



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

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

DETS Report No: 24-03130

Site Reference: Waterfold Lane, Heywood

Project / Job Ref: A4301

Order No: A4301/DS/02

Sample Receipt Date: 26/03/2024

Sample Scheduled Date: 26/03/2024

Report Issue Number: 1

Reporting Date: 04/04/2024

Authorised by:

Dave Ashworth
Technical Manager

Dates of laboratory activities for each tested analyte are available upon request.

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.

For Topsoil and WAC analysis the expanded uncertainty measurement should be considered while evaluating results against compliance values.



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Lenham Heath
Maidstone
Kent ME17 2JN
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Soil Analysis Certificate

DETS Report No: 24-03130	~Date Sampled	21/03/24	21/03/24	21/03/24	21/03/24	21/03/24
Earth Environmental & Geotechnical Ltd	~Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Waterfold Lane, Heywood	~TP / BH No	WS1	WS2	WS3	WS4	WS4
~Project / Job Ref: A4301	~Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: A4301/DS/02	~Depth (m)	0.40	0.50	0.30	0.30	0.80
Reporting Date: 04/04/2024	DETS Sample No	706377	706378	706379	706380	706381

Determinand	Unit	RL	Accreditation	(n)				
Asbestos Screen ^(S)	N/a	N/a	ISO17025	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
pH	pH Units	N/a	MCERTS	8.8	7.9	7.5	7.8	7.6
Total Cyanide	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Complex Cyanide	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Free Cyanide	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Total Sulphate as SO ₄	mg/kg	< 200	MCERTS	709	< 200	538	377	246
Total Sulphate as SO ₄	%	< 0.02	MCERTS	0.07	< 0.02	0.05	0.04	0.02
W/S Sulphate as SO ₄ (2:1)	mg/l	< 10	MCERTS	80	24	76	16	16
W/S Sulphate as SO ₄ (2:1)	g/l	< 0.01	MCERTS	0.08	0.02	0.08	0.02	0.02
Sulphide	mg/kg	< 5	NONE	< 5	< 5	< 5	< 5	< 5
Organic Matter (SOM)	%	< 0.1	MCERTS	10	2.1	8.2	5.3	2.9
Arsenic (As)	mg/kg	< 2	MCERTS	4	3	10	9	4
Barium (Ba)	mg/kg	< 2.5	MCERTS	235	25	126	133	75
Beryllium (Be)	mg/kg	< 0.5	MCERTS	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
W/S Boron	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1	< 1
Cadmium (Cd)	mg/kg	< 0.2	MCERTS	0.8	< 0.2	0.2	0.8	< 0.2
Chromium (Cr)	mg/kg	< 2	MCERTS	8	8	10	11	11
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2
Copper (Cu)	mg/kg	< 4	MCERTS	21	9	35	39	15
Lead (Pb)	mg/kg	< 3	MCERTS	61	10	71	118	16
Mercury (Hg)	mg/kg	< 1	MCERTS	< 1	< 1	< 1	< 1	< 1
Nickel (Ni)	mg/kg	< 3	MCERTS	9	6	10	10	6
Selenium (Se)	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Vanadium (V)	mg/kg	< 1	MCERTS	14	10	17	19	13
Zinc (Zn)	mg/kg	< 3	MCERTS	60	31	50	59	31
Total Phenols (monohydric)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Method Description page describes if the test is performed on the dried or as-received portion

Subcontracted analysis (S)

~ Sample details provided by the customer

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Soil Analysis Certificate

DETS Report No: 24-03130	~Date Sampled	21/03/24				
Earth Environmental & Geotechnical Ltd	~Time Sampled	None Supplied				
~Site Reference: Waterfold Lane, Heywood	~TP / BH No	WS5				
~Project / Job Ref: A4301	~Additional Refs	None Supplied				
~Order No: A4301/DS/02	~Depth (m)	0.50				
Reporting Date: 04/04/2024	DETS Sample No	706382				

Determinand	Unit	RL	Accreditation				
Asbestos Screen ^(S)	N/a	N/a	ISO17025	Not Detected			
pH	pH Units	N/a	MCERTS	7.4			
Total Cyanide	mg/kg	< 1	NONE	< 1			
Complex Cyanide	mg/kg	< 1	NONE	< 1			
Free Cyanide	mg/kg	< 1	NONE	< 1			
Total Sulphate as SO ₄	mg/kg	< 200	MCERTS	430			
Total Sulphate as SO ₄	%	< 0.02	MCERTS	0.04			
W/S Sulphate as SO ₄ (2:1)	mg/l	< 10	MCERTS	28			
W/S Sulphate as SO ₄ (2:1)	g/l	< 0.01	MCERTS	0.03			
Sulphide	mg/kg	< 5	NONE	< 5			
Organic Matter (SOM)	%	< 0.1	MCERTS	26.4			
Arsenic (As)	mg/kg	< 2	MCERTS	45			
Barium (Ba)	mg/kg	< 2.5	MCERTS	412			
Beryllium (Be)	mg/kg	< 0.5	MCERTS	3.2			
W/S Boron	mg/kg	< 1	NONE	< 1			
Cadmium (Cd)	mg/kg	< 0.2	MCERTS	< 0.2			
Chromium (Cr)	mg/kg	< 2	MCERTS	25			
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2			
Copper (Cu)	mg/kg	< 4	MCERTS	130			
Lead (Pb)	mg/kg	< 3	MCERTS	109			
Mercury (Hg)	mg/kg	< 1	MCERTS	< 1			
Nickel (Ni)	mg/kg	< 3	MCERTS	56			
Selenium (Se)	mg/kg	< 2	MCERTS	< 2			
Vanadium (V)	mg/kg	< 1	MCERTS	77			
Zinc (Zn)	mg/kg	< 3	MCERTS	67			
Total Phenols (monohydric)	mg/kg	< 2	NONE	< 2			

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Method Description page describes if the test is performed on the dried or as-received portion

Subcontracted analysis (S)

