

37.



15.01.18 – Topsoil stockpile in westernmost part of site (in far distance).

38.



15.01.18 – Construction of electricity substation located along centre of northwest boundary complete.

38.



04.04.18 – Electricity substation slab removal.

39.



04.04.18 – Post-electricity substation slab removal – underlying made ground.

40.



04.04.18 – Post-electricity substation slab removal – underlying natural soils.

NO PHOTOGRAPH

1.



Trial Pit 1 – View of pit

2.



Trial Pit 1 – Arisings 1

3.



Trial Pit 1 – Arisings 2

4.



Trial Pit 1 – Arisings 3

5.



Trial Pit 2 – View of pit

6.



Trial Pit 2 – Arisings 1

7.



Trial Pit 2 – Arisings 2

8.



Trial Pit 2 – Arisings 3

9.



Trial Pit 3 – View of pit 1

10.



Trial Pit 3 – View of pit 2

11.



Trial Pit 3 – Arisings 1

12.



Trial Pit 3 – Arisings 2

13.



Trial Pit 3 – Arisings 3

14.



Trial Pit 4 – View of pit 1

15.



Trial Pit 4 – Arisings 1

16.



Trial Pit 4 – Arisings 2

17.

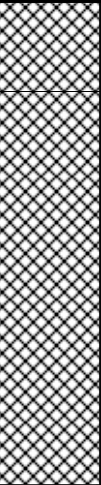


Trial Pit 4 – Arisings 3

NO PHOTOGRAPH

APPENDIX B

Trial Pit Logs – Potential Culvert Diversion Area

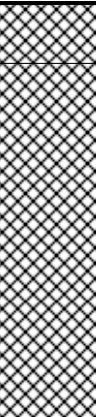
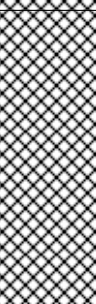
SHEET: 1 of 1	LOCATION: Stockbridge	PROJECT: Waterpark Drive	ENGINEER: SM	JOB NO. R2469	TRIAL PIT NO. TP1
		EXCAVATED BY: JCB Excavator	CLIENT: URL	DATE: 24/11/2017	
DEPTH (m)	SAMPLES/ TESTING	FIELD RECORDS	DEPTH (m)	DESCRIPTION OF STRATA	LEGEND
3	TP1-S1 (PSD)		0.00	MADE GROUND: Dark brown sandy clayey TOPSOIL with occasional gravel including red brick fragments and frequent roots.	
			0.3	MADE GROUND: Soft to stiff orangish brown grey-mottled sandy CLAY with occasional fine gravel including red brick fragments and occasional cobbles of red brick.	
			1.00		
			1.6	Soft to firm orange grey/black-mottled silty CLAY with occasional fine gravel, occasional organic matter and orangish brown medium coarse partings of sand at the top and base of stratum.	
			2.00		
			3.00	Trial pit terminated in natural soils @ 3m bgl.	
			4.00		
			5.00		
 Smith Grant LLP Station House, Station Road, Ruabon, Wrexham LL14 6DL Tel: 01978 822367 Fax: 01978 8247182 www.smithgrant.co.uk email: consult@smithgrant.co.uk		GROUND WATER: None encountered			
		REMARKS: GPS reference: 42700, 92968			
		SCALE: 1:250	LOGGED BY: SM	FIGURE NO. 1	

SHEET: 1 of 1	LOCATION: Stockbridge	PROJECT: Waterpark Drive	ENGINEER: SM	JOB NO. R2469	TRIAL PIT NO. TP2
		EXCAVATED BY: JCB Excavator	CLIENT: URL	DATE: 24/11/2017	
DEPTH (m)	SAMPLES/ TESTING	FIELD RECORDS	DEPTH (m)	DESCRIPTION OF STRATA	LEGEND
	TP2-S1 (SGP suite)		0.00	MADE GROUND: Dark brown sandy clayey TOPSOIL with occasional gravel including red brick fragments and frequent roots.	
			0.25	MADE GROUND: Soft to stiff orangish brown grey-mottled sandy CLAY with occasional fine gravel including red brick fragments, occasional cobbles of red brick and rare wood.	
1.4			TP2-S2 (PSD)	Trial pit collapse from 1.4m bgl.	1.00
	1.4	Mixture of light brown, brown, grey and orange SAND with occasional inclusions of dark grey silt.			
3		3.00			3
			4.00		
			5.00		

 SMITH GRANT Environmental Consultancy LLP Smith Grant LLP Station House, Station Road, Ruabon, Wrexham LL146DL Tel: 01978822367 Fax: 019788247182 www.smithgrant.co.uk email: consult@smithgrant.co.uk	GROUND WATER: Running sands from 2.4m	
	REMARKS: GPS reference: 42728, 92958	
	SCALE: 1:250	LOGGED BY: SM

SHEET: 1 of 1	LOCATION: Stockbridge	PROJECT: Waterpark Drive	ENGINEER: SM	JOB NO. R2469	TRIAL PIT NO. TP3
		EXCAVATED BY: JCB Excavator	CLIENT: URL	DATE: 24/11/2017	
DEPTH (m)	SAMPLES/ TESTING	FIELD RECORDS	DEPTH (m)	DESCRIPTION OF STRATA	LEGEND
	TP3-S1 (SGP suite)	Trial pit collapse from 0.7m bgl.	0.00	MADE GROUND: Dark brown sandy clayey TOPSOIL with occasional gravel including red brick fragments and frequent roots.	
0.3			MADE GROUND: Soft to stiff orangish brown grey-mottled sandy CLAY with occasional fine gravel including red brick fragments and rare wood.		
0.7			Mixture of light brown, brown, grey and orange SAND with occasional rounded to sub-rounded cobbles and occasional inclusions of dark grey silt.		
1.00					
2.00					
2.3	TP3-S2 (PSD)		2.3	Trial pit due to trial pit collapse @ 2.3m bgl.	
			3.00		
			4.00		
			5.00		

 Smith Grant LLP Station House, Station Road, Ruabon, Wrexham LL146DL Tel: 01978822367 Fax: 019788247182 www.smithgrant.co.uk email: consult@smithgrant.co.uk	GROUND WATER: Running sands from 1.8m	
	REMARKS: GPS reference: 42754, 92954	
	SCALE: 1:250	LOGGED BY: SM

SHEET: 1 of 1	LOCATION: Stockbridge	PROJECT: Waterpark Drive	ENGINEER: SM	JOB NO. R2469	TRIAL PIT NO. TP4
		EXCAVATED BY: JCB Excavator	CLIENT: URL	DATE: 24/11/2017	
DEPTH (m)	SAMPLES/ TESTING	FIELD RECORDS	DEPTH (m)	DESCRIPTION OF STRATA	LEGEND
1.4	TP4-S1 (SGP suite)	Trial pit collapse from 2.0m bgl. Relict clay pipeline encountered @ 2.1m bgl.	0.00	MADE GROUND: Dark brown sandy clayey TOPSOIL with occasional gravel including red brick fragments and frequent roots.	
			0.2	MADE GROUND: Soft to stiff orangish brown grey-mottled sandy CLAY with occasional fine gravel including red brick fragments and occasional cobbles of red brick.	
			1.00		
			1.4		
			2.00	MADE GROUND: Reworked mixture of light brown, brown, grey and orange SAND.	
			2.4	Mixture of light brown, brown, grey and orange SAND.	
			3.00	Trial pit terminated in natural soils @ 3m bgl.	
			4.00		
			5.00		

 Smith Grant LLP Station House, Station Road, Ruabon, Wrexham LL146DL Tel: 01978822367 Fax: 019788247182 www.smithgrant.co.uk email: consult@smithgrant.co.uk	GROUND WATER: Running sands from 2.5m	
	REMARKS: GPS reference: 42787, 92964	
	SCALE: 1:250	LOGGED BY: SM

APPENDIX C

Laboratory Analysis Certificates

Concept Life Sciences

Certificate of Analysis

Hadfield House
Hadfield Street
Cornbrook
Manchester
M16 9FE
Tel : 0161 874 2400
Fax : 0161 874 2468

Report Number: 699319-1

Date of Report: 05-Dec-2017

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

Customer Contact: Mr Scott Miller

Customer Job Reference: R2469

Customer Site Reference: Waterpark Drive

Date Job Received at Concept: 24-Nov-2017

Date Analysis Started: 27-Nov-2017

Date Analysis Completed: 05-Dec-2017

The results reported relate to samples received in the laboratory and may not be representative of a whole batch.

