytes except hexavalent chromium. Extraction of as received sample using 10:1 ratio of 0.2M sodium hydroxide to soil for hexavalent chromium using a reciprocal shaker.	Yes		AR	Yes

EMT Job No: 24/3251

Test Method No.	Description	Prep Method No. (if appropriate)	Description	ISO 17025 (UKAS/ANAS)	MCERTS (UK soils only)	Analysis done on As Received (AR) or Dried (AD)	Reported on dry weight basis
TM65	Asbestos Bulk Identification method based on HSG 248 Second edition (2021)	PM42	Modified SCA Blue Book V.12 draft 2017 and WM3 1st Edition v1.1:2018. Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	
TM73	Modified US EPA methods 150.1 (1982) and 9045D Rev. 4 - 2004) and BS1377-3:1990. Determination of pH by Metrohm automated probe analyser.	PM11	Extraction of as received solid samples using one part solid to 2.5 parts deionised water.	Yes		AR	No
TM89	Modified USEPA method OIA-1667 (1999). Determination of cyanide by Flow Injection Analyser. Where WAD cyanides are required a Ligand displacement step is carried out before analysis.	PM45	As received solid samples are extracted with 1M NaOH by orbital shaker for Cyanide, Sulphide and Thiocyanate analysis.	Yes		AR	Yes
TM131	Quantification of Asbestos Fibres and ACM based on HSG 248 Second edition:2021, HSG 264 Second edition:2012, HSE Contract Research Report No.83/1996, MDHS 87:1998, WM3 1st Edition v1.1:2018	PM42	Modified SCA Blue Book V.12 draft 2017 and WM3 1st Edition v1.1:2018. Solid samples undergo a thorough visual inspection for asbestos fibres prior to asbestos identification using TM065.	Yes		AR	Yes
NONE	No Method Code	NONE	No Method Code			AD	Yes

Appendix C

XRF Analyser Results

Nos. 389-389A Gosbrook Road & Nos. 2-4 Send Road,
Caversham
Reading
Berkshire
RG4 8EH

Project Reference J163A



Results of X-Ray Fluorescence Analysis (XRF)

Sackedgate Ltd. Reg 09712671, 26 Reading Road, Burghfield Common, Berkshire RG7 3QA - T- 01189 832 570 M-07854 816921

Instrument Type		Olympus Vanta C				Site Ref		J163A		
Instrument Serial No.		800722				Location		389-389A Gosbrook Road & 2-4 Send Road		
Units		ppm				Client		Darcliffe Homes		
Exposure No.	2	3	4	5	6	1	2	3	4	5
Locn Ref	XRF1	XRF2	XRF3	XRF4	XRF5	XRF6	XRF7	XRF8	XRF9	XRF10
Soil Insitu/Sample	In Situ	In Situ	In Situ	In Situ	In Situ	In Situ	In Situ	In Situ	In Situ	In Situ
Lat	0	0	0	0	0	0	0	0	0	0
Long	0	0	0	0	0	0	0	0	0	0
date	12/02/2024	12/02/2024	12/02/2024	12/02/2024	12/02/2024	21/02/2024	21/02/2024	21/02/2024	21/02/2024	21/02/2024
m/c (%)	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%	20.00%
Measured/ Assumed	A	A	A	A	A	A	A	A	A	A
Aluminium	25864.8	28984.8	29508	27091.2	24060	6253.2	10221.6	0	17474.4	0
LOD	843	951	1025	1076	1454	1548	903	3192	781	2930
Antimony	0	0	0	0	0	0	0	0	0	0
LOD	17	20	22	21	30	39	25	25	21	32
Arsenic	8	8	7	10	8	14	10	8	7	10
LOD	7	7	6	8	7	12	8	7	6	8
Cadmium	0	0	0	0	0	0	0	0	0	0
LOD	9	10	11	11	16	20	13	13	11	16
Chromium	22	58	28	31	35	48	30	30	61	37
LOD	18	13	23	26	29	40	25	25	13	31
Cobalt	48	61	53	68	55	89	55	53	53	67
LOD	40	51	44	57	46	74	46	44	44	56
Copper	110	116	83	132	378	49	28	30	35	53
LOD	3	4	4	5	8	6	3	3	3	5
Iron	34180	43621	30322	45833	21563	29880	23645	20264	29905	24366
LOD	123	166	133	194	130	228	125	115	128	160
Lead	354	253	137	286	110	223	216	116	168	107
LOD	4	4	3	4	3	6	4	3	3	3
Mercury	0	0	0	0	0	0	0	0	0	0
LOD	5	5	5	6	7	9	6	6	5	7
Molybdenum	2	2	1	2	17	16	4	4	2	13
LOD	2	2	1	2	2	3	3	3	2	2
Nickel	53	35	29	48	34	65	25	0	29	43
LOD	4	4	4	5	5	8	4	7	4	6
Selenium	0	0	0	0	0	0	0	0	0	0
LOD	1	1	1	1	1	2	1	1	1	1
Titanium	1927	2035	6334	2658	2266	1996	1824	1286	2298	1745
LOD	64	74	114	87	103	128	89	82	80	108
Tin	0	0	0	0	0	0	0	0	0	0
LOD	14	16	18	17	24	31	20	20	17	26
Vanadium	38	52	48	66	26	73	23	20	20	28
LOD	9	10	13	11	22	18	19	17	17	23
Zinc	504	476	415	598	175	178	193	121	193	246
LOD	5	6	6	7	5	6	4	4	4	6
Sulphur	928	1169	1794	2616	0	0	2725	275	278	0
LOD	35	42	47	56	560	578	51	41	31	305
Light EI	992886	934273	975592	941570	1022244	1062122	997652	1107786	993444	1077275
LOD	1002	1196	1212	1335	1599	1702	1159	494	1007	733
Results checked & issued for and on behalf of Sackedgate Ltd					JR Puzyna					
					Julian Puzyna BEng Hons MCIEH					

1) X-Ray Fluorescence analysis is carried out in situ or from sample containers. Soil is not homogeneous and the concentrations of contaminants vary throughout the soil mass. Large variations are sometimes found at locations just millimetres from each other. This analysis considers a small scan area which may not represent the variability that is more widely present. Where possible a number of tests are carried out to assess the variability within each sample or at each point location tested. 2) The analyser measures concentrations as it sees them in the soil, in its wet state. The results above are corrected for moisture content and are presented on a 'dry weight' basis calculated from a measured or an assumed moisture content. 3) Most elements (eg Lead) give a fairly constant fluorescent response for different compounds of that element. A small number of elements however, give different responses depending on the actual compound that is present. The analyser always shows the worst case concentration and sometimes greatly overestimates the concentrations of those elements. 4) With the exception of Lead, exposure times need to be varied to ensure that the error values are at their lowest.



Results of X-Ray Fluorescence Analysis (XRF)

Sackedgate Ltd. Reg 09712671, 26 Reading Road, Burghfield Common, Berkshire RG7 3QA - T- 01189 832 570 M-07854 816921

Instrument Type	Olympus Vanta C	Site Ref	J163A
Instrument Serial No.	800722	Location	389-389A Gosbrook Road & 2-4 Send Road
Units	ppm	Client	Darcliffe Homes

Exposure No.	6	7							
Locn Ref	XRF11	XRF12							
Soil Insitu/Sample	In Situ	In Situ							

Lat	0	0							
Long	0	0							
date	21/02/2024	21/02/2024							

m/c (%)	20.00%	20.00%							
Measured/ Assumed	A	A							

Aluminium	6924	0							
LOD	1195	3241							
Antimony	0	0							
LOD	31	35							
Arsenic	20	10							
LOD	5	8							
Cadmium	0	0							
LOD	16	18							
Chromium	73	41							
LOD	20	34							
Cobalt	74	72							
LOD	62	60							
Copper	43	37							
LOD	5	5							
Iron	29418	24811							
LOD	188	170							
Lead	107	110							
LOD	3	4							
Mercury	0	0							
LOD	7	8							
Molybdenum	5	5							
LOD	4	4							
Nickel	26	35							
LOD	6	6							
Selenium	0	0							
LOD	1	2							
Titanium	2333	2558							
LOD	112	127							
Tin	0	0							
LOD	25	28							
Vanadium	30	66							
LOD	25	17							
Zinc	317	92							
LOD	7	4							
Sulphur	0	0							
LOD	398	332							
Light EI	1062035	1022948							
LOD	1344	1048							

Results checked & issued for and on behalf of Sackedgate Ltd

JR Puzyna

Julian Puzyna BEng Hons MCIEH

1) X-Ray Fluorescence analysis is carried out in situ or from sample containers. Soil is not homogeneous and the concentrations of contaminants vary throughout the soil mass. Large variations are sometimes found at locations just millimetres from each other. This analysis considers a small scan area which may not represent the variability that is more widely present. Where possible a number of tests are carried out to assess the variability within each sample or at each point location tested. 2) The analyser measures concentrations as it sees them in the soil, in its wet state. The results above are corrected for moisture content and are presented on a 'dry weight' basis calculated from a measured or an assumed moisture content. 3) Most elements (eg Lead) give a fairly constant fluorescent response for different compounds of that element. A small number of elements however, give different responses depending on the actual compound that is present. The analyser always shows the worst case concentration and sometimes greatly overestimates the concentrations of those elements. 4) With the exception of Lead, exposure times need to be varied to ensure that the error values are at their lowest.



Results of X-Ray Fluorescence Analysis (XRF)

Sackedgate Ltd. Reg 09712671, 26 Reading Road, Burghfield Common, Berkshire RG7 3QA - T- 01189 832 570 M-07854 816921

Instrument Type	Olympus Vanta C	Site Ref	J163A
Instrument Serial No.	800722	Location	389-389A Gosbrook Road & 2-4 Send Road
Units	ppm	Client	Darcliffe Homes

Exposure No.	1	31	32	33	34	35	36	37	38	39
Locn Ref	JRP1 Ref	Tyre 1 - 0.1m	Tyre 1 - 0.1m	Tyre 1 - 0.1m	Tyre 2 - 0.2m	Tyre 2 - 0.2m	Tyre 2 - 0.2m	Tyre3 - 0.2m	Tyre3 - 0.2m	Tyre3 - 0.2m
Soil Insitu/Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample

Lat	0	0	0	0	0	0	0	0	0	0
Long	0	0	0	0	0	0	0	0	0	0
date	14/02/2024	14/02/2024	14/02/2024	14/02/2024	14/02/2024	14/02/2024	14/02/2024	14/02/2024	14/02/2024	14/02/2024

m/c (%)	0.00%	22.00%	22.00%	22.00%	18.00%	18.00%	18.00%	18.00%	18.00%	18.00%
Measured/ Assumed	A	A	A	A	A	A	A	A	A	A

Aluminium	0	23824.16	21716	25956.72	25064.38	26474.48	26611.36	27764.22	23305	20720.8
LOD	1278	1068	1106	1185	905	901	877	834	945	1027
Antimony	0	0	0	0	0	0	0	0	0	0
LOD	11	27	27	27	22	23	22	22	25	26
Arsenic	1241	10	10	10	11	9	8	9	9	11
LOD	18	8	8	8	9	8	7	8	8	9
Cadmium	0	0	0	0	0	0	0	0	0	0
LOD	6	14	14	14	12	12	12	11	13	14
Chromium	0	35	38	35	30	58	26	27	63	76
LOD	52	29	31	29	25	15	22	23	16	18
Cobalt	0	77	79	73	64	55	50	60	67	77
LOD	48	63	65	60	54	47	42	51	57	65
Copper	53537	57	63	65	87	68	60	65	63	78
LOD	333	4	5	5	4	4	4	4	4	5
Iron	52328	40653	39904	37444	36991	30294	26122	36658	35729	42068
LOD	352	203	207	191	166	139	120	155	173	214
Lead	395	181	172	157	281	223	150	484	538	520
LOD	12	4	4	4	4	4	3	4	4	5
Mercury	0	0	0	0	0	0	0	0	0	0
LOD	8	6	7	6	6	5	5	5	6	7
Molybdenum	0	10	13	10	4	4	4	4	4	4
LOD	2	2	2	2	3	3	3	3	3	3
Nickel	204	45	38	37	40	38	18	34	28	41
LOD	14	5	6	5	5	4	4	4	5	5
Selenium	0	0	0	0	0	0	0	0	0	0
LOD	2	1	1	1	1	1	1	1	1	1
Titanium	35453	2893	2708	3100	2446	2307	2221	2804	2601	2628
LOD	408	104	105	108	89	88	85	90	97	102
Tin	0	0	0	0	0	0	0	0	0	0
LOD	9	21	22	21	18	18	18	18	20	21
Vanadium	8134	61	0	51	0	46	45	72	60	70
LOD	92	13	22	14	19	12	11	12	13	13
Zinc	4790	364	433	450	517	376	325	408	425	443
LOD	43	6	7	7	7	6	5	6	7	7
Sulphur	132058	0	0	277	720	867	892	5679	5475	3731
LOD	811	306	342	49	41	41	39	53	64	61
Light EI	448642	985761	991518	971824	934332	926607	941338	901185	931470	938958
LOD	3239	1389	1428	1476	1226	1218	1154	1186	1299	1390