~ Sample details provided by the customer



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Soil Analysis Certificate - Speciated PAHs					
DETS Report No: 24-03130	~Date Sampled	21/03/24	21/03/24	21/03/24	21/03/24
Earth Environmental & Geotechnical Ltd	~Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Waterfold Lane, Heywood	~TP / BH No	WS1	WS2	WS3	WS4
~Project / Job Ref: A4301	~Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: A4301/DS/02	~Depth (m)	0.40	0.50	0.30	0.30
Reporting Date: 04/04/2024	DETS Sample No	706377	706378	706379	706380

Determinand	Unit	RL	Accreditation	(n)				
Naphthalene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluorene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Phenanthrene	mg/kg	< 0.1	MCERTS	0.32	< 0.1	0.21	< 0.1	< 0.1
Anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Fluoranthene	mg/kg	< 0.1	MCERTS	0.58	< 0.1	0.23	< 0.1	< 0.1
Pyrene	mg/kg	< 0.1	MCERTS	0.55	< 0.1	0.20	< 0.1	< 0.1
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	0.22	< 0.1	< 0.1	< 0.1	< 0.1
Chrysene	mg/kg	< 0.1	MCERTS	0.27	< 0.1	0.12	< 0.1	< 0.1
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	0.24	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	0.12	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	0.27	< 0.1	< 0.1	< 0.1	< 0.1
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	0.18	< 0.1	< 0.1	< 0.1	< 0.1
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	0.16	< 0.1	< 0.1	< 0.1	< 0.1
Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	2.9	< 1.6	< 1.6	< 1.6	< 1.6

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Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 24-03130	~Date Sampled	21/03/24				
Earth Environmental & Geotechnical Ltd	~Time Sampled	None Supplied				
~Site Reference: Waterfold Lane, Heywood	~TP / BH No	WS5				
~Project / Job Ref: A4301	~Additional Refs	None Supplied				
~Order No: A4301/DS/02	~Depth (m)	0.50				
Reporting Date: 04/04/2024	DETS Sample No	706382				

Determinand	Unit	RL	Accreditation				
Naphthalene	mg/kg	< 0.1	MCERTS	< 0.1			
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1			
Acenaphthene	mg/kg	< 0.1	MCERTS	< 0.1			
Fluorene	mg/kg	< 0.1	MCERTS	< 0.1			
Phenanthrene	mg/kg	< 0.1	MCERTS	0.23			
Anthracene	mg/kg	< 0.1	MCERTS	< 0.1			
Fluoranthene	mg/kg	< 0.1	MCERTS	0.30			
Pyrene	mg/kg	< 0.1	MCERTS	0.27			
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	0.14			
Chrysene	mg/kg	< 0.1	MCERTS	0.21			
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	0.14			
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	< 0.1			
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	< 0.1			
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	< 0.1			
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	< 0.1			
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	< 0.1			
Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	< 1.6			

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Soil Analysis Certificate - TPH CWG Banded					
DETS Report No: 24-03130	~Date Sampled	21/03/24	21/03/24	21/03/24	21/03/24
Earth Environmental & Geotechnical Ltd	~Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Waterfold Lane, Heywood	~TP / BH No	WS1	WS2	WS3	WS4
~Project / Job Ref: A4301	~Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: A4301/DS/02	~Depth (m)	0.40	0.50	0.30	0.30
Reporting Date: 04/04/2024	DETS Sample No	706377	706378	706379	706380

Determinand	Unit	RL	Accreditation	(n)				
Aliphatic >C5 - C6 : HS_1D_MS_AL	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aliphatic >C6 - C8 : HS_1D_MS_AL	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic >C8 - C10 : EH_CU_1D_AL	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Aliphatic >C10 - C12 : EH_CU_1D_AL	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Aliphatic >C12 - C16 : EH_CU_1D_AL	mg/kg	< 3	MCERTS	24	< 3	< 3	< 3	< 3
Aliphatic >C16 - C21 : EH_CU_1D_AL	mg/kg	< 3	MCERTS	31	< 3	< 3	< 3	< 3
Aliphatic >C21 - C34 : EH_CU_1D_AL	mg/kg	< 10	MCERTS	213	< 10	< 10	< 10	< 10
Aliphatic (C5 - C34) : HS_1D_MS+EH_CU_1D_AL	mg/kg	< 21	NONE	268	< 21	< 21	< 21	< 21
Aromatic >C5 - C7 : HS_1D_MS_AR	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Aromatic >C7 - C8 : HS_1D_MS_AR	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic >C8 - C10 : EH_CU_1D_AR	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Aromatic >C10 - C12 : EH_CU_1D_AR	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Aromatic >C12 - C16 : EH_CU_1D_AR	mg/kg	< 2	MCERTS	11	< 2	4	< 2	< 2
Aromatic >C16 - C21 : EH_CU_1D_AR	mg/kg	< 3	MCERTS	83	< 3	18	< 3	< 3
Aromatic >C21 - C35 : EH_CU_1D_AR	mg/kg	< 10	MCERTS	553	< 10	74	< 10	< 10
Aromatic (C5 - C35) : HS_1D_MS+EH_CU_1D_AR	mg/kg	< 21	NONE	646	< 21	97	< 21	< 21
Total >C5 - C35 : HS_1D_MS+EH_CU_1D_Tot al	mg/kg	< 42	NONE	915	< 42	97	< 42	< 42

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Soil Analysis Certificate - TPH CWG Banded					
DETS Report No: 24-03130	~Date Sampled	21/03/24			
Earth Environmental & Geotechnical Ltd	~Time Sampled	None Supplied			
~Site Reference: Waterfold Lane, Heywood	~TP / BH No	WS5			
~Project / Job Ref: A4301	~Additional Refs	None Supplied			
~Order No: A4301/DS/02	~Depth (m)	0.50			
Reporting Date: 04/04/2024	DETS Sample No	706382			