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation

This report should not be reproduced except in full without the written approval of the laboratory

Tests covered by this certificate were conducted in accordance with Concept Life Sciences SOPs

All results have been reviewed in accordance with Section 25 of the Concept Life Sciences, Analytical Services Quality Manual



Report checked
and authorised by :
Sara Abou-Shakra
Customer Service Manager

Issued by :
Sara Abou-Shakra
Customer Service Manager

Concept Reference: 699319							
Project Site: Waterpark Drive							
Customer Reference: R2469							
Soil				Analysed as Soil			
MCERTS Preparation							
Concept Reference				699319 001	699319 002	699319 003	
Customer Sample Reference				TP2-S1	TP3-S1	TP4-S1	
Bottom Depth				1.4	0.7	1.4	
Top Depth				0.25	0.3	0.2	
Date Sampled				23-NOV-2017	23-NOV-2017	23-NOV-2017	
Matrix Class				Sandy Soil	Sandy Soil	Sandy Soil	
Determinand	Method	Test Sample	LOD	Units			
Moisture @105C	T162	AR	0.1	%	19	22	16
Retained on 10mm sieve	T2	M40	0.1	%	<0.1	<0.1	<0.1

Concept Reference: 699319							
Project Site: Waterpark Drive							
Customer Reference: R2469							
Soil				Analysed as Soil			
Smith Grant Standard Suite 1							
Concept Reference				699319 001	699319 002	699319 003	
Customer Sample Reference				TP2-S1	TP3-S1	TP4-S1	
Bottom Depth				1.4	0.7	1.4	
Top Depth				0.25	0.3	0.2	
Date Sampled				23-NOV-2017	23-NOV-2017	23-NOV-2017	
Matrix Class				Sandy Soil	Sandy Soil	Sandy Soil	
Determinand	Method	Test Sample	LOD	Units			
Arsenic	T6	M40	2	mg/kg	10	20	9
Asbestos ID	T27	AR			N.D.	N.D.	N.D.
Cadmium	T6	M40	1	mg/kg	<1	<1	<1
Chromium	T6	M40	1	mg/kg	26	37	22
Chromium VI	T6	AR	1	mg/kg	<1	<1	<1
Copper	T6	M40	1	mg/kg	25	54	25
Lead	T6	M40	1	mg/kg	42	90	42
Mercury	T6	M40	1	mg/kg	<1	<1	<1
Nickel	T6	M40	1	mg/kg	22	32	19
pH	T7	AR			7.3	7.3	7.5
Soil Organic Matter	T287	A40	0.1	%	1.8	2.7	1.4
Zinc	T6	M40	1	mg/kg	59	110	51

Concept Reference: 699319 Project Site: Waterpark Drive Customer Reference: R2469							
Soil		Analysed as Soil					
PAH US EPA 16 (B and K split)							
Concept Reference				699319 001	699319 002	699319 003	
Customer Sample Reference				TP2-S1	TP3-S1	TP4-S1	
Bottom Depth				1.4	0.7	1.4	
Top Depth				0.25	0.3	0.2	
Date Sampled				23-NOV-2017	23-NOV-2017	23-NOV-2017	
Matrix Class				Sandy Soil	Sandy Soil	Sandy Soil	
Determinand	Method	Test Sample	LOD	Units			
Naphthalene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1
Acenaphthylene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1
Acenaphthene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1
Fluorene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1
Phenanthrene	T207	M105	0.1	mg/kg	<0.1	0.2	0.2
Anthracene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1
Fluoranthene	T207	M105	0.1	mg/kg	0.2	0.5	0.3
Pyrene	T207	M105	0.1	mg/kg	0.2	0.4	0.2
Benzo(a)Anthracene	T207	M105	0.1	mg/kg	<0.1	0.2	<0.1
Chrysene	T207	M105	0.1	mg/kg	<0.1	0.2	0.1
Benzo(b)fluoranthene	T207	M105	0.1	mg/kg	<0.1	0.1	<0.1
Benzo(k)fluoranthene	T207	M105	0.1	mg/kg	<0.1	0.2	<0.1
Benzo(a)Pyrene	T207	M105	0.1	mg/kg	<0.1	0.2	<0.1
Indeno(123-cd)Pyrene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1
Dibenzo(ah)Anthracene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1
Benzo(ghi)Perylene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1
PAH(total)	T207	M105	0.1	mg/kg	0.4	2.0	0.8

Concept Reference: 699319							
Project Site: Waterpark Drive							
Customer Reference: R2469							
Soil				Analysed as Soil			
TPH (CWG) with MTBE, BTEX							
Concept Reference					699319 001	699319 002	699319 003
Customer Sample Reference					TP2-S1	TP3-S1	TP4-S1
Bottom Depth					1.4	0.7	1.4
Top Depth					0.25	0.3	0.2
Date Sampled					23-NOV-2017	23-NOV-2017	23-NOV-2017
Matrix Class					Sandy Soil	Sandy Soil	Sandy Soil
Determinand	Method	Test Sample	LOD	Units			
Benzene	T209	M105	10	µg/kg	(13) <10	(13) <10	(13) <10
Toluene	T209	M105	10	µg/kg	<10	<10	<10
EthylBenzene	T209	M105	10	µg/kg	<10	<10	<10
M/P Xylene	T209	M105	10	µg/kg	<10	<10	<10
O Xylene	T209	M105	10	µg/kg	<10	<10	<10
Methyl tert-Butyl Ether	T209	M105	10	µg/kg	<10	<10	<10
TPH (C5-C6 aliphatic)	T209	M105	0.100	mg/kg	<0.100	<0.100	<0.100
TPH (C6-C8 aliphatic)	T209	M105	0.10	mg/kg	<0.10	<0.10	<0.10
TPH (C8-C10 aliphatic)	T209	M105	0.10	mg/kg	<0.10	<0.10	<0.10
TPH (C10-C12 aliphatic)	T909	M105	1	mg/kg	(13) <1	(13) <1	(13) <1
TPH (C12-C16 aliphatic)	T909	M105	1	mg/kg	(13) <1	(13) <1	(13) <1
TPH (C16-C21 aliphatic)	T909	M105	1	mg/kg	(13) 1	(13) 2	(13) 1
TPH (C21-C35 aliphatic)	T909	M105	2	mg/kg	(13) 2	(13) <2	(13) <2
TPH (C6-C7 aromatic)	T209	M105	0.10	mg/kg	<0.10	<0.10	<0.10
TPH (C7-C8 aromatic)	T209	M105	0.10	mg/kg	<0.10	<0.10	<0.10
TPH (C8-C10 aromatic)	T209	M105	0.10	mg/kg	<0.10	<0.10	<0.10
TPH (C10-C12 aromatic)	T909	M105	2	mg/kg	(13) <2	(13) <2	(13) <2
TPH (C12-C16 aromatic)	T909	M105	1	mg/kg	(13) <1	(13) <1	(13) <1
TPH (C16-C21 aromatic)	T909	M105	1	mg/kg	(13) <1	(13) 3	(13) <1
TPH (C21-C35 aromatic)	T909	M105	1	mg/kg	(13) 1	(13) 5	(13) 1

Index to symbols used in 699319-1

Value	Description
M105	Analysis conducted on an "as received" aliquot. Results are reported on a dry weight basis where moisture content was determined by assisted drying of sample at 105C
M40	Analysis conducted on sample assisted dried at no more than 40C. Results are reported on a dry weight basis.
AR	As Received
A40	Assisted dried < 40C
N.D.	Not Detected
13	Results have been blank corrected.
S	Analysis was subcontracted
M	Analysis is MCERTS accredited
U	Analysis is UKAS accredited
N	Analysis is not UKAS accredited

Notes

Asbestos subcontracted to REC Asbestos

Method Index

Value	Description
T287	Calc TOC/0.58
T909	GCxGC
T207	GC/MS (MCERTS)
T27	PLM
T162	Grav (1 Dec) (105 C)
T6	ICP/OES
T7	Probe
T209	GC/MS (Head Space)(MCERTS)
T2	Grav