Results checked & issued for and on behalf of Sackedgate Ltd

Julian Puzyna
Julian Puzyna BEng Hons MCIEH

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Appendix D

Soil & Water Contamination Assessment Criteria

Nos. 389-389A Gosbrook Road & Nos. 2-4 Send Road,
Caversham
Reading
Berkshire
RG4 8EH

Project Reference J163A

Generic Contamination Assessment Criteria

List 1 (Soils Assessment Criteria for Human Health)

- 1A) - Metals
- 1B) - Aliphatic Hydrocarbons
- 1C) - Aromatic Hydrocarbons
- 1D) - BTEX (Monocyclic Aromatic Hydrocarbons)
- 1E) - PAH (Poly-cyclic Aromatic Hydrocarbons)
- 1F) - PCB (Poly Chlorinated Bi-Phenyls)
- 1G) - Chloroalkanes and Alkenes
- 1H) - Explosives
- 1I) - Pesticides
- 1J) - Chlorobenzenes
- 1K) - Phenol and Chlorophenol
- 1L) – Other
- 1M) - Asbestos

This is a tabulated list of generic soil guideline values for the concentrations of contaminants in soils provided by various authorities to protect human health or the environment. These are generic values which make the worst case assumption for every exposure and absorption scenario governing the human uptake or effect on controlled waters for example, of the contaminants considered.

The values have been reproduced from various guidances and are provided for information only. Assessments must always be carried out using the published guidance documents which carry all the necessary notes and caveats. This list is also subject to various copyright permissions and should not be reproduced. Sackedgate Ltd, accepts no liability for any errors in reproduction or subsequent changes or updates to the published guidances or inappropriate use of this document.

At this time Soil Guideline Values (SGVs) have been published by the Environment Agency for Arsenic, Cadmium, Nickel, Selenium, Benzene, Toluene, Ethylbenzene, Xylene and Phenol together with Dioxins Furans and Dioxin like PCBs. These were calculated using the CLEA model (v1.04) and Environment Agency guidance documents SR2 (Human Health Toxicological Assessment of Contaminants in Soil) and SR3 (Updated Technical Background to the CLEA Model).

Further numbers of contaminants were assessed on this basis using the same CLEA Model by CIEH/LQM (The Chartered Institute of Environmental Health and Land Quality Management Ltd). Soil guideline values were published in their report on Generic Assessment Criteria for Human Health Assessments (2009). This 2009 guidance was replaced in 2015 by new S4UL values (Suitable '4' Use Levels) which are intended by CIEH/LQM to provide a complete and updated replacement for the values published in their 2009 report (see CIEH/LQM S4UL – 1.1). The S4UL publication is the Copyright of Land Quality Management Ltd. and is reproduced by Sackedgate Ltd with permission (Publication Number S4UL3813) All rights reserved.

Where there is no Environment Agency SGV or S4UL, values have been derived using the CLEA Model with old TOX reports as well as the SR2 report and the SR3 report, as suggested by the Environment Agency.

The assessments should be based on a hierarchy where the Environment Agency SGVs and S4UL from the Chartered Institute of Environmental Health are most preferred, followed by values derived using the CLEA model.

DEFRA SP1010 & C4SL

We have also considered C4SL values derived for 6 contaminants in the Department of the Environment Farming and Rural Affairs (DEFRA) SP1010 report. The report describes how levels of contamination at a site are placed in one of four categories. Category 4 is where the level of risk posed is acceptably low, to Category 1, where the level of risk is clearly unacceptable. The Category 4 values presented in the report were primarily intended for use under the Part 2A of the Environmental Protection Act 1990 to screen out low risk sites.

The Category 4 values are however, determined using a Lower Level of Toxicological Concern (LLTC) assessment methodology which differs from the Health Condition Values (HCVs) discussed in Environment Agency SR2 report, these consider minimal or tolerable levels of risk.

A direction was given by the Department for Communities and Local Government (DCLG) and DEFRA for the C4SL system to be used for assessments for Planning as well as assessments under Part 2A of the Environmental Protection Act (SP1010 Companion Document December 2014).

In order to maintain consistency in our approach to all contaminants (i.e. minimal or tolerable levels of risk), we have continued to use the slightly more conservative Environment Agency SR2 – SR3 based values for the 43 contaminants considered in the Environment Agency SGV reports and partner S4UL publication from CIEH/LQM.

Unfortunately, the Environment Agency and CIEH/LQM documents do not give any guidelines for Lead concentrations. The SP1010 publication (March 2014 - Appendix H - Table 4.1) does give a provisional Category 4 value for Lead determined using the original HCV CLEA methodology. We consider this value is to be consistent with the minimal or tolerable levels of risk methodology used for the other 43 contaminants by the Environment Agency and CIEH/LQM. On this basis we have adopted the values for Lead calculated to be protective of children as the critical receptors. For a residential garden, where plants are grown for consumption by the residents, the guideline value is 190mg/kg. No guideline concentrations are given by DEFRA in the SP1010 document for adults under that assessment methodology. Values for the other land use scenarios are presented in the following tables.

Asbestos

CIRIA C733 (Asbestos In Soil And Made Ground) shows how respirable fibre exposure estimates can be carried out based on measured soil concentrations. We have used this methodology to derive guideline values for a number of exposure scenarios based on the minimal or tolerable levels risk level of 1 in 100,000 used to derive HCVs for other contaminants.

The most conservative values have been used for the exposure estimates wherever possible. It should be noted that these values are not corroborated by any other organisation and they are also subject to the notes and caveats set out in the wider CIRIA C733 document.

List 2 (Assessment Criteria for Buried Water Supply Pipes)

Water pipes laid in contaminated ground can absorb some contaminants and allow them to contaminate the water running in the pipes. Our assessments are based on the *UKWIR Report Ref No 10/WM/03/21* which gives a mandatory list of contaminants and threshold concentrations for those contaminants in relation to different types of water pipe materials.

However, we would note that some water utility companies assess contaminants on the basis of their own guidances and we have not reproduced lists of contaminants and their thresholds for all of these individual guidances.

List 3 (Assessment Criteria For Soil Disposal)

Assessment of soils destined for landfills takes two stages. The first is site characterisation to determine if the source site is contaminated, the second stage is compliance testing to assess the leachability or solubility of any contaminants that are present at elevated concentrations, as well as the potential for the material to decay and create gases.

Characterisation is carried out by comparing the soil results with the SGVs and GACs in List 1 with respect to human health as well as list 4 for groundwater protection. If the soils are seen to contain unacceptable concentrations of contaminants, then leachate tests will be required to fully classify the risk to groundwater and organic matter tests are required to assess the gas generation potential. The leachate results and total concentrations for a variety of petrochemical products are then compared with thresholds for different waste categories as set out in BS EN 12457-2.

List 4 (Groundwater Assessment Criteria)

Assessment of groundwater analysis is carried out using Water Supply (Water Quality) Regulations 2000 (SI 2000/3184 as amended) or the Environmental Quality Standard (EQS) values for fresh or saltwater depending on which is the most applicable background water quality scenario for compliance. Where the groundwater is not abstracted and not supplying water to springs or rivers, the results from upstream groundwater analysis would be used for comparison.

When investigations highlight the presence of soil contaminants at concentrations exceeding what could be expected naturally, the measured contaminant concentrations in soil would be assessed at tier 1 stage with respect to the risk posed to groundwater using the Environment Agency R&D Publication 20 Remedial Targets Worksheet, Release 2.2a.

Generic values for soil properties and chemical partition coefficients for contaminants were taken from the Environment Agency CLEA Model (v1.06) and supporting documents under the SC050021 reference. Exceedance of these values should not be taken as demonstrating a risk to controlled waters. Tier 2 and Tier 3 assessments would need to be carried out if exceedances are noted at Tier 1.

Assessment Criteria for Ground Gases

Ground gases are assessed on the basis of the CIRIA C665 document (Assessing Risks Posed by Hazardous Ground Gases to Buildings) which dictates the monitoring period and the frequency of visits required. Worst case flow rates and gas concentrations are then used to derive a Gas Screening Value (GSV) from which a characteristic situation and then a level of protection is defined.

List 1A (Metals mg/kg)					
Contaminant	Generic Exposure Scenario	(CLEA v1.06 & S4UL methodology)	Environment Agency SGV (CLEA v1.04)	CIEH/LQM S4UL 2015	DEFRA SP1010 'Final' C4SL December 2014
Arsenic	Residential with plant uptake	32	32	37	37
	Residential without plant uptake	35	Not Assessed	40	40
	Allotment		43	43	49
	Commercial	635	640	640	640
	Public Open Space (Residential)	Not Assessed	Not Assessed	79	79
	Public Open Space (Park)	Not Assessed	Not Assessed	170	170
Beryllium	Residential with plant uptake	Not Assessed	Not Assessed	1.7	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	1.7	Not Assessed
	Allotment	Not Assessed	Not Assessed	35	Not Assessed
	Commercial	Not Assessed	Not Assessed	12	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	2.2	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	63	Not Assessed
Boron	Residential with plant uptake	Not Assessed	Not Assessed	Not Assessed	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	Not Assessed	Not Assessed
	Allotment	Not Assessed	Not Assessed	Not Assessed	Not Assessed
	Commercial	Not Assessed	Not Assessed	Not Assessed	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	Not Assessed	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	Not Assessed	Not Assessed
Cadmium	Residential with plant uptake	Not Assessed	10	11	22
	Residential without plant uptake	Not Assessed	Not Assessed	85	150
	Allotment	Not Assessed	1.8	1.9	3.9
	Commercial	Not Assessed	230	190	410
	Public Open Space (Residential)	Not Assessed	Not Assessed	120	220
	Public Open Space (Park)	Not Assessed	Not Assessed	532	880
Chromium III	Residential with plant uptake	Not Assessed	Not Assessed	910	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	910	Not Assessed
	Allotment	Not Assessed	Not Assessed	18000	Not Assessed
	Commercial	Not Assessed	Not Assessed	8600	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	1500	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	3300	Not Assessed
Chromium VI	Residential with plant uptake	Not Assessed	Not Assessed	6	21
	Residential without plant uptake	Not Assessed	Not Assessed	6	21
	Allotment	Not Assessed	Not Assessed	1.8	170
	Commercial	Not Assessed	Not Assessed	33	49
	Public Open Space (Residential)	Not Assessed	Not Assessed	7.7	23
	Public Open Space (Park)	Not Assessed	Not Assessed	220	250
Copper	Residential with plant uptake	Not Assessed	Not Assessed	2400	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	7100	Not Assessed
	Allotment	Not Assessed	Not Assessed	520	Not Assessed
	Commercial	Not Assessed	Not Assessed	68000	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	12000	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	44000	Not Assessed
Lead	Residential with plant uptake	190 ₍₄₎	450 (old SGV) ₍₅₎	Not Assessed	200
	Residential without plant uptake	310 ₍₄₎	450 (old SGV) ₍₅₎	Not Assessed	310
	Allotment	70 ₍₄₎	Not Assessed	Not Assessed	80
	Commercial	1100 ₍₄₎	750 (old SGV) ₍₅₎	Not Assessed	2300
	Public Open Space (Residential)	Not Assessed	Not Assessed	Not Assessed	630
	Public Open Space (Park)	Not Assessed	Not Assessed	Not Assessed	1300
Inorganic Mercury	Residential with plant uptake	Not Assessed	withdrawn	40	Not Assessed
	Residential without plant uptake	Not Assessed	withdrawn	56	Not Assessed
	Allotment	Not Assessed	withdrawn	19	Not Assessed
	Commercial	Not Assessed	withdrawn	1100	Not Assessed
	Public Open Space (Residential)	Not Assessed	withdrawn	120	Not Assessed
	Public Open Space (Park)	Not Assessed	withdrawn	240	Not Assessed
Elemental Mercury	Residential with plant uptake	Not Assessed	withdrawn	1.2	Not Assessed
	Residential without plant uptake	Not Assessed	withdrawn	1.2	Not Assessed
	Allotment	Not Assessed	withdrawn	21	Not Assessed
	Commercial	Not Assessed	withdrawn	25.8	Not Assessed
	Public Open Space (Residential)	Not Assessed	withdrawn	16	Not Assessed
	Public Open Space (Park)	Not Assessed	withdrawn	25.8	Not Assessed
Methyl Mercury	Residential with plant uptake	Not Assessed	withdrawn	11	Not Assessed
	Residential without plant uptake	Not Assessed	withdrawn	15	Not Assessed
	Allotment	Not Assessed	withdrawn	6	Not Assessed
	Commercial	Not Assessed	withdrawn	320	Not Assessed
	Public Open Space (Residential)	Not Assessed	withdrawn	40	Not Assessed
	Public Open Space (Park)	Not Assessed	withdrawn	68	Not Assessed
Nickel	Residential with plant uptake	Not Assessed	130	180	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	180	Not Assessed
	Allotment	Not Assessed	230	230	Not Assessed
	Commercial	Not Assessed	1800	980	Not Assessed
	Public Open Space (Residential)	Not Assessed		230	Not Assessed
	Public Open Space (Park)	Not Assessed		3400	Not Assessed

