Client Name: Smith Grant LLP
Reference: R1742
Location: Upper Heyford
Contact: Gareth Carroll
JE Job No.: 14/2706

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
$H=H_2SO_4$, Z=ZnAc, N=NaOH, $HN=HN0_3$

Please see attached notes for all abbreviations and acronyms

J E Sample No.	25-28												
Sample ID	LAGOON 75												
Depth													
COC No / misc													
Containers	V P G												
Sample Date	07/02/2014												
Sample Type	Liquid												
Batch Number	1												
Date of Receipt	07/02/2014												
												LOD	Units	Method No.
Dissolved Arsenic	<2.5											<2.5	ug/l	TM30/PM14
Dissolved Boron	41											<12	ug/l	TM30/PM14
Dissolved Cadmium	<0.5											<0.5	ug/l	TM30/PM14
Total Dissolved Chromium	<1.5											<1.5	ug/l	TM30/PM14
Dissolved Copper	<7											<7	ug/l	TM30/PM14
Dissolved Lead	<5											<5	ug/l	TM30/PM14
Dissolved Mercury	<1											<1	ug/l	TM30/PM14
Dissolved Nickel	<2											<2	ug/l	TM30/PM14
Dissolved Selenium	<3											<3	ug/l	TM30/PM14
Dissolved Zinc	39											<3	ug/l	TM30/PM14
PAH MS														
Naphthalene	<0.014											<0.014	ug/l	TM4/PM30
Acenaphthylene	<0.013											<0.013	ug/l	TM4/PM30
Acenaphthene	<0.013											<0.013	ug/l	TM4/PM30
Fluorene	<0.014											<0.014	ug/l	TM4/PM30
Phenanthrene	<0.011											<0.011	ug/l	TM4/PM30
Anthracene	<0.013											<0.013	ug/l	TM4/PM30
Fluoranthene	<0.012											<0.012	ug/l	TM4/PM30
Pyrene	<0.013											<0.013	ug/l	TM4/PM30
Benzo(a)anthracene	<0.015											<0.015	ug/l	TM4/PM30
Chrysene	<0.011											<0.011	ug/l	TM4/PM30
Benzo(bk)fluoranthene	<0.018											<0.018	ug/l	TM4/PM30
Benzo(a)pyrene	<0.016											<0.016	ug/l	TM4/PM30
Indeno(123cd)pyrene	<0.011											<0.011	ug/l	TM4/PM30
Dibenzo(ah)anthracene	<0.01											<0.01	ug/l	TM4/PM30
Benzo(ghi)perylene	<0.011											<0.011	ug/l	TM4/PM30
PAH 16 Total	<0.195											<0.195	ug/l	TM4/PM30
Benzo(b)fluoranthene	<0.01											<0.01	ug/l	TM4/PM30
Benzo(k)fluoranthene	<0.01											<0.01	ug/l	TM4/PM30
PAH Surrogate % Recovery	74											<0	%	TM4/PM30
TPH CWG														
Aliphatics														
>C5-C6	<5											<5	ug/l	TM36/PM12
>C6-C8	<5											<5	ug/l	TM36/PM12
>C8-C10	<5											<5	ug/l	TM36/PM12
>C10-C12	<5											<5	ug/l	TM5/PM30
>C12-C16	<10											<10	ug/l	TM5/PM30
>C16-C21	<10											<10	ug/l	TM5/PM30
>C21-C35	<10											<10	ug/l	TM5/PM30
Total aliphatics C5-35	<10											<10	ug/l	TM5/TM36/PM30

Client Name: Smith Grant LLP
Reference: R1742
Location: Upper Heyford
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JE Job No.: 14/2706

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
H=H_2SO_4, Z=ZnAc, N=NaOH, HN=$HN0_3$

Please see attached notes for all abbreviations and acronyms

J E Sample No.	25-28												
Sample ID	LAGOON 75												
Depth													
COC No / misc													
Containers	V P G												
Sample Date	07/02/2014												
Sample Type	Liquid												
Batch Number	1												
Date of Receipt	07/02/2014												
												LOD	Units	Method No.
TPH CWG														
Aromatics														
>C5-EC7	<5											<5	ug/l	TM36/PM12
>EC7-EC8	<5											<5	ug/l	TM36/PM12
>EC8-EC10	<5											<5	ug/l	TM36/PM12
>EC10-EC12	<5											<5	ug/l	TM5/PM30
>EC12-EC16	<10											<10	ug/l	TM5/PM30
>EC16-EC21	<10											<10	ug/l	TM5/PM30
>EC21-EC35	<10											<10	ug/l	TM5/PM30
Total aromatics C5-35	<10											<10	ug/l	TM5/PM30
Total aliphatics and aromatics(C5-35)	<10											<10	ug/l	TM5/TM36/PM30
MTBE	<5											<5	ug/l	TM36/PM12
Benzene	<5											<5	ug/l	TM36/PM12
Toluene	<5											<5	ug/l	TM36/PM12
Ethylbenzene	<5											<5	ug/l	TM36/PM12
m/p-Xylene	<5											<5	ug/l	TM36/PM12
o-Xylene	<5											<5	ug/l	TM36/PM12
pH	7.55											<0.01	pH units	TM73/PM0

Client Name: Smith Grant LLP
Reference: R1742
Location: Upper Heyford
Contact: Gareth Carroll

Note:

Analysis was 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. Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Jones Environmental Laboratory consultant, Jones Environmental Laboratory cannot be responsible for inaccurate or unrepresentative sampling.

If asbestos fibres are reported at trace levels there will not be enough fibres to quantify and will be less than 0.001%.

Signed on behalf of Jones Environmental Laboratory:

Gemma Newsome
Asbestos Team Leader

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Description	Asbestos Containing Material	Asbestos Results	Asbestos Level	Comments
14/2706	1	BOV-581-SS1	0.4	2	13/02/14	soil/stones	None	NAD	NAD	
14/2706	1	BOV-581-SS2	0.4	4	13/02/14	soil/stones	None	NAD	NAD	
14/2706	1	BOV-581-SS3	0.45	7	13/02/14	soil/stones	None	NAD	NAD	
14/2706	1	BOV-581-SS4	0.45	9	13/02/14	soil/stones	None	NAD	NAD	
14/2706	1	BOV-581-SS5	0.45	11	13/02/14	soil/stones	None	NAD	NAD	
14/2706	1	BOV-581-SS6	0.4	13	14/02/14	Soil-Clay/Brick/Stone	None	NAD	NAD	
14/2706	1	BOV-582-WEST-SS5	0.4	15	13/02/14	soil/stones	None	NAD	NAD	
14/2706	1	BOV-CRUSH 2-S1		21	14/02/14	Soil-Clay/Brick/Stone	None	NAD	NAD	
14/2706	1	BOV-STONE 1-S1		22	14/02/14	Soil-Clay/Brick/Stone	None	NAD	NAD	
14/2706	1	DOR-CRUSH 1-S3		23	14/02/14	Soil-Clay/Brick/Stone	Free Fibres	Chrysotile	Quantifiable	
14/2706	1	DOR-CRUSH 1-S4		24	14/02/14	Soil-Clay/Brick/Stone	Free Fibres	Chrysotile	Quantifiable	

Client Name: Smith Grant LLP
Reference: R1742
Location: Upper Heyford
Contact: Gareth Carroll

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Analysis	Reason
No deviating sample report results for job 14/2706						

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

JE Job No.: 14/2706

SOILS

Please note we are only MCERTS accredited 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. If we are instructed to keep samples, a storage charge of £1 (1.5 Euros) per sample per month will be applied until we are asked to dispose of them.

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. 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.

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.

WATERS

Please note we are not a Drinking Water Inspectorate (DWI) Approved Laboratory . It is important that detection limits are carefully considered when requesting water analysis.

UKAS accreditation applies to surface water and groundwater and 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.

DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

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.

NOTE

Data is only accredited when all the requirements of our Quality System have been met. In certain circumstances where the requirements have not been met, the laboratory may issue the data in an interim report but will remove the accreditation, in this instance results should be considered indicative only. Where possible samples will be re-extracted and a final 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.

ABBREVIATIONS and ACRONYMS USED

#	UKAS accredited.
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.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a Jones Environmental approved laboratory.
CO	Suspected carry over
OC	Outside Calibration Range
NFD	No Fibres Detected

JE Job No: 14/2706

Test Method No.	Description	Prep Method No. (if appropriate)	Description	UKAS	MCERTS (soils only)	Analysis done on As Received (AR) or Air 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 and BS1377.	PM0	No preparation is required.				
TM4	16 PAH by GC-MS, modified USEPA 8270	PM30	In-house method based on USEPA 3510. Liquid samples are mixed with solvent and agitated with an automatic magnetic stirrer with a stir bar for 15 minutes to extract organic molecules. ISO 17025 accredited extraction method. All accreditation is matrix specific				
TM4	16 PAH by GC-MS, modified USEPA 8270	PM8	In-house method based on USEPA 3510. ISO 17025 accredited extraction method for organic extraction from solid samples using an end over end agitator.			AR	Yes
TM4	16 PAH by GC-MS, modified USEPA 8270	PM8	In-house method based on USEPA 3510. ISO 17025 accredited extraction method for organic extraction from solid samples using an end over end agitator.	Yes		AR	Yes
TM4	16 PAH by GC-MS, modified USEPA 8270	PM8	In-house method based on USEPA 3510. ISO 17025 accredited extraction method for organic extraction from solid samples using an end over end agitator.	Yes	Yes	AR	Yes
TM5	In-House method based on USEPA 8015B. Determination of Extractable Petroleum Hydrocarbons (EPH) in the carbon chain length range of C8-40 by GC-FID. Accredited to ISO 17025 on soil and water samples and MCERTS (carbon banding only) on soils. All accreditation is matrix specific.	PM16	Aliphatic/Aromatic fractionation			AR	Yes
TM5	In-House method based on USEPA 8015B. Determination of Extractable Petroleum Hydrocarbons (EPH) in the carbon chain length range of C8-40 by GC-FID. Accredited to ISO 17025 on soil and water samples and MCERTS (carbon banding only) on soils. All accreditation is matrix specific.	PM16	Aliphatic/Aromatic fractionation	Yes	Yes	AR	Yes
TM5	In-House method based on USEPA 8015B. Determination of Extractable Petroleum Hydrocarbons (EPH) in the carbon chain length range of C8-40 by GC-FID. Accredited to ISO 17025 on soil and water samples and MCERTS (carbon banding only) on soils. All accreditation is matrix specific.	PM30	In-house method based on USEPA 3510. Liquid samples are mixed with solvent and agitated with an automatic magnetic stirrer with a stir bar for 15 minutes to extract organic molecules. ISO 17025 accredited extraction method. All accreditation is matrix specific				
TM5/TM36	TPH CWG by GC-FID	PM12/PM16	CWG GC-FID			AR	Yes
TM5/TM36	TPH CWG by GC-FID	PM30	In-house method based on USEPA 3510. Liquid samples are mixed with solvent and agitated with an automatic magnetic stirrer with a stir bar for 15 minutes to extract organic molecules. ISO 17025 accredited extraction method. All accreditation is matrix specific				