Accreditation Summary

Determinand	Method	Test Sample	LOD	Units	Symbol	Concept References
Moisture @105C	T162	AR	0.1	%	N	001-003
Retained on 10mm sieve	T2	M40	0.1	%	N	001-003
Arsenic	T6	M40	2	mg/kg	M	001-003
Asbestos ID	T27	AR			SU	001-003
Cadmium	T6	M40	1	mg/kg	M	001-003
Chromium	T6	M40	1	mg/kg	M	001-003
Chromium VI	T6	AR	1	mg/kg	N	001-003
Copper	T6	M40	1	mg/kg	M	001-003
Lead	T6	M40	1	mg/kg	M	001-003
Mercury	T6	M40	1	mg/kg	M	001-003
Nickel	T6	M40	1	mg/kg	M	001-003
pH	T7	AR			M	001-003
Soil Organic Matter	T287	A40	0.1	%	N	001-003
Zinc	T6	M40	1	mg/kg	M	001-003
Benzene	T209	M105	10	µg/kg	M	001-003
Toluene	T209	M105	10	µg/kg	M	001-003
EthylBenzene	T209	M105	10	µg/kg	M	001-003
M/P Xylene	T209	M105	10	µg/kg	M	001-003
O Xylene	T209	M105	10	µg/kg	M	001-003
Methyl tert-Butyl Ether	T209	M105	10	µg/kg	M	001-003
TPH (C5-C6 aliphatic)	T209	M105	0.100	mg/kg	N	001-003
TPH (C6-C8 aliphatic)	T209	M105	0.10	mg/kg	N	001-003
TPH (C8-C10 aliphatic)	T209	M105	0.10	mg/kg	N	001-003
TPH (C10-C12 aliphatic)	T909	M105	1	mg/kg	M	001-003
TPH (C12-C16 aliphatic)	T909	M105	1	mg/kg	M	001-003
TPH (C16-C21 aliphatic)	T909	M105	1	mg/kg	M	001-003
TPH (C21-C35 aliphatic)	T909	M105	2	mg/kg	M	001-003
TPH (C6-C7 aromatic)	T209	M105	0.10	mg/kg	N	001-003
TPH (C7-C8 aromatic)	T209	M105	0.10	mg/kg	N	001-003
TPH (C8-C10 aromatic)	T209	M105	0.10	mg/kg	N	001-003

Determinand	Method	Test Sample	LOD	Units	Symbol	Concept References
TPH (C10-C12 aromatic)	T909	M105	2	mg/kg	M	001-003
TPH (C12-C16 aromatic)	T909	M105	1	mg/kg	M	001-003
TPH (C16-C21 aromatic)	T909	M105	1	mg/kg	M	001-003
TPH (C21-C35 aromatic)	T909	M105	1	mg/kg	M	001-003
Naphthalene	T207	M105	0.1	mg/kg	M	001-003
Acenaphthylene	T207	M105	0.1	mg/kg	U	001-003
Acenaphthene	T207	M105	0.1	mg/kg	M	001-003
Fluorene	T207	M105	0.1	mg/kg	M	001-003
Phenanthrene	T207	M105	0.1	mg/kg	M	001-003
Anthracene	T207	M105	0.1	mg/kg	U	001-003
Fluoranthene	T207	M105	0.1	mg/kg	M	001-003
Pyrene	T207	M105	0.1	mg/kg	M	001-003
Benzo(a)Anthracene	T207	M105	0.1	mg/kg	M	001-003
Chrysene	T207	M105	0.1	mg/kg	M	001-003
Benzo(b)fluoranthene	T207	M105	0.1	mg/kg	M	001-003
Benzo(k)fluoranthene	T207	M105	0.1	mg/kg	M	001-003
Benzo(a)Pyrene	T207	M105	0.1	mg/kg	M	001-003
Indeno(123-cd)Pyrene	T207	M105	0.1	mg/kg	M	001-003
Dibenzo(ah)Anthracene	T207	M105	0.1	mg/kg	M	001-003
Benzo(ghi)Perylene	T207	M105	0.1	mg/kg	M	001-003
PAH(total)	T207	M105	0.1	mg/kg	U	001-003



Concept Life Sciences

Certificate of Analysis

Hadfield House
Hadfield Street
Cornbrook
Manchester
M16 9FE
Tel : 0161 874 2400
Fax : 0161 874 2468

Report Number: 697291-1

Date of Report: 07-Dec-2017

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

Customer Contact: Mr Scott Miller

Customer Job Reference: R2469

Customer Site Reference: Waterpark Drive

Date Job Received at Concept: 16-Nov-2017

Date Analysis Started: 20-Nov-2017

Date Analysis Completed: 07-Dec-2017

The results reported relate to samples received in the laboratory and may not be representative of a whole batch.

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation

This report should not be reproduced except in full without the written approval of the laboratory

Tests covered by this certificate were conducted in accordance with Concept Life Sciences SOPs

All results have been reviewed in accordance with Section 25 of the Concept Life Sciences, Analytical Services Quality Manual



Report checked
and authorised by :
Miajan Miah
Customer Service Advisor

Issued by :
Miajan Miah
Customer Service Advisor

Concept Reference: 697291 Project Site: Waterpark Drive Customer Reference: R2469 Soil Analysed as Soil MCERTS Preparation								
Concept Reference					697291 001	697291 002	697291 003	697291 004
Customer Sample Reference					SW-TS - 1	SW-TS - 2	SW-TS - 3	SW-TS - 4
Date Sampled					15-NOV-2017	15-NOV-2017	15-NOV-2017	15-NOV-2017
Matrix Class					Clay	Clay	Clay	Clay
Determinand	Method	Test Sample	LOD	Units				
Moisture @105C	T162	AR	0.1	%	29	26	27	27
Retained on 10mm sieve	T2	M40	0.1	%	<0.1	<0.1	<0.1	<0.1

Concept Reference: 697291 Project Site: Waterpark Drive Customer Reference: R2469 Soil Analysed as Soil Smith Grant Standard Suite 1								
Concept Reference					697291 001	697291 002	697291 003	697291 004
Customer Sample Reference					SW-TS - 1	SW-TS - 2	SW-TS - 3	SW-TS - 4
Date Sampled					15-NOV-2017	15-NOV-2017	15-NOV-2017	15-NOV-2017
Matrix Class					Clay	Clay	Clay	Clay
Determinand	Method	Test Sample	LOD	Units				
Arsenic	T6	M40	2	mg/kg	14	13	13	17
Asbestos ID	T27	AR			N.D.	N.D.	N.D.	N.D.
Cadmium	T6	M40	1	mg/kg	<1	<1	<1	<1
Chromium	T6	M40	1	mg/kg	35	33	37	38
Chromium VI	T6	AR	1	mg/kg	<1	<1	<1	<1
Copper	T6	M40	1	mg/kg	37	37	37	43
Lead	T6	M40	1	mg/kg	67	71	66	72
Mercury	T6	M40	1	mg/kg	<1	<1	<1	<1
Nickel	T6	M40	1	mg/kg	28	25	29	30
pH	T7	AR			6.0	5.7	6.0	7.3
Soil Organic Matter	T287	A40	0.1	%	4.1	5.1	4.3	5.4
Zinc	T6	M40	1	mg/kg	72	74	70	79

Concept Reference: 697291 Project Site: Waterpark Drive Customer Reference: R2469 Soil Analysed as Soil PAH US EPA 16 (B and K split)								
Concept Reference					697291 001	697291 002	697291 003	697291 004
Customer Sample Reference					SW-TS - 1	SW-TS - 2	SW-TS - 3	SW-TS - 4
Date Sampled					15-NOV-2017	15-NOV-2017	15-NOV-2017	15-NOV-2017
Matrix Class					Clay	Clay	Clay	Clay
Determinand	Method	Test Sample	LOD	Units				
Naphthalene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
Acenaphthene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
Fluorene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
Phenanthrene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
Anthracene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
Fluoranthene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1	0.2
Pyrene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1	0.2
Benzo(a)Anthracene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
Chrysene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
Benzo(b)fluoranthene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
Benzo(a)Pyrene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
Indeno(123-cd)Pyrene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
Dibenzo(ah)Anthracene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
Benzo(ghi)Perylene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1
PAH(total)	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1	0.4