List 1A cont. (Metals mg/kg)					
Contaminant	Generic Exposure Scenario	(CLEA v1.06 & S4UL methodology)	Environment Agency SGV (CLEA v1.04)	CIEH/LQM S4UL 2015 Part 2	DEFRA SP1010 'Final' C4SL December 2014
Selenium	Residential with plant uptake	Not Assessed	350	250	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	430	Not Assessed
	Allotment	Not Assessed	120	88	Not Assessed
	Commercial	Not Assessed	13000	12000	Not Assessed
	Public Open Space (Residential)	Not Assessed		1100	Not Assessed
	Public Open Space (Park)	Not Assessed		1800	Not Assessed
Vanadium	Residential with plant uptake	Not Assessed	Not Assessed	410	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	1200	Not Assessed
	Allotment	Not Assessed	Not Assessed	91	Not Assessed
	Commercial	Not Assessed	Not Assessed	9000	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	2000	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	5000	Not Assessed
Zinc	Residential with plant uptake	Not Assessed	Not Assessed	3700	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	40000	Not Assessed
	Allotment	Not Assessed	Not Assessed	620	Not Assessed
	Commercial	Not Assessed	Not Assessed	730000	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	8100	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	17000	Not Assessed
Free Cyanide	Residential with plant uptake	Not Assessed	Not Assessed	Not Assessed	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	Not Assessed	Not Assessed
	Allotment	Not Assessed	Not Assessed	Not Assessed	Not Assessed
	Commercial	Not Assessed	Not Assessed	Not Assessed	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	Not Assessed	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	Not Assessed	Not Assessed
Complex Cyanide	Residential with plant uptake	Not Assessed	Not Assessed	Not Assessed	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	Not Assessed	Not Assessed
	Allotment	Not Assessed	Not Assessed	Not Assessed	Not Assessed
	Commercial	Not Assessed	Not Assessed	Not Assessed	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	Not Assessed	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	Not Assessed	Not Assessed
Thiocyanate	Residential with plant uptake	Not Assessed	Not Assessed	Not Assessed	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	Not Assessed	Not Assessed
	Allotment	Not Assessed	Not Assessed	Not Assessed	Not Assessed
	Commercial	Not Assessed	Not Assessed	Not Assessed	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	Not Assessed	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	Not Assessed	Not Assessed
This table is not a list of potential contaminants at any one site All values are subject to ongoing review CIEH - Chartered Institute for Environmental Health LQM - Land Quality Management (commercial research) (1) xx/yy/zz SOM - Soil Organic Matter dependant at 1%/2.5%/6% (2) xx/yy/zz pH - pH dependant at pH6/pH7/pH8 (3) Internal limits exceeded during calculations (4) under review (5) Value Withdrawn S4UL values are the copyright of Land Quality Management Ltd and are reproduced with permission; Publication Number S4UL3262 All rights reserved		Sackedgate Ltd 26 Reading Road, Burghfield Common, Reading, Berkshire RG7 3QA 07854 816921 01189 832570 			

List 1B (Aliphatic Hydrocarbons mg/kg)					
Contaminant	Generic Exposure Scenario	(CLEA v1.06 & S4UL methodology)	Environment Agency SGV (CLEA v1.04)	CIEH/LQM S4UL 2015 Part 3	DEFRA SP1010 'Final' C4SL December 2014
Aliphatic C5-C6	Residential with plant uptake	Not Assessed	Not Assessed	42/78/160 ₍₁₎	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	42/76/160 ₍₁₎	Not Assessed
	Allotment	Not Assessed	Not Assessed	730/1700/3900 ₍₁₎	Not Assessed
	Commercial	Not Assessed	Not Assessed	3200(304 ^{sol})/5900(558 ^{sol})/12000(1150 ^{sol}) _(1&3)	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	570000/590000/60000 ₍₁₎	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	95000(304 ^{sol})/130000(558 ^{sol})/180000(1150 ^{sol}) _(1&3)	Not Assessed
Aliphatic C6-C8	Residential with plant uptake	Not Assessed	Not Assessed	100/230/530 ₍₁₎	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	100/230/530 ₍₁₎	Not Assessed
	Allotment	Not Assessed	Not Assessed	2300/5600/13000 ₍₁₎	Not Assessed
	Commercial	Not Assessed	Not Assessed	7800(144 ^{sol})/17000(322 ^{sol})/40000(736 ^{sol}) _(1&3)	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	600000/610000/620000 ₍₁₎	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	150000(144 ^{sol})/220000(322 ^{sol})/320000(736 ^{sol}) _(1&3)	Not Assessed
Aliphatic C8-C10	Residential with plant uptake	Not Assessed	Not Assessed	27/65/150 ₍₁₎	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	27/65/150 ₍₁₎	Not Assessed
	Allotment	Not Assessed	Not Assessed	320/77/1700 ₍₁₎	Not Assessed
	Commercial	Not Assessed	Not Assessed	2000(78 ^{sol})/4800(190 ^{vap})/11000(451 ^{vap}) _(1&3)	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	13000/13000/13000 ₍₁₎	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	14000(78 ^{sol})/18000(190 ^{vap})/21000(451 ^{vap}) _(1&3)	Not Assessed
Aliphatic C10-C12	Residential with plant uptake	Not Assessed	Not Assessed	130(48 ^{vap})/330(118 ^{vap})/760(283 ^{vap}) _(1&3)	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	130(48 ^{vap})/330(118 ^{vap})/760(283 ^{vap}) _(1&3)	Not Assessed
	Allotment	Not Assessed	Not Assessed	2200/4400/7300 ₍₁₎	Not Assessed
	Commercial	Not Assessed	Not Assessed	9700(48 ^{sol})/23000(118 ^{vap})/47000(283 ^{vap}) _(1&3)	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	13000/13000/13000 ₍₁₎	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	21000(48 ^{sol})/230000(118 ^{vap})/24000(283 ^{vap}) _(1&3)	Not Assessed
Aliphatic C12-C16	Residential with plant uptake	Not Assessed	Not Assessed	1100(24 ^{sol})/2400(59 ^{sol})/4300(142 ^{sol}) _(1&3)	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	1100(24 ^{sol})/2400(59 ^{sol})/4300(142 ^{sol}) _(1&3)	Not Assessed
	Allotment	Not Assessed	Not Assessed	11000/13000/13000 ₍₁₎	Not Assessed
	Commercial	Not Assessed	Not Assessed	59000(24 ^{sol})/82000(59 ^{sol})/90000(142 ^{sol}) _(1&3)	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	13000/13000/13000 ₍₁₎	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	25000(24 ^{sol})/25000(59 ^{sol})/26000(142 ^{sol}) _(1&3)	Not Assessed
Aliphatic C16-C35	Residential with plant uptake	Not Assessed	Not Assessed	65000(8.48 ^{sol})/92000(21 ^{sol})/110000 _(1&3)	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	65000(8.48 ^{sol})/92000(21 ^{sol})/110000 _(1&3)	Not Assessed
	Allotment	Not Assessed	Not Assessed	260000/270000/270000 ₍₁₎	Not Assessed
	Commercial	Not Assessed	Not Assessed	1600000/1700000/1800000 ₍₁₎	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	3800/3800/3800 ₍₁₎	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	3800/3800/3800 ₍₁₎	Not Assessed
Aliphatic C35-C44	Residential with plant uptake	Not Assessed	Not Assessed	65000(8.48 ^{sol})/92000(21 ^{sol})/110000 _(1&3)	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	65000(8.48 ^{sol})/92000(21 ^{sol})/110000 _(1&3)	Not Assessed
	Allotment	Not Assessed	Not Assessed	260000/270000/270000 ₍₁₎	Not Assessed
	Commercial	Not Assessed	Not Assessed	1600000/1700000/1800000 ₍₁₎	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	3800/3800/3800 ₍₁₎	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	3800/3800/3800 ₍₁₎	Not Assessed
Aliphatic C44-C70	Residential with plant uptake	Not Assessed	Not Assessed	1600/1800/1900	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	1600/1800/1900	Not Assessed
	Allotment	Not Assessed	Not Assessed	1200/2100/3000	Not Assessed
	Commercial	Not Assessed	Not Assessed	28000/28000/28000	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	3800/3800/3800	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	7800/7800/7800	Not Assessed
This table is not a list of potential contaminants at any one site All values are subject to ongoing review CIEH - Chartered Institute for Environmental Health LQM - Land Quality Management (commercial research) (1) xx/yy/zz SOM - Soil Organic Matter dependant at 1%/2.5%/6% (2) xx/yy/zz pH - pH dependant at pH6/pH7/pH8 (3) Internal limits exceeded during calculations. Vapour or solubility saturation limit exceeded (limit presented in brackets) (4) under review S4UL values are the copyright of Land Quality Management Ltd and are reproduced with permission; Publication Number S4UL3262 All rights reserved			Sackedgate Ltd 26 Reading Road, Burghfield Common, Reading, Berkshire RG7 3QA 07854 816921 01189 832570		