JE Job No: 14/2706

Test Method No.	Description	Prep Method No. (if appropriate)	Description	UKAS	MCERTS (soils only)	Analysis done on As Received (AR) or Air Dried (AD)	Reported on dry weight basis
PM13	Soil Typing for MCERTS	PM0	No preparation is required.			AR	
TM16	In-House method based on USEPA 8270. Determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS. Accredited to ISO 17025 for waters. All accreditation is matrix specific. Quantification by Internal Standard method.	PM8	In-house method based on USEPA 3510. ISO 17025 accredited extraction method for organic extraction from solid samples using an end over end agitator.			AR	Yes
TM21	TOC and TC by Combustion	PM24	Eltra preparation			AD	Yes
TM30	Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry) using Thermo iCAP 6000 series instrument. Accredited to ISO 17025 for soils and waters and MCERTS accredited for Soils. All accreditation is matrix specific.	PM14	In-house method based on USEPA 3005A. Acid digestion of water samples and analsyis by ICP-OES as per method TM030W.ISO 17025 accredited extraction method. All accreditation is matrix specific				
TM30	Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry) using Thermo iCAP 6000 series instrument. Accredited to ISO 17025 for soils and waters and MCERTS accredited for Soils. All accreditation is matrix specific.	PM15	In-house method based on USEPA 3010A. Acid digestion of dried and crushed solid samples using Aqua Regia reflux.			AD	Yes
TM30	Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry) using Thermo iCAP 6000 series instrument. Accredited to ISO 17025 for soils and waters and MCERTS accredited for Soils. All accreditation is matrix specific.	PM15	In-house method based on USEPA 3010A. Acid digestion of dried and crushed solid samples using Aqua Regia reflux.	Yes	Yes	AD	Yes
TM31	In-house method based on USEPA 8015B. Determination of Methyltertbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID. Accredited to ISO 17025 for soils and waters and MCERTS accredited for soils. Accreditation is matrix specific.	PM12	In-house method based on USEPA 5021. Preparation of solid and liquid samples for headspace analysis. Samples are spiked with surrogates to facilitate quantification. ISO 17025 accredited extraction method. All accreditation is matrix specific			AR	Yes
TM31	In-house method based on USEPA 8015B. Determination of Methyltertbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID. Accredited to ISO 17025 for soils and waters and MCERTS accredited for soils. Accreditation is matrix specific.	PM12	In-house method based on USEPA 5021. Preparation of solid and liquid samples for headspace analysis. Samples are spiked with surrogates to facilitate quantification. ISO 17025 accredited extraction method. All accreditation is matrix specific	Yes		AR	Yes
TM36	In-House method based on USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-12 by headspace GC-FID. Accredited to ISO 17025 on soil and water samples and MCERTS accredited (carbon banding only) on soils. All accreditation is matrix specific.	PM12	In-house method based on USEPA 5021. Preparation of solid and liquid samples for headspace analysis. Samples are spiked with surrogates to facilitate quantification. ISO 17025 accredited extraction method. All accreditation is matrix specific				
TM36	In-House method based on USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-12 by headspace GC-FID. Accredited to ISO 17025 on soil and water samples and MCERTS accredited (carbon banding only) on soils. All accreditation is matrix specific.	PM12	In-house method based on USEPA 5021. Preparation of solid and liquid samples for headspace analysis. Samples are spiked with surrogates to facilitate quantification. ISO 17025 accredited extraction method. All accreditation is matrix specific			AR	Yes

JE Job No: 14/2706

Test Method No.	Description	Prep Method No. (if appropriate)	Description	UKAS	MCERTS (soils only)	Analysis done on As Received (AR) or Air Dried (AD)	Reported on dry weight basis
TM36	In-House method based on USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-12 by headspace GC-FID. Accredited to ISO 17025 on soil and water samples and MCERTS accredited (carbon banding only) on soils. All accreditation is matrix specific.	PM12	In-house method based on USEPA 5021. Preparation of solid and liquid samples for headspace analysis. Samples are spiked with surrogates to facilitate quantification. ISO 17025 accredited extraction method. All accreditation is matrix specific	Yes	Yes	AR	Yes
TM38	Ionic analysis using the Thermo Aquakem Photometric Automatic Analyser. Accredited to ISO17025 and MCERTS for most analytes. All accreditation is matrix specific.	PM20	in-house method based on USEPA 1311 (TCLP). Solid samples are extracted with two parts de-ionised water to one part solid material for analysis of the extract for various parameters.			AR	Yes
TM65	Asbestos Bulk Identification	PM42	Screening of soils for fibres			AR	
TM65	Asbestos Bulk Identification	PM42	Screening of soils for fibres	Yes		AR	
TM73	pH in by Metrohm	PM0	No preparation is required.				
TM73	pH in by Metrohm	PM11	1:2.5 soil/water extraction	Yes	Yes	AR	No
TM74	Water Soluble Boron by ICP-OES	PM32	Preparation of soils for WSB	Yes	Yes	AD	Yes
TM76	Electrical Conductivity by Metrohm	PM58	Preparation of sample for Electrical Conductivity			AD	Yes
TM89	In-house method based on USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser. ISO17025 accredited method for soils and waters and MCERTS on soils. Accreditation is matrix specific.	PM45	Cyanide & Thiocyanate prep for soils			AR	Yes

Jones Environmental Laboratory

Registered Address : Unit 3 Deeside Point, Zone 3, Deeside Industrial Park, Deeside, CH5 2UA. UK

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Smith Grant LLP
Station House
Station Road
Ruabon
Wrexham
LL14 6DL

Attention :	Gareth Carroll
Date :	4th March, 2014
Your reference :	R1742
Our reference :	Test Report 14/3241 Batch 1 Schedule A
Location :	Upper Hexford
Date samples received :	25th February, 2014
Status :	Final report
Issue :	1

Eighteen samples were received for analysis on 25th February, 2014. 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.

Compiled By:

Phil Sommerton BSc
Project Manager

Bob Millward BSc FRSC
Principal Chemist

Client Name: Smith Grant LLP
Reference: R1742
Location: Upper Hexford
Contact: Gareth Carroll
JE Job No.: 14/3241

Report : Solid

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

Please see attached notes for all abbreviations and acronyms

J E Sample No.	1-2	3-4	5-6	7-8	9-10	11-12	13-14	15-16	17-18	19-20	LOD	Units	Method No.
Sample ID	BOV-581-WEST-SS3	BOV-581-WEST-SS4	BOV-581-WEST-SS5	BOV-581-WEST-SS6	BOV-582-WEST-SS6	BOV-582-WEST-SS7	UG8-1	UG8-2	UG8-3	UG8-4			
Depth													
COC No / misc													
Containers	V J	V J	V J	V J	V J	V J	V J	V J	V J	V J			
Sample Date	25/02/2014	25/02/2014	25/02/2014	25/02/2014	25/02/2014	25/02/2014	25/02/2014	25/02/2014	25/02/2014	25/02/2014			
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	25/02/2014	25/02/2014	25/02/2014	25/02/2014	25/02/2014	25/02/2014	25/02/2014	25/02/2014	25/02/2014	25/02/2014			
Antimony	3	<1	1	3	1	2	-	-	-	-	<1	mg/kg	TM30/PM15
Arsenic #M	20.4	10.1	13.0	19.8	16.4	22.8	-	-	-	-	<0.5	mg/kg	TM30/PM15
Barium #M	69	27	44	67	52	91	-	-	-	-	<1	mg/kg	TM30/PM15
Beryllium	1.3	0.6	0.7	1.0	0.7	1.0	-	-	-	-	<0.5	mg/kg	TM30/PM15
Cadmium #M	0.1	<0.1	<0.1	0.4	0.2	0.2	-	-	-	-	<0.1	mg/kg	TM30/PM15
Chromium #M	48.0	21.7	29.5	44.5	30.4	51.5	-	-	-	-	<0.5	mg/kg	TM30/PM15
Cobalt #M	9.2	4.0	5.5	8.2	5.5	9.2	-	-	-	-	<0.5	mg/kg	TM30/PM15
Copper #M	12	5	5	13	8	13	-	-	-	-	<1	mg/kg	TM30/PM15
Lead #M	32	12	9	44	52	32	-	-	-	-	<5	mg/kg	TM30/PM15
Mercury #M	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	<0.1	mg/kg	TM30/PM15
Molybdenum #M	3.2	1.4	2.1	3.0	1.9	3.5	-	-	-	-	<0.1	mg/kg	TM30/PM15
Nickel #M	16.7	5.5	8.1	14.2	8.1	12.9	-	-	-	-	<0.7	mg/kg	TM30/PM15
Selenium #M	<1	<1	<1	<1	<1	<1	-	-	-	-	<1	mg/kg	TM30/PM15
Vanadium	65	37	44	57	44	57	-	-	-	-	<1	mg/kg	TM30/PM15
Water Soluble Boron #M	1.7	0.8	0.7	1.4	1.0	0.9	-	-	-	-	<0.1	mg/kg	TM74/PM32
Zinc #M	87	27	27	83	58	170	-	-	-	-	<5	mg/kg	TM30/PM15
PAH MS					x100 dilution								
Naphthalene #M	<0.04	<0.04	<0.04	<0.04	<4.00	<0.04	-	-	-	-	<0.04	mg/kg	TM4/PM8
Acenaphthylene	<0.03	<0.03	<0.03	<0.03	<3.00	0.04	-	-	-	-	<0.03	mg/kg	TM4/PM8
Acenaphthene #M	<0.05	<0.05	<0.05	<0.05	14.63	0.09	-	-	-	-	<0.05	mg/kg	TM4/PM8
Fluorene #M	<0.04	<0.04	<0.04	<0.04	<4.00	0.08	-	-	-	-	<0.04	mg/kg	TM4/PM8
Phenanthrene #M	0.06	<0.03	0.03	0.11	50.93	0.63	-	-	-	-	<0.03	mg/kg	TM4/PM8
Anthracene #	<0.04	<0.04	<0.04	<0.04	11.38	0.14	-	-	-	-	<0.04	mg/kg	TM4/PM8
Fluoranthene #M	0.25	0.06	0.07	0.38	175.16	1.38	-	-	-	-	<0.03	mg/kg	TM4/PM8
Pyrene #	0.22	0.06	0.06	0.33	150.86	1.03	-	-	-	-	<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene #	0.17	<0.06	0.07	0.22	125.55	0.47	-	-	-	-	<0.06	mg/kg	TM4/PM8
Chrysene #M	0.16	0.05	0.05	0.25	158.75	0.57	-	-	-	-	<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene #M	0.27	0.08	<0.07	0.39	237.92	0.89	-	-	-	-	<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene #	0.19	0.05	0.05	0.22	148.53	0.59	-	-	-	-	<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene #M	0.11	<0.04	<0.04	0.15	71.07	0.33	-	-	-	-	<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene #	<0.04	<0.04	<0.04	<0.04	12.54	0.05	-	-	-	-	<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene #	0.11	<0.04	<0.04	0.16	72.46	0.30	-	-	-	-	<0.04	mg/kg	TM4/PM8
PAH 16 Total	1.5	<0.6	<0.6	2.2	1229.8	6.6	-	-	-	-	<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	0.19	0.06	<0.05	0.28	171.30	0.64	-	-	-	-	<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	0.08	0.02	<0.02	0.11	66.62	0.25	-	-	-	-	<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	110	106	112	106	97	114	-	-	-	-	<0	%	TM4/PM8

