



Jessica Sheridan
Earth Environmental & Geotechnical Ltd
Houldsworth Mill Business Centre
Houldsworth Street
Reddish
Stockport
Cheshire
SK5 6DA

DETS Ltd
Unit 1
Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Kent
ME17 2JN
t: 01622 850410

DETS Report No: 19-08687

Site Reference: Laund Road, Huddersfield

Project / Job Ref: A0697

Order No: A0697/JS

Sample Receipt Date: 18/06/2019

Sample Scheduled Date: 20/06/2019

Report Issue Number: 1

Reporting Date: 26/06/2019

Authorised by:

A handwritten signature in grey ink, appearing to read "Dave Ashworth".

Dave Ashworth
Deputy Quality Manager

Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.



DETS Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410



Soil Analysis Certificate						
DETS Report No: 19-08687	Date Sampled	14/06/19				
Earth Environmental & Geotechnical Ltd	Time Sampled	None Supplied				
Site Reference: Laund Road, Huddersfield	TP / BH No	TP14				
Project / Job Ref: A0697	Additional Refs	None Supplied				
Order No: A0697/JS	Depth (m)	0.30				
Reporting Date: 26/06/2019	DETS Sample No	416124				

Determinand	Unit	RL	Accreditation				
Asbestos Screen ^(S)	N/a	N/a	ISO17025	Detected			
Sample Matrix ^(S)	Material Type	N/a	NONE	Chrysotile Present as bundles			
Asbestos Type ^(S)	PLM Result	N/a	ISO17025	Chrysotile			
pH	pH Units	N/a	MCERTS	6.5			
Total Cyanide	mg/kg	< 2	NONE	< 2			
Complex Cyanide	mg/kg	< 2	NONE	< 2			
Free Cyanide	mg/kg	< 2	NONE	< 2			
Total Sulphate as SO ₄	mg/kg	< 200	NONE	1225			
Total Sulphate as SO ₄	%	< 0.02	NONE	0.12			
W/S Sulphate as SO ₄ (2:1)	mg/l	< 10	MCERTS	93			
W/S Sulphate as SO ₄ (2:1)	g/l	< 0.01	MCERTS	0.09			
Sulphide	mg/kg	< 5	NONE	< 5			
Organic Matter	%	< 0.1	MCERTS	9.1			
Arsenic (As)	mg/kg	< 2	MCERTS	68			
Barium (Ba)	mg/kg	< 5	NONE	226			
Beryllium (Be)	mg/kg	< 0.5	NONE	1.6			
W/S Boron	mg/kg	< 1	NONE	< 1			
Cadmium (Cd)	mg/kg	< 0.2	MCERTS	< 0.2			
Chromium (Cr)	mg/kg	< 2	MCERTS	32			
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2			
Copper (Cu)	mg/kg	< 4	MCERTS	177			
Lead (Pb)	mg/kg	< 3	MCERTS	444			
Mercury (Hg)	mg/kg	< 1	NONE	< 1			
Nickel (Ni)	mg/kg	< 3	MCERTS	46			
Selenium (Se)	mg/kg	< 3	NONE	< 3			
Vanadium (V)	mg/kg	< 2	NONE	51			
Zinc (Zn)	mg/kg	< 3	MCERTS	674			
Total Phenols (monohydric)	mg/kg	< 2	NONE	< 2			
EPH (C10 - C40)	mg/kg	< 6	MCERTS	211			

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C
Subcontracted analysis (S)



DETS Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410



Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 19-08687	Date Sampled	14/06/19				
Earth Environmental & Geotechnical Ltd	Time Sampled	None Supplied				
Site Reference: Laund Road, Huddersfield	TP / BH No	TP14				
Project / Job Ref: A0697	Additional Refs	None Supplied				
Order No: A0697/JS	Depth (m)	0.30				
Reporting Date: 26/06/2019	DETS Sample No	416124				

Determinand	Unit	RL	Accreditation				
Naphthalene	mg/kg	< 0.1	MCERTS	1.13			
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1			
Acenaphthene	mg/kg	< 0.1	MCERTS	1.43			
Fluorene	mg/kg	< 0.1	MCERTS	1.10			
Phenanthrene	mg/kg	< 0.1	MCERTS	10.50			
Anthracene	mg/kg	< 0.1	MCERTS	2.34			
Fluoranthene	mg/kg	< 0.1	MCERTS	15.70			
Pyrene	mg/kg	< 0.1	MCERTS	13.20			
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	5.88			
Chrysene	mg/kg	< 0.1	MCERTS	4.83			
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	5.26			
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	1.53			
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	3.65			
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	1.53			
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	0.33			
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	1.19			
Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	69.5			

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C



DETS Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410



Soil Analysis Certificate - TPH CWG Banded						
DETS Report No: 19-08687	Date Sampled	14/06/19				
Earth Environmental & Geotechnical Ltd	Time Sampled	None Supplied				
Site Reference: Laund Road, Huddersfield	TP / BH No	TP14				
Project / Job Ref: A0697	Additional Refs	None Supplied				
Order No: A0697/JS	Depth (m)	0.30				
Reporting Date: 26/06/2019	DETS Sample No	416124				

Determinand	Unit	RL	Accreditation				
Aliphatic >C5 - C6	mg/kg	< 0.01	NONE	< 0.01			
Aliphatic >C6 - C8	mg/kg	< 0.05	NONE	< 0.05			
Aliphatic >C8 - C10	mg/kg	< 2	MCERTS	< 2			
Aliphatic >C10 - C12	mg/kg	< 2	MCERTS	< 2			
Aliphatic >C12 - C16	mg/kg	< 3	MCERTS	< 3			
Aliphatic >C16 - C21	mg/kg	< 3	MCERTS	< 3			
Aliphatic >C21 - C34	mg/kg	< 10	MCERTS	< 10			
Aliphatic (C5 - C34)	mg/kg	< 21	NONE	< 21			
Aromatic >C5 - C7	mg/kg	< 0.01	NONE	< 0.01			
Aromatic >C7 - C8	mg/kg	< 0.05	NONE	< 0.05			
Aromatic >C8 - C10	mg/kg	< 2	MCERTS	< 2			
Aromatic >C10 - C12	mg/kg	< 2	MCERTS	< 2			
Aromatic >C12 - C16	mg/kg	< 2	MCERTS	9			
Aromatic >C16 - C21	mg/kg	< 3	MCERTS	44			
Aromatic >C21 - C35	mg/kg	< 10	MCERTS	46			
Aromatic (C5 - C35)	mg/kg	< 21	NONE	99			
Total >C5 - C35	mg/kg	< 42	NONE	99			

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C



DETS Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410



Soil Analysis Certificate - BTEX / MTBE						
DETS Report No: 19-08687	Date Sampled	14/06/19				
Earth Environmental & Geotechnical Ltd	Time Sampled	None Supplied				
Site Reference: Laund Road, Huddersfield	TP / BH No	TP14				
Project / Job Ref: A0697	Additional Refs	None Supplied				
Order No: A0697/JS	Depth (m)	0.30				
Reporting Date: 26/06/2019	DETS Sample No	416124				

Determinand	Unit	RL	Accreditation					
Benzene	ug/kg	< 2	MCERTS	< 2				
Toluene	ug/kg	< 5	MCERTS	< 5				
Ethylbenzene	ug/kg	< 2	MCERTS	< 2				
p & m-xylene	ug/kg	< 2	MCERTS	< 2				
o-xylene	ug/kg	< 2	MCERTS	< 2				
MTBE	ug/kg	< 5	MCERTS	< 5				

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C



DETS Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410



Soil Analysis Certificate - Sample Descriptions	
DETS Report No: 19-08687	
Earth Environmental & Geotechnical Ltd	
Site Reference: Laund Road, Huddersfield	
Project / Job Ref: A0697	
Order No: A0697/JS	
Reporting Date: 26/06/2019	

DETS Sample No	TP / BH No	Additional Refs	Depth (m)	Moisture Content (%)	Sample Matrix Description
416124	TP14	None Supplied	0.30	17.6	Black loamy sand with stones and brick

Moisture content is part of procedure E003 & is not an accredited test

Insufficient Sample ^{I/S}

Unsuitable Sample ^{U/S}



DETS Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410



Soil Analysis Certificate - Methodology & Miscellaneous Information	
DETS Report No: 19-08687	
Earth Environmental & Geotechnical Ltd	
Site Reference: Laund Road, Huddersfield	
Project / Job Ref: A0697	
Order No: A0697/JS	
Reporting Date: 26/06/2019	