Determinand	Unit	RL	Accreditation				
Aliphatic >C5 - C6 : HS_1D_MS_AL	mg/kg	< 0.01	NONE	< 0.01			
Aliphatic >C6 - C8 : HS_1D_MS_AL	mg/kg	< 0.05	NONE	< 0.05			
Aliphatic >C8 - C10 : EH_CU_1D_AL	mg/kg	< 2	MCERTS	< 2			
Aliphatic >C10 - C12 : EH_CU_1D_AL	mg/kg	< 2	MCERTS	< 2			
Aliphatic >C12 - C16 : EH_CU_1D_AL	mg/kg	< 3	MCERTS	< 3			
Aliphatic >C16 - C21 : EH_CU_1D_AL	mg/kg	< 3	MCERTS	< 3			
Aliphatic >C21 - C34 : EH_CU_1D_AL	mg/kg	< 10	MCERTS	< 10			
Aliphatic (C5 - C34) : HS_1D_MS+EH_CU_1D_AL	mg/kg	< 21	NONE	< 21			
Aromatic >C5 - C7 : HS_1D_MS_AR	mg/kg	< 0.01	NONE	< 0.01			
Aromatic >C7 - C8 : HS_1D_MS_AR	mg/kg	< 0.05	NONE	< 0.05			
Aromatic >C8 - C10 : EH_CU_1D_AR	mg/kg	< 2	MCERTS	< 2			
Aromatic >C10 - C12 : EH_CU_1D_AR	mg/kg	< 2	MCERTS	< 2			
Aromatic >C12 - C16 : EH_CU_1D_AR	mg/kg	< 2	MCERTS	< 2			
Aromatic >C16 - C21 : EH_CU_1D_AR	mg/kg	< 3	MCERTS	< 3			
Aromatic >C21 - C35 : EH_CU_1D_AR	mg/kg	< 10	MCERTS	< 10			
Aromatic (C5 - C35) : HS_1D_MS+EH_CU_1D_AR	mg/kg	< 21	NONE	< 21			
Total >C5 - C35 : HS_1D_MS+EH_CU_1D_Tot al	mg/kg	< 42	NONE	< 42			

~ Sample details provided by the customer



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Soil Analysis Certificate - BTEX / MTBE						
DETS Report No: 24-03130	~Date Sampled	21/03/24	21/03/24	21/03/24	21/03/24	21/03/24
Earth Environmental & Geotechnical Ltd	~Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Waterfold Lane, Heywood	~TP / BH No	WS1	WS2	WS3	WS4	WS4
~Project / Job Ref: A4301	~Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: A4301/DS/02	~Depth (m)	0.40	0.50	0.30	0.30	0.80
Reporting Date: 04/04/2024	DETS Sample No	706377	706378	706379	706380	706381

Determinand	Unit	RL	Accreditation	(n)				
Benzene : HS 1D MS	ug/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Toluene : HS 1D MS	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5
Ethylbenzene : HS 1D MS	ug/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
p & m-xylene : HS 1D MS	ug/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
o-xylene : HS 1D MS	ug/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
MTBE : HS 1D MS	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5	< 5

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Soil Analysis Certificate - BTEX / MTBE						
DETS Report No: 24-03130	~Date Sampled	21/03/24				
Earth Environmental & Geotechnical Ltd	~Time Sampled	None Supplied				
~Site Reference: Waterfold Lane, Heywood	~TP / BH No	WS5				
~Project / Job Ref: A4301	~Additional Refs	None Supplied				
~Order No: A4301/DS/02	~Depth (m)	0.50				
Reporting Date: 04/04/2024	DETS Sample No	706382				

Determinand	Unit	RL	Accreditation				
Benzene : HS 1D MS	ug/kg	< 2	MCERTS	< 2			
Toluene : HS 1D MS	ug/kg	< 5	MCERTS	< 5			
Ethylbenzene : HS 1D MS	ug/kg	< 2	MCERTS	< 2			
p & m-xylene : HS 1D MS	ug/kg	< 2	MCERTS	< 2			
o-xylene : HS 1D MS	ug/kg	< 2	MCERTS	< 2			
MTBE : HS 1D MS	ug/kg	< 5	MCERTS	< 5			

~ Sample details provided by the customer

Waste Acceptance Criteria Analytical Certificate										
DETS Report No: 24-03130		~Date Sampled	21/03/24					Landfill Waste Acceptance Criteria Limits		
Earth Environmental & Geotechnical Ltd		~Time Sampled	None Supplied					Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
~Site Reference: Waterfold Lane, Heywood		~TP / BH No	WS1							
~Project / Job Ref: A4301		~Additional Refs	None Supplied							
~Order No: A4301/DS/02		~Depth (m)	0.40							
Reporting Date: 04/04/2024		DETS Sample No	706377							
Determinand		Unit	MDL							
TOC ^{MU}		%	< 0.1	5.8				3%	5%	6%
Loss on Ignition ^{MU}		%	< 0.01	7.30				--	--	10%
BTEX ^{MU}		mg/kg	< 0.05	< 0.05				6	--	--
Sum of PCBs		mg/kg	< 0.1	< 0.1				1	--	--
Mineral Oil ^{MU}		mg/kg	< 10	333				500	--	--
Total PAH ^{MU}		mg/kg	< 1.7	2.9				100	--	--
pH ^{MU}		pH Units	N/a	8.8				--	>6	--
Acid Neutralisation Capacity		mol/kg (+/-)	< 1	1.5				--	To be evaluated	To be evaluated
Eluate Analysis			2:1 mg/l	8:1 mg/l		Cumulative 10:1 * mg/kg	Limit values for compliance leaching test using BS EN 12457-3 at L/S 10 l/kg (mg/kg)			
Arsenic ^U			0.0022	0.0014		0.025	0.5	2	25	
Barium ^U			0.0619	0.0753		1.350	20	100	300	
Cadmium ^U			< 0.0002	< 0.0002		< 0.002	0.04	1	5	
Chromium ^U			0.0011	0.0009		0.017	0.5	10	70	
Copper ^U			0.0052	0.0022		0.043	2	50	100	
Mercury ^U			< 0.00004	< 0.00004		< 0.0004	0.01	0.2	2	
Molybdenum ^U			0.0069	0.0021		0.044	0.5	10	30	
Nickel ^U			< 0.0002	< 0.0002		< 0.0002	0.4	10	40	
Lead ^U			0.0050	0.0012		0.026	0.5	10	50	
Antimony ^U			< 0.0002	< 0.0002		< 0.002	0.06	0.7	5	
Selenium ^U			0.0005	0.0002		0.0046	0.1	0.5	7	
Zinc ^U			0.002	0.007		0.13	4	50	200	
Chloride ^U			2	1		22	800	15000	25000	
Fluoride ^U			0.8	< 0.5		< 1	10	150	500	
Sulphate ^U			18	5		110	1000	20000	50000	
TDS			106	79		1462	4000	60000	100000	
Phenol Index ^U			< 0.01	< 0.01		< 0.5	1	-	-	
DOC ^U			9.9	7.9		145	500	800	1000	
Leach Test Information										