Client Name: Smith Grant LLP
Reference: R1742
Location: Upper Hexford
Contact: Gareth Carroll
JE Job No.: 14/3241

Report : Solid

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

Please see attached notes for all abbreviations and acronyms

J E Sample No.	1-2	3-4	5-6	7-8	9-10	11-12	13-14	15-16	17-18	19-20	LOD	Units	Method No.
Sample ID	BOV-581-WEST-SS3	BOV-581-WEST-SS4	BOV-581-WEST-SS5	BOV-581-WEST-SS6	BOV-582-WEST-SS6	BOV-582-WEST-SS7	UG8-1	UG8-2	UG8-3	UG8-4			
Depth													
COC No / misc													
Containers	V J	V J	V J	V J	V J	V J	V J	V J	V J	V J			
Sample Date	25/02/2014	25/02/2014	25/02/2014	25/02/2014	25/02/2014	25/02/2014	25/02/2014	25/02/2014	25/02/2014	25/02/2014			
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	25/02/2014	25/02/2014	25/02/2014	25/02/2014	25/02/2014	25/02/2014	25/02/2014	25/02/2014	25/02/2014	25/02/2014			
TPH CWG													
Aliphatics													
>C5-C6 #M	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>C6-C8 #M	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>C8-C10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>C10-C12 #M	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	2.5	<0.2	<0.2	<0.2	mg/kg	TM5/PM16
>C12-C16 #M	<4	<4	<4	<4	<4	<4	<4	62	<4	<4	<4	mg/kg	TM5/PM16
>C16-C21 #M	<7	<7	<7	<7	<7	<7	<7	107	<7	<7	<7	mg/kg	TM5/PM16
>C21-C35 #M	<7	<7	<7	<7	<7	<7	<7	26	<7	<7	<7	mg/kg	TM5/PM16
Total aliphatics C5-35	<19	<19	<19	<19	<19	<19	<19	198	<19	<19	<19	mg/kg	TM5/TM36/PM12/PM16
Aromatics													
>C5-EC7	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>EC7-EC8	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>EC8-EC10 #M	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	mg/kg	TM36/PM12
>EC10-EC12	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	mg/kg	TM5/PM16
>EC12-EC16	<4	<4	<4	<4	12	5	<4	31	<4	<4	<4	mg/kg	TM5/PM16
>EC16-EC21	<7	<7	<7	<7	1193	97	<7	65	<7	20	<7	mg/kg	TM5/PM16
>EC21-EC35	<7	<7	<7	25	4200	300	<7	55	<7	50	<7	mg/kg	TM5/PM16
Total aromatics C5-35	<19	<19	<19	25	5405	402	<19	151	<19	70	<19	mg/kg	TM5/TM36/PM12/PM16
Total aliphatics and aromatics(C5-35)	<38	<38	<38	<38	5405	402	<38	349	<38	70	<38	mg/kg	TM5/TM36/PM12/PM16
MTBE #	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12
Benzene #	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12
Toluene #	<5	<5	<5	<5	<5	<5	<5	<5	<5	25	<5	ug/kg	TM31/PM12
Ethylbenzene #	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12
m/p-Xylene #	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12
o-Xylene #	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	ug/kg	TM31/PM12
					x50 dilution due to nature of extract								
PCBs (Total vs Aroclor 1254)	<10	<10	<10	<10	<500	<10	-	-	-	-	<10	ug/kg	TM16/PM8
Natural Moisture Content	12.2	13.7	14.1	21.7	19.9	26.0	19.6	19.8	21.7	24.0	<0.1	%	PM4/PM0
Hexavalent Chromium	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	-	-	-	-	<0.3	mg/kg	TM38/PM20
Free Cyanide	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	<0.5	mg/kg	TM89/PM45
Complex Cyanide	<0.5	<0.5	<0.5	<0.5	2.2	<0.5	-	-	-	-	<0.5	mg/kg	TM89/PM45
Organic Matter	1.9	1.2	0.5	2.2	3.1	2.4	-	-	-	-	<0.2	%	TM21/PM24
Electrical Conductivity @25C (5:1 ext)	199	149	157	179	157	235	-	-	-	-	<100	uS/cm	TM76/PM58
pH #M	8.34	8.14	8.44	8.32	8.45	7.87	-	-	-	-	<0.01	pH units	TM73/PM11
Sample Type	Loam	Clayey Loam	Clayey Loam	Clayey Loam	Clay	Clay	Clay	Clay	Clayey Loam	Clay		None	PM13/PM0
Sample Colour	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown		None	PM13/PM0
Other Items	STONES,ROOTS	STONES,ROOTS,CHALK	STONES,ROOTS,CHALK	STONES,ROOTS	STONES,ROOTS	STONES,ROOTS	STONES	MOSTLT STONES	STONES	STONES		None	PM13/PM0

Client Name: Smith Grant LLP
Reference: R1742
Location: Upper Hexford
Contact: Gareth Carroll
JE Job No.: 14/3241

Report : Solid

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

Please see attached notes for all abbreviations and acronyms

J E Sample No.	21-22	23-24	32-33								LOD	Units	Method No.
Sample ID	BOV-CRUSH1-4	BOV-CRUSH1-5	BOV-581-WEST-SS7										
Depth													
COC No / misc													
Containers	V J	V J	V J										
Sample Date	25/02/2014	25/02/2014	25/02/2014										
Sample Type	Soil	Soil	Soil										
Batch Number	1	1	1										
Date of Receipt	25/02/2014	25/02/2014	25/02/2014										
Antimony	1	1	2								<1	mg/kg	TM30/PM15
Arsenic #M	17.9	24.9	18.7								<0.5	mg/kg	TM30/PM15
Barium #M	79	82	56								<1	mg/kg	TM30/PM15
Beryllium	0.7	0.9	1.4								<0.5	mg/kg	TM30/PM15
Cadmium #M	<0.1	<0.1	<0.1								<0.1	mg/kg	TM30/PM15
Chromium #M	22.4	35.5	35.6								<0.5	mg/kg	TM30/PM15
Cobalt #M	5.2	6.1	7.7								<0.5	mg/kg	TM30/PM15
Copper #M	8	10	7								<1	mg/kg	TM30/PM15
Lead #M	25	9	13								<5	mg/kg	TM30/PM15
Mercury #M	<0.1	<0.1	<0.1								<0.1	mg/kg	TM30/PM15
Molybdenum #M	0.8	0.9	2.1								<0.1	mg/kg	TM30/PM15
Nickel #M	7.8	10.6	14.1								<0.7	mg/kg	TM30/PM15
Selenium #M	<1	<1	<1								<1	mg/kg	TM30/PM15
Vanadium	49	72	64								<1	mg/kg	TM30/PM15
Water Soluble Boron #M	1.9	2.3	0.8								<0.1	mg/kg	TM74/PM32
Zinc #M	58	49	44								<5	mg/kg	TM30/PM15
PAH MS	x10 dilution	x10 dilution											
Naphthalene #M	<0.40	<0.40	<0.04								<0.04	mg/kg	TM4/PM8
Acenaphthylene	<0.30	<0.30	<0.03								<0.03	mg/kg	TM4/PM8
Acenaphthene #M	<0.50	<0.50	<0.05								<0.05	mg/kg	TM4/PM8
Fluorene #M	<0.40	<0.40	<0.04								<0.04	mg/kg	TM4/PM8
Phenanthrene #M	2.21	0.34	<0.03								<0.03	mg/kg	TM4/PM8
Anthracene #	0.57	<0.40	<0.04								<0.04	mg/kg	TM4/PM8
Fluoranthene #M	5.37	0.34	<0.03								<0.03	mg/kg	TM4/PM8
Pyrene #	4.53	<0.30	<0.03								<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene #	3.29	<0.60	<0.06								<0.06	mg/kg	TM4/PM8
Chrysene #M	3.75	<0.20	<0.02								<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene #M	6.10	<0.70	<0.07								<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene #	3.79	<0.40	<0.04								<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene #M	1.91	<0.40	<0.04								<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene #	<0.40	<0.40	<0.04								<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene #	2.11	<0.40	<0.04								<0.04	mg/kg	TM4/PM8
PAH 16 Total	33.6	<6.0	<0.6								<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	4.39	<0.50	<0.05								<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	1.71	<0.20	<0.02								<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	107	124	106								<0	%	TM4/PM8

Client Name: Smith Grant LLP
Reference: R1742
Location: Upper Hexford
Contact: Gareth Carroll
JE Job No.: 14/3241

Report : Solid

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

J E Sample No.	21-22	23-24	32-33									
Sample ID	BOV-CRUSH1-4	BOV-CRUSH1-5	BOV-581-WEST-SS7									
Depth												
COC No / misc												
Containers	V J	V J	V J									
Sample Date	25/02/2014	25/02/2014	25/02/2014									
Sample Type	Soil	Soil	Soil									
Batch Number	1	1	1									
Date of Receipt	25/02/2014	25/02/2014	25/02/2014									