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Soil	D	Boron - Water Soluble	Determination of water soluble boron in soil by 2:1 hot water extract followed by ICP-OES	E012
Soil	AR	BTEX	Determination of BTEX by headspace GC-MS	E001
Soil	D	Cations	Determination of cations in soil by aqua-regia digestion followed by ICP-OES	E002
Soil	D	Chloride - Water Soluble (2:1)	Determination of chloride by extraction with water & analysed by ion chromatography	E009
Soil	AR	Chromium - Hexavalent	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry	E016
Soil	AR	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E015
Soil	D	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through extraction with cyclohexane	E011
Soil	AR	Diesel Range Organics (C10 - C24)	Determination of hexane/acetone extractable hydrocarbons by GC-FID	E004
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of saturated calcium sulphate followed by electrometric measurement	E022
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of water followed by electrometric measurement	E023
Soil	D	Elemental Sulphur	Determination of elemental sulphur by solvent extraction followed by GC-MS	E020
Soil	AR	EPH (C10 – C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH Product ID	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS	E004
Soil	D	Fluoride - Water Soluble	Determination of Fluoride by extraction with water & analysed by ion chromatography	E009
Soil	D	FOC (Fraction Organic Carbon)	Determination of fraction of organic carbon by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	D	Loss on Ignition @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace	E019
Soil	D	Magnesium - Water Soluble	Determination of water soluble magnesium by extraction with water followed by ICP-OES	E025
Soil	D	Metals	Determination of metals by aqua-regia digestion followed by ICP-OES	E002
Soil	AR	Mineral Oil (C10 - C40)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge	E004
Soil	AR	Moisture Content	Moisture content; determined gravimetrically	E003
Soil	D	Nitrate - Water Soluble (2:1)	Determination of nitrate by extraction with water & analysed by ion chromatography	E009
Soil	D	Organic Matter	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	PAH - Speciated (EPA 16)	Determination of PAH compounds by extraction in acetone and hexane followed by GC-MS with the use of surrogate and internal standards	E005
Soil	AR	PCB - 7 Congeners	Determination of PCB by extraction with acetone and hexane followed by GC-MS	E008
Soil	D	Petroleum Ether Extract (PEE)	Gravimetrically determined through extraction with petroleum ether	E011
Soil	AR	pH	Determination of pH by addition of water followed by electrometric measurement	E007
Soil	AR	Phenols - Total (monohydric)	Determination of phenols by distillation followed by colorimetry	E021
Soil	D	Phosphate - Water Soluble (2:1)	Determination of phosphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Total	Determination of total sulphate by extraction with 10% HCl followed by ICP-OES	E013
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of sulphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of water soluble sulphate by extraction with water followed by ICP-OES	E014
Soil	AR	Sulphide	Determination of sulphide by distillation followed by colorimetry	E018
Soil	D	Sulphur - Total	Determination of total sulphur by extraction with aqua-regia followed by ICP-OES	E024
Soil	AR	SVOC	Determination of semi-volatile organic compounds by extraction in acetone and hexane followed by GC-MS	E006
Soil	AR	Thiocyanate (as SCN)	Determination of thiocyanate by extraction in caustic soda followed by acidification followed by addition of ferric nitrate followed by colorimetry	E017
Soil	D	Toluene Extractable Matter (TEM)	Gravimetrically determined through extraction with toluene	E011
Soil	D	Total Organic Carbon (TOC)	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	TPH CWG (ali: C5- C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C35. C5 to C8 by headspace GC-MS	E004
Soil	AR	TPH LQM (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C44. C5 to C8 by headspace GC-MS	E004
Soil	AR	VOCs	Determination of volatile organic compounds by headspace GC-MS	E001
Soil	AR	VPH (C6-C8 & C8-C10)	Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID	E001

D Dried
AR As Received



Jessica Sheridan
Earth Environmental & Geotechnical Ltd
Houldsworth Mill Business Centre
Houldsworth Street
Reddish
Stockport
Cheshire
SK5 6DA

DETS Ltd
Unit 1
Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Kent
ME17 2JN
t: 01622 850410

DETS Report No: 19-09168

Site Reference: Laund Road, Huddersfield

Project / Job Ref: A0697

Order No: None Supplied

Sample Receipt Date: 27/06/2019

Sample Scheduled Date: 27/06/2019

Report Issue Number: 1

Reporting Date: 03/07/2019

Authorised by:

A handwritten signature in grey ink, appearing to read "Dave Ashworth".

Dave Ashworth
Deputy Quality Manager

Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.



DETS Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410



Soil Analysis Certificate						
DETS Report No: 19-09168	Date Sampled	13/06/19	13/06/19	14/06/19		
Earth Environmental & Geotechnical Ltd	Time Sampled	None Supplied	None Supplied	None Supplied		
Site Reference: Laund Road, Huddersfield	TP / BH No	TP2	TP8	TP14		
Project / Job Ref: A0697	Additional Refs	None Supplied	None Supplied	None Supplied		
Order No: None Supplied	Depth (m)	0.20	0.30	0.30		
Reporting Date: 03/07/2019	DETS Sample No	417970	417971	417972		

Determinand	Unit	RL	Accreditation			
Asbestos Quantification ^(S)	%	< 0.001	ISO17025	0.001	< 0.001	0.007

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C
Subcontracted analysis (S)



DETS Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

Soil Analysis Certificate - Methodology & Miscellaneous Information	
DETS Report No: 19-09168	
Earth Environmental & Geotechnical Ltd	
Site Reference: Laund Road, Huddersfield	
Project / Job Ref: A0697	
Order No: None Supplied	
Reporting Date: 03/07/2019	

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Soil	D	Boron - Water Soluble	Determination of water soluble boron in soil by 2:1 hot water extract followed by ICP-OES	E012
Soil	AR	BTEX	Determination of BTEX by headspace GC-MS	E001
Soil	D	Cations	Determination of cations in soil by aqua-regia digestion followed by ICP-OES	E002
Soil	D	Chloride - Water Soluble (2:1)	Determination of chloride by extraction with water & analysed by ion chromatography	E009
Soil	AR	Chromium - Hexavalent	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphenylcarbazide followed by colorimetry	E016
Soil	AR	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E015
Soil	D	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through extraction with cyclohexane	E011
Soil	AR	Diesel Range Organics (C10 - C24)	Determination of hexane/acetone extractable hydrocarbons by GC-FID	E004
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of saturated calcium sulphate followed by electrometric measurement	E022
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of water followed by electrometric measurement	E023
Soil	D	Elemental Sulphur	Determination of elemental sulphur by solvent extraction followed by GC-MS	E020
Soil	AR	EPH (C10 – C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH Product ID	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS	E004
Soil	D	Fluoride - Water Soluble	Determination of Fluoride by extraction with water & analysed by ion chromatography	E009
Soil	D	FOC (Fraction Organic Carbon)	Determination of fraction of organic carbon by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	D	Loss on Ignition @ 450oC	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace	E019
Soil	D	Magnesium - Water Soluble	Determination of water soluble magnesium by extraction with water followed by ICP-OES	E025
Soil	D	Metals	Determination of metals by aqua-regia digestion followed by ICP-OES	E002
Soil	AR	Mineral Oil (C10 - C40)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge	E004
Soil	AR	Moisture Content	Moisture content; determined gravimetrically	E003
Soil	D	Nitrate - Water Soluble (2:1)	Determination of nitrate by extraction with water & analysed by ion chromatography	E009
Soil	D	Organic Matter	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	PAH - Speciated (EPA 16)	Determination of PAH compounds by extraction in acetone and hexane followed by GC-MS with the use of surrogate and internal standards	E005
Soil	AR	PCB - 7 Congeners	Determination of PCB by extraction with acetone and hexane followed by GC-MS	E008
Soil	D	Petroleum Ether Extract (PEE)	Gravimetrically determined through extraction with petroleum ether	E011
Soil	AR	pH	Determination of pH by addition of water followed by electrometric measurement	E007
Soil	AR	Phenols - Total (monohydric)	Determination of phenols by distillation followed by colorimetry	E021
Soil	D	Phosphate - Water Soluble (2:1)	Determination of phosphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Total	Determination of total sulphate by extraction with 10% HCl followed by ICP-OES	E013
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of sulphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of water soluble sulphate by extraction with water followed by ICP-OES	E014
Soil	AR	Sulphide	Determination of sulphide by distillation followed by colorimetry	E018
Soil	D	Sulphur - Total	Determination of total sulphur by extraction with aqua-regia followed by ICP-OES	E024
Soil	AR	SVOC	Determination of semi-volatile organic compounds by extraction in acetone and hexane followed by GC-MS	E006
Soil	AR	Thiocyanate (as SCN)	Determination of thiocyanate by extraction in caustic soda followed by acidification followed by addition of ferric nitrate followed by colorimetry	E017
Soil	D	Toluene Extractable Matter (TEM)	Gravimetrically determined through extraction with toluene	E011
Soil	D	Total Organic Carbon (TOC)	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	TPH CWG (ali: C5- C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C35. C5 to C8 by headspace GC-MS	E004
Soil	AR	TPH LQM (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C44. C5 to C8 by headspace GC-MS	E004
Soil	AR	VOCs	Determination of volatile organic compounds by headspace GC-MS	E001
Soil	AR	VPH (C6-C8 & C8-C10)	Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID	E001

D Dried
AR As Received



Jessica Sheridan
Earth Environmental & Geotechnical Ltd
Houldsworth Mill Business Centre
Houldsworth Street
Reddish
Stockport
Cheshire
SK5 6DA

DETS Ltd
Unit 1
Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Kent
ME17 2JN
t: 01622 850410

DETS Report No: 19-08620

Site Reference: Laund Road, Huddersfield

Project / Job Ref: A0967

Order No: A0697/JS

Sample Receipt Date: 18/06/2019

Sample Scheduled Date: 18/06/2019

Report Issue Number: 1

Reporting Date: 25/06/2019

Authorised by:

A handwritten signature in blue ink, appearing to read "Dave Ashworth".