Concept Reference: 697291 Project Site: Waterpark Drive Customer Reference: R2469 Soil Analysed as Soil Total Petroleum Hydrocarbons CWG								
Concept Reference					697291 001	697291 002	697291 003	697291 004
Customer Sample Reference					SW-TS - 1	SW-TS - 2	SW-TS - 3	SW-TS - 4
Date Sampled					15-NOV-2017	15-NOV-2017	15-NOV-2017	15-NOV-2017
Matrix Class					Clay	Clay	Clay	Clay
Determinand	Method	Test Sample	LOD	Units				
Benzene	T209	M105	0.010	mg/kg	(13) <0.010	(13) <0.010	(13) <0.010	(13) <0.010
Toluene	T209	M105	0.010	mg/kg	(13) <0.010	(13) <0.010	(13) <0.010	(13) <0.010
EthylBenzene	T209	M105	0.010	mg/kg	<0.010	<0.010	<0.010	<0.010
M/P Xylene	T209	M105	0.010	mg/kg	<0.010	<0.010	<0.010	<0.010
O Xylene	T209	M105	0.010	mg/kg	<0.010	<0.010	<0.010	<0.010
Methyl tert-Butyl Ether	T209	M105	0.010	mg/kg	<0.010	<0.010	<0.010	<0.010
TPH (C5-C6 aliphatic)	T209	M105	0.100	mg/kg	<0.100	<0.100	<0.100	<0.100
TPH (C6-C8 aliphatic)	T209	M105	0.10	mg/kg	<0.10	<0.10	<0.10	<0.10
TPH (C8-C10 aliphatic)	T209	M105	0.10	mg/kg	<0.10	<0.10	<0.10	<0.10
TPH (C10-C12 aliphatic)	T206	M105	1	mg/kg	(13) <1	(13) <1	(13) <1	(13) <1
TPH (C12-C16 aliphatic)	T206	M105	2	mg/kg	(13) <2	(13) <2	(13) <2	(13) <2
TPH (C16-C21 aliphatic)	T206	M105	1	mg/kg	(13) <1	(13) <1	(13) <1	(13) <1
TPH (C21-C35 aliphatic)	T206	M105	4	mg/kg	(13) <4	(13) <4	(13) <4	(13) <4
TPH (C6-C7 aromatic)	T209	M105	0.10	mg/kg	<0.10	<0.10	<0.10	<0.10
TPH (C7-C8 aromatic)	T209	M105	0.10	mg/kg	<0.10	<0.10	<0.10	<0.10
TPH (C8-C10 aromatic)	T209	M105	0.10	mg/kg	<0.10	<0.10	<0.10	<0.10
TPH (C10-C12 aromatic)	T206	M105	1	mg/kg	(13) <1	(13) <1	(13) <1	(13) <1
TPH (C12-C16 aromatic)	T206	M105	1	mg/kg	(13) <1	(13) <1	(13) <1	(13) <1
TPH (C16-C21 aromatic)	T206	M105	1	mg/kg	(13) <1	(13) <1	(13) <1	(13) 2
TPH (C21-C35 aromatic)	T206	M105	1	mg/kg	(13) <1	(13) <1	(13) <1	(13) 4

Index to symbols used in 697291-1

Value	Description
AR	As Received
M105	Analysis conducted on an "as received" aliquot. Results are reported on a dry weight basis where moisture content was determined by assisted drying of sample at 105C
M40	Analysis conducted on sample assisted dried at no more than 40C. Results are reported on a dry weight basis.
A40	Assisted dried < 40C
N.D.	Not Detected
13	Results have been blank corrected.
S	Analysis was subcontracted
M	Analysis is MCERTS accredited
U	Analysis is UKAS accredited
N	Analysis is not UKAS accredited

Notes

Asbestos was subcontracted to REC Asbestos.

Method Index

Value	Description
T287	Calc TOC/0.58
T6	ICP/OES
T206	GC/FID (MCERTS)
T7	Probe
T162	Grav (1 Dec) (105 C)
T27	PLM
T2	Grav
T207	GC/MS (MCERTS)
T209	GC/MS (Head Space)(MCERTS)

Accreditation Summary

Determinand	Method	Test Sample	LOD	Units	Symbol	Concept References
Arsenic	T6	M40	2	mg/kg	M	001-004
Asbestos ID	T27	AR			SU	001-004
Cadmium	T6	M40	1	mg/kg	M	001-004
Chromium	T6	M40	1	mg/kg	M	001-004
Chromium VI	T6	AR	1	mg/kg	N	001-004
Copper	T6	M40	1	mg/kg	M	001-004
Lead	T6	M40	1	mg/kg	M	001-004
Mercury	T6	M40	1	mg/kg	M	001-004
Nickel	T6	M40	1	mg/kg	M	001-004
pH	T7	AR			M	001-004
Soil Organic Matter	T287	A40	0.1	%	N	001-004
Zinc	T6	M40	1	mg/kg	M	001-004
Naphthalene	T207	M105	0.1	mg/kg	M	001-004
Acenaphthylene	T207	M105	0.1	mg/kg	U	001-004
Acenaphthene	T207	M105	0.1	mg/kg	M	001-004
Fluorene	T207	M105	0.1	mg/kg	M	001-004
Phenanthrene	T207	M105	0.1	mg/kg	M	001-004
Anthracene	T207	M105	0.1	mg/kg	U	001-004
Fluoranthene	T207	M105	0.1	mg/kg	M	001-004
Pyrene	T207	M105	0.1	mg/kg	M	001-004
Benzo(a)Anthracene	T207	M105	0.1	mg/kg	M	001-004
Chrysene	T207	M105	0.1	mg/kg	M	001-004
Benzo(b)fluoranthene	T207	M105	0.1	mg/kg	M	001-004
Benzo(k)fluoranthene	T207	M105	0.1	mg/kg	M	001-004
Benzo(a)Pyrene	T207	M105	0.1	mg/kg	M	001-004
Indeno(123-cd)Pyrene	T207	M105	0.1	mg/kg	M	001-004
Dibenzo(ah)Anthracene	T207	M105	0.1	mg/kg	M	001-004
Benzo(ghi)Perylene	T207	M105	0.1	mg/kg	M	001-004
PAH(total)	T207	M105	0.1	mg/kg	U	001-004
Benzene	T209	M105	0.010	mg/kg	M	001-004
Toluene	T209	M105	0.010	mg/kg	M	001-004
EthylBenzene	T209	M105	0.010	mg/kg	M	001-004
M/P Xylene	T209	M105	0.010	mg/kg	M	001-004

Determinand	Method	Test Sample	LOD	Units	Symbol	Concept References
O Xylene	T209	M105	0.010	mg/kg	M	001-004
Methyl tert-Butyl Ether	T209	M105	0.010	mg/kg	M	001-004
TPH (C5-C6 aliphatic)	T209	M105	0.100	mg/kg	N	001-004
TPH (C6-C8 aliphatic)	T209	M105	0.10	mg/kg	N	001-004
TPH (C8-C10 aliphatic)	T209	M105	0.10	mg/kg	N	001-004
TPH (C10-C12 aliphatic)	T206	M105	1	mg/kg	N	001-004
TPH (C12-C16 aliphatic)	T206	M105	2	mg/kg	M	001-004
TPH (C16-C21 aliphatic)	T206	M105	1	mg/kg	M	001-004
TPH (C21-C35 aliphatic)	T206	M105	4	mg/kg	M	001-004
TPH (C6-C7 aromatic)	T209	M105	0.10	mg/kg	N	001-004
TPH (C7-C8 aromatic)	T209	M105	0.10	mg/kg	N	001-004
TPH (C8-C10 aromatic)	T209	M105	0.10	mg/kg	N	001-004
TPH (C10-C12 aromatic)	T206	M105	1	mg/kg	M	001-004
TPH (C12-C16 aromatic)	T206	M105	1	mg/kg	M	001-004
TPH (C16-C21 aromatic)	T206	M105	1	mg/kg	M	001-004
TPH (C21-C35 aromatic)	T206	M105	1	mg/kg	M	001-004
Moisture @105C	T162	AR	0.1	%	N	001-004
Retained on 10mm sieve	T2	M40	0.1	%	N	001-004



Concept Life Sciences

Certificate of Analysis

Hadfield House
Hadfield Street
Cornbrook
Manchester
M16 9FE
Tel : 0161 874 2400
Fax : 0161 874 2468

Report Number: 700966-1

Date of Report: 12-Dec-2017

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

Customer Contact: Mr Scott Miller

Customer Job Reference: R2469

Customer Site Reference: Waterpark Drive

Date Job Received at Concept: 01-Dec-2017

Date Analysis Started: 04-Dec-2017

Date Analysis Completed: 12-Dec-2017

The results reported relate to samples received in the laboratory and may not be representative of a whole batch.

This report should not be reproduced except in full without the written approval of the laboratory

Tests covered by this certificate were conducted in accordance with Concept Life Sciences SOPs

All results have been reviewed in accordance with Section 25 of the Concept Life Sciences, Analytical Services Quality Manual

Report checked
and authorised by :
Aleksandra Pacula
Customer Service Advisor

Issued by :
Aleksandra Pacula
Customer Service Advisor



Concept Reference:	700966
Project Site:	Waterpark Drive
Customer Reference:	R2469
Soil	Analysed as Soil
Miscellaneous	

Soil	Analysed as Soil
Miscellaneous	

Concept Reference					700966 001	700966 002	700966 003	700966 004	700966 005
Customer Sample Reference					Agg1	Agg2	Agg3	Agg4	Agg5
Date Sampled					30-NOV-2017	30-NOV-2017	30-NOV-2017	30-NOV-2017	30-NOV-2017
Determinand	Method	Test Sample	LOD	Units					
Asbestos ID	T27	AR			N.D.	N.D.	N.D.	N.D.	N.D.