List 1C (Aromatic (Mono-cyclic and Poly-cyclic) Hydrocarbons mg/kg)					
Contaminant	Generic Exposure Scenario	(CLEA v1.06 & S4UL methodology)	Environment Agency SGV (CLEA v1.04)	CIEH/LQM S4UL 2015 Part 3	DEFRA SP1010 'Final' C4SL December 2014
Aromatic C5-C7	Residential with plant uptake	Not Assessed	Not Assessed	70/140/300 ₍₁₎	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	370/690/1400 ₍₁₎	Not Assessed
	Allotment	Not Assessed	Not Assessed	13/27/57 ₍₁₎	Not Assessed
	Commercial	Not Assessed	Not Assessed	26000(1220 ^{sol})/46000(2260 ^{sol})/86000(4710 ^{sol}) _(1&3)	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	56000/56000/56000 ₍₁₎	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	76000(1220 ^{sol})/84000(2260 ^{sol})/92000(4710 ^{sol}) _(1&3)	Not Assessed
Aromatic C7-C8	Residential with plant uptake	Not Assessed	Not Assessed	130/290/660 ₍₁₎	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	860/1800/3900 ₍₁₎	Not Assessed
	Allotment	Not Assessed	Not Assessed	22/51/120 ₍₁₎	Not Assessed
	Commercial	Not Assessed	Not Assessed	56000(869 ^{vap})/110000(1920 ^{sol})/180000(4360 ^{vap}) _(1&3)	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	56000/56000/56000 ₍₁₎	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	87000(869 ^{vap})/95000(1920 ^{sol})/100000(4360 ^{vap}) _(1&3)	Not Assessed
Aromatic C8-C10	Residential with plant uptake	Not Assessed	Not Assessed	34/83/190 ₍₁₎	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	47/110/270 ₍₁₎	Not Assessed
	Allotment	Not Assessed	Not Assessed	8.6/21/51 ₍₁₎	Not Assessed
	Commercial	Not Assessed	Not Assessed	3500(613 ^{vap})/8100(1500 ^{vap})/17000(3580 ^{vap}) _(1&3)	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	5000/5000/5000 ₍₁₎	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	7200(613 ^{vap})/8500(1500 ^{vap})/9300(3580 ^{vap}) _(1&3)	Not Assessed
Aromatic C10-C12	Residential with plant uptake	Not Assessed	Not Assessed	74/180/380 ₍₁₎	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	250/590/1200 ₍₁₎	Not Assessed
	Allotment	Not Assessed	Not Assessed	13/31/74 ₍₁₎	Not Assessed
	Commercial	Not Assessed	Not Assessed	16000(364 ^{sol})/28000(899 ^{sol})/34000(2150 ^{sol}) _(1&3)	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	5000/5000/5000 ₍₁₎	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	9200(364 ^{sol})/9700(899 ^{sol})/10000 _(1&3)	Not Assessed
Aromatic C12-C16	Residential with plant uptake	Not Assessed	Not Assessed	140/330/660 ₍₁₎	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	1800/2300(419 ^{sol})/2500 _(1&3)	Not Assessed
	Allotment	Not Assessed	Not Assessed	23/57/130 ₍₁₎	Not Assessed
	Commercial	Not Assessed	Not Assessed	36000/(169 ^{sol})/37000/38000 _(1&3)	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	5100/5100/5000 ₍₁₎	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	10000/10000/10000 ₍₁₎	Not Assessed
Aromatic C16-C21	Residential with plant uptake	Not Assessed	Not Assessed	260/540/930 ₍₁₎	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	1900/1900/1900 ₍₁₎	Not Assessed
	Allotment	Not Assessed	Not Assessed	46/110/260 ₍₁₎	Not Assessed
	Commercial	Not Assessed	Not Assessed	28000/28000/28000 ₍₁₎	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	3800/3800/3800 ₍₁₎	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	7600/7700/7800 ₍₁₎	Not Assessed
Aromatic C21-C35	Residential with plant uptake	Not Assessed	Not Assessed	1100/1500/1700 ₍₁₎	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	1900/1900/1900 ₍₁₎	Not Assessed
	Allotment	Not Assessed	Not Assessed	370/820/1600 ₍₁₎	Not Assessed
	Commercial	Not Assessed	Not Assessed	28000/28000/28000 ₍₁₎	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	3800/3800/3800 ₍₁₎	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	7800/7800/7900 ₍₁₎	Not Assessed
Aromatic C35-C44	Residential with plant uptake	Not Assessed	Not Assessed	1100/1500/1700 ₍₁₎	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	1900/1900/1900 ₍₁₎	Not Assessed
	Allotment	Not Assessed	Not Assessed	370/820/1600 ₍₁₎	Not Assessed
	Commercial	Not Assessed	Not Assessed	28000/28000/28000 ₍₁₎	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	3800/3800/3800 ₍₁₎	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	7800/7800/7900 ₍₁₎	Not Assessed
Aromatic C44-C70	Residential with plant uptake	Not Assessed	Not Assessed	1600/1800/1900 ₍₁₎	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	1900/1900/1900 ₍₁₎	Not Assessed
	Allotment	Not Assessed	Not Assessed	1200/2100/3000 ₍₁₎	Not Assessed
	Commercial	Not Assessed	Not Assessed	28000/28000/28000 ₍₁₎	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	3800/3800/3800 ₍₁₎	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	7800/7800/7900 ₍₁₎	Not Assessed
This table is not a list of potential contaminants at any one site All values are subject to ongoing review CIEH - Chartered Institute for Environmental Health LQM - Land Quality Management (commercial research) (1) xx/yy/zz SOM - Soil Organic Matter dependant at 1%/2.5%/6% (2) xx/yy/zz pH - pH dependant at pH6/pH7/pH8 (3) Internal limits exceeded during calculations. Vapour or solubility saturation limit exceeded (limit presented in brackets) (4) under review S4UL values are the copyright of Land Quality Management Ltd and are reproduced with permission; Publication Number S4UL3262 All rights reserved			Sackedgate Ltd 26 Reading Road, Burghfield Common, Reading, Berkshire RG7 3QA 07854 816921 01189 832570 		

List 1D (BTEX Mono-cyclic Aromatic Hydrocarbons mg/kg)					
Contaminant	Generic Exposure Scenario	(CLEA v1.06 & S4UL methodology)	Environment Agency SGV (CLEA v1.04)	CIEH/LQM S4UL 2015 Part 3	DEFRA SP1010 'Final' C4SL December 2014
Benzene	Residential with plant uptake	Not Assessed	0.33	0.87/0.17/0.37 ⁽¹⁾	0.87
	Residential without plant uptake	Not Assessed	Not Assessed	0.38/0.70/1.4 ⁽¹⁾	3.3
	Allotment	Not Assessed	0.07	0.017/0.034/0.075 ⁽¹⁾	0.18
	Commercial	Not Assessed	95	27/47/90 ⁽¹⁾	98
	Public Open Space (Residential)	Not Assessed	Not Assessed	72/72/73 ⁽¹⁾	79
	Public Open Space (Park)	Not Assessed	Not Assessed	90/11/110 ⁽¹⁾	170
Toluene	Residential with plant uptake	Not Assessed	610	130/290/660	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	880(869 ^{vap})/1900/3900 ^(1&3)	Not Assessed
	Allotment	Not Assessed	120	22/51/120 ⁽¹⁾	Not Assessed
	Commercial	Not Assessed	4400	56000(869 ^{vap})/56000(1920 ^{vap})/56000(4360 ^{vap}) ^(1&3)	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	5600/5600/5600 ⁽¹⁾	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	87000(869 ^{vap})/95000(1920 ^{vap})/100000(4360 ^{vap}) ^(1&3)	Not Assessed
Ethylbenzene	Residential with plant uptake	Not Assessed	350	47/110/260 ⁽¹⁾	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	83/190/440 ⁽¹⁾	Not Assessed
	Allotment	Not Assessed	90	16/39/91 ⁽¹⁾	Not Assessed
	Commercial	Not Assessed	2800	5700(518 ^{vap})/13000(1220 ^{vap})/27000(2840 ^{vap}) ^(1&3)	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	24000/24000/25000 ⁽¹⁾	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	17000(518 ^{vap})/22000(1220 ^{vap})/27000(2840 ^{vap}) ^(1&3)	Not Assessed
o-Xylene	Residential with plant uptake	Not Assessed	250	60/140/330 ⁽¹⁾	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	88/210/480 ⁽¹⁾	Not Assessed
	Allotment	Not Assessed	160	28/67/160 ⁽¹⁾	Not Assessed
	Commercial	Not Assessed	2600	6600(478 ^{sol})/15000(1120 ^{sol})/33000(2620 ^{sol}) ^(1&3)	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	41000/42000/43000 ⁽¹⁾	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	17000(478 ^{sol})/24000(1120 ^{sol})/33000(2620 ^{sol}) ^(1&3)	Not Assessed
m-Xylene	Residential with plant uptake	Not Assessed	240	59/140/320 ⁽¹⁾	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	52/190/450 ⁽¹⁾	Not Assessed
	Allotment	Not Assessed	180	31/74/170 ⁽¹⁾	Not Assessed
	Commercial	Not Assessed	3500	6200(625 ^{vap})/14000(1470 ^{vap})/31000(3460 ^{vap}) ^(1&3)	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	41000/42000/43000 ⁽¹⁾	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	17000(625 ^{vap})/24000(1470 ^{vap})/32000(3460 ^{vap}) ^(1&3)	Not Assessed
p-Xylene	Residential with plant uptake	Not Assessed	230	56/130/310 ⁽¹⁾	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	79/180/430 ⁽¹⁾	Not Assessed
	Allotment	Not Assessed	160	29/69/160 ⁽¹⁾	Not Assessed
	Commercial	Not Assessed	3200	59000(576 ^{sol})/14000(1350 ^{sol})/30000(3170 ^{sol}) ^(1&3)	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	41000/42000/43000 ⁽¹⁾	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	17000(576 ^{sol})/23000(1350 ^{sol})/31000(3170 ^{sol}) ^(1&3)	Not Assessed
This table is not a list of potential contaminants at any one site All values are subject to ongoing review CIEH - Chartered Institute for Environmental Health LQM - Land Quality Management (commercial research) (1) xx/yy/zz SOM - Soil Organic Matter dependant at 1%/2.5%/6% (2) xx/yy/zz pH - pH dependant at pH6/pH7/pH8 (3) Internal limits exceeded during calculations. Vapour or solubility saturation limit exceeded (limit presented in brackets) (4) under review S4UL values are the copyright of Land Quality Management Ltd and are reproduced with permission; Publication Number S4UL3262 All rights reserved			Sackedgate Ltd 26 Reading Road, Burghfield Common, Reading, Berkshire RG7 3QA 07854 816921 01189 832570 		

List 1E (Poly-cyclic Aromatic Hydrocarbons or PAH - mg/kg)					
Contaminant	Generic Exposure Scenario	(CLEA v1.06 & S4UL methodology)	Environment Agency SGV (CLEA v1.04)	CIEH/LQM S4UL 2015 Part 4	DEFRA SP1010 'Final' C4SL December 2014
Acenaphthene	Residential with plant uptake	Not Assessed	Not Assessed	210/610/1100 ₍₁₎	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	3000/(57 ^{soil})/4700(141 ^{soil})/6000(336 ^{soil}) _(1&3)	Not Assessed
	Allotment	Not Assessed	Not Assessed	34/85/200 ₍₁₎	Not Assessed
	Commercial	Not Assessed	Not Assessed	8400(57 ^{soil})/97000(141 ^{soil})/100000 _(1&3)	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	15000/15000/15000 ₍₁₎	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	29000/30000/30000 ₍₁₎	Not Assessed
Acenaphthylene	Residential with plant uptake	Not Assessed	Not Assessed	170/420/920 ₍₁₎	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	2900(86.1 ^{soil})/4600(212 ^{soil})/6000(506 ^{soil}) _(1&3)	Not Assessed
	Allotment	Not Assessed	Not Assessed	28/69/160 ₍₁₎	Not Assessed
	Commercial	Not Assessed	Not Assessed	83000(86.1 ^{soil})/97000(212 ^{soil})/100000 _(1&3)	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	15000/15000/15000 ₍₁₎	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	29000/30000/30000 ₍₁₎	Not Assessed
Anthracene	Residential with plant uptake	Not Assessed	Not Assessed	2400/5400/11000 ₍₁₎	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	31000(1.17 ^{vap})/35000/37000 _(1&3)	Not Assessed
	Allotment	Not Assessed	Not Assessed	380/950/2200 ₍₁₎	Not Assessed
	Commercial	Not Assessed	Not Assessed	520000/540000/540000 ₍₁₎	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	74000/74000/74000 ₍₁₎	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	150000/150000/150000 ₍₁₎	Not Assessed
Benzo (a) Anthracene	Residential with plant uptake	Not Assessed	Not Assessed	7.2/11/13 ₍₁₎	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	11/14/15 ₍₁₎	Not Assessed
	Allotment	Not Assessed	Not Assessed	2.9/6.5/13 ₍₁₎	Not Assessed
	Commercial	Not Assessed	Not Assessed	170/170/180 ₍₁₎	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	29/29/29 ₍₁₎	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	49/56/62 ₍₁₎	Not Assessed
Benzo (a) Pyrene	Residential with plant uptake	Not Assessed	Not Assessed	2.2/2.7/3.0 ₍₁₎	5.0
	Residential without plant uptake	Not Assessed	Not Assessed	3.2/3.2/3.2 ₍₁₎	5.3
	Allotment	Not Assessed	Not Assessed	0.97/2.0/3.5 ₍₁₎	5.7
	Commercial	Not Assessed	Not Assessed	35/35/36 ₍₁₎	77
	Public Open Space (Residential)	Not Assessed	Not Assessed	5.7/5.7/5.7 ₍₁₎	10
	Public Open Space (Park)	Not Assessed	Not Assessed	11/12/13 ₍₁₎	21
Benzo (b) Fluoranthene	Residential with plant uptake	Not Assessed	Not Assessed	2.6/3.3/3.7 ₍₁₎	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	3.9/4.0/4.0 ₍₁₎	Not Assessed
	Allotment	Not Assessed	Not Assessed	0.99/2.1/3.9 ₍₁₎	Not Assessed
	Commercial	Not Assessed	Not Assessed	44/44/45 ₍₁₎	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	7.1/7.2/7.2 ₍₁₎	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	13/15/16 ₍₁₎	Not Assessed
Benzo (ghi) Perylene	Residential with plant uptake	Not Assessed	Not Assessed	320/340/350 ₍₁₎	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	360/360/360 ₍₁₎	Not Assessed
	Allotment	Not Assessed	Not Assessed	290/470/640 ₍₁₎	Not Assessed
	Commercial	Not Assessed	Not Assessed	3900/4000/4000 ₍₁₎	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	640/640/640 ₍₁₎	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	1400/1500/1600 ₍₁₎	Not Assessed
Benzo (k) Fluoranthene	Residential with plant uptake	Not Assessed	Not Assessed	77/93/100 ₍₁₎	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	110/110/110 ₍₁₎	Not Assessed
	Allotment	Not Assessed	Not Assessed	37/75/130 ₍₁₎	Not Assessed
	Commercial	Not Assessed	Not Assessed	1200/1200/1200 ₍₁₎	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	190/190/190 ₍₁₎	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	370/410/440 ₍₁₎	Not Assessed
Chrysene	Residential with plant uptake	Not Assessed	Not Assessed	15/22/27 ₍₁₎	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	30/31/32 ₍₁₎	Not Assessed
	Allotment	Not Assessed	Not Assessed	4.1/9.4/19 ₍₁₎	Not Assessed
	Commercial	Not Assessed	Not Assessed	350/350/350 ₍₁₎	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	57/57/57 ₍₁₎	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	93/110/120 ₍₁₎	Not Assessed
Dibenzo (ah) Anthracene	Residential with plant uptake	Not Assessed	Not Assessed	0.24/0.28/0.3 ₍₁₎	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	0.31/0.32/0.32 ₍₁₎	Not Assessed
	Allotment	Not Assessed	Not Assessed	0.14/0.27/0.43 ₍₁₎	Not Assessed
	Commercial	Not Assessed	Not Assessed	3.5/3.6/3.6 ₍₁₎	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	0.57/0.57/0.58 ₍₁₎	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	1.1/1.3/1.4 ₍₁₎	Not Assessed
Fluoranthene	Residential with plant uptake	Not Assessed	Not Assessed	280/560/890 ₍₁₎	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	1500/1600/1600 ₍₁₎	Not Assessed
	Allotment	Not Assessed	Not Assessed	52/130/290 ₍₁₎	Not Assessed
	Commercial	Not Assessed	Not Assessed	23000/23000/23000 ₍₁₎	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	3100/3100/3100 ₍₁₎	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	6300/6300/6400 ₍₁₎	Not Assessed
Fluorene	Residential with plant uptake	Not Assessed	Not Assessed	170/400/860 ₍₁₎	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	2800(30.9 ^{soil})/3800(76.5 ^{soil})/4500(183 ^{soil}) _(1&3)	Not Assessed
	Allotment	Not Assessed	Not Assessed	27/67/160 ₍₁₎	Not Assessed
	Commercial	Not Assessed	Not Assessed	63000(30.9 ^{soil})/68000/71000 _(1&3)	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	9900/9900/9900 ₍₁₎	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	20000/20000/20000 ₍₁₎	Not Assessed