Dave Ashworth
Deputy Quality Manager

Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.



DETS Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410



Soil Analysis Certificate						
DETS Report No: 19-08620	Date Sampled	13/06/19	13/06/19	13/06/19	13/06/19	13/06/19
Earth Environmental & Geotechnical Ltd	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Laund Road, Huddersfield	TP / BH No	TP2	TP4	TP4	STP (Stockpile)	TP8
Project / Job Ref: A0967	Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Order No: A0697/JS	Depth (m)	0.20	0.30	0.70	None Supplied	0.30
Reporting Date: 25/06/2019	DETS Sample No	415804	415805	415807	415808	415810

Determinand	Unit	RL	Accreditation					
Asbestos Screen ^(S)	N/a	N/a	ISO17025	Detected	Not Detected	Not Detected	Not Detected	Detected
Sample Matrix ^(S)	Material Type	N/a	NONE	Chrysotile encapsulated in soil clump				small amount of Amosite found loose in soil
Asbestos Type ^(S)	PLM Result	N/a	ISO17025	Chrysotile				Amosite
pH	pH Units	N/a	MCERTS	7.5	6.6	5.8	7.1	6.5
Total Cyanide	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	3
Complex Cyanide	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	3
Free Cyanide	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2
Total Sulphate as SO ₄	mg/kg	< 200	NONE	1134	605	870	1435	1029
Total Sulphate as SO ₄	%	< 0.02	NONE	0.11	0.06	0.09	0.14	0.10
W/S Sulphate as SO ₄ (2:1)	mg/l	< 10	MCERTS	227	40	17	478	49
W/S Sulphate as SO ₄ (2:1)	g/l	< 0.01	MCERTS	0.23	0.04	0.02	0.48	0.05
Sulphide	mg/kg	< 5	NONE	< 5	< 5	< 5	< 5	< 5
Organic Matter	%	< 0.1	MCERTS	2.7	4.7	4.2	2.9	5.8
Arsenic (As)	mg/kg	< 2	MCERTS	10	19	26	10	28
Barium (Ba)	mg/kg	< 5	NONE	91	261	198	67	251
Beryllium (Be)	mg/kg	< 0.5	NONE	0.8	1.7	1.6	0.7	1.3
W/S Boron	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Cadmium (Cd)	mg/kg	< 0.2	MCERTS	< 0.2	< 0.2	< 0.2	< 0.2	0.6
Chromium (Cr)	mg/kg	< 2	MCERTS	21	28	25	18	19
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2
Copper (Cu)	mg/kg	< 4	MCERTS	38	230	54	38	51
Lead (Pb)	mg/kg	< 3	MCERTS	100	194	173	72	265
Mercury (Hg)	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Nickel (Ni)	mg/kg	< 3	MCERTS	17	28	18	11	20
Selenium (Se)	mg/kg	< 3	NONE	< 3	< 3	< 3	< 3	< 3
Vanadium (V)	mg/kg	< 2	NONE	27	44	55	25	36
Zinc (Zn)	mg/kg	< 3	MCERTS	115	230	134	114	733
Total Phenols (monohydric)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2
EPH (C10 - C40)	mg/kg	< 6	MCERTS	84	93	104	391	365

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C

Subcontracted analysis (S)



DETS Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410



Soil Analysis Certificate						
DETS Report No: 19-08620	Date Sampled	13/06/19	14/06/19	14/06/19		
Earth Environmental & Geotechnical Ltd	Time Sampled	None Supplied	None Supplied	None Supplied		
Site Reference: Laund Road, Huddersfield	TP / BH No	TP11	WS1	WS6		
Project / Job Ref: A0967	Additional Refs	None Supplied	None Supplied	None Supplied		
Order No: A0697/JS	Depth (m)	0.40	0.40	0.50		
Reporting Date: 25/06/2019	DETS Sample No	415811	415815	415816		

Determinand	Unit	RL	Accreditation					
Asbestos Screen ^(S)	N/a	N/a	ISO17025	Not Detected	Not Detected	Not Detected		
Sample Matrix ^(S)	Material Type	N/a	NONE					
Asbestos Type ^(S)	PLM Result	N/a	ISO17025					
pH	pH Units	N/a	MCERTS	7.3	5.3	5.9		
Total Cyanide	mg/kg	< 2	NONE	< 2	< 2	< 2		
Complex Cyanide	mg/kg	< 2	NONE	< 2	< 2	< 2		
Free Cyanide	mg/kg	< 2	NONE	< 2	< 2	< 2		
Total Sulphate as SO ₄	mg/kg	< 200	NONE	1987	811	1104		
Total Sulphate as SO ₄	%	< 0.02	NONE	0.20	0.08	0.11		
W/S Sulphate as SO ₄ (2:1)	mg/l	< 10	MCERTS	35	20	18		
W/S Sulphate as SO ₄ (2:1)	g/l	< 0.01	MCERTS	0.03	0.02	0.02		
Sulphide	mg/kg	< 5	NONE	< 5	< 5	< 5		
Organic Matter	%	< 0.1	MCERTS	3.9	4.6	4.8		
Arsenic (As)	mg/kg	< 2	MCERTS	35	24	36		
Barium (Ba)	mg/kg	< 5	NONE	149	136	990		
Beryllium (Be)	mg/kg	< 0.5	NONE	1.7	1.4	1.6		
W/S Boron	mg/kg	< 1	NONE	< 1	< 1	< 1		
Cadmium (Cd)	mg/kg	< 0.2	MCERTS	1.2	< 0.2	< 0.2		
Chromium (Cr)	mg/kg	< 2	MCERTS	17	29	37		
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2	< 2	< 2		
Copper (Cu)	mg/kg	< 4	MCERTS	72	53	114		
Lead (Pb)	mg/kg	< 3	MCERTS	241	223	501		
Mercury (Hg)	mg/kg	< 1	NONE	< 1	< 1	< 1		
Nickel (Ni)	mg/kg	< 3	MCERTS	26	21	48		
Selenium (Se)	mg/kg	< 3	NONE	< 3	< 3	< 3		
Vanadium (V)	mg/kg	< 2	NONE	38	46	53		
Zinc (Zn)	mg/kg	< 3	MCERTS	500	271	2070		
Total Phenols (monohydric)	mg/kg	< 2	NONE	< 2	< 2	< 2		
EPH (C10 - C40)	mg/kg	< 6	MCERTS	374	97	100		

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C

Subcontracted analysis (S)



DETS Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410



Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 19-08620	Date Sampled	13/06/19	13/06/19	13/06/19	13/06/19	13/06/19
Earth Environmental & Geotechnical Ltd	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Laund Road, Huddersfield	TP / BH No	TP2	TP4	TP4	STP (Stockpile)	TP8
Project / Job Ref: A0967	Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Order No: A0697/JS	Depth (m)	0.20	0.30	0.70	None Supplied	0.30
Reporting Date: 25/06/2019	DETS Sample No	415804	415805	415807	415808	415810

