



Scientific Analysis Laboratories Ltd

Certificate of Analysis

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

Scientific Analysis Laboratories is a
limited company registered in England and
Wales (No 2514788) whose address is at
Hadfield House, Hadfield Street, Manchester M16 9FE

Report Number: 475374-1

Date of Report: 15-May-2015

Customer: MB Soils & Groundworks Ltd
46-52 Richmond Hill
Wigan
Lancashire
WN5 8AA

Customer Contact: Mr Mark Bennett

Customer Job Reference:

Date Job Received at SAL: 06-May-2015

Date Analysis Started: 07-May-2015

Date Analysis Completed: 15-May-2015

The results reported relate to samples received in the laboratory
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 SAL SOPs
All results have been reviewed in accordance with Section 25 of the SAL Quality Manual



1549

Report checked
and authorised by :
Emma Spear
Project Management

Issued by :
Emma Spear
Project Management

SAL Reference: 475374 Customer Reference: Soil Analysed as Soil BS 3882:2007						
SAL Reference			475374 001		475374 002	
Customer Sample Reference			BL1		Ellesmere Port	
Date Sampled			Deviating		Deviating	
Determinand	Method	Test Sample	LOD	Units		
Nitrogen (Total)	T837	AR	100	mg/kg	1140	1420
Extractable P	T392	AR	10	mg/l	31	14
Electrical Conductivity	T7	AR	10	µS/cm	<10	<10
Silt Content	T2	AR	1.0	%	31	22
Total Organic Carbon	T21	AR	0.1	%	3.1	1.5
pH	T7	AR			6.4	5.7
Visible Contaminants	T161	AR		%	N.D.	N.D.
Organic Matter	T2	AR	0.1	%	7.8	4.2
K (Extractable BS 3882)	T272	AR	10	mg/l	37	31
Carbon / Nitrogen ratio	T85	AR			Ratio 27:1	Ratio 11:1
Carbonate	T22	AR	0.1	%	0.3	0.3
Exchangeable Na if EC > 2800µS/cm	T6	AR	1	%	(NR)	(NR)
Mg (Extractable BS 3882)	T272	AR	10	mg/l	85	54
Sand Content	T2	AR	1.0	%	45	60
Clay Content	T2	AR	1.0	%	24	18
Dry density	T85	AR	100	mg/cm3	1000	1000

SAL Reference: 475374 Customer Reference: Soil Analysed as Soil Phytotoxic Contaminants						
SAL Reference			475374 001		475374 002	
Customer Sample Reference			BL1		Ellesmere Port	
Date Sampled			Deviating		Deviating	
Determinand	Method	Test Sample	LOD	Units		
Copper	T312	AR	1	mg/kg	21	13
Nickel	T312	AR	1	mg/kg	9	10
Zinc	T312	AR	1	mg/kg	39	30

SAL Reference: 475374 Customer Reference: Soil Analysed as Soil PCB EC7						
SAL Reference			475374 001		475374 002	
Customer Sample Reference			BL1		Ellesmere Port	
Date Sampled			Deviating		Deviating	
Determinand	Method	Test Sample	LOD	Units		
PCB BZ#28	T1	AR	0.05	µg/kg	<0.05	<0.05
PCB BZ#52	T1	AR	0.05	µg/kg	<0.05	<0.05
PCB BZ#101	T1	AR	0.05	µg/kg	<0.05	<0.05
PCB BZ#118	T1	AR	0.05	µg/kg	<0.05	<0.05
PCB BZ#138	T1	AR	0.05	µg/kg	<0.05	<0.05
PCB BZ#153	T1	AR	0.05	µg/kg	<0.05	<0.05
PCB BZ#180	T1	AR	0.05	µg/kg	<0.05	<0.05

Customer Reference:

SAL Reference					475374 001	475374 002
Customer Sample Reference					BL1	Ellesmere Port
Date Sampled					Deviating	Deviating
Determinand	Method	Test Sample	LOD	Units		
1,2,4-Trichlorobenzene	T16	AR	0.1	mg/kg	<0.1	<0.1
1,2-Dichlorobenzene	T16	AR	0.1	mg/kg	<0.1	<0.1
1,3-Dichlorobenzene	T16	AR	0.1	mg/kg	<0.1	<0.1
1,4-Dichlorobenzene	T16	AR	0.1	mg/kg	<0.1	<0.1
2,4,5-Trichlorophenol	T16	AR	0.1	mg/kg	<0.1	<0.1
2,4,6-Trichlorophenol	T16	AR	0.1	mg/kg	<0.1	<0.1
2,4-Dichlorophenol	T16	AR	0.1	mg/kg	<0.1	<0.1
2,4-Dimethylphenol	T16	AR	0.1	mg/kg	<0.1	<0.1
2,4-Dinitrophenol	T16	AR	0.1	mg/kg	<0.5	<0.5
2,4-Dinitrotoluene	T16	AR	0.1	mg/kg	⁽³⁶⁾ <0.1	⁽³⁶⁾ <0.1
2,6-Dinitrotoluene	T16	AR	0.1	mg/kg	<0.1	<0.1
2-Chloronaphthalene	T16	AR	0.1	mg/kg	<0.1	<0.1
2-Chlorophenol	T16	AR	0.1	mg/kg	<0.1	<0.1
2-methyl phenol	T16	AR	0.1	mg/kg	<0.1	<0.1
2-Methylnaphthalene	T16	AR	0.1	mg/kg	<0.1	<0.1
2-Nitroaniline	T16	AR	0.1	mg/kg	<0.1	<0.1
2-Nitrophenol	T16	AR	0.1	mg/kg	<0.1	<0.1
3-Nitroaniline	T16	AR	0.1	mg/kg	<0.1	<0.1
3/4-Methylphenol	T16	AR	0.1	mg/kg	0.3	<0.1
4-Bromophenyl phenylether	T16	AR	0.1	mg/kg	<0.1	<0.1
4-Chloro-3-methylphenol	T16	AR	0.1	mg/kg	<0.1	<0.1
4-Chloroaniline	T16	AR	0.1	mg/kg	⁽³⁶⁾ <0.5	⁽³⁶⁾ <0.5
4-Chlorophenyl phenylether	T16	AR	0.1	mg/kg	<0.1	<0.1
4-Nitroaniline	T16	AR	0.1	mg/kg	⁽³⁶⁾ <0.5	⁽³⁶⁾ <0.5
4-Nitrophenol	T16	AR	0.1	mg/kg	⁽³⁶⁾ <0.5	⁽³⁶⁾ <0.5
Azobenzene	T16	AR	0.1	mg/kg	<0.1	<0.1
Bis (2-chloroethoxy) methane	T16	AR	0.1	mg/kg	<0.1	<0.1
Bis (2-chloroethyl) ether	T16	AR	0.1	mg/kg	<0.1	<0.1
Bis (2-chloroisopropyl) ether	T16	AR	0.1	mg/kg	<0.1	<0.1
Bis (2-ethylhexyl)phthalate	T16	AR	0.1	mg/kg	<0.1	<0.1
Butyl benzylphthalate	T16	AR	0.1	mg/kg	<0.1	<0.1
Carbazole	T16	AR	0.1	mg/kg	<0.1	<0.1
Di-n-butylphthalate	T16	AR	0.1	mg/kg	<0.1	<0.1
Di-n-octylphthalate	T16	AR	0.1	mg/kg	<0.1	<0.1
Dibenzofuran	T16	AR	0.1	mg/kg	<0.1	<0.1
Diethyl phthalate	T16	AR	0.1	mg/kg	<0.1	<0.1
Dimethyl phthalate	T16	AR	0.1	mg/kg	<0.1	<0.1
Hexachlorobenzene	T16	AR	0.1	mg/kg	<0.1	<0.1
Hexachlorobutadiene	T16	AR	0.1	mg/kg	<0.1	<0.1
Hexachlorocyclopentadiene	T16	AR	0.1	mg/kg	⁽³⁶⁾ <0.5	⁽³⁶⁾ <0.5
Hexachloroethane	T16	AR	0.1	mg/kg	<0.1	<0.1
Isophorone	T16	AR	0.1	mg/kg	<0.1	<0.1
Nitrobenzene	T16	AR	0.1	mg/kg	<0.1	<0.1
Pentachlorophenol	T16	AR	0.1	mg/kg	⁽³⁶⁾ <0.5	⁽³⁶⁾ <0.5
Phenol	T16	AR	0.1	mg/kg	<0.1	<0.1