List 1E cont (Poly-cyclic Aromatic Hydrocarbons or PAH - mg/kg)					
Contaminant	Generic Exposure Scenario	(CLEA v1.06 & S4UL methodology)	Environment Agency SGV (CLEA v1.04)	CIEH/LQM S4UL 2015 Part 4	DEFRA SP1010 'Final' C4SL December 2014
Indeno (cd) Pyrene	Residential with plant uptake	Not Assessed	Not Assessed	27/36/41 ₍₁₎	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	45/46/46 ₍₁₎	Not Assessed
	Allotment	Not Assessed	Not Assessed	9.5/21/39 ₍₁₎	Not Assessed
	Commercial	Not Assessed	Not Assessed	500/510/510 ₍₁₎	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	82/82/82 ₍₁₎	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	150/170/180 ₍₁₎	Not Assessed
Naphthalene	Residential with plant uptake	Not Assessed	Not Assessed	2.3/5.6/13 ₍₁₎	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	2.3/5.6/13 ₍₁₎	Not Assessed
	Allotment	Not Assessed	Not Assessed	4.1/10/24 ₍₁₎	Not Assessed
	Commercial	Not Assessed	Not Assessed	190(76.4 ^{sol})/460(183 ^{sol})/1100(432 ^{sol}) _(1&3)	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	4900/4900/4900 ₍₁₎	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	1200(76.4 ^{sol})/1900(183 ^{sol})/3000 _(1&3)	Not Assessed
Phenanthrene	Residential with plant uptake	Not Assessed	Not Assessed	95/220/440 ₍₁₎	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	1300(36 ^{sol})/1500/1500 _(1&3)	Not Assessed
	Allotment	Not Assessed	Not Assessed	15/38/90 ₍₁₎	Not Assessed
	Commercial	Not Assessed	Not Assessed	22000/22000/23000 ₍₁₎	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	3100/3100/3100 ₍₁₎	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	6200/6200/6300 ₍₁₎	Not Assessed
Pyrene	Residential with plant uptake	Not Assessed	Not Assessed	620/1200/2000 ₍₁₎	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	3700/3800/3800 ₍₁₎	Not Assessed
	Allotment	Not Assessed	Not Assessed	110/270/620 ₍₁₎	Not Assessed
	Commercial	Not Assessed	Not Assessed	54000/54000/54000 ₍₁₎	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	7400/7400/7400 ₍₁₎	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	15000/15000/15000 ₍₁₎	Not Assessed
Coal Tar (Benzo (a) Pyrene as surrogate)	Residential with plant uptake	Not Assessed	Not Assessed	0.79/0.98/1.1 ₍₁₎	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	1.2/1.2/1.2 ₍₁₎	Not Assessed
	Allotment	Not Assessed	Not Assessed	0.32/0.67/1.2 ₍₁₎	Not Assessed
	Commercial	Not Assessed	Not Assessed	15/15/15 ₍₁₎	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	2.2/2.2/2.2 ₍₁₎	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	4.4/4.7/4.8 ₍₁₎	Not Assessed
This table is not a list of potential contaminants at any one site All values are subject to ongoing review CIEH - Chartered Institute for Environmental Health LQM - Land Quality Management (commercial research) (1) xx/yy/zz SOM - Soil Organic Matter dependant at 1%/2.5%/6% (2) xx/yy/zz pH - pH dependant at pH6/pH7/pH8 (3) Internal limits exceeded during calculations. Vapour or solubility saturation limit exceeded (limit presented in brackets) (4) under review S4UL values are the copyright of Land Quality Management Ltd and are reproduced with permission; Publication Number S4UL3262 All rights reserved		Sackedgate Ltd 26 Reading Road, Burghfield Common, Reading, Berkshire RG7 3QA 07854 816921 01189 832570 			