Determinand	Unit	RL	Accreditation					
Naphthalene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	0.20	0.59	0.29
Acenaphthylene	mg/kg	< 0.1	MCERTS	0.19	0.18	< 0.1	< 0.1	< 0.1
Acenaphthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	0.21	1.18	0.38
Fluorene	mg/kg	< 0.1	MCERTS	0.14	0.16	0.16	0.90	0.38
Phenanthrene	mg/kg	< 0.1	MCERTS	0.92	1.17	1.39	8.76	4.14
Anthracene	mg/kg	< 0.1	MCERTS	0.32	0.30	0.24	2.06	2.47
Fluoranthene	mg/kg	< 0.1	MCERTS	1.89	2.09	1.53	12.60	11.80
Pyrene	mg/kg	< 0.1	MCERTS	1.70	1.78	1.28	10.60	10.70
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	1.19	1.05	0.58	4.31	6.97
Chrysene	mg/kg	< 0.1	MCERTS	0.77	0.78	0.76	4.28	5.19
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	1.28	1.18	0.61	3.79	6.53
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	0.43	0.40	0.24	1.27	2.23
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	0.99	0.89	0.42	2.84	5.29
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	0.87	0.74	0.17	1.37	2.38
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	0.25	0.46
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	0.61	0.46	0.17	1.11	1.95
Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	11.3	11.2	7.9	55.9	61.2

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C



DETS Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410



Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 19-08620	Date Sampled	13/06/19	14/06/19	14/06/19		
Earth Environmental & Geotechnical Ltd	Time Sampled	None Supplied	None Supplied	None Supplied		
Site Reference: Laund Road, Huddersfield	TP / BH No	TP11	WS1	WS6		
Project / Job Ref: A0967	Additional Refs	None Supplied	None Supplied	None Supplied		
Order No: A0697/JS	Depth (m)	0.40	0.40	0.50		
Reporting Date: 25/06/2019	DETS Sample No	415811	415815	415816		

Determinand	Unit	RL	Accreditation					
Naphthalene	mg/kg	< 0.1	MCERTS	3.29	0.25	0.28		
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1		
Acenaphthene	mg/kg	< 0.1	MCERTS	4.16	0.18	0.43		
Fluorene	mg/kg	< 0.1	MCERTS	2.72	0.14	0.32		
Phenanthrene	mg/kg	< 0.1	MCERTS	24.40	1.64	3.62		
Anthracene	mg/kg	< 0.1	MCERTS	3.75	0.27	0.71		
Fluoranthene	mg/kg	< 0.1	MCERTS	19.40	2.62	5.03		
Pyrene	mg/kg	< 0.1	MCERTS	11.20	2.31	4.37		
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	3.95	1.03	1.85		
Chrysene	mg/kg	< 0.1	MCERTS	4.32	1.22	1.83		
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	3.43	1.42	1.63		
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	1.08	0.43	0.50		
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	2.53	1	1.14		
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	1.13	0.53	0.62		
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	0.22	< 0.1	< 0.1		
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	0.88	0.47	0.51		
Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	86.4	13.5	22.8		

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C



DETS Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410



Soil Analysis Certificate - TPH CWG Banded

DETS Report No: 19-08620	Date Sampled	13/06/19	13/06/19	13/06/19	13/06/19	13/06/19
Earth Environmental & Geotechnical Ltd	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Laund Road, Huddersfield	TP / BH No	TP2	TP4	TP4	STP (Stockpile)	TP8
Project / Job Ref: A0967	Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Order No: A0697/JS	Depth (m)	0.20	0.30	0.70	None Supplied	0.30
Reporting Date: 25/06/2019	DETS Sample No	415804	415805	415807	415808	415810

Determinand	Unit	RL	Accreditation					
Aliphatic >C5 - C6	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic >C6 - C8	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic >C8 - C10	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Aliphatic >C10 - C12	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Aliphatic >C12 - C16	mg/kg	< 3	MCERTS	< 3	< 3	< 3	< 3	< 3
Aliphatic >C16 - C21	mg/kg	< 3	MCERTS	< 3	< 3	< 3	< 3	< 3
Aliphatic >C21 - C34	mg/kg	< 10	MCERTS	< 10	< 10	< 10	25	< 10
Aliphatic (C5 - C34)	mg/kg	< 21	NONE	< 21	< 21	< 21	25	< 21
Aromatic >C5 - C7	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic >C7 - C8	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic >C8 - C10	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Aromatic >C10 - C12	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Aromatic >C12 - C16	mg/kg	< 2	MCERTS	< 2	< 2	< 2	2	4
Aromatic >C16 - C21	mg/kg	< 3	MCERTS	< 3	< 3	< 3	30	19
Aromatic >C21 - C35	mg/kg	< 10	MCERTS	< 10	< 10	< 10	86	57
Aromatic (C5 - C35)	mg/kg	< 21	NONE	< 21	< 21	< 21	119	80
Total >C5 - C35	mg/kg	< 42	NONE	< 42	< 42	< 42	143	80

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C



DETS Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410



Soil Analysis Certificate - TPH CWG Banded

DETS Report No: 19-08620	Date Sampled	13/06/19	14/06/19	14/06/19		
Earth Environmental & Geotechnical Ltd	Time Sampled	None Supplied	None Supplied	None Supplied		
Site Reference: Laund Road, Huddersfield	TP / BH No	TP11	WS1	WS6		
Project / Job Ref: A0967	Additional Refs	None Supplied	None Supplied	None Supplied		
Order No: A0697/J5	Depth (m)	0.40	0.40	0.50		
Reporting Date: 25/06/2019	DETS Sample No	415811	415815	415816		

Determinand	Unit	RL	Accreditation					
Aliphatic >C5 - C6	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01		
Aliphatic >C6 - C8	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05		
Aliphatic >C8 - C10	mg/kg	< 2	MCERTS	< 2	< 2	< 2		
Aliphatic >C10 - C12	mg/kg	< 2	MCERTS	< 2	< 2	< 2		
Aliphatic >C12 - C16	mg/kg	< 3	MCERTS	< 3	< 3	< 3		
Aliphatic >C16 - C21	mg/kg	< 3	MCERTS	< 3	< 3	< 3		
Aliphatic >C21 - C34	mg/kg	< 10	MCERTS	< 10	< 10	< 10		
Aliphatic (C5 - C34)	mg/kg	< 21	NONE	< 21	< 21	< 21		
Aromatic >C5 - C7	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01		
Aromatic >C7 - C8	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05		
Aromatic >C8 - C10	mg/kg	< 2	MCERTS	< 2	< 2	< 2		
Aromatic >C10 - C12	mg/kg	< 2	MCERTS	< 2	< 2	< 2		
Aromatic >C12 - C16	mg/kg	< 2	MCERTS	18	< 2	< 2		
Aromatic >C16 - C21	mg/kg	< 3	MCERTS	53	< 3	4		
Aromatic >C21 - C35	mg/kg	< 10	MCERTS	38	< 10	< 10		
Aromatic (C5 - C35)	mg/kg	< 21	NONE	109	< 21	< 21		
Total >C5 - C35	mg/kg	< 42	NONE	109	< 42	< 42		

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C



DETS Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410



Soil Analysis Certificate - BTEX / MTBE						
DETS Report No: 19-08620	Date Sampled	13/06/19	13/06/19	13/06/19	13/06/19	13/06/19
Earth Environmental & Geotechnical Ltd	Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Site Reference: Laund Road, Huddersfield	TP / BH No	TP2	TP4	TP4	STP (Stockpile)	TP8
Project / Job Ref: A0967	Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
Order No: A0697/JS	Depth (m)	0.20	0.30	0.70	None Supplied	0.30
Reporting Date: 25/06/2019	DETS Sample No	415804	415805	415807	415808	415810

Determinand	Unit	RL	Accreditation					
Benzene	ug/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Toluene	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
Ethylbenzene	ug/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
p & m-xylene	ug/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
o-xylene	ug/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
MTBE	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C



DETS Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410



Soil Analysis Certificate - BTEX / MTBE						
DETS Report No: 19-08620	Date Sampled	13/06/19	14/06/19	14/06/19		
Earth Environmental & Geotechnical Ltd	Time Sampled	None Supplied	None Supplied	None Supplied		
Site Reference: Laund Road, Huddersfield	TP / BH No	TP11	WS1	WS6		
Project / Job Ref: A0967	Additional Refs	None Supplied	None Supplied	None Supplied		
Order No: A0697/JS	Depth (m)	0.40	0.40	0.50		
Reporting Date: 25/06/2019	DETS Sample No	415811	415815	415816		

Determinand	Unit	RL	Accreditation					
Benzene	ug/kg	< 2	MCERTS	< 2	< 2	< 2		
Toluene	ug/kg	< 5	MCERTS	< 5	< 5	< 5		
Ethylbenzene	ug/kg	< 2	MCERTS	< 2	< 2	< 2		
p & m-xylene	ug/kg	< 2	MCERTS	< 2	< 2	< 2		
o-xylene	ug/kg	< 2	MCERTS	< 2	< 2	< 2		
MTBE	ug/kg	< 5	MCERTS	< 5	< 5	< 5		