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Index to symbols used in 475374-1

Value	Description
AR	As Received
N.D.	Not Detected
2	LOD Raised Due to Matrix Interference
36	LOD Raised due to low Matrix spike recovery
13	Results have been blank corrected.
NR	No Result

W	Analysis was performed at another SAL laboratory
S	Analysis was subcontracted
U	Analysis is UKAS accredited
N	Analysis is not UKAS accredited

Notes

Samples submitted for GC/MS (Headspace) analysis were submitted in inappropriate containers. It is possible therefore that the results provided may be compromised.
The date of sampling has not been provided and therefore the time from sampling to analysis is unknown. It is possible therefore that the results provided may be compromised.

Method Index

Value	Description
T837	NUT007 (Dumas)
T4	Colorimetry
T6	ICP/OES
T392	ICP/OES (Sodium Hydrogen Carbonate Extract)
T161	Visual
T27	PLM
T85	Calc
T312	ICP-OES (Nitric Acid Extraction)
T16	GC/MS
T7	Probe
T54	GC/MS (Headspace)
T272	ICP/OES (Ammonium Nitrate)
T8	GC/FID
T21	OX/IR
T149	GC/MS (SIR)
T1	GC/MS (HR)
T2	Grav
T22	Titration

Accreditation Summary

Determinand	Method	Test Sample	LOD	Units	Symbol	SAL References
Asbestos	T27	AR			SU	001-002
Boron	T6	AR	1.0	mg/kg	N	001-002
Chromium VI	T6	AR	1	mg/kg	N	001-002
Carbon / Nitrogen ratio	T85	AR			N	001-002
Carbonate	T22	AR	0.1	%	N	001-002
Clay Content	T2	AR	1.0	%	SN	001-002
Dry density	T85	AR	100	mg/cm3	N	001-002
Electrical Conductivity	T7	AR	10	µS/cm	N	001-002
Exchangeable Na if EC > 2800uS/cm	T6	AR	1	%	N	001-002
Mg (Extractable BS 3882)	T272	AR	10	mg/l	N	001-002
Nitrogen (Total)	T837	AR	100	mg/kg	WN	001-002
Organic Matter	T2	AR	0.1	%	N	001-002
Extractable P	T392	AR	10	mg/l	N	001-002
K (Extractable BS 3882)	T272	AR	10	mg/l	N	001-002
Sand Content	T2	AR	1.0	%	SN	001-002
Silt Content	T2	AR	1.0	%	SN	001-002
Total Organic Carbon	T21	AR	0.1	%	N	001-002
Visible Contaminants	T161	AR		%	N	001-002
pH	T7	AR			U	001-002
Retained on 20mm	T2	AR	0.1	%	N	001-002
Retained on 2mm	T2	AR	0.1	%	N	001-002
Retained on 50mm	T2	AR	0.1	%	N	001-002
Copper	T312	AR	1	mg/kg	N	001-002
Nickel	T312	AR	1	mg/kg	N	001-002
Zinc	T312	AR	1	mg/kg	N	001-002
1,2,4-Trichlorobenzene	T16	AR	0.1	mg/kg	U	001-002
1,2-Dichlorobenzene	T16	AR	0.1	mg/kg	U	001-002
1,3-Dichlorobenzene	T16	AR	0.1	mg/kg	U	001-002
1,4-Dichlorobenzene	T16	AR	0.1	mg/kg	U	001-002
2,4,5-Trichlorophenol	T16	AR	0.1	mg/kg	U	001-002
2,4,6-Trichlorophenol	T16	AR	0.1	mg/kg	U	001-002
2,4-Dichlorophenol	T16	AR	0.1	mg/kg	U	001-002
2,4-Dimethylphenol	T16	AR	0.1	mg/kg	U	001-002