Waste Acceptance Criteria Analytical Certificate										
DETS Report No: 24-03130		~Date Sampled	21/03/24					Landfill Waste Acceptance Criteria Limits		
Earth Environmental & Geotechnical Ltd		~Time Sampled	None Supplied					Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill
~Site Reference: Waterfold Lane, Heywood		~TP / BH No	WS5							
~Project / Job Ref: A4301		~Additional Refs	None Supplied							
~Order No: A4301/DS/02		~Depth (m)	0.50							
Reporting Date: 04/04/2024		DETS Sample No	706382							
Determinand	Unit	MDL								
TOC ^{MU}	%	< 0.1	15.4				3%	5%	6%	
Loss on Ignition ^{MU}	%	< 0.01	11.80				--	--	10%	
BTEX ^{MU}	mg/kg	< 0.05	< 0.05				6	--	--	
Sum of PCBs	mg/kg	< 0.1	< 0.1				1	--	--	
Mineral Oil ^{MU}	mg/kg	< 10	< 10				500	--	--	
Total PAH ^{MU}	mg/kg	< 1.7	< 1.7				100	--	--	
pH ^{MU}	pH Units	N/a	7.4				--	>6	--	
Acid Neutralisation Capacity	mol/kg (+/-)	< 1	< 1				--	To be evaluated	To be evaluated	
Eluate Analysis				2:1 mg/l	8:1 mg/l		Cumulative 10:1 * mg/kg	Limit values for compliance leaching test using BS EN 12457-3 at L/S 10 l/kg (mg/kg)		
Arsenic ^U			0.0016	0.0008		0.016	0.5	2	25	
Barium ^U			0.0472	0.0338		0.624	20	100	300	
Cadmium ^U			< 0.0002	< 0.0002		< 0.002	0.04	1	5	
Chromium ^U			0.0003	< 0.0002		0.003	0.5	10	70	
Copper ^U			0.0021	0.0013		0.024	2	50	100	
Mercury ^U			0.00005	< 0.00004		< 0.0004	0.01	0.2	2	
Molybdenum ^U			0.0090	0.0038		0.074	0.5	10	30	
Nickel ^U			< 0.0002	< 0.0002		< 0.0002	0.4	10	40	
Lead ^U			0.0017	0.0009		0.017	0.5	10	50	
Antimony ^U			< 0.0002	< 0.0002		< 0.002	0.06	0.7	5	
Selenium ^U			0.0009	0.0002		0.0044	0.1	0.5	7	
Zinc ^U			0.004	0.016		0.28	4	50	200	
Chloride ^U			< 1	< 1		< 12	800	15000	25000	
Fluoride ^U			< 0.5	< 0.5		< 1	10	150	500	
Sulphate ^U			12	6		109	1000	20000	50000	
TDS			45	29		539	4000	60000	100000	
Phenol Index ^U			< 0.01	< 0.01		< 0.5	1	-	-	
DOC ^U			5.1	6.3		113	500	800	1000	
Leach Test Information										
Sample Mass (kg)			0.10							
Dry Matter (%)			85.5							
Moisture (%)			17							
Stage 1										
Volume Eluate L2 (litres)			0.16							
Filtered Eluate VE1 (litres)			0.08							
Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Samples Descriptions page describes if the test is performed on the dried or as-received portion										
Stated limits are for guidance only and Normec DETS Limited cannot be held responsible for any discrepancies with current legislation										
M Denotes MCERTS accredited test										
U Denotes ISO17025 accredited test										
~ Sample details provided by the customer										
* DETS are accredited for the testing of leachate and not the leachate preparation stage which is unaccredited										



Normec DETS Limited
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: 24-03130	
Earth Environmental & Geotechnical Ltd	
~Site Reference: Waterfold Lane, Heywood	
~Project / Job Ref: A4301	
~Order No: A4301/DS/02	
Reporting Date: 04/04/2024	

DETS Sample No	~TP / BH No	~Additional Refs	~Depth (m)	Moisture Content (%)	Sample Matrix Description
706377	WS1	None Supplied	0.40	5.4	Black loamy gravel with stones and concrete
706378	WS2	None Supplied	0.50	15.3	Light brown sandy clay
706379	WS3	None Supplied	0.30	10.2	Brown sandy loam with stones and concrete
706380	WS4	None Supplied	0.30	17.7	Brown sandy loam with stones and concrete
706381	WS4	None Supplied	0.80	18.8	Brown sandy clay
706382	WS5	None Supplied	0.50	14	Black loamy sand with stones and concrete

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

Insufficient Sample ^{I/S}

Unsuitable Sample ^{U/S}

~ Sample details provided by the customer



Normec DETS Limited
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: 24-03130

Earth Environmental & Geotechnical Ltd

~Site Reference: Waterfold Lane, Heywood

~Project / Job Ref: A4301

~Order No: A4301/DS/02

Reporting Date: 04/04/2024

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 diphénylcarbazide 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	Fraction Organic Carbon (FOC)	Determination of TOC by combustion analyser.	E027
Soil	D	Organic Matter (SOM)	Determination of TOC by combustion analyser.	E027
Soil	D	TOC (Total Organic Carbon)	Determination of TOC by combustion analyser.	E027
Soil	AR	Exchangeable Ammonium	Determination of ammonium by discrete analyser.	E029
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 (all: 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 (all: 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

~ Sample details provided by the customer



Normec DETS Limited
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: 24-03130

Earth Environmental & Geotechnical Ltd

~Site Reference: Waterfold Lane, Heywood

~Project / Job Ref: A4301

~Order No: A4301/DS/02

Reporting Date: 04/04/2024

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	F	Ammoniacal Nitrogen	Determination of ammoniacal nitrogen by discrete analyser.	E126
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	U	Chemical Oxygen Demand (COD)	Determination using a COD reactor followed by colorimetry	E112
Water	UF	Biological Oxygen Demand (BOD)	Determination using BOD sensors measuring the change of pressure	E133
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 GI-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 SO4)	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