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C



DETS Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410



Leachate Analysis Certificate						
DETS Report No: 19-08620	Date Sampled	13/06/19	13/06/19			
Earth Environmental & Geotechnical Ltd	Time Sampled	None Supplied	None Supplied			
Site Reference: Laund Road, Huddersfield	TP / BH No	TP4	TP11			
Project / Job Ref: A0967	Additional Refs	None Supplied	None Supplied			
Order No: A0697/JS	Depth (m)	0.30	0.40			
Reporting Date: 25/06/2019	DETS Sample No	415806	415812			

Determinand	Unit	RL	Accreditation				
pH	pH Units	N/a	ISO17025	7.0	8.1		
Total Cyanide	ug/l	< 5	NONE	< 5	< 5		
Complex Cyanide	ug/l	< 5	NONE	< 5	< 5		
Free Cyanide	ug/l	< 5	NONE	< 5	< 5		
Sulphate as SO ₄	mg/l	< 1	ISO17025	3	6		
Sulphide	mg/l	< 0.1	NONE	< 0.1	< 0.1		
Total Organic Carbon (TOC)	mg/l	< 0.1	NONE	6.5	6.9		
Arsenic	ug/l	< 5	ISO17025	< 5	9		
Barium	ug/l	< 5	ISO17025	10	28		
Beryllium	ug/l	< 3	ISO17025	< 3	< 3		
Boron	ug/l	< 5	ISO17025	17	25		
Cadmium	ug/l	< 0.4	ISO17025	< 0.4	< 0.4		
Chromium	ug/l	< 5	ISO17025	< 5	11		
Chromium (hexavalent)	ug/l	< 20	NONE	< 20	< 20		
Lead	ug/l	< 5	ISO17025	< 5	< 5		
Mercury	ug/l	< 0.05	ISO17025	< 0.05	< 0.05		
Nickel	ug/l	< 5	ISO17025	< 5	< 5		
Selenium	ug/l	< 5	ISO17025	< 5	< 5		
Vanadium	ug/l	< 5	ISO17025	< 5	< 5		
Zinc	ug/l	< 2	ISO17025	4	3		
Total Phenols (monohydric)	ug/l	< 10	NONE	< 10	< 10		
EPH (C10 - C40)	ug/l	< 10	NONE	< 10	< 10		

Subcontracted analysis ⁽⁵⁾



DETS Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

Leachate Analysis Certificate - Speciated PAH						
DETS Report No: 19-08620	Date Sampled	13/06/19	13/06/19			
Earth Environmental & Geotechnical Ltd	Time Sampled	None Supplied	None Supplied			
Site Reference: Laund Road, Huddersfield	TP / BH No	TP4	TP11			
Project / Job Ref: A0967	Additional Refs	None Supplied	None Supplied			
Order No: A0697/JS	Depth (m)	0.30	0.40			
Reporting Date: 25/06/2019	DETS Sample No	415806	415812			

Determinand	Unit	RL	Accreditation				
Naphthalene	ug/l	< 0.01	NONE	< 0.01	< 0.01		
Acenaphthylene	ug/l	< 0.01	NONE	< 0.01	< 0.01		
Acenaphthene	ug/l	< 0.01	NONE	< 0.01	< 0.01		
Fluorene	ug/l	< 0.01	NONE	< 0.01	< 0.01		
Phenanthrene	ug/l	< 0.01	NONE	0.01	0.06		
Anthracene	ug/l	< 0.01	NONE	< 0.01	0.03		
Fluoranthene	ug/l	< 0.01	NONE	0.01	0.04		
Pyrene	ug/l	< 0.01	NONE	0.02	0.02		
Benzo(a)anthracene	ug/l	< 0.01	NONE	< 0.01	< 0.01		
Chrysene	ug/l	< 0.01	NONE	< 0.01	< 0.01		
Benzo(b)fluoranthene	ug/l	< 0.01	NONE	< 0.01	< 0.01		
Benzo(k)fluoranthene	ug/l	< 0.01	NONE	< 0.01	< 0.01		
Benzo(a)pyrene	ug/l	< 0.01	NONE	< 0.01	< 0.01		
Indeno(1,2,3-cd)pyrene	ug/l	< 0.01	NONE	< 0.01	< 0.01		
Dibenz(a,h)anthracene	ug/l	< 0.01	NONE	< 0.01	< 0.01		
Benzo(ghi)perylene	ug/l	< 0.008	NONE	< 0.008	< 0.008		
Total EPA-16 PAHs	ug/l	< 0.01	NONE	0.04	0.15		



DETS Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410



Soil Analysis Certificate - Sample Descriptions

DETS Report No: 19-08620	
Earth Environmental & Geotechnical Ltd	
Site Reference: Laund Road, Huddersfield	
Project / Job Ref: A0967	
Order No: A0697/JS	
Reporting Date: 25/06/2019	

DETS Sample No	TP / BH No	Additional Refs	Depth (m)	Moisture Content (%)	Sample Matrix Description
415804	TP2	None Supplied	0.20	15.9	Brown loamy sand with brick and concrete
415805	TP4	None Supplied	0.30	20.3	Brown loamy sand with vegetation and stones
415807	TP4	None Supplied	0.70	23.5	Black loamy clay
415808	STP (Stockpile)	None Supplied	None Supplied	16.3	Brown loamy sand with stones and concrete
415810	TP8	None Supplied	0.30	20.9	Black loamy sand with stones and vegetation
415811	TP11	None Supplied	0.40	15	Black loamy sand with chalk and concrete
415815	WS1	None Supplied	0.40	21.3	Brown loamy sand with vegetation
415816	WS6	None Supplied	0.50	21.3	Black loamy sand with stones and concrete

Moisture content is part of procedure E003 & is not an accredited test

Insufficient Sample ^{1/5}

Unsuitable Sample ^{u/s}



DETS Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410



Soil Analysis Certificate - Methodology & Miscellaneous Information

DETS Report No: 19-08620

Earth Environmental & Geotechnical Ltd

Site Reference: Laund Road, Huddersfield

Project / Job Ref: A0967

Order No: A0697/JS

Reporting Date: 25/06/2019

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Soil	D	Boron - Water Soluble	Determination of water soluble boron in soil by 2:1 hot water extract followed by ICP-OES	E012
Soil	AR	BTEX	Determination of BTEX by headspace GC-MS	E001
Soil	D	Cations	Determination of cations in soil by aqua-regia digestion followed by ICP-OES	E002
Soil	D	Chloride - Water Soluble (2:1)	Determination of chloride by extraction with water & analysed by ion chromatography	E009
Soil	AR	Chromium - Hexavalent	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphénylcarbazine followed by colorimetry	E016
Soil	AR	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E015
Soil	D	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through extraction with cyclohexane	E011
Soil	AR	Diesel Range Organics (C10 - C24)	Determination of hexane/acetone extractable hydrocarbons by GC-FID	E004
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of saturated calcium sulphate followed by electrometric measurement	E022
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of water followed by electrometric measurement	E023
Soil	D	Elemental Sulphur	Determination of elemental sulphur by solvent extraction followed by GC-MS	E020
Soil	AR	EPH (C10 - C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH Product ID	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS	E004
Soil	D	Fluoride - Water Soluble	Determination of Fluoride by extraction with water & analysed by ion chromatography	E009
Soil	D	FOC (Fraction Organic Carbon)	Determination of fraction of organic carbon by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	D	Loss on Ignition @ 450°C	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace	E019
Soil	D	Magnesium - Water Soluble	Determination of water soluble magnesium by extraction with water followed by ICP-OES	E025
Soil	D	Metals	Determination of metals by aqua-regia digestion followed by ICP-OES	E002
Soil	AR	Mineral Oil (C10 - C40)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge	E004
Soil	AR	Moisture Content	Moisture content; determined gravimetrically	E003
Soil	D	Nitrate - Water Soluble (2:1)	Determination of nitrate by extraction with water & analysed by ion chromatography	E009
Soil	D	Organic Matter	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	PAH - Speciated (EPA 16)	Determination of PAH compounds by extraction in acetone and hexane followed by GC-MS with the use of surrogate and internal standards	E005
Soil	AR	PCB - 7 Congeners	Determination of PCB by extraction with acetone and hexane followed by GC-MS	E008
Soil	D	Petroleum Ether Extract (PEE)	Gravimetrically determined through extraction with petroleum ether	E011
Soil	AR	pH	Determination of pH by addition of water followed by electrometric measurement	E007
Soil	AR	Phenols - Total (monohydric)	Determination of phenols by distillation followed by colorimetry	E021
Soil	D	Phosphate - Water Soluble (2:1)	Determination of phosphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Total	Determination of total sulphate by extraction with 10% HCl followed by ICP-OES	E013
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of sulphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of water soluble sulphate by extraction with water followed by ICP-OES	E014
Soil	AR	Sulphide	Determination of sulphide by distillation followed by colorimetry	E018
Soil	D	Sulphur - Total	Determination of total sulphur by extraction with aqua-regia followed by ICP-OES	E024
Soil	AR	SVOC	Determination of semi-volatile organic compounds by extraction in acetone and hexane followed by GC-MS	E006
Soil	AR	Thiocyanate (as SCN)	Determination of thiocyanate by extraction in caustic soda followed by acidification followed by addition of ferric nitrate followed by colorimetry	E017
Soil	D	Toluene Extractable Matter (TEM)	Gravimetrically determined through extraction with toluene	E011
Soil	D	Total Organic Carbon (TOC)	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	TPH CWG (ali: C5- C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C35. C5 to C8 by headspace GC-MS	E004
Soil	AR	TPH LQM (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C44. C5 to C8 by headspace GC-MS	E004
Soil	AR	VOCs	Determination of volatile organic compounds by headspace GC-MS	E001
Soil	AR	VPH (C6-C8 & C8-C10)	Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID	E001