Please see attached notes for all abbreviations and acronyms

											LOD	Units	Method No.
TPH CWG													
Aliphatics													
>C5-C6 #M	4.6	<0.1	<0.1								<0.1	mg/kg	TM36/PM12
>C6-C8 #M	1.7	<0.1	<0.1								<0.1	mg/kg	TM36/PM12
>C8-C10	0.1	<0.1	<0.1								<0.1	mg/kg	TM36/PM12
>C10-C12 #M	<0.2	<0.2	<0.2								<0.2	mg/kg	TM5/PM16
>C12-C16 #M	<4	<4	<4								<4	mg/kg	TM5/PM16
>C16-C21 #M	<7	<7	<7								<7	mg/kg	TM5/PM16
>C21-C35 #M	81	43	<7								<7	mg/kg	TM5/PM16
Total aliphatics C5-35	87	43	<19								<19	mg/kg	TM5/TM36/PM12/PM16
Aromatics													
>C5-EC7	<0.1	<0.1	<0.1								<0.1	mg/kg	TM36/PM12
>EC7-EC8	<0.1	<0.1	<0.1								<0.1	mg/kg	TM36/PM12
>EC8-EC10 #M	<0.1	<0.1	<0.1								<0.1	mg/kg	TM36/PM12
>EC10-EC12	<0.2	<0.2	<0.2								<0.2	mg/kg	TM5/PM16
>EC12-EC16	<4	<4	<4								<4	mg/kg	TM5/PM16
>EC16-EC21	12	<7	<7								<7	mg/kg	TM5/PM16
>EC21-EC35	184	54	<7								<7	mg/kg	TM5/PM16
Total aromatics C5-35	196	54	<19								<19	mg/kg	TM5/TM36/PM12/PM16
Total aliphatics and aromatics(C5-35)	283	97	<38								<38	mg/kg	TM5/TM36/PM12/PM16
MTBE #	<5	<5	<5								<5	ug/kg	TM31/PM12
Benzene #	<5	<5	<5								<5	ug/kg	TM31/PM12
Toluene #	63	<5	<5								<5	ug/kg	TM31/PM12
Ethylbenzene #	<5	<5	<5								<5	ug/kg	TM31/PM12
m/p-Xylene #	<5	<5	<5								<5	ug/kg	TM31/PM12
o-Xylene #	<5	<5	<5								<5	ug/kg	TM31/PM12
	x20 dilution due to nature of extract	x10 dilution due to nature of extract											
PCBs (Total vs Aroclor 1254)	<200	<100	<10								<10	ug/kg	TM16/PM8
Natural Moisture Content	16.2	13.1	15.9								<0.1	%	PM4/PM0
Hexavalent Chromium	<0.3	<0.3	<0.3								<0.3	mg/kg	TM38/PM20
Free Cyanide	<0.5	<0.5	<0.5								<0.5	mg/kg	TM89/PM45
Complex Cyanide	<0.5	<0.5	<0.5								<0.5	mg/kg	TM89/PM45
Organic Matter	1.6	0.5	0.7								<0.2	%	TM21/PM24
Electrical Conductivity @25C (5:1 ext)	6104	2218	163								<100	uS/cm	TM76/PM58
pH #M	10.15	10.58	8.49								<0.01	pH units	TM73/PM11
Sample Type	Sand	Sand	Clayey Loam									None	PM13/PM0
Sample Colour	Medium Brown	Medium Brown	Medium Brown									None	PM13/PM0
Other Items	STONES,ROOTS	MOSTLY STONES,ROOTS	STONES,ROOTS									None	PM13/PM0

Client Name: Smith Grant LLP
Reference: R1742
Location: Upper Hexford
Contact: Gareth Carroll

Note:

Analysis was 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. Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Jones Environmental Laboratory consultant, Jones Environmental Laboratory cannot be responsible for inaccurate or unrepresentative sampling.

If asbestos fibres are reported at trace levels there will not be enough fibres to quantify and will be less than 0.001%.

Signed on behalf of Jones Environmental Laboratory:

Gemma Newsome
Asbestos Team Leader

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Description	Asbestos Containing Material	Asbestos Results	Asbestos Level	Comments
14/3241	1	BOV-581-WEST-SS3		2	27/02/14	Soil/Stone	None	NAD	NAD	
14/3241	1	BOV-581-WEST-SS4		4	27/02/14	Soil/Stone	None	NAD	NAD	
14/3241	1	BOV-581-WEST-SS5		6	27/02/14	Soil/Stone	None	NAD	NAD	
14/3241	1	BOV-581-WEST-SS6		8	27/02/14	Soil/Stone	None	NAD	NAD	
14/3241	1	BOV-582-WEST-SS6		10	27/02/14	Soil/Stone	None	NAD	NAD	
14/3241	1	BOV-582-WEST-SS7		12	27/02/14	Soil/Stone	None	NAD	NAD	
14/3241	1	BOV-581-WEST-SS7		33	27/02/14	Soil/Stone	None	NAD	NAD	

Client Name: Smith Grant LLP
Reference: R1742
Location: Upper Hexford
Contact: Gareth Carroll

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Analysis	Reason
No deviating sample report results for job 14/3241						

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

JE Job No.: 14/3241

SOILS

Please note we are only MCERTS accredited 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. If we are instructed to keep samples, a storage charge of £1 (1.5 Euros) per sample per month will be applied until we are asked to dispose of them.

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. 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.

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.

WATERS

Please note we are not a Drinking Water Inspectorate (DWI) Approved Laboratory . It is important that detection limits are carefully considered when requesting water analysis.

UKAS accreditation applies to surface water and groundwater and 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.

DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

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.

NOTE

Data is only accredited when all the requirements of our Quality System have been met. In certain circumstances where the requirements have not been met, the laboratory may issue the data in an interim report but will remove the accreditation, in this instance results should be considered indicative only. Where possible samples will be re-extracted and a final 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.

ABBREVIATIONS and ACRONYMS USED

#	UKAS accredited.
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.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a Jones Environmental approved laboratory.
CO	Suspected carry over
OC	Outside Calibration Range
NFD	No Fibres Detected

JE Job No: 14/3241

Test Method No.	Description	Prep Method No. (if appropriate)	Description	UKAS	MCERTS (soils only)	Analysis done on As Received (AR) or Air 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 and BS1377.	PM0	No preparation is required.				
TM4	16 PAH by GC-MS, modified USEPA 8270	PM8	In-house method based on USEPA 3510. ISO 17025 accredited extraction method for organic extraction from solid samples using an end over end agitator.			AR	Yes
TM4	16 PAH by GC-MS, modified USEPA 8270	PM8	In-house method based on USEPA 3510. ISO 17025 accredited extraction method for organic extraction from solid samples using an end over end agitator.	Yes		AR	Yes
TM4	16 PAH by GC-MS, modified USEPA 8270	PM8	In-house method based on USEPA 3510. ISO 17025 accredited extraction method for organic extraction from solid samples using an end over end agitator.	Yes	Yes	AR	Yes
TM5	In-House method based on USEPA 8015B. Determination of Extractable Petroleum Hydrocarbons (EPH) in the carbon chain length range of C8-40 by GC-FID. Accredited to ISO 17025 on soil and water samples and MCERTS (carbon banding only) on soils. All accreditation is matrix specific.	PM16	Aliphatic/Aromatic fractionation			AR	Yes
TM5	In-House method based on USEPA 8015B. Determination of Extractable Petroleum Hydrocarbons (EPH) in the carbon chain length range of C8-40 by GC-FID. Accredited to ISO 17025 on soil and water samples and MCERTS (carbon banding only) on soils. All accreditation is matrix specific.	PM16	Aliphatic/Aromatic fractionation	Yes	Yes	AR	Yes
TM5/TM36	TPH CWG by GC-FID	PM12/PM16	CWG GC-FID			AR	Yes
PM13	Soil Typing for MCERTS	PM0	No preparation is required.			AR	
TM16	In-House method based on USEPA 8270. Determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS. Accredited to ISO 17025 for waters. All accreditation is matrix specific. Quantification by Internal Standard method.	PM8	In-house method based on USEPA 3510. ISO 17025 accredited extraction method for organic extraction from solid samples using an end over end agitator.			AR	Yes
TM21	TOC and TC by Combustion	PM24	Eltra preparation			AD	Yes

JE Job No: 14/3241

Test Method No.	Description	Prep Method No. (if appropriate)	Description	UKAS	MCERTS (soils only)	Analysis done on As Received (AR) or Air Dried (AD)	Reported on dry weight basis
TM30	Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry) using Thermo iCAP 6000 series instrument. Accredited to ISO 17025 for soils and waters and MCERTS accredited for Soils. All accreditation is matrix specific.	PM15	In-house method based on USEPA 3010A. Acid digestion of dried and crushed solid samples using Aqua Regia reflux.			AD	Yes
TM30	Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry) using Thermo iCAP 6000 series instrument. Accredited to ISO 17025 for soils and waters and MCERTS accredited for Soils. All accreditation is matrix specific.	PM15	In-house method based on USEPA 3010A. Acid digestion of dried and crushed solid samples using Aqua Regia reflux.	Yes	Yes	AD	Yes
TM31	In-house method based on USEPA 8015B. Determination of Methyltertbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID. Accredited to ISO 17025 for soils and waters and MCERTS accredited for soils. Accreditation is matrix specific.	PM12	In-house method based on USEPA 5021. Preparation of solid and liquid samples for headspace analysis. Samples are spiked with surrogates to facilitate quantification. ISO 17025 accredited extraction method. All accreditation is matrix specific			AR	Yes
TM31	In-house method based on USEPA 8015B. Determination of Methyltertbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID. Accredited to ISO 17025 for soils and waters and MCERTS accredited for soils. Accreditation is matrix specific.	PM12	In-house method based on USEPA 5021. Preparation of solid and liquid samples for headspace analysis. Samples are spiked with surrogates to facilitate quantification. ISO 17025 accredited extraction method. All accreditation is matrix specific	Yes		AR	Yes
TM36	In-House method based on USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-12 by headspace GC-FID. Accredited to ISO 17025 on soil and water samples and MCERTS accredited (carbon banding only) on soils. All accreditation is matrix specific.	PM12	In-house method based on USEPA 5021. Preparation of solid and liquid samples for headspace analysis. Samples are spiked with surrogates to facilitate quantification. ISO 17025 accredited extraction method. All accreditation is matrix specific			AR	Yes
TM36	In-House method based on USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-12 by headspace GC-FID. Accredited to ISO 17025 on soil and water samples and MCERTS accredited (carbon banding only) on soils. All accreditation is matrix specific.	PM12	In-house method based on USEPA 5021. Preparation of solid and liquid samples for headspace analysis. Samples are spiked with surrogates to facilitate quantification. ISO 17025 accredited extraction method. All accreditation is matrix specific	Yes	Yes	AR	Yes
TM38	Ionic analysis using the Thermo Aquakem Photometric Automatic Analyser. Accredited to ISO17025 and MCERTS for most analytes. All accreditation is matrix specific.	PM20	in-house method based on USEPA 1311 (TCLP). Solid samples are extracted with two parts de-ionised water to one part solid material for analysis of the extract for various parameters.			AR	Yes
TM65	Asbestos Bulk Identification	PM42	Screening of soils for fibres			AR	
TM65	Asbestos Bulk Identification	PM42	Screening of soils for fibres	Yes		AR	
TM73	pH in by Metrohm	PM11	1:2.5 soil/water extraction	Yes	Yes	AR	No

JE Job No: 14/3241

Test Method No.	Description	Prep Method No. (if appropriate)	Description	UKAS	MCERTS (soils only)	Analysis done on As Received (AR) or Air Dried (AD)	Reported on dry weight basis
TM74	Water Soluble Boron by ICP-OES	PM32	Preparation of soils for WSB	Yes	Yes	AD	Yes
TM76	Electrical Conductivity by Metrohm	PM58	Preparation of sample for Electrical Conductivity			AD	Yes
TM89	In-house method based on USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser. ISO17025 accredited method for soils and waters and MCERTS on soils. Accreditation is matrix specific.	PM45	Cyanide & Thiocyanate prep for soils			AR	Yes

Jones Environmental Laboratory

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Smith Grant LLP
Station House
Station Road
Ruabon
Wrexham
LL14 6DL

Attention :	Gareth Carroll
Date :	21st March, 2014
Your reference :	R1742
Our reference :	Test Report 14/3839 Batch 1
Location :	Uppes Heyford
Date samples received :	13th March, 2014
Status :	Final report
Issue :	1

Nine samples were received for analysis on 13th March, 2014. 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.