~ Sample details provided by the customer



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



List of HWOL Acronyms and Operators	
DETS Report No: 24-03130	
Earth Environmental & Geotechnical Ltd	
~Site Reference: Waterfold Lane, Heywood	
~Project / Job Ref: A4301	
~Order No: A4301/DS/02	
Reporting Date: 04/04/2024	

Acronym	Description
HS	Headspace analysis
EH	Extractable Hydrocarbons - i.e. everything extracted by the solvent
CU	Clean-up - e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
2D	GC-GC - Double coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted
	Operator - underscore to separate acronyms (exception for +)
+	Operator to indicate cumulative eg. EH+HS_Total or EH_CU+HS_Total
~	Sample details provided by the customer

Benzene - HS_1D_MS
Ethylbenzene - HS_1D_MS
MTBE - HS_1D_MS
Mineral Oil (C10 - C40) (BS EN 12457-3) - EH_CU_1D_AL
TPH CWG - Aliphatic >C10 - C12 - EH_CU_1D_AL
TPH CWG - Aliphatic >C12 - C16 - EH_CU_1D_AL
TPH CWG - Aliphatic >C16 - C21 - EH_CU_1D_AL
TPH CWG - Aliphatic >C21 - C34 - EH_CU_1D_AL
TPH CWG - Aliphatic >C5 - C6 - HS_1D_MS_AL
TPH CWG - Aliphatic >C6 - C8 - HS_1D_MS_AL
TPH CWG - Aliphatic >C8 - C10 - EH_CU_1D_AL
TPH CWG - Aliphatic C5 - C34 - HS_1D_MS+EH_CU_1D_AL
TPH CWG - Aromatic >C10 - C12 - EH_CU_1D_AR
TPH CWG - Aromatic >C12 - C16 - EH_CU_1D_AR
TPH CWG - Aromatic >C16 - C21 - EH_CU_1D_AR
TPH CWG - Aromatic >C21 - C35 - EH_CU_1D_AR
TPH CWG - Aromatic >C5 - C35 - HS_1D_MS+EH_CU_1D_AR
TPH CWG - Aromatic >C5 - C7 - HS_1D_MS_AR
TPH CWG - Aromatic >C7 - C8 - HS_1D_MS_AR
TPH CWG - Aromatic >C8 - C10 - EH_CU_1D_AR
TPH CWG - Total >C5 - C35 - HS_1D_MS+EH_CU_1D_Total
Toluene - HS_1D_MS
Total BTEX (BS EN 12457-3) - HS_1D_MS_Total
m & p-xylene - HS_1D_MS
o-Xylene - HS_1D_MS

Parameter	Matrix Type	Expanded Uncertainty Measurement	Unit
TOC	Soil	12.2	%
Loss on Ignition	Soil	22.9	%
BTEX	Soil	11.2	%
Sum of PCBs	Soil	43.4	%
Mineral Oil	Soil	9.0	%
Total PAH	Soil	18.5	%
pH	Soil	0.335	Units
Acid Neutralisation Capacity	Soil	18.0	%
Clay Content	Soil	15.0	%
Silt Content	Soil	14.0	%
Sand Content	Soil	13.0	%
Loss on Ignition	Soil	22.9	%
pH	Soil	0.335	Units
Carbonate	Soil	12.0	%
Total Nitrogen	Soil	12.0	%
Phosphorus (Extractable)	Soil	24.0	%
Potassium (Extractable)	Soil	20.0	%
Magnesium (Extractable)	Soil	26.0	%
Zinc	Soil	21.6	%
Copper	Soil	18.2	%
Nickel	Soil	24.3	%
Available Sodium	Soil	23.0	%
Available Calcium	Soil	23.0	%
Electrical Conductivity	Soil	10.0	%



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

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

DETS Report No: 24-04333

Site Reference: Waterfold Lane, Heywood

Project / Job Ref: A4301

Order No: A4301/MM/02

Sample Receipt Date: 23/04/2024

Sample Scheduled Date: 24/04/2024

Report Issue Number: 1

Reporting Date: 30/04/2024

Authorised by:

Steve Knight
Customer Support Manager

Dates of laboratory activities for each tested analyte are available upon request.

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.

For Topsoil and WAC analysis the expanded uncertainty measurement should be considered while evaluating results against compliance values.



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



Soil Analysis Certificate				
DETS Report No: 24-04333	~Date Sampled	19/04/24	19/04/24	19/04/24
Earth Environmental & Geotechnical Ltd	~Time Sampled	None Supplied	None Supplied	None Supplied
~Site Reference: Waterfold Lane, Heywood	~TP / BH No	CP1	CP1	CP2
~Project / Job Ref: A4301	~Additional Refs	None Supplied	None Supplied	None Supplied
~Order No: A4301/MM/02	~Depth (m)	1.00	2.50	0.50
Reporting Date: 30/04/2024	DETS Sample No	711129	711130	711131