D Dried
AR As Received



DETS Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410



Water Analysis Certificate - Methodology & Miscellaneous Information

DETS Report No: 19-08620

Earth Environmental & Geotechnical Ltd

Site Reference: Laund Road, Huddersfield

Project / Job Ref: A0967

Order No: A0697/JS

Reporting Date: 25/06/2019

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Water	UF	Alkalinity	Determination of alkalinity by titration against hydrochloric acid using bromocresol green as the end point	E103
Water	UF	BTEX	Determination of BTEX by headspace GC-MS	E101
Water	F	Cations	Determination of cations by filtration followed by ICP-MS	E102
Water	UF	Chemical Oxygen Demand (COD)	Determination using a COD reactor followed by colorimetry	E112
Water	F	Chloride	Determination of chloride by filtration & analysed by ion chromatography	E109
Water	F	Chromium - Hexavalent	Determination of hexavalent chromium by acidification, addition of 1,5 diphenylcarbazide followed by	E116
Water	UF	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E115
Water	UF	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E115
Water	UF	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E115
Water	UF	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through liquid:liquid extraction with cyclohexane	E111
Water	F	Diesel Range Organics (C10 - C24)	Determination of liquid:liquid extraction with hexane followed by GC-FID	E104
Water	F	Dissolved Organic Content (DOC)	Determination of DOC by filtration followed by low heat with persulphate addition followed by IR detection	E110
Water	UF	Electrical Conductivity	Determination of electrical conductivity by electrometric measurement	E123
Water	F	EPH (C10 - C40)	Determination of liquid:liquid extraction with hexane followed by GC-FID	E104
Water	F	EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)	Determination of liquid:liquid extraction with hexane followed by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS	E104
Water	F	Fluoride	Determination of Fluoride by filtration & analysed by ion chromatography	E109
Water	F	Hardness	Determination of Ca and Mg by ICP-MS followed by calculation	E102
Leachate	F	Leachate Preparation - NRA	Based on National Rivers Authority leaching test 1994	E301
Leachate	F	Leachate Preparation - WAC	Based on BS EN 12457 Pt1, 2, 3	E302
Water	F	Metals	Determination of metals by filtration followed by ICP-MS	E102
Water	F	Mineral Oil (C10 - C40)	Determination of liquid:liquid extraction with hexane followed by GC-FID	E104
Water	F	Nitrate	Determination of nitrate by filtration & analysed by ion chromatography	E109
Water	UF	Monohydric Phenol	Determination of phenols by distillation followed by colorimetry	E121
Water	F	PAH - Speciated (EPA 16)	Determination of PAH compounds by concentration through SPE cartridge, collection in dichloromethane followed by GC-MS	E105
Water	F	PCB - 7 Congeners	Determination of PCB compounds by concentration through SPE cartridge, collection in dichloromethane followed by GC-MS	E108
Water	UF	Petroleum Ether Extract (PEE)	Gravimetrically determined through liquid:liquid extraction with petroleum ether	E111
Water	UF	pH	Determination of pH by electrometric measurement	E107
Water	F	Phosphate	Determination of phosphate by filtration & analysed by ion chromatography	E109
Water	UF	Redox Potential	Determination of redox potential by electrometric measurement	E113
Water	F	Sulphate (as SO ₄)	Determination of sulphate by filtration & analysed by ion chromatography	E109
Water	UF	Sulphide	Determination of sulphide by distillation followed by colorimetry	E118
Water	F	SVOC	Determination of semi-volatile organic compounds by concentration through SPE cartridge, collection in dichloromethane followed by GC-MS	E106
Water	UF	Toluene Extractable Matter (TEM)	Gravimetrically determined through liquid:liquid extraction with toluene	E111
Water	UF	Total Organic Carbon (TOC)	Low heat with persulphate addition followed by IR detection	E110
Water	F	TPH CWG (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)	Determination of liquid:liquid extraction with hexane, fractionating with SPE followed by GC-FID for C8 to C35. C5 to C8 by headspace GC-MS	E104
Water	F	TPH LQM (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44)	Determination of liquid:liquid extraction with hexane, fractionating with SPE followed by GC-FID for C8 to C44. C5 to C8 by headspace GC-MS	E104
Water	UF	VOCs	Determination of volatile organic compounds by headspace GC-MS	E101
Water	UF	VPH (C6-C8 & C8-C10)	Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID	E101

Key

F Filtered
UF Unfiltered



Jessica Sheridan
Earth Environmental & Geotechnical Ltd
Houldsworth Mill Business Centre
Houldsworth Street
Reddish
Stockport
Cheshire
SK5 6DA

DETS Ltd
Unit 1
Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Kent
ME17 2JN
t: 01622 850410

DETS Report No: 19-08639

Site Reference: Laund Road, Huddersfield

Project / Job Ref: A0697

Order No: A0697/

Sample Receipt Date: 19/06/2019

Sample Scheduled Date: 19/06/2019

Report Issue Number: 1

Reporting Date: 25/06/2019

Authorised by:

A handwritten signature in blue ink, appearing to read "Dave Ashworth".

Dave Ashworth
Deputy Quality Manager

Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.



DETS Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410



Soil Analysis Certificate						
DETS Report No: 19-08639	Date Sampled	14/06/19				
Earth Environmental & Geotechnical Ltd	Time Sampled	None Supplied				
Site Reference: Laund Road, Huddersfield	TP / BH No	TP15				
Project / Job Ref: A0697	Additional Refs	None Supplied				
Order No: A0697/	Depth (m)	0.30				
Reporting Date: 25/06/2019	DETS Sample No	415907				

Determinand	Unit	RL	Accreditation				
Asbestos Screen ^(S)	N/a	N/a	ISO17025	Not Detected			
pH	pH Units	N/a	MCERTS	7.3			
Total Cyanide	mg/kg	< 2	NONE	< 2			
Complex Cyanide	mg/kg	< 2	NONE	< 2			
Free Cyanide	mg/kg	< 2	NONE	< 2			
Total Sulphate as SO ₄	mg/kg	< 200	NONE	996			
Total Sulphate as SO ₄	%	< 0.02	NONE	0.10			
W/S Sulphate as SO ₄ (2:1)	mg/l	< 10	MCERTS	129			
W/S Sulphate as SO ₄ (2:1)	g/l	< 0.01	MCERTS	0.13			
Sulphide	mg/kg	< 5	NONE	< 5			
Organic Matter	%	< 0.1	MCERTS	4.2			
Arsenic (As)	mg/kg	< 2	MCERTS	72			
Barium (Ba)	mg/kg	< 5	NONE	269			
Beryllium (Be)	mg/kg	< 0.5	NONE	2.1			
W/S Boron	mg/kg	< 1	NONE	< 1			
Cadmium (Cd)	mg/kg	< 0.2	MCERTS	0.5			
Chromium (Cr)	mg/kg	< 2	MCERTS	36			
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2			
Copper (Cu)	mg/kg	< 4	MCERTS	155			
Lead (Pb)	mg/kg	< 3	MCERTS	246			
Mercury (Hg)	mg/kg	< 1	NONE	< 1			
Nickel (Ni)	mg/kg	< 3	MCERTS	58			
Selenium (Se)	mg/kg	< 3	NONE	< 3			
Vanadium (V)	mg/kg	< 2	NONE	71			
Zinc (Zn)	mg/kg	< 3	MCERTS	495			
Total Phenols (monohydric)	mg/kg	< 2	NONE	< 2			
EPH (C10 - C40)	mg/kg	< 6	MCERTS	203			

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C
 Subcontracted analysis (S)