Index to symbols used in 700966-1

Value	Description
AR	As Received
N.D.	Not Detected
S	Analysis was subcontracted
U	Analysis is UKAS accredited

Notes

Asbestos was subcontracted to REC Asbestos.

Method Index

Value	Description
T27	PLM

Accreditation Summary

Determinand	Method	Test Sample	LOD	Units	Symbol	Concept References
Asbestos ID	T27	AR			SU	001-005

Concept Life Sciences

Certificate of Analysis

Hadfield House
Hadfield Street
Cornbrook
Manchester
M16 9FE
Tel : 0161 874 2400
Fax : 0161 874 2468

Report Number: 709629-1

Date of Report: 30-Jan-2018

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

Customer Contact: Mr Scott Miller

Customer Job Reference: R2469

Customer Site Reference: Waterpark Drive

Date Job Received at Concept: 18-Jan-2018

Date Analysis Started: 19-Jan-2018

Date Analysis Completed: 30-Jan-2018

The results reported relate to samples received in the laboratory and may not be representative of a whole batch.

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation

This report should not be reproduced except in full without the written approval of the laboratory

Tests covered by this certificate were conducted in accordance with Concept Life Sciences SOPs

All results have been reviewed in accordance with Section 25 of the Concept Life Sciences, Analytical Services Quality Manual



Report checked
and authorised by :
Aleksandra Pacula
Customer Service Advisor

Issued by :
Aleksandra Pacula
Customer Service Advisor

Concept Reference: 709629 Project Site: Waterpark Drive Customer Reference: R2469							
Soil		Analysed as Soil					
MCERTS Preparation							
Concept Reference					709629 001	709629 002	709629 003
Customer Sample Reference					SP-TS-5	SP-TS-6	SP-TS-7
Date Sampled					16-JAN-2018	16-JAN-2018	16-JAN-2018
Matrix Class					Sandy Soil	Sandy Soil	Sandy Soil
Determinand	Method	Test Sample	LOD	Units			
Moisture @105C	T162	AR	0.1	%	26	18	28
Retained on 10mm sieve	T2	M40	0.1	%	<0.1	<0.1	<0.1

Concept Reference: 709629 Project Site: Waterpark Drive Customer Reference: R2469							
Soil		Analysed as Soil					
Smith Grant Standard Suite 1							
Concept Reference				709629 001	709629 002	709629 003	
Customer Sample Reference				SP-TS-5	SP-TS-6	SP-TS-7	
Date Sampled				16-JAN-2018	16-JAN-2018	16-JAN-2018	
Matrix Class				Sandy Soil	Sandy Soil	Sandy Soil	
Determinand	Method	Test Sample	LOD	Units			
Arsenic	T6	M40	2	mg/kg	11	13	11
Asbestos ID	T27	AR			N.D.	N.D.	N.D.
Cadmium	T6	M40	1	mg/kg	<1	<1	<1
Chromium	T6	M40	1	mg/kg	29	31	29
Chromium VI	T6	AR	1	mg/kg	<1	<1	<1
Copper	T6	M40	1	mg/kg	35	37	32
Lead	T6	M40	1	mg/kg	57	69	56
Mercury	T6	M40	1	mg/kg	<1	<1	<1
Nickel	T6	M40	1	mg/kg	24	27	25
pH	T7	AR			7.5	7.4	7.3
Soil Organic Matter	T287	A40	0.1	%	4.0	3.1	4.3
Zinc	T6	M40	1	mg/kg	74	70	63

Concept Reference: 709629							
Project Site: Waterpark Drive							
Customer Reference: R2469							
Soil				Analysed as Soil			
TPH (CWG) with MTBE, BTEX							
Concept Reference					709629 001	709629 002	709629 003
Customer Sample Reference					SP-TS-5	SP-TS-6	SP-TS-7
Date Sampled					16-JAN-2018	16-JAN-2018	16-JAN-2018
Matrix Class					Sandy Soil	Sandy Soil	Sandy Soil
Determinand	Method	Test Sample	LOD	Units			
Benzene	T209	M105	10	µg/kg	(13) <10	(13) <10	(13) <10
Toluene	T209	M105	10	µg/kg	<10	<10	<10
EthylBenzene	T209	M105	10	µg/kg	<10	<10	<10
M/P Xylene	T209	M105	10	µg/kg	<10	<10	<10
O Xylene	T209	M105	10	µg/kg	<10	<10	<10
Methyl tert-Butyl Ether	T209	M105	10	µg/kg	<10	<10	<10
TPH (C5-C6 aliphatic)	T209	M105	0.100	mg/kg	<0.100	<0.100	<0.100
TPH (C6-C8 aliphatic)	T209	M105	0.10	mg/kg	<0.10	<0.10	<0.10
TPH (C8-C10 aliphatic)	T209	M105	0.10	mg/kg	<0.10	<0.10	<0.10
TPH (C10-C12 aliphatic)	T909	M105	1	mg/kg	(13) <1	(13) <1	(13) <1
TPH (C12-C16 aliphatic)	T909	M105	1	mg/kg	(13) <1	(13) <1	(13) <1
TPH (C16-C21 aliphatic)	T909	M105	1	mg/kg	(13) <1	(13) <1	(13) <1
TPH (C21-C35 aliphatic)	T909	M105	2	mg/kg	(13) <2	(13) <2	(13) <2
TPH (C6-C7 aromatic)	T209	M105	0.10	mg/kg	<0.10	<0.10	<0.10
TPH (C7-C8 aromatic)	T209	M105	0.10	mg/kg	<0.10	<0.10	<0.10
TPH (C8-C10 aromatic)	T209	M105	0.10	mg/kg	<0.10	<0.10	<0.10
TPH (C10-C12 aromatic)	T909	M105	2	mg/kg	(13) <2	(13) <2	(13) <2
TPH (C12-C16 aromatic)	T909	M105	1	mg/kg	(13) <1	(13) <1	(13) <1
TPH (C16-C21 aromatic)	T909	M105	1	mg/kg	(13) <1	(13) <1	(13) <1
TPH (C21-C35 aromatic)	T909	M105	1	mg/kg	(13) <1	(13) <1	(13) <1

Concept Reference: 709629 Project Site: Waterpark Drive Customer Reference: R2469							
Soil		Analysed as Soil					
PAH US EPA 16 (B and K split)							
Concept Reference					709629 001	709629 002	709629 003
Customer Sample Reference					SP-TS-5	SP-TS-6	SP-TS-7
Date Sampled					16-JAN-2018	16-JAN-2018	16-JAN-2018
Matrix Class					Sandy Soil	Sandy Soil	Sandy Soil
Determinand	Method	Test Sample	LOD	Units			
Naphthalene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1
Acenaphthylene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1
Acenaphthene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1
Fluorene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1
Phenanthrene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1
Anthracene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1
Fluoranthene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1
Pyrene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1
Benzo(a)Anthracene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1
Chrysene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1
Benzo(b)fluoranthene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1
Benzo(k)fluoranthene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1
Benzo(a)Pyrene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1
Indeno(123-cd)Pyrene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1
Dibenzo(ah)Anthracene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1
Benzo(ghi)Perylene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1
PAH(tot(a))	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1

Concept Reference: 709629										
Project Site: Waterpark Drive										
Customer Reference: R2469										
Soil		Analysed as Soil								
Miscellaneous										
Concept Reference				709629 001	709629 002	709629 003	709629 004	709629 005		
Customer Sample Reference				SP-TS-5	SP-TS-6	SP-TS-7	AGG-IMP-6	AGG-IMP-7		
Date Sampled				16-JAN-2018	16-JAN-2018	16-JAN-2018	16-JAN-2018	16-JAN-2018		
Matrix Class				Sandy Soil	Sandy Soil	Sandy Soil	Sandy Soil	Sandy Soil		
Determinand		Method	Test Sample	LOD	Units					
Asbestos ID		T27	AR			N.D.	N.D.	N.D.	N.D.	N.D.

Index to symbols used in 709629-1

Value	Description
AR	As Received
A40	Assisted dried < 40C
M40	Analysis conducted on sample assisted dried at no more than 40C. Results are reported on a dry weight basis.
M105	Analysis conducted on an "as received" aliquot. Results are reported on a dry weight basis where moisture content was determined by assisted drying of sample at 105C
N.D.	Not Detected
13	Results have been blank corrected.
S	Analysis was subcontracted
M	Analysis is MCERTS accredited
U	Analysis is UKAS accredited
N	Analysis is not UKAS accredited

Notes

Asbestos was subcontracted to REC Asbestos.