Determinand	Method	Test Sample	LOD	Units	Symbol	SAL References
2,4-Dinitrophenol	T16	AR	0.1	mg/kg	U	001-002
2,4-Dinitrotoluene	T16	AR	0.1	mg/kg	U	001-002
2,6-Dinitrotoluene	T16	AR	0.1	mg/kg	U	001-002
2-Chloronaphthalene	T16	AR	0.1	mg/kg	U	001-002
2-Chlorophenol	T16	AR	0.1	mg/kg	U	001-002
2-methyl phenol	T16	AR	0.1	mg/kg	U	001-002
2-Methylnaphthalene	T16	AR	0.1	mg/kg	U	001-002
2-Nitroaniline	T16	AR	0.1	mg/kg	U	001-002
2-Nitrophenol	T16	AR	0.1	mg/kg	U	001-002
3-Nitroaniline	T16	AR	0.1	mg/kg	U	001-002
3/4-Methylphenol	T16	AR	0.1	mg/kg	U	001-002
4-Bromophenyl phenylether	T16	AR	0.1	mg/kg	U	001-002
4-Chloro-3-methylphenol	T16	AR	0.1	mg/kg	U	001-002
4-Chloroaniline	T16	AR	0.1	mg/kg	U	001-002
4-Chlorophenyl phenylether	T16	AR	0.1	mg/kg	U	001-002
4-Nitroaniline	T16	AR	0.1	mg/kg	U	001-002
4-Nitrophenol	T16	AR	0.1	mg/kg	U	001-002
Azobenzene	T16	AR	0.1	mg/kg	U	001-002
Bis (2-chloroethoxy) methane	T16	AR	0.1	mg/kg	U	001-002
Bis (2-chloroethyl) ether	T16	AR	0.1	mg/kg	U	001-002
Bis (2-chloroisopropyl) ether	T16	AR	0.1	mg/kg	U	001-002
Bis (2-ethylhexyl)phthalate	T16	AR	0.1	mg/kg	U	001-002
Butyl benzylphthalate	T16	AR	0.1	mg/kg	U	001-002
Carbazole	T16	AR	0.1	mg/kg	U	001-002
Di-n-butylphthalate	T16	AR	0.1	mg/kg	U	001-002
Di-n-octylphthalate	T16	AR	0.1	mg/kg	U	001-002
Dibenzofuran	T16	AR	0.1	mg/kg	U	001-002
Diethyl phthalate	T16	AR	0.1	mg/kg	U	001-002
Dimethyl phthalate	T16	AR	0.1	mg/kg	U	001-002
Hexachlorobenzene	T16	AR	0.1	mg/kg	U	001-002
Hexachlorobutadiene	T16	AR	0.1	mg/kg	U	001-002
Hexachlorocyclopentadiene	T16	AR	0.1	mg/kg	U	001-002
Hexachloroethane	T16	AR	0.1	mg/kg	U	001-002
Isophorone	T16	AR	0.1	mg/kg	U	001-002
Nitrobenzene	T16	AR	0.1	mg/kg	U	001-002
Pentachlorophenol	T16	AR	0.1	mg/kg	U	001-002
Phenol	T16	AR	0.1	mg/kg	U	001-002
Arsenic	T6	AR	1	mg/kg	U	001-002
Barium	T6	AR	1	mg/kg	U	001-002
Cadmium	T6	AR	1	mg/kg	U	001-002
Chromium	T6	AR	1	mg/kg	U	001-002
Copper	T6	AR	1	mg/kg	U	001-002
Cyanide(Total)	T4	AR	1	mg/kg	U	001-002
Cyanide(free)	T4	AR	1	mg/kg	U	001-002
Lead	T6	AR	1	mg/kg	U	001-002
Mercury	T6	AR	1	mg/kg	U	001-002
Nickel	T6	AR	1	mg/kg	U	001-002
Phenols(Mono)	T4	AR	1	mg/kg	U	001-002
Selenium	T6	AR	3	mg/kg	U	001-002
SO4(Total)	T6	AR	0.01	%	N	001-002
Vanadium	T6	AR	1	mg/kg	U	001-002
Zinc	T6	AR	1	mg/kg	U	001-002
1,1,1,2-Tetrachloroethane	T54	AR	5	µg/kg	U	001-002
1,1,1-Trichloroethane	T54	AR	5	µg/kg	U	001-002
1,1,2,2-Tetrachloroethane	T54	AR	5	µg/kg	U	001-002
1,1,2-Trichloroethane	T54	AR	5	µg/kg	U	001-002
1,1-Dichloroethane	T54	AR	5	µg/kg	U	001-002
1,2-Dichloroethane	T54	AR	5	µg/kg	U	001-002
Carbon tetrachloride	T54	AR	5	µg/kg	U	001-002
Cis-1,2-Dichloroethylene	T54	AR	5	µg/kg	U	001-002
Tetrachloroethene	T54	AR	5	µg/kg	U	001-002
Trans-1,2-Dichloroethene	T54	AR	5	µg/kg	U	001-002
Trichloroethene	T54	AR	5	µg/kg	U	001-002
Vinyl chloride	T54	AR	5	µg/kg	U	001-002
PCB (Total Tri-Hepta)	T1	AR	0.05	µg/kg	U	001-002
PCB BZ#28	T1	AR	0.05	µg/kg	U	001-002
PCB BZ#52	T1	AR	0.05	µg/kg	U	001-002
PCB BZ#101	T1	AR	0.05	µg/kg	U	001-002
PCB BZ#118	T1	AR	0.05	µg/kg	U	001-002
PCB BZ#138	T1	AR	0.05	µg/kg	U	001-002