List 1F (PCBs µg/kg)					
Contaminant	Generic Exposure Scenario	(CLEA v1.06 & S4UL methodology)	Environment Agency New SGV (CLEA v1.04)	CIEH/LQM 2nd Ed 2009 or CIEH/LQM S4UL 2015	DEFRA SP1010 'Final' C4SL December 2014
Sum of PCDDs, PCDFs and dioxin-like PCBs	Residential with plant uptake	Not Assessed	8	Not Assessed	Not Assessed
	Residential without plant uptake	Not Assessed	8	Not Assessed	Not Assessed
	Allotment	Not Assessed		Not Assessed	Not Assessed
	Commercial	Not Assessed	240	Not Assessed	Not Assessed
PCB-77	Residential with plant uptake	Not Assessed	0.0774	Not Assessed	Not Assessed
	Residential without plant uptake	Not Assessed	0.0783	Not Assessed	Not Assessed
	Allotment	Not Assessed	0.233	Not Assessed	Not Assessed
	Commercial	Not Assessed	2.33	Not Assessed	Not Assessed
PCB-81	Residential with plant uptake	Not Assessed	0.0774	Not Assessed	Not Assessed
	Residential without plant uptake	Not Assessed	0.0783	Not Assessed	Not Assessed
	Allotment	Not Assessed	0.233	Not Assessed	Not Assessed
	Commercial	Not Assessed	2.33	Not Assessed	Not Assessed
PCB-126	Residential with plant uptake	Not Assessed	0.0777	Not Assessed	Not Assessed
	Residential without plant uptake	Not Assessed	0.0783	Not Assessed	Not Assessed
	Allotment	Not Assessed	0.247	Not Assessed	Not Assessed
	Commercial	Not Assessed	2.33	Not Assessed	Not Assessed
PCB-169	Residential with plant uptake	Not Assessed	0.0777	Not Assessed	Not Assessed
	Residential without plant uptake	Not Assessed	0.0783	Not Assessed	Not Assessed
	Allotment	Not Assessed	0.251	Not Assessed	Not Assessed
	Commercial	Not Assessed	2.33	Not Assessed	Not Assessed
PCB-105	Residential with plant uptake	Not Assessed	0.0777	Not Assessed	Not Assessed
	Residential without plant uptake	Not Assessed	0.0783	Not Assessed	Not Assessed
	Allotment	Not Assessed	0.247	Not Assessed	Not Assessed
	Commercial	Not Assessed	2.33	Not Assessed	Not Assessed
PCB-114	Residential with plant uptake	Not Assessed	0.0777	Not Assessed	Not Assessed
	Residential without plant uptake	Not Assessed	0.0783	Not Assessed	Not Assessed
	Allotment	Not Assessed	0.247	Not Assessed	Not Assessed
	Commercial	Not Assessed	2.33	Not Assessed	Not Assessed
PCB-118	Residential with plant uptake	Not Assessed	0.0777	Not Assessed	Not Assessed
	Residential without plant uptake	Not Assessed	0.0783	Not Assessed	Not Assessed
	Allotment	Not Assessed	0.247	Not Assessed	Not Assessed
	Commercial	Not Assessed	2.33	Not Assessed	Not Assessed
PCB-123	Residential with plant uptake	Not Assessed	0.0777	Not Assessed	Not Assessed
	Residential without plant uptake	Not Assessed	0.0783	Not Assessed	Not Assessed
	Allotment	Not Assessed	0.247	Not Assessed	Not Assessed
	Commercial	Not Assessed	2.33	Not Assessed	Not Assessed
PCB-156	Residential with plant uptake	Not Assessed	0.0777	Not Assessed	Not Assessed
	Residential without plant uptake	Not Assessed	0.0783	Not Assessed	Not Assessed
	Allotment	Not Assessed	0.251	Not Assessed	Not Assessed
	Commercial	Not Assessed	2.33	Not Assessed	Not Assessed
PCB-157	Residential with plant uptake	Not Assessed	0.0777	Not Assessed	Not Assessed
	Residential without plant uptake	Not Assessed	0.0783	Not Assessed	Not Assessed
	Allotment	Not Assessed	0.251	Not Assessed	Not Assessed
	Commercial	Not Assessed	2.33	Not Assessed	Not Assessed
PCB-156	Residential with plant uptake	Not Assessed	0.0777	Not Assessed	Not Assessed
	Residential without plant uptake	Not Assessed	0.0783	Not Assessed	Not Assessed
	Allotment	Not Assessed	0.251	Not Assessed	Not Assessed
	Commercial	Not Assessed	2.33	Not Assessed	Not Assessed
PCB-157	Residential with plant uptake	Not Assessed	0.0777	Not Assessed	Not Assessed
	Residential without plant uptake	Not Assessed	0.0783	Not Assessed	Not Assessed
	Allotment	Not Assessed	0.251	Not Assessed	Not Assessed
	Commercial	Not Assessed	2.33	Not Assessed	Not Assessed
PCB-167	Residential with plant uptake	Not Assessed	0.0777	Not Assessed	Not Assessed
	Residential without plant uptake	Not Assessed	0.0783	Not Assessed	Not Assessed
	Allotment	Not Assessed	0.251	Not Assessed	Not Assessed
	Commercial	Not Assessed		Not Assessed	Not Assessed
PCB-189	Residential with plant uptake	Not Assessed	0.0778	Not Assessed	Not Assessed
	Residential without plant uptake	Not Assessed	0.0783	Not Assessed	Not Assessed
	Allotment	Not Assessed	0.252	Not Assessed	Not Assessed
	Commercial	Not Assessed	2.33	Not Assessed	Not Assessed
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List 1G (ChloroAlkanes & Alkenes mg/kg)					
Contaminant	Generic Exposure Scenario	(CLEA v1.06 & S4UL methodology)	Environment Agency SGV (CLEA v1.04)	CIEH/LQM S4UL 2015 Part5	DEFRA SP1010 'Final' C4SL December 2014
1,2 Dichloroethane (1,2 -DCA)	Residential with plant uptake	Not Assessed	Not Assessed	0.0071/0.011/0.019	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	0.0092/0.013/0.023	Not Assessed
	Allotment	Not Assessed	Not Assessed	0.0046/0.0083/0.016	Not Assessed
	Commercial	Not Assessed	Not Assessed	0.67/0.97/1.7	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	29/29/29	Not Assessed
1,1,1 Trichloroethane	Public Open Space (Park)	Not Assessed	Not Assessed	21/24/28	Not Assessed
	Residential with plant uptake	Not Assessed	Not Assessed	8.8/18/39	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	9.0/18/40	Not Assessed
	Allotment	Not Assessed	Not Assessed	48/110/240	Not Assessed
	Commercial	Not Assessed	Not Assessed	660/1300/3000	Not Assessed
1,1,2,2 Tetrachloroethanes	Public Open Space (Residential)	Not Assessed	Not Assessed	14000/14000/14000	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	57000(1425 ^{vap})/76000(2915 ^{vap})/100000(6392 ^{vap})	Not Assessed
	Residential with plant uptake	Not Assessed	Not Assessed	1.6/3.4/7.5	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	3.9/8.0/17	Not Assessed
	Allotment	Not Assessed	Not Assessed	0.41/0.89/2.0	Not Assessed
1,1,1,2 Tetrachloroethanes	Commercial	Not Assessed	Not Assessed	270/550/1100	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	1400/1400/1400	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	1800/2100/2300	Not Assessed
	Residential with plant uptake	Not Assessed	Not Assessed	1.2/2.8/6.4	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	1.5/3.5/8.2	Not Assessed
Tetrachloroethene	Allotment	Not Assessed	Not Assessed	0.79/1.9/4.4	Not Assessed
	Commercial	Not Assessed	Not Assessed	110/250/560	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	1400/1400/1400	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	1500/1800/2100	Not Assessed
	Residential with plant uptake	Not Assessed	Not Assessed	0.18/0.39/0.9	Not Assessed
Tetrachloromethane Aka Carbon Terachloride	Residential without plant uptake	Not Assessed	Not Assessed	0.18/0.4/0.92	Not Assessed
	Allotment	Not Assessed	Not Assessed	0.65/1.5/3.6	Not Assessed
	Commercial	Not Assessed	Not Assessed	19/42/95	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	1400/1400/1400	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	820(424 ^{soil})/1100(951 ^{soil})/1500	Not Assessed
Trichloroethene	Residential with plant uptake	Not Assessed	Not Assessed	0.026/0.058/0.13	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	0.026/0.058/0.13	Not Assessed
	Allotment	Not Assessed	Not Assessed	0.45/1.0/2.4	Not Assessed
	Commercial	Not Assessed	Not Assessed	2.9/6.3/14	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	890/920/950	Not Assessed
Trichloromethane Aka Chloroform	Public Open Space (Park)	Not Assessed	Not Assessed	190/270/400	Not Assessed
	Residential with plant uptake	Not Assessed	Not Assessed	0.016/0.034/0.075	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	0.017/0.036/0.08	Not Assessed
	Allotment	Not Assessed	Not Assessed	0.041/0.091/0.21	Not Assessed
	Commercial	Not Assessed	Not Assessed	1.2/2.6/6.7	Not Assessed
Chloroethene Aka Vinyl Chloride	Public Open Space (Residential)	Not Assessed	Not Assessed	120/120/120	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	70/91/120	Not Assessed
	Residential with plant uptake	Not Assessed	Not Assessed	0.91/1.7/3.4	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	1.2/2.1/4.2	Not Assessed
	Allotment	Not Assessed	Not Assessed	0.42/0.83/1.7	Not Assessed
	Commercial	Not Assessed	Not Assessed	99/170/350	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	2500/2500/2500	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	2600/2800/3100	Not Assessed
	Residential with plant uptake	Not Assessed	Not Assessed	0.00064/0.00087/0.0014	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	0.00077/0.0010/0.0015	Not Assessed
	Allotment	Not Assessed	Not Assessed	0.000550.0010/0.0018	Not Assessed
	Commercial	Not Assessed	Not Assessed	0.059/0.077/0.12	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	3.5/3.5/3.5	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	4.8/5.0/5.4	Not Assessed
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List 1H (Explosives mg/kg)					
Contaminant	Generic Exposure Scenario	(CLEA v1.06 & S4UL methodology)	Environment Agency SGV (CLEA v1.04)	CIEH/LQM S4UL 2015 Part 6	DEFRA SP1010 'Final' C4SL December 2014
2,4,6 Trinitrotoluene Aka TNT	Residential with plant uptake	Not Assessed	Not Assessed	1.6/3.7/8.1	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	65/66/66	Not Assessed
	Allotment	Not Assessed	Not Assessed	0.24/0.58/1.4	Not Assessed
	Commercial	Not Assessed	Not Assessed	1000/1000/1000	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	130/130/130	Not Assessed
RDX	Public Open Space (Park)	Not Assessed	Not Assessed	260/270/270	Not Assessed
	Residential with plant uptake	Not Assessed	Not Assessed	120/250/540	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	13000/13000/13000	Not Assessed
	Allotment	Not Assessed	Not Assessed	17/38/85	Not Assessed
	Commercial	Not Assessed	Not Assessed	21000/21000/21000	Not Assessed
HMX	Public Open Space (Residential)	Not Assessed	Not Assessed	26000/26000/27000	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	49000(18.7sol)/51000/53000	Not Assessed
	Residential with plant uptake	Not Assessed	Not Assessed	5.7/13/26	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	6700/6700/6700	Not Assessed
	Allotment	Not Assessed	Not Assessed	0.86/1.9/3.9	Not Assessed
	Commercial	Not Assessed	Not Assessed	11000/11000/11000	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	13000/13000/13000	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	23000(0.36 ^{vap})/23000(0.39 ^{vap})/24000(0.48 ^{vap})	Not Assessed
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List 11 (Pesticides mg/kg)					
Contaminant	Generic Exposure Scenario	(CLEA v1.06 & S4UL methodology)	Environment Agency SGV (CLEA v1.04)	CIEH/LQM S4UL 2015 Part 7	DEFRA SP1010 'Final' C4SL December 2014
Aldrin	Residential with plant uptake	Not Assessed	Not Assessed	5.7/6.6/7.1 ₍₁₎	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	7.3/7.4/7.5 ₍₁₎	Not Assessed
	Allotment	Not Assessed	Not Assessed	3.2/6.1/9.6 ₍₁₎	Not Assessed
	Commercial	Not Assessed	Not Assessed	170/170/170 ₍₁₎	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	18/18/18 ₍₁₎	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	30/30/31 ₍₁₎	Not Assessed
Dieldrin	Residential with plant uptake	Not Assessed	Not Assessed	0.97/2/3.5 ₍₁₎	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	7/7.3/7.4 ₍₁₎	Not Assessed
	Allotment	Not Assessed	Not Assessed	0.17/0.41/0.96 ₍₁₎	Not Assessed
	Commercial	Not Assessed	Not Assessed	170/170/170 ₍₁₎	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	18/18/18 ₍₁₎	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	30/30/30 ₍₁₎	Not Assessed
Atrazine	Residential with plant uptake	Not Assessed	Not Assessed	3.3/7.6/17.4 ₍₁₎	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	610/620/620 ₍₁₎	Not Assessed
	Allotment	Not Assessed	Not Assessed	0.5/1.2/2.7 ₍₁₎	Not Assessed
	Commercial	Not Assessed	Not Assessed	9300/9300/9400 ₍₁₎	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	1200/1200/1200 ₍₁₎	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	2300/2400/2400 ₍₁₎	Not Assessed
Dichlorvos	Residential with plant uptake	Not Assessed	Not Assessed	0.032/0.066/0.14 ₍₁₎	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	6.4/6.5/6.6 ₍₁₎	Not Assessed
	Allotment	Not Assessed	Not Assessed	0.0049/0.010/0.022 ₍₁₎	Not Assessed
	Commercial	Not Assessed	Not Assessed	140/140/140 ₍₁₎	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	16/16/16 ₍₁₎	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	26/26/27 ₍₁₎	Not Assessed
Alpha Endosulfan	Residential with plant uptake	Not Assessed	Not Assessed	7.4/18/41 ₍₁₎	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	160(0.003 ^{vap})/280(0.007 ^{vap})/410(0.016 ^{vap}) _(1 & 3)	Not Assessed
	Allotment	Not Assessed	Not Assessed	1.2/2.9/6.6 ₍₁₎	Not Assessed
	Commercial	Not Assessed	Not Assessed	5600(0.016 ^{vap})/7400(0.016 ^{vap})/8400(0.016 ^{vap}) _(1 & 3)	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	1200/1200/1200 ₍₁₎	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	2400/2400/2500 ₍₁₎	Not Assessed
Beta Endosulfan	Residential with plant uptake	Not Assessed	Not Assessed	7.0/17/39 ₍₁₎	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	150(0.00007 ^{vap})/320(0.0002 ^{vap})/440(0.0004 ^{vap}) _(1 & 3)	Not Assessed
	Allotment	Not Assessed	Not Assessed	1.1/2.7/6.4 ₍₁₎	Not Assessed
	Commercial	Not Assessed	Not Assessed	6300(0.00007 ^{vap})/7800(0.0002 ^{vap})/8700(0.0004 ^{vap}) _(1 & 3)	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	1200/1200/1200 ₍₁₎	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	2400/2400/2500 ₍₁₎	Not Assessed
Alpha BHC (Hexachlorocyclohexane) Inc Lindane	Residential with plant uptake	Not Assessed	Not Assessed	0.23/0.66/1.2 ₍₁₎	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	6.9/9.2/11 ₍₁₎	Not Assessed
	Allotment	Not Assessed	Not Assessed	0.035/0.087/0.21 ₍₁₎	Not Assessed
	Commercial	Not Assessed	Not Assessed	170/180/180 ₍₁₎	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	24/24/24 ₍₁₎	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	47/48/48 ₍₁₎	Not Assessed
Beta BHC (Hexachlorocyclohexane) Inc Lindane	Residential with plant uptake	Not Assessed	Not Assessed	0.085/0.2/0.46 ₍₁₎	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	3.7/3.8/3.8 ₍₁₎	Not Assessed
	Allotment	Not Assessed	Not Assessed	0.013/0.032/0.077 ₍₁₎	Not Assessed
	Commercial	Not Assessed	Not Assessed	65/65/65 ₍₁₎	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	8.1/8.1/8.1 ₍₁₎	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	15/15/16 ₍₁₎	Not Assessed
Gamma BHC (Hexachlorocyclohexane) Inc Lindane	Residential with plant uptake	Not Assessed	Not Assessed	0.06/0.14/0.33 ₍₁₎	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	2.9/3.3/3.5 ₍₁₎	Not Assessed
	Allotment	Not Assessed	Not Assessed	0.0092/0.023/0.054 ₍₁₎	Not Assessed
	Commercial	Not Assessed	Not Assessed	67/69/70 ₍₁₎	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	8.2/8.2/8.2 ₍₁₎	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	14/15/15 ₍₁₎	Not Assessed
DDT _{TOT} (Sum of DDD, DDE, TDE and DDT)	Residential with plant uptake	Not Assessed	Not Assessed	Not Assessed	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	Not Assessed	Not Assessed
	Allotment	Not Assessed	Not Assessed	Not Assessed	Not Assessed
	Commercial	Not Assessed	Not Assessed	Not Assessed	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	Not Assessed	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	Not Assessed	Not Assessed
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List 1J (Chlorobenzenes mg/kg)					
Contaminant	Generic Exposure Scenario	(CLEA v1.06 & S4UL methodology)	Environment Agency SGV (CLEA v1.04)	CIEH/LQM S4UL 2015 Part8	DEFRA SP1010 'Final' C4SL December 2014
Chlorobenzene	Residential with plant uptake	Not Assessed	Not Assessed	0.46/1.0/2.4 ₍₁₎	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	0.46/1.0/2.4 ₍₁₎	Not Assessed
	Allotment	Not Assessed	Not Assessed	5.9/14/32 ₍₁₎	Not Assessed
	Commercial	Not Assessed	Not Assessed	56/130/290 ₍₁₎	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	11000/13000/14000 ₍₁₎	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	1300(675 ^{sol})/2000(1520 ^{sol})/2900 ₍₁₎	Not Assessed
1,2 Dichlorobenzene	Residential with plant uptake	Not Assessed	Not Assessed	23/56/130 ₍₁₎	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	24/57/130 ₍₁₎	Not Assessed
	Allotment	Not Assessed	Not Assessed	94/230/540 ₍₁₎	Not Assessed
	Commercial	Not Assessed	Not Assessed	2000(571 ^{sol})/4800(1370 ^{sol})/11000(3240 ^{sol}) ₍₁₎	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	90000/95000/98000	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	24000(571 ^{sol})/36000(1370 ^{sol})/51000(3240 ^{sol}) ₍₁₎	Not Assessed
1,3 Dichlorobenzene	Residential with plant uptake	Not Assessed	Not Assessed	0.4/0.1/2.3 ₍₁₎	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	0.44/1.1/2.5 ₍₁₎	Not Assessed
	Allotment	Not Assessed	Not Assessed	0.25/0.6/1.5 ₍₁₎	Not Assessed
	Commercial	Not Assessed	Not Assessed	30/73/170 ₍₁₎	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	300/300/300 ₍₁₎	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	390/440/470 ₍₁₎	Not Assessed
1,4 Dichlorobenzene	Residential with plant uptake	Not Assessed	Not Assessed	61/150/350 ₍₁₎	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	61/150/350 ₍₁₎	Not Assessed
	Allotment	Not Assessed	Not Assessed	19/37/88 ₍₁₎	Not Assessed
	Commercial	Not Assessed	Not Assessed	4400(224 ^{vap})/10000(540 ^{vap})/25000(1280 ^{vap}) ₍₁₎	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	17000/17000/17000 ₍₁₎	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	36000(224 ^{vap})/36000(540 ^{vap})/36000(1280 ^{vap}) ₍₁₎	Not Assessed
1,2,3 Trichlorobenzene	Residential with plant uptake	Not Assessed	Not Assessed	1.5/3.6/8.6 ₍₁₎	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	1.5/3.7/8.8 ₍₁₎	Not Assessed
	Allotment	Not Assessed	Not Assessed	4.7/12/28 ₍₁₎	Not Assessed
	Commercial	Not Assessed	Not Assessed	102/250/590 ₍₁₎	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	1800/1800/1800 ₍₁₎	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	770(134 ^{vap})/1100(330 ^{vap})/1600(789 ^{vap}) ₍₁₎	Not Assessed
1,2,4 Trichlorobenzene	Residential with plant uptake	Not Assessed	Not Assessed	2.6/6.4/15 ₍₁₎	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	2.6/6.4/15 ₍₁₎	Not Assessed
	Allotment	Not Assessed	Not Assessed	55/140/320 ₍₁₎	Not Assessed
	Commercial	Not Assessed	Not Assessed	220/530/1300 ₍₁₎	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	15000/17000/19000 ₍₁₎	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	1700(318 ^{vap})/2600(786 ^{vap})/4000(1880 ^{vap}) ₍₁₎	Not Assessed
1,3,5 Trichlorobenzene	Residential with plant uptake	Not Assessed	Not Assessed	0.33/0.81/1.9 ₍₁₎	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	0.33/0.81/1.9 ₍₁₎	Not Assessed
	Allotment	Not Assessed	Not Assessed	4.7/12/28 ₍₁₎	Not Assessed
	Commercial	Not Assessed	Not Assessed	23/55/130 ₍₁₎	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	1700/1700/1800 ₍₁₎	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	380(36.7 ^{vap})/580(90.8 ^{vap})/860(217 ^{vap}) ₍₁₎	Not Assessed
1,2,3,4 Tetrachlorobenzenes	Residential with plant uptake	Not Assessed	Not Assessed	15/36/78 ₍₁₎	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	24/56/120 ₍₁₎	Not Assessed
	Allotment	Not Assessed	Not Assessed	4.4/11/26 ₍₁₎	Not Assessed
	Commercial	Not Assessed	Not Assessed	1700(122 ^{vap})/3080(304 ^{vap})/4400(728 ^{vap}) ₍₁₎	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	830/830/830 ₍₁₎	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	1500(122 ^{vap})/1600/1600 ₍₁₎	Not Assessed
1,2,3,5 Tetrachlorobenzenes	Residential with plant uptake	Not Assessed	Not Assessed	0.66/1.6/3.7 ₍₁₎	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	0.75/1.9/4.3 ₍₁₎	Not Assessed
	Allotment	Not Assessed	Not Assessed	0.38/0.9/2.2 ₍₁₎	Not Assessed
	Commercial	Not Assessed	Not Assessed	49(39.4 ^{vap})/120(98.1 ^{vap})/240(235 ^{vap}) ₍₁₎	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	78/79/79 ₍₁₎	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	110(39 ^{vap})/120/130 ₍₁₎	Not Assessed
1,2,4,5 Tetrachlorobenzenes	Residential with plant uptake	Not Assessed	Not Assessed	0.33/0.77/1.6 ₍₁₎	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	0.73/1.7/3.5 ₍₁₎	Not Assessed
	Allotment	Not Assessed	Not Assessed	0.06/0.16/0.37 ₍₁₎	Not Assessed
	Commercial	Not Assessed	Not Assessed	42(19.7 ^{sol})/72(49.1 ^{sol})/96 ₍₁₎	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	13/13/13 ₍₁₎	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	25/26/26 ₍₁₎	Not Assessed
Pentachlorobenzene	Residential with plant uptake	Not Assessed	Not Assessed	5.8/12/22 ₍₁₎	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	19/30/38 ₍₁₎	Not Assessed
	Allotment	Not Assessed	Not Assessed	1.2/3.1/7.0 ₍₁₎	Not Assessed
	Commercial	Not Assessed	Not Assessed	640(43.0 ^{sol})/770(107 ^{sol})/830 ₍₁₎	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	100/100/100 ₍₁₎	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	190/190/190 ₍₁₎	Not Assessed