Method Index

Value	Description
T2	Grav
T162	Grav (1 Dec) (105 C)
T6	ICP/OES
T27	PLM
T7	Probe
T909	GCxGC
T287	Calc TOC/0.58
T209	GC/MS (Head Space)(MCERTS)
T207	GC/MS (MCERTS)

Accreditation Summary

Determinand	Method	Test Sample	LOD	Units	Symbol	Concept References
Moisture @105C	T162	AR	0.1	%	N	001-003
Retained on 10mm sieve	T2	M40	0.1	%	N	001-003
Arsenic	T6	M40	2	mg/kg	M	001-003
Asbestos ID	T27	AR			SU	001-005
Cadmium	T6	M40	1	mg/kg	M	001-003
Chromium	T6	M40	1	mg/kg	M	001-003
Chromium VI	T6	AR	1	mg/kg	N	001-003
Copper	T6	M40	1	mg/kg	M	001-003
Lead	T6	M40	1	mg/kg	M	001-003
Mercury	T6	M40	1	mg/kg	M	001-003
Nickel	T6	M40	1	mg/kg	M	001-003
pH	T7	AR			M	001-003
Soil Organic Matter	T287	A40	0.1	%	N	001-003
Zinc	T6	M40	1	mg/kg	M	001-003
Benzene	T209	M105	10	µg/kg	M	001-003

Determinand	Method	Test Sample	LOD	Units	Symbol	Concept References
Toluene	T209	M105	10	µg/kg	M	001-003
EthylBenzene	T209	M105	10	µg/kg	M	001-003
M/P Xylene	T209	M105	10	µg/kg	M	001-003
O Xylene	T209	M105	10	µg/kg	M	001-003
Methyl tert-Butyl Ether	T209	M105	10	µg/kg	M	001-003
TPH (C5-C6 aliphatic)	T209	M105	0.100	mg/kg	N	001-003
TPH (C6-C8 aliphatic)	T209	M105	0.10	mg/kg	N	001-003
TPH (C8-C10 aliphatic)	T209	M105	0.10	mg/kg	N	001-003
TPH (C10-C12 aliphatic)	T909	M105	1	mg/kg	M	001-003
TPH (C12-C16 aliphatic)	T909	M105	1	mg/kg	M	001-003
TPH (C16-C21 aliphatic)	T909	M105	1	mg/kg	M	001-003
TPH (C21-C35 aliphatic)	T909	M105	2	mg/kg	M	001-003
TPH (C6-C7 aromatic)	T209	M105	0.10	mg/kg	N	001-003
TPH (C7-C8 aromatic)	T209	M105	0.10	mg/kg	N	001-003
TPH (C8-C10 aromatic)	T209	M105	0.10	mg/kg	N	001-003
TPH (C10-C12 aromatic)	T909	M105	2	mg/kg	M	001-003
TPH (C12-C16 aromatic)	T909	M105	1	mg/kg	M	001-003
TPH (C16-C21 aromatic)	T909	M105	1	mg/kg	M	001-003
TPH (C21-C35 aromatic)	T909	M105	1	mg/kg	M	001-003
Naphthalene	T207	M105	0.1	mg/kg	M	001-003
Acenaphthylene	T207	M105	0.1	mg/kg	U	001-003
Acenaphthene	T207	M105	0.1	mg/kg	M	001-003
Fluorene	T207	M105	0.1	mg/kg	M	001-003
Phenanthrene	T207	M105	0.1	mg/kg	M	001-003
Anthracene	T207	M105	0.1	mg/kg	U	001-003
Fluoranthene	T207	M105	0.1	mg/kg	M	001-003
Pyrene	T207	M105	0.1	mg/kg	M	001-003
Benzo(a)Anthracene	T207	M105	0.1	mg/kg	M	001-003
Chrysene	T207	M105	0.1	mg/kg	M	001-003
Benzo(b)fluoranthene	T207	M105	0.1	mg/kg	M	001-003
Benzo(k)fluoranthene	T207	M105	0.1	mg/kg	M	001-003
Benzo(a)Pyrene	T207	M105	0.1	mg/kg	M	001-003
Indeno(123-cd)Pyrene	T207	M105	0.1	mg/kg	M	001-003
Dibenzo(ah)Anthracene	T207	M105	0.1	mg/kg	M	001-003
Benzo(ghi)Perylene	T207	M105	0.1	mg/kg	M	001-003
PAH(total)	T207	M105	0.1	mg/kg	U	001-003

Concept Life Sciences

Certificate of Analysis

Hadfield House
Hadfield Street
Cornbrook
Manchester
M16 9FE
Tel : 0161 874 2400
Fax : 0161 874 2468

Report Number: 727485-1

Date of Report: 16-Apr-2018

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

Customer Contact: Mr Scott Miller

Customer Job Reference: R2469

Customer Site Reference: WATERPARK DRIVE

Date Job Received at Concept: 06-Apr-2018

Date Analysis Started: 10-Apr-2018

Date Analysis Completed: 16-Apr-2018

The results reported relate to samples received in the laboratory and may not be representative of a whole batch.

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation

This report should not be reproduced except in full without the written approval of the laboratory

Tests covered by this certificate were conducted in accordance with Concept Life Sciences SOPs

All results have been reviewed in accordance with Section 25 of the Concept Life Sciences, Analytical Services Quality Manual



Report checked
and authorised by :
Sara Abou-Shakra
Customer Service Manager

Issued by :
Sara Abou-Shakra
Customer Service Manager

Concept Reference: 727485 Project Site: WATERPARK DRIVE Customer Reference: R2469 Soil Analysed as Soil MCERTS Preparation								
Concept Reference					727485 001	727485 002	727485 003	727485 004
Customer Sample Reference					ELEC-SS-S1	ELEC-SS-S2	ELEC-SS-S3	ELEC-SS-S4
Date Sampled					04-APR-2018	04-APR-2018	04-APR-2018	04-APR-2018
Matrix Class					Sandy Soil	Sandy Soil	Sandy Soil	Sandy Soil
Determinand	Method	Test Sample	LOD	Units				
Moisture @105C	T162	AR	0.1	%	16	13	16	17
Retained on 10mm sieve	T2	M40	0.1	%	28.6	38.6	<0.1	<0.1

Concept Reference: 727485 Project Site: WATERPARK DRIVE Customer Reference: R2469 Soil Analysed as Soil PCB EC7 (GC/MS/HR)								
Concept Reference					727485 001	727485 002	727485 003	727485 004
Customer Sample Reference					ELEC-SS-S1	ELEC-SS-S2	ELEC-SS-S3	ELEC-SS-S4
Date Sampled					04-APR-2018	04-APR-2018	04-APR-2018	04-APR-2018
Matrix Class					Sandy Soil	Sandy Soil	Sandy Soil	Sandy Soil
Determinand	Method	Test Sample	LOD	Units				
PCB BZ#28	T208	M105	0.05	µg/kg	(62,63) <2.0	(63) <1.0	(62,63) <2.0	(62,63) <2.0
PCB BZ#52	T208	M105	0.05	µg/kg	(62,63) <2.0	(63) <1.0	(63,62) <2.0	(62,63) <2.0
PCB BZ#101	T208	M105	0.05	µg/kg	(63,62) <2.0	(63) <1.0	(63,62) <2.0	(63,62) <2.0
PCB BZ#118	T208	M105	0.05	µg/kg	(62,63) <2.0	(63) <1.0	(62,63) <2.0	(62,63) <2.0
PCB BZ#153	T208	M105	0.05	µg/kg	(63,62) <2.0	(63) <1.0	(63,62) <2.0	(63,62) <2.0
PCB BZ#138	T208	M105	0.05	µg/kg	(63,62) <2.0	(63) <1.0	(62,63) <2.0	(62,63) <2.0
PCB BZ#180	T208	M105	0.05	µg/kg	(62,63) <2.0	(63) <1.0	(62,63) <2.0	(63,62) <2.0

Index to symbols used in 727485-1

Value	Description
M40	Analysis conducted on sample assisted dried at no more than 40C. Results are reported on a dry weight basis.
AR	As Received
M105	Analysis conducted on an "as received" aliquot. Results are reported on a dry weight basis where moisture content was determined by assisted drying of sample at 105C
62	LOD was raised due to the method performance of the analytical procedure used
63	LOD was raised because an alternative analytical procedure was used
M	Analysis is MCERTS accredited
N	Analysis is not UKAS accredited

Method Index

Value	Description
T208	GC/MS (HR) (MCERTS)
T2	Grav
T162	Grav (1 Dec) (105 C)