DETS Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410



Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 19-08639	Date Sampled	14/06/19				
Earth Environmental & Geotechnical Ltd	Time Sampled	None Supplied				
Site Reference: Laund Road, Huddersfield	TP / BH No	TP15				
Project / Job Ref: A0697	Additional Refs	None Supplied				
Order No: A0697/	Depth (m)	0.30				
Reporting Date: 25/06/2019	DETS Sample No	415907				

Determinand	Unit	RL	Accreditation				
Naphthalene	mg/kg	< 0.1	MCERTS	0.55			
Acenaphthylene	mg/kg	< 0.1	MCERTS	0.13			
Acenaphthene	mg/kg	< 0.1	MCERTS	0.64			
Fluorene	mg/kg	< 0.1	MCERTS	0.50			
Phenanthrene	mg/kg	< 0.1	MCERTS	5.32			
Anthracene	mg/kg	< 0.1	MCERTS	1.14			
Fluoranthene	mg/kg	< 0.1	MCERTS	7.32			
Pyrene	mg/kg	< 0.1	MCERTS	6.36			
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	3.24			
Chrysene	mg/kg	< 0.1	MCERTS	3.15			
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	3.31			
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	1.53			
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	2.79			
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	1.66			
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	0.17			
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	1.51			
Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	39.3			

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C



DETS Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410



Soil Analysis Certificate - TPH CWG Banded

DETS Report No: 19-08639	Date Sampled	14/06/19				
Earth Environmental & Geotechnical Ltd	Time Sampled	None Supplied				
Site Reference: Laund Road, Huddersfield	TP / BH No	TP15				
Project / Job Ref: A0697	Additional Refs	None Supplied				
Order No: A0697/	Depth (m)	0.30				
Reporting Date: 25/06/2019	DETS Sample No	415907				

Determinand	Unit	RL	Accreditation				
Aliphatic >C5 - C6	mg/kg	< 0.01	NONE	< 0.01			
Aliphatic >C6 - C8	mg/kg	< 0.05	NONE	< 0.05			
Aliphatic >C8 - C10	mg/kg	< 2	MCERTS	< 2			
Aliphatic >C10 - C12	mg/kg	< 2	MCERTS	< 2			
Aliphatic >C12 - C16	mg/kg	< 3	MCERTS	< 3			
Aliphatic >C16 - C21	mg/kg	< 3	MCERTS	< 3			
Aliphatic >C21 - C34	mg/kg	< 10	MCERTS	< 10			
Aliphatic (C5 - C34)	mg/kg	< 21	NONE	< 21			
Aromatic >C5 - C7	mg/kg	< 0.01	NONE	< 0.01			
Aromatic >C7 - C8	mg/kg	< 0.05	NONE	< 0.05			
Aromatic >C8 - C10	mg/kg	< 2	MCERTS	< 2			
Aromatic >C10 - C12	mg/kg	< 2	MCERTS	< 2			
Aromatic >C12 - C16	mg/kg	< 2	MCERTS	4			
Aromatic >C16 - C21	mg/kg	< 3	MCERTS	22			
Aromatic >C21 - C35	mg/kg	< 10	MCERTS	41			
Aromatic (C5 - C35)	mg/kg	< 21	NONE	67			
Total >C5 - C35	mg/kg	< 42	NONE	67			

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C



DETS Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410



Soil Analysis Certificate - BTEX / MTBE						
DETS Report No: 19-08639	Date Sampled	14/06/19				
Earth Environmental & Geotechnical Ltd	Time Sampled	None Supplied				
Site Reference: Laund Road, Huddersfield	TP / BH No	TP15				
Project / Job Ref: A0697	Additional Refs	None Supplied				
Order No: A0697/	Depth (m)	0.30				
Reporting Date: 25/06/2019	DETS Sample No	415907				

Determinand	Unit	RL	Accreditation				
Benzene	ug/kg	< 2	MCERTS	< 2			
Toluene	ug/kg	< 5	MCERTS	< 5			
Ethylbenzene	ug/kg	< 2	MCERTS	< 2			
p & m-xylene	ug/kg	< 2	MCERTS	< 2			
o-xylene	ug/kg	< 2	MCERTS	< 2			
MTBE	ug/kg	< 5	MCERTS	< 5			

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C



DETS Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410



Leachate Analysis Certificate						
DETS Report No: 19-08639	Date Sampled	14/06/19				
Earth Environmental & Geotechnical Ltd	Time Sampled	None Supplied				
Site Reference: Laund Road, Huddersfield	TP / BH No	TP15				
Project / Job Ref: A0697	Additional Refs	None Supplied				
Order No: A0697/	Depth (m)	0.30				
Reporting Date: 25/06/2019	DETS Sample No	415908				

Determinand	Unit	RL	Accreditation				
pH	pH Units	N/a	ISO17025	7.7			
Total Cyanide	ug/l	< 5	NONE	< 5			
Complex Cyanide	ug/l	< 5	NONE	< 5			
Free Cyanide	ug/l	< 5	NONE	< 5			
Sulphate as SO ₄	mg/l	< 1	ISO17025	3			
Sulphide	mg/l	< 0.1	NONE	< 0.1			
Total Organic Carbon (TOC)	mg/l	< 0.1	NONE	5.6			
Arsenic	ug/l	< 5	ISO17025	< 5			
Barium	ug/l	< 5	ISO17025	32			
Beryllium	ug/l	< 3	ISO17025	< 3			
Boron	ug/l	< 5	ISO17025	10			
Cadmium	ug/l	< 0.4	ISO17025	< 0.4			
Chromium	ug/l	< 5	ISO17025	< 5			
Chromium (hexavalent)	ug/l	< 20	NONE	< 20			
Lead	ug/l	< 5	ISO17025	< 5			
Mercury	ug/l	< 0.05	ISO17025	< 0.05			
Nickel	ug/l	< 5	ISO17025	< 5			
Selenium	ug/l	< 5	ISO17025	< 5			
Vanadium	ug/l	< 5	ISO17025	< 5			
Zinc	ug/l	< 2	ISO17025	7			
Total Phenols (monohydric)	ug/l	< 10	NONE	< 10			
EPH (C10 - C40)	ug/l	< 10	NONE	< 10			

Subcontracted analysis ^(S)



DETS Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410

Leachate Analysis Certificate - Speciated PAH						
DETS Report No: 19-08639	Date Sampled	14/06/19				
Earth Environmental & Geotechnical Ltd	Time Sampled	None Supplied				
Site Reference: Laund Road, Huddersfield	TP / BH No	TP15				
Project / Job Ref: A0697	Additional Refs	None Supplied				
Order No: A0697/	Depth (m)	0.30				
Reporting Date: 25/06/2019	DETS Sample No	415908				

Determinand	Unit	RL	Accreditation				
Naphthalene	ug/l	< 0.01	NONE	0.07			
Acenaphthylene	ug/l	< 0.01	NONE	< 0.01			
Acenaphthene	ug/l	< 0.01	NONE	0.02			
Fluorene	ug/l	< 0.01	NONE	0.02			
Phenanthrene	ug/l	< 0.01	NONE	0.04			
Anthracene	ug/l	< 0.01	NONE	0.01			
Fluoranthene	ug/l	< 0.01	NONE	0.03			
Pyrene	ug/l	< 0.01	NONE	0.02			
Benzo(a)anthracene	ug/l	< 0.01	NONE	< 0.01			
Chrysene	ug/l	< 0.01	NONE	< 0.01			
Benzo(b)fluoranthene	ug/l	< 0.01	NONE	< 0.01			
Benzo(k)fluoranthene	ug/l	< 0.01	NONE	< 0.01			
Benzo(a)pyrene	ug/l	< 0.01	NONE	< 0.01			
Indeno(1,2,3-cd)pyrene	ug/l	< 0.01	NONE	< 0.01			
Dibenz(a,h)anthracene	ug/l	< 0.01	NONE	< 0.01			
Benzo(ghi)perylene	ug/l	< 0.008	NONE	< 0.008			
Total EPA-16 PAHs	ug/l	< 0.01	NONE	0.21			

Page 8 of 11



DETS Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410



Soil Analysis Certificate - Sample Descriptions

DETS Report No: 19-08639	
Earth Environmental & Geotechnical Ltd	
Site Reference: Laund Road, Huddersfield	
Project / Job Ref: A0697	
Order No: A0697/	
Reporting Date: 25/06/2019	

DETS Sample No	TP / BH No	Additional Refs	Depth (m)	Moisture Content (%)	Sample Matrix Description
415907	TP15	None Supplied	0.30	16.1	Black loamy sand with stones and concrete