Compiled By:

Phil Sommerton BSc
Project Manager

Bob Millward BSc FRSC
Principal Chemist

Client Name: Smith Grant LLP
Reference: R1742
Location: Uppes Heyford
Contact: Gareth Carroll
JE Job No.: 14/3839

Report : Solid

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

Please see attached notes for all abbreviations and acronyms

J E Sample No.	1-2	3-4	5-6	19-20	21-22	23-24					LOD	Units	Method No.
Sample ID	INTERCEPTOR SOUTH	INTERCEPTOR EAST	INTERCEPTOR WEST	BOV-582-SS8-WEST	BOV-581-SS7	BOV-581-SS8							
Depth				0.3	0.4	0.4							
COC No / misc													
Containers	V J	V J	V J	V J	V J	V J							
Sample Date	13/03/2014	13/03/2014	13/03/2014	13/03/2014	13/03/2014	13/03/2014							
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil							
Batch Number	1	1	1	1	1	1							
Date of Receipt	13/03/2014	13/03/2014	13/03/2014	13/03/2014	13/03/2014	13/03/2014							
Antimony	108	-	7	-	-	-					<1	mg/kg	TM30/PM15
Antimony	-	39	-	-	-	-					<1	mg/kg	TM30/PM62
Arsenic #M	20.1	-	19.1	-	-	160.9					<0.5	mg/kg	TM30/PM15
Arsenic	-	21.1	-	-	-	-					<0.5	mg/kg	TM30/PM62
Barium #M	259	-	102	-	-	-					<1	mg/kg	TM30/PM15
Barium	-	407	-	-	-	-					<1	mg/kg	TM30/PM62
Beryllium	1.1	-	0.9	-	-	-					<0.5	mg/kg	TM30/PM15
Beryllium	-	<0.5	-	-	-	-					<0.5	mg/kg	TM30/PM62
Cadmium #M	12.0	-	3.8	-	-	-					<0.1	mg/kg	TM30/PM15
Cadmium	-	5.9	-	-	-	-					<0.1	mg/kg	TM30/PM62
Chromium #M	84.4	-	48.9	-	-	-					<0.5	mg/kg	TM30/PM15
Chromium	-	101.5	-	-	-	-					<0.5	mg/kg	TM30/PM62
Cobalt #M	9.0	-	7.5	-	-	-					<0.5	mg/kg	TM30/PM15
Cobalt	-	13.7	-	-	-	-					<0.5	mg/kg	TM30/PM62
Copper #M	132	-	64	-	-	-					<1	mg/kg	TM30/PM15
Copper	-	260	-	-	-	-					<1	mg/kg	TM30/PM62
Lead #M	523	-	235	-	-	-					<5	mg/kg	TM30/PM15
Lead	-	706	-	-	-	-					<5	mg/kg	TM30/PM62
Mercury #M	0.1	-	<0.1	-	-	-					<0.1	mg/kg	TM30/PM15
Mercury	-	<0.1	-	-	-	-					<0.1	mg/kg	TM30/PM62
Molybdenum #M	3.8	-	2.9	-	-	-					<0.1	mg/kg	TM30/PM15
Molybdenum	-	7.8	-	-	-	-					<0.1	mg/kg	TM30/PM62
Nickel #M	33.4	-	22.1	-	-	-					<0.7	mg/kg	TM30/PM15
Nickel	-	47.6	-	-	-	-					<0.7	mg/kg	TM30/PM62
Selenium #M	2	-	2	-	-	-					<1	mg/kg	TM30/PM15
Selenium	-	<1	-	-	-	-					<1	mg/kg	TM30/PM62
Vanadium	63	-	48	-	-	369					<1	mg/kg	TM30/PM15
Vanadium	-	78	-	-	-	-					<1	mg/kg	TM30/PM62
Water Soluble Boron #M	12.5	-	14.7	-	-	-					<0.1	mg/kg	TM74/PM32
Water Soluble Boron	-	7.8	-	-	-	-					<0.1	mg/kg	TM74/PM61
Zinc #M	6168	-	721	-	-	-					<5	mg/kg	TM30/PM15
Zinc	-	2560	-	-	-	-					<5	mg/kg	TM30/PM62

Client Name: Smith Grant LLP
Reference: R1742
Location: Uppes Heyford
Contact: Gareth Carroll
JE Job No.: 14/3839

Report : Solid

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

Please see attached notes for all abbreviations and acronyms

J E Sample No.	1-2	3-4	5-6	19-20	21-22	23-24						
Sample ID	INTERCEPTOR SOUTH	INTERCEPTOR EAST	INTERCEPTOR WEST	BOV-582-SS8-WEST	BOV-581-SS7	BOV-581-SS8						
Depth				0.3	0.4	0.4						
COC No / misc												
Containers	V J	V J	V J	V J	V J	V J						
Sample Date	13/03/2014	13/03/2014	13/03/2014	13/03/2014	13/03/2014	13/03/2014						
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil						
Batch Number	1	1	1	1	1	1						
Date of Receipt	13/03/2014	13/03/2014	13/03/2014	13/03/2014	13/03/2014	13/03/2014						
PAH MS	x100 dilution	x100 dilution	x100 dilution									
Naphthalene #M	<4.00	<4.00	<4.00	<0.04	<0.04	-					<0.04	mg/kg	TM4/PM8
Acenaphthylene	<3.00	<3.00	<3.00	<0.03	0.16	-					<0.03	mg/kg	TM4/PM8
Acenaphthene #M	<5.00	<5.00	<5.00	<0.05	0.81	-					<0.05	mg/kg	TM4/PM8
Fluorene #M	<4.00	<4.00	<4.00	<0.04	0.90	-					<0.04	mg/kg	TM4/PM8
Phenanthrene #M	<3.00	<3.00	<3.00	0.17	6.91	-					<0.03	mg/kg	TM4/PM8
Anthracene #	<4.00	<4.00	<4.00	<0.04	1.73	-					<0.04	mg/kg	TM4/PM8
Fluoranthene #M	<3.00	20.69	13.69	0.38	10.84	-					<0.03	mg/kg	TM4/PM8
Pyrene #	<3.00	16.38	<3.00	0.34	7.53	-					<0.03	mg/kg	TM4/PM8
Benzo(a)anthracene #	<6.00	<6.00	<6.00	0.22	3.81	-					<0.06	mg/kg	TM4/PM8
Chrysene #M	<2.00	12.36	<2.00	0.28	4.14	-					<0.02	mg/kg	TM4/PM8
Benzo(bk)fluoranthene #M	<7.00	<7.00	<7.00	0.38	6.44	-					<0.07	mg/kg	TM4/PM8
Benzo(a)pyrene #	<4.00	<4.00	<4.00	0.28	3.75	-					<0.04	mg/kg	TM4/PM8
Indeno(123cd)pyrene #M	<4.00	<4.00	<4.00	0.13	2.51	-					<0.04	mg/kg	TM4/PM8
Dibenzo(ah)anthracene #	<4.00	<4.00	<4.00	<0.04	0.31	-					<0.04	mg/kg	TM4/PM8
Benzo(ghi)perylene #	<4.00	<4.00	<4.00	0.13	2.23	-					<0.04	mg/kg	TM4/PM8
PAH 16 Total	<60.0	<60.0	<60.0	2.3	52.1	-					<0.6	mg/kg	TM4/PM8
Benzo(b)fluoranthene	<5.00	<5.00	<5.00	0.27	4.64	-					<0.05	mg/kg	TM4/PM8
Benzo(k)fluoranthene	<2.00	<2.00	<2.00	0.11	1.80	-					<0.02	mg/kg	TM4/PM8
PAH Surrogate % Recovery	99	99	93	106	110	-					<0	%	TM4/PM8
TPH CWG													
Aliphatics													
>C5-C6 #M	<0.1	<0.1	<0.1	-	-	-					<0.1	mg/kg	TM36/PM12
>C6-C8 #M	<0.1	<0.1	0.4	-	-	-					<0.1	mg/kg	TM36/PM12
>C8-C10	<0.1	1.0	18.6	-	-	-					<0.1	mg/kg	TM36/PM12
>C10-C12 #M	21.2	<0.2	82.4	-	-	-					<0.2	mg/kg	TM5/PM16
>C12-C16 #M	<4	<4	571	-	-	-					<4	mg/kg	TM5/PM16
>C16-C21 #M	128	74	137	-	-	-					<7	mg/kg	TM5/PM16
>C21-C35 #M	1225	971	842	-	-	-					<7	mg/kg	TM5/PM16
Total aliphatics C5-35	1374	1046	1651	-	-	-					<19	mg/kg	TM5/TM36/PM12/PM16
Aromatics													
>C5-EC7	<0.1	<0.1	<0.1	-	-	-					<0.1	mg/kg	TM36/PM12
>EC7-EC8	<0.1	<0.1	<0.1	-	-	-					<0.1	mg/kg	TM36/PM12
>EC8-EC10 #M	<0.1	<0.1	1.3	-	-	-					<0.1	mg/kg	TM36/PM12
>EC10-EC12	<0.2	<0.2	<0.2	-	-	-					<0.2	mg/kg	TM5/PM16
>EC12-EC16	<4	<4	80	-	-	-					<4	mg/kg	TM5/PM16
>EC16-EC21	90	103	177	-	-	-					<7	mg/kg	TM5/PM16
>EC21-EC35	2021	1128	1382	-	-	-					<7	mg/kg	TM5/PM16
Total aromatics C5-35	2111	1231	1640	-	-	-					<19	mg/kg	TM5/TM36/PM12/PM16
Total aliphatics and aromatics(C5-35)	3485	2277	3291	-	-	-					<38	mg/kg	TM5/TM36/PM12/PM16
MTBE #	<5	<5	<5	-	-	-					<5	ug/kg	TM31/PM12
Benzene #	<5	<5	<5	-	-	-					<5	ug/kg	TM31/PM12