Accreditation Summary

Determinand	Method	Test Sample	LOD	Units	Symbol	Concept References
PCB BZ#28	T208	M105	0.05	µg/kg	M	001-004
PCB BZ#52	T208	M105	0.05	µg/kg	M	001-004
PCB BZ#101	T208	M105	0.05	µg/kg	M	001-004
PCB BZ#118	T208	M105	0.05	µg/kg	M	001-004
PCB BZ#153	T208	M105	0.05	µg/kg	M	001-004
PCB BZ#138	T208	M105	0.05	µg/kg	M	001-004
PCB BZ#180	T208	M105	0.05	µg/kg	M	001-004
Moisture @105C	T162	AR	0.1	%	N	001-004
Retained on 10mm sieve	T2	M40	0.1	%	N	001-004



2183

Final Report

Report No.: 18-12003-1

Initial Date of Issue: 08-May-2018

Client Smith Grant LLP

Client Address: Station House, Station Road
Ruabon
Wrexham
LL14 6DL

Contact(s): Ben Thomas

Project R2469 Waterpark Drive

Quotation No.: **Date Received:** 01-May-2018

Order No.: **Date Instructed:** 01-May-2018

No. of Samples: 4

Turnaround (Wkdays): 5 **Results Due:** 08-May-2018

Date Approved: 08-May-2018

Approved By:



Details: Martin Dyer, Laboratory Manager

Project: R2469 Waterpark Drive

Client: Smith Grant LLP	Chemtest Job No.:				18-12003	18-12003	18-12003	18-12003
Quotation No.:	Chemtest Sample ID.:				615970	615971	615972	615973
Order No.:	Client Sample Ref.:				IMP6F2	IMP6F2	IMP6F2	IMP6F2
	Client Sample ID.:				SO1	SO2	SO3	SO4
	Sample Type:				SOIL	SOIL	SOIL	SOIL
	Date Sampled:				25-Apr-2018	25-Apr-2018	25-Apr-2018	25-Apr-2018
	Asbestos Lab:				COVENTRY	COVENTRY	COVENTRY	COVENTRY
Determinand	Accred.	SOP	Units	LOD				
ACM Type	U	2192		N/A	-	-	-	-
Asbestos Identification	U	2192	%	0.001	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected

SOP	Title	Parameters included	Method summary
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry

Report Information

Key

- U UKAS accredited
- M MCERTS and UKAS accredited
- N Unaccredited
- S This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
- SN This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
- T This analysis has been subcontracted to an unaccredited laboratory
- I/S Insufficient Sample
- U/S Unsuitable Sample
- N/E not evaluated
- < "less than"
- > "greater than"

Comments or interpretations are beyond the scope of UKAS accreditation

The results relate only to the items tested

Uncertainty of measurement for the determinands tested are available upon request

None of the results in this report have been recovery corrected

All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis

All Asbestos testing is performed at the indicated laboratory

Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

- A - Date of sampling not supplied
- B - Sample age exceeds stability time (sampling to extraction)
- C - Sample not received in appropriate containers
- D - Broken Container
- E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 45 days from the date of receipt

All water samples will be retained for 14 days from the date of receipt

Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:

customerservices@chemtest.co.uk

Concept Life Sciences

Certificate of Analysis

Hadfield House
Hadfield Street
Cornbrook
Manchester
M16 9FE
Tel : 0161 874 2400
Fax : 0161 874 2468

Report Number: 743219-1

Date of Report: 21-Jun-2018

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

Customer Contact: Mr Scott Miller

Customer Job Reference: R2469

Customer Site Reference: WATERPARK DRIVE

Date Job Received at Concept: 08-Jun-2018

Date Analysis Started: 11-Jun-2018

Date Analysis Completed: 21-Jun-2018

The results reported relate to samples received in the laboratory and may not be representative of a whole batch.

Opinions and interpretations expressed herein are outside the scope of UKAS accreditation

This report should not be reproduced except in full without the written approval of the laboratory

Tests covered by this certificate were conducted in accordance with Concept Life Sciences SOPs

All results have been reviewed in accordance with Section 25 of the Concept Life Sciences, Analytical Services Quality Manual



Report checked
and authorised by :
Chloe Kitto
Customer Service Advisor

Issued by :
Aneta Dybek-Echtermeyer
Customer Service Advisor

Soil	Analysed as Soil
MCERTS Preparation	

Concept Reference					743219 001	743219 002	743219 003	743219 004	743219 005
Customer Sample Reference					TSSP3 S1	TSSP3 S2	TSSP3 S3	TSSP4 S1	TSSP4 S2
Date Sampled					07-JUN-2018	07-JUN-2018	07-JUN-2018	07-JUN-2018	07-JUN-2018
Matrix Class					Clay	Clay	Clay	Clay	Clay
Determinand	Method	Test Sample	LOD	Units					
Moisture @105C	T162	AR	0.1	%	24	18	22	12	10
Retained on 10mm sieve	T2	M40	0.1	%	<0.1	<0.1	<0.1	<0.1	<0.1

Soil	Analysed as Soil
Smith Grant Standard Suite 1	

Concept Reference					743219 001	743219 002	743219 003	743219 004	743219 005
Customer Sample Reference					TSSP3 S1	TSSP3 S2	TSSP3 S3	TSSP4 S1	TSSP4 S2
Date Sampled					07-JUN-2018	07-JUN-2018	07-JUN-2018	07-JUN-2018	07-JUN-2018
Matrix Class					Clay	Clay	Clay	Clay	Clay
Determinand	Method	Test Sample	LOD	Units					
Arsenic	T6	M40	2	mg/kg	10	11	15	9	10
Asbestos ID	T27	A40			N.D.	N.D.	N.D.	N.D.	N.D.
Cadmium	T6	M40	1	mg/kg	<1	<1	<1	<1	<1
Chromium	T6	M40	1	mg/kg	24	26	27	18	22
Chromium VI	T6	A40	1	mg/kg	<1	<1	<1	<1	<1
Copper	T6	M40	1	mg/kg	37	41	53	40	30
Lead	T6	M40	1	mg/kg	76	72	68	79	54
Mercury	T6	M40	1	mg/kg	<1	<1	<1	<1	<1
Nickel	T6	M40	1	mg/kg	23	26	35	17	20
pH	T7	A40			8.1	8.3	7.5	7.6	7.1
Soil Organic Matter	T287	A40	0.1	%	3.3	3.1	6.0	3.6	2.7
Zinc	T6	M40	1	mg/kg	100	110	110	86	190

Concept Reference: 743219 Project Site: WATERPARK DRIVE Customer Reference: R2469 Soil Analysed as Soil PAH US EPA 16 (B and K split)									
Concept Reference					743219 001	743219 002	743219 003	743219 004	743219 005
Customer Sample Reference					TSSP3 S1	TSSP3 S2	TSSP3 S3	TSSP4 S1	TSSP4 S2
Date Sampled					07-JUN-2018	07-JUN-2018	07-JUN-2018	07-JUN-2018	07-JUN-2018
Matrix Class					Clay	Clay	Clay	Clay	Clay
Determinand	Method	Test Sample	LOD	Units					
Naphthalene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	T207	M105	0.1	mg/kg	0.2	0.2	<0.1	0.5	0.1
Anthracene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1	0.1	<0.1
Fluoranthene	T207	M105	0.1	mg/kg	0.3	0.5	<0.1	1.4	0.2
Pyrene	T207	M105	0.1	mg/kg	0.3	0.5	<0.1	1.4	0.2
Benzo(a)Anthracene	T207	M105	0.1	mg/kg	0.2	0.2	<0.1	0.8	<0.1
Chrysene	T207	M105	0.1	mg/kg	0.2	0.2	<0.1	0.8	0.1
Benzo(b)fluoranthene	T207	M105	0.1	mg/kg	0.2	0.2	<0.1	0.8	<0.1
Benzo(k)fluoranthene	T207	M105	0.1	mg/kg	<0.1	0.2	<0.1	0.8	<0.1
Benzo(a)Pyrene	T207	M105	0.1	mg/kg	0.1	0.2	<0.1	0.9	<0.1
Indeno(123-cd)Pyrene	T207	M105	0.1	mg/kg	<0.1	0.1	<0.1	0.5	<0.1
Dibenzo(ah)Anthracene	T207	M105	0.1	mg/kg	<0.1	<0.1	<0.1	0.2	<0.1
Benzo(ghi)Perylene	T207	M105	0.1	mg/kg	<0.1	0.1	<0.1	0.7	<0.1
PAH(total)	T207	M105	0.1	mg/kg	1.5	2.6	<0.1	8.9	0.6