Determinand	Unit	RL	Accreditation	19/04/24	19/04/24	19/04/24	19/04/24
Asbestos Screen ^(S)	N/a	N/a	ISO17025	Not Detected	Not Detected	Not Detected	Not Detected
pH	pH Units	N/a	MCERTS	7.6	7.6	11.3	7.7
Total Cyanide	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1
Complex Cyanide	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1
Free Cyanide	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1
Total Sulphate as SO ₄	mg/kg	< 200	MCERTS	925	10430	1110	657
Total Sulphate as SO ₄	%	< 0.02	MCERTS	0.09	1.04	0.11	0.07
W/S Sulphate as SO ₄ (2:1)	mg/l	< 10	MCERTS	131	320	192	117
W/S Sulphate as SO ₄ (2:1)	g/l	< 0.01	MCERTS	0.13	0.32	0.19	0.12
Sulphide	mg/kg	< 5	NONE	< 5	< 5	< 5	< 5
Organic Matter (SOM)	%	< 0.1	MCERTS	28.7	7.6	6.7	3
Arsenic (As)	mg/kg	< 2	MCERTS	27	25	9	7
Barium (Ba)	mg/kg	< 2.5	MCERTS	185	126	189	148
Beryllium (Be)	mg/kg	< 0.5	MCERTS	1.7	2.2	0.7	0.7
W/S Boron	mg/kg	< 1	NONE	< 1	< 1	< 1	< 1
Cadmium (Cd)	mg/kg	< 0.2	MCERTS	0.6	< 0.2	0.6	0.5
Chromium (Cr)	mg/kg	< 2	MCERTS	23	15	15	13
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2
Copper (Cu)	mg/kg	< 4	MCERTS	121	116	53	20
Lead (Pb)	mg/kg	< 3	MCERTS	132	41	100	37
Mercury (Hg)	mg/kg	< 1	MCERTS	< 1	< 1	< 1	< 1
Nickel (Ni)	mg/kg	< 3	MCERTS	35	42	16	14
Selenium (Se)	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2
Vanadium (V)	mg/kg	< 1	MCERTS	40	53	22	19
Zinc (Zn)	mg/kg	< 3	MCERTS	149	57	81	77
Total Phenols (monohydric)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Method Description page describes if the test is performed on the dried or as-received portion

Subcontracted analysis (S)

~ Sample details provided by the customer



Normec DETS Limited
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: 24-04333	~Date Sampled	19/04/24	19/04/24	19/04/24	19/04/24
Earth Environmental & Geotechnical Ltd	~Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Waterfold Lane, Heywood	~TP / BH No	CP1	CP1	CP2	CP2
~Project / Job Ref: A4301	~Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: A4301/MM/02	~Depth (m)	1.00	2.50	0.50	0.70
Reporting Date: 30/04/2024	DETS Sample No	711129	711130	711131	711132

Determinand	Unit	RL	Accreditation				
Naphthalene	mg/kg	< 0.1	MCERTS	28	0.82	0.54	< 0.1
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	< 0.1	< 0.1
Acenaphthene	mg/kg	< 0.1	MCERTS	131	3.51	1.25	0.36
Fluorene	mg/kg	< 0.1	MCERTS	70.90	1.92	0.90	< 0.1
Phenanthrene	mg/kg	< 0.1	MCERTS	563	19.90	3.87	0.57
Anthracene	mg/kg	< 0.1	MCERTS	147	5.63	1.21	0.17
Fluoranthene	mg/kg	< 0.1	MCERTS	890	39.10	4.76	0.81
Pyrene	mg/kg	< 0.1	MCERTS	733	31.60	4.54	0.84
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	286	11.70	1.56	0.31
Chrysene	mg/kg	< 0.1	MCERTS	262	10.90	2.04	0.41
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	236	9.52	2.39	0.48
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	96.60	4.08	0.87	0.15
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	188	10.40	2.37	0.44
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	94.60	4.95	1.52	0.29
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	19.40	0.94	< 0.1	< 0.1
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	67.20	3.40	1.36	0.26
Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	3810	158	29.2	5.1

~ Sample details provided by the customer



Normec DETS Limited
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
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Soil Analysis Certificate - TPH CWG Banded					
DETS Report No: 24-04333	~Date Sampled	19/04/24	19/04/24	19/04/24	19/04/24
Earth Environmental & Geotechnical Ltd	~Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Waterfold Lane, Heywood	~TP / BH No	CP1	CP1	CP2	CP2
~Project / Job Ref: A4301	~Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: A4301/MM/02	~Depth (m)	1.00	2.50	0.50	0.70
Reporting Date: 30/04/2024	DETS Sample No	711129	711130	711131	711132

Determinand	Unit	RL	Accreditation					
Aliphatic >C5 - C6 : HS_1D_MS_AL	mg/kg	< 0.01	NONE	< 0.01	< 0.01	< 0.01	< 0.01	
Aliphatic >C6 - C8 : HS_1D_MS_AL	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Aliphatic >C8 - C10 : EH_CU_1D_AL	mg/kg	< 2	MCERTS	5	< 2	< 2	4	
Aliphatic >C10 - C12 : EH_CU_1D_AL	mg/kg	< 2	MCERTS	53	< 2	14	16	
Aliphatic >C12 - C16 : EH_CU_1D_AL	mg/kg	< 3	MCERTS	405	13	144	156	
Aliphatic >C16 - C21 : EH_CU_1D_AL	mg/kg	< 3	MCERTS	525	17	209	215	
Aliphatic >C21 - C34 : EH_CU_1D_AL	mg/kg	< 10	MCERTS	807	32	204	286	
Aliphatic (C5 - C34) : HS_1D_MS+EH_CU_1D_AL	mg/kg	< 21	NONE	1795	62	571	675	
Aromatic >C5 - C7 : HS_1D_MS_AR	mg/kg	< 0.01	NONE	< 0.01	0.03	< 0.01	< 0.01	
Aromatic >C7 - C8 : HS_1D_MS_AR	mg/kg	< 0.05	NONE	< 0.05	< 0.05	< 0.05	< 0.05	
Aromatic >C8 - C10 : EH_CU_1D_AR	mg/kg	< 2	MCERTS	5	< 2	< 2	< 2	
Aromatic >C10 - C12 : EH_CU_1D_AR	mg/kg	< 2	MCERTS	61	2	< 2	< 2	
Aromatic >C12 - C16 : EH_CU_1D_AR	mg/kg	< 2	MCERTS	1121	40	11	14	
Aromatic >C16 - C21 : EH_CU_1D_AR	mg/kg	< 3	MCERTS	4751	213	45	35	
Aromatic >C21 - C35 : EH_CU_1D_AR	mg/kg	< 10	MCERTS	5962	283	54	29	
Aromatic (C5 - C35) : HS_1D_MS+EH_CU_1D_AR	mg/kg	< 21	NONE	11900	539	111	77	
Total >C5 - C35 : HS_1D_MS+EH_CU_1D_Tot al	mg/kg	< 42	NONE	13695	601	682	752	