Determinand	Method	Test Sample	LOD	Units	Symbol	SAL References
PCB BZ#153	T1	AR	0.05	µg/kg	U	001-002
PCB BZ#180	T1	AR	0.05	µg/kg	U	001-002
Benzene	T54	AR	1	µg/kg	U	001-002
Toluene	T54	AR	1	µg/kg	U	001-002
EthylBenzene	T54	AR	1	µg/kg	U	001-002
M/P Xylene	T54	AR	1	µg/kg	U	001-002
O Xylene	T54	AR	1	µg/kg	U	001-002
Methyl tert-Butyl Ether	T54	AR	1	µg/kg	U	001-002
TPH (C5-C6 aliphatic)	T54	AR	0.010	mg/kg	N	001-002
TPH (C6-C8 aliphatic)	T54	AR	0.010	mg/kg	N	001-002
TPH (C8-C10 aliphatic)	T54	AR	0.010	mg/kg	N	001-002
TPH (C10-C12 aliphatic)	T8	AR	1	mg/kg	N	001-002
TPH (C12-C16 aliphatic)	T8	AR	1	mg/kg	N	001-002
TPH (C16-C21 aliphatic)	T8	AR	1	mg/kg	N	001-002
TPH (C21-C35 aliphatic)	T8	AR	1	mg/kg	N	001-002
TPH (C6-C7 aromatic)	T54	AR	0.010	mg/kg	N	001-002
TPH (C7-C8 aromatic)	T54	AR	0.010	mg/kg	N	001-002
TPH (C8-C10 aromatic)	T54	AR	0.010	mg/kg	N	001-002
TPH (C10-C12 aromatic)	T8	AR	1	mg/kg	N	001-002
TPH (C12-C16 aromatic)	T8	AR	1	mg/kg	N	001-002
TPH (C16-C21 aromatic)	T8	AR	1	mg/kg	N	001-002
TPH (C21-C35 aromatic)	T8	AR	1	mg/kg	N	001-002
Naphthalene	T149	AR	0.01	mg/kg	U	001-002
Acenaphthylene	T149	AR	0.01	mg/kg	U	001-002
Acenaphthene	T149	AR	0.01	mg/kg	U	001-002
Fluorene	T149	AR	0.01	mg/kg	U	001-002
Phenanthrene	T149	AR	0.01	mg/kg	U	001-002
Anthracene	T149	AR	0.01	mg/kg	U	001-002
Fluoranthene	T149	AR	0.01	mg/kg	U	001-002
Pyrene	T149	AR	0.01	mg/kg	U	001-002
Benzo(a)Anthracene	T149	AR	0.01	mg/kg	U	001-002
Chrysene	T149	AR	0.01	mg/kg	U	001-002
Benzo(b/k)Fluoranthene	T149	AR	0.01	mg/kg	U	001-002
Benzo(a)Pyrene	T149	AR	0.01	mg/kg	U	001-002
Indeno(123-cd)Pyrene	T149	AR	0.01	mg/kg	U	001-002
Dibenzo(ah)Anthracene	T149	AR	0.01	mg/kg	U	001-002
Benzo(ghi)Perylene	T149	AR	0.01	mg/kg	U	001-002
PAH(total)	T149	AR	0.01	mg/kg	U	001-002