Concept Reference: 743219 Project Site: WATERPARK DRIVE Customer Reference: R2469 Soil Analysed as Soil TPH (CWG) with MTBE, BTEX									
Concept Reference					743219 001	743219 002	743219 003	743219 004	743219 005
Customer Sample Reference					TSSP3 S1	TSSP3 S2	TSSP3 S3	TSSP4 S1	TSSP4 S2
Date Sampled					07-JUN-2018	07-JUN-2018	07-JUN-2018	07-JUN-2018	07-JUN-2018
Matrix Class					Clay	Clay	Clay	Clay	Clay
Determinand	Method	Test Sample	LOD	Units					
Benzene	T209	M105	10	µg/kg	⁽¹³⁾ <10	⁽¹³⁾ <10	⁽¹³⁾ <10	⁽¹³⁾ <10	⁽¹³⁾ <10
Toluene	T209	M105	10	µg/kg	<10	<10	<10	<10	<10
EthylBenzene	T209	M105	10	µg/kg	<10	<10	<10	<10	<10
M/P Xylene	T209	M105	10	µg/kg	<10	<10	<10	<10	<10
O Xylene	T209	M105	10	µg/kg	<10	<10	<10	<10	<10
Methyl tert-Butyl Ether	T209	M105	10	µg/kg	<10	<10	<10	<10	<10
TPH (C5-C6 aliphatic)	T209	M105	0.100	mg/kg	<0.100	<0.100	<0.100	<0.100	<0.100
TPH (C6-C8 aliphatic)	T209	M105	0.10	mg/kg	<0.10	<0.10	<0.10	<0.10	<0.10
TPH (C8-C10 aliphatic)	T209	M105	0.10	mg/kg	<0.10	<0.10	<0.10	<0.10	<0.10
TPH (C10-C12 aliphatic)	T909	M105	1	mg/kg	⁽¹³⁾ <1	⁽¹³⁾ <1	⁽¹³⁾ <1	⁽¹³⁾ <1	⁽¹³⁾ <1
TPH (C12-C16 aliphatic)	T909	M105	1	mg/kg	⁽¹³⁾ <1	⁽¹³⁾ <1	⁽¹³⁾ <1	⁽¹³⁾ <1	⁽¹³⁾ <1
TPH (C16-C21 aliphatic)	T909	M105	1	mg/kg	⁽¹³⁾ <1	⁽¹³⁾ <1	⁽¹³⁾ <1	⁽¹³⁾ <1	⁽¹³⁾ <1
TPH (C21-C35 aliphatic)	T909	M105	2	mg/kg	⁽¹³⁾ <2	⁽¹³⁾ <2	(13) 11	(13) 6	⁽¹³⁾ <2
TPH (C6-C7 aromatic)	T209	M105	0.10	mg/kg	<0.10	<0.10	<0.10	<0.10	<0.10
TPH (C7-C8 aromatic)	T209	M105	0.10	mg/kg	<0.10	<0.10	<0.10	<0.10	<0.10
TPH (C8-C10 aromatic)	T209	M105	0.10	mg/kg	<0.10	<0.10	<0.10	<0.10	<0.10
TPH (C10-C12 aromatic)	T909	M105	2	mg/kg	⁽¹³⁾ <2	⁽¹³⁾ <2	⁽¹³⁾ <2	⁽¹³⁾ <2	⁽¹³⁾ <2
TPH (C12-C16 aromatic)	T909	M105	1	mg/kg	⁽¹³⁾ <1	(13) 1	⁽¹³⁾ <1	(13) 1	⁽¹³⁾ <1
TPH (C16-C21 aromatic)	T909	M105	1	mg/kg	(13) 5	(13) 6	(13) 2	(13) 12	⁽¹³⁾ <1
TPH (C21-C35 aromatic)	T909	M105	1	mg/kg	(13) 15	(13) 14	(13) 8	(13) 44	(13) 1

Index to symbols used in 743219-1

Value	Description
AR	As Received
A40	Assisted dried < 40C

M40	Analysis conducted on sample assisted dried at no more than 40C. Results are reported on a dry weight basis.
M105	Analysis conducted on an "as received" aliquot. Results are reported on a dry weight basis where moisture content was determined by assisted drying of sample at 105C
N.D.	Not Detected
13	Results have been blank corrected.
S	Analysis was subcontracted
M	Analysis is MCERTS accredited
U	Analysis is UKAS accredited
N	Analysis is not UKAS accredited

Notes

Asbestos testing was subcontracted to REC Asbestos.

Method Index

Value	Description
T287	Calc TOC/0.58
T162	Grav (1 Dec) (105 C)
T207	GC/MS (MCERTS)
T2	Grav
T7	Probe
T27	PLM
T209	GC/MS (Head Space)(MCERTS)
T909	GCxGC
T6	ICP/OES

Accreditation Summary

Determinand	Method	Test Sample	LOD	Units	Symbol	Concept References
Arsenic	T6	M40	2	mg/kg	M	001-005
Asbestos ID	T27	A40			SU	001-005
Cadmium	T6	M40	1	mg/kg	M	001-005
Chromium	T6	M40	1	mg/kg	M	001-005
Chromium VI	T6	A40	1	mg/kg	N	001-005
Copper	T6	M40	1	mg/kg	M	001-005
Lead	T6	M40	1	mg/kg	M	001-005
Mercury	T6	M40	1	mg/kg	M	001-005
Nickel	T6	M40	1	mg/kg	M	001-005
pH	T7	A40			M	001-005
Soil Organic Matter	T287	A40	0.1	%	N	001-005
Zinc	T6	M40	1	mg/kg	M	001-005
Benzene	T209	M105	10	µg/kg	M	001-005
Toluene	T209	M105	10	µg/kg	M	001-005
EthylBenzene	T209	M105	10	µg/kg	M	001-005
M/P Xylene	T209	M105	10	µg/kg	M	001-005
O Xylene	T209	M105	10	µg/kg	M	001-005
Methyl tert-Butyl Ether	T209	M105	10	µg/kg	M	001-005
TPH (C5-C6 aliphatic)	T209	M105	0.100	mg/kg	N	001-005
TPH (C6-C8 aliphatic)	T209	M105	0.10	mg/kg	N	001-005
TPH (C8-C10 aliphatic)	T209	M105	0.10	mg/kg	N	001-005
TPH (C10-C12 aliphatic)	T909	M105	1	mg/kg	M	001-005
TPH (C12-C16 aliphatic)	T909	M105	1	mg/kg	M	001-005
TPH (C16-C21 aliphatic)	T909	M105	1	mg/kg	M	001-005
TPH (C21-C35 aliphatic)	T909	M105	2	mg/kg	M	001-005
TPH (C6-C7 aromatic)	T209	M105	0.10	mg/kg	N	001-005
TPH (C7-C8 aromatic)	T209	M105	0.10	mg/kg	N	001-005
TPH (C8-C10 aromatic)	T209	M105	0.10	mg/kg	N	001-005
TPH (C10-C12 aromatic)	T909	M105	2	mg/kg	M	001-005
TPH (C12-C16 aromatic)	T909	M105	1	mg/kg	M	001-005
TPH (C16-C21 aromatic)	T909	M105	1	mg/kg	M	001-005
TPH (C21-C35 aromatic)	T909	M105	1	mg/kg	M	001-005
Naphthalene	T207	M105	0.1	mg/kg	M	001-005
Acenaphthylene	T207	M105	0.1	mg/kg	U	001-005
Acenaphthene	T207	M105	0.1	mg/kg	M	001-005
Fluorene	T207	M105	0.1	mg/kg	M	001-005

Determinand	Method	Test Sample	LOD	Units	Symbol	Concept References
Phenanthrene	T207	M105	0.1	mg/kg	M	001-005
Anthracene	T207	M105	0.1	mg/kg	U	001-005
Fluoranthene	T207	M105	0.1	mg/kg	M	001-005
Pyrene	T207	M105	0.1	mg/kg	M	001-005
Benzo(a)Anthracene	T207	M105	0.1	mg/kg	M	001-005
Chrysene	T207	M105	0.1	mg/kg	M	001-005
Benzo(b)fluoranthene	T207	M105	0.1	mg/kg	M	001-005
Benzo(k)fluoranthene	T207	M105	0.1	mg/kg	M	001-005
Benzo(a)Pyrene	T207	M105	0.1	mg/kg	M	001-005
Indeno(123-cd)Pyrene	T207	M105	0.1	mg/kg	M	001-005
Dibenzo(ah)Anthracene	T207	M105	0.1	mg/kg	M	001-005
Benzo(ghi)Perylene	T207	M105	0.1	mg/kg	M	001-005
PAH(total)	T207	M105	0.1	mg/kg	U	001-005
Moisture @105C	T162	AR	0.1	%	N	001-005
Retained on 10mm sieve	T2	M40	0.1	%	N	001-005