Client Name: Smith Grant LLP
Reference: R1742
Location: Uppes Heyford
Contact: Gareth Carroll
JE Job No.: 14/3839

Report : Solid

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

Please see attached notes for all abbreviations and acronyms

J E Sample No.	1-2	3-4	5-6	19-20	21-22	23-24					LOD	Units	Method No.
Sample ID	INTERCEPTOR SOUTH	INTERCEPTOR EAST	INTERCEPTOR WEST	BOV-582-SS8-WEST	BOV-581-SS7	BOV-581-SS8							
Depth				0.3	0.4	0.4							
COC No / misc													
Containers	V J	V J	V J	V J	V J	V J							
Sample Date	13/03/2014	13/03/2014	13/03/2014	13/03/2014	13/03/2014	13/03/2014							
Sample Type	Soil	Soil	Soil	Soil	Soil	Soil							
Batch Number	1	1	1	1	1	1							
Date of Receipt	13/03/2014	13/03/2014	13/03/2014	13/03/2014	13/03/2014	13/03/2014							
Toluene #	<5	<5	<5	-	-	-					<5	ug/kg	TM31/PM12
Ethylbenzene #	<5	<5	40	-	-	-					<5	ug/kg	TM31/PM12
m/p-Xylene #	<5	103	323	-	-	-					<5	ug/kg	TM31/PM12
o-Xylene #	<5	167	793	-	-	-					<5	ug/kg	TM31/PM12
	x20 dilution due to nature of extract	x20 dilution due to nature of extract	x20 dilution due to nature of extract										
PCBs (Total vs Aroclor 1254)	<200	<200	<200	-	-	-					<10	ug/kg	TM16/PM8
Natural Moisture Content	433.8	NDP	221.4	11.9	13.6	-					<0.1	%	PM4/PM0
		x10 dilution											
Hexavalent Chromium	<0.3	<3.0	<0.3	-	-	-					<0.3	mg/kg	TM38/PM20
Free Cyanide	<0.5	<0.5	<0.5	-	-	-					<0.5	mg/kg	TM89/PM45
Complex Cyanide	4.5	6.4	2.7	-	-	-					<0.5	mg/kg	TM89/PM45
Organic Matter	21.6	NDP	15.0	-	-	-					<0.2	%	TM21/PM24
Electrical Conductivity @25C (5:1 ext)	759	NDP	676	-	-	-					<100	uS/cm	TM76/PM58
pH #M	7.39	7.06	7.49	-	-	-					<0.01	pH units	TM73/PM11
Sample Type	Loam	Loam	Loam	Clay	Clayey Sand	Clayey Sand						None	PM13/PM0
Sample Colour	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown	Medium Brown						None	PM13/PM0
Other Items	wet and leafage	wet and leafage	wet	sand and stones	stones	stones						None	PM13/PM0

Client Name: Smith Grant LLP
Reference: R1742
Location: Uppes Heyford
Contact: Gareth Carroll
JE Job No.: 14/3839

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
H=H_2SO_4, Z=ZnAc, N=NaOH, HN=$HN0_3$

J E Sample No.	7-10	11-14	15-18									
Sample ID	INTERCEPTOR SOUTH	INTERCEPTOR EAST	INTERCEPTOR WEST									
Depth												
COC No / misc												
Containers	V P G	V P G	V P G									
Sample Date	13/03/2014	13/03/2014	13/03/2014									
Sample Type	Liquid	Liquid	Liquid									
Batch Number	1	1	1									
Date of Receipt	13/03/2014	13/03/2014	13/03/2014									

Please see attached notes for all abbreviations and acronyms

											LOD	Units	Method No.
Dissolved Arsenic	4.3	<2.5	<2.5								<2.5	ug/l	TM30/PM14
Dissolved Boron	20	<12	28								<12	ug/l	TM30/PM14
Dissolved Cadmium	<0.5	<0.5	<0.5								<0.5	ug/l	TM30/PM14
Total Dissolved Chromium	<1.5	2.4	<1.5								<1.5	ug/l	TM30/PM14
Dissolved Copper	<7	<7	<7								<7	ug/l	TM30/PM14
Dissolved Lead	<5	<5	<5								<5	ug/l	TM30/PM14
Dissolved Mercury	<1	<1	<1								<1	ug/l	TM30/PM14
Dissolved Nickel	<2	<2	<2								<2	ug/l	TM30/PM14
Dissolved Selenium	<3	<3	<3								<3	ug/l	TM30/PM14
Dissolved Zinc	103	14	5								<3	ug/l	TM30/PM14
PAH MS													
Naphthalene	0.350	0.020	0.140								<0.014	ug/l	TM4/PM30
Acenaphthylene	0.020	<0.013	0.020								<0.013	ug/l	TM4/PM30
Acenaphthene	<0.013	0.030	0.030								<0.013	ug/l	TM4/PM30
Fluorene	<0.014	0.030	0.020								<0.014	ug/l	TM4/PM30
Phenanthrene	0.040	0.170	0.020								<0.011	ug/l	TM4/PM30
Anthracene	<0.013	0.020	<0.013								<0.013	ug/l	TM4/PM30
Fluoranthene	0.040	0.240	0.030								<0.012	ug/l	TM4/PM30
Pyrene	0.030	0.170	0.030								<0.013	ug/l	TM4/PM30
Benzo(a)anthracene	<0.015	0.060	<0.015								<0.015	ug/l	TM4/PM30
Chrysene	0.020	0.110	<0.011								<0.011	ug/l	TM4/PM30
Benzo(bk)fluoranthene	0.020	0.140	<0.018								<0.018	ug/l	TM4/PM30
Benzo(a)pyrene	<0.016	0.080	<0.016								<0.016	ug/l	TM4/PM30
Indeno(123cd)pyrene	<0.011	0.050	<0.011								<0.011	ug/l	TM4/PM30
Dibenzo(ah)anthracene	<0.01	<0.01	<0.01								<0.01	ug/l	TM4/PM30
Benzo(ghi)perylene	<0.011	0.040	<0.011								<0.011	ug/l	TM4/PM30
PAH 16 Total	0.520	1.160	0.290								<0.195	ug/l	TM4/PM30
Benzo(b)fluoranthene	0.01	0.10	<0.01								<0.01	ug/l	TM4/PM30
Benzo(k)fluoranthene	<0.01	0.04	<0.01								<0.01	ug/l	TM4/PM30
PAH Surrogate % Recovery	90	96	101								<0	%	TM4/PM30
TPH CWG													
Aliphatics													
>C5-C6	<5	<5	<5								<5	ug/l	TM36/PM12
>C6-C8	<5	<5	<5								<5	ug/l	TM36/PM12
>C8-C10	<5	<5	<5								<5	ug/l	TM36/PM12
>C10-C12	<5	<5	<5								<5	ug/l	TM5/PM30
>C12-C16	<10	<10	<10								<10	ug/l	TM5/PM30
>C16-C21	<10	<10	<10								<10	ug/l	TM5/PM30
>C21-C35	<10	<10	<10								<10	ug/l	TM5/PM30
Total aliphatics C5-35	<10	<10	<10								<10	ug/l	TM5/TM36/PM30

Client Name: Smith Grant LLP
Reference: R1742
Location: Uppes Heyford
Contact: Gareth Carroll
JE Job No.: 14/3839

Report : Liquid

Liquids/products: V=40ml vial, G=glass bottle, P=plastic bottle
H=H_2SO_4, Z=ZnAc, N=NaOH, HN=$HN0_3$

Please see attached notes for all abbreviations and acronyms

J E Sample No.	7-10	11-14	15-18									
Sample ID	INTERCEPTOR SOUTH	INTERCEPTOR EAST	INTERCEPTOR WEST									
Depth												
COC No / misc												
Containers	V P G	V P G	V P G									
Sample Date	13/03/2014	13/03/2014	13/03/2014									
Sample Type	Liquid	Liquid	Liquid									
Batch Number	1	1	1									
Date of Receipt	13/03/2014	13/03/2014	13/03/2014									
											LOD	Units	Method No.
TPH CWG													
Aromatics													
>C5-EC7	<5	<5	<5								<5	ug/l	TM36/PM12
>EC7-EC8	<5	<5	<5								<5	ug/l	TM36/PM12
>EC8-EC10	<5	<5	<5								<5	ug/l	TM36/PM12
>EC10-EC12	<5	<5	<5								<5	ug/l	TM5/PM30
>EC12-EC16	<10	<10	<10								<10	ug/l	TM5/PM30
>EC16-EC21	<10	<10	<10								<10	ug/l	TM5/PM30
>EC21-EC35	<10	<10	<10								<10	ug/l	TM5/PM30
Total aromatics C5-35	<10	<10	<10								<10	ug/l	TM5/PM30
Total aliphatics and aromatics(C5-35)	<10	<10	<10								<10	ug/l	TM5/TM36/PM30
MTBE	<5	<5	<5								<5	ug/l	TM36/PM12
Benzene	<5	<5	<5								<5	ug/l	TM36/PM12
Toluene	<5	<5	<5								<5	ug/l	TM36/PM12
Ethylbenzene	<5	<5	<5								<5	ug/l	TM36/PM12
m/p-Xylene	<5	<5	<5								<5	ug/l	TM36/PM12
o-Xylene	<5	<5	<5								<5	ug/l	TM36/PM12
pH	7.45	7.11	7.95								<0.01	pH units	TM73/PM0

Client Name: Smith Grant LLP
Reference: R1742
Location: Uppes Heyford
Contact: Gareth Carroll

Note:

Analysis was 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. Samples are retained for not less than 6 months from the date of analysis unless specifically requested.

Opinions lie outside the scope of our UKAS accreditation.

Where the sample is not taken by a Jones Environmental Laboratory consultant, Jones Environmental Laboratory cannot be responsible for inaccurate or unrepresentative sampling.

If asbestos fibres are reported at trace levels there will not be enough fibres to quantify and will be less than 0.001%.