List 1J (Chlorobenzenes mg/kg) cont

Contaminant	Generic Exposure Scenario	(CLEA v1.06 & S4UL methodology)	Environment Agency SGV (CLEA v1.04)	CIEH/LQM S4UL 2015 Part8	DEFRA SP1010 'Final' C4SL December 2014
Hexachlorobenzene	Residential with plant uptake	Not Assessed	Not Assessed	1.3(0.2 ^{vap})/3.3(0.5 ^{vap})/4.9 ₍₁₎	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	4.1(0.2 ^{vap})/5.7(0.5 ^{vap})/6.7(1.2 ^{vap}) ₍₁₎	Not Assessed
	Allotment	Not Assessed	Not Assessed	0.47/1.1/2.5 ₍₁₎	Not Assessed
	Commercial	Not Assessed	Not Assessed	110(0.2 ^{vap})/120/120 ₍₁₎	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	16/16/16 ₍₁₎	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	30/30/30 ₍₁₎	Not Assessed
This table is not a list of potential contaminants at any one site All values are subject to ongoing review CIEH - Chartered Institute for Environmental Health LQM - Land Quality Management (commercial research) (1) xx/yy/zz SOM - Soil Organic Matter dependant at 1%/2.5%/6% (2) xx/yy/zz pH - pH dependant at pH6/pH7/pH8 (3) Internal limits exceeded during calculations. Vapour or solubility saturation limit exceeded (limit presented in brackets) (4) under review S4UL values are the copyright of Land Quality Management Ltd and are reproduced with permission; Publication Number S4UL3262 All rights reserved			Sackedgate Ltd 26 Reading Road, Burghfield Common, Reading, Berkshire RG7 3QA 07854 816921 01189 832570 		

List 1K (Phenols & Chlorophenols mg/kg)

Contaminant	Generic Exposure Scenario	(CLEA v1.06 & S4UL methodology)	Environment Agency SGV (CLEA v1.04)	CIEH/LQM S4UL 2015 Part9	DEFRA SP1010 'Final' C4SL December 2014
Phenol	Residential with plant uptake	Not Assessed	Not Assessed	280/550/1100 ₍₁₎	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	750/1300/2300 ₍₁₎	Not Assessed
	Allotment	Not Assessed	Not Assessed	66/140/280 ₍₁₎	Not Assessed
	Commercial	Not Assessed	Not Assessed	760/1500/3200 ₍₁₎	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	760/1500/3200 ₍₁₎	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	760/1500/3200 ₍₁₎	Not Assessed
Chlorophenol	Residential with plant uptake	Not Assessed	Not Assessed	0.87/2.0/4.5 ₍₁₎	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	94/150/210 ₍₁₎	Not Assessed
	Allotment	Not Assessed	Not Assessed	0.13/0.30/0.7 ₍₁₎	Not Assessed
	Commercial	Not Assessed	Not Assessed	3500/4000/4300 ₍₁₎	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	620/620/620 ₍₁₎	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	1100/1100/1100 ₍₁₎	Not Assessed
Pentachlorophenol	Residential with plant uptake	Not Assessed	Not Assessed	0.22/0.52/1.2 ₍₁₎	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	27(16.4 ^{vap})/29/31 ₍₁₎	Not Assessed
	Allotment	Not Assessed	Not Assessed	0.03/0.08/0.19 ₍₁₎	Not Assessed
	Commercial	Not Assessed	Not Assessed	400/400/400 ₍₁₎	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	60/60/60 ₍₁₎	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	110/120/120 ₍₁₎	Not Assessed
This table is not a list of potential contaminants at any one site All values are subject to ongoing review CIEH - Chartered Institute for Environmental Health LQM - Land Quality Management (commercial research) (1) xx/yy/zz SOM - Soil Organic Matter dependant at 1%/2.5%/6% (2) xx/yy/zz pH - pH dependant at pH6/pH7/pH8 (3) Internal limits exceeded during calculations. Vapour or solubility saturation limit exceeded (limit presented in brackets) (4) under review S4UL values are the copyright of Land Quality Management Ltd and are reproduced with permission; Publication Number S4UL3262 All rights reserved			Sackedgate Ltd 26 Reading Road, Burghfield Common, Reading, Berkshire RG7 3QA 07854 816921 01189 832570 		

List 1L (Other mg/kg)

Contaminant	Generic Exposure Scenario	(CLEA v1.06 & S4UL methodology)	Environment Agency SGV (CLEA v1.04)	CIEH/LQM S4UL 2015 Part 10	DEFRA SP1010
Carbon Disulphide	Residential with plant uptake	Not Assessed	Not Assessed	0.14/0.29/0.62 ₍₁₎	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	0.14/0.29/0.62 ₍₁₎	Not Assessed
	Allotment	Not Assessed	Not Assessed	4.8/10/23 ₍₁₎	Not Assessed
	Commercial	Not Assessed	Not Assessed	11/22/47 ₍₁₎	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	11000/11000/12000 ₍₁₎	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	1300/1900/2700 ₍₁₎	Not Assessed
Hexachlorobutadiene	Residential with plant uptake	Not Assessed	Not Assessed	0.29/0.7/1.6 ₍₁₎	Not Assessed
	Residential without plant uptake	Not Assessed	Not Assessed	0.32/0.78/1.8 ₍₁₎	Not Assessed
	Allotment	Not Assessed	Not Assessed	0.25/0.61/1.4 ₍₁₎	Not Assessed
	Commercial	Not Assessed	Not Assessed	31/66/120 ₍₁₎	Not Assessed
	Public Open Space (Residential)	Not Assessed	Not Assessed	25/25/25 ₍₁₎	Not Assessed
	Public Open Space (Park)	Not Assessed	Not Assessed	48/50/51 ₍₁₎	Not Assessed
This table is not a list of potential contaminants at any one site All values are subject to ongoing review CIEH - Chartered Institute for Environmental Health LQM - Land Quality Management (commercial research) (1) xx/yy/zz SOM - Soil Organic Matter dependant at 1%/2.5%/6% (4) under review S4UL values are the copyright of Land Quality Management Ltd and are reproduced with permission; Publication Number S4UL3262 All rights reserved			Sackedgate Ltd 26 Reading Road, Burghfield Common, Reading, Berkshire RG7 3QA 07854 816921 01189 832570 		