~ Sample details provided by the customer



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Lenham Heath
Maidstone
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Soil Analysis Certificate - BTEX / MTBE						
DETS Report No: 24-04333	~Date Sampled	19/04/24	19/04/24	19/04/24	19/04/24	
Earth Environmental & Geotechnical Ltd	~Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	
~Site Reference: Waterfold Lane, Heywood	~TP / BH No	CP1	CP1	CP2	CP2	
~Project / Job Ref: A4301	~Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied	
~Order No: A4301/MM/02	~Depth (m)	1.00	2.50	0.50	0.70	
Reporting Date: 30/04/2024	DETS Sample No	711129	711130	711131	711132	

Determinand	Unit	RL	Accreditation				
Benzene : HS_1D_MS	ug/kg	< 2	MCERTS	< 2	33	< 2	< 2
Toluene : HS_1D_MS	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5
Ethylbenzene : HS_1D_MS	ug/kg	< 2	MCERTS	22	< 2	< 2	< 2
p & m-xylene : HS_1D_MS	ug/kg	< 2	MCERTS	43	4	< 2	< 2
o-xylene : HS_1D_MS	ug/kg	< 2	MCERTS	27	2	< 2	< 2
MTBE : HS_1D_MS	ug/kg	< 5	MCERTS	< 5	< 5	< 5	< 5

~ Sample details provided by the customer



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L, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410



Waste Acceptance Criteria Analytical Certificate																																							
DETS Report No: 24-04333		~Date Sampled	19/04/24		<table border="1"> <thead> <tr> <th colspan="3">Landfill Waste Acceptance Criteria Limits</th> </tr> <tr> <th>Inert Waste Landfill</th> <th>Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill</th> <th>Hazardous Waste Landfill</th> </tr> </thead> <tbody> <tr> <td>3%</td> <td>5%</td> <td>6%</td> </tr> <tr> <td>--</td> <td>--</td> <td>10%</td> </tr> <tr> <td>6</td> <td>--</td> <td>--</td> </tr> <tr> <td>1</td> <td>--</td> <td>--</td> </tr> <tr> <td>500</td> <td>--</td> <td>--</td> </tr> <tr> <td>100</td> <td>--</td> <td>--</td> </tr> <tr> <td>--</td> <td>>6</td> <td>--</td> </tr> <tr> <td>--</td> <td>To be evaluated</td> <td>To be evaluated</td> </tr> </tbody> </table>					Landfill Waste Acceptance Criteria Limits			Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill	3%	5%	6%	--	--	10%	6	--	--	1	--	--	500	--	--	100	--	--	--	>6	--	--	To be evaluated	To be evaluated
Landfill Waste Acceptance Criteria Limits																																							
Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill																																					
3%	5%	6%																																					
--	--	10%																																					
6	--	--																																					
1	--	--																																					
500	--	--																																					
100	--	--																																					
--	>6	--																																					
--	To be evaluated	To be evaluated																																					
Earth Environmental & Geotechnical Ltd		~Time Sampled	None Supplied																																				
~Site Reference: Waterfold Lane, Heywood		~TP / BH No	CP1																																				
~Project / Job Ref: A4301		~Additional Refs	None Supplied																																				
~Order No: A4301/MM/02		~Depth (m)	1.00																																				
Reporting Date: 30/04/2024		DETS Sample No	711129																																				
Determinand	Unit	MDL																																					
TOC ^{MU}	%	< 0.1	16.7																																				
Loss on Ignition ^{MU}	%	< 0.01	16.20																																				
BTEX ^{MU}	mg/kg	< 0.05	0.09																																				
Sum of PCBs	mg/kg	< 0.1	< 0.1																																				
Mineral Oil ^{MU}	mg/kg	< 10	1819																																				
Total PAH ^{MU}	mg/kg	< 1.7	3830																																				
pH ^{MU}	pH Units	N/a	7.6																																				
Acid Neutralisation Capacity	mol/kg (+/-)	< 1	< 1																																				
Eluate Analysis			2:1 mg/l	8:1 mg/l		Cumulative 10:1 * mg/kg	Limit values for compliance leaching test using BS EN 12457-3 at L/S 10 l/kg (mg/kg)																																
Arsenic ^U		0.0032	0.0036		0.065	0.5	2	25																															
Barium ^U		0.0581	0.0275		0.520	20	100	300																															
Cadmium ^U		< 0.0002	< 0.0002		< 0.002	0.04	1	5																															
Chromium ^U		0.0005	0.0003		0.005	0.5	10	70																															
Copper ^U		0.0059	0.0049		0.090	2	50	100																															
Mercury ^U		< 0.00004	< 0.00004		< 0.0004	0.01	0.2	2																															
Molybdenum ^U		0.0131	0.0050		0.097	0.5	10	30																															
Nickel ^U		0.0004	0.0003		0.0060	0.4	10	40																															
Lead ^U		0.0002	0.0004		0.008	0.5	10	50																															
Antimony ^U		< 0.0002	< 0.0002		< 0.002	0.06	0.7	5																															
Selenium ^U		0.0006	< 0.0002		0.0032	0.1	0.5	7																															
Zinc ^U		0.008	0.003		0.05	4	50	200																															
Chloride ^U		4	11		192	800	15000	25000																															
Fluoride ^U		< 0.5	< 0.5		< 1	10	150	500																															
Sulphate ^U		49	49		895	1000	20000	50000																															
TDS		186	83		1579	4000	60000	100000																															
Phenol Index ^U		< 0.01	< 0.01		< 0.5	1	-	-																															
DOC ^U		16	12.5		228	500	800	1000																															
Leach Test Information																																							
Sample Mass (kg)			0.11																																				
Dry Matter (%)			82.7																																				
Moisture (%)			21																																				
Stage 1																																							
Volume Eluate L2 (litres)			0.16																																				
Filtered Eluate VE1 (litres)			0.06																																				

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Samples Descriptions page describes if the test is performed on the dried or as-received portion

Stated limits are for guidance only and Normec DETS Limited cannot be held responsible for any discrepancies with current legislation

M Denotes MCERTS accredited test

U Denotes ISO17025 accredited test

~ Sample details provided by the customer

* DETS are accredited for the testing of leachate and not the leachate preparation stage which is unaccredited