Signed on behalf of Jones Environmental Laboratory:

Gemma Newsome
Asbestos Team Leader

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Date Of Analysis	Description	Asbestos Containing Material	Asbestos Results	Asbestos Level	Comments
14/3839	1	INTERCEPTOR SOUTH		2	18/03/14	soil	None	NAD	NAD	
14/3839	1	INTERCEPTOR EAST		4	18/03/14	soil	Free Fibres	Chrysotile	Quantifiable	
14/3839	1	INTERCEPTOR WEST		6	18/03/14	soil	None	NAD	NAD	

Client Name: Smith Grant LLP **Matrix : Solid**
Reference: R1742
Location: Uppes Heyford
Contact: Gareth Carroll

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	NDP Reason
14/3839	1	INTERCEPTOR EAST		3-4	Asbestos detected in sample

Client Name: Smith Grant LLP
Reference: R1742
Location: Uppes Heyford
Contact: Gareth Carroll

J E Job No.	Batch	Sample ID	Depth	J E Sample No.	Analysis	Reason
No deviating sample report results for job 14/3839						

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

JE Job No.: 14/3839

SOILS

Please note we are only MCERTS accredited 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. If we are instructed to keep samples, a storage charge of £1 (1.5 Euros) per sample per month will be applied until we are asked to dispose of them.

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. 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.

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.

WATERS

Please note we are not a Drinking Water Inspectorate (DWI) Approved Laboratory . It is important that detection limits are carefully considered when requesting water analysis.

UKAS accreditation applies to surface water and groundwater and 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.

DEVIATING SAMPLES

Samples must be received in a condition appropriate to the requested analyses. All samples should be submitted to the laboratory in suitable containers with sufficient ice packs to sustain an appropriate temperature for the requested analysis. If this is not the case you will be informed and any test results that may be compromised highlighted on your deviating samples report.

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.

NOTE

Data is only accredited when all the requirements of our Quality System have been met. In certain circumstances where the requirements have not been met, the laboratory may issue the data in an interim report but will remove the accreditation, in this instance results should be considered indicative only. Where possible samples will be re-extracted and a final 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.

ABBREVIATIONS and ACRONYMS USED

#	UKAS accredited.
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.
++	Result outside calibration range, results should be considered as indicative only and are not accredited.
*	Analysis subcontracted to a Jones Environmental approved laboratory.
CO	Suspected carry over
OC	Outside Calibration Range
NFD	No Fibres Detected

JE Job No: 14/3839

Test Method No.	Description	Prep Method No. (if appropriate)	Description	UKAS	MCERTS (soils only)	Analysis done on As Received (AR) or Air 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 and BS1377.	PM0	No preparation is required.				
TM4	16 PAH by GC-MS, modified USEPA 8270	PM30	In-house method based on USEPA 3510. Liquid samples are mixed with solvent and agitated with an automatic magnetic stirrer with a stir bar for 15 minutes to extract organic molecules. ISO 17025 accredited extraction method. All accreditation is matrix specific				
TM4	16 PAH by GC-MS, modified USEPA 8270	PM8	In-house method based on USEPA 3510. ISO 17025 accredited extraction method for organic extraction from solid samples using an end over end agitator.			AR	Yes
TM4	16 PAH by GC-MS, modified USEPA 8270	PM8	In-house method based on USEPA 3510. ISO 17025 accredited extraction method for organic extraction from solid samples using an end over end agitator.	Yes		AR	Yes
TM4	16 PAH by GC-MS, modified USEPA 8270	PM8	In-house method based on USEPA 3510. ISO 17025 accredited extraction method for organic extraction from solid samples using an end over end agitator.	Yes	Yes	AR	Yes
TM5	In-House method based on USEPA 8015B. Determination of Extractable Petroleum Hydrocarbons (EPH) in the carbon chain length range of C8-40 by GC-FID. Accredited to ISO 17025 on soil and water samples and MCERTS (carbon banding only) on soils. All accreditation is matrix specific.	PM16	Aliphatic/Aromatic fractionation			AR	Yes
TM5	In-House method based on USEPA 8015B. Determination of Extractable Petroleum Hydrocarbons (EPH) in the carbon chain length range of C8-40 by GC-FID. Accredited to ISO 17025 on soil and water samples and MCERTS (carbon banding only) on soils. All accreditation is matrix specific.	PM16	Aliphatic/Aromatic fractionation	Yes	Yes	AR	Yes
TM5	In-House method based on USEPA 8015B. Determination of Extractable Petroleum Hydrocarbons (EPH) in the carbon chain length range of C8-40 by GC-FID. Accredited to ISO 17025 on soil and water samples and MCERTS (carbon banding only) on soils. All accreditation is matrix specific.	PM30	In-house method based on USEPA 3510. Liquid samples are mixed with solvent and agitated with an automatic magnetic stirrer with a stir bar for 15 minutes to extract organic molecules. ISO 17025 accredited extraction method. All accreditation is matrix specific				
TM5/TM36	TPH CWG by GC-FID	PM12/PM16	CWG GC-FID			AR	Yes
TM5/TM36	TPH CWG by GC-FID	PM30	In-house method based on USEPA 3510. Liquid samples are mixed with solvent and agitated with an automatic magnetic stirrer with a stir bar for 15 minutes to extract organic molecules. ISO 17025 accredited extraction method. All accreditation is matrix specific				

JE Job No: 14/3839

Test Method No.	Description	Prep Method No. (if appropriate)	Description	UKAS	MCERTS (soils only)	Analysis done on As Received (AR) or Air Dried (AD)	Reported on dry weight basis
PM13	Soil Typing for MCERTS	PM0	No preparation is required.			AR	
TM16	In-House method based on USEPA 8270. Determination of Semi-Volatile Organic compounds (SVOCs) by GC-MS. Accredited to ISO 17025 for waters. All accreditation is matrix specific. Quantification by Internal Standard method.	PM8	In-house method based on USEPA 3510. ISO 17025 accredited extraction method for organic extraction from solid samples using an end over end agitator.			AR	Yes
TM21	TOC and TC by Combustion	PM24	Eltra preparation			AD	Yes
TM30	Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry) using Thermo iCAP 6000 series instrument. Accredited to ISO 17025 for soils and waters and MCERTS accredited for Soils. All accreditation is matrix specific.	PM14	In-house method based on USEPA 3005A. Acid digestion of water samples and analsyis by ICP-OES as per method TM030W.ISO 17025 accredited extraction method. All accreditation is matrix specific				
TM30	Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry) using Thermo iCAP 6000 series instrument. Accredited to ISO 17025 for soils and waters and MCERTS accredited for Soils. All accreditation is matrix specific.	PM15	In-house method based on USEPA 3010A. Acid digestion of dried and crushed solid samples using Aqua Regia reflux.			AD	Yes
TM30	Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry) using Thermo iCAP 6000 series instrument. Accredited to ISO 17025 for soils and waters and MCERTS accredited for Soils. All accreditation is matrix specific.	PM15	In-house method based on USEPA 3010A. Acid digestion of dried and crushed solid samples using Aqua Regia reflux.	Yes	Yes	AD	Yes
TM30	Trace Metal elements by ICP-OES (Inductively Coupled Plasma - Optical Emission Spectrometry) using Thermo iCAP 6000 series instrument. Accredited to ISO 17025 for soils and waters and MCERTS accredited for Soils. All accreditation is matrix specific.	PM62	Aqua Regia extraction (Soils) (as received sample)			AR	Yes
TM31	In-house method based on USEPA 8015B. Determination of Methyltertbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID. Accredited to ISO 17025 for soils and waters and MCERTS accredited for soils. Accreditation is matrix specific.	PM12	In-house method based on USEPA 5021. Preparation of solid and liquid samples for headspace analysis. Samples are spiked with surrogates to facilitate quantification. ISO 17025 accredited extraction method. All accreditation is matrix specific			AR	Yes
TM31	In-house method based on USEPA 8015B. Determination of Methyltertbutylether, Benzene, Toluene, Ethylbenzene and Xylene by headspace GC-FID. Accredited to ISO 17025 for soils and waters and MCERTS accredited for soils. Accreditation is matrix specific.	PM12	In-house method based on USEPA 5021. Preparation of solid and liquid samples for headspace analysis. Samples are spiked with surrogates to facilitate quantification. ISO 17025 accredited extraction method. All accreditation is matrix specific	Yes		AR	Yes
TM36	In-House method based on USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-12 by headspace GC-FID. Accredited to ISO 17025 on soil and water samples and MCERTS accredited (carbon banding only) on soils. All accreditation is matrix specific.	PM12	In-house method based on USEPA 5021. Preparation of solid and liquid samples for headspace analysis. Samples are spiked with surrogates to facilitate quantification. ISO 17025 accredited extraction method. All accreditation is matrix specific				

JE Job No: 14/3839

Test Method No.	Description	Prep Method No. (if appropriate)	Description	UKAS	MCERTS (soils only)	Analysis done on As Received (AR) or Air Dried (AD)	Reported on dry weight basis
TM36	In-House method based on USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-12 by headspace GC-FID. Accredited to ISO 17025 on soil and water samples and MCERTS accredited (carbon banding only) on soils. All accreditation is matrix specific.	PM12	In-house method based on USEPA 5021. Preparation of solid and liquid samples for headspace analysis. Samples are spiked with surrogates to facilitate quantification. ISO 17025 accredited extraction method. All accreditation is matrix specific			AR	Yes
TM36	In-House method based on USEPA 8015B. Determination of Gasoline Range Organics (GRO) in the carbon chain range of C5-12 by headspace GC-FID. Accredited to ISO 17025 on soil and water samples and MCERTS accredited (carbon banding only) on soils. All accreditation is matrix specific.	PM12	In-house method based on USEPA 5021. Preparation of solid and liquid samples for headspace analysis. Samples are spiked with surrogates to facilitate quantification. ISO 17025 accredited extraction method. All accreditation is matrix specific	Yes	Yes	AR	Yes
TM38	Ionic analysis using the Thermo Aquakem Photometric Automatic Analyser. Accredited to ISO17025 and MCERTS for most analytes. All accreditation is matrix specific.	PM20	in-house method based on USEPA 1311 (TCLP). Solid samples are extracted with two parts de-ionised water to one part solid material for analysis of the extract for various parameters.			AR	Yes
TM65	Asbestos Bulk Identification	PM42	Screening of soils for fibres			AR	
TM65	Asbestos Bulk Identification	PM42	Screening of soils for fibres	Yes		AR	
TM73	pH in by Metrohm	PM0	No preparation is required.				
TM73	pH in by Metrohm	PM11	1:2.5 soil/water extraction	Yes	Yes	AR	No
TM74	Water Soluble Boron by ICP-OES	PM32	Preparation of soils for WSB	Yes	Yes	AD	Yes
TM74	Water Soluble Boron by ICP-OES	PM61	Preparation of soils for WSB (as received sample)			AR	Yes
TM76	Electrical Conductivity by Metrohm	PM58	Preparation of sample for Electrical Conductivity			AD	Yes

JE Job No: 14/3839

Test Method No.	Description	Prep Method No. (if appropriate)	Description	UKAS	MCERTS (soils only)	Analysis done on As Received (AR) or Air Dried (AD)	Reported on dry weight basis
TM89	In-house method based on USEPA method OIA-1667. Determination of cyanide by Flow Injection Analyser. ISO17025 accredited method for soils and waters and MCERTS on soils. Accreditation is matrix specific.	PM45	Cyanide & Thiocyanate prep for soils			AR	Yes

APPENDIX C.