List 1M (Natural Mineral Fibres quantified % weight in soil)					
Contaminant	Generic Exposure Scenario	(CIRIA C733 methodology)	Environment Agency	CIEH/LQM	DEFRA
Chrysotile Asbestos	Residential with active gardening Sandy Soil	0.01%	Not assessed	Not assessed	Not assessed
	Residential with active gardening Int Soil	0.05%	Not assessed	Not assessed	Not assessed
	Residential with active gardening Clay Soil	0.1%	Not assessed	Not assessed	Not assessed
	Allotment Sandy Soil	0.002%	Not assessed	Not assessed	Not assessed
	Allotment Intermediate Soil	0.005%	Not assessed	Not assessed	Not assessed
	Allotment Clay Soil	0.01%	Not assessed	Not assessed	Not assessed
	Commercial Sandy Soil	0.05%	Not assessed	Not assessed	Not assessed
	Commercial Intermediate Soil	0.2%	Not assessed	Not assessed	Not assessed
	Commercial Clay Soil	0.25%	Not assessed	Not assessed	Not assessed
	Public Open Space Sandy Soil (Residential)	0.0015%	Not assessed	Not assessed	Not assessed
	Public Open Space Int Soil (Residential)	0.0025%	Not assessed	Not assessed	Not assessed
	Public Open Space Clay Soil (Residential)	0.001% (clay overtakes sand)	Not assessed	Not assessed	Not assessed
Amosite Asbestos	Residential with active gardening Sandy Soil	Any detectable concentration	Not assessed	Not assessed	Not assessed
	Residential with active gardening Int Soil	Any detectable concentration	Not assessed	Not assessed	Not assessed
	Residential with active gardening Clay Soil	Any detectable concentration	Not assessed	Not assessed	Not assessed
	Allotment Sandy Soil	Any detectable concentration	Not assessed	Not assessed	Not assessed
	Allotment Intermediate Soil	Any detectable concentration	Not assessed	Not assessed	Not assessed
	Allotment Clay Soil	Any detectable concentration	Not assessed	Not assessed	Not assessed
	Commercial Sandy Soil	0.001%	Not assessed	Not assessed	Not assessed
	Commercial Intermediate Soil	0.001%	Not assessed	Not assessed	Not assessed
	Commercial Clay Soil	0.009%	Not assessed	Not assessed	Not assessed
	Public Open Space Sandy Soil (Residential)	Any detectable concentration	Not assessed	Not assessed	Not assessed
	Public Open Space Int Soil (Residential)	Any detectable concentration	Not assessed	Not assessed	Not assessed
	Public Open Space Clay Soil (Residential)	Any detectable concentration	Not assessed	Not assessed	Not assessed
Crocidolite Asbestos	Residential with active gardening Sandy Soil	Any detectable concentration	Not assessed	Not assessed	Not assessed
	Residential with active gardening Int Soil	Any detectable concentration	Not assessed	Not assessed	Not assessed
	Residential with active gardening Clay Soil	Any detectable concentration	Not assessed	Not assessed	Not assessed
	Allotment Sandy Soil	Any detectable concentration	Not assessed	Not assessed	Not assessed
	Allotment Intermediate Soil	Any detectable concentration	Not assessed	Not assessed	Not assessed
	Allotment Clay Soil	Any detectable concentration	Not assessed	Not assessed	Not assessed
	Commercial Sandy Soil	Any detectable concentration	Not assessed	Not assessed	Not assessed
	Commercial Intermediate Soil	Any detectable concentration	Not assessed	Not assessed	Not assessed
	Commercial Clay Soil	Any detectable concentration	Not assessed	Not assessed	Not assessed
	Public Open Space Sandy Soil (Residential)	Any detectable concentration	Not assessed	Not assessed	Not assessed
	Public Open Space Int Soil (Residential)	Any detectable concentration	Not assessed	Not assessed	Not assessed
	Public Open Space Clay Soil (Residential)	Any detectable concentration	Not assessed	Not assessed	Not assessed
This table is not a list of potential contaminants at any one site All values are subject to ongoing review C733 – CIRIA - Construction Industry Research & Information Association – Asbestos in Made Ground Sect 13 Respirable fibre exposure estimation using published air-to-air relationships after Addison <i>et al</i> (1988). <i>Details</i> Dilution of airborne fibre concentrations from the point of origin has not been considered. Residential assume 90 hours per year gardening activities that result in dust being raised. (Addison <i>et al</i> 1988) Allotment assume 260 hours per year (2.5 hrs per day every weekend) of activities that result in dust being raised. Commercial assume 24 hours per year when service trenches could be excavated that results in dust being raised. Public Open space assume not more than four 8hr maintenance days per year (32hrs/yr) that result in dust being raised as well as game playing in summer hols when soil surface is dry and veg layer is compromised (6wks 8hrs/day + maintenance = 368hrs/yr) Limit of detection usually 0.001%			Sackedgate Ltd 26 Reading Road, Burghfield Common, Reading, Berkshire RG7 3QA 07854 816921 01189 832570 		

List 2 (Waste Acceptance Criteria (WAC) Analysis)			
	Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill
Solid Waste Analysis - Limit values for compliance			
Total Organic Carbon (%)	3	5	6
Loss on Ignition (%)	-	-	10
Sum of BTEX (mg/kg)	6	-	-
Sum of 7 PCBs (mg/kg)	1	-	-
Mineral Oil (mg/kg)	500	-	-
PAH Sum of 17 (mg/kg)	100	-	-
pH (pH Units)	-	>6	-
Eluate Analysis - Limit values for compliance leaching test using BS EN 12457-3 at L/S 10 l/kg (mg/kg)			
Arsenic	0.5	2	25
Barium	20	100	300
Cadmium	0.04	1	5
Chromium	0.5	10	70
Copper	2	50	100
Mercury	0.01	0.2	2
Molybdenum	0.5	10	30
Nickel	0.4	10	40
Lead	0.5	10	50
Antimony	0.06	0.7	5
Selenium	0.1	0.5	7
Zinc	4	50	200
Chloride	800	15000	25000
Fluoride	10	150	500
Sulphate as SO ₄	1000	20000	50000
Total Dissolved Solids	4000	60000	100000
Phenol Index	1	-	-
Dissolved Organic Carbon	500	800	1000
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List 3 (Generic Soil Screening Values for the Selection of Appropriate Water Supply Pipe Materials)							
		Pipe Material					
		All threshold concentrations in mg/kg					
	Parameter Group	PE	PVC	Barrier pipe (PE-Al-PE)	Wrapped Steel	Wrapped Ductile Iron	Copper
1	Extended VOC suite by purge and trap or headspace and GCMS with TICs	0.5	0.125	Pass	Pass	Pass	Pass
1A	+BTEX +MTBE	0.1	0.03	Pass	Pass	Pass	Pass
2	SVOCs by purge and trap or headspace and GCMS with TICs(aliphatic and aromatic C5 – C10	2	1.4	Pass	Pass	Pass	Pass
2E	+Phenols	2	0.4	Pass	Pass	Pass	Pass
2F	+Cresols and chlorinated phenols	2	0.04	Pass	Pass	Pass	Pass
3	Mineral Oil C11 – C20	10	Pass	Pass	Pass	Pass	Pass
4	Mineral Oil C21 – C40	500	Pass	Pass	Pass	Pass	Pass
5	Corrosive (Conductivity, Redox and pH)	Pass	Pass	Pass	Corrosive if pH <7 and conductivity >400µS/cm	Corrosive if pH <5 Eh not neutral and conductivity > 400mS/cm	Corrosive if pH <5 or >8 and Eh positive
Specific suites identified as relevant following site investigation							
2A	Ethers	0.5	1	Pass	Pass	Pass	Pass
2B	Nitrobenzene	0.5	0.4	Pass	Pass	Pass	Pass
2C	Ketones	0.5	0.02	Pass	Pass	Pass	Pass
2D	Aldehydes	0.5	0.02	Pass	Pass	Pass	Pass
6	Amines	Fail	Pass	Pass	Pass	Pass	Pass
This table is not a list of potential contaminants at any one site All values are subject to ongoing review. Table reproduced from <i>UKWIR Report Ref No 10/WM/03/21 (Table 3.1)</i> VOC = Volatile Organic Compounds (solvents) SVOC = Semi Volatile Organic Compounds GCMS = Gas Chromatography Mass Spectrometer TIC = Tentatively Identifiable compound BTEX = Benzene, Toluene, Ethyl Benzene & Xylene (VOCs) MTBE = Methyl tertiary butyl ether (petrol additive)				Sackedgate Ltd 26 Reading Road, Burghfield Common, Reading, Berkshire RG7 3QA 07854 816921 01189 832570			



List 3 (Generic Soil Screening Values for the Selection of Appropriate Water Supply Pipe Materials - Thames Water Utilities Ltd)	
Aliphatic C5 - C12	0.5 mg/kg
Aromatic C5 - C12	0.5 mg/kg
Aliphatic C12 - C21 (not chlorinated)	10 mg/kg
Aromatic C12 - C21 (not BTEX)	10 mg/kg
Aliphatic C21 - C35	500 mg/kg
Aromatic C21 - C35	500 mg/kg
Chlorinated short chain aliphatic hydrocarbons	0.5 mg/kg
Chlorinated short chain aromatic hydrocarbons	2 mg/kg
BTEX compounds	0.1 mg/kg
MTBE compounds	0.1 mg/kg
Naphthalene	5 mg/kg
Phenols (unless present with BTEX)	5 mg/kg
Phenols (in conjunction with BTEX)	2 mg/kg
Phenols (chlorinated)	2 mg/kg
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List 4 (Tier 1 Generic Soil Target Concentrations for Groundwater Protection - EA R&D 20 method)

Contaminant	Remedial Target (Mg/kg)
Arsenic	5.0 (Natural soils 0 to 35) ⁽³⁾
Cadmium	1.13
Chromium VI	10
Copper	255
Lead	590
Mercury (inorganic)	0.5
Nickel	10 (Average rural soils 21.1mg/kg) ⁽²⁾
Selenium	0.5
Zinc	105
Poly Cyclic Aromatics (Total Aromatics C ₅ to C ₄₄)	4.5 x 10 ⁻⁵ ⁽¹⁾
Total Petroleum Hydrocarbons (Aliphatic and Aromatic C ₅ to C ₄₄)	5.8 x 10 ⁻³ ⁽¹⁾
⁽¹⁾ organic carbon content sensitive, actual values should be used if possible	
⁽²⁾ Nickel in Rural soils 1.16 to 216mg/kg average 21.1 mg/kg (ref - EA SC050021 / Nickel SGV)	
⁽³⁾ Arsenic in Natural Soils 0 to 35mg/kg (ref - BGS Soils Beneath Our Feet website)	
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List 4 (Selected Generic Groundwater Screening Values mg/litre)

Contaminant Mg/litre	EQS Freshwater	EQS Saltwater	WHO (health)	WHO (ATO)	EU Drinking water	UK Drinking water
Antimony	-	-	0.005	-	0.005	0.005
Arsenic	0.05	0.025	0.01	-	0.01	0.01
Boron	0.002	0.007	0.0003	-	0.001	0.001
Cadmium	0.005	0.0025	0.003	-	0.005	0.005
Chromium	0.005-0.025	0.015	0.05	-	0.05	0.05
Copper	0.001-0.028	0.005	2	1	2	2
Lead	0.004-0.025	0.025	0.01	-	0.01	0.01
Mercury	0.001	0.0003	0.001	-	0.001	0.001
Molybdenum	-	-	0.07	-	-	-
Nickel	0.05-0.2	0.03	0.02	-	0.02	0.02
Selenium	-	-	0.01	-	0.01	0.01
Vanadium	0.02-0.06	0.1	-	-	-	-
Zinc	0.008-0.5	-	-	3	-	5
Hydrocarbons (dissolved/emulsion)	-	-	-	-	-	0.01
Poly-cyclic Aromatic Hydrocarbons	-	-	-	-	0.0001	0.0001
Benzene	0.3	0.3	0.01	-	0.001	0.001
Toluene	0.5	0.5	0.7	24-170	-	-
Ethylbenzene	-	-	0.3	-	-	-
Xylene	0.03	0.03	0.5	20-1800	-	-
Benzo (a) Pyrene	-	-	0.0007	-	0.00001	0.00001
Phenol	0.03	0.03	-	-	0.0005	0.0005
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