Moisture content is part of procedure E003 & is not an accredited test

Insufficient Sample ^{1/S}

Unsuitable Sample ^{U/S}



DETS Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410



Soil Analysis Certificate - Methodology & Miscellaneous Information

DETS Report No: 19-08639

Earth Environmental & Geotechnical Ltd

Site Reference: Laund Road, Huddersfield

Project / Job Ref: A0697

Order No: A0697/

Reporting Date: 25/06/2019

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Soil	D	Boron - Water Soluble	Determination of water soluble boron in soil by 2:1 hot water extract followed by ICP-OES	E012
Soil	AR	BTEX	Determination of BTEX by headspace GC-MS	E001
Soil	D	Cations	Determination of cations in soil by aqua-regia digestion followed by ICP-OES	E002
Soil	D	Chloride - Water Soluble (2:1)	Determination of chloride by extraction with water & analysed by ion chromatography	E009
Soil	AR	Chromium - Hexavalent	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphénylcarbazine followed by colorimetry	E016
Soil	AR	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E015
Soil	D	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through extraction with cyclohexane	E011
Soil	AR	Diesel Range Organics (C10 - C24)	Determination of hexane/acetone extractable hydrocarbons by GC-FID	E004
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of saturated calcium sulphate followed by electrometric measurement	E022
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of water followed by electrometric measurement	E023
Soil	D	Elemental Sulphur	Determination of elemental sulphur by solvent extraction followed by GC-MS	E020
Soil	AR	EPH (C10 - C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH Product ID	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS	E004
Soil	D	Fluoride - Water Soluble	Determination of Fluoride by extraction with water & analysed by ion chromatography	E009
Soil	D	FOC (Fraction Organic Carbon)	Determination of fraction of organic carbon by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	D	Loss on Ignition @ 450°C	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace	E019
Soil	D	Magnesium - Water Soluble	Determination of water soluble magnesium by extraction with water followed by ICP-OES	E025
Soil	D	Metals	Determination of metals by aqua-regia digestion followed by ICP-OES	E002
Soil	AR	Mineral Oil (C10 - C40)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge	E004
Soil	AR	Moisture Content	Moisture content; determined gravimetrically	E003
Soil	D	Nitrate - Water Soluble (2:1)	Determination of nitrate by extraction with water & analysed by ion chromatography	E009
Soil	D	Organic Matter	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	PAH - Speciated (EPA 16)	Determination of PAH compounds by extraction in acetone and hexane followed by GC-MS with the use of surrogate and internal standards	E005
Soil	AR	PCB - 7 Congeners	Determination of PCB by extraction with acetone and hexane followed by GC-MS	E008
Soil	D	Petroleum Ether Extract (PEE)	Gravimetrically determined through extraction with petroleum ether	E011
Soil	AR	pH	Determination of pH by addition of water followed by electrometric measurement	E007
Soil	AR	Phenols - Total (monohydric)	Determination of phenols by distillation followed by colorimetry	E021
Soil	D	Phosphate - Water Soluble (2:1)	Determination of phosphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO ₄) - Total	Determination of total sulphate by extraction with 10% HCl followed by ICP-OES	E013
Soil	D	Sulphate (as SO ₄) - Water Soluble (2:1)	Determination of sulphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO ₄) - Water Soluble (2:1)	Determination of water soluble sulphate by extraction with water followed by ICP-OES	E014
Soil	AR	Sulphide	Determination of sulphide by distillation followed by colorimetry	E018
Soil	D	Sulphur - Total	Determination of total sulphur by extraction with aqua-regia followed by ICP-OES	E024
Soil	AR	SVOC	Determination of semi-volatile organic compounds by extraction in acetone and hexane followed by GC-MS	E006
Soil	AR	Thiocyanate (as SCN)	Determination of thiocyanate by extraction in caustic soda followed by acidification followed by addition of ferric nitrate followed by colorimetry	E017
Soil	D	Toluene Extractable Matter (TEM)	Gravimetrically determined through extraction with toluene	E011
Soil	D	Total Organic Carbon (TOC)	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	TPH CWG (ali: C5- C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C35. C5 to C8 by headspace GC-MS	E004
Soil	AR	TPH LQM (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C44. C5 to C8 by headspace GC-MS	E004
Soil	AR	VOCs	Determination of volatile organic compounds by headspace GC-MS	E001
Soil	AR	VPH (C6-C8 & C8-C10)	Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID	E001

D Dried
AR As Received



DETS Ltd
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410



Water Analysis Certificate - Methodology & Miscellaneous Information

DETS Report No: 19-08639

Earth Environmental & Geotechnical Ltd

Site Reference: Laund Road, Huddersfield

Project / Job Ref: A0697

Order No: A0697/

Reporting Date: 25/06/2019

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Water	UF	Alkalinity	Determination of alkalinity by titration against hydrochloric acid using bromocresol green as the end point	E103
Water	UF	BTEX	Determination of BTEX by headspace GC-MS	E101
Water	F	Cations	Determination of cations by filtration followed by ICP-MS	E102
Water	UF	Chemical Oxygen Demand (COD)	Determination using a COD reactor followed by colorimetry	E112
Water	F	Chloride	Determination of chloride by filtration & analysed by ion chromatography	E109
Water	F	Chromium - Hexavalent	Determination of hexavalent chromium by acidification, addition of 1,5 diphenylcarbazide followed by	E116
Water	UF	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E115
Water	UF	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E115
Water	UF	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E115
Water	UF	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through liquid:liquid extraction with cyclohexane	E111
Water	F	Diesel Range Organics (C10 - C24)	Determination of liquid:liquid extraction with hexane followed by GC-FID	E104
Water	F	Dissolved Organic Content (DOC)	Determination of DOC by filtration followed by low heat with persulphate addition followed by IR detection	E110
Water	UF	Electrical Conductivity	Determination of electrical conductivity by electrometric measurement	E123
Water	F	EPH (C10 - C40)	Determination of liquid:liquid extraction with hexane followed by GC-FID	E104
Water	F	EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)	Determination of liquid:liquid extraction with hexane followed by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS	E104
Water	F	Fluoride	Determination of Fluoride by filtration & analysed by ion chromatography	E109
Water	F	Hardness	Determination of Ca and Mg by ICP-MS followed by calculation	E102
Leachate	F	Leachate Preparation - NRA	Based on National Rivers Authority leaching test 1994	E301
Leachate	F	Leachate Preparation - WAC	Based on BS EN 12457 Pt1, 2, 3	E302
Water	F	Metals	Determination of metals by filtration followed by ICP-MS	E102
Water	F	Mineral Oil (C10 - C40)	Determination of liquid:liquid extraction with hexane followed by GC-FID	E104
Water	F	Nitrate	Determination of nitrate by filtration & analysed by ion chromatography	E109
Water	UF	Monohydric Phenol	Determination of phenols by distillation followed by colorimetry	E121
Water	F	PAH - Speciated (EPA 16)	Determination of PAH compounds by concentration through SPE cartridge, collection in dichloromethane followed by GC-MS	E105
Water	F	PCB - 7 Congeners	Determination of PCB compounds by concentration through SPE cartridge, collection in dichloromethane followed by GC-MS	E108
Water	UF	Petroleum Ether Extract (PEE)	Gravimetrically determined through liquid:liquid extraction with petroleum ether	E111
Water	UF	pH	Determination of pH by electrometric measurement	E107
Water	F	Phosphate	Determination of phosphate by filtration & analysed by ion chromatography	E109
Water	UF	Redox Potential	Determination of redox potential by electrometric measurement	E113
Water	F	Sulphate (as SO ₄)	Determination of sulphate by filtration & analysed by ion chromatography	E109
Water	UF	Sulphide	Determination of sulphide by distillation followed by colorimetry	E118
Water	F	SVOC	Determination of semi-volatile organic compounds by concentration through SPE cartridge, collection in dichloromethane followed by GC-MS	E106
Water	UF	Toluene Extractable Matter (TEM)	Gravimetrically determined through liquid:liquid extraction with toluene	E111
Water	UF	Total Organic Carbon (TOC)	Low heat with persulphate addition followed by IR detection	E110
Water	F	TPH CWG (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)	Determination of liquid:liquid extraction with hexane, fractionating with SPE followed by GC-FID for C8 to C35. C5 to C8 by headspace GC-MS	E104
Water	F	TPH LQM (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44)	Determination of liquid:liquid extraction with hexane, fractionating with SPE followed by GC-FID for C8 to C44. C5 to C8 by headspace GC-MS	E104
Water	UF	VOCs	Determination of volatile organic compounds by headspace GC-MS	E101
Water	UF	VPH (C6-C8 & C8-C10)	Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID	E101

Key

F Filtered
UF Unfiltered