Geotechnical Analysis Results

Nicholls Colton Analytical
7 - 11 Harding Street
Leicester
LE1 4DH

Nicholls Colton Analytical

Cover Sheet

Smith Grant LLP
Station House
Station Road
Ruabon
Wrexham
LL14 6DL

Analytical Test Report:	**L14/0256/SGP/001**

Your Project Reference:	**R1742 - Upper Heyford**	Samples Received on:	10/02/2014
Your Order Number:	650	Testing Instruction Received:	10/02/2014
Report Issue Number:	1	Sample Tested :	10 to 12/02/2014
Samples Analysed	2 Soils	Report issued:	13/02/2014

Signed

Terry Stafford
Manager - Site Services
Nicholls Colton Analytical

Notes:

Samples will be retained for 14 days after issue of this report unless otherwise requested.

Samples were provided by client

Grading

Sample preparation was in accordance with BS1377:Part 1:1990.

Testing was in accordance with BS1377:Part 2:1990 clause 9.2 wet sieving method

Issued by JG 29.01.13, Authorised by MS

0320

L14/0256/SGP/001

R1742 - Upper Heyford

Material Analysis Results

NCA Reference			**14-3118**	**14-3119**
Client Sample Reference			BOV-CRUSH 1 S1	BOV-CRUSH 1 S2
Client Sample Location			Not Provided	Not Provided
Date of Sampling			07/02/2014	07/02/2014
Material Description			Yellow limestone and concrete	Yellow limestone and concrete
BS Test Sieve (mm)	**Units**	**Specification**	**Class 6F2**	**Class 6F2**
300	**% Passing**		100	100
125.0	**% Passing**	**100**	100	100
90.0	**% Passing**	**80-100**	94	94
75.0	**% Passing**	**65-100**	79	74
63.0	**% Passing**		72	71
50.0	**% Passing**		64	63
37.5	**% Passing**	**45-100**	58	56
28.0	**% Passing**		51	50
20.0	**% Passing**		45	45
14.0	**% Passing**		36	39
10.0	**% Passing**	**15-60**	31	34
6.3	**% Passing**		25	29
5.0	**% Passing**	**10-45**	21	26
3.35	**% Passing**		18	23
2.00	**% Passing**		15	19
1.18	**% Passing**		12	16
0.600	**% Passing**	**0-25**	9	13
0.425	**% Passing**		8	12
0.300	**% Passing**		7	11
0.212	**% Passing**		6	9
0.150	**% Passing**		5	8
0.063	**% Passing**	**0-12**	3	7
	According to the above specification the sample:		**Complies**	**Complies**

Nicholls Colton Analytical
7 - 11 Harding Street
Leicester
LE1 4DH

Nicholls Colton Analytical

Cover Sheet

Smith Grant LLP
Station House
Station Road
Ruabon
Wrexham
LL14 6DL

Analytical Test Report:	**L14/0256/SGP/002**

Your Project Reference:	**R1742 - Upper Heyford**	Samples Received on:	10/02/2014
Your Order Number:	650	Testing Instruction Received:	10/02/2014
Report Issue Number:	1	Sample Tested :	14 to 18/02/2014
Samples Analysed	3 Soils	Report issued:	19/02/2014

Signed

Will Elson
Manager - Testing Services
Nicholls Colton Analytical

Notes:

Samples will be retained for 14 days after issue of this report unless otherwise requested.

Samples were provided by client

Grading

Sample preparation was in accordance with BS1377:Part 1:1990.

Testing was in accordance with BS1377:Part 2:1990 clause 9.2 wet sieving method

Issued by JG 29.01.13, Authorised by MS

0320

L14/0256/SGP/002

R1742 - Upper Heyford

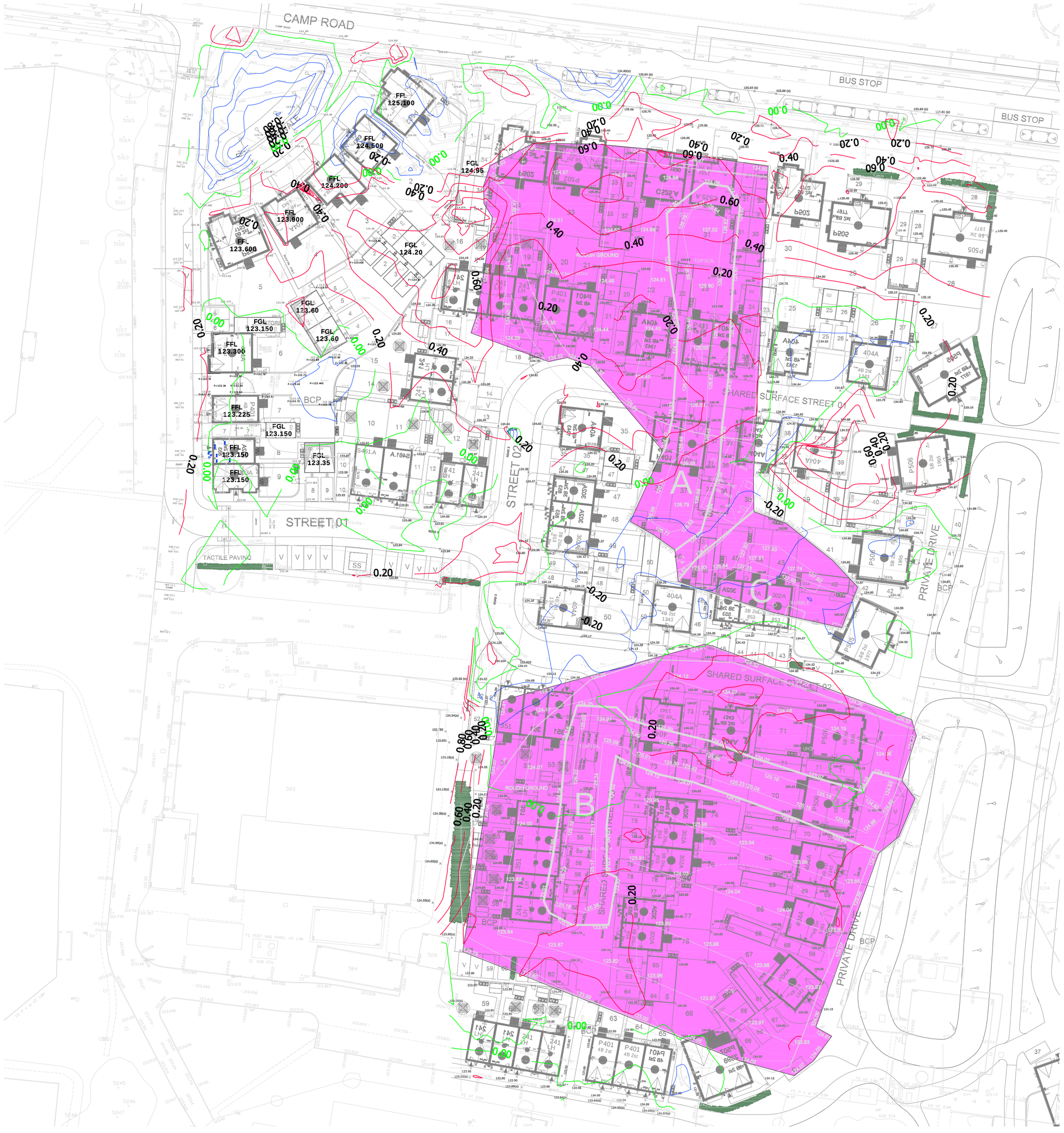
Material Analysis Results

NCA Reference			14-3116	14-3117	14-3120
Client Sample Reference			DOR-CRUSH 1-1	DOR-CRUSH 1-2	BOV-CRUSH 2-1
Client Sample Location			Not Provided	Not Provided	Not Provided
Date of Sampling			07/02/2014	07/02/2014	07/02/2014
Material Description			Grey/ brown concrete and brick	Brown/ grey concrete brick and occasional wood	Grey/ yellow crushed rock
BS Test Sieve (mm)	**Units**	**Specification**	**Class 6F2**	**Class 6F2**	**Class 6F2**
300	**% Passing**		100	100	100
125.0	**% Passing**	**100**	100	100	100
90.0	**% Passing**	**80-100**	96	90	85
75.0	**% Passing**	**65-100**	85	77	74
63.0	**% Passing**		74	65	67
50.0	**% Passing**		59	61	57
37.5	**% Passing**	**45-100**	52	56	51
28.0	**% Passing**		44	48	47
20.0	**% Passing**		38	42	43
14.0	**% Passing**		31	33	36
10.0	**% Passing**	**15-60**	26	26	33
6.3	**% Passing**		21	21	29
5.0	**% Passing**	**10-45**	19	20	27
3.35	**% Passing**		16	18	24
2.00	**% Passing**		13	16	20
1.18	**% Passing**		11	14	17
0.600	**% Passing**	**0-25**	9	11	13
0.425	**% Passing**		8	10	11
0.300	**% Passing**		7	9	9
0.212	**% Passing**		6	8	7
0.150	**% Passing**		5	7	6
0.063	**% Passing**	**0-12**	4	6	5
According to the above specification the sample:			**Complies**	**Complies**	**Complies**

APPENDIX D.

Urban Regen Cut and Fill Drawing
(at completion, 22/01/2014, ref: UR/HEYCF/D1B rev A)

UPPER HEYFORD



Cut & Fill Quantities

First surface PGM : Asbuilt/Original Ground Level West
Second surface PGM: Proposed Ground Level B1

Total Volumes of Cut/Fill (Second PGM relative to first) :

	Cut	Fill
Gross:	1175.4	4637.7
Nett:		3462.4

Stockpiles - **EXCLUDED** from calculation

Stockpile A - Topsoil	1245.1m3
Stockpile B - Topsoil	906.3m3
Stockpile C - Rubble	795.4m3

0 20 40 60 100

Key

- Cut Contour
- Fill Contour
- Balance Contour
- Extent of Asbuilt survey

N

Rev	Date	Revision

urban regen

Project	URBAN REGEN UPPER HEYFORD
Title	CUT AND FILL AREA B1
Scale	1:500@A1
Date	JANUARY 2014
Drawn	UR
Chk	
Drg No	UR/HEYCF/B1
-	