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



Soil Analysis Certificate - Sample Descriptions

DETS Report No: 24-04333

Earth Environmental & Geotechnical Ltd

~Site Reference: Waterfold Lane, Heywood

~Project / Job Ref: A4301

~Order No: A4301/MM/02

Reporting Date: 30/04/2024

DETS Sample No	~TP / BH No	~Additional Refs	~Depth (m)	Moisture Content (%)	Sample Matrix Description
711129	CP1	None Supplied	1.00	16.9	Black loamy sand with stones and vegetation
711130	CP1	None Supplied	2.50	15	Brown sandy loam with stones and brick
711131	CP2	None Supplied	0.50	9.2	Brown loamy sand with stones and concrete
711132	CP2	None Supplied	0.70	10.6	Brown sandy loam with stones

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

Insufficient Sample ^{U/S}

Unsuitable Sample ^{U/S}

~ Sample details provided by the customer



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Soil Analysis Certificate - Methodology & Miscellaneous Information

DETS Report No: 24-04333

Earth Environmental & Geotechnical Ltd

~Site Reference: Waterfold Lane, Heywood

~Project / Job Ref: A4301

~Order No: A4301/MM/02

Reporting Date: 30/04/2024

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	Fraction Organic Carbon (FOC)	Determination of TOC by combustion analyser.	E027
Soil	D	Organic Matter (SOM)	Determination of TOC by combustion analyser.	E027
Soil	D	TOC (Total Organic Carbon)	Determination of TOC by combustion analyser.	E027
Soil	AR	Exchangeable Ammonium	Determination of ammonium by discrete analyser.	E029
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

~ Sample details provided by the customer



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Lenham Heath
Maidstone
Kent ME17 2JN
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Water Analysis Certificate - Methodology & Miscellaneous Information

DETS Report No: 24-04333

Earth Environmental & Geotechnical Ltd

~Site Reference: Waterfold Lane, Heywood

~Project / Job Ref: A4301

~Order No: A4301/MM/02

Reporting Date: 30/04/2024

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	F	Ammoniacal Nitrogen	Determination of ammoniacal nitrogen by discrete analyser.	E126
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	U	Chemical Oxygen Demand (COD)	Determination using a COD reactor followed by colorimetry	E112
Water	UF	Biological Oxygen Demand (BOD)	Determination using BOD sensors measuring the change of pressure	E133
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 colorimetry	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 SO4)	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

~ Sample details provided by the customer



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



List of HWOL Acronyms and Operators

DETS Report No: 24-04333

Earth Environmental & Geotechnical Ltd

~Site Reference: Waterfold Lane, Heywood

~Project / Job Ref: A4301

~Order No: A4301/MM/02

Reporting Date: 30/04/2024

Acronym	Description
HS	Headspace analysis
EH	Extractable Hydrocarbons - i.e. everything extracted by the solvent
CU	Clean-up - e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
2D	GC-GC - Double coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
#1	EH 2D Total but with humics mathematically subtracted
#2	EH 2D Total but with fatty acids mathematically subtracted
_	Operator - underscore to separate acronyms (exception for +)
+	Operator to indicate cumulative eg. EH+HS Total or EH_CU+HS Total
~	Sample details provided by the customer

Benzene - HS_1D_MS
Ethylbenzene - HS_1D_MS
MTBE - HS_1D_MS
Mineral Oil (C10 - C40) (BS EN 12457-3) - EH_CU_1D_AL
TPH CWG - Aliphatic >C10 - C12 - EH_CU_1D_AL
TPH CWG - Aliphatic >C12 - C16 - EH_CU_1D_AL
TPH CWG - Aliphatic >C16 - C21 - EH_CU_1D_AL
TPH CWG - Aliphatic >C21 - C34 - EH_CU_1D_AL
TPH CWG - Aliphatic >C5 - C6 - HS_1D_MS_AL
TPH CWG - Aliphatic >C6 - C8 - HS_1D_MS_AL
TPH CWG - Aliphatic >C8 - C10 - EH_CU_1D_AL
TPH CWG - Aliphatic C5 - C34 - HS_1D_MS+EH_CU_1D_AL
TPH CWG - Aromatic >C10 - C12 - EH_CU_1D_AR
TPH CWG - Aromatic >C12 - C16 - EH_CU_1D_AR
TPH CWG - Aromatic >C16 - C21 - EH_CU_1D_AR
TPH CWG - Aromatic >C21 - C35 - EH_CU_1D_AR
TPH CWG - Aromatic >C5 - C35 - HS_1D_MS+EH_CU_1D_AR
TPH CWG - Aromatic >C5 - C7 - HS_1D_MS_AR
TPH CWG - Aromatic >C7 - C8 - HS_1D_MS_AR
TPH CWG - Aromatic >C8 - C10 - EH_CU_1D_AR
TPH CWG - Total >C5 - C35 - HS_1D_MS+EH_CU_1D_Total
Toluene - HS_1D_MS
Total BTEX (BS EN 12457-3) - HS_1D_MS_Total
m & p-xylene - HS_1D_MS
o-Xylene - HS_1D_MS

Parameter	Matrix Type	Expanded Uncertainty Measurement	Unit
TOC	Soil	12.2	%
Loss on Ignition	Soil	22.9	%
BTEX	Soil	11.2	%
Sum of PCBs	Soil	43.4	%
Mineral Oil	Soil	9.0	%
Total PAH	Soil	18.5	%
pH	Soil	0.335	Units
Acid Neutralisation Capacity	Soil	18.0	%
Clay Content	Soil	15.0	%
Silt Content	Soil	14.0	%
Sand Content	Soil	13.0	%
Loss on Ignition	Soil	22.9	%
pH	Soil	0.335	Units
Carbonate	Soil	12.0	%
Total Nitrogen	Soil	12.0	%
Phosphorus (Extractable)	Soil	24.0	%
Potassium (Extractable)	Soil	20.0	%
Magnesium (Extractable)	Soil	26.0	%
Zinc	Soil	21.6	%
Copper	Soil	18.2	%
Nickel	Soil	24.3	%
Available Sodium	Soil	23.0	%
Available Calcium	Soil	23.0	%
Electrical Conductivity	Soil	10.0	%